





#### **Table of Contents**

About EIT Food	4
About VCLeaders	4
Authors	4
FOREWORD	5
Key Takeaways	7
Regional Snapshot	8
CEE AGRITECH AND FOODTECH MARKET ANALYSIS	11
Number of Start-ups	11
Investment	13
FoodTech & AgriTech Subindustries	22
DEEP DIVE INTO SUB-REGIONS	30
Baltics	32
Central Europe	37
Balkans	43
Ukraine	48
CONCLUSIONS	50
KEY TRENDS IN CEE FOODTECH & AGRITECH	51
DEFINITIONS AND METHODOLOGY	54
DATA SOURCES	56
APPENDICES	59
Appendix 1: Country Snapshots	60
Appendix 2: FoodTech & AgriTech Market Segmentation	90

#### **About EIT Food**

EIT Food is the world's largest and most dynamic food innovation community. We accelerate innovation to build a future-fit food system that produces healthy and sustainable food for all.

Supported by the European Institute of Innovation and Technology (EIT), a body of the European Union, we invest in projects, organisations and individuals that share our goals for a healthy and sustainable food system. We unlock innovation potential in businesses and universities and create and scale agrifood start-ups to bring new technologies and products to market. We equip entrepreneurs and professionals with the skills needed to transform the food system and put consumers at the heart of our work, helping build trust by reconnecting them to the origins of their food.

We are one of nine innovation communities established by the European Institute of Innovation and Technology (EIT), an independent EU body set up in 2008 to drive innovation and entrepreneurship across Europe.

Find out more at www.eitfood.eu or follow us via social media:











EIT Food supports innovators, researchers, entrepreneurs, and impactful FoodTech & AgriTech start-ups, every step of the way - from business propositions, market validation, business acceleration, and tech validation to commercial upscaling. Whatever stage - launch, accelerate or scale up - EIT Food offers three hands-on, equity-free Pan-European programmes giving the best chance to become a food system game-changer and succeed. More details here.

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#### **About VCLeaders**

VCLeaders is building the bestest\* VC community in Europe. They help VC fund managers with research, education, and strategic networking opportunities. Their mission is to make Europe the best environment for creating and funding innovative businesses.

#### **Authors**

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#### **FOREWORD**

In the ever-evolving landscape of agriculture and food technology, the Central and Eastern European (CEE) region stands at a pivotal crossroads.

The agrifood sector plays a fundamental role in the economies of the CEE countries, encompassing a rich tapestry of traditions, challenges, and opportunities. In recent years, the region has witnessed a surge in technological innovations, bringing forth a wave of advancements that hold the promise of enhancing efficiency, productivity, and environmental sustainability across the agrifood value chain.

At the same time, the food system has wide-ranging implications for ecosystems, biodiversity, water resources, climate change, and overall environmental sustainability. It has also a profound impact on public health, influencing not only nutritional outcomes but also contributing to various health-related challenges in the CEE region. Diets rich in highly processed food and sugar have long-term impacts on well-being and life expectancy and consequently on public health. Furthermore, COVID-19 pandemic and Russian aggression in Ukraine have had severe and immediate consequences on global food security, directly affecting supply chains in the CEE region. Moreover, given the complex, globalized, and untransparent supply chains, there is an urge for solutions for better sustainability, resilience, transparency, and equality in the food system.

EIT Food is a community that has come together to respond to these challenges, the biggest issues in the food system affecting our lives. Mission-based approach with the following missions: Healthy lives through food; A Net Zero Food System; Reducing Risk for a Fair & Resilient Food System; focuses the efforts on improving outcomes for people and planet as the starting point for our work.

By engaging with various stakeholders, fostering innovation, and promoting entrepreneurship and education, EIT Food aims to create a more resilient, sustainable, and inclusive food system in the CEE region. Its initiatives and collaborations contribute to addressing challenges, driving economic growth, and promoting positive changes in the food industry that benefit both consumers and the environment.

The CEE region has been witnessing a growing interest and investment in agrifood innovations. Innovators and the agrifood industry in this region have been actively working on adopting and developing technologies to enhance the efficiency, sustainability, and productivity of their agricultural and food sectors.

This report serves as a comprehensive exploration of the current state of play in the agrifood technology and innovation development, navigating through the diverse spectrum of pioneering ideas in the CEE region. The report endeavours to shed light on the key trends and is an attempt to map the ecosystem supporting innovations in the region, so that it offers a perspective to a private investor interested in innovations for the agrifood sector made in CEE.

I hope that the findings and perspectives presented herein will spark meaningful conversations, foster collaborations, and inspire further innovations that propel the region towards a sustainable, technologically enriched agrifood future.

**Marja-Liisa Meurice** Director EIT Food North and East Region



#### **Key Takeaways**

- The findings of the report point to a high number of technologies leveraged by FoodTech & AgriTech start-ups in the CEE region to create innovative solutions and products to propel transition to net zero food system, higher sustainability and efficiency of food production and consumption and reduction in food waste across the food supply chain;
- There are significant disparities within the CEE region, in terms of size, venture capital activity and growth momentum of the FoodTech & AgriTech start-ups, highlighting the industry's uneven development within the CEE region and strong geographical aggregation of technology-intensive entrepreneurial and investment processes;
- Our findings indicate that start-ups in technologically advanced regions
  of the CEE region were able to successfully grow internationally as technology rather than domestic agricultural resources provided new opportunities in FoodTech
  & AgriTech marketplaces;
- The year of 2022 marked the end of an extraordinary period, during which start-up ecosystems rapidly evolved into economically significant clusters, with CEE-based FoodTech & AgriTech industry receiving an increasing interest of investors and latestage financing to start-ups with scale-up ambitions;
- Since then, investors have continued to maintain moderate interest in the CEE-based early-stage FoodTech start-ups. In the AgriTech, investors have shifted their focus to larger and lower-risk deals, while still maintaining moderate interest in innovative food and diversified protein start-ups raising pre-seed and seed rounds;
- The magnitude of investor pullback from FoodTech & AgriTech industry calls for prompt government action in supporting the liquidity of CEE-based FoodTech & AgriTech start-up sector, in order for start-ups to avoid financial stress and cashflow challenges and secure sufficient capital for continuous product development.

#### **REGIONAL SNAPSHOT\***

#### **Economy Snapshot (2023)**

Area: 1,854,703 km<sup>2</sup> Population: 151.4 mn

Population-weighted avg. GDP per capita (2022):

**EUR 13,305** 

Internet access: 90.2%

#### Agriculture Snapshot (2022)

Ag. area: **976,260 km²** (53% of total area)

Workforce: 10.5%

#### FoodTech & AgriTech Snapshot (2023)

Number of FoodTech & AgriTech start-ups: **743** % of all domestic start-ups: **4.6**%

#### Investment in FoodTech (2018-2023)

Raised capital: EUR 679.0 mn

Rounds: 213

#### Investment in AgriTech (2018-2023)

Raised capital: EUR 121.8 mn

Rounds: 130

#### **Segmentation of Subindustries**

by Number of Rounds



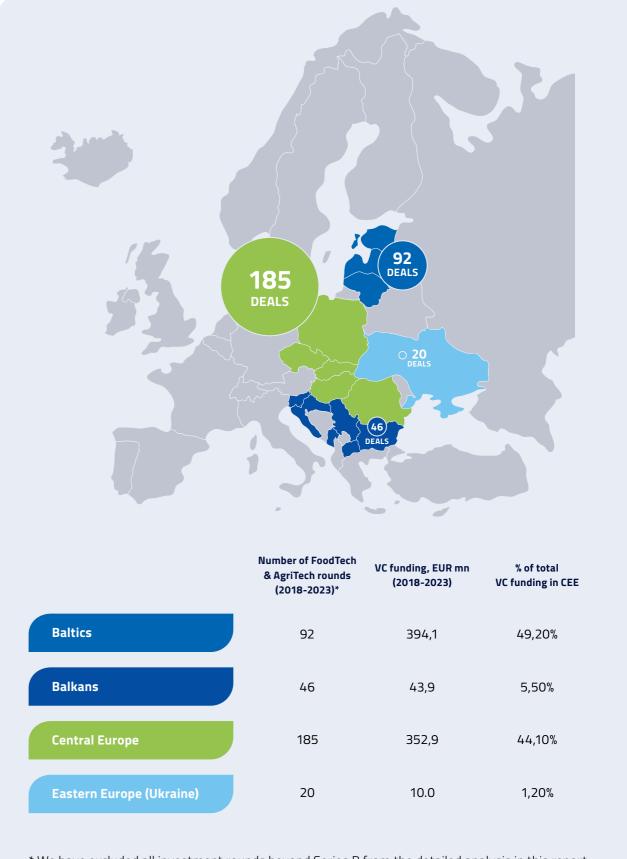
#### Top Rounds (excl. Bolt and Rohlik):

Year	Start-up	Amount EUR, mn	Stage
2022	trapview	10.0	Series B
2018	CLICK & GROW	9.3	Early VC
2023	MUNCH	7.0	Series A
2022	eAgronom	7.0	Series A
2022	> Nasekomo	7.0	Conv.
2023	ecobean-g	7.0	Grant
2022	Teafood	6.5	Seed
2021	conclerge	6.0	Early VC
2021	eAgronom	5.1	Early VC
2023	sundose°	5.1	Series A

**Top Funded Start-ups** (as of 01.01.2024 since their launch):

Name	Amount EUR, mn
Bolt	1757.8
rohlik	541.0
trapview	17.7
§ eAgronom	15.8
CLICK & GROW	15.2
Nasekomo	14.4
MUNCH	11.1
ecobean-g	9.2
zakaz.ua	9.0
$\text{sundose}^{\circ}$	7.3

<sup>\*</sup> This report draws upon information from various sources that are listed in the <u>Data Sources</u> section. While care has been taken to ensure the accuracy of the information presented, the authors do not guarantee or warrant the content's accuracy, reliability, or completeness. The information is provided for general educational and informative purposes only.



<sup>\*</sup> We have excluded all investment rounds beyond Series B from the detailed analysis in this report. Please see page 13 for more information.

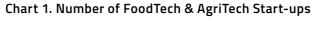
# The State of the CEE FoodTech & AgriTech

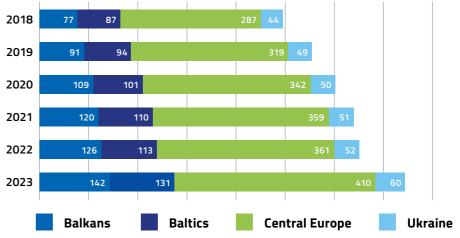
# CEE AGRITECH AND FOODTECH MARKET ANALYSIS

#### **Number of Start-ups**

The COVID-19 pandemic has brought the permanent shift in consumer behavior, leading to an exponential rise in demand for food e-commerce and online delivery services. FoodTech & AgriTech start-ups in the CEE region have leveraged the shift into unprecedented growth opportunities. From 2018 to 2022, the number of FoodTech & AgriTech start-ups has surged from 495 to 652, at the CAGR of 7.1%. This rate surpasses the broader start-up ecosystem's growth rate of 4.1% during the same period.

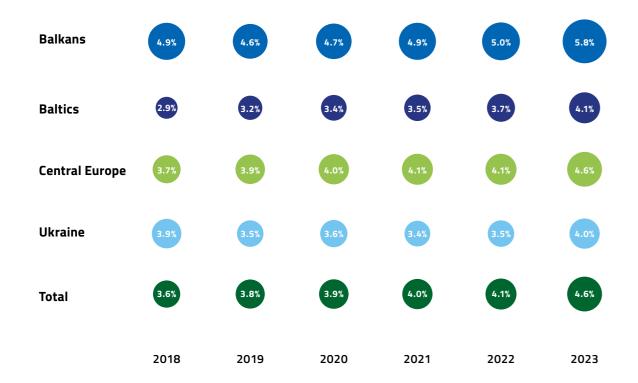
Furthermore, the escalating costs of food security and climate change have accelerated the speed at which start-ups in the CEE region have adopted technologies to address issues plaguing the food and agriculture sectors. This has resulted in a 14% surge in the size of CEE's FoodTech & AgriTech start-up sector in the course of 2023, maintaining a moderate interest from venture capital investors in this emerging industry. This interest has remained consistent, even amidst the broader pullback in venture capital activity and fundraising since 2022.





However, significant disparities in the stage of development and size of FoodTech & AgriTech start-ups have persisted in the CEE region. These disparities are manifested in the number of start-ups, the amount of funding raised and the activity of investors, as well as in the geographical concentration of start-ups and investors within the region's entrepreneurial hubs.

Chart 2. Regional Distribution of FoodTech & AgriTech Start-ups as a Percentage of Total Start-ups



The relative importance of FoodTech & AgriTech start-ups in the CEE start-up scene has been increasing, as these start-ups now comprise 4.6% of all CEE-based start-ups. This trend is particularly pronounced in the Baltics, where the sector has grown at an annual rate of 13.0% from 2018 to 2023. Consequently, there are about 23 FoodTech start-ups per 1 million population in the Baltics, markedly higher than the CEE average of 4.9 per million.

#### Did you know?





Innovators from the CEE region can take part in EIT Food Pan-European programmes together with their peers from other regions. Check the offer <a href="here">here</a>. CEE innovators can also participate in programs offered additionally solely to participants from CEE and South of Europe. Please check these programs <a href="here">here</a>.

#### Investment

#### 2018-2023 Investment Cycle

The analysis of the capital market processes provides critical insights about the FoodTech & AgriTech industry's stage of development and economic significance. It provides insights into how start-up ecosystems are evolving and what they are contributing to economic growth and competitiveness. High investment levels indicate the long-term quality and potential of firms to generate abnormal returns and make a significant impact on the economy and employment. These investments also indicate investors' confidence in start-ups' resources and capabilities to successfully scale globally and realize venture capital-scale returns. The investment processes reflect the maturity of the emerging FoodTech & AgriTech industry and opportunities for new entrants.

Throughout 2022, the FoodTech & AgriTech industry attracted significant investment in capital markets, with start-ups managing to raise more than EUR 26.6 billion globally, according to Dealroom. This figure, however, has dropped by 54.8% in 2023, reaching around 12.0 billion EUR in 2023<sup>1</sup>. In Europe, FoodTech & AgriTech start-ups secured EUR 3.7 billion of capital, which represented 30.8% of the total amount raised by the global FoodTech & AgriTech industry. Over the period between 2018 and 2023, European start-ups from this emerging industry were able to secure an increasing amount of capital, with a CAGR of 7.6%.

FoodTech and AgriTech startups in CEE have shown remarkable growth over recent years. In 2018, these startups collectively raised a modest EUR 176 million, but by 2022, the figure surged to an impressive EUR 922.9 million. To better understand the factors driving this growth, we analyzed 302 investment rounds from 2018 to 2022, totaling EUR 2,427.0 million. Additionally, we examined 47 investment rounds in 2023, contributing an additional EUR 107.7 million, culminating in a total investment of EUR 2,534.7 million in the CEE FoodTech and AgriTech sectors from 2018 to 2023.

It's crucial to highlight that significant contributions to this capital influx came from growth-stage funding rounds of Estonia's mobility company Bolt and the Czech grocery delivery app Rohlik. From 2019 to 2023, Bolt and Rohlik together amassed EUR 1.73 billion in B+ series funding. Excluding these major growth-stage rounds, the FoodTech and AgriTech sectors in CEE attracted EUR 692.5 million from 2018 to 2022, topping EUR 800 million in 2023.

This data underscores the challenges in making generalizations about the industry, considering the diverse nature of companies ranging from cultivated meat producers to quick meal delivery services. The presence of a few significant funding rounds can dramatically alter the perception of overall investment trends. The market's ability to produce both high-value unicorns and less-funded startups calls for a more nuanced, segmented analysis rather than broad generalizations. Consequently, in the subsequent sections of this report, we have chosen to exclude all later-stage VC investment rounds (Series C and above). We will clearly indicate any exceptions to this approach.

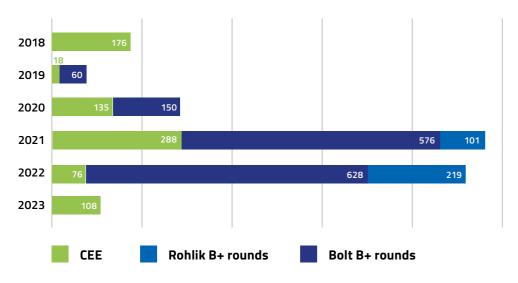
<sup>1</sup> As of December 2023, according to Dealroom estimate.





CEE FoodTech & AgriTech funding is 2.9% of all EU FoodTech & AgriTech funding

Chart 3. CEE FoodTech & AgriTech Funding by Year







#### Interview with EcoBean's Board Member, Maciej Majchrowicz

#### Do you believe that your market is open to in- Was getting funding the biggest challenge novations like yours?

Absolutely. We are starting in Europe due to prox- Our complicated sales process poses key chalhave to utilize every option available.

#### Is it easy to find capital to fund a company like yours?

Previously, we incorrectly assumed that impact and climate tech VCs would be interested - but we have not seen much appetite from them. However, we do see strong interest from industry and AgTech investors. We are VC-backed, but funding infrastructure and CAPEX carries challenges.

# for you so far?

imity, but decarbonization is a global issue with lenges. With diverse products and several target worldwide potential. Conversations with pro- markets, straightforward sales are difficult. We spective clients confirm the broad appeal. Reg- deal with food, cosmetics and pharma - this comulatory and commercial pressures on businesses plexity makes it tough to determine how best to to decarbonize continue mounting - they will soon sell our chemical products industry-by-industry. That said, our spin-off origin from Warsaw University of Technology has facilitated much, and we carry out ongoing joint projects. Additionally, one founder has lifelong commercialization experience - an asset we leverage.

#### ecobean-

Website: https://ecobean.pl

Year founded: 2017 HQ Country: Poland

EcoBean addresses the significant problem of coffee waste. Coffee ranks as the fifth-largest food commodity globally, leading to considerable amounts of waste — specifically, over 3 million tons of spent coffee grounds are generated annually in Europe alone. Traditionally, these grounds are discarded into landfills, representing a missed opportunity given that they are a rich source of biomass. EcoBean produces sustainable chemicals from coffee waste utilizing its pateneted technology. Chemicals produced have super-low carbon footprint thus are attractive for various industries.





#### **Investment Contraction**

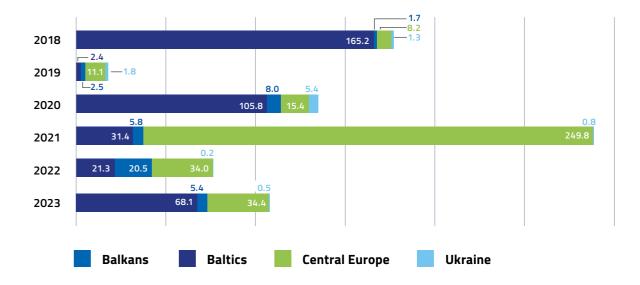
The recent pullback in venture capital activity and elevated interest rates have limited the access to growth capital for start-ups regardless of their domicile, marking the end of an extraordinary investment cycle, during which start-up ecosystems rapidly evolved into economically significant clusters. The contraction in the amount of capital raised by the CEE-based FoodTech & AgriTech start-ups highlights the difficulties they face, regardless of their location, size, and maturity, in navigating through a hostile capital market environment.

The magnitude of the contraction in financing of the CEE-based FoodTech & AgriTech start-ups is manifested by a 73.6% drop in capital they raised in 2022, relative to 2021. Despite a notable 42.8% increase in 2023 compared to the previous year, the capital raised remains 62.3% lower than the levels observed in 2021, as well as lower than those in 2020 and 2018 (Chart 4).

The magnitude of the contraction highlights the necessity of prompt government action in supporting the liquidity of CEE-based FoodTech & AgriTech start-ups by implementing the schemes relevant for start-ups at different stages of their maturity for financing of their operations and continuous product development processes. It calls for the increasing role of government agencies in stepping up monitoring and support to the most affected firms in this emerging industry, given their significance for the ongoing transition to a net zero food system, improving sustainability and efficiency of food production and consumption and reducing food waste across the food supply chain, amidst rising food insecurity and cost.

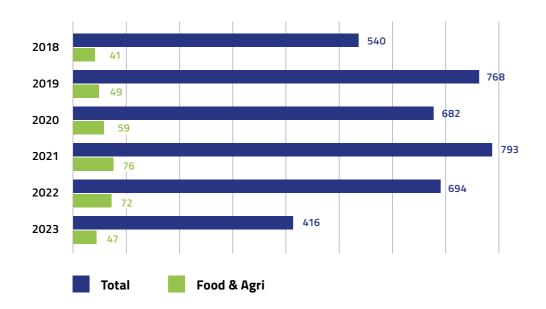
Despite the general pullback in venture capital activity and fundraising since 2022, investors have maintained an interest in CEE-based early-stage FoodTech start-ups raising pre-seed and seed rounds. In the AgriTech space, investors have shifted their focus to larger and low-er-risk deals, resulting in longer deal-closing times and general pullback from investing in early-stage AgriTech start-ups.

Chart 4. Total Funds Invested in FoodTech & AgriTech Start-ups across Analyzed Regions, EUR mn



With a CAGR of 15.1% from 2018 to 2022, the CEE start-up ecosystem demonstrated consistent growth in funding rounds (+75.6% vs 2018), peaking at 76 in 2021. However, there was a slight downturn in 2022 with 72 rounds (Chart 5), reflecting a 5.3% decrease compared to 2021. The trend persisted into 2023, with a reported 47 rounds, marking a notable decline of 34.7% compared to the previous year, consequently reducing the 2018-2023 CAGR to just 2.8%. This decline in funding rounds further confirms a shift in investment dynamics.

Chart 5. Number of FoodTech & AgriTech Funding Rounds across Analyzed Regions

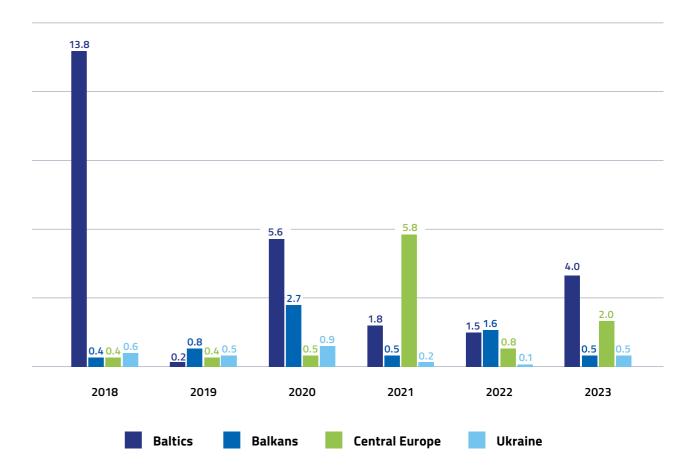


#### **Average VC Round Size**

From 2018 to 2022, the average funding per round in the CEE-based FoodTech & AgriTech sectors underwent an almost 76% decrease, plummeting to EUR 1.1 million per round (Chart 6). This decline underscores the sector's substantial reliance on venture capital for growth. Notably, FoodTech & AgriTech funding rounds, which were 3.3 times larger than the overall CEE average funding per round in 2018, witnessed a dramatic shift by 2022. In 2023, this metric rebounded, reaching EUR 2.3 million per round, which is now 1.6 times higher compared to the overall average funding per round in the CEE.

It's noteworthy that the exceptional average funding per round in the sector for 2018 and 2021 can be attributed to early-stage investments in food logistics & delivery start-ups. A significant part of this investment is focused on broader services, such as those provided by Estonian company Bolt, a global ride-hailing and mobility company. While Bolt's food logistics & delivery business is just a segment of its core activities, its substantial fundraising efforts have notably influenced these higher average figures.

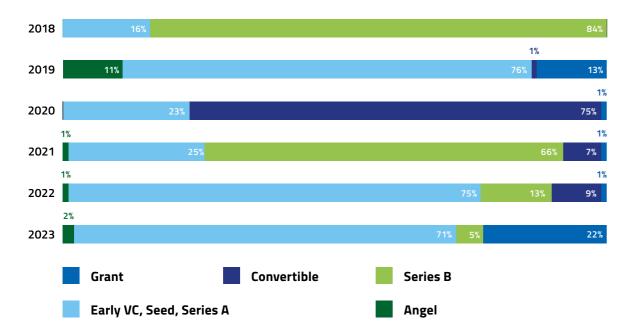
Chart 6. Average Funding per Round, EUR mn



The AgriTech and FoodTech CEE investment landscape witnessed dynamic shifts from 2018 to 2022 in terms of preferred maturity. In 2018, the sole Series B round, specifically Bolt's megaround, constituted a substantial 84% of the investments (Chart 7). However, in 2019, 76% of investments were directed towards early-stage endeavors (Seed and Series A), demonstrating a commitment to nurturing nascent ventures. This trend persisted through 2020. In 2021, there was a resurgence in Series B investments at 66%, fueled by the growing interest in food logistics & delivery companies like Bolt or Rohlik due to COVID, signaling increased confidence in slightly more established companies. Remarkably, 2022 showcased a transformative shift, with early-stage investments claiming a commanding 75%.

Investors have maintained moderate confidence in pre-seed and seed rounds of FoodTech & AgriTech throughout 2022 and 2023. Notably, Series B funding has experienced a significant decrease, contracting to 5% and indicating a strategic reevaluation. Angel funding and convertible notes have demonstrated marginal increases, while grant funding has seen a noteworthy rise to 22%. This diversified approach in 2023 reflects a dynamic and flexible investment land-scape.

Chart 7. Angel, Earl VC, Seed, Series A, LateVC, Convertible



#### FoodTech Funding as % of CEE VC Funding

The FoodTech & AgriTech sector has maintained a significant presence in the CEE venture capital investment landscape despite fluctuating investment patterns across different countries. In 2020, FoodTech start-ups represented a substantial 15.3% (Chart 8) of the total VC investments in the CEE region, highlighting the sector's appeal. This surge in investment was primarily driven by an intensified focus on the food logistics & delivery sector, a trend that gained momentum during the COVID-19 pandemic.

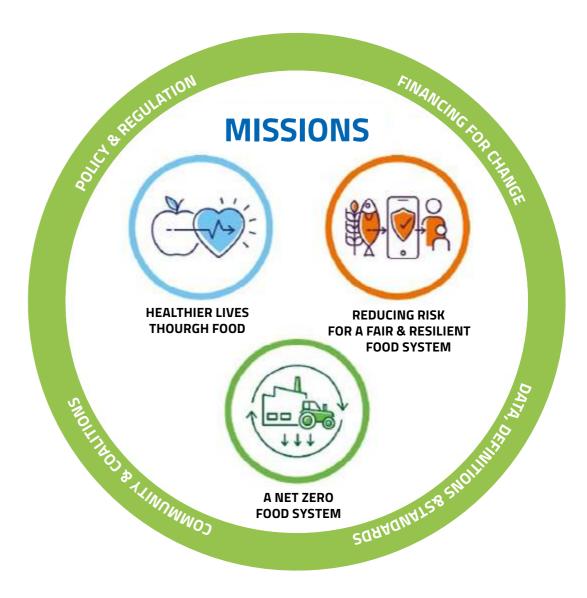


Chart 8. Share of FoodTech & AgriTech Investment in Total VC Funding



#### FoodTech & AgriTech Subindustries

Our analysis of the FoodTech & AgriTech industry explores five areas across a broad value chain of food production, distribution, consumption and recovery: food logistics & delivery, food in-store retail & restaurant tech, innovative food, kitchen & cooking tech and AgriTech.

At EIT Food, we are particularly interested in FoodTech & AgriTech companies that can enhance quality of life through food (e.g. by providing consumers access to affordable, health-ier products and actionable information for better decision making), address climate change challenges by fostering transition to a net-zero emission' food system and develop solutions to make food system more resilient.

	Rounds	2018	2019	2020	2021	2022	2023	Total
- <del>E</del> _3	Logistics & Delivery	6	13	5	18	11	5	58
	In-store Retail and Rest. Tech	8	8	13	17	13	6	65
D S S S S S S S S S S S S S S S S S S S	Innovative food	3	12	12	19	17	17	80
	Kitchen & Cooking Tech	3	2	3	1	0	1	10
	AgriTech	21	14	25	21	31	18	130

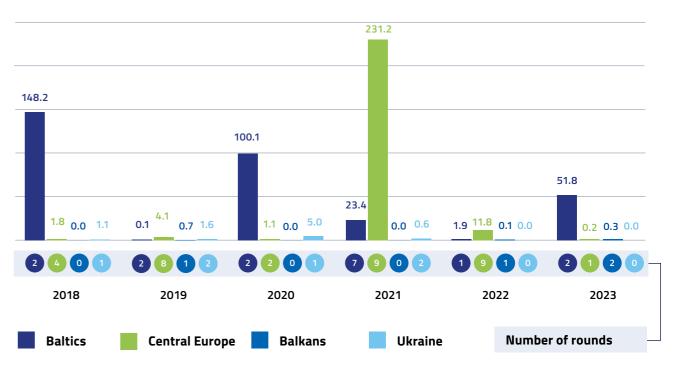
	Funding, EUR mn	2018	2019	2020	2021	2022	2023	Total
<b>£</b> ,	Logistics & Delivery	151.1	6.5	106.2	255.1	13.8	52.3	585.0
₩ ₩	In-store Retail and Rest. Tech	2.0	2.0	3.8	7.9	8.0	15.1	38.9
St.	Innovative food	0.9	4.2	8.1	15.9	9.7	12.9	51.7
	Kitchen & Cooking Tech	0.9	0.8	0.4	0.1	0.0	1.4	3.5
	AgriTech	21.6	4.4	16.1	8.8	44.4	26.6	121.8

# Food Logistics & Delivery

The growth of the FoodTech industry in the CEE region has been primarily associated with the rapid development of food e-commerce and online delivery services. This marketplace has attracted some of the largest rounds of investment in this region and FoodTech, due to promising venture capital-scale returns. Since 2018, CEE-based food logistics & delivery start-ups have raised EUR 2.2 billion in early-stage and growth-stage rounds to finance their operations and scaling-up. Adjusted for growth-capital rounds, since 2018, CEE-based food logistics & delivery start-ups have raised EUR 585.0 million in 58 early-stage rounds (Chart 9).

Within the CEE region, there are significant disparities in terms of the size and funding of food logistics & delivery start-ups, attributable to the exceptional growth of several companies. Baltics-based Bolt and Central Europe-based Rohlik have successfully garnered early- and late-stage funding for scaling-up and international expansion.

Chart 9. VC Deal Activity (Capital Raised in EUR, mn and Number of Rounds) by Food Logistics & Delivery Start-ups 2018-2023



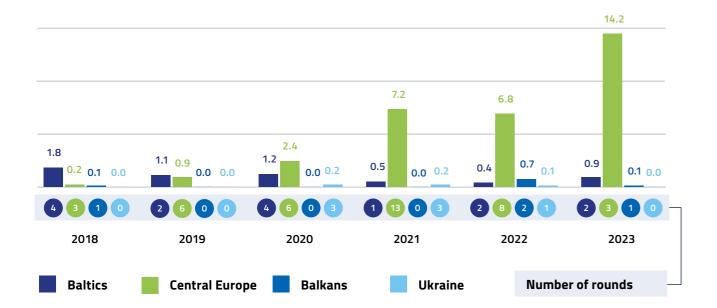
The recent pullback in venture capital activity and elevated interest rates have limited the access to growth capital for Food Delivery & Logistics start-ups in the CEE, resulting in sudden contraction in the amount of raised capital by start-ups and number of investment rounds, pointing to a hostile capital market environment for start-ups regardless of their size and maturity.

# Food In-Store Retail & Restaurant Tech

Start-ups in the food retail & restaurant technology space have been disrupting traditional food supply chains by leveraging technologies in improving sustainability and efficiency of food production and consumption, reducing food waste across the food supply chain and engaging customers in transition to a net zero food system.

Since 2018, the CEE-based start-ups in this marketplace have collectively raised EUR 38.9 million in 65 mostly pre-seed and seed rounds (Chart 10). The early-stage food retail & restaurant technology start-ups from the CEE region have only recently demonstrated the first traction in scaling-up and maturing, led by Hungary-based Munch, which was among the first to secure Series A funding for international expansion in the food retail tech marketplace. Being an emerging subindustry with significant regional disparities in terms of the size of start-ups and their growth traction, the food retail and restaurant tech is yet to experience broader interest of growth-stage investors, as it gradually matures.

Chart 10: VC Deal Activity (Capital Raised in EUR, mn and Number of Rounds) by Retail & Restaurant Tech Start-ups 2018-2023



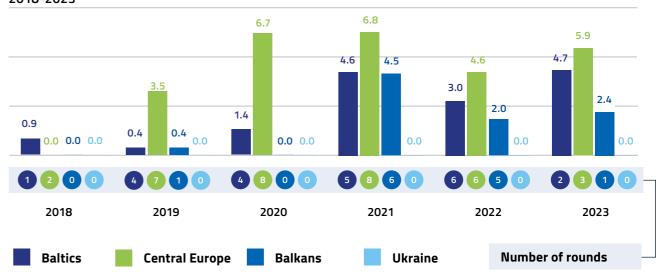


Rising consumer awareness of food insecurity has fueled the growth and investor interest in this emerging marketplace. Start-ups in this space are utilizing biotechnology to create affordable, healthier and more sustainable food and respond to change in consumer behavior and shift towards diversified proteins.

Innovative FoodTech & AgriTech start-ups are innovating with both cell-based and plant-based meat substitutes, closely replicating the taste and texture of animal meats. Companies like Mewery, Juicy Marbles, Bene Meat Technologies, Planeat, Plantcraft, and Mana have led this trend, developing alternative protein sources and offering products such as cell-based meat, plant-based deli meat and nutritionally complete plant-based foods. These innovations cater to the increasing demand for sustainable and ethical food options.

Led by start-ups from Central Europe and the Baltics, the CEE-based innovative food players have collectively raised capital amounting to EUR 51.7 million in 80 mostly pre-seed and seed funding rounds since 2018 (Chart 11). Despite the general pullback in venture capital activity and fundraising since 2022, investors have continued to maintain moderate interest in the CEE-based innovative FoodTech & AgriTech start-ups raising pre-seed and seed rounds.

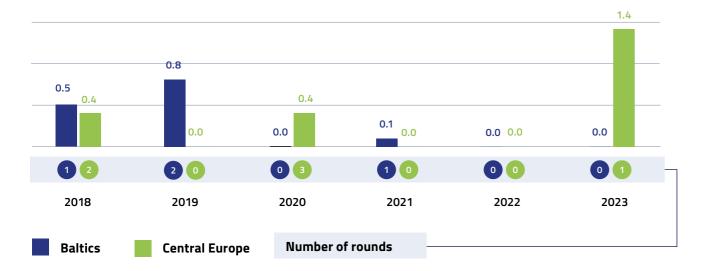
Chart 11: VC Deal Activity (Capital Raised in EUR, mn and Number of Rounds) by Innovative Food Start-ups 2018-2023





Start-ups in this emerging marketplace leverage various technologies in development of innovative cooking appliances or cookware. This nascent marketplace has been concentrated in the region of Baltics and Central Europe, with a small number of start-ups that have collectively raised EUR 3.5 million in one pre-seed and one seed funding round since 2018 (Chart 12).

Chart 12: VC Deal Activity (Capital Raised in EUR, mn and Number of Rounds) by Kitchen and Cooking Tech Start-ups 2018-2023







#### Interview with Napiferyn Biotech's CEO and Co-founder, Magdalena Kozłowska

#### What are Napiferyn's biggest strengths?

Our process capitalizes on a waste stream produced from rapeseed oil pressing, which is currently underutilized as low-value feed. We've developed a method to extract high-quality FoodTech protein from this overlooked resource. Following a circular economy model, we eliminate the need to sow new fields, instead maximizing the potential of existing raw materials. This approach is not only sustainable but also beneficial in terms of resource efficiency.

#### What has been you major challenges so far?

As pioneers in our field, we confront several commercialization challenges, including securing funding, navigating complex registration procedures, and protecting intellectual property. These processes are often tedious, lengthy, and expensive. Specifically, applying for grants and acquiring venture capital funding is time-consuming and highly competitive.

# How mature is the ecosystem around FoodTech & AgriTech in your country?

Navigating the FoodTech & AgriTech ecosystem in Łódź is familiar territory for us. At our inception, the market was abundant with grant opportunities, providing our initial financial boost. Additionally, we are pleased to be based in Poland, Europe's third-largest producer of rapeseed.



Website: <a href="https://napiferyn.com">https://napiferyn.com</a>

Year founded: **2014** HQ Country: **Poland** 

Napiferyn Biotech developed a novel method to extract rapeseed protein from the by-products of oil pressing. The company is utilizing an unexploited raw material - rapeseed - as a new protein source for the food market. This approach targets the escalating global demand for protein, which cannot be adequately and sustainably met by animal protein sources alone.





Start-ups in the AgriTech sector are leveraging advanced technologies to enhance yields, farming activity and resilience of the food system, fostering faster transition to regenerative agriculture and adoption of sustainable practices and processes in food production. The region's predominantly small-scale farming structure with limited income prevents faster adoption of new technologies by farmers and the shift to more sustainable and resilient agriculture. Ukraine, with its vast agricultural resources and few AgriTech start-ups is the largest market for CEE-based AgriTech start-ups.

#### Did you know?





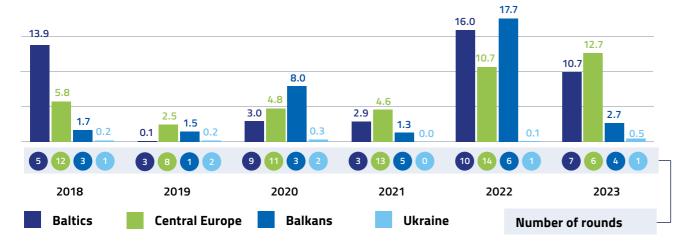


EIT Food builds strong alliances between world-class industry partners and start-up community to accelerate the growth of the innovative economy in Europe as part of corporate venturing services. More information here.

Amid growing concerns about food security, there is an increasing focus on enhancing productivity and sustainability in agriculture. Key technologies driving this change include precision agriculture, vertical farming, and IoT-enabled sensors. These innovations are revolutionizing traditional farming practices by integrating advanced methodologies like robotics and data analytics, which significantly improve efficiency and optimize yields. AgriTech start-ups are playing a critical role in this transformation, accelerating the transformation towards more effective and sustainable agricultural practices.

Since 2018, CEE-based AgriTech start-ups have collectively raised the capital amounting to EUR 121.8 million in 130 mostly pre-seed and seed rounds (Chart 13). Amidst market volatility and a slowdown in venture capital activity, investors have shifted their focus to larger and lower-risk deals, resulting in longer deal-closing times and general pullback from investing in early-stage AgriTech start-ups.

Chart 13: VC Deal Activity (Capital Raised in EUR, mn and Number of Rounds) by AgriTech Start-ups 2018-2023





## **DEEP DIVE INTO SUB-REGIONS**

To better grasp regional dynamics, we closely examined countries across Central and Eastern Europe comprising distinct sub-regional ecosystems. For analytical purposes, we categorize these into three clusters: the Baltics (Estonia, Latvia, Lithuania), Central Europe (Czechia, Hungary, Poland, Romania, Slovakia), and the Balkans (Bulgaria, Croatia, Montenegro, North Macedonia, Serbia, Slovenia). Given Ukraine's singular position in the food industry and economic contrasts, we analyze it as a distinct CEE entity.

Our pioneering analysis reveals that there is a there is a statistically significant relationship between Innovation Indexes of the countries in the CEE region and capital raised by domiciled FoodTech & AgriTech startups - notably AgriTech (p: 0.0007), food retail & restaurant tech (p: 0.02), and food logistics & delivery (p: 0.001). Our findings indicate that start-ups in technologically advanced regions of the CEE region have been able to successfully grow internationally as technology rather than domestic agricultural resources provided new opportunities in FoodTech & AgriTech marketplaces. The clustering of marketplace leaders in the Baltics underscores this conclusion: high-quality start-ups have clustered in the region's most technology-intensive clusters.







#### Interview with SatAgro's CEO & Co-founder, Przemysław Żelazowski

#### What problem is SatAgro addressing?

SatAgro platform helps farms save money while simultaneously reducing their negative impact on the environment and increasing resilience to climate change. The consumption of production means in cultivation is poorly matched to crop properties. With satellite technology, we help streamline cultivation which benefits both the environment and profitability. We analyze the condition of the crop (nitrogen fertilization), are engaged in soil research, allowing for precise treatments. This integration of soil data from satellites and directly from the soil helps us know what to use besides nitrogen. Our focus is on optimizing plant nutrition, protection, and irrigation, but nutrition is the most important. The key is the quantities of fertilizers used.

#### How did the company start?

I was doing a PhD at Oxford and studying climate change and at that time people were still laughing about it. Now even people in the hard-minded Poland are thinking about transitioning towards net zero. We were able to start the company running with an R&D grant, but we managed to use it to create the early version of our platform.

# What are the biggest challenges you are facing right now?

Though we monitor about 1.5% of all crops in Poland, we did not put enough effort into our marketing and communication. We grow mostly through partnership, so we are not worried about the markets like Poland where we already have strong presence. We previously thought that the platform would suffice. Now we know that a local representative is needed for sales. Abroad we have single farms, mainly in Spain. We also have a large contract in the USA. We are now trying to expand our business to other entities. Our industry is often too complicated for investors. The sector is complex and it is not obvious how to get a return.



Website: https://satagro.pl

Year founded: 2013

HQ Country: Poland

SatAgro offers farm monitoring services using satellite imagery. It provides agricultural data insights, including crop monitoring, historical data management, event logs, prescription mapping, geolocation, data export, weather forecasting, and consulting services, enabling remote access to comprehensive data insights for users.

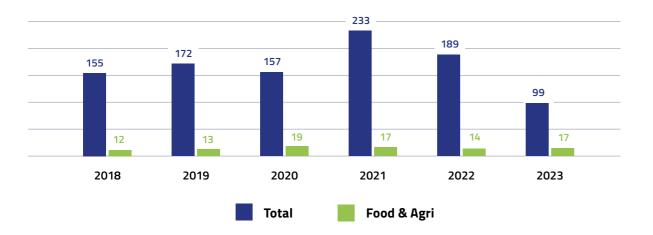


#### **Baltics**

#### **Number of Start-ups**

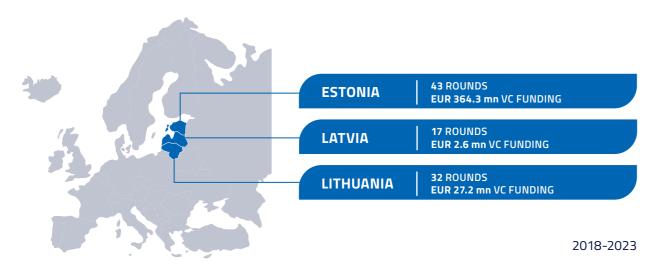
There were 142 FoodTech & AgriTech start-ups in the Baltics, representing 20.8% of the FoodTech & AgriTech start-ups of the whole CEE region as of 2023. The growth in the number of start-ups in the Baltics has continued throughout 2023 despite external financing challenges, increasing its share in the overall start-up scene of the Baltics to 4.1%.

Chart 14. Number of FoodTech & AgriTech Rounds versus Total Number of VC Investment Rounds in the Baltic Sub-region 2018-2023



#### Investment

This technology-intensive region of the CEE has led the growth of the CEE's FoodTech & AgriTech. Start-ups of the Baltics region have raised 49.2% of the capital invested in the CEE's FoodTech & AgriTech start-ups since 2018.







#### Interview with Got Foods Co-founder, Michel Wettstein

#### What is the problem you are addressing?

At Got Foods, we are addressing the critical need for dairy substitutes that authentically replicate the taste and texture of traditional dairy products. Global consumers often struggle to find plant-based alternatives for cow milk, cheese, and spreads that closely resemble dairy. Our products are formulated using pea protein as the main source of protein, along with other innovative sources, to provide consumers with dairy substitutes that deliver both nutritional value and sensory experience.

# Are there easily accessible resources for R&D in your country and field? How did the product development look in your case?

In our case, when we initially conceptualized our idea, we engaged with the EIT Food, which facilitated the alignment of our concept with consumer needs and market dynamics. It helped us to think about the market when working on the product. Next, extensive refining and focus group sessions were instrumental in fine-tuning our products to meet consumer preferences effectively.

Moreover, while we benefited from external grants, a significant portion of our product development was driven by internal R&D efforts, leveraging our laboratory facilities.

ucts. Global consumers often struggle to find plant-based alternatives for cow milk, cheese, and spreads that closely resemble dairy. Our products are formulated using pea protein as the products are products are formulated using pea protein as the products are producted as the product are producted as the producted are producted as the pr

The market we operate in is receptive to innovations like ours, as evidenced by the interest and demand we have observed. Our perspective on international expansion is positive, with ongoing testing in the Baltics and plans to explore opportunities in the Benelux and Denmark. To facilitate successful expansion, we recognize the importance of securing the right partners in these markets, particularly due to existing competition, and are actively seeking local collaborations to support our growth initiatives.



Website: https://got-foods.com/

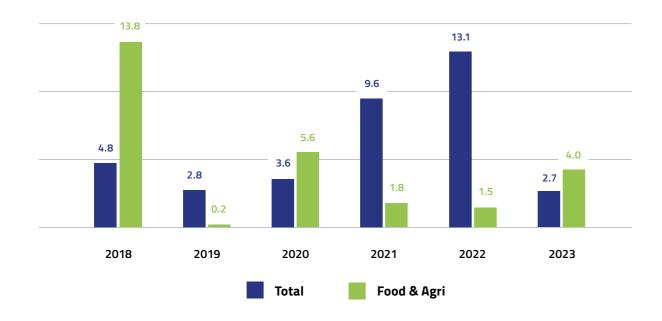
Year founded: **2022** HQ Country: **Latvia** 

Dairy substitutes created out of pure proteins found in split peas. This alternative tastes like actual dairy. While it is without lactose, gluten, and any other allergens.



The late-stage financing deals have resulted in significant volatility in the amount of capital raised by FoodTech & AgriTech start-ups of the Baltics region, which recessed to EUR 68.1 million of raised capital in 17 rounds in 2023 (Charts 14 & 15), as the growth financing in the region essentially dried out. The change in investor sentiment has led to 71.0% decline in capital raised by FoodTech start-ups from the Baltics region to EUR 4.0 million per round in 2023 (Chart 15) vs 2018, highlighting a maintained investor interest in pre-seed and seed-stage deals.

Chart 15. Average Funding per Round in the Baltics Sub-region, EUR mn



#### **Estonia**

Estonia has attracted the CEE region's largest FoodTech investment. Its start-ups have raised 45.5% of the capital secured by the CEE FoodTech & AgriTech firms. Growth financing for heavyweights like Bolt, Click & Grow and EAgronom comprises these monumental sums. Estonia's VC ecosystem was particularly vibrant in 2020, contributing EUR 102.1 million (96.5%) investment in Baltics' FoodTech & AgriTech, mainly due to a large Series B investment in Bolt.

## Lithuania

Lithuania's start-ups have raised far smaller sums than Estonia - just 3.4% of the total CEE FoodTech & AgriTech investment since 2018. However, some firms have recently captured investor interest despite the VC pullback. Leafood raised a substantial EUR 6.5 million seed round in 2022. Meanwhile, HeavyFinance and Divaks secured seed funding in 2023 - signaling enduring appetites targeting particular niches.





#### Interview with Biorefic Co-founder, Emils Paupe-Balodis

#### Operating in the zero-waste and food alternatives sphere, what are the biggest advan- mature is it? What are its strengths and tages you have?

Our key advantage lies in our efficient upcycling In Latvia, private funding heavily relies on your process, which minimizes production costs by utilizing waste materials, giving us a competitive edge. Collaboration with local academic partners enhances our capabilities and provides strong support.

#### What are the biggest challenges you are dealing with?

We are currently facing difficulties in expanding our production process. While we have been successful in producing small batches in a research institute, scaling up to a pilot project with a farm presents hurdles related to registration and the acquisition of additional equipment. As a result, we are actively seeking contract manufacturers to facilitate the production process and equipment acquisition as we navigate these challenges and work toward our goals.

#### Let's look at the Latvian ecosystem. How weaknesses?

network and access to relevant partners. The pool of private money available for investment is relatively small. Additionally, while there are early-stage VCs in the country, the terms offered can be unfavorable considering the specifics of our sector, despite the European Union's support. It's worth noting that most business angels are primarily from the IT sector and may not fully understand the agrifood industry.



Website: http://biorefic.com/

Year founded: 2021 HQ Country: **Latva** 

Biorefic is a next-generation zero-waste biorefinery manufacturing prebiotics, alternative lipids, and proteins for animal feed and aquaculture without using food inputs.







#### Interview with Äio Co-founder, Nemailla Bonturi

#### What is the problem you are addressing?

Agriculture and food companies are facing escalating pressure to decarbonize due to increasing regulatory and commercial pressures. Our proprietary technology offers the potential to alleviate the adverse effects of the present food production process. By valorising side streams from agricultural, forestry, and food industries through fermentation, we're not only helping to mitigate CO2 emissions and biodiversity loss, but we're also addressing food security challenges. By harnessing biotechnologically produced ingredients, we are bolstering resilience in the face of climate change, ensuring a more sustainable and secure global food supply.

# your products?

We face two key challenges in scaling our products. Firstly, the EU's stringent novel food regulations can be restrictive, pushing FoodTech companies to seek markets abroad instead. Secondly, complex waste management regulations result in drawn-out processes when engaging with officials and investors. Navigating lengthy discussions requires immense patience as we untangle complex standards. However, the potential for growth remains promising. With persistence and savvy navigation of regulatory hurdles, the fertile opportunities for expansion and innovation across the food and waste industries beckon.

#### What do you think about the FoodTech & AgriTech ecosystem in your country?

The FoodTech & AgriTech ecosystem in Estonia has made notable strides recently, centered around industry-focused hackathons and a knowledgeable tech community. We can leverage What are the challenges you're facing to scale a strong pool of seasoned start-up operators and scientists. Additionally, grants aimed at facilitating knowledge transfer and innovation are readily accessible, further catalyzing growth.



Website: https://aio.bio

Year founded: 2022

HQ Country: Estonia

ÄIO is a biotechnology company upcycling side streams to value-added food and oleochemical ingredients.

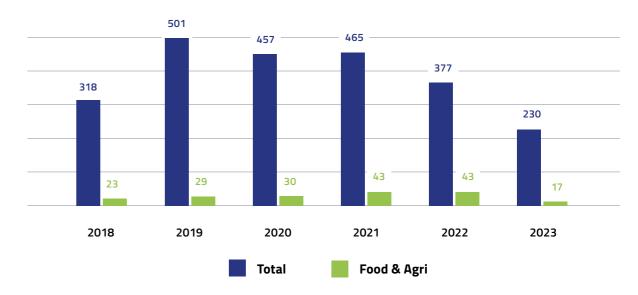


#### **Central Europe**

#### Number of start-ups

There were 410 FoodTech & AgriTech start-ups in the countries of Central Europe, representing 60.0% of the FoodTech & AgriTech start-ups of the whole CEE region as of 2023. The growth in the number of start-ups in Central Europe has continued throughout 2023, despite the overall capital market turmoil.

Chart 16. Number of FoodTech & AgriTech Rounds versus Number of Total VC Investment Rounds in the Central European Sub-region 2018-2023



#### Investment

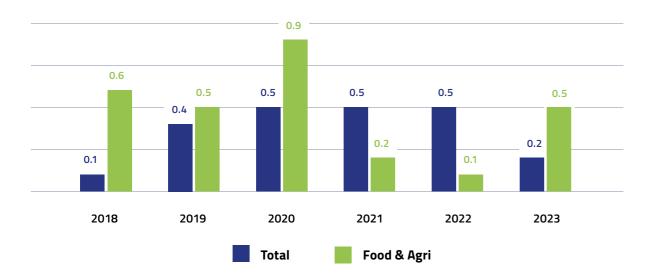
Central Europe has seen 44.1% of the total CEE FoodTech & AgriTech investment since 2018. From 2018-2022, funding grew at a 42.6% CAGR. COVID-driven growth capital propelled firms like grocery delivery unicorn Rohlik.

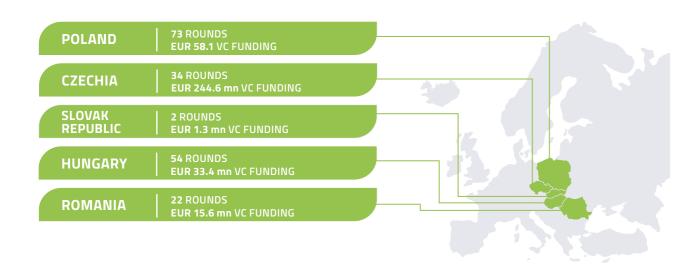
However, recessionary headwinds emerged in 2022. FoodTech & AgriTech funding dropped to EUR 34.0 million across 43 rounds, as growth financing stalled (Chart 16). Investor sentiment shifts led to an average size of round plummeting to EUR 0.1 million in 2022 (Chart 17). The total investment in the region in 2023 remained on the same level, reaching EUR 34.4 million over a significantly lower number of rounds - just 17 (-60.4% vs 2022). Consequently, funding per round increased to EUR 0.5 million per round.

Despite broader economic challenges, investor appetite persists for pre-seed and seed stage opportunities in Central Eastern Europe. This enthusiasm is evident in several notable early-stage rounds from the first 3 quarters of 2023, including:

- A EUR 2.6 million Series A investment in Polish AgriTech start-up Fresh Inset, which is developing solutions for optimized fruit growing.
- A EUR 2.7 million early-stage venture capital investment in Czech start-up MIWA.eu, which offers automated micro warehouses to enable inner-city e-commerce deliveries.
- A EUR 2.5 million seed investment in Polish AgriTech start-up Napiferyn, which developed a method to extract proteins from rapeseed.

Chart 17. Average Funding per Round in the Central European Sub-region, EUR mn





2018-2023





#### Interview with ekolive founder Darina Styriakova and board member Markus Klein

#### What is the problem you are addressing?

ekolive offers innovative bioleaching solutions for the mining industry, providing sustainable alternatives to traditional methods. Our bioleaching processes utilize natural microorganisms to accelerate mineral degradation, and reduce environmental impact while producing natural biolmelstimulants. In Agritech, we focus on improving soil health and agricultural productivity using these biolmelstimulants that promote the soil microbiome, improve nutrient availability, and at the same time positively stimulate plants in many ways. These contribute to regenerative agricultural practices and higher crop yields.

# What are the biggest challenges your startup and your sector is facing?

Due to seasonality, time to market is a major challenge in the agricultural sector. It often takes several years of testing to gain the trust of potential users. Similarly, in the mining sector, we have seen lengthy negotiations, with it taking up to four years to establish a partnership.

Our products are organic plant strengtheners or biostimulants, which somehow fall between the statutory categories of fertilizers and pesticides. Nevertheless, product registration in the EU and in individual countries only allows assignment to one of these categories. And resistance from established industry players is hindering opportunities to change these regulations. Furthermore, our product falls into the unprotected category of biostimulants, in which the market is saturated with predominantly chemical-based solutions that are nevertheless declared as "organic" and which have often proven to be ineffective. This has led to a general lack of trust in biostimulants among potential customers.

Do you feel that the market in which you are present is open for innovations such as yours? What are your perspectives on international expansion?

We are continually expanding into new markets and are initially targeting agriculture in CEE and then worldwide. Contrary to expectations, farmers in CEE are more open-minded than in Western Europe - there are larger and more open-minded companies there. We also have increasing interest from companies in Central America and especially Africa, where interest and openness - and also the markets - are much greater than in Europe. The challenge is to find importers and sales partners who know how to convince end customers. Registrations outside the EU are resource intensive and can take up to a year, which in turn poses a challenge to the protection of intellectual property and trade secrets.

We also have inquiries from international mining companies who want to set up production and sales as licensees in other continents; this is currently under negotiations.



Website: <a href="https://ekolive.eu/">https://ekolive.eu/</a>

Year founded: 2008, active since 2018

HQ Country: Slovakia, a sister company in Germany

ekolive is the first and leading provider of an EU/ETV-certified eco-innovative bioleaching method for processing minerals and soil using bacteria.

# Czechia

Czechia has attracted the largest amount of FoodTech & AgriTech capital in Central Europe, due to growth financing provided to Rohlik in 2021. Since 2018, Czechia-based FoodTech & AgriTech start-ups have attracted 30.6% of the total investment made in the CEE FoodTech & AgriTech start-ups, in the total amount of EUR 244.6 million.

#### **Poland**

Poland-based FoodTech & AgriTech start-ups have attracted 7.3% of the total investment in the CEE FoodTech& AgriTech start-ups made since 2018, in the total amount of EUR 58.1 million. FoodTech company EcoBean raised a EUR 2.1 million seed round in 2022 and a EUR 7.0 million grant from the Polish government in 2023.

#### Romania

Romania's FoodTech & AgriTech industry has attracted 2.0% of the total investment made in the CEE FoodTech start-ups since 2018, in the total amount of EUR 15.6 million, led by EUR 6 million series A investment of BoB Concierge in 2021.

#### Hungary

Hungary-based FoodTech & AgriTech start-ups have secured 4.2% of the total investment made in the CEE FoodTech & AgriTech start-ups since 2018, in the total amount of EUR 33.4 million, led by the series A round of Munch, raised in the course of 2023. Hungary has a balanced mix of start-ups in the FoodTech & AgriTech space. Smapp Lab has been its latest AgriTech to secure its seed-stage funding.





#### Interview with Ullmanna's CEO & Co-founder, Martin Ullmann

# addressing?

We are primarily addressing two concerns: the excessive use of chemicals in crop protection and the need for more sustainable farming practices. Our solutions are geared towards reducing manual labor and automating organic farming.

#### Do you find your market receptive to innovations like yours?

Most of our customers are in the DACH region, Belgium, Italy, and a few in the Czech Republic, Poland, and Slovakia. We're a B2B company and have thought globally from the start. We see no barriers to international expansion within the EU and are optimistic about the market's growth.

#### What were the most significant challenges you've faced so far?

Our journey hasn't been a sprint but a marathon. We started four years ago, and keeping a consistent pace and delivery has been challenging.

What is the problem your company is Scaling and growing have been our toughest challenges. At present, we can produce hundreds of pieces of equipment, but making the leap to thousand pieces and beyond is a significant hurdle.

#### Do you think that your local ecosystem is mature enough to support companies like yours?

Czechia has several innovation centers that help with business models and growth. However, opportunities are more abundant in Prague. As we are located outside the capital, we have applied for programs in various other countries, including Switzerland, France, and Germany. We secured funding initially through a university-based Czech accelerator, a municipal grant, and a government accelerator with Czech Invest. These programs were instrumental in funding us in the early stages and connecting us with team members.



Website: https://www.ullmanna.eu/

Year founded: 2019 HQ Country: Czechia

Ullmanna is developing smart robotic weeding machines to scale organic food production and make conventional farming more sustainable. Their flagship product is NEWMAN (Non chEmical Weeding MAchiNe), an Al-powered robotic weeder. NEWMAN leverages computer vision and robotics to automatically identify and remove weeds, distinguishing unwanted plants from crops. This automation enables farmers to expand organic farmland without added manual labor or chemical herbicides.







#### Interview with Insignes Labs CEO, Anna Ogar

#### What is the problem that your company is What challenges do you face? addressing?

from climate change-induced drought and pathoand synthetic fertilizers. Our current portfolio allows farmers to leverage innovative mineral comvalidated in field trials across a range of crops and investment of both time and resources. geographies.

#### What are the biggest advantages of your vertical? products?

By slashing synthetic fungicide and chemical fertilizers usage, we're making tangible reductions in carbon footprint is crucial. This effort aims to provide consumers with high-quality, residue-free food on their plates. Our innovative products have undergone extensive field trials, confirming their performance.

We are facing significant regulatory challenges Our PURE technology helps farmers protect crops that impede our progress. The policies within the agro-industry often undergo frequent and drastic gens, while limiting the use of harmful fungicides changes across different regions, creating obstacles for global expansion despite substantial scaling potential beyond the EU. Managing these conpounds for high-quality, residue-free harvests, as stantly shifting regulations demands a significant

# Do you think VCs are interested in your

These regulatory dynamics pose equity and timeline challenges that limit VC interest in early funding rounds. Investors usually show more interest CO2 emissions per hectare. The reduction of our as products approach registration and commercialization. However, for hardware and tech needing extended registration processes, the road to generating revenue is prolonged, despite the validity of our field-tested technology. Securing preseed/seed capital proves exceedingly difficult due to this market timeline, although considerable interest arises in later stages once sales kick off.



Website: <a href="https://www.insignes-labs.com/en">https://www.insignes-labs.com/en</a>

Year founded: 2017 HQ Country: Poland

Insignes Labs perates a biotechnology company developing antimicrobial additives that protect materials from harmful microorganisms including bacteria, algae, fungi, and molds. Leveraging specialty chemistry expertise, the company enhances the biocidal effectiveness of selected active substances. This innovation ensures the permanent, effective protection of both commercial and household products against potentially dangerous microbes.



#### **Balkans**

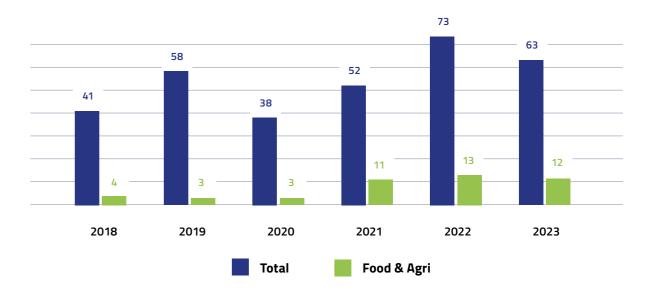
#### Number of Start-ups

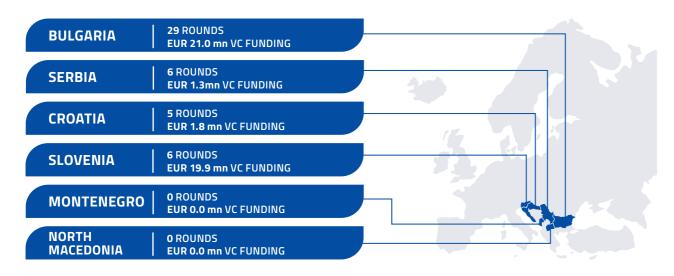
The number of FoodTech & AgriTech start-ups based in the Balkans region grew from 87 in 2018 to 113 by 2022 (+29.9%). This momentum has continued into 2023, with the number of Balkans-based FoodTech & AgriTech start-ups growing by 15.9% YoY. This mirrors the expansion of the broader FoodTech & AgriTech industry across CEE. With this influx of new companies focused on food and agriculture technologies emerging from the Balkans, the share of Balkans-based start-ups in that sector relative to total CEE FoodTech & AgriTech start-ups has risen to an estimated 5.8% in 2023, up notably from prior years.

#### Investment

Compared to the larger rounds closed by FoodTech & AgriTech start-ups in the Baltics and Central Europe, the Balkans region has attracted a relatively small share of investment. Specifically, just 5.5% of total capital invested in CEE FoodTech & AgriTech since 2018 has gone to Balkans-based start-ups. In 2023, this funding gap has remained, with Balkans FoodTech & AgriTech start-ups raising EUR 5.4 million across 12 rounds (Chart 18).

Chart 18. Number of FoodTech & AgriTech Rounds versus Number of Total VC Investment Rounds in the Balkans Sub-region 2018-2023

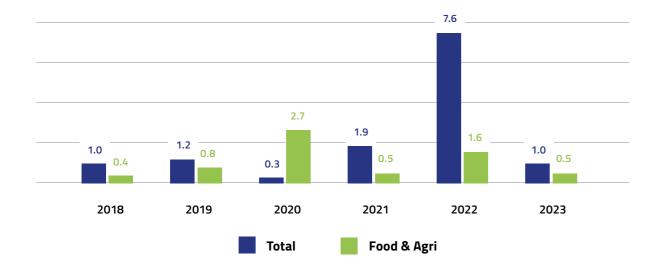




2018-2023

The average funding per round of FoodTech & AgriTech start-ups in the Balkans witnessed substantial growth since 2018, increasing 4.0x from EUR 0.4 million to 1.6 million in 2022. As of 2023, the average funding round of FoodTech & AgriTech start-ups amounted to EUR 0.5 million (Chart 19), highlighting investor interest in pre-seed-stage deals.

Chart 19. Average Funding per Round in the Balkans Sub-region, EUR mn



The bulk of investment flow into Balkans' start-ups in the FoodTech & AgriTech space since 2018 has taken place in Slovenia and Bulgaria.



Bulgaria entered the FoodTech & AgriTech investment landscape in 2018 when Nasekomo raised EUR 1.0 million in seed funding, emerging as the country's most notable player at the time. Further establishing its presence, Nasekomo successfully raised EUR 4 million in a Series A round in 2020. Investments in the region sustained their momentum over the subsequent years. For instance, in 2021, Ondo, an AgriTech start-up, raised EUR 1 million in seed funding. In 2022, Nasekomo continued its growth trajectory by securing a substantial EUR 7 million in its Series B round.

In 2023, the most noteworthy investment has been a seed funding of EUR 0.5 million garnered by Cupfee, a Bulgarian FoodTech start-up. Despite being early in the year, the region continues to witness the rise of promising FoodTech start-ups, which in turn are attracting heightened investor interest over time.

#### Slovenia

Similar to Bulgaria, the FoodTech & AgriTech industry in Slovenia has been characterized by the growth trajectory of a few select start-ups. A leading example is Trapview, known for its digital insect monitoring and forecasting solutions. Trapview kicked off its funding journey in 2019 with a EUR 1.5 million seed round. This momentum continued into 2020 when the company secured EUR 3.7 million in Series A financing. Further demonstrating the promise of Slovenia's food and agriculture tech scene, the innovative food start-up Juicy Marbles raised a EUR 3.9 million round in 2021. Fundraising peaked in 2022 when Trapview closed a EUR 10.0 million Series B round, cementing the company's leadership position and strong prospects for continued FoodTech & AgriTech growth in Slovenia.





#### Interview with Ondo CEO, Ilia Iordanov

# ness development?

Expanding our operations beyond Bulgaria. As we are producing hardware, we need to establish local partnerships for deployment. The biggest challenge is to sell and market our product and access more partners. You have to have someone in the field to install the solution. Farmers want to see it in action first, so we need to invest in local installation and have someone the farmers will trust to give feedback. Scaling and growth are slower compared to software, but once set in motion, it is very stable.

#### How mature is the ecosystem? What are its aware and have a better understanding of agriculstrengths and weaknesses?

Bulgaria's ecosystem is growing, but it falls behind tech hubs like Berlin or Silicon Valley. The country has a dozen active Venture Capital firms and 50-100 angel investors supporting acceleration and seed-stage funding, which is signifi-

What is your current focus in terms of busi- cant progress relative to several years ago. While funding for early stages is accessible, there's a lack of later-stage funds or larger tickets. Bulgaria has abundant technical talent, especially skilled developers and product development experts, but lacks experienced sales and business development professionals.

#### Is there anything you would like to add? Is there something we didn't think to ask about?

For the past 2 years, most of the VC treated Agritech as a different kind of beast. The expectations of the investors should be aligned with the sector. Agritech is connected with the natu-Let's look at the region/country you are in. ral world and production, so investors should be ture and its specifics (seasonality, sector lagging behind, not that innovative, need for hardware). The expectations should be rooted in reality. f.



Website: https://ondo.io/

Year founded: 2020

HQ Country: Bulgaria

ONDO is a next-generation automation solution for precise irrigation, fertigation, and climate control for open fields and greenhouses.



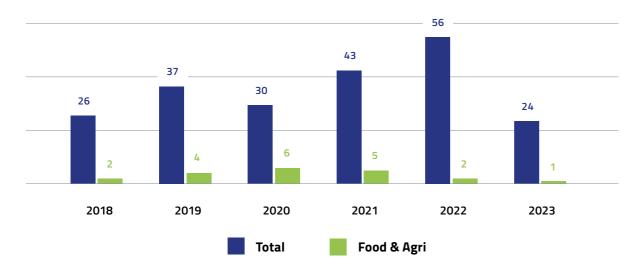




Ukraine has faced long-term economic instability since Russia's 2014 illegal annexation of Crimea, holding up VC investments compared to other CEE countries. This has especially impacted sectors like FoodTech & AgriTech. In the last five years, funding decreased from just above EUR 1.3 million in 2018 to only EUR 0.2 million in 2022, as the ongoing war deterred investors.

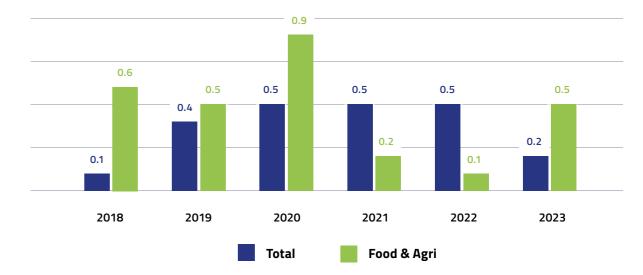
However, there are signs of resilience. In 2023, FoodTech & AgriTech start-ups raised a moderately improved EUR 0.5 million despite the challenging environment. These sectors' share of total Ukrainian start-up funding fluctuated greatly between years – from 36.6% in 2018 to 10.1% in 2019 and 0.64% in 2021. This volatility reflects the small number of rounds (Chart 20) and absolute capital deployed. The number of FoodTech & AgriTech start-ups in Ukraine as of 2023 equals to 60.

Chart 20. Number of Funding Rounds in Ukraine Over Years 2018-2023, FoodTech & AgriTech versus Total Ecosystem



While significant uncertainty persists, Ukraine maintains immense potential for FoodTech and AgriTech growth given its agricultural resources and human capital. With economic stabilization, return of investor confidence, highly probable accession to the EU¹, Ukraine has a significant potential to reemerge as an innovative hub for food and farming technologies in the years ahead.

Chart 21. Funding per Round in Ukraine Over Years 2018-2023, FoodTech & AgriTech versus Total Ecosystem



#### War in Ukraine and Food Security

The ongoing war in Ukraine, coupled with the lingering effects of the COVID-19 pandemic on the global supply chains, has deeply unsettled global food security. The full-scale war, Russia's blockade of Ukrainian ports and its deliberate targeting of Ukrainian grain infrastructure, has disrupted global food supply chains even more, leading to escalating food prices, disproportionately affecting countries heavily dependent on food imports. Despite the hostilities, most of the Ukrainian food manufacturers have resumed work and redirecting their focus to the European market.

The war has also had a dual effect on the FoodTech & AgriTech sectors. On one hand, it has slowed growth and innovation within the food industry. On the other hand, it has escalated the demand for advanced FoodTech solutions that can enhance productivity, minimize waste, and improve distribution.

#### Future Outlook: Impact of Ukraine's Accession Process to the EU

Ukraine, the region's significant grain producer and exporter, lags behind the EU in terms of crop processing and value addition, thus hindering the development of broader agriculture and food sectors. Ukraine's further integration and probable accession to the EU could dramatically reshape not only the local landscape, but also the European food and agricultural sectors. As one of the world's major "bredbaskets", Ukraine's integration into the EU might lead to a decrease in food prices as Ukrainian farmers get access to larger markets and subsidies. However, this might also pose a challenge to existing EU farmers, necessitating modernization and specialization of their farming practices to remain competitive. This could spur further development in FoodTech & AgriTech and innovative solutions.

<sup>1</sup> The European Council has decided to open accession negotiations with Ukraine on 14.12.2023

#### CONCLUSIONS

There are significant disparities within the CEE region, in terms of size, venture capital activity and growth momentum of the FoodTech & AgriTech start-ups. The year of 2022 marked the end of an extraordinary period, during which CEE-based FoodTech & AgriTech start-ups received an increasing interest of investors and late-stage financing to support their operational, growth and scale-up ambitions.

#### Did you know?



EIT Food provides the CEE FoodTech & AgriTech industry with knowledge of trends and equips them with the skills needed to transition to more sustainable practices in the food system and enhance the open innovation approach. For more: <u>here</u>.

#### Challenges for CEE FoodTech & AgriTech Industry

#### **Investment Contraction Trauma**

The magnitude of the contraction in financing of the CEE-based FoodTech & AgriTech startups is manifested by a 88.3% drop in capital raised in the course of 2023, relative to the full year of 2022 (including Bolt and Rohlik B+ rounds), amid longer deal-closing times and general pullback from investing in FoodTech & AgriTech industry.

#### **Prompt Government Action**

The magnitude and pace of investment contraction highlights the necessity of prompt government action in supporting the liquidity of CEE-based FoodTech & AgriTech start-ups, in order for start-ups to avoid financial stress and cash-flow challenges and secure sufficient capital for continuous product development. The apparent challenge for government and government institutions will be to make prompt and flexible response that targets a number of activities within the food supply chain.

#### **Targeted and Tailored Government Action**

The FoodTech & AgriTech industry is highly fragmented, encompassing a wide array of startups and technologies, posing challenges for shaping the development of an emerging industry by policy actions. FoodTech & AgriTech industry is segmented into activities that are at different stages of their maturity. The inconsistencies have resulted in geographical aggregation of entrepreneurial and capital market processes, creating geographical inequalities within the CEE, aggregation of investment in specific activity such as food logistics & delivery and challenges to target government actions to spaces where they are most needed.

For instance, the majority of diversified protein FoodTech & AgriTech start-ups in the CEE re-

gion have missed the bandwagon of favorable circumstances on the capital market that lasted until 2022. Given their relevance for food security and production of affordable, healthier and more sustainable food, policymakers shall implement schemes tailored to capital-investive product development processes of diversified protein FoodTech start-ups.

#### **Regulatory and Red Tape Bottlenecks**

The regulatory framework for novel foods and FoodTech & AgriTech innovations in Europe poses distinct challenges. A critical issue is the EU's stringent novel foods regulation, which displaces the approval process. Additionally, there is a notable lack of transparent communication channel between the industry and regulatory authorities, hindering innovation. Manufacturers are also compelled to substantiate their sustainability claims with robust data, mitigating the risk of 'greenwashing' and adding complexity to the approval process. Moreover, the industry must navigate the challenge of being transparent about product sources, while allowing consumers to define what they consider 'natural.' This balancing act further complicates the regulatory landscape. A common complaint among start-ups is the protracted duration of regulatory processes in Europe, which appears to considerably slow down progress and innovation in the sector.

#### **Security Concerns**

The Russia-Ukraine war has significantly disrupted global food security, leading to soaring food prices and supply chain disruptions. This crisis disproportionately affects vulnerable populations in countries dependent on food imports.

#### **KEY TRENDS IN CEE FOODTECH & AGRITECH**

#### Maintained Investor Interest in Pre-growth Rounds

Despite the general pullback in venture capital activity and fundraising since 2022, investors have maintained interest in the CEE-based FoodTech start-ups raising pre-growth rounds, with longer deal-closing times across the FoodTech & AgriTech industry.

#### Investor Focus on Growth-stage AgriTech

AgriTech was one of the most vibrant spaces with 130 mostly pre-seed and seed rounds since 2018. Amidst a slowdown in venture capital activity, investors have shifted their focus to larger and lower-risk AgriTech deals, leaving many AgriTech start-ups short of pre-seed and seed capital.

#### Investor Pullback from Capital-Intensive FoodTech

There has been the general pullback of investors from financing capital-intensive vertical and indoor farms, which, prior to 2023, relied on external financing for facility start-ups, build-out and operational costs. Vertical farms attempting to upsize their operations in order to secure venture capital-scale returns have seen the full-scale dry-out of external financing.

#### FoodTech & AgriTech Clustering

Strong geographical aggregation of entrepreneurial and investment processes in technology-intensive regions of the CEE is expected to continue and technology-intensive ecosystems are expected to retain their advantages for emerging FoodTech & AgriTech start-ups.

#### **Consumer Shift to Diversifies Proteins**

Rising consumer awareness of food insecurity and ethics of meat production have fueled the growth of and investor interest in start-ups developing diversified proteins. Despite the general pullback in venture capital activity and fundraising since 2022, investors have continued to maintain moderate interest in CEE-based innovative FoodTech & AgriTech start-ups, providing the essential external financing source to start-ups in this space. Since 2018, there have been 80 mostly pre-seed and seed funding rounds of CEE-based innovative food start-ups in one of the most vibrant spaces in the CEE FoodTech.



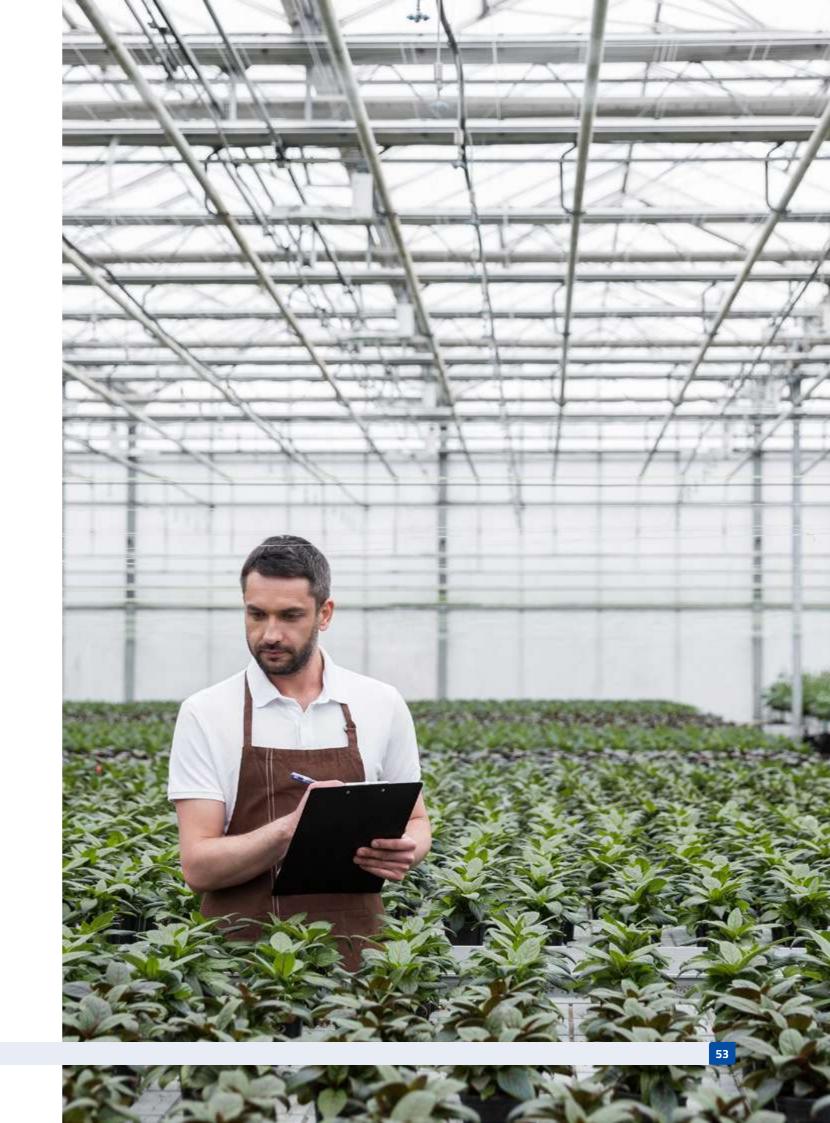
#### Expert opinion: Tomasz Poniński | General Partner at Montis Capital

The FoodTech & AgriTech sectors are undergoing major transformations, driven by various interrelated trends. Climate change, manifesting as decreasing rainfall and rising temperatures, is necessitating adaptations to animal husbandry and crop cultivation practices. Simultaneously, the world's growing population and associated increases in food and water scarcity, especially in developing countries, are causing mass migrations and supply chain disruptions.

Sudden shortages of consumer and production goods, an uncertain political climate, and international conflicts and tensions further impact food supply and prices. Shifting dietary preferences focused on healthy foods, ready meals, supplements, vegetarianism, and reduced sugar reflect broader attitudinal changes regarding health.

Consumers increasingly prioritize diagnostics, disease prevention, and the link between food, overall health, and mental health. The emergence of bio-deep-tech solutions, combining biotechnology with machine learning and Al, enables new research processes and solutions that could replace traditional chemical or natural methods.

In this context, AgriTech & FoodTech have crucial roles in addressing these interconnected challenges, offering innovative and sustainable solutions for the future of food and agriculture.



#### **DEFINITIONS AND METHODOLOGY**

#### FoodTech & AgriTech

The industry is broadly segmented into several subindustries, with several categorizations available in external resources. AgFunder segments based on the value chain position: upstream (covering agricultural biotechnologies, novel farming systems, and innovative food), midstream (encompassing food safety, processing, transport, and ecological restoration), and downstream (including in-store retail, e-grocery, and cloud retail infrastructure). In contrast, Dealroom segments the industry into seven subcategories: food logistics & delivery, AgriTech, alternative protein, food in-store retail & restaurant tech, kitchen and cooking tech, a cross-segment, and a miscellaneous group (comprising coffee, tea, pet food, and functional beverages). Meanwhile, Pitchbook differentiates between FoodTech and AgriTech, with FoodTech comprising e-commerce, food production, restaurant & retail tech, alternative proteins, bioengineered foods, and discovery & review, and AgriTech including agricultural biotech, in-door farming, agrifinance & e-commerce, animal agriculture, and precision agriculture. We present a detailed breakdown of these categorizations in the Appendix.

This report is based on the Dealroom's segmentation of the industry, focusing on five principal categories: food logistics & delivery, food in-store retail & restaurant tech, innovative food kitchen & cooking tech and AgriTech.

#### Central & Eastern Europe (CEE)

We define Central and Eastern Europe (CEE) as encompassing Bulgaria, Croatia, Czechia, Es-tonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovenia, Slovakia, Montenegro, North Macedonia, Serbia, and Ukraine. For analytical purposes, we categorize these into three sub-regions: the Baltics (Estonia, Latvia, Lithuania), Central Europe (Czechia, Hungary, Poland, Slovakia, Romania), and the Balkans (Bulgaria, Croatia, Montenegro, North Macedonia, Serbia, Slovenia). We analyze Ukraine as a distinct entity within the CEE region, owing to its unique position in the food sector and vast agricultural resources.

#### **Period of Analysis**

In this report, we have observed and analyzed quantitative data collected over the 5-year period between 2018 and 2023, due to the nascent and evolving nature of start-up ecosystems in the CEE. A larger longitudinal dataset would have limited the conclusiveness of the report's findings given the industry's early stage of maturity. The past five years have been particularly transformative for the industry, marked by significant events that have reshaped technology adoption and market dynamics. The COVID-19 pandemic in 2020 accelerated the adoption of various technologies, notably in the rapid scaling of food logistics & delivery and the rise of quick commerce. Additionally, the new stage of the Russian-Ukrainian war, beginning in 2022, has notably impacted the global supply chain and food security. Concurrently, growing con-cerns about climate change are influencing customer choices and agricultural practices.

#### Methodology

This report presents findings of the analysis of primary and secondary data collected using several complementary research methods, each with a purpose of contributing to the robustness of the findings presented in the report. Initially, the explorative collection of data was conducted from primary and secondary sources, while in the second phase of the research, several research methodologies were applied with an objective of validating propositions and contributing to understanding the broader context of the findings presented in the report.

The primary research involved collecting primary qualitative data by conducting semi-structured interviews with randomly selected ecosystem stakeholders from the CEE region based on the sample's selection criteria. The sample of 16 start-ups and 8 venture capital firms was interviewed in the period between September and October of 2023 to collect 24 complete qualitative observations. The representativeness (p-value) tests were conducted on observations due to their small number to ensure the sample's representativeness. The interviews were conducted based on pre-tested interview protocol to ensure the stability of results and control of biases. This research entailed asking respondents several open-ended questions, based on validated constructs and previously published studies. Qualitative insights from the interviews were coded thematically and synthesized to extract a nuanced understanding of the ecosystem, investment and policy processes.

The research further entailed collecting secondary qualitative data published in business and technology articles and conducting archival analysis, which contributed to understanding of the broader context of the results.

The secondary research entailed collecting secondary quantitative data in the period from September to October of 2023 from a wide range of sources:

- Eurostat
- Various industry databases (Crunchbase, Dealroom, Pitchbook, Traxcn and Vestbee)
- Industry reports (Pitchbook, Dealroom, EIT Food and AgFunder) etc.

The industry data was collected for the period of 6 calendar years of 2018 to 2023. The longitudinal datasets provided limited information for the calendar year of 2023.

The secondary quantitative datasets have been analyzed for consistency, completeness and quality. Certain data limitations were outlined during this process, particularly in obtaining detailed information in certain countries, especially with regard to investment and start-up processes. The secondary quantitative datasets have been complemented with the primary quantitative data, in order for the report to base its findings on complete datasets.

The research entailed descriptive analysis of variables, with an objective of presenting descriptive findings in the report. However, to obtain broader understanding of the findings and uncover relationships among variables, correlational analysis of several variables was performed with explorative objectives. The longitudinal quantitative data was analyzed to discern trends in start-up growth, funding, exits, job creation and other relevant variables across geographies and sectors.

#### **Abbreviations**

#### **Currency Representation**

We use the FX ISO coding system to denote currencies. For example, EUR for the Euro, PLN for the Polish Zloty, and USD for the U.S. Dollar.

#### **Numeric Abbreviations**

Although we aim to write out 'millions' and 'billions' in full if abbreviations are necessary, we use "mn" for millions, "bn" for billions, and "tn" for trillions.

#### **Numeric Formatting**

We use a comma to separate thousands and a period to indicate decimals. For instance, 1,000.50 refers to one thousand and fifty cents. These style guide points aim to maintain consistency and clarity throughout our publications.

#### **DATA SOURCES**

#### **Economy Snapshot**

Area: CIA

Innovation index: <u>TheGlobalEconomy</u>

Internet access: Eurostat

#### **Agriculture Snapshot**

Ag. area: <u>Eurostat</u>

GVA (Gross Value Added): <u>Eurostat</u>

VAP (Value of production): <u>Eurostat</u>

Share of total workforce: estimate based on <u>Eurostat</u>

Top crops in country by production: Based on the <u>Eurostat</u> dataset, 2022 data

#### FoodTech & AgriTech Snapshot

- FoodTech & AgriTech start-ups: Dealroom, as of Feb 2024
  - % of all domestic start-ups: estimate based on Dealroom, as of Feb 2024
  - % of all CEE FoodTech start-ups: estimate based on Dealroom, as of Feb 2024
- Investment in FoodTech & AgriTech (2018-2023)
  - Raised capital: Dealroom, as of Feb 2024
  - Rounds: Dealroom, as of Feb 2024
- Top Investors: Dealroom, PitchBook, CrunchBase, Primary data collection
- Top Accelerators: Primary data collection
- Top Rounds: Dealroom, PitchBook, CrunchBase, Primary data collection



# **APPENDICES**

Appendix 1: Country Snapshots



# **BULGARIA Economy Snapshot (2023)** Area: **110,994 km²** (8.9% of CEE) Population: 6.4 mn (5.9% of CEE) GDP per capita (2022): **EUR 13,305** Innovation index: 39.5 Internet access: 88.5% Cuml. PISA`22 score: **1,243** (-3.0% vs 2018, 49/80 rank) Agriculture Snapshot (2023) Ag. area: **50,221 km²** (9.1% of CEE) Contribution to the GDP: 4.4% GVA: **EUR 2,340 mn** VAP: **EUR 5,341 mn** Share of total workforce: 6.3% FoodTech & AgriTech Snapshot (2023) Number of start-ups: 48 of all domestic start-ups: **5.8%** of all CEE FoodTech start-ups: **7.0%**

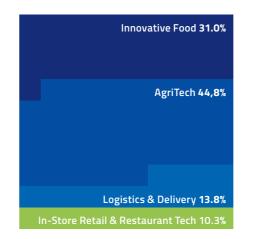
#### Investment in FoodTech (2018-2023)

Raised capital: **EUR 4.6 mn** (0.7% of CEE FoodTech)

Rounds: **16** (7.0% of CEE FoodTech rounds)

#### Investment in AgriTech (2018-2023)

Raised capital: **EUR 16.4 mn** (13.6% of CEE AgriTech) Rounds: **13** (10.6% of CEE AgriTech)



#### **Top crops in country by Production:**

- Common winter wheat and spelt:
   6.4 Mt/year | 5.2% of the EU production (5<sup>th</sup> among EU countries)
- Grain maize and corn-cob-mix:
   2.6t Mt/year | 4.8% of the EU production (8<sup>th</sup> among EU countries)
- Sunflower seed:
   2.1 Mt/year | 22.9% of the EU production (1st place among EU countries)

#### **Worth Noting:**

Bulgaria is the second-largest producer of aromatic, medicinal, and culinary plants in the EU, with an annual output of 0.1 Mt.

#### **Top FoodTech & AgriTech Investors:**

- Vitosha Venture Partners
- Eleven Ventures
- Innovation Capital

# Top Accelerators for FoodTech & AgriTech Companies:

- Future Verticals
- Accelerate by Vitosha
- Innovation Accelerator

#### **Top Rounds:**

Year	Start-up	Amount EUR, mn	Stage
2022	Nasekomo	7.0	Conv.
2020	Nasekomo	4.0	Early VC
2023	Nasekomo	2.4	Grant

# Top Funded Start-ups (as of 01.01.2024 since their launch):

Name	Amount EUR, mn
Nasekomo	14.4
Cupffee	1.9
Ondo	1.4



#### CROATIA



#### Economy Snapshot (2023)

Area: **56,594** km² (4.5% of CEE)
Population: **3.9** mn (3.5% of CEE)
GDP per capita (2022): EUR **17,642**Innovation index: **35.6**Internet access: **89.6**%
Cuml. PISA`22 score: **1,421**(+0.4% vs 2018, 33/80 rank)

#### Agriculture Snapshot (2022)

Ag. area: 14,479 km² (2.6% of CEE) Contribution to the GDP: 2.5% GVA: EUR 1,686 mn VAP: EUR 3,154 mn Workforce: 6.8%

#### FoodTech & AgriTech Snapshot (2023)

Number of start-ups: 23 of all domestic start-ups: 5.0% of all CEE FoodTech start-ups: 3.4%



#### Investment in FoodTech (2018-2023)

Raised capital: **EUR 1.8 mn** (0.3% of CEE FoodTech)
Rounds: **5** (2.5% of CEE FoodTech)

#### Investment in AgriTech (2018-2023)

Raised capital: **EUR 0.0 mn** (0.0% of CEE AgriTech)
Rounds: **0** (0.0% of CEE AgriTech)

Innovative Food 80.0%

In-Store Retail & Restaurant Tech 20.0

#### Top crops in country by Production:

- Grain maize and corn-cob-mix:
   1.6 Mt/year | 3.1% of the EU production (10<sup>th</sup> among EU countries)
- Common winter wheat and spelt:
   1.0 Mt/year | 0.8% of the EU production (18th among EU countries)
- Green maize:
   0.8 Mt/year | 0.4% of the EU production (19th place among EU countries)

#### **Worth Noting:**

Croatia ranks third in the European Union for the production of miscellaneous small citrus fruits (including hybrids), with an annual output of 42 Mt.

#### **Top FoodTech & AgriTech Investors:**

- Fil Rouge Capital
- South Central Ventures

# Top Accelerators for FoodTech & AgriTech Companies:

ZICER

#### **Top Rounds:**

Year	Start-up	Amount EUR, mn	Stage
2022	Detox	8.0	Seed
2019	BiteMe	0.4	Angel
2022	BiteMe	0.3	Seed

Top Funded Start-ups (as of 01.01.2024 since their launch):

Name	Amount EUR, mn
Anibiome	1.1
BiteMe Nutrition	0.9
Detox	0.8



# **CZECHIA Economy Snapshot (2023)** Area: **78,867 km²** (6.3% of CEE) Population: **10.8 mn** (9.9% of CEE) GDP per capita (2022): **EUR 25,517** Innovation index: 42.8 Internet access: 92.8% Cuml. PISA`22 score: **1,473** (-0.9% vs 2018, 16/80 rank) Agriculture Snapshot (2022) Ag. area: **35,304 km**<sup>2</sup> (6.4% of CEE) Contribution to the GDP: 2.1% GVA: **EUR 2,340 mn** VAP: **EUR 7,145 mn** Workforce: 2.6% FoodTech & AgriTech Snapshot (2023) Number of start-ups: **72** of all domestic start-ups: 4.2% of all CEE FoodTech start-ups: **10.5%**

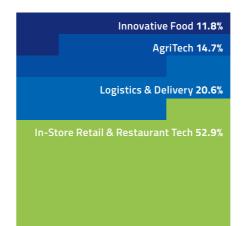
#### Investment in FoodTech (2018-2023)

Raised capital: **EUR 242.1 mn** (36.1% of CEE FoodTech)

Rounds: 29 (14.5% of CEE FoodTech)

#### Investment in AgriTech (2018-2023)

Raised capital: **EUR 2.5 mn** (2.0% of CEE AgriTech)
Rounds: **5** (4.1% of CEE AgriTech)



#### **Top crops in country by Production:**

#### 1. Grain maize:

7.6 Mt/year | 3.5% of the EU production (8th among EU countries)

 Common winter wheat and spelt:
 4.9 Mt/year | 4.0% of the EU production (7<sup>th</sup> among EU countries)

 Sugar beet (excluding seed):
 4.1 Mt/year | 3.9% of the EU production (6<sup>th</sup> place among EU countries)

#### **Worth Noting:**

Czechia ranks as the second-largest producer of hops within the EU, with an annual yield of 4 Mt. Additionally, it is third largest linseed producer, with an annual output reaching 3 Mt.

#### **Top FoodTech & AgriTech Investors:**

- Miton
- Index Ventures
- Reflex Capital

# Top Accelerators for FoodTech & AgriTech Companies:

- Green Light
- Impact Hub
- Startup Yard
- CzechAccelerator

#### **Top Rounds:**

Year	Start-up	Amount EUR, mn	Stage
2021	Rohlik	190	Series B
2023	MIWA.eu	2.7	Early VC
2021	MIWA.eu	2.5	Grant
2023	Qerko	2.5	Seed

Top Funded Start-ups (as of 01.01.2024 since their launch):

Name	Amount EUR, mn
Rohlik	541.0
MIWA.eu	6.3
Qerko	3.9
Nutritionpro	3.9



#### **ESTONIA**



#### **Economy Snapshot (2023)**

Area: 45,228 km² (3.6% of CEE)
Population: 1.4 mn (1.2% of CEE)
GDP per capita (2022): EUR 26,695
Innovation index: 50.2
Internet access: 93.2%
Cuml. PISA`22 score: 1,547
(-1.9% vs 2018, 7/80 rank)

#### Agriculture Snapshot (2022)

Ag. area: 9,862 km² (1.8% of CEE) Contribution to the GDP: 2.5% GVA: EUR 0,266 mn VAP: EUR 1,360 mn Workforce: 2.7%

#### FoodTech & AgriTech Snapshot (2023)

Number of start-ups: **53** of all domestic start-ups: **3.1%** of all CEE FoodTech start-ups: **7.8%** 

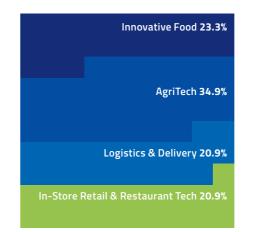


#### Investment in FoodTech (2018-2023)

Raised capital: **EUR 335.0 mn** (50.0% of CEE FoodTech) Rounds: **28** (14.0% of CEE FoodTech)

#### Investment in AgriTech (2018-2023)

Raised capital: **EUR 29.3 mn** (24.3% of CEE AgriTech) Rounds: **15** (12.2% of CEE AgriTech)



#### Top crops in country by Production:

- Common winter wheat and spelt:
   0.8 Mt/year | 0.6% of the EU production (19th among EU countries)
- Green maize:
   0.4 Mt/year | 0.2% of the EU production (24<sup>th</sup> among EU countries)
- 3. Spring barley:
   0.3 Mt/year | 1.4% of the EU production (11th place among EU countries)

#### **Top FoodTech & AgriTech Investors:**

- Startup Wise Guys
- Specialist VC
- Change Ventures

# Top Accelerators for FoodTech & AgriTech Companies:

- Beamline
- Startup Wise Guys
- BuildIt

#### Top Rounds:

Start-up	Amount EUR, mn	Stage
Bolt	148.2	Series B
Click & Grow	9.3	Early VC
EAgronom	7.0	Series A
EAgronom	5.1	Early VC
	Bolt  Click & Grow  EAgronom	Bolt 148.2  Click & Grow 9.3  EAgronom 7.0

# Top Funded Start-ups (as of 01.01.2024 since their launch):

Name	Amount EUR, mn
Bolt	1,757.8
EAgronom	15.9
Click & Grow	15.2
Yummy	3.4



# **LATVIA** Economy Snapshot (2023) Area: **64,589 km²** (5.2% of CEE) Population: 1.9 mn (1.7% of CEE) GDP per capita (2022): **EUR 20,720** Innovation index: 36.5 Internet access: 93.1% Agriculture Snapshot (2022) Ag. area: **19,704 km²** (3.6% of CEE) Contribution to the GDP: 5.1% GVA: **EUR 0,546 mn** VAP: **EUR 1,871 mn** Workforce: 6.8% FoodTech & AgriTech Snapshot (2023) Number of start-ups: 28 of all domestic start-ups: 4.7% of all CEE FoodTech start-ups: 4.1%

#### Investment in FoodTech (2018-2023)

Raised capital: **EUR 1.0 mn** (0.1% of CEE FoodTech)
Rounds: **6** (3.0% of CEE FoodTech)

#### Investment in AgriTech (2018-2023)

Raised capital: **EUR 1.7 mn** (1.4% of CEE AgriTech) Rounds: **11** (8.9% of CEE AgriTech)



#### **Top FoodTech & AgriTech Investors:**

- Startup Wise Guys
- Overkill Ventures

# Top Accelerators for FoodTech & AgriTech Companies:

BuildIt

#### **Top Rounds:**

Year	Start-up	Amount EUR, mn	Stage
2023	Spirulina- Nord	0.6	Seed
2022	Lande	0.6	Seed
2023	WeedBot	0.4	Seed

#### Top crops in country by Production:

- Common winter wheat and spelt:
   2.2 Mt/year | 1.8% of the EU production (13th among EU countries)
- Green maize:
   0.7 Mt/year | 0.3% of the EU production (20th among EU countries)
- 3. Winter rape and turnip rape seeds
  0.3 Mt/year | 1.7% of the EU production
  (11th place among EU countries)

Top Funded Start-ups (as of 01.01.2024 since their launch):

Name	Amount EUR, mn
SpirulinaNord	0.6
WeedBot	0.6
Lande	0.6



#### **LITHUANIA**



#### Economy Snapshot (2023)

Area: 65,300 km² (5.2% of CEE)
Population: 2.9 mn (2.6% of CEE)
GDP per capita (2022): EUR 23,926
Innovation index: 37.4
Internet access: 88.6%
Cuml. PISA`22 score: 1,431
(-0.5% vs 2018, 30/80 rank)

#### Agriculture Snapshot (2022)

Ag. area: 29,113 km² (5.3% of CEE) Contribution to the GDP: 4.0% GVA: EUR 1,473 mn VAP: EUR 4,309 mn Workforce: 5.3%

#### FoodTech & AgriTech Snapshot (2023)

Number of start-ups:: **61**of all domestic start-ups: **5.5%**of all CEE FoodTech start-ups: **8.9%** 



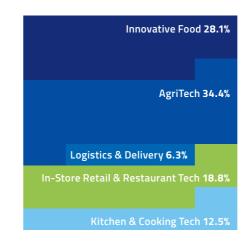
#### Investment in FoodTech (2018-2023)

Raised capital: **EUR 11.6 mn** (1.7% of CEE FoodTech)

Rounds: **21** (10.5% of CEE FoodTech)

#### Investment in AgriTech (2018-2023)

Raised capital: **EUR 15.6 mn** (12.9% of CEE AgriTech) Rounds: **11** (8.9% of CEE AgriTech)



#### **Top crops in country by Production:**

- Common winter wheat and spelt:
   4.1 Mt/year | 3.4% of the EU production (9th among EU countries)
- 2. **Temporary grasses and grazings** 3.7 Mt/year
- Winter rape and turnip rape seeds:
   0.9 Mt/year | 4.6% of the EU production (7<sup>th</sup> place among EU countries)

#### **Worth Noting:**

Lithuania is the second-largest producer of broad and field beans in the EU, with an annual yield of 0.2 Mt. And the third-largest producer of field peas, with an annual output of 0.2 Mt.

#### **Top FoodTech & AgriTech Investors:**

- Coinvest Capital
- Iron Wolf Capital
- Practica Capital

# Top Accelerators for FoodTech & AgriTech Companies:

- Baltic Sandbox
- Katalista Ventures
- Startup Division

#### **Top Rounds:**

Year	Start-up	Amount EUR, mn	Stage
2022	Leafood	6.5	Seed
2023	HeavyFin- ance	3.0	Seed
2018	ART21	2.2	Seed

# Top Funded Start-ups (as of 01.01.2024 since their launch):

Name	Amount EUR, mn
Leafood	6.5
HeavyFinance	5.1
Divaks	4.5



## **HUNGARY**



Economy Snapshot (2023)
Area: 93,028 km2 (7.4% of CEE)
Population: 9.6 mn (8.8% of CEE)
GDP per capita (2022): EUR 17,400
Innovation index: 39.8
Internet access: 92.7%
Cuml. PISA`22 score: 1,432

(-0.4% vs 2018, 29/80 rank)

Agriculture Snapshot (2022)
Ag. area: 50,811 km² (9.2% of CEE)
Contribution to the GDP: 2.8%
GVA: EUR 4,111 mn
VAP: EUR 11,075 mn
Workforce: 4.4%

FoodTech & AgriTech Snapshot (2023)
Number of start-ups: 76
of all domestic start-ups: 5.1%
of all CEE FoodTech start-ups: 11.1%

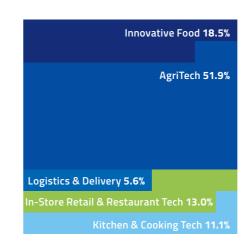


#### Investment in FoodTech (2018-2023)

Raised capital: **EUR 19.0 mn** (2.8% of CEE FoodTech)
Rounds: **26** (13.0% of CEE FoodTech)

#### Investment in AgriTech (2018-2023)

Raised capital: **EUR 14.4 mn** (12.0% of CEE AgriTech) Rounds: **28** (22.8% of CEE AgriTech)



#### Top crops in country by Production:

- Common winter wheat and spelt:
   4.2 Mt/year | 3.4% of the EU production (8<sup>th</sup> among EU countries)
- Grain maize and corn-cob-mix:
   2.8 Mt/year. | 5.2% of the EU production (7<sup>th</sup> among EU countries)
- 3. Green maize:
   1.7 Mt/year | 0.8% of the EU production
   13<sup>th</sup> place among EU countries)

#### **Worth Noting:**

1st largest producer of Energy crops n.e.c. in the EU with annual output of 62 Mt.

2nd largest producer of Sour cherries in the EU with annual output of 66 Mt.

3rd largest producer of Sorghum in the EU with annual output of 48 Mt.

#### **Top FoodTech & AgriTech Investors:**

- Portfolion
- Impact Ventures
- Interactive Venture Partners

# Top Accelerators for FoodTech & AgriTech Companies:

- NAK TechLab
- Design Terminal

#### **Top Rounds:**

Year	Start-up	Amount EUR, mn	Stage
2023	Munch	11.0	Series A
2018	MITE - CHEM	2.6	Series A
2023	Smapp Lab	2.3	Seed

# Top Funded Start-ups (as of 01.01.2024 since their launch):

Name	Amount EUR, mn
Munch	11.0
Gremon	4.1
MITE - CHEM	4.1



## **POLAND**

## Economy Snapshot (2023)

Area: **311,888 km²** (24.9% of CEE)
Population: **36.8 mn** (33.6% of CEE)
GDP per capita (2022): **EUR 17,380**Innovation index: **37.5**Internet access: **93.3%**Cuml. PISA`22 score: **1,477**(-4.2% vs 2018, 15/80 rank)

#### Agriculture Snapshot (2022)

Ag. area: 141,979 km² (25.7% of CEE) Contribution to the GDP: 2.1% GVA: EUR 12,178 mn VAP: EUR 37,137 mn Workforce: 8.4%

#### FoodTech & AgriTech Snapshot (2023)

Number of start-ups: **164**of all domestic start-ups: **4.7%**of all CEE FoodTech start-ups: **24.0%** 



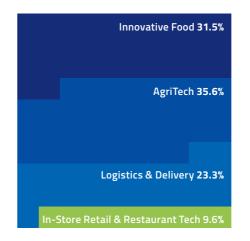
#### Investment in FoodTech (2018-2023)

Raised capital: **EUR 36.4 mn** (5.4% of CEE FoodTech)

Rounds: 47 (23.5% of CEE FoodTech)

#### Investment in AgriTech (2018-2023)

Raised capital: **EUR 21.7 mn** (18.0% of CEE AgriTech) Rounds: **26** (21.1% of CEE AgriTech)



#### **Top crops in country by Production:**

#### 1. Green maize:

26.0 Mt/year | 11.9% of the EU production (3<sup>rd</sup> among EU countries).

#### 2. Sugar beet (excluding seed):

14.2 Mt/year. | 13.7% of the EU production (3<sup>rd</sup> among EU countries)

 Common winter wheat and spelt:
 12.4 Mt/year | 10.1% of the EU production (3<sup>rd</sup> place among EU countries)

#### **Worth Noting:**

1st largest producer of Common spring wheat and spelt in the EU with annual output of 0,8 Mt. 2nd largest producer of Grain maize and corn-cobmix in the EU with annual output of 8.3 Mt. 3rd largest producer of Common winter wheat and spelt in the EU with annual output of 12,3 Mt.

#### **Top FoodTech & AgriTech Investors:**

- ICOS Capital
- Montis Capital
- CofounderZone

## Top Accelerators for FoodTech & AgriTech Companies:

- Foodtech.ac
- Akces NCBR
- Żabka FoodTech Lab

#### **Top Rounds:**

Year	Start-up	Amount EUR, mn	Stage
2023	EcoBean	7.0	Grant
2021	Sundose	5.1	Series A
2022	Restaumatic	4.5	Early VC
2023	Fresh Inset	2.6	Series B

## Top Funded Start-ups (as of 01.01.2024 since their launch):

Name	Amount EUR, mn
EcoBean	9.2
Sundose	7.3
Fresh Inset	6.3



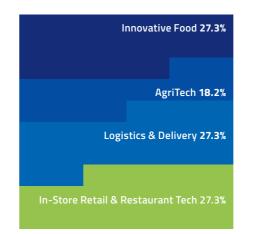


Raised capital: **EUR 14.0 mn** (2.1% of CEE FoodTech)

Rounds: **18** (9.0% of CEE FoodTech)

#### Investment in AgriTech (2018-2023)

Raised capital: **EUR 1.6 mn** (1.3% of CEE AgriTech)
Rounds: **4** (3.3% of CEE AgriTech)



## Top crops in country by Production:

- Common winter wheat and spelt:
   8.6 Mt/year | 7.0% of the EU production (4th among EU countries).
- Grain maize and corn-cob-mix:
   8.0 Mt/year. | 15.2% of the EU production (3<sup>rd</sup> among EU countries)
- Sunflower seed:
   2.1 Mt/year | 22.6% of the EU production (2<sup>nd</sup> place among EU countries)

#### **Worth Noting:**

1<sup>st</sup> largest producer of Plums in the EU with annual output of 0.7 Mt 2<sup>nd</sup> largest producer of Sunflower seed in the EU with annual output of 2,1 Mt 3<sup>rd</sup> largest producer of Winter barley in the EU with annual output of 1,6 Mt.

#### **Top FoodTech & AgriTech Investors:**

- SeedBlink
- Early Game Ventures
- Underline Ventures
- Evergent Investments
- TechAngels

# Top Accelerators for FoodTech & AgriTech Companies:

- Early Game Ventures
- Innovation Labs
- F&B Business Accelerator
- InnovX
- ScaleOut
- Techcelerator
- Spherik Accelerator

#### **Top Rounds:**

Year	Start-up	Amount EUR, mn	Stage
2021	BOB Con- cierge	6.0	Early VC
2020	Verdino	3.0	Seed
2020	Vifrana	2.0	N/D

Top Funded Start-ups (as of 01.01.2024 since their launch):

Name	Amount EUR, mn
Bob Concierge	6.9
Verdino	3.0
bonapp.eco	1.4



## **SLOVENIA**



#### **Economy Snapshot (2023)**

Area: 20,271 km² (1.6% of CEE)
Population: 2.1 mn (1.9% of CEE)
GDP per capita (2022): EUR 27,071
Innovation index: 40.6
Internet access: 93.7%

# Agriculture Snapshot (2022) Ag. area: 4,794 km² (0.9% of CEE)

Contribution to the GDP: 1.7% GVA: EUR 0,558 mn VAP: EUR 1,554 mn Workforce: 5.8%

#### FoodTech & AgriTech Snapshot (2023)

Number of start-ups: **30**of all domestic start-ups: **4.9%**of all CEE FoodTech start-ups: **4.4%** 



#### Investment in FoodTech (2018-2023)

Raised capital: **EUR 4.7 mn** (0.7% of CEE FoodTech)
Rounds: **3** (1.5% of CEE FoodTech)

#### Investment in AgriTech (2018-2023)

Raised capital: **EUR 15.2 mn** (12.6% of CEE AgriTech) Rounds: **3** (2.4% of CEE AgriTech)

Innovative Food **50.0**%

AgriTech 50.0%

#### **Top crops in country by Production:**

#### 1. Green maize:

0.9 Mt/year | 0.4% of the EU production (16<sup>th</sup> among EU countries).

## 2. **Temporary grasses and grazings** 0.3 Mt/year

## Grain maize and corn-cob-mix: 0.3 Mt/year | 0.5% of the EU production (16th place among EU countries)

#### 4. Grapes:

0.1 Mt/year | 0.3% of the EU production (12<sup>th</sup> place among EU countries)

#### **Top FoodTech & AgriTech Investors:**

- Silicon Gardens
- South Central Ventures

# Top Accelerators for FoodTech & AgriTech Companies:

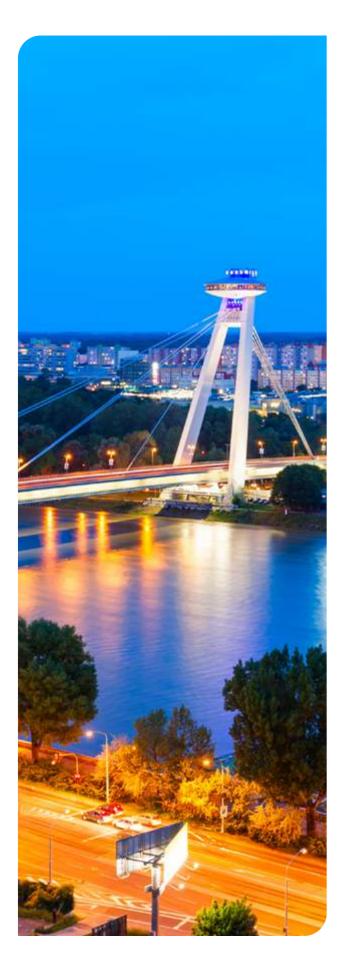
- ABC Accelerator
- DIH Agrifood

#### **Top Rounds:**

Year	Start-up	Amount EUR, mn	Stage
2022	Trapview	10.0	Series B
2021	Juicy Marbles	3.8	Seed
2020	Trapview	3.7	Series A
2023	Fresh Inset	2.6	Series B

# Top Funded Start-ups (as of 01.01.2024 since their launch):

Name	Amount EUR, mn
Trapview	17.7
Juicy Marbles	3.9
JuiceFast	0.8



## SLOVAK REPUBLIC



## Economy Snapshot (2023)

Area: 49,035 km² (3.9% of CEE) Population: 5.4 mn (5.0% of CEE) GDP per capita (2022): EUR 20,174 Innovation index: 34.3 Internet access: 90.6%

# Agriculture Snapshot (2022) Ag. area: 18,492 km² (3.4% of CEE)

Contribution to the GDP: 2.2%
GVA: EUR 0,931 mn
VAP: EUR 3,105 mn
Workforce: 1.9%

#### FoodTech & AgriTech Snapshot (2023)

Number of start-ups: **25**of all domestic start-ups: **4.7%**of all CEE FoodTech start-ups: **3.7%** 



#### Investment in FoodTech (2018-2023)

Raised capital: **EUR 0.3 mn** (0.0% of CEE FoodTech)

Rounds: **1** (0.5% of CEE FoodTech)

#### Investment in AgriTech (2018-2023)

Raised capital: **EUR 1.0 mn** (0.8% of CEE AgriTech)
Rounds: **1** (0.8% of CEE AgriTech)

AgriTech 50.0%

In-Store Retail & Restaurant Tech 50.0

## Companies:

Top Accelerators for FoodTech & AgriTech

**Top FoodTech & AgriTech Investors:** 

Perry Talents

Vision Ventures

Zero Gravity Capital

Venture to Future Fund

Challenger Accelerator

#### **Top Rounds:**

Year	Start-up	Amount EUR, mn	Stage
2020	Nitroterra	1.0	Seed
2020	Eatster	0.3	Seed

#### **Top crops in country by Production:**

- Common winter wheat and spelt:
   1.7 Mt/year | 1.4% of the EU production (15th among EU countries).
- 2. Grain maize:1.1 Mt/year. | 1.1% of the EU production

(14<sup>th</sup> among EU countries)

 Sugar beet (excluding seed):
 1.1 Mt/year | 1.1% of the EU production (12th place among EU countries)

#### **Worth Noting:**

2<sup>nd</sup> largest producer of Other vegetables cultivated for fruit n.e.c. in the EU with annual output of 28,000 tonnes

# Top Funded Start-ups (as of 01.01.2024 since their launch):

Name	Amount EUR, mn
Nitroterra	1.0
Orderlord	0.4
Eatster	0.3





Raised capital: **EUR 0.0 mn** (0.0% of CEE FoodTech)
Rounds: **0** (0.0% of CEE FoodTech)

#### Investment in AgriTech (2018-2023)

Raised capital: **EUR 0.0 mn** (0.0% of CEE FoodTech)
Rounds: **0** (0.0% of CEE AgriTech)

#### **Top FoodTech & AgriTech Investors:**

Balkan Tech Fund

# Top Accelerators for FoodTech & AgriTech Companies:

DigitalDen

#### Top crops in country by Production:

- Potatoes (including seed potatoes):
   23.0 Mt/year
- 2. **Grapes:** 20 Mt/year
- 3. **Watermelons:** 18 Mt/year
- 4. **Cabbages:** 9 Mt/year

#### **Top Rounds:**

No data available

Top Funded Start-ups (as of 01.01.2024 since their launch):

83

No data available



## NORTH MEEDONIA



## Economy Snapshot (2023)

Area: 25,713 km² (2.1% of CEE)
Population: 1.8 mn (1.7% of CEE)
GDP per capita (2022): EUR 6,261
Innovation index: 28.8
Internet access: 83.0%

# Agriculture Snapshot (2022) Ag. area: 12,651 km² (2.3% of CEE) Contribution to the GDP: 8.1%

Workforce: 10.8%

## FoodTech & AgriTech Snapshot (2023)

Number of start-ups: 4 of all domestic start-ups: 3.8% of all CEE FoodTech start-ups: 0.4%



#### Investment in FoodTech (2018-2023)

Raised capital: **EUR 0.1 mn** (0.0% of CEE FoodTech)
Rounds: **3** (0.0% of CEE FoodTech)

#### Investment in AgriTech (2018-2023)

Raised capital: **EUR 0.0 mn** (0.0% of CEE FoodTech)
Rounds: **0** (0.0% of CEE AgriTech)

#### **Top crops in country by Production:**

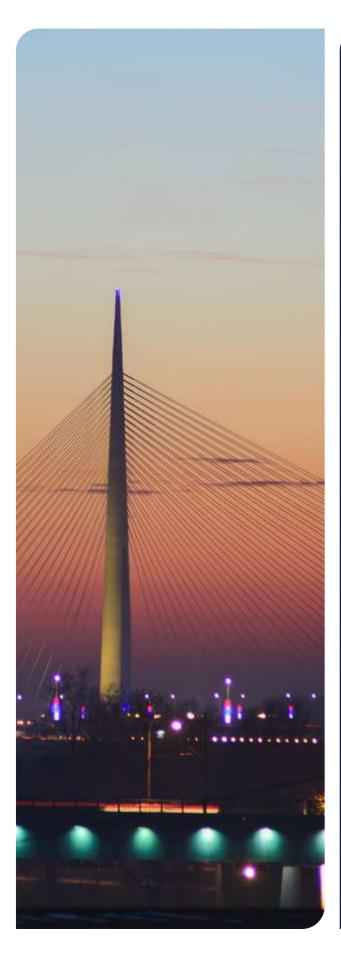
- Green maize:
   0.3 Mt/year
- 2. **Grapes:** 0.3 Mt/year
- 3. **Peppers (capsicum):** 0.2 Mt/year
- 4. Common winter wheat and spelt: 0.2/year
- Potatoes (including seed potatoes):
   0.2/year

#### **Top Rounds:**

Year	Start-up	Amount EUR, mn	Stage
2022	ChiaDía Drinks	0.05	Angel
2021	Long Positive	0.05	Grant
2022	Organic Balkan	0.03	Grant

Top Funded Start-ups (as of 01.01.2024 since their launch):

Name	Amount EUR, mn
ChiaDía Drinks	0.05
Long Positive	0.05
Organic Balkan	0.03





Raised capital: **EUR 0.0 mn** (0.0% of CEE FoodTech)

Rounds: **0** (0.0% of CEE FoodTech)

#### Investment in AgriTech (2018-2023)

Raised capital: **EUR 1.3 mn** (1.0% of CEE AgriTech)
Rounds: **6** (4.9% of CEE AgriTech)

AgriTech 100.0%

#### **Top crops in country by Production:**

- Grain maize and corn-cob-mix:
   4.3 Mt/year
- Common winter wheat and spelt:
   3.1 Mt/year
- 3. Sugar beet (excluding seed): 1.7 Mt/year
- 4. **Sunflower seed:** 0.6 Mt/year
- 5. Potatoes (including seed potatoes): 0.5 Mt/year

#### **Top FoodTech & AgriTech Investors:**

- South Central Ventures
- SmartLabs
- ICT Hub Venture
- TS Ventures Fund
- Omorika Ventures
- 5th Quarter Ventures

# Top Accelerators for FoodTech & AgriTech Companies:

- BITF Incubator
- Foodscale hub

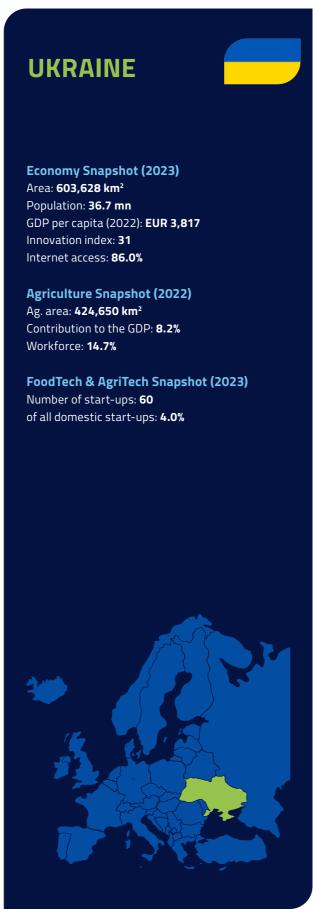
#### **Top Rounds:**

Year	Start-up	Amount EUR, mn	Stage
2018	Agremo	0.5	Early VC
2022	Agremo	0.5	Seed

# Top Funded Start-ups (as of 01.01.2024 since their launch):

Name	Amount EUR, mn
Agremo	1.2
Beehold	0.2

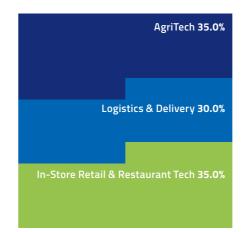




Raised capital: **EUR 8.7 mn** (% of CEE FoodTech)
Rounds: **13** ( of CEE FoodTech)

#### Investment in AgriTech (2018-2023)

Raised capital: **EUR 1.2 mn** (% of CEE AgriTech)
Rounds: **7** (% of CEE AgriTech)



#### **Top crops in country by Production:**

#### 1. **Corn:**

34.2 Mt/year (64.6% of the total EU production in 2022 that reached ~53.0 Mt)

#### 2. Wheat:

26.8 Mt/year (21.1% of the total EU production in 2022 that reached ~127.0 Mt)

#### 3. Sunflower Seed:

15.1 Mt/year (161.3% of the total EU production in 2022 that reached ~9.3 Mt)

#### 4. Barley:

8.2 Mt/year (17.3% of the total EU production in 2022 that reached ~47.5 Mt)

#### 5. Soybean:

4.0 Mt/year (163% of the total EU production in 2022 that reached ~2.5 Mt)

#### 6. Rapeseed:

3.1 Mt/year

#### **Top FoodTech & AgriTech Investors:**

- SMRK
- CIG
- TA Ventures
- Flyer One Ventures

# Top Accelerators for FoodTech & AgriTech Companies:

- 1991 Accelerator
- ISE Group
- YEP
- Vacuum DeepTech Accelerator
- The Impact Business Acceleration Program
- The GCIP Ukraine

## Top Rounds:

Year	Start-up	Amount EUR, mn	Stage
2020	Zakaz	5.0	Series A
2019	Seadora	1.5	Seed
2018	Zakaz	1.1	Series A
2023	Carbominer	1.5	Grant

Top Funded Start-ups (as of 01.01.2024 since their launch):

Name	Amount EUR, mn
Seadora	13.3
Carbominer	2.4
Kray Technologies	1.5

# Appendix 2: FoodTech & AgriTech Market Segmentation

## **Market Segmentation by Dealroom**

	Groceries
FOOD LOGISTICS & DELIVERY	Food delivery
	10-min delivery
	Dark kitchen
	Meal kits
	B2B marketplaces
	B2B marketplaces
	Vertical farming
	Precision agriculture
	Regenerative agriculture
	Fertilizers
AGRITECH	Crop protection
	Acquaculture
	Greenhouse
	Animal farming
	Farmer lending and insurance
	Rest of SynBio
	Plant-based
ALTERNATIVE PROTEIN	Lab-grown
	Precision fermentation
	Fungi
	Insect
	Algae & seaweed

IN-STORE RETAIL & RESTAURANT TECH	Software for restaurants
	Fintech
REST OF FOODTECH	Coffee and tea
	Pet food
	Beer, winde and spirits
	Functional beverages
	Other beverages
	Dietary supplements, nutrition, microbiome
WITCHEN TECH	Robotics
KITCHEN TECH	Others
CROSS SEGMENT	Food waste
	Sustainable packaging

## **Market Segmentation by AgFunder**

<b>■</b> Up	stream Midstream Downstream
	Agricultural Biotechnology On-farm inputs for crop & animal agriculture, including genetics,
П	Agribusiness Marketplace & FinTech Commodities trading platforms, online input, procurement,
Н	equipment leasing, farmer FinTech  Bioenergy & Biomaterials
	Non-food extraction & processing, feedstock technology, cannabis pharmaceuticals
	Farm Management Software, Sensing & IoT  Agricultural data capturing devices, decision support software, big data analytics
	Farm Robotics, Mechanization & Equipment On-farm machinery, automation, drone manufacturers, grow equipment
	Novel Farming Systems Indoor farms, aquaculture, insect & algae production
	Innovative Food Cultured meat, novel ingredients, plant-based proteins
	Midstream Technologies  Food safety and traceability, logistics and transport, processing technologies
	Conservation/CarbonTech  Ecological restoration technologies and tools, including carbon credit platforms and forestry initiatives
	Miscellaneous  All other AgriFood-related technologies

# In-Store Retail and Restaurant Tech Shelf-stacking robots, 3D food printers, payment systems, food waste monitoring IoT E-grocery

Online stores and marketplaces for selling and delivering processed and unprocessed agricultural products to consumers

#### Home & Cooking Tech

Smart kitchen appliances, nutrition technologies, food testing devices, and home grow kits

#### Online Restaurants and Meal Marketplaces

Online tech platforms delivering prepared food and meal kits from a wide range of vendors

#### **Cloud Retail Infrastructure**

On-demand enabling tech, ghost kitchens, last-mile delivery robots and services

## **Market Segmentation by Pitchbook**

## FoodTech

ALT-PROTEINS	Cultivated
	Fermented
	Plant-based
	Edible insects
	Novel ingredients
	Future food forms
BIOENGINEERED FOODS	Upcycled foods
FOODS	Functional foods
	Molecular engineering
	Food beverage discovery
DISCOVERY	Kitchen enablement software
& REVIEW	Personalized nutrition
	Meal kits
E-COMMERCE	Online grocers
	Restaurant marketplaces
	Food intelligence & development
FOOD PRODUCTION	Food waste & traceability
	Sustainable packaging
	Freshness control
RESTAURANT & RETAIL TECH	Delivery robots
	Advanced vending
	Kitchentech & robotics
	Sales & operations tech
	Grocery store tech
	Ghost kitchens

## AgriTech

	Animal biotech
AC DIOTECH	Plant biotech
AG BIOTECH	Biomaterials
	Plant data & analysis
	Indoor farming components
INDOOR FARMING	Indoor farming systems
	Indoor growers
AGRIFINANCE & E-COMMERCE	Agribusiness marketplaces
	Finance & insurance
	Acquaculture
	Livestock & land animal tech
ANIMAL AG	Pollination tech
	Insect farming
	Drones & imagery analytics
	Farm management software
PRECISION AG	Robotics & smart field equipment
	Field IoT