



FIVE SEASONS
VENTURES



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The State of European Food Tech 2021

MARCH 2021



2020 marked an inflection point for foodtech, as consumers reassessed how they eat

The pandemic has driven radical changes in consumer behaviour and accelerated adoption of meal and grocery deliveries, some of which is here to stay. It also highlighted big inefficiencies in the food supply chain and raised awareness for a healthier and sustainable food system.

2020 saw continued growth in food startup investor interest, with €2.4bn invested in 2020 (+12x vs 2013) and an increase of foodtech startup valuations (+156% vs 2019).

European foodtech unicorns are now large, international players, catching up with their US counterparts (i.e. valued at 48% of US foodtech unicorns, compared to 10% for tech overall).

Covid-19 accelerated egrocery adoption, and the emergence of new food distribution models

We believe the egrocery to be bigger than food delivery, as total market for groceries is \$2.1tn compared to \$0.6tn for restaurants. Egrocery companies have seen skyrocketing growth in 2020 (3x to 10x vs 2019), as convenience turned into necessity.

As demand shifted away from food services, meal kits companies efficiently stepped in together with virtual/dark kitchens, and removed previous doubts over these models. Quick-commerce startups (the 15 minute delivery from local dark stores), the last newborn in the grocery space, drew most attention, with €262M raised in the first quarter of 2021 already.

D2C food was the winner of Covid-19, creating an astonishing €84bn in value.

Food production and transformation is catching up with consumer-facing foodtech

B2B food companies may take longer to unlock growth than B2C but the opportunity could be bigger representing €1.7bn of capital investment in 2020 .

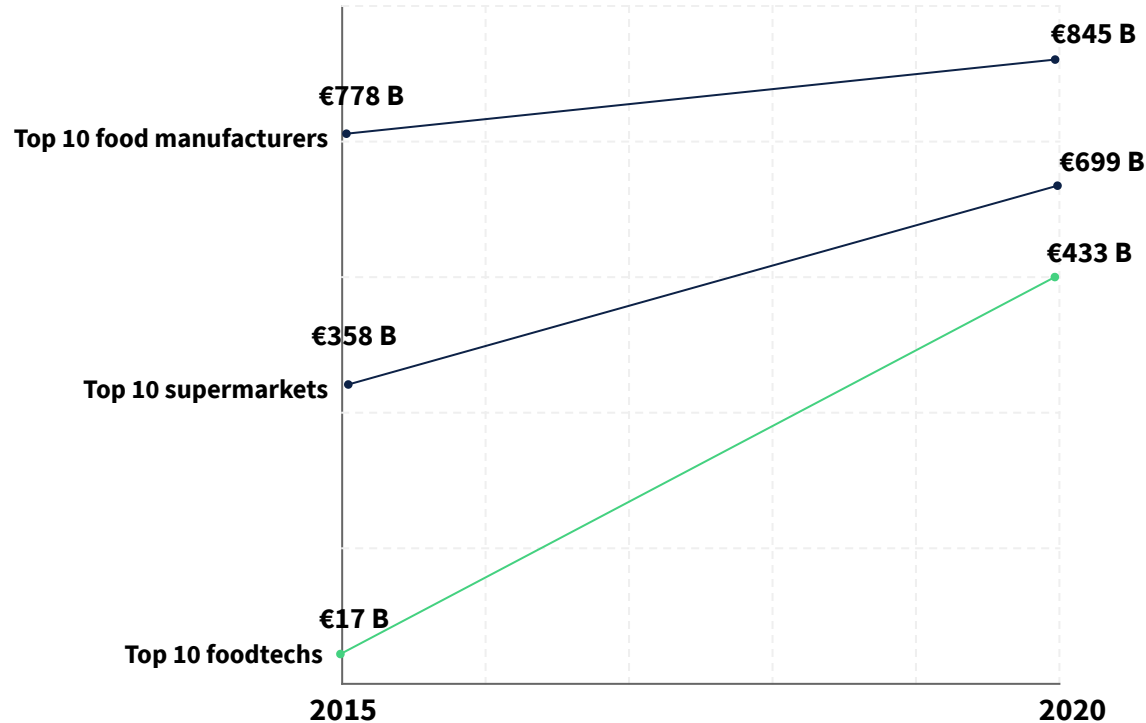
The pandemic highlighted inefficiencies in the food supply chain and the need for new technology solutions. Investments to enable supply chain automation, or funding to indoor and vertical farming have been on the rise. Insect production and food waste management also attracted large VC funding.

As consumer interest in sustainable alternatives grows, so do investments and valuations in the plant-based and cell-based sector (10x in 5 years) throughout Europe (and beyond).

**1 2020 marked an inflection point for foodtech,
regarding both company growth and VC funding**

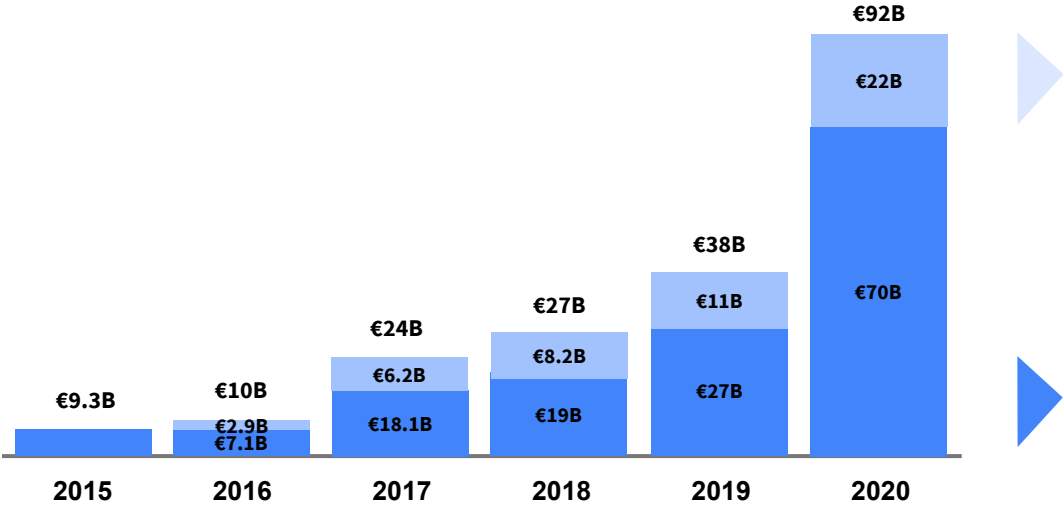
Foodtech companies have been growing faster than food incumbents, and still have a lot of enterprise value to eat into.

Combined enterprise value



European foodtech unicorns are now worth a combined €92 billion, after a huge bump in enterprise value during 2020.

Combined enterprise value (€ B)



Private foodtech unicorns

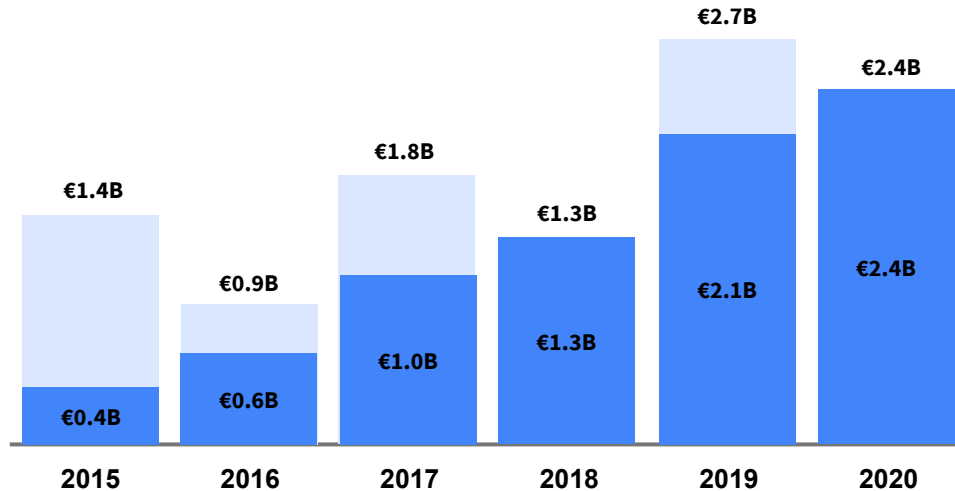


Public foodtech unicorns



The next generation of European foodtech innovators are surfing on a wave of momentum in VC backing, as food delivery startups reach maturity.

VC investment in European Food Tech (€ B)



First wave foodtech

€2.7B investment since 2015 in 5 food delivery platforms



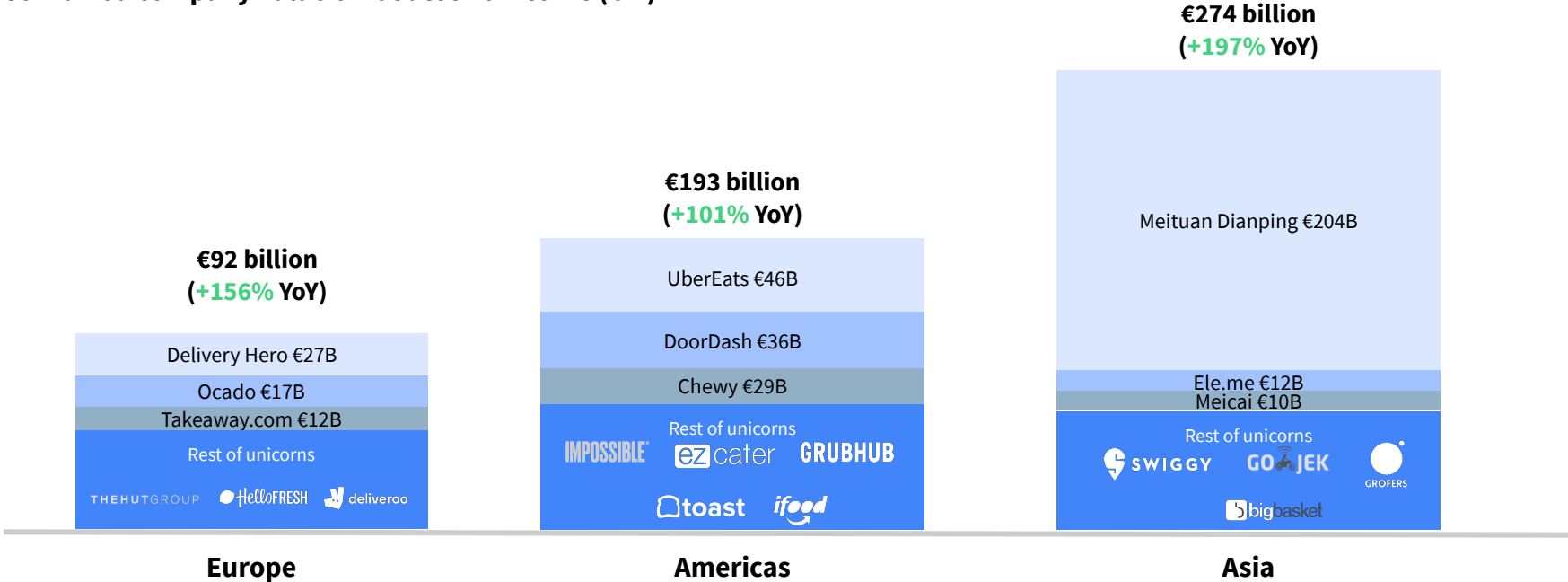
Next generation

€7.8B investment since 2015 and growing at 33%



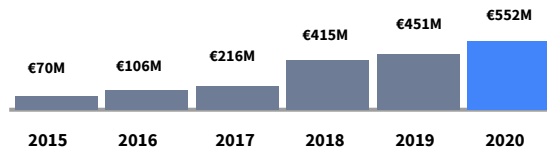
European foodtech unicorns are within striking distance from their US and Asian peers, and growing faster, with the exception of fast-growing Meituan Dianping.

Combined company value of foodtech unicorns (€ B)

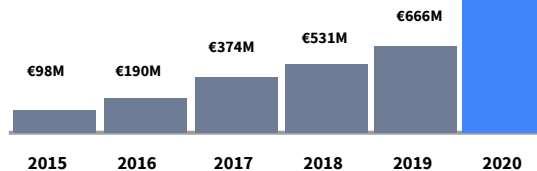


Transformation outpaced distribution & consumption VC funding, whilst primary production financing grew steadily in 2020.

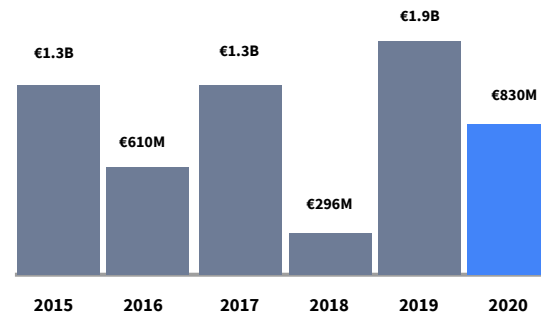
Primary Production



Transformation



Distribution & Consumption



Name	Transaction
INFARM Farming tech for urban services	\$140M SERIES C Jul 2020
Roslin Technologies Solutions for agri-tech & animal health	€50M EARLY VC Jul 2020
Tropic Biosciences Develops varieties of tropical crops	\$28.5M SERIES B Jun 2020
PlantLab Solution for improving crop quality	€20M GROWTH EQUITY Jul 2020
Nao Technologies Autonomous systems for agricultural applications	€14M SERIES B Jan 2020

Name	Transaction
Karma Kitchens Develops cloud kitchens	€252M SERIES A Jul 2020
The Protein Brewery Protein alternatives by fungal protein	€22M SERIES A Nov 2020
Castalie Sustainable alternative to water	€13.5M SERIES A Jun 2020
Lactips Thermoplastic pellets based on milk protein	€13M LATE VC May 2020
Next Protein Insect-based protein for animal feedstocks	\$11.2M SERIES A May 2020

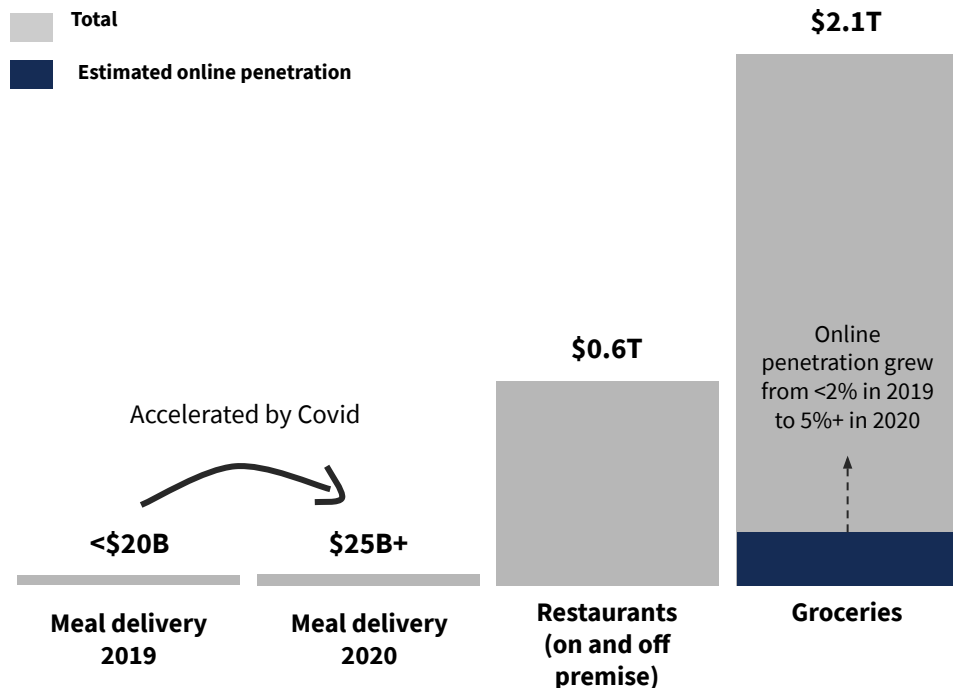
Name	Transaction
Wolt Food delivery and logistics	\$108M SERIES D May 2020
Mathem Online grocery retailer	€47.5M LATE VC Feb 2020
Gousto Meal kits delivery	\$41M LATE VC Apr 2020
Butternut box Direct-to-consumer pet food company	€20M SERIES C Feb 2020
Hungry Panda Delivery of authentic Chinese food and groceries	\$20M EARLY VC Mar 2020

2 Covid-19 accelerated penetration of online meal and grocery delivery, whilst fostering the adoption of new models



Online meal deliveries accelerated in 2020. But the bigger growth opportunity still lies ahead: grocery delivery.

2020E Gross Market Value (GMV) in Europe



Select European examples

Food delivery entering groceries



Personal shoppers



Online grocery retailers



Meal kits





Nathan Labat
Boris Meton
Lucas Lefebvre
Co-Founders



How did Covid impact your business?

Since February, our revenue has grown 3x. As an online grocery platform, we saw a big demand surge during the first wave of the pandemic. But what we've seen since then is that most of those customers have stayed with us. The first wave of the pandemic was obviously so unexpected that it was a real challenge on the bottom line operationally. As we now enter the second wave, we're not seeing the same demand surge relating to panic buying as we saw before, but we're also much more prepared this time around.

What do you think are the long-term implications for consumer grocery shopping?

It takes 21 days to change your habits. I think during the first lockdown, industry wide we gained at least 5 or 6 years of growth, and those changes are here to stay. Of course deeper digital adoption is one big trend, but this is also a health crisis. As a result of the pandemic we've seen a big push towards organic and healthier products, which I think is also a permanent shift. People are moving away from convenience products like ready meals, back to raw products for home cooking.

How have you leveraged user data as a business?

As we are a subscription business, our data allows us to predict buying behaviour very well. Our predictive analytics combined with our supplier relationships means that during the pandemic's second wave, we can deliver a much better service level through stock optimisation. In addition we're working on leveraging our data to develop strategies to customise consumer experience and offers.

How are consumers changing the way they interact with grocery retailers?

Customers come to us not just because we offer discounted products, but because we also act as a curator of products. The membership subscription model of our business builds customer loyalty, brand affinity and engagement which is really powerful. For example our users constantly challenge us on supply chain transparency and organic, ethical goods. Our consumers have become a core part of our product development strategy for our new own-brand products, as co-creators. In general I think we are seeing a de-bundling of grocery shopping. Leaders are emerging specialising in fresh or frozen, organic or bulk. The hypermarket era is over. Consumers are evolving, and shifting towards selecting different players based on different needs.

HQ: Livry-Gargan

Founded: 2018

Founder: Boris Meton, Lucas Lefebvre, Nathan Labat

Select Investors: Five Seasons Ventures, Heartcore, Kima Ventures

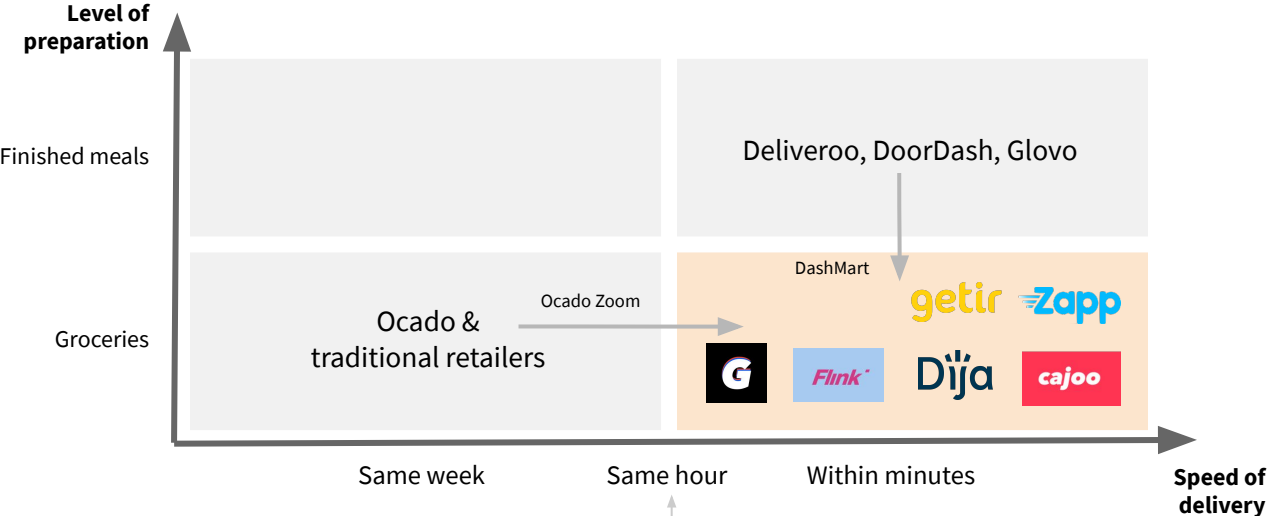
Funding: €6M

e-Grocery

Online grocery retailer



Foodtech players are racing to claim the instant grocery space, where local fulfillment and higher repeat offer high margins.



Players operating through dark stores (micro fulfillment centers in urban areas)

Virtual kitchens are still looking for the right model.

Virtual restaurants

Bringing restaurant-level brand, aesthetic, and menu to a delivery-only offering.

Often operate out of ghost/cloud/dark kitchens - preparation space that is not linked to a retail site.

Virtual restaurants use platforms like Deliveroo for sales and delivery, and may even outsource their restaurant concept, in a virtual restaurant franchise.



keatz

TASTER 



CLOUD
KITCHENS

REEF



Virtual franchises

Virtual restaurant enablers focus on building food brands people love, while outsourcing production to underused kitchen owners and distribution to big marketplaces.

Their core expertise lies in developing amazing food that stays amazing once delivered and in marketing. To gain customer awareness, some of them partner with influencers or celebrities.

nextbite

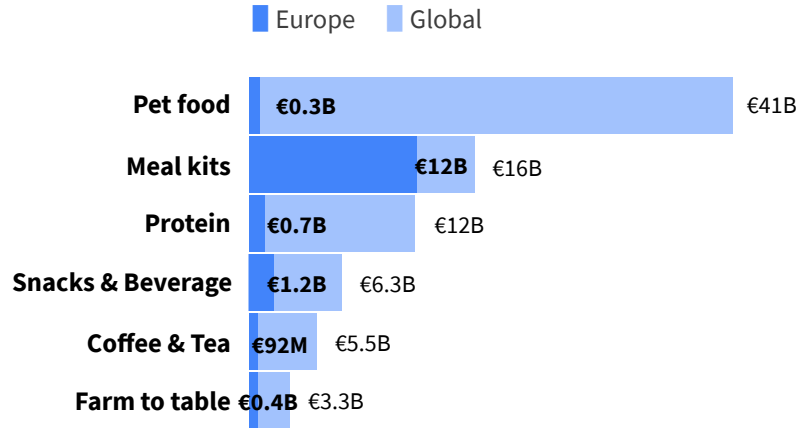


KBOX
GLOBAL

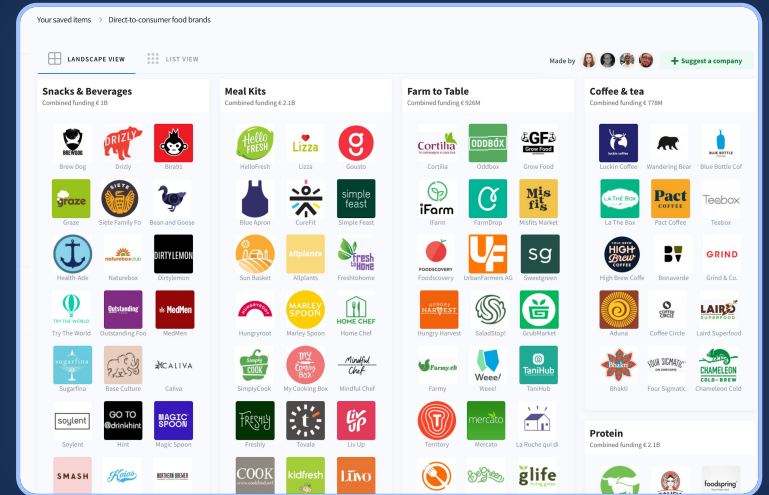
VDC
VIRTUAL DINING CONCEPTS

Covid-19 paved the way for a D2C revival, unleashing €84bn in value.

Top categories by combined value



Click on the image below to open the interactive landscape.



Food corporates committed significant resources to D2C models during the pandemic, through organic own-brand expansion and startup acquisition.

Launched
D2C
offering



Apr 2020

Dec 2020

Acquired
D2C
offering



Mindful Chef



Target

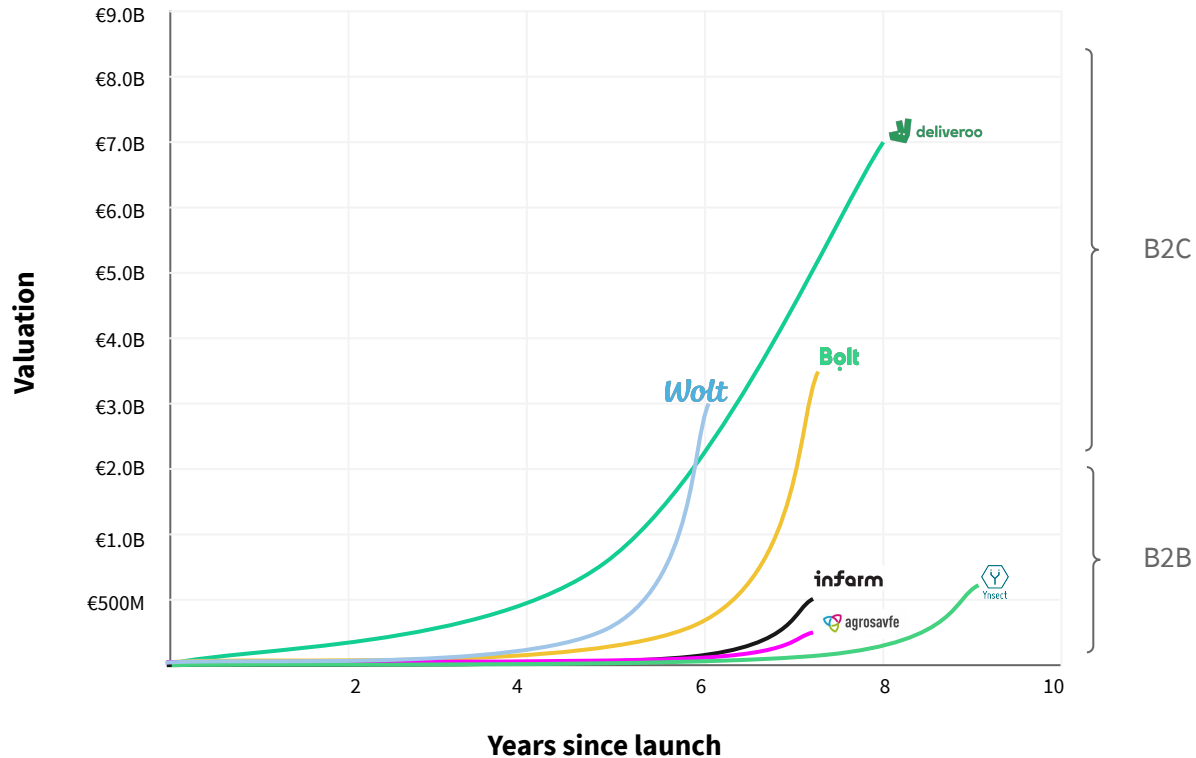
3 Distribution went digital, but what about the rest of the food value chain?



Almost all foodtech unicorns are consumer-facing. The race for the first primary production unicorn is on.

	Primary Production		Transformation		Distribution & Consumption
	Input	Farmers	Traders	Food companies	Retailers
Global market size ⁽¹⁾	€500B	€3 trillion	€1 trillion	€4 trillion	€6 trillion
Unicorns		indigo	NewDada 新达达 新零售供应链管家	BEYOND MEAT IMPOSSIBLE MEMPHIS MEAT BREWDOG Perfect Day LIVEKINDLY	MedMen sweetgreen GROFERS ocado GOJEK DOORDASH Uber Eats chewy gousto deliveroo amazon.com prime Takeaway.com bigbasket zomato ez cater instacart Delivery Hero POSTMATES KAM
European rising stars	Tropic Biosciences Ynsect agrosavfe innova FEED	PROTIX Sencrop AGRICOOOL ICEYE Aquabyte infarm GAMAYA	Farmia procsea foodza fooducerp PHENIX aliro fruitsapp NEW MARKETPLACE	Food Barkyn BouxMatok Butternut Box Huel mosa meat	Too Good To Go SIMPLE FcAst Supermercato24 Kolonial.no Cortilia SMUNCH
Themes	<ul style="list-style-type: none"> ✓ Crop optimisation ✓ Automated machinery 	<ul style="list-style-type: none"> ✓ Vertical farming ✓ Remote sensors 	<ul style="list-style-type: none"> ✓ Digital marketplaces ✓ Food traceability 	<ul style="list-style-type: none"> ✓ Robotics & AI ✓ Waste management 	<ul style="list-style-type: none"> ✓ Ghost kitchens ✓ Optimize last-mile logistics

So far, B2C has been scaling faster. B2B takes longer to unlock, but is at least as big an opportunity.



Covid-19 highlighted inefficiencies in the food supply chain...



Tyson Will Close Its Biggest Pork Plant After Workers Call Out Sick With Coronavirus

by Chauncey Alcorn
April 22, 2020



The Global Food Trade Has Been Upended by a Container Crisis

by Isis Almeida, Ann Koh, and Michael Hirtzer
February 2, 2021



Food and Beverage Companies Cope with Labor Shortages

by Korie Wilkins
January 26, 2021



FINANCIAL
TIMES

People: the strongest link in the strained supply chain

by Andrew Hill
March 8, 2021



Farm Mechanization Key to Addressing Labor Issues Moving Forward

by Brian German
February 16, 2021



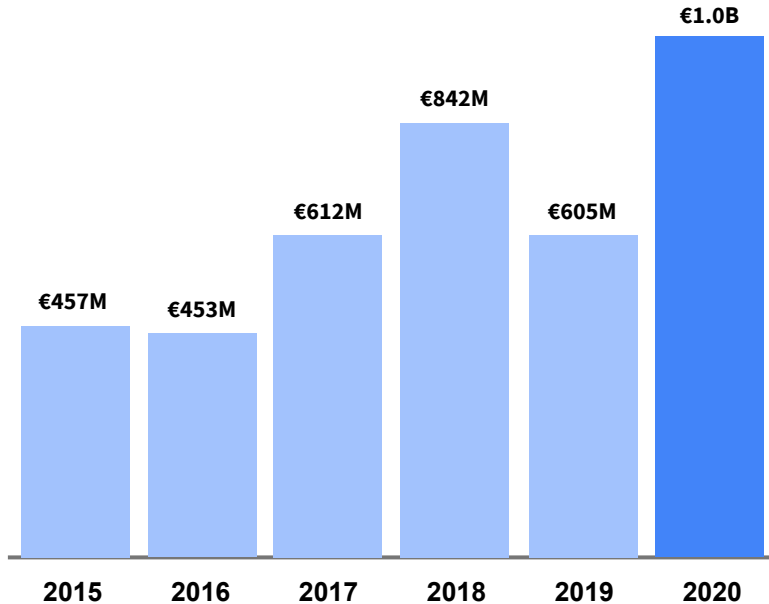
JOURNALS | AAAS

COVID-19 risks to global food security




by David Laborde, Will Martin, Johan Swinnen, Rob Vos
July 31, 2020

... which triggered investment in farming robotics and automation to address these issues.

Global VC investment in farm management & robotics



Selected categories

<p>Harvesting & picking</p> 	<p>Crop analytics</p> 
<p>Farm management</p> 	<p>Geospatial intelligence</p> 
<p>Indoor & next-gen farming</p> 	



inform

Erez Galonska
Guy Galonska
Osnat Michaeli
Co-Founders



What was your motivation to start Inform?

Inform started just under a decade ago. My co-founders, Guy Galonska, Osnat Michaeli and I had just moved to Berlin, bought a 1955 Airstream trailer, outfitted it with DIY growing shelves and started experimenting with indoor farming our own fresh produce. We realised that our current food system's biggest deficiency is that it is too far removed from the people it is trying to feed. We wanted to redefine the entire chain from start to finish. Instead of building large-scale farms outside of the city, optimizing on a specific yield, and then distributing the produce, we decided it would be more effective to distribute the farms themselves throughout the city. Soon we began to build modular, vertical farming units which could be installed in any urban environment, from supermarkets, restaurants, and distribution centers to other urban spaces, as close as possible to where food is consumed. We now have more than 1,000 farms based all around the world.

How is Inform contributing to sustainable food supply?

Inform's modular farming is extremely efficient. Each in-store farm uses 95% less water and 75% less fertiliser than soil-based agriculture; we save thousands of food kilometres by not shipping from abroad, and we don't pump harmful chemicals into soil or groundwater. Today, 90% of electricity used throughout the Inform network comes from renewables, with a target to reach zero emission food production next year.

Why do retailers choose to install Inform?

Retailers are becoming more sensitive to the fragility of the global supply chain, particularly in this era of climate uncertainty. We find that retailers' commitments to these initiatives resonate with the demands that consumers themselves are making for more locally-grown food choices and processes that offer transparency, sustainability, quality and taste. Moreover, within a market that presents fierce competition for grocery retailers, our clients see Inform as providing an opportunity to expand the diversity and size of their basket of fresh produce offerings and stand out from their competitors, while increasing attraction and footfall traffic to their food and vegetable departments with our innovative farms.

How did Covid affect your business? Are these long term implications?

Our recent Series A allows us to continue to invest heavily in a product that helps companies globally to train, engage and communicate with their increasingly distributed and deskless workforce. We will double-down on industries where we already have a good fit, like in the on-demand industry, but we're also seeing strong demand from other industries and this fundraise will allow us to expand. We're currently in aggressive hiring mode, as we're looking for talent to join our team across all functions.

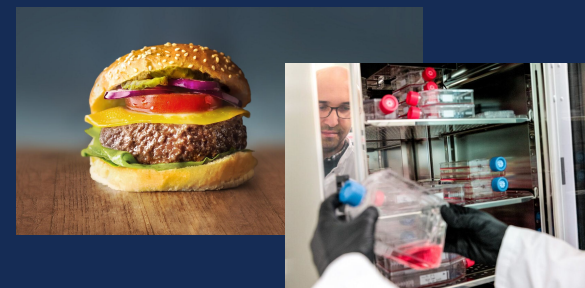
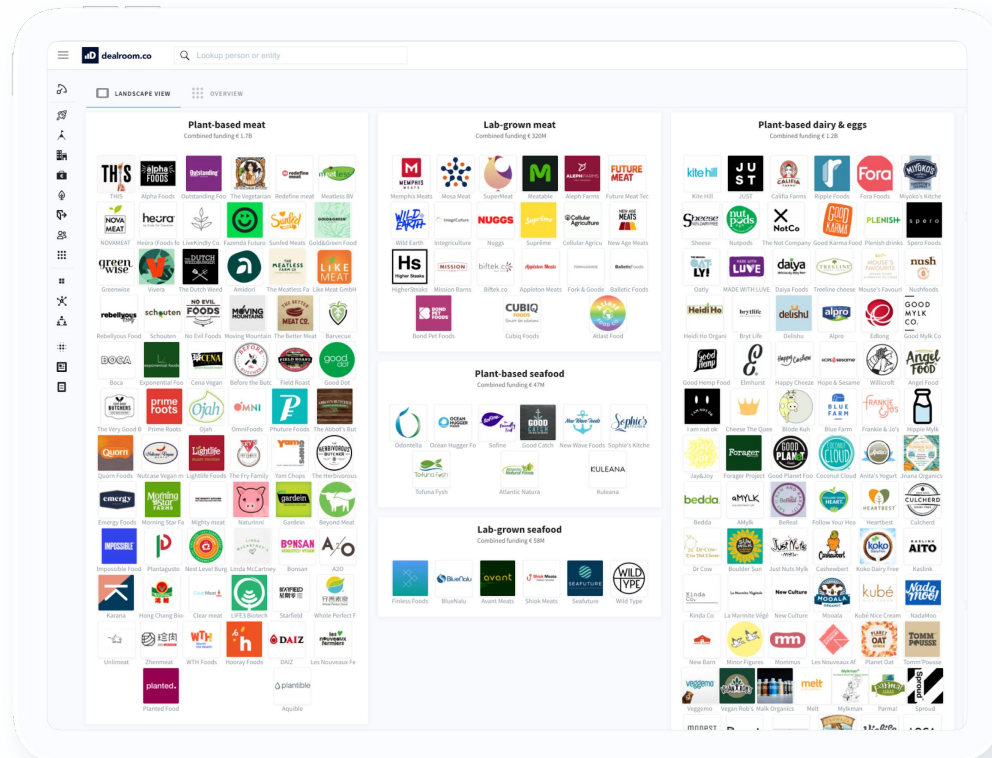
Protein production is moving away from farms. Investment in plant-based, insect and lab-grown alternative protein has grown 10x in 5 years.

MOSA
Meat

Founded: 2016

Location: Maastricht, Netherlands


















Latest round: \$85M Series B in December 2020



The Alternative
Protein landscape

4 Venture capital, exits, and corporate landscape









Foodtech specialists benefit from their unique position to address these new trends.

FUND	HQ	INVESTMENTS	EUROPEAN FOOD TECH INVESTMENTS 2019-2020
 Five Seasons Ventures Venture fund focused on Food Tech	Paris	8	
 Demeter Major player in venture capital and private equity for the energy and ecological transition	Paris	7	
 Kima Ventures Active early-stage investors	Paris	7	
 Pymwymic Fund companies who make a positive impact on the planet	Amsterdam	6	
 Astanor Ventures Investing across the food and agriculture value chain	Brussels	6	
FOUNDERS FUTURE Venture studio, providing creativity, network, support and productive capital	Paris	5	
 Idinvest Partners Leading pan-European Private Equity firm	Paris	4	
 Balderton Capital Backing European-founded startups	London	4	
 Indico Capital Partners Leading early stage VC	Lisbon	4	

Both incumbent food corporates and first-wave foodtech companies provide viable exit routes for VC-backed startups.

Acquiror	Target	Target HQ	Category	Transaction	Rev. Multiple
 Takeaway.com	 GrubHub	New York	Food delivery	\$7.3B Acquisition	5.7x
 Orkla	 NutraQ	Oslo	Supplements	€307M Acquisition	3.6x
 Uber	 Postmates	San Francisco	Food delivery	\$2.6B Acquisition	5.3x
 Barilla	 Pasta Evangelist	London	Meal delivery	€41M Acquisition	3.6x
 HelloFRESH	 Factor75	Chicago	Meal kits	\$277M Acquisition	2.8x
 MARS	 Kind	New York	Snacks	\$5.0B Acquisition	3.3x
 goPuff	 BevMo	Concord, US	Alcohol retail chain	€293M Acquisition	8.2x
 Nestlé	 Freshly	New York	Meal kits	\$950 Acquisition	3.5x
 Dr.Oetker	 Flaschenpost.de	Munich	Beverages delivery	€1.0B Acquisition	3.1x

Big food companies are making strategic bets in foodtech startups to explore new areas.

Corporate	Investment	HQ	Category	Transaction
 →	E-FARM	Hamburg	Agritech marketplace	\$5.3M Series A Sep 2020
 →	N2 Applied	Asker, NO	Fertilizers	€7.4M Series A Jan 2020
 →	Solar Foods	Helsinki	Alternative protein	€15M Series A Sep 2020
 →	Vitibot	Reims, FR	Autonomous wine robots	€11M Early VC Oct 2020
 →	Plant Jammer	Copenhagen	AI-driven recipes	\$4.7M Early VC Aug 2020
 →	YFood	Munich	D2C / Alt protein	€15M Series B Apr 2020
 →	The Protein Brewery B.V.	Breda, NL	Animal-free protein	€22M Series A Nov 2020
 →	Mosa Meat	Maastricht	Lab-grown meat	€55M Series B Sep 2020



Ivan Farneti
Partner



Niccolo Manzoni
Partner

We back Food Tech entrepreneurs for a healthier, more sustainable and more efficient food system.

Five Season Ventures is the first VC fund in Europe solely focused on investing in early stage food technology companies.

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