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INVESTING IN THE EUROPEAN FARM TO FORK STRATEGY A BLOOMING FIELD FOR AGTECH & FOODTECH INNOVATION

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AUTHORS



Lucía Garzarón
Sustainability Director
Valoral Advisors



Roberto Vitón
Founder and Managing Director
Valoral Advisors

1.

A CALL FOR CHANGE



We all agree that the past year has been a very challenging one, that has demanded enormous global efforts to address the Covid-19 pandemic, which involved managing a delicate balance between safeguarding people's health and lives, while preserving economic resilience and social wellbeing.

At the same time, the climate crisis and environmental damage caused by humanity on earth are becoming increasingly tangible. According to Copernicus Climate Change Service, 2020 was the warmest year on record for Europe, and together with 2016 it was the warmest year recorded globally. We also witnessed wildfires in Australia and the worst fire season in California, USA, while ice melted in the poles.

At the beginning of 2020 we thought the focus on the Covid-19 pandemic would hinder the advances towards fighting climate change, but the opposite happened. We observed increasing concern and commitment to address the global climate crisis, the biodiversity and nature crisis, and the pollution and waste crisis, where consumers, and the private and public sectors showed higher commitment to generate positive change.

In 2020, China and Japan expressed their commitment to become carbon neutral by 2060 and by 2050 respectively, and the UK revealed its 9-point plan to achieve net zero carbon emissions

by 2050, while the European Commission continued reinforcing its commitment to a sustainable Europe through The European Green Deal. Moreover, in January 2021, in his first day of presidency, President-elect Joe Biden recommitted the United States to the Paris Agreement and showed that dealing with the climate crisis was among his highest priorities.

Large corporations are also showing signs of change and transitioning to a more sustainable economy. And other positive news are emerging as well, for instance, that Europe generated more electricity from renewables than from fossil fuels in 2020, according to a report published on 25 January 2021, by the German think tank Agora Energiewende and the British think tank Ember.

In this global context, the food and agriculture industry remains a large contributor to climate change and environmental degradation, where according to a new article published by naturefood on 8 March, 2021, and co-authored by Francesco Tubiello, a senior statistician and climate change specialist at the Food and Agriculture Organization of the United Nations (FAO), the sector generates one third of global greenhouse gas emissions in the form of carbon dioxide, methane, nitrous oxide, and fluorinated gases. The industry contributes as well with strong biodiversity loss, environmental pollution, and soil degradation.

At the same time, climate change is already affecting food production through changes in weather patterns and increased natural disasters, droughts, floods, forest fires and pests, and pose major threats to global food security and agricultural livelihoods.

All this demonstrates the imperative need for the food and agriculture industry to transition to more sustainable, regenerative, and resilient food production systems that build a better relationship with the natural environment, as well as provide healthy and nutritious food for all people.

Europe has shown it has a clear ambition in this direction, with the publication of the Farm to Fork Strategy in May 2020, where, as part of the European Green Deal, the European Commission is paving the way to develop a healthy and environmentally friendly food system for all its people.

At Valoral Advisors we believe that the Farm to Fork Strategy represents a big step forward for the food and agriculture industry, as it aims to set clear rules and trends for the years to come and opens opportunities for innovation and development of new food and agriculture business models and technologies that enhance productivity and sustainability.

As part of our market intelligence analysis, we track over 2,000 food and agriculture startups in Europe, where we have observed over the last 10 years that the food and agriculture industry has experienced a new wave of innovation and change that is increasingly aligned with sustainability values.

We find new companies arising along the value chain, in various sectors such as novel farming systems, including indoor farming, insect farming and algae farming; or new technologies for farm mechanisation and automation and precision agriculture; new technologies for food traceability along the supply chain; innovations in alternative proteins, food upcycling and other new ingredients for food production; as well as the proliferation of new sales channels with food delivery and takeaway apps and online marketplaces and restaurants.

The methodology used in our analysis includes the definition of 12 innovation categories that span the whole food and agriculture value chain and the identification of over 70 specific innovation segments within those categories which cover a vast majority of the AgriFoodTech space. We also apply a bottom-up mapping approach, identifying individual startups based in Europe and which their main innovations fall within the scope described before.

To identify the 2,000 startups included in this assessment, we have compiled information from multiple sources including desk research, European accelerators and VC funds, AgTech and FoodTech conferences and other industry-related events, local innovation platforms across Europe, and industry news, among others. This data is continuously updated and expanded to include new startups.

In the coming sections, we first present a brief summary of the European Green Deal and the Farm to Fork Strategy. We then explore innovation areas in the food and agriculture industry and their alignment with the Farm to Fork Strategy, and finally present an investment framework that aims to identify AgriFoodTech investment opportunities that can deliver potential attractive financial returns and positively contribute to the Farm to Fork Strategy and the European Green Deal.

We hope you enjoy the reading and find it insightful and inspiring, and you are very welcome to contact us, share your thoughts and discuss this further.

2.

THE EUROPEAN GREEN DEAL: A ROADMAP TO SUSTAINABLE ECONOMIES



The European Green Deal is a highly ambitious sustainable growth strategy for the European Union, that was launched in 2019 and defines a new path for human progress for the upcoming years.

It combines a set of policy initiatives by the European Commission, with the aim of making the European Union's economy sustainable by transitioning to a carbon-neutral economy and generating economic competitiveness, improving people's quality of life through better health, cleaner air and water, and caring for nature.

THE EUROPEAN GREEN DEAL DEFINES SOME CLEAR GOALS FOR THE EUROPEAN UNION:

- ✓ TO BECOME CARBON-NEUTRAL BY 2050.
- ✓ TO BOOST THE EFFICIENT USE OF RESOURCES BY MOVING TO A CLEAN, CIRCULAR ECONOMY.
- ✓ TO PROTECT HUMAN LIFE, ANIMALS, AND PLANTS AND REDUCE POLLUTION.
- ✓ TO HELP COMPANIES BECOME WORLD LEADERS IN CLEAN PRODUCTS AND TECHNOLOGIES.
- ✓ TO HELP ENSURE A JUST AND INCLUSIVE TRANSITION.



The European Green Deal will establish the incentives and regulations to boost the European economy through the development of green technologies, the establishment of sustainable industry and manufacturing, the implementation of a circular economy, whilst also caring for nature and reducing pollution.

To achieve these results, the European Green Deal considers mobilising at least €1 trillion of investments over the course of 10 years, through a combination of public and private capital.

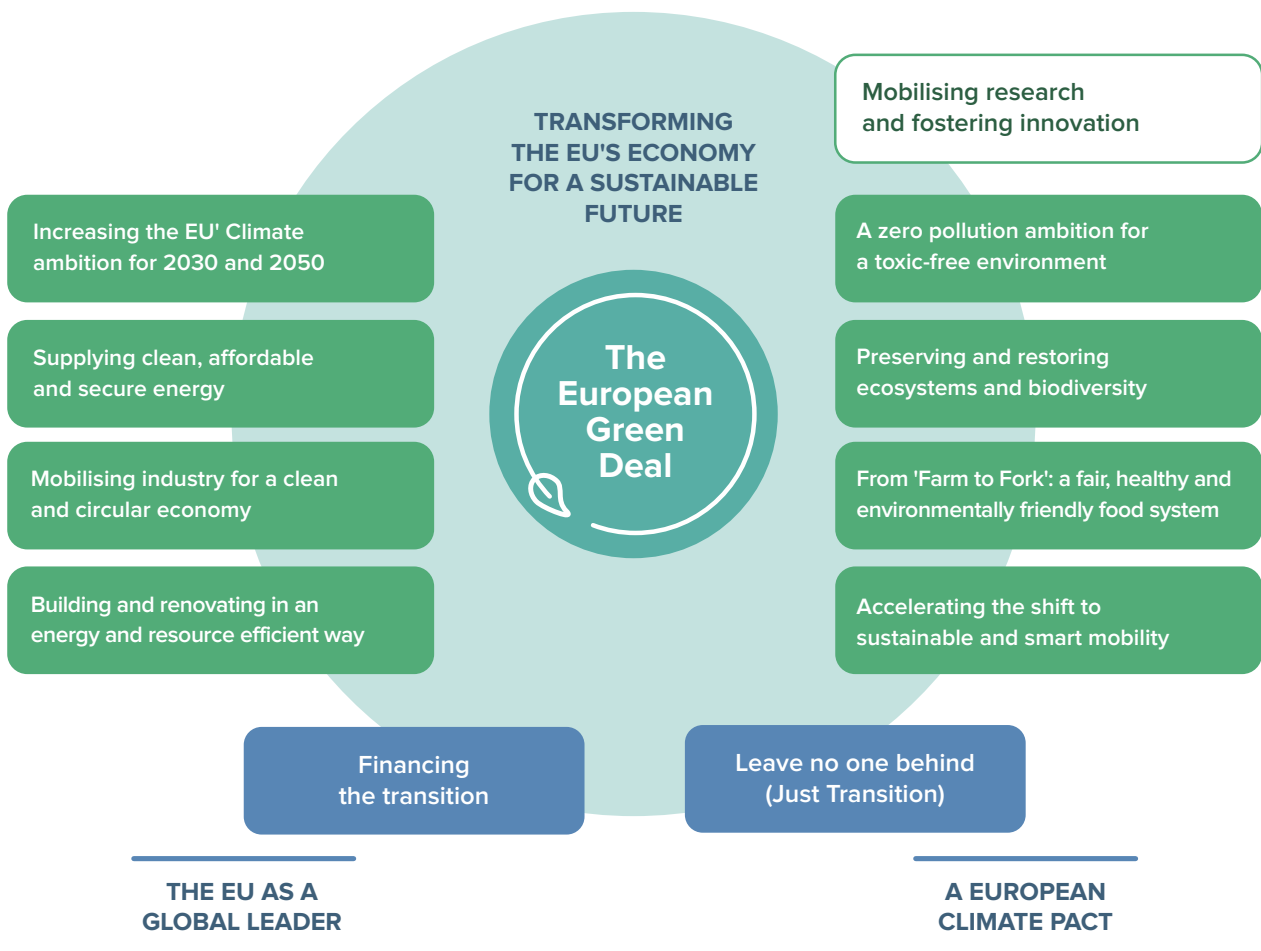
Therefore, the European Green Deal will pave the way to attractive business opportunities, innovation, and transition to more sustainable business models. It will demand action by all sectors of the Economy, decarbonising the energy sector; making buildings more energy efficient; supporting industry to innovate and making

industry more circular and sustainable; promoting cleaner, cheaper, and healthier forms of private and public transport; and making the food and agriculture industry less polluting and providing healthier food for everyone.

The European Green Deal includes 9 main policy areas: biodiversity, from farm to fork, sustainable agriculture, clean energy, sustainable industry, building and renovating, sustainable mobility, eliminating pollution, and climate action.

All these policy areas can be linked and relate in certain way to the food and agriculture industry. However, in this report we will focus on understanding the Farm to Fork Strategy and the investment opportunities that arise in the food and agriculture industry.

Fig. 01: Main elements of the European Green Deal.



Source: Communication from the Commission. The European Green Deal. 11 December 2019.

3.

**THE FARM TO FORK
STRATEGY:
FORGING A
SUSTAINABLE AND
HEALTHY FOOD
SYSTEM FOR ALL**

On 20th May 2020, the European Commission issued the publication “A Farm to Fork Strategy – for a fair, healthy and environmentally-friendly food system” with the goal of providing European citizens with sustainable, nutritious, affordable, and safe food.

The Farm to Fork Strategy aims to accelerate the transition to a sustainable and resilient food system in the European Union. It also aims to ensure that the food and agriculture industry is aligned with the European Green Deal objectives.

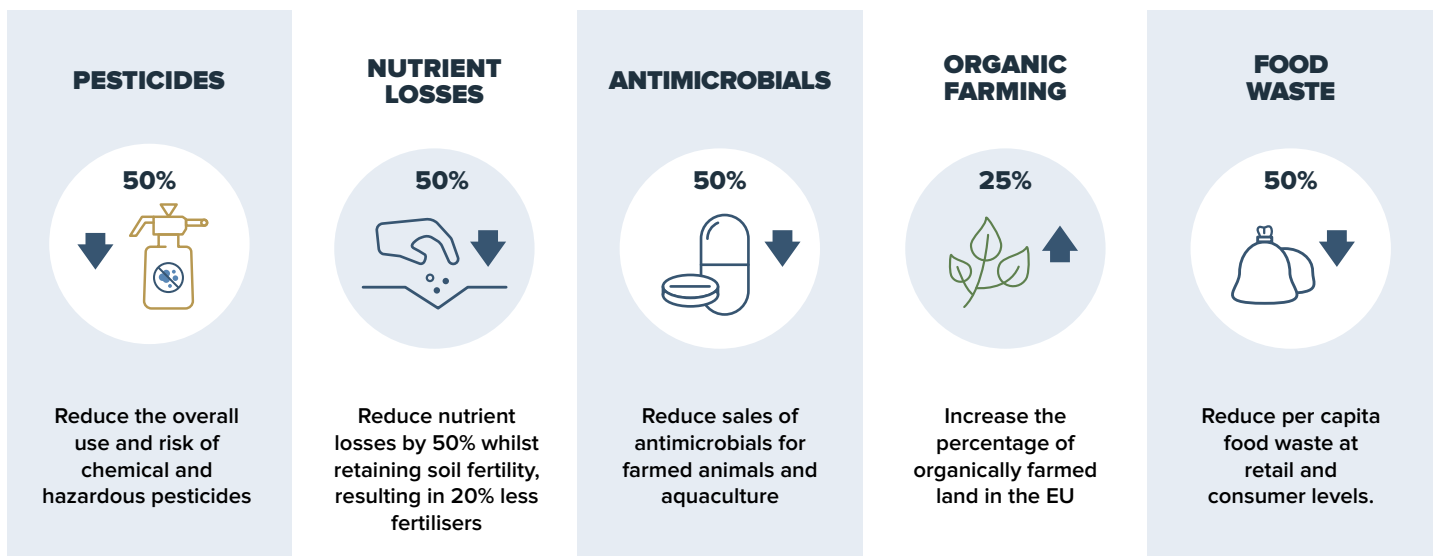
Therefore, the Farm to Fork Strategy strives to transition to a food system that should:

- Have a neutral or positive environmental impact, by preserving, restoring, and protecting land, soil, water, air, plants and animal health and welfare.
- Help mitigate climate change and adapt to its impacts.
- Help reverse the loss of biodiversity.
- Ensure food security, nutrition, and public health, making sure that everyone has access to sufficient, safe, nutritious, and sustainable food.
- Preserve affordability of food while generating fairer economic returns, fostering competitiveness of the EU supply sector, and promoting fair trade.

It also specifies some clear and measurable objectives for the next ten years, as illustrated in Figure 2:

Fig. 02:

2030 Targets for sustainable food production.



#EUFarm2Fork

#EUGreenDeal



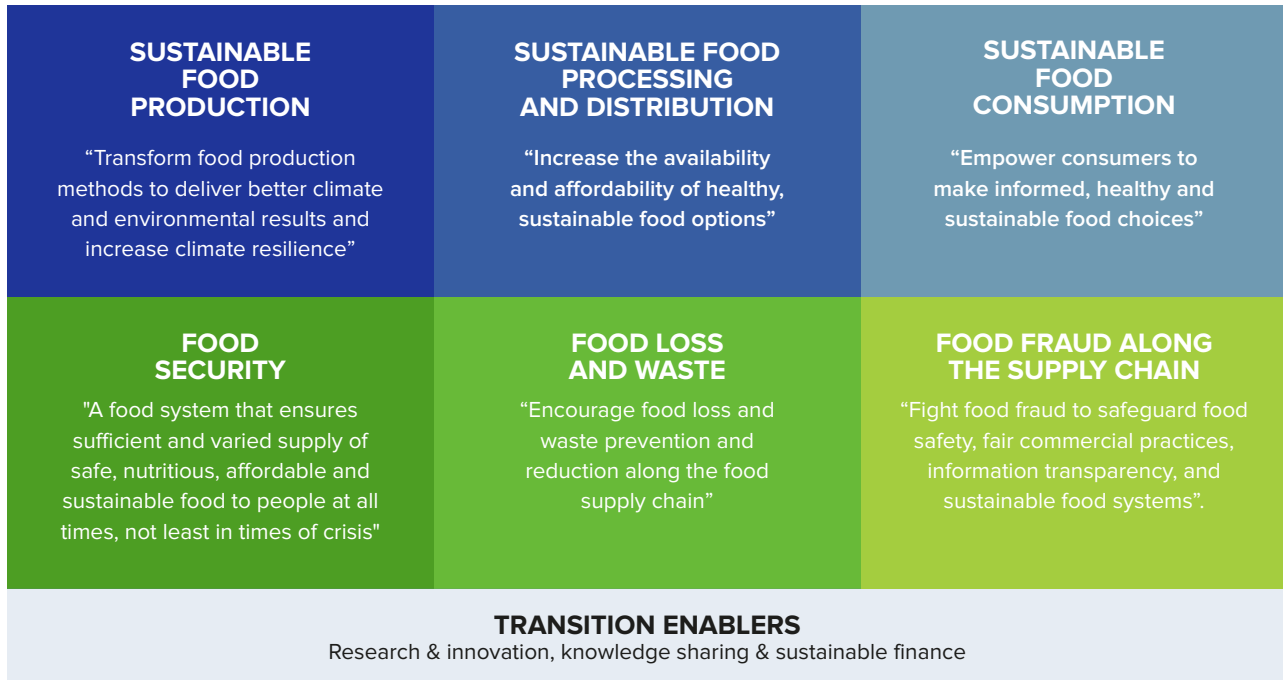
EUROPEAN COMMISSION

Source: Valoral Advisors and the Farm to Fork Strategy by the European Commission.

To achieve a sustainable food system, the Farm to Fork Strategy will articulate policy around six main areas of work described in Figure 3, addressing sustainable change throughout the whole food and agriculture value chain.

Fig. 03:

The Farm to Fork Strategy articulates six main areas of work:



Source: Valoral Advisors, based on *The Farm to Fork Strategy by the European Commission*.

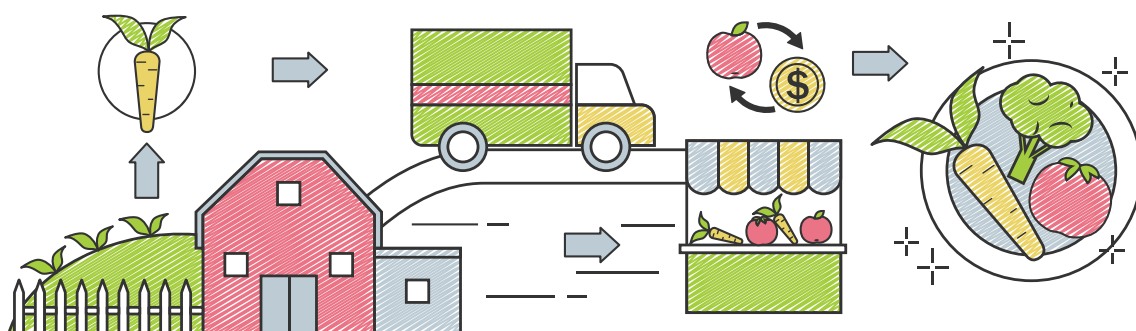
Each of these six main areas of work includes a detailed and comprehensive list of topics and activities where the Farm to Fork Strategy aims to concentrate, and which are summarised in Table 1 of the Annex.

It is worth noting that the Farm to Fork Strategy currently stands in an initial phase, providing food and agriculture industry participants time to prepare and plan for transition. The European Commission plans to make a legislative proposal of a framework for a sustainable food system before the end of 2023. It will work on common definitions

and general principles and requirements for sustainable food systems.

In line with the European Green Deal, the Farm to Fork Strategy represents a call for action and change to all actors in the food and agriculture value chain, including farmers, fishers, and aquaculture producers, as well as food processing and distribution, and represents a unique opportunity for the industry to embrace change and innovation and frame a more sustainable, regenerative, and resilient food system.

FARM TO FORK



4.

A NEW WAVE OF INNOVATION AND OPPORTUNITIES FOR THE FOOD AND AGRICULTURE INDUSTRY

As we have read in the previous section, the European Green Deal and the Farm to Fork Strategy define a clear trend towards a more sustainable future, a future that demands food and agriculture companies to transition to sustainable and net zero business models, in alignment with the Paris Agreement. In this context, innovation is crucial to reinforce transformation towards a more productive, healthier, and sustainable food and agriculture system.

With the aim of understanding the role that innovation plays in the food and agriculture industry, at Valoral Advisors we have developed a proprietary database of innovative AgriFood European startups. This database helps us identify main areas of innovation, current trends and investment opportunities. It also allows us to analyse startups' commitment with sustainability criteria and to evaluate how the identified innovation areas align with the Farm to Fork Strategy goals.






At the time of this publication, our database contains 2,000 European AgriFood startups. This database has focus on AgTech and FoodTech innovation, while it also considers startups with innovative business models and/or innovative products or services.



We have classified the startups in our database in twelve key areas of innovation along the food and agriculture value chain, as described in Figure 4 below.

Fig. 04:

Main innovation areas in the food and agriculture industry.

 NOVEL FARMING SYSTEMS	 BIOENERGY, BIOMATERIALS & OTHER RENEWABLES
 FARM MECHANISATION & AUTOMATION	 SUPPLY CHAIN TECHNOLOGIES
 GENETICS, CROP PROTECTION & ANIMAL WELFARE	 FOOD PROCESSING TECHNOLOGIES
 BIG DATA & PRECISION FARMING	 INNOVATIVE FOOD & BEVERAGES
 FARM MANAGEMENT & INFORMATION & EDUCATION SERVICES	 TECHNOLOGIES FOR RESTAURANTS, FOOD RETAIL STORES & HOME COOKING
 TRADING PLATFORMS, OUTSOURCING AND FINTECH FOR AGRICULTURE	 NEW SALES CHANNELS

Source: Valoral Advisors.

These areas of innovation include several sub-sectors, leading to an overall classification with over 70 categories, which can be found in detail in Table 2 of the Annex. This classification brings light on innovation opportunities and on a wide spectrum of attractive investment possibilities in the food and agriculture sector.

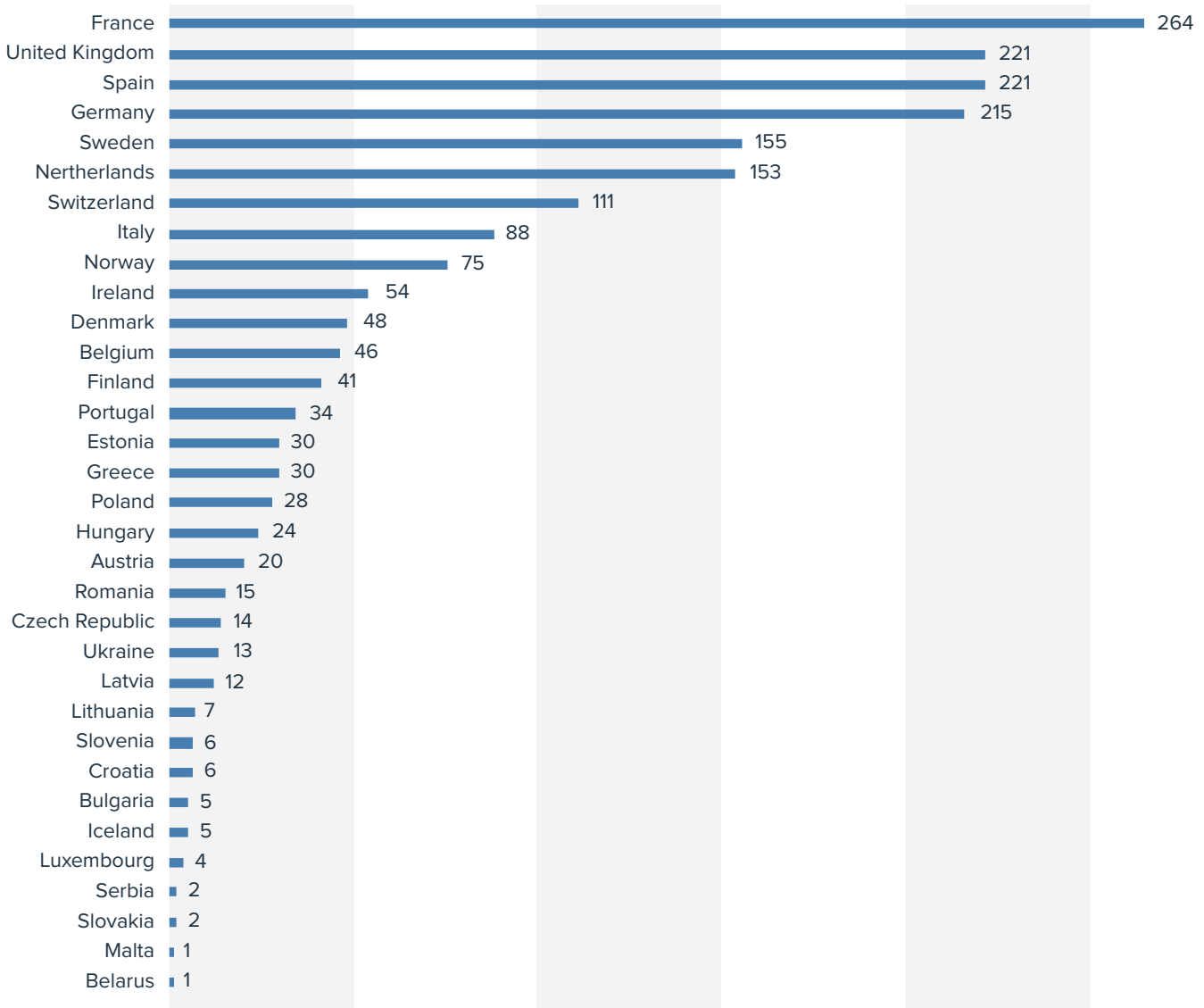
The startups considered in the analysis have wide geographical spread across Western and Eastern Europe, as can be seen in Chart 1 in the next page. The countries that have the highest number of startups are the largest economies in Western Europe, such as France, United Kingdom, Spain and Germany, which also have the largest food and agriculture sectors across the region.

Northern European countries like Sweden, Netherlands, Norway, Ireland, Denmark, and Finland, also present a large number of startups

in the AgriFood industry. These countries are generally among the most innovative across the region, in part due to proactive government support that includes public investment in startups through different public agencies and innovation programs.

Chart 01:

Geographical coverage of AgriFood startups across Europe.



Source: Valoral Advisors.

Moreover, AgriFood innovation across Europe is spreading evenly and rapidly along the value chain, as can be seen in Chart 2 in the next page, which displays the number of startups by innovation area.

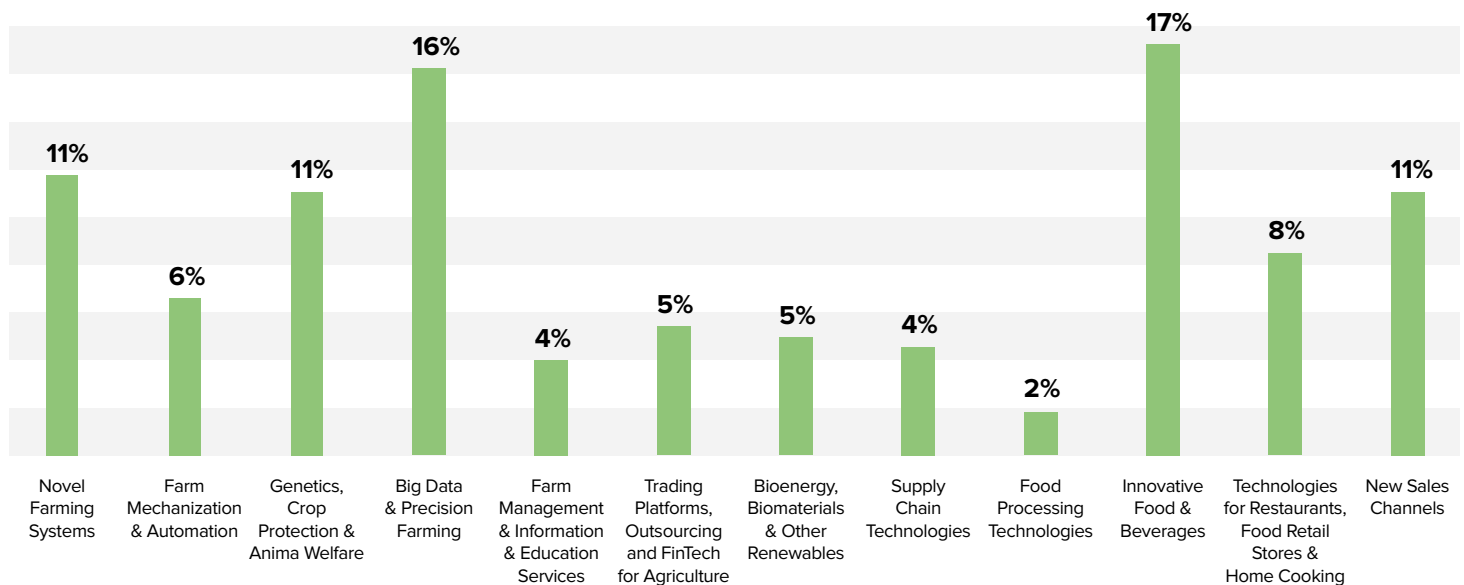
53% of startups relate to activities within the farming business, or “inside the farm”, while the remaining correspond to innovations “beyond the gate”, including transportation and logistics, food processing and manufacturing and food distribution.

There are five sectors that stand out with more than 10% of total number of startups each. One

of them is ‘novel farming systems’ that has been growing with the development of greenhouses and protected agriculture, aquaculture systems and technologies, insect farming and algae farming, all very interesting sub-sectors to explore in further detail and with a promising future.

Chart 02:

Number of AgriFood startups by innovation area (% of total).



Source: Valoral Advisors.

Another relevant innovation area is ‘genetics, crop protection and animal welfare’, with 11% of total number of startups identified. It is a segment that is naturally strong in Europe given the relevance of the seed, crop protection, crop nutrition and animal healthcare industry.

Within this category, ‘biostimulants, bioherbicides, biopesticides & biofertilizers’ is the fastest growth sub-sector as the industry is increasingly shifting from chemical to biological solutions, propelled by a series of factors including consumers’ preferences, regulatory changes, the growth of organic farming and an overall push for more sustainable production systems.

Furthermore, ‘Big data and precision farming’ is one of the largest areas of innovation and technology development in Europe, with 16 % of startups recorded. It is well-developed in Europe and in other regions like North America and Latin America, where many new technologies are emerging and being adopted in different degrees.

‘Big data and precision farming’ has a large number of startups in subsectors like ‘drones and satellite imagery’, ‘remote sensors and field monitoring’, ‘integrated hardware and software solutions (IoT)’, and ‘data analytics and decision support technologies’, with the aim of advancing a more

precise agriculture that applies inputs only when and where needed, leading to higher productivity, reduced use of agricultural inputs and enhanced sustainability.

The ‘innovative food & beverages’ segment is very interesting as well and is the largest innovation area identified in our analysis, with 17% of total startups, which is understandable given the vast food and beverages market in Europe and the increasing interest among consumers to adopt healthier and more sustainable diets.

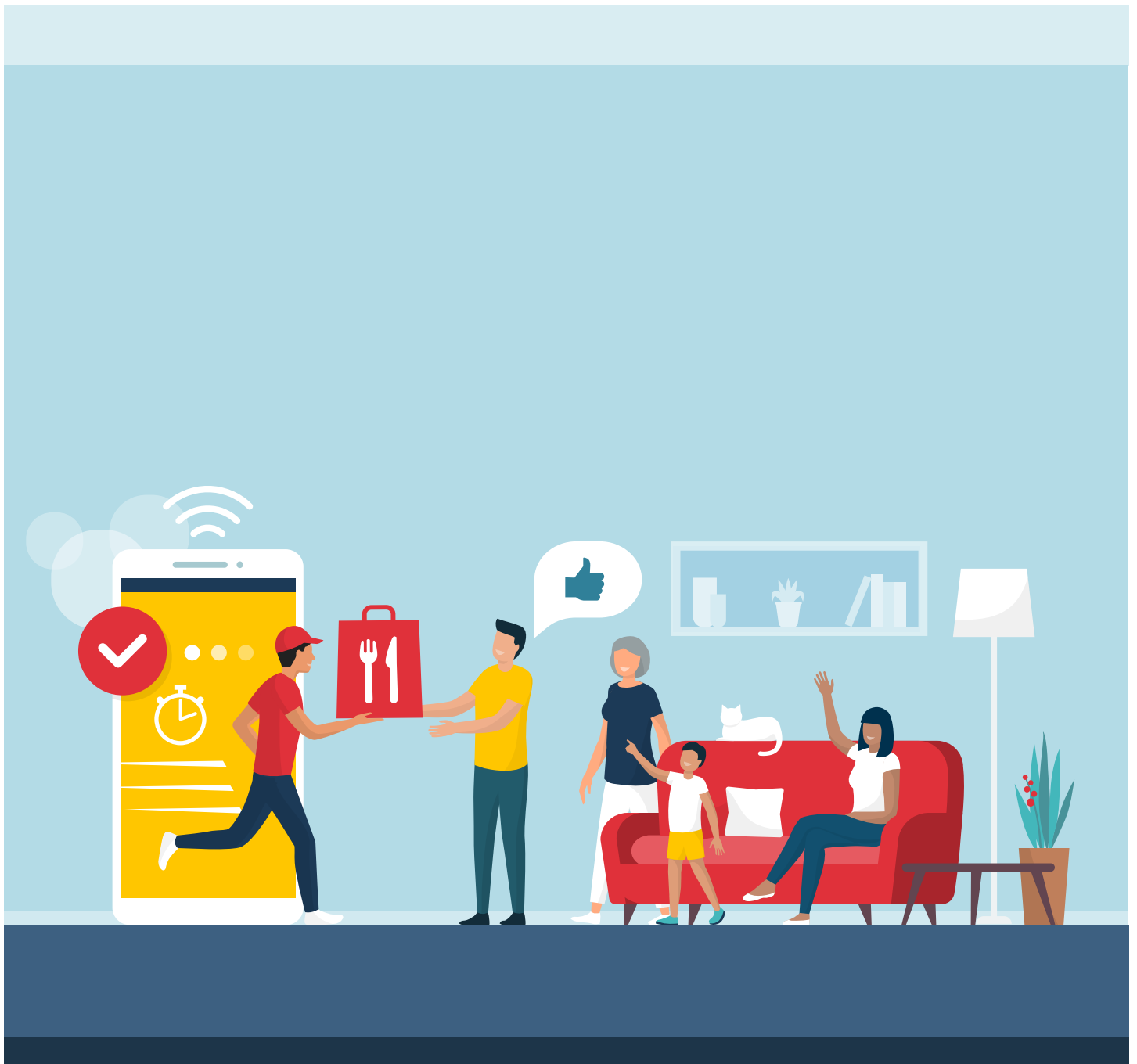
In this segment, most startups are involved in producing innovative food products prepared with plant-based proteins, with insect, algae, and other sustainable proteins, or with new ingredients and flavours. Other subsectors have a smaller number of startups but look promising and have gained increased awareness in recent years, such as cultured meats and lab-grown proteins, fermentation-based proteins and upcycled food.

Finally, the ‘new sales channels’ segment has substantially expanded amid the Covid-19 pandemic, as people have stayed more at home and have changed shopping habits with an increased use of online shopping options and home delivery.

Within this investment area, there has been a proliferation of startups focused on food delivery and takeaway apps; sales from farms directly to consumers or ‘farm to table’; food marketplaces and online groceries; and online meal kits and online restaurants.

The remaining innovation areas illustrated in Chart 2 include a vast range of solutions and products that span the whole food and agriculture value chain, and which provide attractive investment

opportunities. The Table 2 in the Annex provides more detail about these sectors and subsectors.



The previously mentioned 12 food and agriculture innovation areas are further analysed in Chart 3 below, with an assessment of their overall alignment with the Farm to Fork Strategy goals.

The relative alignment is calculated based on a specific scoring assigned to the more than 70

innovation categories against the six main goals set by the European Farm to Fork Strategy. The average alignment is 51% when we consider the aggregated 2,000 startups. In other words, we can say that on average, European AgriFood startups have a 51% alignment to the overall European Farm to Fork Strategy.

Chart 03:

Alignment of innovation areas to the European Farm to Fork Strategy goals.

AgriFood Innovation Area	EU Farm To Fork Strategic Goals						TOTAL WEIGHT
	ENSURING SUSTAINABLE FOOD PRODUCTION	ENSURING FOOD SECURITY	STIMULATING SUSTAINABLE FOOD PROCESSING, WHOLESALE, RETAIL, HOSPITALITY AND FOOD SERVICES PRACTICES	PROMOTING SUSTAINABLE FOOD CONSUMPTION AND FACILITATING THE SHIFT TO HEALTHY SUSTAINABLE DIETS	REDUCING FOOD LOSS AND WASTE	COMBATING FOOD FRAUD ALONG THE FOOD SUPPLY CHAIN	
Novel Farming Systems	High	High	Low	Low	High	None	62%
Farm Mechanization & Automation	High	High	None	None	High	None	46%
Genetics, Crop Protection & Anima Welfare	High	High	None	Low	None	None	43%
Big Data & Precision Farming	High	High	None	None	Low	None	41%
Farm Management & Information & Education Services	High	High	None	Low	High	None	39%
Trading Platforms, Outsourcing and FinTech for Agriculture	Low	Low	None	None	None	High	33%
Bioenergy, Biomaterials & Other Renewables	High	Low	High	High	High	None	55%
Supply Chain Technologies	High	High	High	High	High	High	79%
Food Processing Technologies	Low	High	High	Low	High	None	49%
Innovative Food & Beverages	High	High	High	High	Low	None	63%
Technologies for Restaurants, Food Retail Stores & Home Cooking	None	Low	High	High	High	None	41%
New Sales Channels	High	High	Low	High	High	None	52%
Total weight	70%	66%	43%	49%	46%	31%	51%

Source: Valoral Advisors.

Chart 3 shows that most investment areas are strongly aligned with at least a few strategic goals, like, for instance, novel farming systems is highly aligned with sustainable food production and with ensuring food security and has relevant influence on reducing food loss and waste.

However, supply chain technologies stand out for their alignment with all six main areas of work of the Farm to Fork Strategy and attain the highest overall alignment with 79%. This comes out naturally as supply chain technologies generally touch almost all activities along the value chain, starting from the farm to food processing, food distribution and reaching the consumer as well.

For example, some supply chain technologies track food ingredient properties from their origin and provide this information to food processors and consumers. Several large food corporations are now utilising supply chain technologies to monitor, for instance, deforestation among suppliers and ensure zero deforestation objectives.

Although all mapped startups in our database can develop tech for good and be purpose-driven, there are some innovation areas which show higher overall alignment with the Farm to Fork Strategy goals. For instance, novel farming systems and innovative food and beverages attain high overall alignment with 62% and 63% respectively. These two areas have been coincidentally among the ones which have received more investment flows lately.

On the other hand, when considering the Farm to Fork Strategy goals, some of them achieve a higher overall alignment, like sustainable food production with 70%, and ensuring food security with 67%, which can suggest that these goals present a wider set of sustainable investment opportunities.

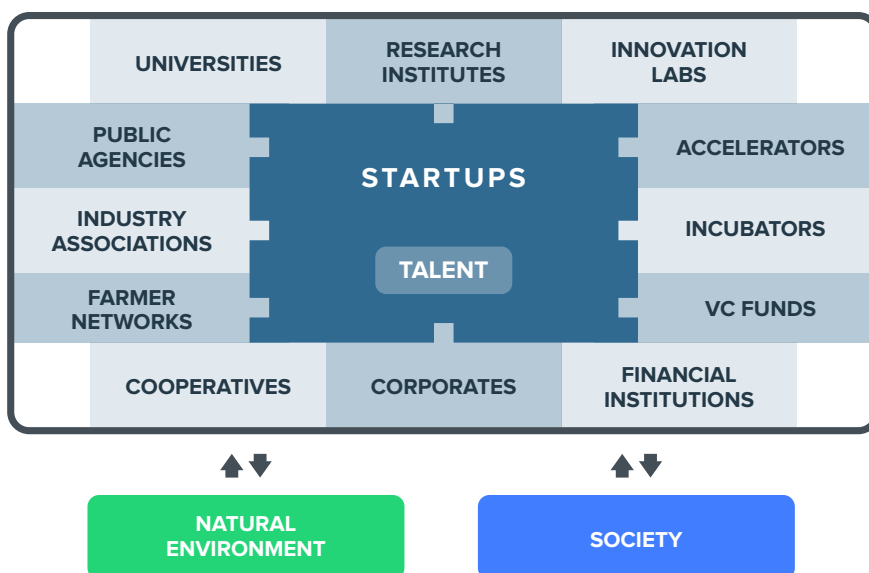
Other goals with lower overall alignment can indicate that there is more space for further innovation, like, for instance, in stimulating sustainable food processing, wholesale, retail, hospitality and food services practices.

Combating food fraud along the food supply chain is a more specific area of work that is mostly aligned with supply chain technologies and to a lesser extent to other areas of innovation. In this particular case technology innovation is very helpful, for example to supervise overfishing, while needs to be complemented with adequate common international policies.

To make all this innovation possible the existence of sound ecosystems that support startups' development and growth is crucial. Innovation normally does not happen in isolation, for instance, in Europe there are multiple AgriFoodTech innovation ecosystems that encourage startups' development.

Fig. 05:

AgriFoodTech Innovation Ecosystem.



Source: Valoral Advisors.

The Figure 5 in the previous page illustrates the main stakeholders in European AgriFoodTech ecosystems.

These ecosystems usually combine a group of stakeholders that provide academic knowledge, social capital, natural capital, financial capital and/or technical and managerial support. It is the interaction between these stakeholders that provides value to the ecosystem and to startups' development.

We see an increased specialisation in some of these ecosystems with particular focus on, for instance, livestock, water, automation, or food innovation, among other themes, depending on the local market needs. We also notice that the organisations operating in the ecosystem are increasingly incorporating sustainability values and competencies throughout their activities.

The natural environment is a relevant stakeholder that can serve as inspiration for innovation through, for instance, biomimicry, and provides valuable natural assets to develop innovations in the production of agricultural inputs, the provision of food, and bioenergy and biomaterials. Incorporating sustainability criteria in early-stage projects, from idea and design stages is utterly important to drive sustainable innovation.

At the same time, the availability of early-stage capital is vital to support startups in their initial stages, from idea, to design, to a minimum viable product (MVP). The role of the private and public sector will remain key to drive this innovation in an effective way, providing not only financial resources but technical and commercial support as well.

The current AgriFoodTech regional ecosystem in Europe, with multiple local hubs and the interaction with dozens of incubators, accelerators, venture capital funds as well as corporate venture units, has been a critical backbone to support the innovation described in this section.

The proliferation of European AgriFoodTech startups in the past 10 years presents vast investment opportunities through an array of

investment topics and themes along the food and agriculture value chain that are supported by sound AgriFoodTech ecosystems. These opportunities can be analysed and prioritised from a financial perspective while also considering sustainability values and their alignment with the European Farm to Fork Strategy and foster the development of a more sustainable, resilient, and healthy food and agriculture system.

5.

AN INVESTMENT APPROACH THROUGH THE LENS OF THE FARM TO FORK STRATEGY

The previous sections have described the opportunities to invest in the European AgriFoodTech space in alignment with the European Farm to Fork Strategy.

In this section we portray an investment approach to the AgriFoodTech sector, as we find a growing pool of investors with interest in gaining or expanding their exposure to the sector:

- **Venture capital funds** – both specialists and generalists – are among the most active investors in the AgriFood industry, increasingly focused on specific sectors and in specific investment stages.
- **Family offices** are also another active and growing pool of capital with interest in the AgriFood sector, usually with an explicit impact mandate.
- **Institutional investors** are emerging as another relevant investor segment, many of them setting up food and agriculture investment platforms to gain exposure to the structural trends shaping our sector.
- **Corporate investors** are a major investor segment, not just in Europe, but all around the world, as corporates ramp up their efforts to secure new technologies and innovative products through different investment strategies.
- **Mission-driven investors**, including impact investors and non-profit entities, are also becoming more active in the sector, pursuing opportunities which provide exposure to different impact themes.
- Last but not least, **public agencies** are also another relevant pool of capital, especially in the early-stage space.

From our experience working with all these investor segments, we notice that each of them typically has different investment rationale, investment approaches and required capabilities to deploy capital, as described in Table 1 below.

Table 01:

Main investor segments in the European AgriFoodTech market.

MAIN INVESTOR SEGMENTS	INVESTMENT RATIONALE	TYPICAL INVESTMENT APPROACH	KEY REQUIRED CAPABILITIES
Venture capital funds	<ul style="list-style-type: none"> • Specific mandate in AgriFoodTech VC space, or as part of an agnostic / generalist sector strategy. 	<ul style="list-style-type: none"> • Fund investments. 	<ul style="list-style-type: none"> • Prioritisation of key themes/sectors. • Market visibility & deal flow. • Technical DD capabilities.
Family offices	<ul style="list-style-type: none"> • Build exposure to growing AgriFoodTech VC space. • Interest in themes around sustainability, digitalisation, nutrition, and health, among others. • Impact investing opportunities in food and agriculture. 	<ul style="list-style-type: none"> • Direct investments in different funding stages, usually with other family offices. • Open to invest in funds. 	<ul style="list-style-type: none"> • Prioritisation of key themes/sectors. • Market visibility & deal flow. • Technical DD capabilities. • Fund selection & DD.
Institutional investors	<ul style="list-style-type: none"> • Build VC allocations in the growing AgriFoodTech sector. • Participate in growth sectors that can deliver higher returns. • Increase exposure to themes aligned with SDGs/impact mandate. 	<ul style="list-style-type: none"> • Allocations to established fund managers. • Some institutional investors build in-house teams to lead direct investments in the sector, usually driven by a relevant impact mandate or by food security considerations. 	<ul style="list-style-type: none"> • Broad market assessment (sector and geography wise). • Fund selection & DD. • Market visibility & dealflow.
Corporate investors	<ul style="list-style-type: none"> • Access to new innovations in their own industry sectors. • Acquisition of technologies to add to existing businesses or to enter new markets. • Carbon offsetting investments. 	<ul style="list-style-type: none"> • Allocations to AgriFoodTech VC funds. • Direct investments into selected companies, or outright acquisitions. • Setup of corporate venture units. 	<ul style="list-style-type: none"> • Market visibility & dealflow. • Access to innovation hubs & ecosystems.
Mission-driven investors	<ul style="list-style-type: none"> • Invest capital for good in sectors aligned with their mission and impact mandates. • Support asset managers and entrepreneurs working on AgriFoodTech solutions connected to key impact themes. 	<ul style="list-style-type: none"> • Allocations to funds and direct investments. • Usually investing together with our like-minded investors and organisations. 	<ul style="list-style-type: none"> • AgriFood sector knowledge. • Market visibility & dealflow. • Deep technical dive in technologies. • ESG & Impact assessment.
Public agencies	<ul style="list-style-type: none"> • Promote innovation in the food and agriculture sector. • Provide catalytic capital to drive positive outcomes in key sectors/themes. • Strengthen local asset management capabilities. 	<ul style="list-style-type: none"> • Allocations to AgriFoodTech funds. • Direct investments – e.g. equity, debt and grants -. • Funding of local innovation ecosystem and innovation hubs, with a focus on early stage initiatives. 	<ul style="list-style-type: none"> • Fund selection & DD. • Market visibility & dealflow. • Access to innovation hubs & ecosystems. • ESG & Impact assessment.

Source: Valoral Advisors.

We can fairly say that the European AgriFoodTech market currently provides enough depth, scale and diversification to invest in a professional way and in alignment with sustainability values:

- Our database – which is continuously updated – already includes 2,000 European AgriFoodTech startups.
- There are over 50 venture capital funds and corporate Venture units across Europe.
- The regional AgriFoodTech ecosystem counts multiple local hubs with a broad network of incubators and business accelerators, usually working in partnership with universities, industry associations, corporate partnerships, public promotion agencies, and others.

In this context, the challenge faced by many investors is how to develop a structured and comprehensive investment approach to target the opportunities identified in this study.

Below we present a simplified approach that we apply at Valoral Advisors which connects all the relevant aspects needed to deploy capital in the European AgriFoodTech space in alignment with the European Farm to Fork Strategy.

Table 02:

Farm to Fork investments in action – Investing in the European AgriFoodTech space.

	ASSESSMENT AND PRIORITISATION OF KEY INVESTMENT THEMES	DEFINITION OF INVESTMENT APPROACH	INVESTMENT SCREENING & SELECTION	INVESTMENT DD, NEGOTIATION & CLOSING	ONGOING MONITORING & PORTFOLIO MANAGEMENT
RANGE OF ACTIVITIES	<ul style="list-style-type: none"> • Mapping of relevant sectors and themes across the AgriFoodTech space against the “Farm to Fork” strategy. • Definition of key selection/ priority investment criteria. • Consideration of impact goals. • Selection of sectors and themes aligned with key investment criteria and impact goals. 	<ul style="list-style-type: none"> • Assessment of key investment considerations for fund investments vs. direct investments. • Understanding of investment paths and implications of investing through funds or investing directly into companies. • Definition of preferred investment approach (i.e. allocations to funds, direct investments, a combined approach, etc.). 	<ul style="list-style-type: none"> • For funds: review of investable universe of funds by defined criteria and F2F strategy alignment. • For direct investments: review of relevant mapping across regions, sectors and F2F strategy criteria. • Initial shortlist of potential investment targets. • Review of shortlisted opportunities and initial assessment to select key opportunities. • Iterative assessment. 	<ul style="list-style-type: none"> • Comprehensive due diligence of investment managers or companies, including non financial criteria and evaluation of contribution/alignment to F2F strategy. • Negotiation and closing of investments. 	<ul style="list-style-type: none"> • After investment completion, focus on continued monitoring and management of investments. • Continued assessment of financial and non financial performance.
OUTCOME	Defined investment scope (sectors and themes).	Agreed investment approach.	Initial investment targets.	Allocation to funds and investments into companies completed.	Portfolio management and investment reporting with focus on financial and non financial performance.

Source: Valoral Advisors.

This investment approach can be an effective tool to invest profitably in the AgriFoodTech industry whilst joining global efforts to promote positive change towards a more sustainable and thriving industry in the long term.

6.

FINAL REMARKS AND CONCLUSIONS

Societies are increasingly recognising the seriousness of the global climate crisis, the biodiversity and nature crisis, and the pollution and waste crisis, and are showing growing commitment for positive change.

Likewise, governments are developing sustainability targets and policy, with Europe paving the way with the European Green Deal sustainable growth strategy. And investors are increasingly willing to invest capital for good and prioritise investment opportunities that are aligned with positive sustainable outcomes.

In this context, the food and agriculture industry remains a large contributor to climate change and environmental degradation and needs to transition to a more sustainable, regenerative, and resilient food and agriculture production system that builds a better relationship with the natural environment, as well as provides healthy and nutritious food for all people.

The Farm to Fork Strategy set out by the European Commission represents a big step forward in this direction. It establishes clear sustainability goals and describes six main areas of work along the food and agriculture value chain, including a detailed and comprehensive list of topics and activities to enhance sustainability.

Innovation is crucial to drive transformation in the food and agriculture industry. Our mapping of over 2,000 European AgriFoodTech startups allows investors, corporates, and public agencies to identify and understand the main industry innovation areas and evaluate their alignment to the Farm to Fork Strategy.

A challenge faced by many of these investors is how to develop a structured and comprehensive investment approach to target these opportunities. The good news is that the European AgriFoodTech market provides enough depth, scale and diversification to invest in a professional way, and several approaches are available depending on the investors' needs and preferences.

We have now a big opportunity to embrace and foster AgriFoodTech innovation and the Farm to Fork Strategy represents a fundamental framework to drive investments in this direction and positively contribute to a more productive, healthier, and sustainable food system.

We look forward to exploring with you the ever-growing opportunities in the European AgriFoodTech sector and more broadly in the global food and agriculture investment space, thank you.

Sincerely,

Lucía Garzarón
Sustainability Director
Valoral Advisors

lucia.garzaron@valoral.com

Roberto Vitón
Founder and Managing Director
Valoral Advisors

roberto.viton@valoral.com

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ANNEX

Table 01:**Summary of main topics and activities considered in the European Farm to Fork Strategy.**

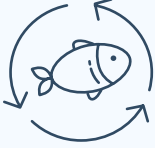





SUSTAINABLE FOOD PRODUCTION	SUSTAINABLE FOOD PROCESSING & DISTRIBUTION	SUSTAINABLE FOOD CONSUMPTION & SUSTAINABLE DIETS
<p>Carbon sequestration & carbon farming.</p> <p>Circular bio-based economy.</p> <ul style="list-style-type: none"> • Biological agricultural inputs and biochemistry. • Renewable energy & bioenergy from agriculture waste. • Energy efficiency solutions (e.g., solar panels). <p>Pesticide use reduction & bio-pesticides.</p> <p>Fertilisers use optimisation; natural & biofertilisers.</p> <p>Sustainable livestock farming:</p> <ul style="list-style-type: none"> • Sustainable and innovative feed additives. • Alternative feed options: insects, algae, or fish waste. • Carbon efficient meat production. • Antimicrobial use reduction, new veterinary medicinal products and medicated feed. <p>Better animal welfare & animal welfare labelling.</p> <p>Plant health resilience:</p> <ul style="list-style-type: none"> • Seeds diversity and adapted to pressures of climate change. • New genomic techniques to improve sustainability. <p>Growth of organic farming and organic aquaculture.</p> <p>Sustainable fish and seafood production:</p> <ul style="list-style-type: none"> • Traceability systems & digitalised catch certificates. • Sustainable aquaculture. • Algae, a source of alternative protein. <p>Enhance farmers' environmental and climate performance:</p> <ul style="list-style-type: none"> • Data and analysis. • Environmental standards & measures. • Green and digital technologies. 	<p>Integrate sustainability into corporate governance & companies' strategies.</p> <p>Increase energy use efficiency.</p> <p>Reformulate food products for healthy, sustainable diets.</p> <p>Set up nutrient profiles to limit foods high in fat, sugars, and salt.</p> <p>Sustainable marketing and advertising strategies.</p> <p>On food packaging:</p> <ul style="list-style-type: none"> • Reduce food packaging. • Ensure packaging safety & reduce hazardous chemicals. • Innovative and sustainable food packaging solutions. • Re-usable packaging & cutlery in food services. • Include geographical indications and sustainability criteria. <p>Circular business models.</p> <ul style="list-style-type: none"> • New business opportunities making use of food waste. <p>Food systems resilience & shorter supply chains.</p> <p>Scale-up socially responsible business models.</p>	<p>Encourage the shift to healthy & sustainable diets.</p> <p>Decrease EU overweight and obesity rates.</p> <p>Improve food products' information for better choices.</p> <ul style="list-style-type: none"> • Harmonised front-of-pack nutrition labelling. • Product's origin or provenance indicators. • Harmonised voluntary green claims. • Sustainable labelling framework that covers nutritional, climate, environmental and social aspects of food products. • New ways of providing information to consumers, e.g., for visually impaired persons. <p>Improve the availability and price of sustainable food.</p> <p>Promote healthy and sustainable diets in institutional catering.</p> <p>Increase sustainable food procurement in schools, hospitals, and public institutions.</p> <p>EU school schemes to include education on sustainable food production and consumption, healthy nutrition and food waste reduction.</p> <p>Tax incentives to drive the transition to a sustainable food system & healthy diets.</p>

ENSURING FOOD SECURITY	REDUCING FOOD LOSS AND WASTE	COMBATING FOOD FRAUD ALONG THE FOOD SUPPLY CHAIN
<p>Monitor food security, and competitiveness of farmers and food operators.</p> <p>Ensure the respect of worker's social rights: reinforcement of workers' social protection, working and housing conditions and protection of health and safety.</p> <p>Increase sustainability of food producers to enhance their resilience.</p> <p>Develop a common European response to crisis affecting food systems and contingency plan.</p>	<p>Food loss and waste quantification, analysis, and prevention.</p> <p>New uses to food waste.</p> <p>Revise and update legislation based on new consumer research findings on food loss and waste.</p> <p>Coordinate & reinforce EU action in food loss and waste. Show the way forward to all actors.</p>	<p>Scale up fight against food fraud.</p> <ul style="list-style-type: none"> • Zero tolerance food fraud policy with effective deterrents. • Use EU data on traceability and alerts to improve coordination on food fraud. • Propose stricter dissuasive measures, better import controls, and strengthen coordination and investigative capacities of European Anti-Fraud Office.

Source: Valoral Advisors, based on *The Farm to Fork Strategy by the European Commission*.

Table 02:

AgTech and FoodTech innovation areas and subsectors.

01.		Novel Farming Systems	Innovations in Soil & Water Conservation, Restoration and Carbon Offsetting Aquaculture Systems & Technologies Urban Farming Indoor Farming & Protected Agriculture Growing Systems & Equipment for Controlled Agriculture Smart Lighting Systems Insect Farming Algae Farming
02.		Farm mechanisation & automation	Labour Technologies, Robotics & Autonomous Machinery Water & Irrigation Systems Livestock & Dairy Solutions Innovative Materials & Applications
03.		Genetics, Crop Protection & Animal Welfare	Plant Genetics, Genomics & other Biotechnology developments Sustainable Fertilizers & Biochar Biostimulants, Bioherbicides, Biopesticides & Biofertilizers Biological & Mechanical Pest Control Soil Disinfection & Other Soil Treatments Hive Technologies and Pollination Services Fish & Animal Breeding Animal Nutrition & Health Other Seed, Plants & Animal Solutions
04.		Big Data & Precision Farming	Soil analysis & landscape assessment Drones & Satellite Imagery Remote Sensors & Field Monitoring Integrated Hardware & Software Solutions (IoT) Data Analytics & Decision Support Technologies
05.		Farm Management & Information & Education Services	Farm Management Software, Reporting Tools & Advisory Services Weather and Market Data Logistics & Transportation data Training, Education & Farm Community Services
06.		Trading Platforms, Outsourcing and Agriculture FinTech	Marketplaces for Inputs, Products & Services Machinery Sharing & Contractor Outsourcing Platforms Innovative Payment, Financing & Marketing Platforms Insurance & Risk Management Services Carbon Markets Investment & Innovation Platforms

07.		Bioenergy, Biomaterials & Other Renewables	<ul style="list-style-type: none"> Biofuels Biomaterials Biochemicals Biochar & biocarbon Food waste upcycling Waste Mitigation & Waste Treatment Other renewable energies Water Purification
08.		Supply Chain Technologies	<ul style="list-style-type: none"> Food & Ag Logistics & Storage solutions Food & Ag Traceability and Safety Smart Contracts & Digital Certification Fishing Monitoring & Tracking Technologies
09.		Food Processing Technologies	<ul style="list-style-type: none"> Food & Feed Processing Technology Food Processing Management Software Active & Intelligent Conditioning & Packaging
10.		Innovative Food & Beverages	<ul style="list-style-type: none"> Insect, Algae & other Sustainable Proteins Plant-based Proteins Fermentation-based Proteins Cultured Meats & Lab-grown Proteins Functional Foods, Beverages & Care Other Sustainable & Healthy Food Products Upcycled Food New Ingredients & Flavours
11.		Technologies for Restaurants, Food Retail Stores & Home Cooking	<ul style="list-style-type: none"> Robotics & IoT for Restaurants & Food Stores 3D Food Printing Cooking Appliances Food & Cooking Advice & Other Services Solutions to Reduce Food Waste Business Analytics, Management Solutions and Point of Sale (POS) Technologies Online Order Software, Marketing & Advertising Tools and Sales Training Solutions
12.		New Sales Channels	<ul style="list-style-type: none"> Farm to Table Food Marketplaces & Online Groceries Ghost Kitchens Booking, Delivery & Take Away Apps Online meal kits & Online Restaurants New Concepts for Food at Work

Source: Valoral Advisors.

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About Valoral Advisors

Valoral Advisors is an internationally recognised advisory Firm specialized in the global food and agriculture investment space. We work with fund managers, private & institutional investors, and business owners to help them invest profitably whilst fostering a better agriculture – more productive, more efficient, and more sustainable.

Valoral Advisors Sarl

info@valoral.com

www.valoral.com

Europe

7b, rue des Mérovingiens

L-8070 Luxembourg

G. D. of Luxembourg

T: +352 621 463 488

South America

Gorostiaga 1542 7th Floor

C1426 Buenos Aires

Argentina



Valoral Advisors Sarl

info@valoral.com

www.valoral.com