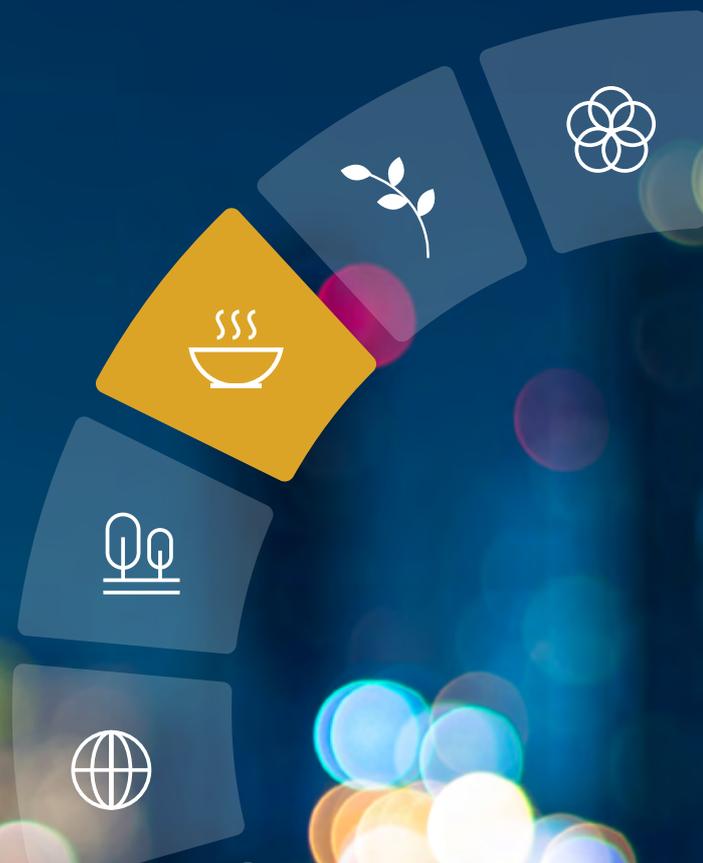


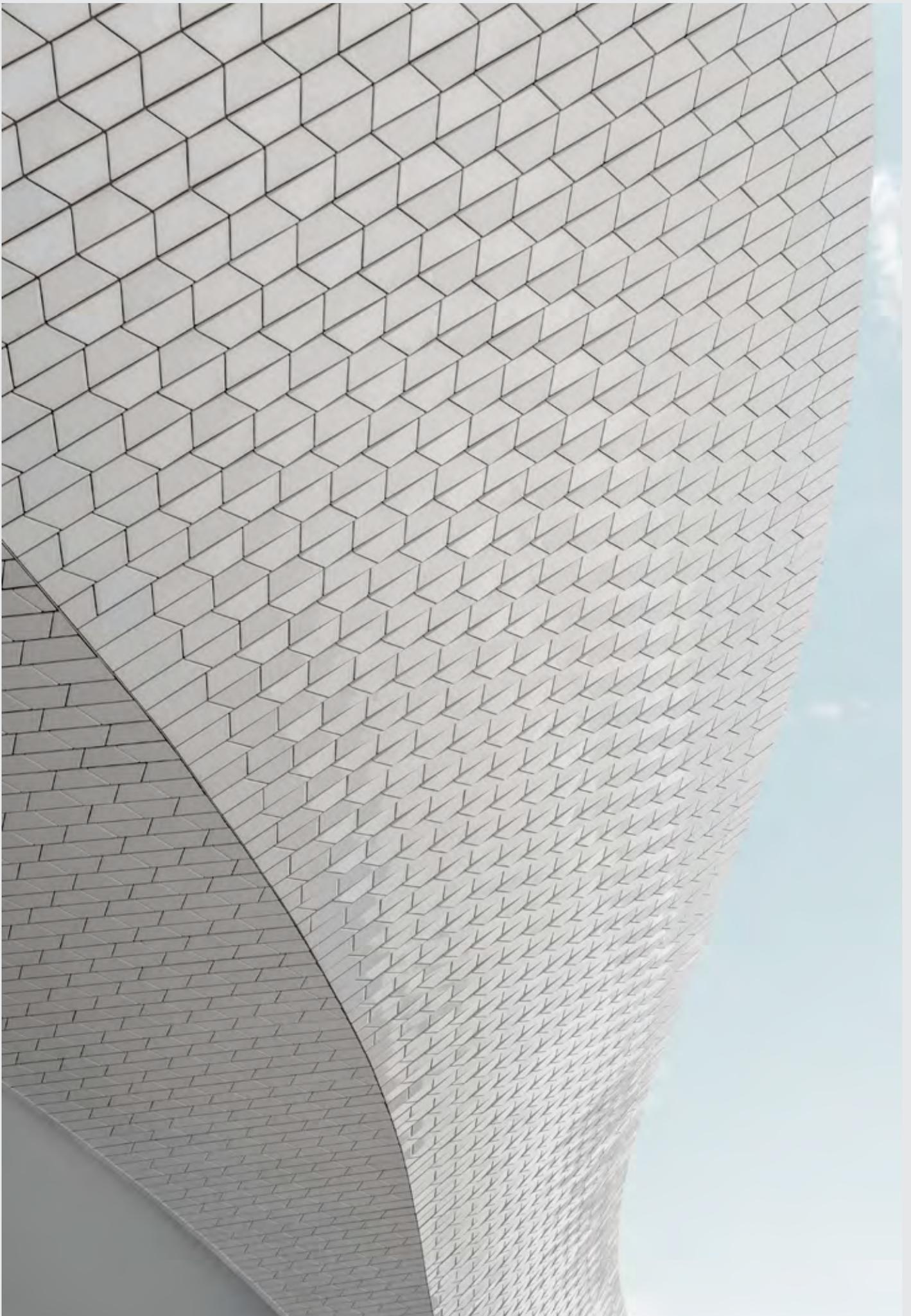
# THE **SDG 2** FORECAST

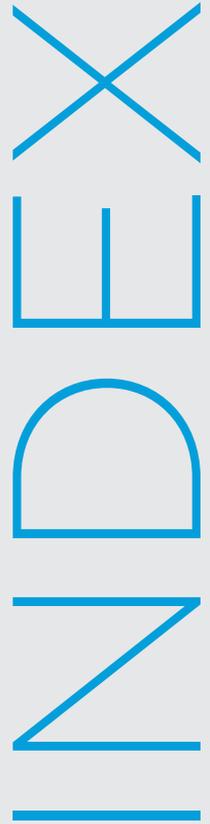
IDENTIFYING NEW  
BUSINESS MODELS  
AND TECHNOLOGIES

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SDG 2:  
ZERO  
HUNGER







**4** What is the SDG forecast by Valuer?

5 How the Valuer platform uses AI to find SDG-related technologies

7 Reaching corporate sustainability by embracing innovation

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## WHAT IS THE SDG FORECAST BY VALUER?

Published monthly, each issue of this report focuses on a different Sustainable Development Goal (SDG). By taking a deep-dive into the progress of the goal in question, it covers various aspects of how the business sector can play an essential role in achieving its aspirations.

Hoping to serve as motivation, the publication includes market analysis and an overview of some of the currently trending technologies. Moreover, it provides multiple examples of large organizations and innovative startups that are doing excellent work in ensuring a prosperous global community.

In line with Valuer's rationale, the report stresses the benefits that surface once various market actors, specifically corporations and startups, decide to work together towards achieving environmental and social sustainability.

The following issue focuses on  
**SDG 2: Zero hunger.**

## ABOUT VALUER.AI

Valuer is a data-driven platform for corporations, accelerators, and venture funds. We provide an end-to-end innovation pipeline that helps you with the discovery of relevant innovative technology, the identification of market opportunities, and the prioritization of your strategic initiatives.

Founded in 2017, Valuer has a team of more than 90 people from all over the world and has so far worked with BMW, Siemens Gamesa, Novozymes, Grundfos, and Spirent, among other prominent organizations.

# HOW THE VALUER PLATFORM USES AI TO FIND SDG-RELATED STARTUPS

We ran the AI platform to identify the 6000 startups most relevant to three SDG 2 areas:



**FOOD STORAGE AND PRESERVATION**



**SUSTAINABLE CROP PRODUCTION**



**SUSTAINABLE LIVESTOCK FARMING**

## HOW THE PLATFORM FINDS STARTUPS RELEVANT TO SDG 2

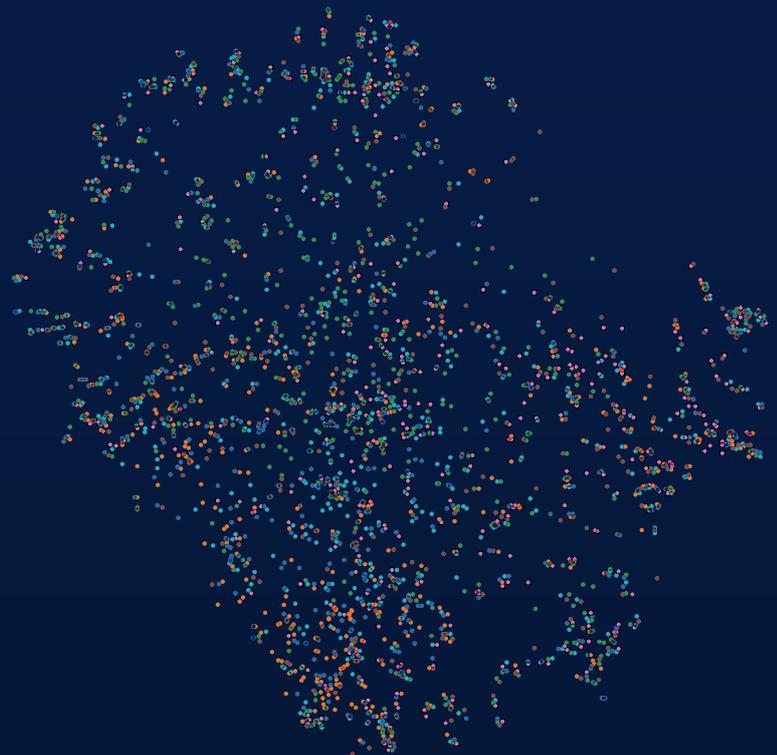
The process starts with Valuer clustering its database of startups potentially relevant to SDG 2. Most notably, the startup descriptions are processed by NLP, which finds patterns impossible to recognize with tags and regular search mechanisms.

The platform then references the clusters to the three focus areas deduced from SDG 2. By choosing the ones nearest to a projected point, it finds the startups most relevant to each area. The three focus areas are then processed by the platform to identify similarities, which results in subgroups with a high degree of relevance (see color codes on the cluster illustration, Image 1).

## GROUPING STARTUPS FROM DIFFERENT SDG 2 AREAS

The illustration shows the clusters of startups (represented with dots) colored depending on their projection area. Their proximity to other startups depends on how much their solutions have in common.

The image lets us make simplified conclusions, but since the platform processes in 1024 dimensions, the insights we can draw from a 2D illustration are limited. This is also why some dots seem very distant from their projection areas.



### Food storage and preservation:

- Innovative storage and packaging
- Food preservation

### Sustainable crop production:

- Irrigation technologies
- Precision agriculture

### Sustainable livestock farming:

- Sustainable animal fodder
- Farm animals antimicrobial resistance

### Image 1:

Valuer platform's clustering of SDG 2-related startups

### INTERESTING INSIGHTS AND STARTUP TRENDS

The platform can draw several insights from the clustering, including:

- The “Precision Agriculture” cluster is considerably more scattered around the map than the other clusters. This might indicate a wide variety of innovation and an overlap with some of the technology and approaches used by the other clusters.
- The “Farm Animals Antimicrobial Resistance” cluster is the only one that has almost no overlap with the other clusters. This might suggest that the innovation and technology in the cluster are distinct from those used in the other areas. Aside from this, we see substantial dispersion around the map and overlap in all the other clusters.
- The positioning of “Innovative Storage and Packaging” and “Food Preservation” might indicate the presence of significantly similar solutions and approaches to innovation within the clusters.

### FINDING THE MOST RELEVANT SDG 2 FOCUS AREAS

The platform uses four parameters to assess the clusters’ relevance, importance, and innovativeness:

- **Success potential:** The AI platform uses historical data from each startup to evaluate the group’s overall chance for future success.
- **Market opportunity:** The AI platform analyzes the startups’ technology descriptions to estimate the cluster’s overall potential to generate profit and sustainable businesses.
- **Degree of fit:** The AI platform uses Natural Language Processing to grade how well a cluster of startups aligns with the customer’s challenges. (In this case, the information on SDG 2.)
- **Innovation:** The AI platform looks for original and previously unseen combinations of business models and technologies in order to grade how generally innovative the cluster is.

### RANKING THE THREE SDG 2 FOCUS AREAS

The platform then ranks the results to find the most suitable focus area for our customers. In this case, it used the four parameters (Success, Market, Fit, Innovation) to rank the SDG 2 areas.

**“Food Storage and Preservation” is the highest-ranked SDG 2 cluster on our AI platform, while “Sustainable Crop Production” ranks the lowest. All clusters have somewhat similar platform scores, which suggests that SDG 2 has several areas of opportunity with the potential for successful innovation.**

### NEXT STEP: RUN THE PLATFORM TO FIND THE BEST-MATCHING STARTUPS FOR YOUR COMPANY

**By using the Valuer platform, companies can choose a focus area and find their best-matching startups.** The startups featured on page 18 show the final format in which our customers receive the companies that the platform selected for them

| Main group                    | Subgroup                              | Success | Market | Fit | Innovation | Total |
|-------------------------------|---------------------------------------|---------|--------|-----|------------|-------|
| Food storage and preservation | Innovative storage and packaging      | 57      | 78     | 79  | 75         | 290   |
|                               | Food preservation                     | 61      | 74     | 85  | 70         |       |
| Sustainable crop production   | Irrigation technologies               | 76      | 70     | 78  | 81         | 276   |
|                               | Precision agriculture                 | 41      | 77     | 80  | 49         |       |
| Sustainable livestock farming | Sustainable animal fodder             | 63      | 79     | 71  | 56         | 282   |
|                               | Farm animals antimicrobial resistance | 75      | 69     | 73  | 77         |       |

**Image 2:** Valuer platform’s evaluation of startups from different SDG 2 areas

## INNOVATION: KEY DRIVER IN BUILDING A SUSTAINABLE FUTURE

Technological breakthroughs and creativity are critical to advancing the SDGs and reducing the time and cost necessary to achieve results. Disruptive innovation is not a silver bullet but holds the highest potential in addressing complex global issues. Fortunately, transformative change is something humans have already done many times throughout history.

In this context, the private sector plays a crucial role in advancing the UN global development agenda. However, no single company can address such a demanding challenge alone. This is why collaboration between industry players is essential to achieving the solutions we need—and the philosophy of the SDGs recognizes this.

## REACHING CORPORATE SUSTAINABILITY BY EMBRACING INNOVATION

By embracing collaboration with startups and innovators, corporations can achieve more sustainable operations and products. Such partnerships are a promising way to foster the future of industries, rapidly scale-up efforts, and support the UN Global Goals.

The adoption of novel sustainability solutions goes beyond society's call for greater transparency and accountability. Blending purpose with profit promises a competitive advantage that meets the expectations of modern customers, employees, and investors. Working with innovative startups to make operations more sustainable can, among other benefits, generate new revenue, reduce costs in the long-run, open the way to untapped markets, increase supply chain resilience, and improve brand image.

We're already witnessing a wave of progressive, profit-oriented companies and entrepreneurs who are using innovative models to enter SDG-related markets and ensure long-term business growth. For instance, BMW is staying "ahead of the curve" by expanding operations and positioning the brand as a shared-mobility service provider.



**13,290,546 USD**

FROM THE VALUER PLATFORM:  
AVERAGE FUNDING OF THE  
SDG 2-RELATED STARTUPS

# ABOUT THE UN SUSTAINABLE DEVELOPMENT GOALS

## THE GOALS ARE DESIGNED TO BE

“The blueprint  
to achieve a  
better and more  
sustainable  
future for all.”

In 2015, the UN general assembly adopted the 2030 Agenda for Sustainable Development, which includes 17 Sustainable Development Goals. Intended to be achieved by 2030, the goals are designed to be “the blueprint to achieve a better and more sustainable future for all.”

Signed by 193 heads of state, each goal has a list of targets whose progress is measured with specific indicators. With data available in an easy-to-understand form, the 17 SDGs are broad-based and interdependent—meaning that the action in one goal’s area will affect the outcomes in others.

The SDGs build on the Millennium Development Goals (MDGs) that were agreed by governments in 2001 and expired in 2015. Aside from being more all-encompassing than the MDGs, which were considered to be too narrow in focus, the consultation process for the SDGs was much more inclusive. The new goals tackle a wide range of areas, from poverty and gender inequality to climate change.

# THE SUSTAINABLE DEVELOPMENT GOALS ARE:



1. NO POVERTY



10. REDUCING INEQUALITY



2. ZERO HUNGER



11. SUSTAINABLE CITIES AND COMMUNITIES



3. GOOD HEALTH AND WELL-BEING



12. RESPONSIBLE CONSUMPTION AND PRODUCTION



4. QUALITY EDUCATION



13. CLIMATE ACTION



5. GENDER EQUALITY



14. LIFE BELOW WATER



6. CLEAN WATER AND SANITATION



15. LIFE ON LAND



7. AFFORDABLE AND CLEAN ENERGY



16. PEACE, JUSTICE, AND STRONG INSTITUTIONS



8. DECENT WORK AND ECONOMIC GROWTH



17. PARTNERSHIPS FOR THE GOALS



9. INDUSTRY, INNOVATION, AND INFRASTRUCTURE

# DEVELOPMENT GOAL IN FOCUS

## SDG 2: ZERO HUNGER

After decades of steady decline, the number of people who suffer from hunger—as measured by the prevalence of undernourishment—began to slowly increase again in 2015. Current estimates show that nearly 690 million people are hungry, or 8.9 percent of the world population – up by 10 million people in one year and by nearly 60 million in five years.

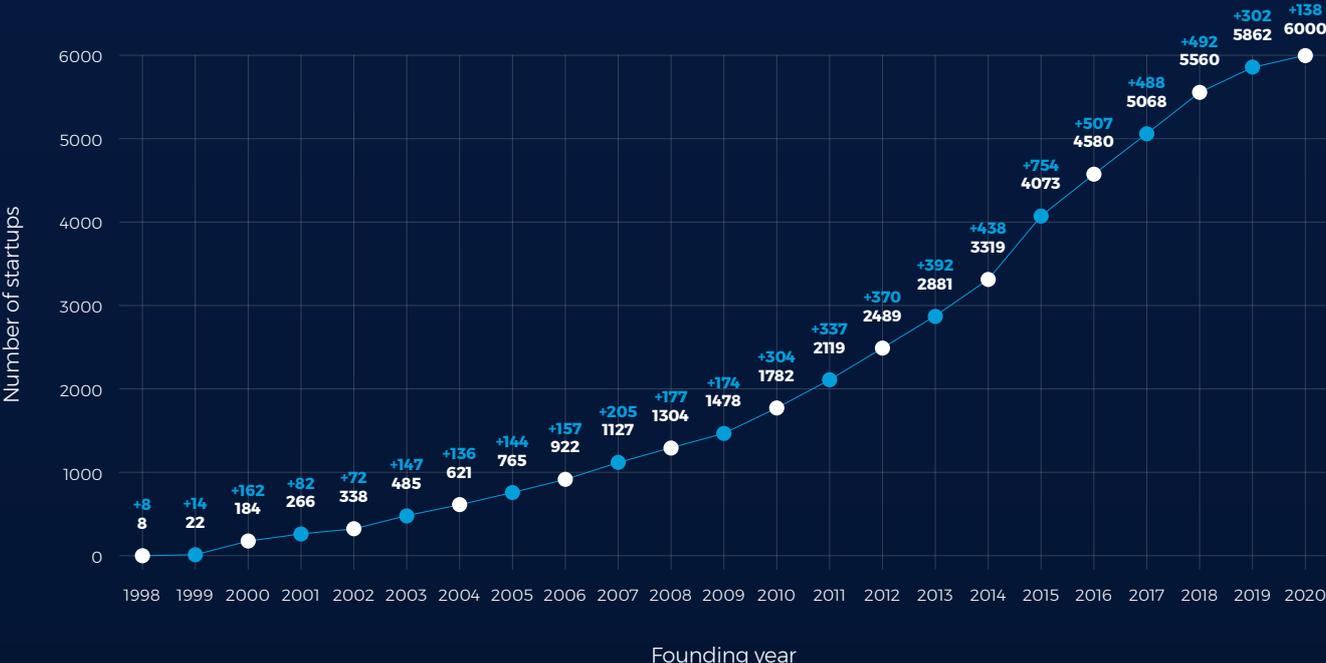
The world is not on track to achieve Zero Hunger by 2030. If recent trends continue, the number of people affected by hunger would surpass 840 million by 2030.

According to the World Food Programme, 135 million suffer from acute hunger largely due to man-made conflicts, climate change and economic downturns. The COVID-19 pandemic could now double that number, putting an additional 130 million people at risk of suffering acute hunger by the end of 2020.

With more than a quarter of a billion people potentially at the brink of starvation, swift action needs to be taken to provide food and humanitarian relief to the most at-risk regions.

At the same time, a profound change of the global food and agriculture system is needed if we are to nourish the more than 690 million people who are hungry today – and the additional 2 billion people the world will have by 2050. Increasing agricultural productivity and sustainable food production are crucial to help alleviate the perils of hunger.

\*Official definition of SDG 2 as published on [un.org](http://un.org)



**From the Valuer platform:**  
A timeline depicting the increasing number of startups active in the SDG 2 areas

# MARKET PROJECTIONS AND TECHNOLOGY TRENDS



## FOOD STORAGE AND PRESERVATION SOLUTIONS

One of the biggest challenges in the 21st century has been providing sufficient, safe, and nutritious food to all people. As of 2020, one-third of all food produced for human consumption goes to waste globally, while every ninth person is undernourished. In 2017, most of these people lived in developing countries and rural areas, where lack of access to nutritious food is a major issue.

According to the UNCTAD, a handful of factors are transforming food systems in recent years, including globalization, expanding food trade, technological innovations, and longer food supply and processing chains. Due to technological advancements, nutritious foods can now not only reach the most affected areas easier but also help in preventing post-harvest loss and expanding the shelf-life of products.

The increased food trade, especially of fruits and vegetables, has propelled the post-harvest treatment market, especially in terms of innovative solutions for increasing product shelf life during storage and transportation. According to Markets and Markets, the global post-harvest treatment market is projected to advance to \$2.3 billion by 2026, registering a CAGR of 6.5% during the forecast period between 2019 and 2026.

Furthermore, consumers' changing preferences for food and beverages are driving the research and development for novel food preservatives—a method the industry heavily relies on for prolonging product shelf life and improving safety and quality. The global natural food preservative market is expected to grow from \$796.1 million in 2018 to almost \$1.1 billion by 2026 with a CAGR of 3.7%, reports Allied Market Research.

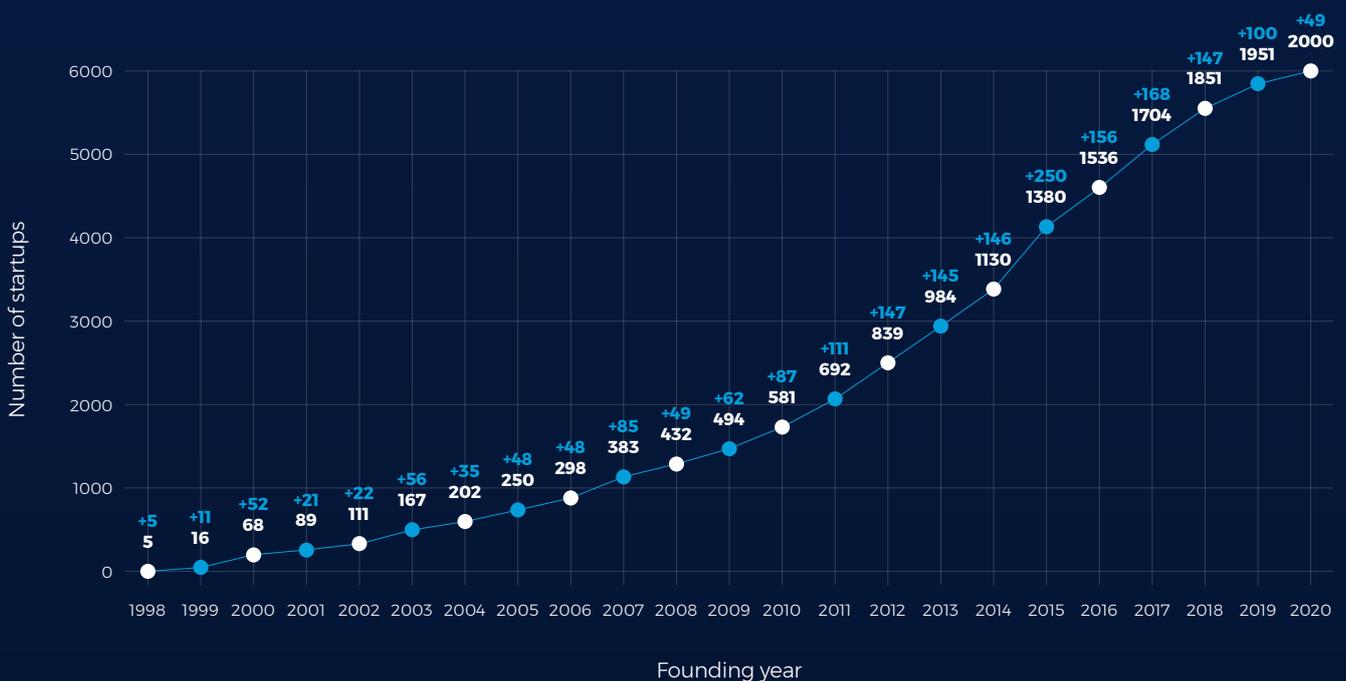
**EMERGING TECHNOLOGY TRENDS:**

- **Edible coating:** Preservatives made from leftover organic produce applied to the surface of fruits and vegetables to enhance and significantly extend their shelf-life.
- **Solar-powered refrigeration rooms:** On-site storage rooms for simplified distribution of perishable food in developing countries.
- **Modified atmosphere packaging (MAP):** Packaging systems with an adjusted gaseous atmosphere that preserve the food and extend its shelf-life.



## 11,743,205 USD 2013

FROM THE VALUER PLATFORM:  
AVERAGE INVESTMENTS  
AND YEAR OF FUNDING OF  
THE FOOD STORAGE AND  
PRESERVATION STARTUPS



**From the Valuer platform:**

A timeline depicting the increasing number of food storage and preservation startups



## SUSTAINABLE CROP PRODUCTION SOLUTIONS

According to FAO, to meet the growing food demand of the increasing world population by 2050 and their expected dietary changes, agriculture will need to produce 60% more food globally in the same period. At the same time, due to climate change, around one-third of farmland has been degraded as of 2020.

To increase crop yields with as little natural resources like land and water as possible, more and more farmers worldwide turn to technology, such as IoT and big data. Such technology-induced productivity enhancements are boosting the global precision agriculture market, which is expected to reach \$7.8 billion by 2022, registering a CAGR of 14.9% during the forecast period 2016-2022, according to Allied Market Research.

For instance, irrigated agriculture represents 20% of the total cultivated land and contributes 40% of the total food produced worldwide. While it's twice more productive per unit of land than rainfed agriculture, irrigated agriculture is a major water consumer. In general, agriculture currently accounts for an average of 70% of global freshwater withdrawal, according to the World Bank.

Smart irrigation systems are one type of innovative solutions that can help decrease water use, as watering is done with a precise schedule based on several parameters such as plant water, soil moisture, and data about the local weather. According to Market Research Future, the global smart irrigation market is set to reach \$1.87 billion by 2023, growing at a CAGR of 18.6% between 2018 and 2023.

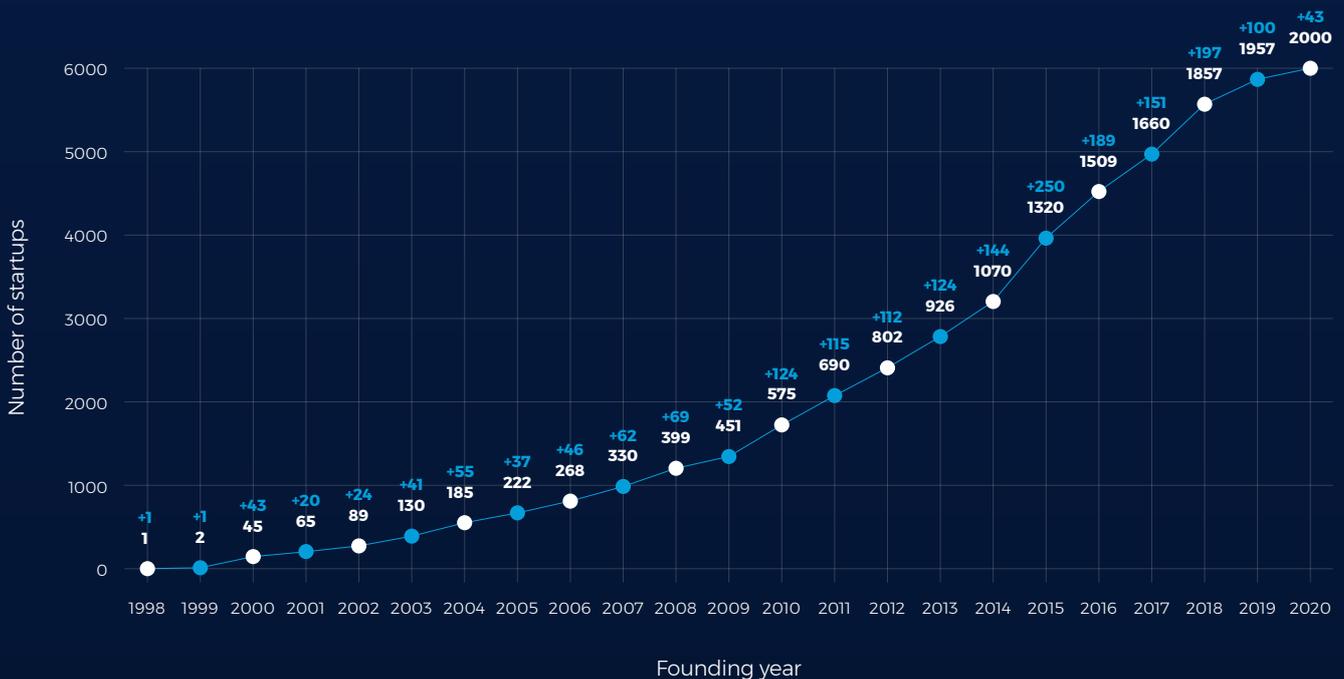
### EMERGING TECHNOLOGY TRENDS:

- **IoT:** Using IoT sensors on the ground to measure temperature, humidity, and soil moisture to optimize returns, predict crop conditions, and preserve resources.
- **Smart irrigation systems:** Combining sensors and AI to automate watering systems based on current crop conditions and water needs.
- **Drone technology:** Acquiring imagery from the field and using them as insights for optimizing crop production.
- **Vertical farming:** Growing crops in vertically stacked layers, often incorporating Controlled Environment Agriculture (CEA) technology and farming techniques without soil (such as hydroponics, aquaponics, and aeroponics.)



**14,414,727 USD**  
**2013**

FROM THE VALUER PLATFORM:  
AVERAGE INVESTMENTS  
AND YEAR OF FUNDING OF  
THE SUSTAINABLE CROP  
PRODUCTION STARTUPS



### From the Valuer platform:

A timeline depicting the increasing number of sustainable crop production startups



## SUSTAINABLE LIVESTOCK FARMING SOLUTIONS

In 2018, [FAO reported](#) that animal-source foods comprised 39% of protein and 18% of calorie intake worldwide, but this was not equitably distributed. The study demonstrated that impoverished people in lower-middle-income countries often do not consume enough animal-source foods, while those in high-income countries consume in excess of their dietary needs.

Harnessing novel technologies like IoT and data analytics can make traditional livestock farming more efficient and sustainable. The increasing global demand for dairy products, the extended profitability and high yield, and the minimum impact on the environment and climate change are fueling the growth of the global precision livestock farming market, which is set to reach \$4.6 billion by 2024, according to [Markets and Markets](#).

On the other hand, plant-based meat and protein substitutes are also becoming more popular as a promising alternative to conventional animal sources. According to [estimations](#), plant-based food sales rose 17% in 2018, and the use of alternative protein as a food ingredient in consumer products will continue growing. The global alternative protein market is expected to grow at a CAGR of 9.5% between 2019 and 2025, reaching \$17.9 billion by 2025, according to [Research and Markets](#).

### EMERGING TECHNOLOGY TRENDS:

- **Bacteriophages as an antimicrobial agent:** Viruses that infect bacteria and reduce the need for antibiotics, thus preventing antimicrobial resistance in animals and humans.
- **Precision livestock farming (PLF):** Real-time monitoring per animal that ensures efficient and sustainable farming and producing food of high quality and safety.
- **Meat substitutes:** Plant-based alternatives that approximate meat's texture, flavor, appearance, and chemical characteristics.



**13,713,706 USD**  
**2013**

FROM THE VALUER PLATFORM:  
AVERAGE INVESTMENTS AND  
YEAR OF FUNDING OF THE  
SUSTAINABLE LIVESTOCK  
FARMING STARTUPS

# CORPORATIONS THAT DO A GREAT JOB AT TACKLING GOAL 2



## GENERAL MILLS

Ending hunger and ensuring safe, nutritious, and sufficient food access to all people is one of the key SDG 2 targets, and General Mills has made it a focal point in their collaboration with more than 30 food banks across the globe. Through its multiple philanthropic projects and initiatives, the food manufacturing giant has provided 5.5 billion meal donations worldwide in 2019 alone.

To help combat malnutrition in children, General Mills launched a global initiative to reduce childhood hunger using school meals. This enabled more than 674,000 children worldwide to access a nourishing school meal daily, resulting in more than 140 million meals per year. One of the most successful segments of the initiative happened in the Indian states of Uttar Pradesh and Odisha. There, in collaboration with the World Food Programme (WFP,) General Mills nutritionally fortified school meals for 420,000 students daily with essential nutrients, like iron and vitamin A.

Additionally, General Mills is dedicated to advancing regenerative agriculture, targeting another SDG 2 target regarding supporting smallholder farming communities in developing countries. Through their support to NGO partners CARE in Côte d'Ivoire and Ghana and Positive Planet in Madagascar, they aim to improve the livelihoods and farming practices of smallholder farming communities, establish farming cooperatives, and increase food and nutrition security. Moreover, the company also works to empower female farmers, support youth education, and prevent child labor. Collectively, these efforts reach more than 22,000 smallholder farmers and their family members.



**12,289,894 USD**  
**2013**

FROM THE VALUER PLATFORM:  
AVERAGE INVESTMENTS  
AND YEAR OF FUNDING OF  
THE FOOD PRESERVATION  
STARTUPS



## BAYER

German pharmaceutical and life sciences company Bayer recognizes the threat that hunger imposes across the planet and acts on SDG 2 through its agricultural initiatives. To increase farm productivity and income of small-scale food producers, they've launched Better Life Farming, a long-term partnership with IFC (International Finance Corporation), Netafim, and Swiss Re Corporate Solutions. Joining forces, the organizations aim to assist smallholder farmers in growing their farms into commercially viable and sustainable farming businesses, encourage financial security, and increase knowledge.

The partnership also addresses the increasing global demand for rice, particularly in Asia. In the Philippines, they've identified several pain points for farmers across the value chain, including the reduced access to viable finance and technology. By engaging local partners, Better Life Farming has been active across several regions, covering more than 2500 hectares of farmland and 1533 farmers in total. One of the key project regions, Bohol, experienced an incremental yield increase of 57% and an increase of 170% in net income compared to farmers in the area.

Bayer also ensures sustainable food production systems at smallholder farms using their innovative solutions. Launched in 2018 in India, their first-of-a-kind hybrid rice seed Arize, is bred with resistance against Brown Plant Hopper and Bacterial Leaf Blight, one of the largest causes for colossal crop losses. Another variety of the same seed was developed to endure flooding, surviving for more than 15 days of sustained flooding in Bangladesh, where such floods have a severe impact on farmers' rice harvests



**15,103,721 USD**  
**2012**

FROM THE VALUER PLATFORM:  
AVERAGE INVESTMENTS AND  
YEAR OF FUNDING OF THE  
IRRIGATION TECHNOLOGIES  
STARTUPS



## WALMART

American retail corporation Walmart engages with SDG 2 through several projects and contributions across their value chain. Enabling access to food is crucial for the retail giant, making significant strides for those in need through food donations. As part of their Walmart Foundation initiative, they've donated more than 585 million pounds of food in the US in 2020, with more than 65% of that being fruits, vegetables, dairy, and meats.

Moreover, Walmart is also dedicated to providing safe food to those in need through its comprehensive food safety program. In 2020 alone, they've conducted more than 138,000 independent food safety audits in their stores and established a blockchain platform in the US to help trace foods in their supply chain. In China, the company has launched the Walmart Food Safety Collaboration Center (WFSCC) to enhance food safety in the country. Since 2016, they've invested more than \$22.5 million to evolve this goal further.

One more way in which Walmart engages with SDG 2 is by enabling access for smallholder farms to emerging markets. Awarding more than \$37 million through their Walmart Foundation, the company has reached more than 175,000 smallholder farmers, with 35% of them being women. One of the most notable examples of this initiative happened in India, where the foundation invested more than \$13 million in grants to more than 96,000 smallholders in 2020



**11,196,518 USD**  
**2013**

FROM THE VALUER PLATFORM:  
AVERAGE INVESTMENTS AND  
YEAR OF FUNDING OF THE  
INNOVATIVE STORAGE AND  
PACKAGING STARTUPS

# THREE STARTUPS THAT COULD HELP CORPORATIONS ALIGN WITH GOAL 2

This publication demonstrates the way that Valuer helps corporations find technology and innovation solutions for their sustainability goals. For this purpose, we've included a selection of three startups that can help corporations become sustainable in regards to SDG 2.

The format of the startup features resembles the one our customers receive once their startup search is finalized. But, with one very significant difference—the selection here is a general example that doesn't take into account a corporation's unique needs.



## Sufresca

Sufresca has developed a post-harvest treatment technology that can extend the shelf life of fresh fruits and vegetables for several weeks.

PAGE 22



## Plantible Foods

Plantible Foods is a food technology company that develops a plant-based protein leveraging sustainable aqua-farming and extraction technologies.

PAGE 28



## Boost Biomes

Boost Biomes uses a proprietary DNA sequencing-based platform technology to discover commercially viable multi-microbial products.

PAGE 34

# SUFRESCA

Sufresca has developed a post-harvest treatment technology that can extend the shelf life of fresh fruits and vegetables for several weeks.



## BUSINESS LOGIC

### PRODUCT CONCEPT

Sufresca has developed a liquid formula that creates a seal around fruits and vegetables, limiting environmental effects to extend the product's shelf life by several weeks. Based on this technology, the startup has developed three types of treatments: 1) emulsion type coatings aimed at fresh fruits and vegetables, 2) film type coatings used for garlic, onions, and bulbs of ornamental plants, and 3) bandage type coatings aimed at pomegranate arils, grapes, and berries..

### BUSINESS MODEL

Sufresca uses a B2B approach, collaborating with partners in the US and Europe to bring its first products to the market. The startup targets clients along the entire supply chain, providing a cost-effective solution that is easy to apply and can work with existing processing and packing equipment. Sufresca has finalized coatings for peppers and garlic, with solutions for tomatoes, cucumbers, and pomegranate still in testing.



## SUMMARY

Sufresca's edible coating technology can reduce spoilage during the supply chain and maintain the freshness of produce for several weeks.

The startup has leveraged the technology to develop coatings for cucumbers, tomatoes, onions, garlic, and peppers.

In 2019, Sufresca raised \$500,000 in a seed round led by Rimomim Fund.

According to Markets and Markets, the post-harvest treatment market is projected to grow from \$1.5 billion in 2019 to \$2.3 billion by 2026, at a CAGR of 6.5%.

## QUICK FACTS

**LOCATION:** Israel , Tel Aviv  
**FOUNDED:** 15/08/2018  
**FUNDING:** 1,300,000 USD  
**EMPLOYEES:** 4  
**WEBSITE:** sufresca.com

## SECTOR / SUBSECTORS

AGRICULTURE & FARMING

SCIENCE & ENGINEERING

AGTECH

BIOTECHNOLOGY

ENVIRONMENTAL ENGINEERING

IDEA

PRODUCT/ PROTOTYPE

GO TO MARKET

GROWTH & EXPANSION

ESTABLISHED



## MEET THE TEAM



### PROF. AMOS NUSSINOVITCH

*Founder & CSO*

Prof. Amos Nussinovitch has over 30 years of experience as a professor and researcher at the Hebrew University of Jerusalem. He is the author of seven books, as well as more than 130 peer-reviewed publications and 30 patents. Prof. Amos Nussinovitch has a specialty in food processing, food engineering, and biotechnology, emphasizing edible coatings, theoretical and practical aspects of hydrocolloids, and physics and technology of foods. He studied chemistry at the University of Tel Aviv and food engineering and technology at the Technion - Israel Institute of Technology.



### EFRAT BOKER FERRI

*CEO*

Efrat Boker Ferri has over 18 years of experience in executive management positions and entrepreneurship, having founded several startups in the fields of OCR and neuroscience. Prior to Sufresca, she served as CEO of Formtest, Vice President of Investments at ProSeed Ventures, Board Member of the Technion Incubator, and CEO and CFO at OmniTelecom, among others. Efrat Boker Ferri holds a BSc in Physics and Chemistry and an MSc in Applied Chemistry from the Hebrew University of Jerusalem.

# SUFRESCA AIMS TO ELIMINATE FOOD WASTE AND PLASTIC PACKAGING

**A**s numerous studies have shown, global hunger and lack of food is primarily a problem of supply chain inefficiencies and food waste. Global food production is sufficient to meet every individual; however, according to a 2017 FAO report, 30% of food produced for human consumption worldwide is lost in the supply chain. Moreover, FAO's 2019 report estimates that this loss is higher for fruit and vegetables than for cereals and pulses.

Inspired by this massive problem, Prof. Amos Nussinovitch at the Hebrew University in Jerusalem has spent more than 30 years researching edible films and coatings for fruits and vegetables to extend their post-harvest shelf life. His dedication paid off, and in 2018 he founded Sufresca to commercialize the technology.

Since then, the Israeli startup has developed a range of edible, unnoticeable, and eco-friendly coatings that support fruits and vegetables' natural abilities to protect against environmental stressors. The startup believes that its shelf life extension technology can significantly reduce the need for plastic packaging and food waste.

“Our mission is to set new market standards for fresh produce handling, where cost-effective, eco-friendly, and green coating solutions are available for all fruit and vegetable, and later on for all food commodities, for which plastic is currently used to extend shelf-life,”

**STATED CEO EFRAT BOKER FERRI.**



### FRESH AND NUTRITIOUS, FROM FARM TO HOME

Sufresca's solution is a liquid formula that creates a breathable coating when applied on the surface of fruits and vegetables. The solution seals the surface and extends the shelf life of produce by several weeks. A key feature of the technology is that it allows the treated product's natural metabolism to continue, which is essential for maintaining freshness and nutritional value. Sufresca has also made sure that the solution is edible, consisting primarily of water, glazing agents, emulsifiers, stabilizers, and acidity regulators. Additionally, the solution doesn't need to be diluted and can be stored at ambient temperatures.

“All ingredients used in our coatings are recognized by the European Food Safety Authority (EFSA) as food additives (E Number) and by the US Food and Drug Administration (FDA) as Generally Recognized As Safe (GRAS),”

STATED CEO EFRAT BOKER FERRI

Sufresca has developed a range of applications for its technology, each tailored to the specific characteristics of the treated product. The solutions consider factors such as cultivar, season, harvesting maturity, different environmental conditions, and standard post-harvest handling practices. In addition, the products are designed to be cheap and easy to use, providing a cost-effective solution that can be retrofitted to conventional packing house production lines and equipment.

“Sufresca's technology can provide non-toxic, biodegradable coatings that are less than 0.1 mm thick and are invisible, unnoticeable, odorless, and tasteless. Coating thickness depends on the application technique, considering the physical structure and roughness of the fruit or vegetable surface as well as the chemical wetting and better adherence to the cuticle of the coated commodity,”

EXPLAINS CEO EFRAT BOKER FERRI



Sufresca has classified the various applications of the technology into three categories: 1) emulsion-type coatings for fresh fruit and vegetables; 2) film-type coatings for garlic, onions, and ornamental plant bulbs; and 3) bandage-type coatings for pomegranate arils, grapes, and berries.

The first application is an emulsion type coating that provides a fully breathable and edible protection layer for products that are challenging to coat. This application creates a very thin, invisible, odorless, and tasteless layer that can efficiently prolong the shelf life of products stored at ambient temperatures for several weeks. Sufresca has leveraged this coating to develop products for bell peppers, cucumbers, and tomatoes.

The second application is a film type coating aimed at fresh and dry onion bulbs and garlic cloves, preserving their quality by reducing weight loss and mechanical damage during storage. The coating produces a thin and transparent layer that provides a glossy finish and prevents tearing or splitting. Additionally, the coating can serve as a defensive layer against pests.

Sufresca's final solution is a bandage type coating for pomegranate arils, grapes, and berries. The solution is intended to address the surface damage caused during processing, covering the affected areas to prevent fluid leakage and decay.

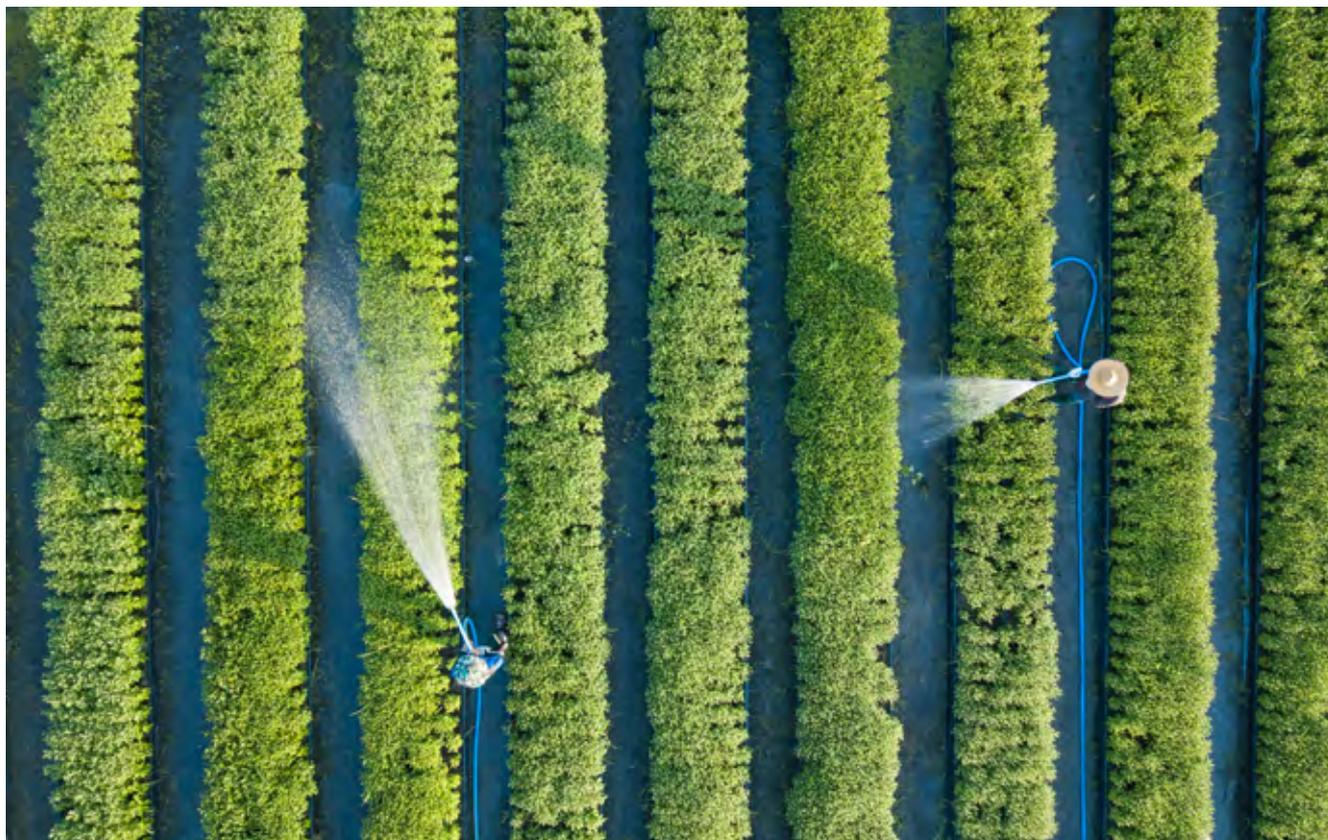
#### THE RESULT OF A LIFETIME OF RESEARCH

Sufresca's technology has received several awards and accolades. In 2019, founder Amos Nussinovitch was awarded the first prize at the 2019 Kaye Innovation Awards at the Hebrew University of Jerusalem for his 30 years of research and development of edible films and coatings for shelf-life extension. Moreover, in 2020 the startup won the NexTerra Challenge, a competition hosted by Terra Ventures to discover scalable new technologies that address critical environmental, health, and societal challenges.

Financial accolades followed, with the startup raising a \$500,000 seed round led by Rimonim in 2019. With this funding, Rimonim, an existing investor in Sufresca, expanded its total financing in the startup to \$1.3 million. Additionally, as part of the deal, Rimonim's co-founder and general partner, Yigal Galli, was appointed as chairman of Sufresca's Board of Directors. Speaking of Rimonim's expectations for the startup, Yigal Galli shared that he anticipates Sufresca's products to reach the market in North America and Europe within two years.

**“The adoption should be very quick; we don't have to educate farmers or retailers,”**

**EXPLAINS YIGAL GALLI.**



Sufresca's commercialization plan comes precisely when the overall market for post-harvest treatment technology is experiencing strong growth. According to Markets and Markets, the post-harvest treatment market is projected to rise from \$1.5 billion in 2019 to \$2.3 billion by 2026 at a CAGR of 6.5% during the forecast period. The primary factor driving the market is the increased trade in perishable products such as fruit and vegetables, which widens the applications for post-harvesting technologies.

The startup seems to be underway to seize this opportunity, currently expanding its offering to include all perishable foods. To date, the startup has developed solutions for peppers and garlic, with finalized products for tomatoes and cucumbers still in progress. Furthermore, Sufresca is currently working to obtain official regulatory approvals from both EFSA and the FDA. Once these certifications have been met, the startup will start commercializing the products. The startup is optimistic that they will gain the necessary certificates soon, with Sufresca's CEO stating that despite starting regulatory processes in 2020, the team has been researching edible coatings for more than 15 years.

“So far, we have collaborated with several European entities and successfully completed six experiments, where particularly outstanding results were demonstrated for cucumbers and peppers. Likewise, we plan to expand our operations and collaborations with more European and US partners,”

**CONCLUDES EFRAT BOKER FERRI,  
THE CEO.**

# PLANTIBLE FOODS

Plantible Foods is a food technology company that develops a plant-based protein leveraging sustainable aqua-farming and extraction technologies.



## BUSINESS LOGIC

### PRODUCT CONCEPT

Plantible Foods is developing a proprietary lemna-based protein in environmentally sensitive aqua farms. Named Rubi Protein, the product is made by growing lemna in highly controlled indoor conditions, later undergoing cold-pressing to extract the protein. Rubi Protein has a neutral taste, contains all amino acids, and is suitable as an alternative for egg whites and other meat and dairy proteins.

### BUSINESS MODEL

The main value proposition of Plantible Foods is its scalable, vertically integrated and climate-friendly production of increasingly popular plant-based proteins. Although it is still in the pilot stage, the company plans to operate with a B2B model, centering around producers of plant-based CPGs, baking ingredient companies, and plant-based meat sellers. Possible target markets also include sport nutrition supplements and beverages.



## SUMMARY

Plantible Foods aims to transform the food industry by creating a versatile and sustainable plant-based protein.

The San Diego-based startup has created the Rubi Protein based on the lemna plant.

In April 2020, Plantible Foods closed a \$4.6 million seed round co-led by Vectr Ventures and Lerer Hippeau.

According to Research and Markets, the global plant-based protein market is estimated to reach \$35.54 billion in 2024, growing at a CAGR of 14% between 2020 and 2024.

## QUICK FACTS

**LOCATION:** San Diego, CA, United States

**FOUNDED:** 01/01/2016

**FUNDING:** 5,100,000 USD

**EMPLOYEES:** 13

**WEBSITE:** plantiblefoods.com

## SECTOR / SUBSECTORS

AGRICULTURE & FARMING

ACCOMMODATION & FOOD

AGTECH

ORGANIC FOOD

DIETARY SUPPLEMENTS

IDEA

PRODUCT/ PROTOTYPE

GO TO MARKET

GROWTH & EXPANSION

ESTABLISHED



## MEET THE TEAM



**TONY MARTENS**

*Co-Founder*

Prior to co-founding Plantible, Tony Martens was part of the management team that drafted and executed a 5-year strategy, transforming a small and traditional agricultural commodity trading and processing firm into one of Europe's largest commodity trading companies. In terms of education, he holds a BBA in Economics, Business Administration, and Management from the Nyenrode New Business School in Amsterdam, as well as a BBA in Marketing and International Trade and Finance Law from the University of Westminster.



**MAURITS VAN DE VEN**

*Co-Founder*

Maurits van de Ven is a serial entrepreneur with his name tied to several startups, including Shirtfitters, MediMobility, Medium Ventures, and VelgenHuis. He also has experience as a business developer and an analyst. Maurits van de Ven holds an MSc in Finance from ESADE Business & Law School and a BSc in Technology Management from the University of Groningen.



# PLANTING THE SEEDS OF SUSTAINABLE PROTEIN CONSUMPTION

**W**ith climate change posing a looming challenge, sustainable consumption has become the focus of many eco-conscious consumers. Diets have had a particularly prominent place in the spotlight, as the food industry is one of the most significant contributors to climate change. In fact, according to figures published in 2019 by the IPCC (Intergovernmental Panel on Climate Change), current food systems are responsible for 21-37% of global greenhouse gas emissions. In addition, farming and industrial practices related to food production have led to widespread deforestation, biodiversity loss, and declining water bodies.

The team behind Nasekomo, a young startup based in Sofia, Bulgaria, thinks insect protein has the potential to answer these concerns. Before founding Nasekomo in 2017, Xavier Marcenac, Olga Marcenac, and Marc Bolard were looking for ventures that could have a big environmental impact. During their research and consultations with experts, they saw that insects could provide the necessary protein while preserving environmental resources.

Because of their lower GHG footprint, plant-based diets have gained significant traction among consumers. Finding replacements for protein-rich foods from animal origin has become a priority, and several plant-based proteins have come to the

forefront of this effort. In addition to popular plants like soybeans and quinoa, another natural protein substitute that has gained prominence is lemna, also known as duckweed.

Utilizing this plant's potential, Plantible Foods, a San Diego-based startup established in 2018, aspires to transform the food industry. Tony Martens and Maurits van de Ven, both experienced business analysts from the Netherlands, originally incubated the idea in their home country, before moving their operations to the United States in 2018. From the new location, the Plantible Foods team developed its proprietary lemna-based protein called Rubi Protein. According to them, the aquatic plant is 100 times more protein efficient than soy and 400 times more than peas. The protein isolated from lemna is organic, free of major allergens, and does not have taste, odor, or color, making it applicable to various formulations.

“At Plantible, we are accelerating the food revolution by creating the next generation of plant-based food ingredients that don’t force consumers to make compromises on taste, nutrition, or price when shifting to a plant-based diet,”

**COMMENTED THE CO-FOUNDER  
TONY MARTENS.**

## **PROTEIN PRODUCTION WITH A LOW ENVIRONMENTAL IMPACT**

Notably, the main focus of Plantible Foods is to produce a healthy food ingredient that has a low environmental footprint. To that end, the startup uses sustainable processes from farm to formulation. The life of a Rubi Protein begins in indoor aquafarms, where lemna is grown under continuously monitored and controlled environmental conditions. Traditionally, lemna hasn’t been cultivated at a large scale because its growth is more challenging to control than more widely used plants. To address this issue, the startup uses its proprietary technology, which provides data-driven insight to optimize plant growth rates, nutritional content, and ideal harvest times. Throughout the growth process, no pesticides or other toxic chemicals are used, and almost 95% of the water is recycled.

In these conditions, lemna can easily double in mass in 48 hours, which allows the team to harvest the plant even on a daily basis. In comparison, many other protein-rich plants can only be harvested once a year, requiring vast arable farmlands and substantial irrigation. Once the lemna is harvested, it undergoes the Plantible Foods proprietary cold-press extraction process. Through this method, the team isolates the desired white Rubi protein from the green lemna biomass.

According to co-founder Martens, the company’s mission is to replace animal protein, and from a nutritional and functional standpoint, their Rubi protein powder presents a viable alternative. The protein contains a full range of amino acids, with functionality that has been compared to that of egg whites in terms of foaming, gelation, and emulsifying.



“In the end, it is about developing a scalable and cost-competitive supply chain that produces a desired ingredient. Since it is very hard to compete with nature, we have decided to embrace it as much as possible by identifying a highly functional and nutritional enzyme,”

**SHARE THE FOUNDERS.**

While the company is still waiting for its FDA approval, the product has shown the potential to serve a range of food applications, such as dairy and meat alternatives, sports and health nutritional supplements, smoothies, and RTD beverages.



## SHIFTING CONSUMER BEHAVIOR AS THE PRIMARY GROWTH DRIVER OF THE PLANT-BASED PROTEIN MARKET

With its promising product and scalability, Plantible Foods is headed towards fast-paced progress, and in doing so, they were supported with one pre-seed investment in 2018. In October, the startup received an undisclosed amount from Unshackled Ventures, a fund for immigrant-founded startups based in Silicon Valley. The co-founders stated that the capital would be allocated for finalizing their extraction technology.

Additional funding came in April 2020, when Plantible Foods raised \$4.6 million in seed funding co-led by Hong Kong-based Vectr Ventures and New York's Lerer Hippeau. The company's next step is commercialization, with announced plans to launch its product Rubi Protein in 2021 while acquiring and growing its target customer base.

“As momentum in the plant-based protein space continues to grow, there is a massive opportunity to produce a truly distinct and high performing ingredient that addresses the evolving consumer needs,”

**NOTED ALAN CHAN, MANAGING PARTNER OF VECTR VENTURES.**

Investor confidence in the company coincides with the overall trend of growing interest in the plant-based foods market. According to a 2020 report published by Research and Markets, the global plant-based protein market is projected to reach \$35.54 billion in 2024, growing at a CAGR of 14% during the 2020-2024 forecast period. The report denotes North America as the fastest-growing geographical market because of several key trends, including widening applications of plant-based proteins in food products, increasing prevalence of chronic diseases, surging health awareness among the adult population, and a rising millennial population in the region. As a company set in the U.S. market, Plantible Foods is poised to enjoy a favorable business climate in the coming years.

In the coming year, Plantible aims to build out and optimize its pilot plant operations. It will continue to work with its commercial partners on the development of various products in multiple product categories. Coinciding with the aforementioned activities, Plantible will work on obtaining the necessary regulatory approvals necessary for the commercialization of Rubi protein.

# BOOST BIOMES

**Boost Biomes uses a proprietary DNA sequencing-based platform technology to discover commercially viable multi-microbial products.**



## BUSINESS LOGIC

### PRODUCT CONCEPT

Boost Biomes conducts DNA sequencing to discover microbial interactions and develop biological agents that exploit their symbiotic reactions. The startup achieves this with its proprietary platform that uses cloud-based bioinformatic processing to visualize the microbial interactions. The first product developed with the platform is a biofungicide, which Boost Biomes expects to bring to the market by the autumn of 2022.

### BUSINESS MODEL

Boost Biomes improves the health and quality of the crops and produce by exploring the compatibility between diverse microbiomes. The company discovers and develops novel products, and intends to partner with crop protection companies and distributors to market final products.



## SUMMARY

Boost Biomes' proprietary discovery platform uses DNA sequencing technology to observe the interactions between microbiomes.

With its biotechnology platform, the startup aims to develop products to improve crop health and food safety.

In June 2020, Boost Biomes raised \$5 million in a Series A funding round led by Yara International with participation from Viking Global and Y Combinator.

According to Markets and Markets, the global agricultural biologicals market is projected to grow from \$8.8 billion in 2019 to \$18.9 billion by 2025 at a CAGR of 13.6%.

## QUICK FACTS

**LOCATION:** San Diego, CA, United States

**FOUNDED:** 13/09/2016

**FUNDING:** 10,000,000 USD

**EMPLOYEES:** 14

**WEBSITE:** boostbiomes.com

## SECTOR / SUBSECTORS

AGRICULTURE & FARMING

BIOTECHNOLOGY

MICROBIO

MEAGTECH

IDEA

PRODUCT/ PROTOTYPE

GO TO MARKET

GROWTH & EXPANSION

ESTABLISHED



## MEET THE TEAM



**ADAM ARKIN, PHD**

*Co-Founder*

Adam Arkin is an expert in systems and synthetic biology, cell biophysics, and comparative functional genomics. He is a long-standing collaborator of Berkeley University, where he continues to teach at the Department of Bioengineering and serves as Director of the Center for the Utilization of Biological Engineering in Space (CUBES) as well as Director of the Synthetic Biology Institute. Adam Arkin is also the CEO and CSO of the Energy Department's Knowledgebase ('Kbase') platform and the Senior Investigator and Co-Director of the ENIGMA Department's project. He received his BA in Chemistry from Carleton College and his PhD in Physical Chemistry from MIT.



**JAMIE BACHER, PHD**

*Co-Founder & CEO*

Jamie Bacher is a biology graduate from McGill University, later acquiring a PhD in Molecular Biology from the University of Texas. After finishing his doctoral studies, he was a Post-Doctoral Fellow at Maxygen, Inc. and at The Scripps Research Institute. Following this, among other roles, he served as Section Leader at Sapphire Energy, and Coordinator and Deputy Director for the Total - Amyris Biofene Program. Before co-founding Boost Biomes, he established Pareto Biotechnologies, Inc., where he held the position of CEO.

# HARNESSING THE POTENTIAL OF MICROBIOMES FOR A SUSTAINABLE FUTURE

**A** growing population and ongoing climate change are already placing agriculture under immense pressure. Technological advances have managed to mitigate some of the impacts, however, if we hope to feed everyone sustainably, agriculture will have to be re-imagined from the ground up. A vital issue standing in the way of this is crop pathogens, with a 2019 study published in the journal *Nature, Ecology & Evolution*, estimating the associated losses for staple crops in a range from 8% to nearly 30%.

Inspired by this problem, three biology experts - Jamie Bacher, Adam Arkin, and Robert McBride - have decided to leverage microbiomes for sustainable food quality improvement. Bacher and McBride came up with the idea that eventually became Boost Biomes while working at Sapphire Energy, a San Diego-based company converting algae into biofuels. The two realized that controlling the microbiomes could mitigate many of the issues involved in the process. Arkin soon joined the team and introduced the idea for microbial DNA sequencing discovery.

With the vision to “to harness the potential of microbiomes,” in 2016, the team founded Boost Biomes. Since then, the San Francisco-based startup has been busy applying DNA sequencing to study microbiomes and thoroughly understand their interactions.

“When microbes work together in a product, their capabilities are greater than the sum of the parts. Boost Biomes has a proprietary technology to understand which microbes work together, and to assemble novel, superior microbial products. These are Ecological Solutions to Ecological Challenges - the microbes in the products work together, to address the pathogens and other challenges faced by food and crops by the microbes in their environments. Products that we develop are effective, long-lasting, safe, biological, and sustainable,”

**EXPLAINS CO-FOUNDER JAMIE BACHER.**

## LOOKING FOR BIG SOLUTIONS IN THE SMALLEST PLACES

To explore and spot these interactions, Boost Biomes enriches the microbial environment and incorporates high-throughput DNA sequencing to identify microbial products of commercial value. The startup's end goal is to gain insights that will enable them to develop high-performance multi-microbial products to combat the common diseases in crops.

“We think there are at least three benefits of products with microbes that actually work together,”

**EXPLAINS BOOST BIOME CEO AND CO-FOUNDER JAMIE BACHER.**

“If they're working together, it could lead to a longer-lasting impact on the environment. It could be more effective because they're not just working in parallel but working together and with other microbes already present in the soil. Finally, when you have multiple modes of action, it lowers the risk that the pathogen develops resistance to it. That's incredibly important for farmers.”

Boost Biomes' process begins by visualizing all the occurring interactions between the microbiomes through cloud-based bioinformatics processing. What separates Boost Biomes from companies offering similar services is their method of studying microbial interactions. Instead of attempting to predict microbial behavior per traditional methods, the team cultures the microbiomes and observes them through experimental phases.



“There are standard approaches that will infer or predict interactions [between microbes]. We're doing something quite different because we bring those microbiomes into the lab and we culture them. We're actually getting an experimental look at those interactions instead of a predictive look that you'd get in a more traditional approach,”

**EXPLAINS BACHER.**



The startup intends to use its platform to develop products that prevent diseases in-field, increasing crop yield, as well as post-harvest diseases to improve shelf-life and product safety. To this end, Boost Biomes is currently developing its first product, a biofungicide that it expects to release in the market by the autumn of 2022. Boost Biomes has already tested the product against foliar diseases such as downy mildew on grapes, achieving high performance. *“In the lab it has been effective at killing 14 different pathogens,” said Bacher.*

With this product, the startup intends to target pathogens of high-value crops, such as brown mold on peaches and blue mold on apples, which it has effectively treated in lab testing.

As for bringing its products to market, Boost Biomes intends to partner with crop inputs companies to discover, develop, and commercialize the final products. The startup believes that this approach is a quicker path to product registration and availability. Boost Biomes also plans to work closely with growers and packers to accurately determine their needs.

**SUSTAINABLE AGRICULTURE DRIVING THE DEMAND FOR BIOLOGICAL TREATMENTS**

Boost Biome’s innovative platform has managed to convince international investors, resulting in a seed investment by Kureha Corporation in February 2020. Kureha’s goal was to leverage Boost Biomes’ technology to expand its business portfolio, focusing on social issues and healthier human lifestyles.

**SPEAKING TO THE OCCASION, BOOST BIOMES’ CEO, JAMIE BACHER, SAID,**

“This investment from Kureha emphasizes that Boost has now demonstrated the path from discovery to commercial opportunity. Our proprietary technology platform enables our global commercial and co-development partners opportunities to generate novel, highly-effective microbial products that are natural, organic, and safe.”



“A key priority for farmers is efficient and effective use of fertilizers. Boost’s technology has the promise to unlock new means to enhance crops’ nutrient uptake,”

**ADDED CHRISTIANSEN.**

Moreover, in June 2020, the startup raised an additional \$5 million in a Series A funding round led by Yara International, a global crop nutrition company. Existing investors Viking Global and Y Combinator also participated in the funding round. Boost Biomes has stated that the primary goal of the funding is to support its efforts to bring the flagship biofungicide product to the market. The startup also intends to strengthen its technology platform and develop additional products.

Further, as part of the same announcement, Boost Biomes entered into a Joint Development Agreement with Yara. The partners will focus on plant phosphate uptake issues, one of the primary nutrients used as fertilizer. To remedy this, the joint development team intends to explore better ways of mobilizing the key nutrient.

Reflecting the increasing investor interest in the startup, the overall market for agricultural biologicals is projected to experience growing demand. According to a study by Markets and Markets, the global agricultural biologicals market is estimated to increase from \$8.8 billion in 2019 to \$18.9 billion by 2025. Growing adoption of sustainable agriculture, low residue levels, and supportive government regulations are the main factors driving the market, which is expected to rise at a CAGR of 13.6% during the forecast period.

Driven by the rapidly growing demand for agricultural biologicals, Boost Biomes intends to position itself to seize the market opportunity. Aside from their projects with Yara and Kureha, Boost Biome has shared that it plans to form additional partnerships with industry leaders and focus on developing new products.

“We are excited to collaborate with and invest in Boost Biomes,”

**SAID JOACIM CHRISTIANSEN, SENIOR VICE PRESIDENT AT YARA FARMING SOLUTIONS.**

“There are so many challenges out there, big important problems. We don’t know all of them but we are great partners to work with and we are ready to put our tech platform to work,”

**STATED THE COMPANY.**

# CONCLUSION: KEY TAKEAWAYS AND WHAT WE EXPECT IN THE FUTURE

The 17 UN Sustainable Development Goals were explicitly designed to engage the business sector in addressing some of the greatest challenges humanity is facing. This publication was created to promote the idea that organizations can become more environmentally-conscious in a way that lowers costs and simultaneously opens the doors to new business opportunities.

Focusing on *SDG 2: Zero hunger*, this report stresses the benefits that can emerge when large organizations align their operations with the goal by adopting innovative technology.

## THESE ARE SOME OF THE REPORT'S KEY TAKEAWAYS:

**Technological innovation is imperative to achieving the SDGs:** We're moving too slowly and struggling to keep pace with the growing societal needs. In this regard, technological breakthroughs and creativity hold the highest potential for reducing the time and cost necessary to achieve results.

**Startups can help corporations become more sustainable:** Since startups are inherently innovative, large organizations can benefit from collaborating with them. Collaborating with startups is a promising way for finding new sustainability-related technologies that work for a large company.

**The global post-harvest treatment market is expected to reach \$2.3 billion by 2026:** The increased food trade, especially of fruits and vegetables, has propelled the post-harvest treatment market, especially in terms of novel solutions for increasing product shelf life. According to Markets and Markets, the market is expected to grow at a CAGR of 6.5% between 2019 and 2026.

**Consumers' changing preferences for food and beverages are driving the research and development for healthier food preservatives:** The global natural food preservative market is expected to grow from \$796.1 million in 2018 to almost \$1.1 billion by 2026 with a CAGR of 3.7%, reports Allied Market Research.

**The adoption of technology-induced productivity enhancements by farmers is boosting the growth of the precision agriculture market:** On a global level, the precision agriculture market is expected to reach \$7.8 billion by 2022, registering a CAGR of 14.9% between 2016-2022, according to Allied Market Research

**Smart irrigation systems promise to help farmers decrease water use by combining data, sensors, and AI to automate watering systems:** According to Market Research Future, the global smart irrigation market is set to reach \$1.87 Billion by 2023, growing at a CAGR of 18.6% between 2018 and 2023.

**The global precision livestock farming market is expected to reach \$4.6 billion by 2024:** According to Markets and Markets, the market growth is fueled by the increasing global demand for dairy products, the extended profitability and high yield, and the minimum impact on the environment and climate change.

**Plant-based meat and protein substitutes are also becoming more popular as a promising alternative to conventional animal sources:** The global alternative protein market is expected to grow at a CAGR of 9.5% between 2019 and 2025, reaching \$17.9 billion by 2025, according to Research and Markets.

**Organizations are approaching sustainability from different angles that make the most sense to their ambitions:** The report includes the stories of General Mills, Bayer, and Walmart as some of the large organizations that are successfully engaging with SDG 2.



## THE COMPANY OF THE FUTURE IS SUSTAINABLE

There's no alternative to sustainable development. The increasingly evident climate change and stricter regulations, coupled with the modern needs of the informed customer, mean that business-as-usual won't cut it anymore. Fortunately, this new reality brings not only threats but also numerous new business opportunities to those who embrace it on time.

**IN SUPPORT OF OUR CONCLUSION, A PUBLICATION BY HBR POINTS OUT THAT:**

“Sustainability is a mother lode of organizational and technological innovations that yield both bottom-line and top-line returns. [...] In fact, because those are the goals of corporate innovation, we find that smart companies now treat sustainability as innovation's new frontier.”

## VALUER HELPS CORPORATIONS BLEND PURPOSE WITH PROFIT

There's no one-size-fits-all approach to corporate sustainability. This is why it's essential that each organization addresses the challenge from a perspective that makes the most sense to its strategies.

**By finding startups with innovative solutions that complement a corporation's unique needs, the Valuer AI platform helps organizations adopt the most compatible sustainability-related technologies.**

The platform's data-driven approach empowers companies to find previously unseen opportunities, enabling a move from cost-cutting to opportunity-driven profit generation.

Learn more about how the Valuer AI platform works on page 5.

# ACTIVATE THE VALUER RADAR

Use our AI platform to find innovative technologies that will help you become sustainable and gain competitive advantage

