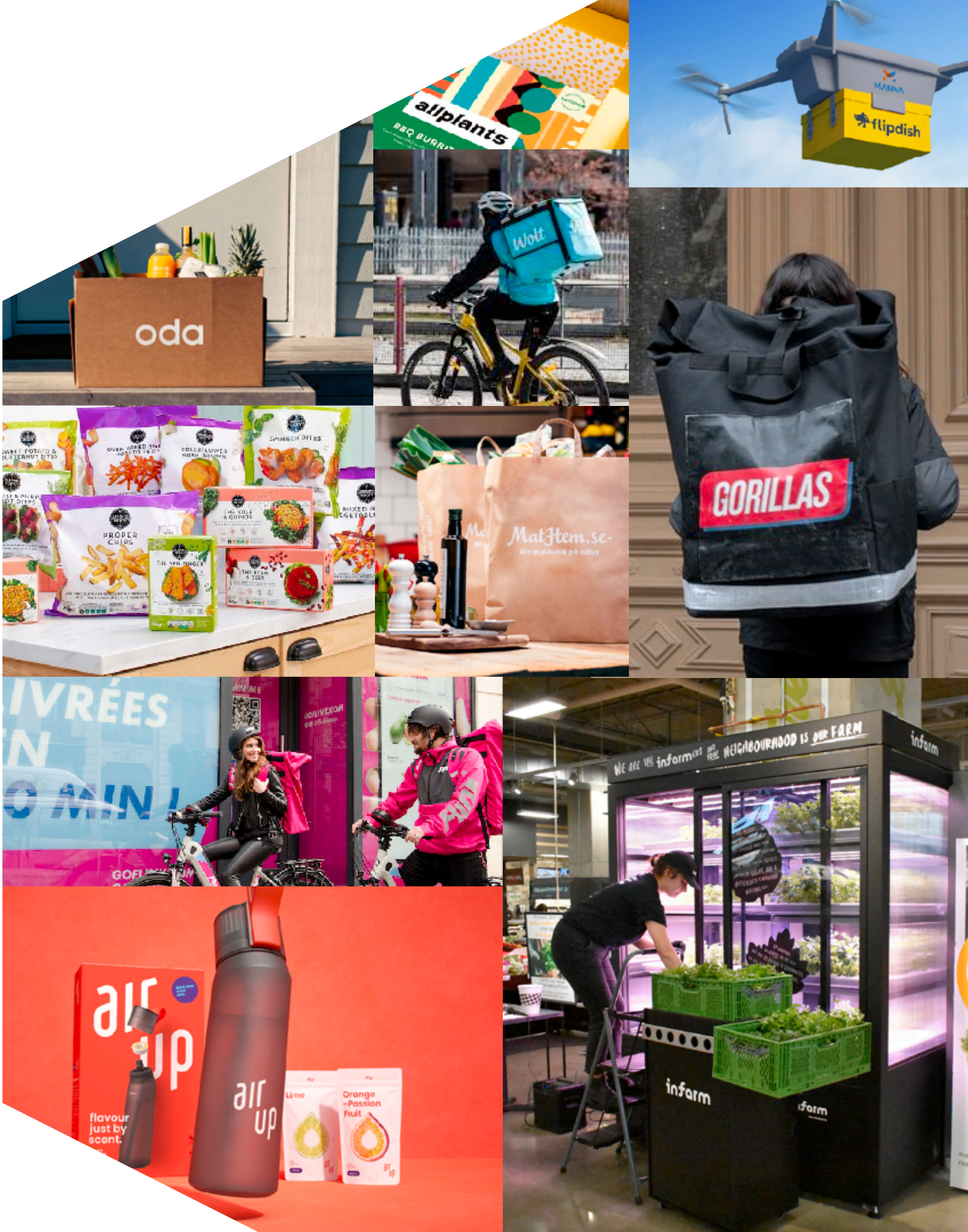


# 2022 INVESTMENT, INNOVATION HUBS & TRENDS REPORT ON THE STATE OF THE EUROPEAN FOODTECH ECOSYSTEM



 DigitalFoodLab with

 Nestlé

 Pinduoduo

# HELLO,

We are DigitalFoodLab's founders, Jérémie & Matthieu. We are:

- **Food entrepreneurs**, founders of one of the first French FoodTech startups (2010-16), and successfully exited
- **FoodTech experts**, co-founders of DigitalFoodLab
- **Angels, coaches and board members** of FoodTech startups

**But first and foremost, we want to accelerate the emergence of the future of food.**



## WE HELP YOU NAVIGATE THE FUTURE OF FOOD



### **UNDERSTAND - What is happening with FoodTech?**

*Understand the short, medium and long-term trends*

### **IDENTIFY - What are the key opportunities for your company?**

*Identify the best areas of innovation and build a shared strategy*

### **ACT - How to work with and benefit from the innovation ecosystem?**

*Build the best strategy step by step to leverage innovation all over the world*

# SPONSORS

We are grateful for the help provided by our sponsors, **Nestlé** and **Pinduoduo**. Both support the future of food.



**Nestlé** is the world's largest food and beverage company, with more than 2000 brands. At Nestlé, we constantly explore and push the boundaries of what is possible with foods, beverages, and nutritional health solutions to enhance quality of life and contribute to a healthier future. We focus our energy and resources where unlocking the power of food can make the greatest difference to the lives of people and pets, protect and enhance the environment, and generate significant value for our shareholders and stakeholders alike.



**Pinduoduo** connects millions of agricultural producers with consumers across China. Pinduoduo aims to bring more businesses and people into the digital economy so that local communities can benefit from increased productivity and convenience through new market opportunities.

# HELLO,

**FoodTech is booming in Europe and may be on the path to becoming a leading global hub.**

First of all, we thank you for reading this report. This is the fifth edition of our yearly focus on the state of European FoodTech. In this year's report, you will find five key insights.

After a year of stagnation, **FoodTech is booming in Europe**, in all of its categories (from the future of agriculture to future food products to delivery) and also in most regions. **Investments reached €9.5B** in European FoodTech startups in 2021. That is **3 times more than the previous year**. **Europe's share of the global FoodTech ecosystem has risen to 20%** (from 12% in 2021), a point it had never reached before. **More deals are made** (80% more €1M+ deals) and each of them is becoming bigger: **the median investment has doubled to €1.8M**.

**Investments in grocery delivery** startups are the main contributor to this impressive growth. While a large share of that money went to quick-commerce startups, many other types of startups have raised funding to disrupt the way we think about groceries. The speed at which this ecosystem is developing is unprecedented and its impact will be far from marginal. It could change the food retail landscape much sooner than initially anticipated (and beyond e-commerce).

## The fastest creation of unicorns ever. And the potential for much more.

There are now **13 FoodTech unicorns in Europe**, twice as many as last year. This increase reflects **inflation in the size of the deals and the valuations of startups**. We can easily identify **10 to 20 companies that have the potential to become unicorns** in the next 12 to 24 months (the third wave of European FoodTech startups mentioned in last year's report). Moreover, we can spot interesting early stage (and well-funded) European startups in almost all key FoodTech trends. All the pieces are now in place for the development of a successful ecosystem.

The scale of investment is growing everywhere in Europe. However, as the ecosystem matures, the amounts invested in the most developed hubs increase much more than in emerging spots. This means that the concentration of large deals is even bigger than in previous years. In 2021, more than 50% of the money went to startups located in the « European FoodTech Hub » region which includes Germany, the UK, France, the Netherlands and the Nordics.

Finally, further proof of attractiveness: 2021 was **a record year in terms of the number of acquisitions and investments in European FoodTech** startups, notably from American companies.

# FOODTECH IN EUROPE IN 2022

## KEY FIGURES FROM THE REPORT

€9.5B

Projected amount of investments in European FoodTech startups in 2021.

x2

The median deal has doubled from €0.9M in 2020 to €1.8M in 2021: the fastest increase ever.

x3

Increase in investments between 2020 and 2021.

13

FoodTech unicorns in Europe.  
2 exits (Wolt and Glovo) and 2 IPOs (Deliveroo and Oatly).

19

€100M+ deals compared to 20 over the past 5 years.

53%

of investments were made in startups located in Germany, the UK and France. 75% of overall investments were in startups located in 10 cities.

# FOODTECH IN EUROPE IN 2022

## WHAT IS FOODTECH?

DigitalFoodLab's definition is: "FoodTech is the ecosystem made up of all the agrifood entrepreneurs and startups (from production to distribution) innovating on products, distribution, marketing or business model."



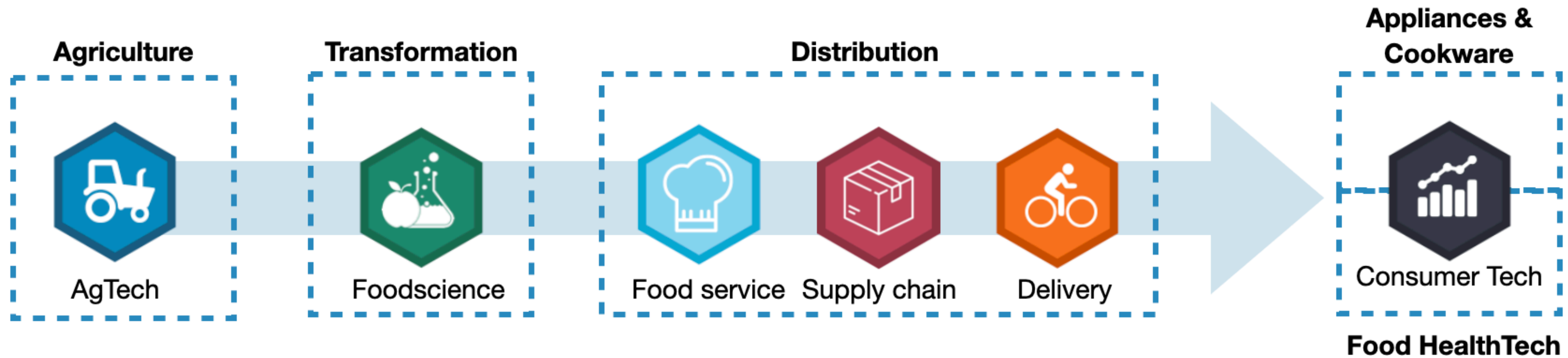
DigitalFoodLab has identified six categories that make up FoodTech, themselves divided into sub-categories (see [part 3](#) for definitions of the categories and sub-categories).





# FOODTECH IN EUROPE IN 2022

## WHY FOODTECH?



**FoodTech startups act on all the components of the food value chain, and offer solutions to some of the most pressing issues:**

- **Climate:** startups acting on new inputs for agriculture, alternative proteins, new packaging or fighting food waste propose innovative answers to reduce the huge impact of our food system on the environment.
- **Health:** startups developing better-for-you products (such as alternatives to animal proteins but also alternatives to additives), solutions to access freshly cooked meals, coaching and personalisation may have the keys to stop the increase of food-related health issues and to help us live better and longer lives.
- **Strategic autonomy:** startups working on urban farming, crop optimisation and alternative proteins develop answers to the desire for fresher and locally grown food. They also develop a new food model that will enable some areas to be less reliant on food imports.

# FOODTECH IN EUROPE IN 2022

## SCOPE OF THE REPORT

### WHY FOCUS ON INVESTMENTS IN EUROPEAN FOODTECH STARTUPS?

Investments are the only reliable data that we can use to compare innovation ecosystems consistently over time and geography.

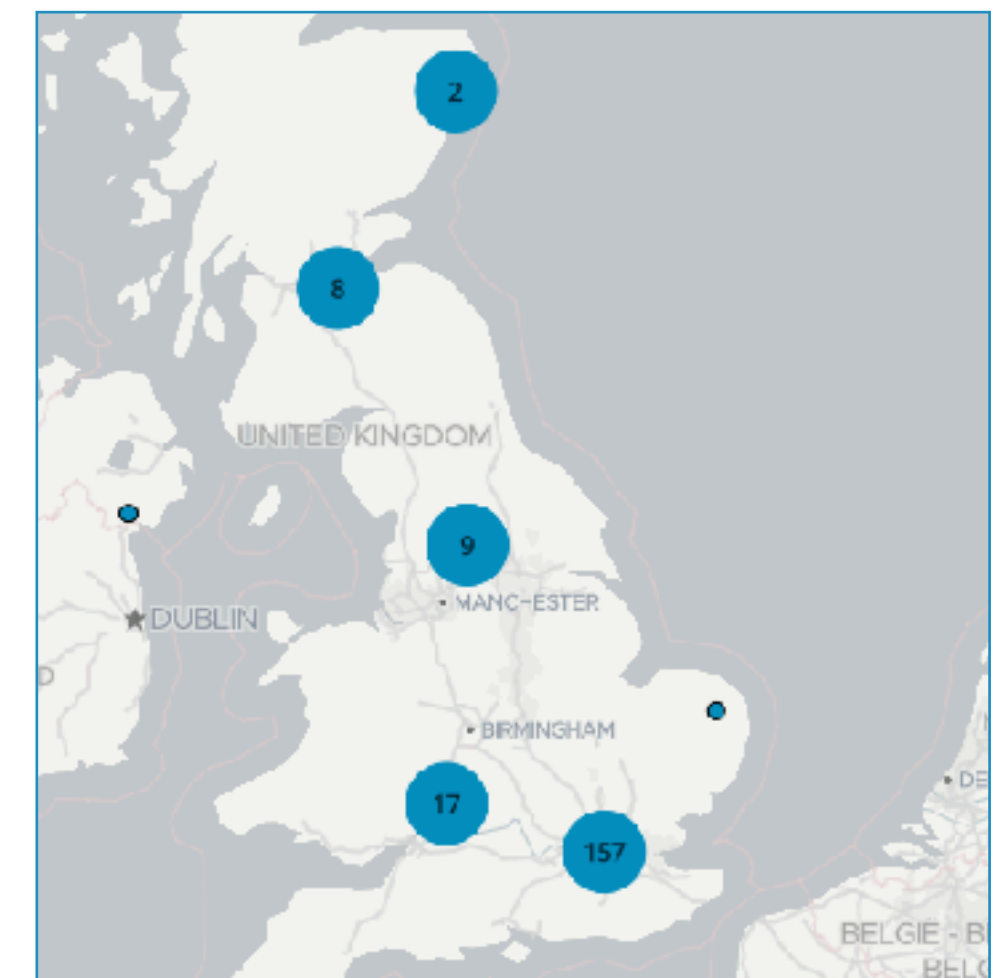
Europe is an agrifood powerhouse and is home to many strong food cultures. It is only natural to wonder if and how it may help to shape the future of food.

### WHAT REGIONS ARE COVERED?

Defining Europe's borders can be tricky. For this report, we have included all of continental Europe, the British Isles and Iceland, while excluding all of Russia and Turkey.

### WHERE DOES THE DATA COME FROM?

This report is based on DigitalFoodLab's proprietary database. It contains the most comprehensive data about FoodTech startups and investors. We gather data all year long with machine learning tools and with our network of partners all over the world. This report displays investments in euros with currency conversions made at the time of the deals' announcements.



# FOODTECH IN EUROPE IN 2022

## I - STATE OF THE ECOSYSTEM

€9.5B

Projected amount of investments in European FoodTech startups in 2021: x3 compared to 2020, x10 in 5 years

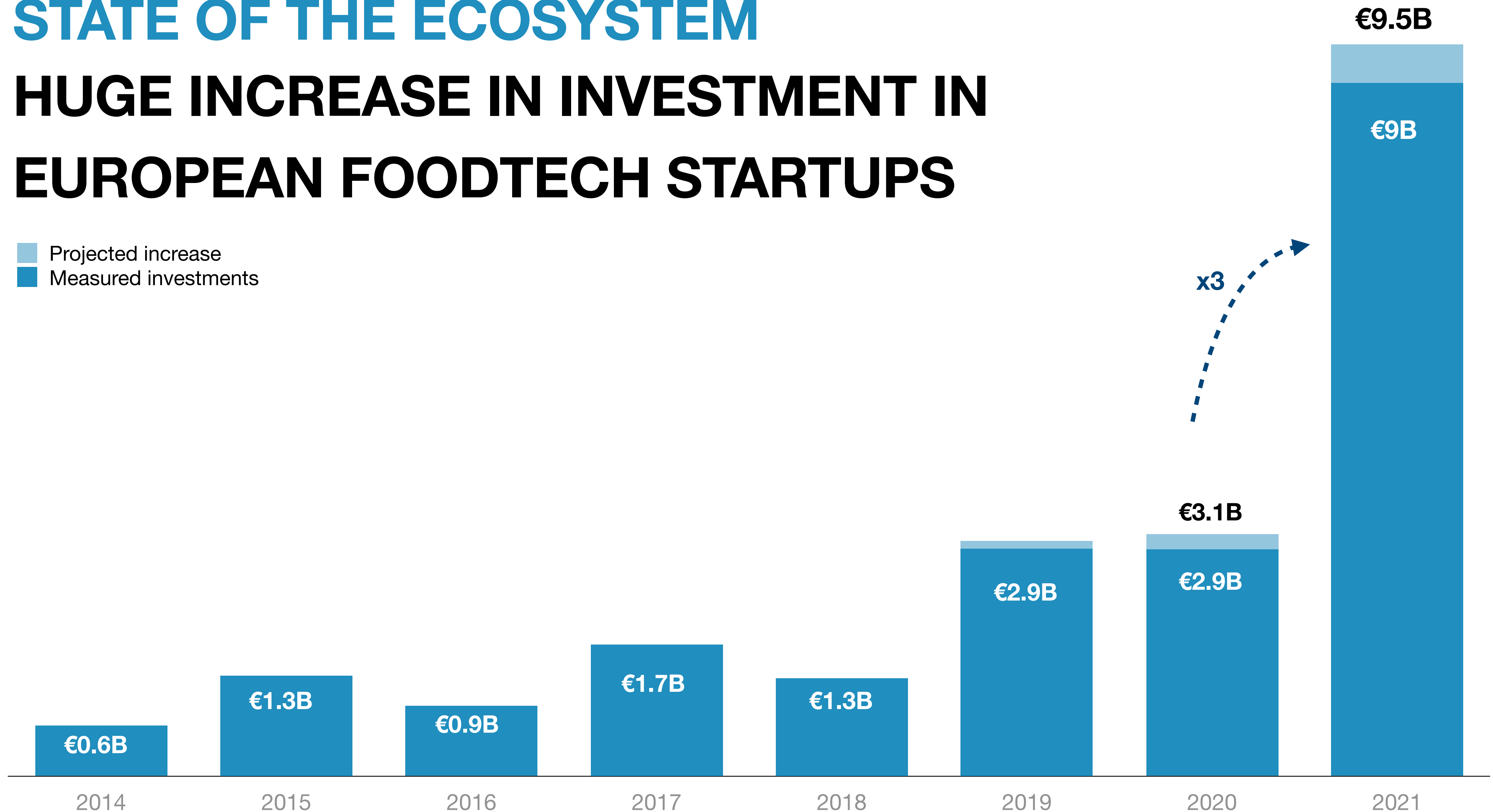
*Founded in 2020 and raising €1.2B since, Gorillas has had an impressive year. The German quick-commerce startup ([more here](#)) is now active in multiple countries. This kind of super fast growth is something new and could have implications larger than in the grocery delivery ecosystem. It could even permeate all the categories of the FoodTech ecosystem.*



# STATE OF THE ECOSYSTEM

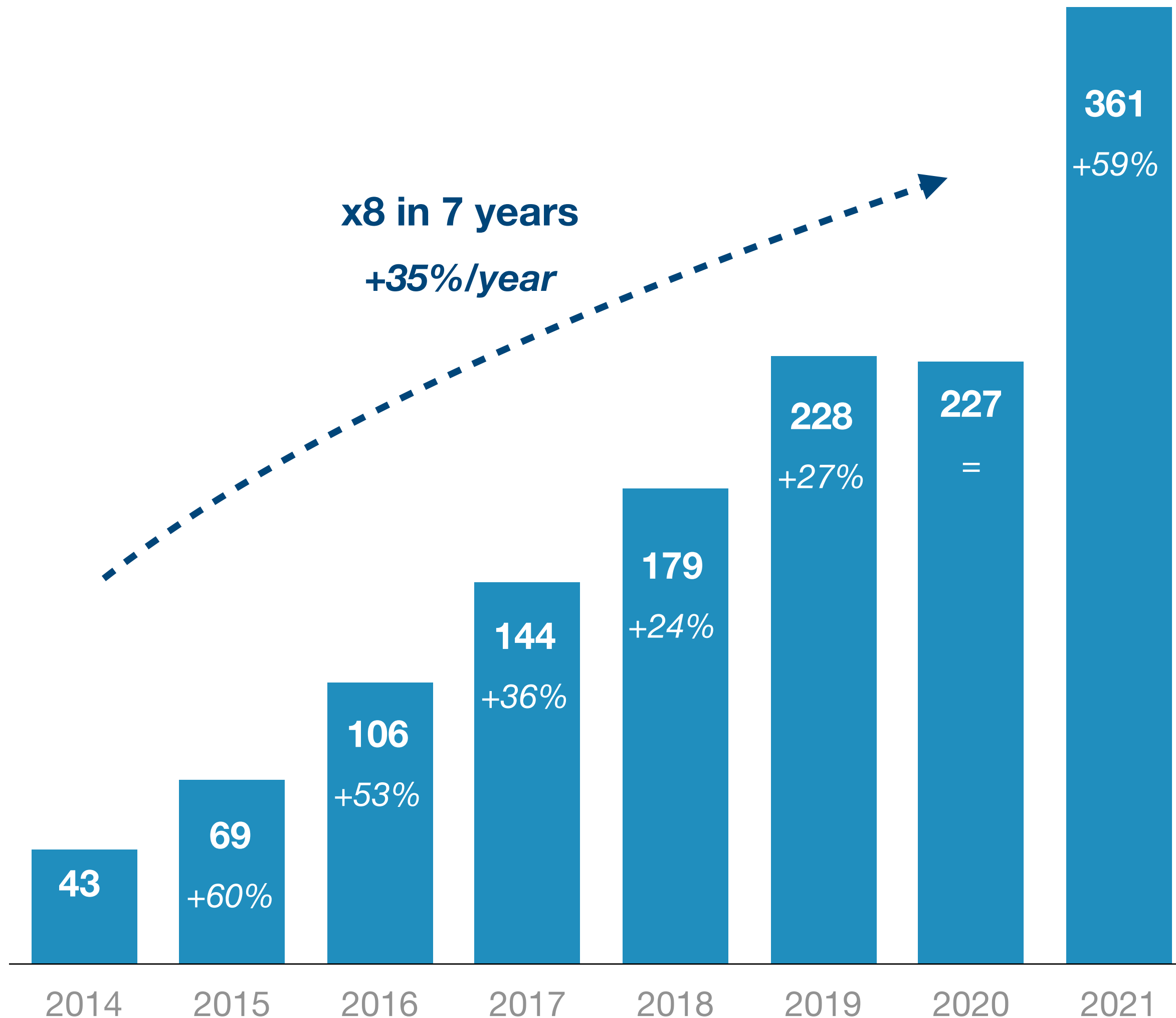
## HUGE INCREASE IN INVESTMENT IN EUROPEAN FOODTECH STARTUPS

■ Projected increase  
■ Measured investments



# STATE OF THE ECOSYSTEM

## NUMBER OF SIGNIFICANT DEALS (>€1M)



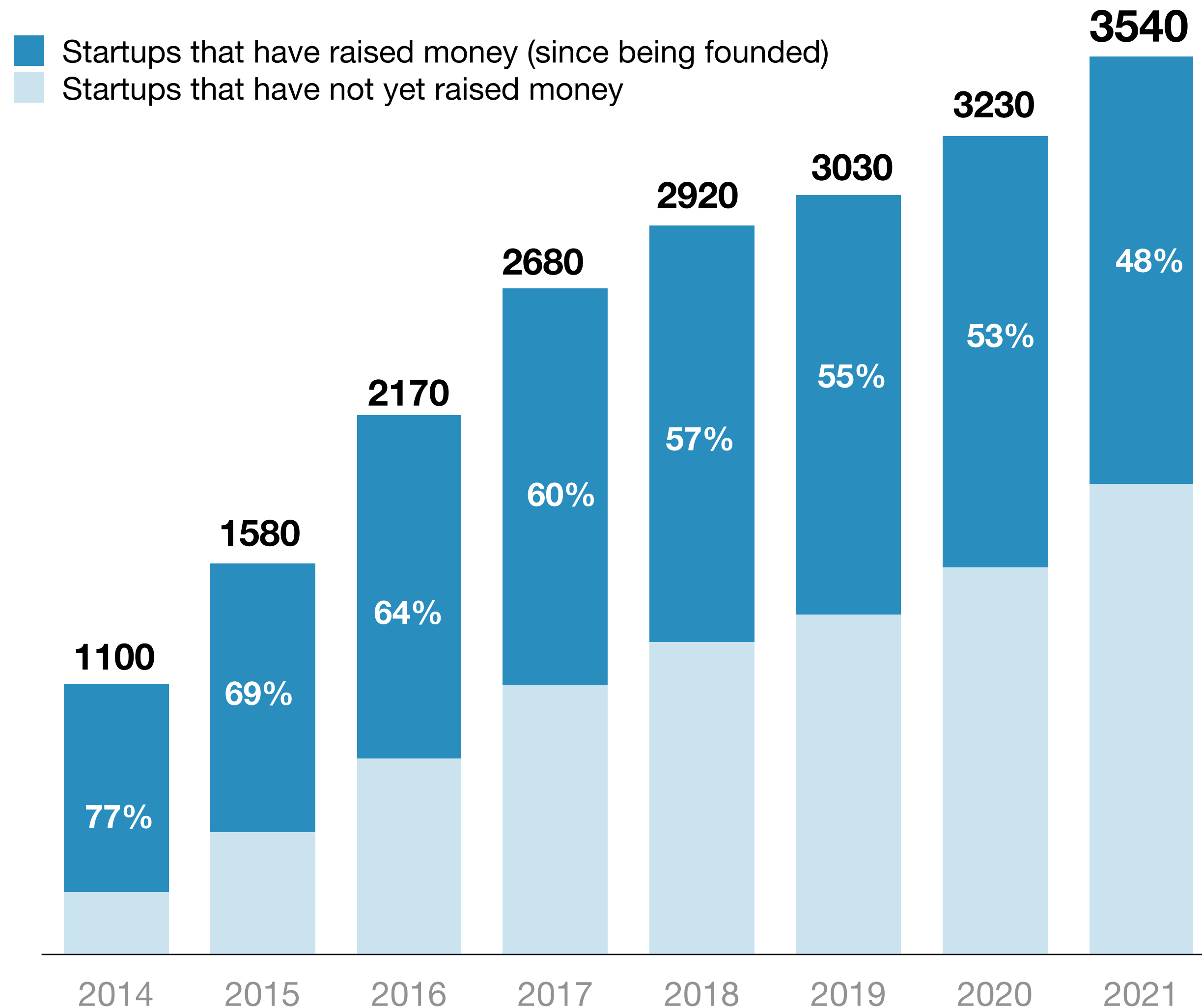
### A GOOD BAROMETER OF THE ECOSYSTEM

It is interesting to observe that every year, the number of €1M deals increases significantly, even in years when the sum of the investments itself decreases. It is a good barometer of the health of the ecosystem. This shows how the ecosystem is still growing in size with more and more entrepreneurs and investors betting on new sectors of growth.

In many ways, 2020 was an extraordinary year. For investments too, it was a complicated year and the number of deals stagnated. However, this has been more than compensated for with unprecedented 59% growth in 2021. We can therefore be confident that the ecosystem is in good shape and will keep growing.

# STATE OF THE ECOSYSTEM

## A GROWING ECOSYSTEM - NUMBER OF STARTUPS



### 8% MORE STARTUPS EACH YEAR

Since 2017, the number of active startups (the difference between new ventures and the sum of successful startups that have been acquired or completed an IPO, and those that simply failed) keeps growing at a rate of 8% each year.

This is a positive sign that shows the ecosystem is adding more and more entrepreneurs.

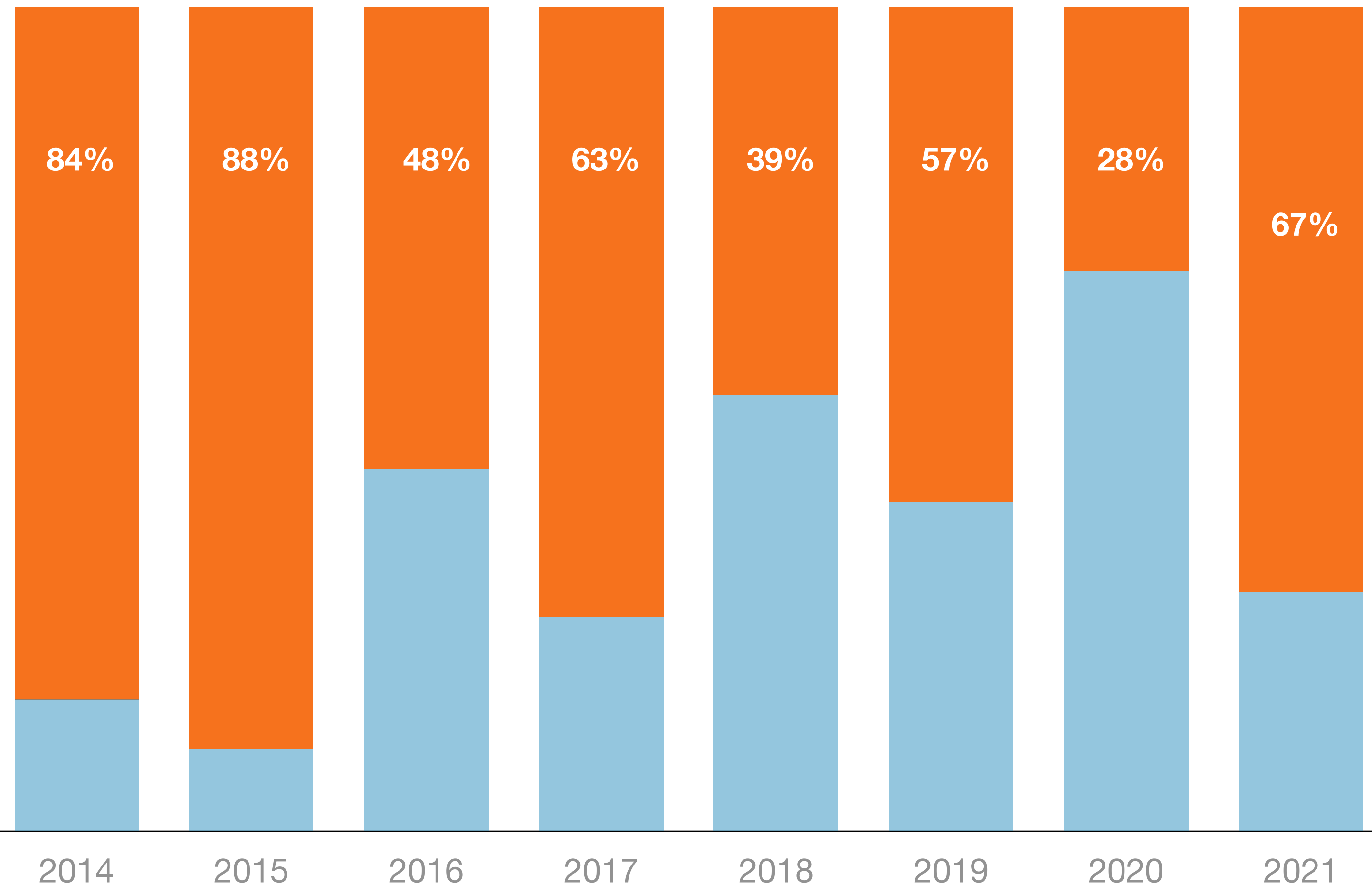
### A GROWING SHARE OF BOOTSTRAPPED STARTUPS

Attention is often focused on funding and startups that raise money (and this reports contributes to it), but we should remember that **a large and growing share of FoodTech startups never raise money**. However, DigitalFoodLab's data shows a strong **correlation between raising money and a startup's chances of success**.

# STATE OF THE ECOSYSTEM

## AN ECOSYSTEM DOMINATED BY DELIVERY

Investments in food delivery startups  
Other investments



### 67% OF FOODTECH INVESTMENTS GO INTO FOOD DELIVERY

**Food delivery** (initially meal delivery and now, more and more, grocery delivery) **remains the beacon of the European FoodTech ecosystem.**

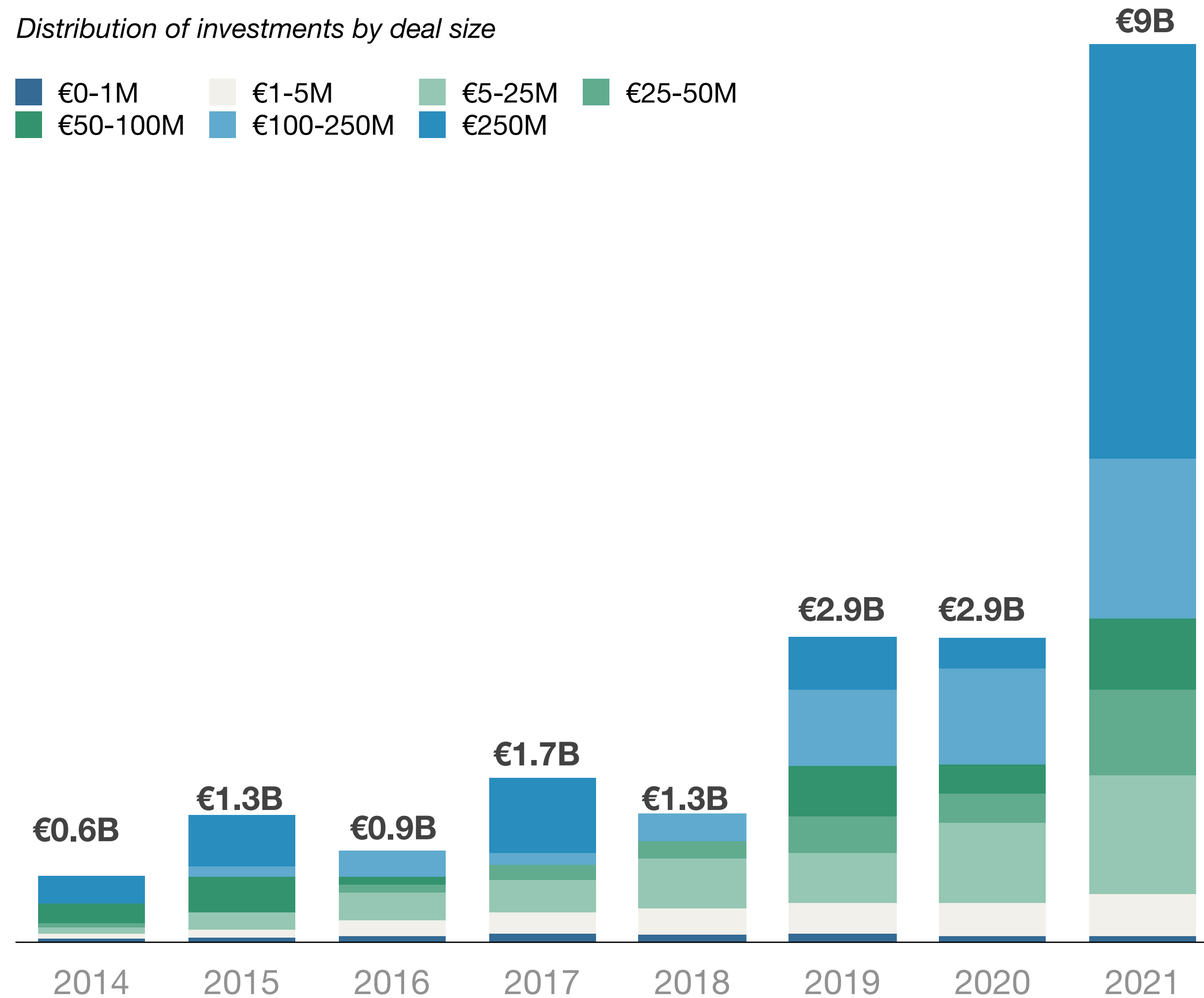
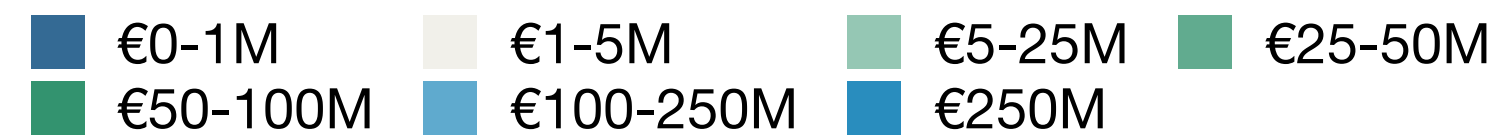
2020 was again an exceptional year as, for the first time, 2/3 of the investments went elsewhere, notably into cloud kitchens and alternative proteins.

You can find [a breakdown of the investments by category](#) in the third part of the report.

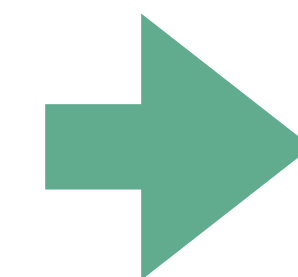
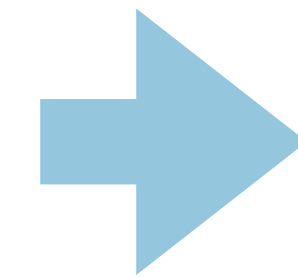
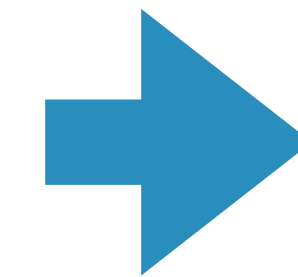
# STATE OF THE ECOSYSTEM

## LEADERS & FUTURE LEADERS

Distribution of investments by deal size



The growth in investments is not only made up of huge deals, but also of deals all over the investment funnel (see *part 4 for more information*).



**Unicorns**

**Soonicorns & potential leaders**



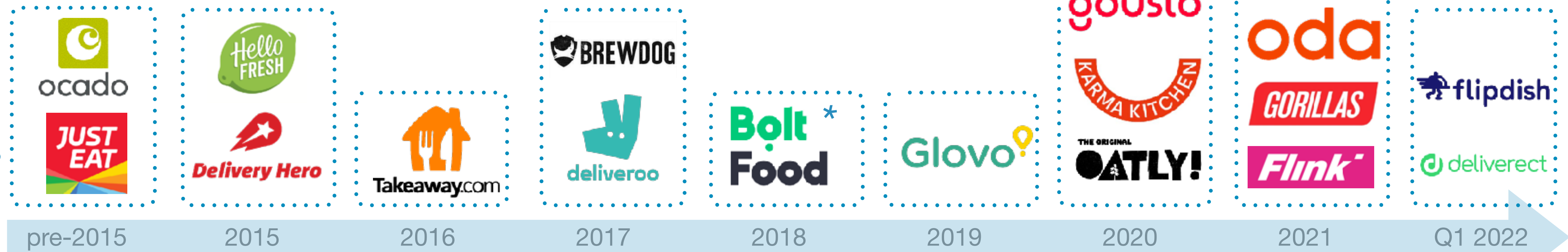
# STATE OF THE ECOSYSTEM

## UNICORNS CREATED IN EUROPE

Startups reaching the « unicorn status » (private startups with €1B+ valuation) in Europe.

*Date when they reached the unicorn status*

NEW UNICORNS



EXITS (IPOs and acquisitions).



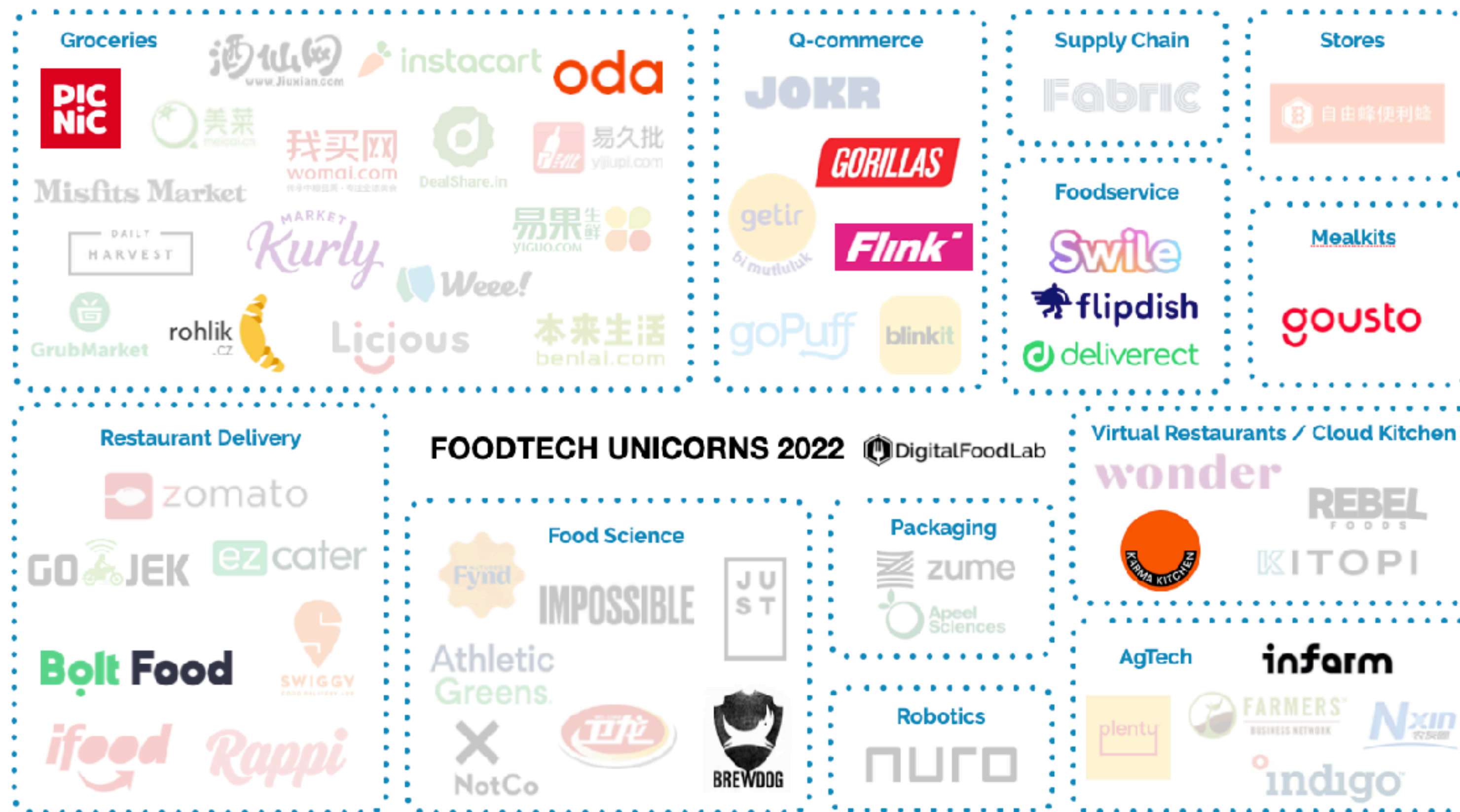
\* At that time, the activities of Bolt were mostly around mobility

# STATE OF THE ECOSYSTEM

## AN OPPORTUNITY FOR MANY MORE UNICORNS

Mapping of all « private » (hence excluding startups after acquisitions or IPOs)

FoodTech unicorns. Currently, there are 13 unicorns in Europe.



- 7 FoodTech startups reached the unicorn status in Europe in 2021. This increase is impressive and shows the potential for European FoodTech startups to become global competitors. Beyond the new unicorns, « liquidity events » (IPOs and acquisitions) are also on the rise.
- As shown on the mapping, the number of FoodTech unicorns originating in Europe is still quite limited.
- Combined with the growth of large rounds of financing, these factors show the potential for the emergence of 10 to 20 more FoodTech unicorns in Europe over the next few years.

# PINDUODUO & FOODTECH INNOVATION



**XinYi Lim**

*Executive Director of Sustainability and Agricultural Impact*

## Can you share with us Pinduoduo's interest in the food system?

**The agri-food system is at the centre of Pinduoduo's business.** When we started in 2015, the agri-food sector was conspicuously under-penetrated by the fast-growing digital economy. Our starting point was to integrate the sector into the digital economy so that all stakeholders – including consumers, farmers, merchants, and logistics service providers – benefit from its efficiencies and opportunities.

With our deep involvement in the sector, we aim to create value by leveraging technology across its value chain to make it more efficient, resilient, and sustainable. This is why last year, **we launched a 10 Billion Agriculture Initiative, to which we are committing 10 billion RMB (€1.4B) of our profits towards addressing critical needs in the agricultural sector, as well as rural communities.**

## Why are you interested in foodtech, particularly the European foodtech ecosystem?

Technology will help the global agri-food system meet the rising demands of the world's growing population and increasingly sophisticated consumer preferences, while mitigating the corresponding expansion of its environmental footprint.

As an agri-food platform that **connects over 850 million consumers and 16 million farmers**, we want to be at the innovation frontier to identify great teams we can support.

The foodtech space is very dynamic, and we are looking at the great new ideas bubbling up in this sector across the world with great interest. The European foodtech scene is vibrant and enriched by the continent's varied geographies, and gastronomic traditions, which can spark out-of-the-box solutions that we could find interesting to work with.



**Pinduoduo**

**Pinduoduo** connects millions of agricultural producers with consumers across China. Pinduoduo aims to bring more businesses and people into the digital economy so that local communities can benefit from the increased productivity and convenience through new market opportunities.

# PINDUODUO & FOODTECH INNOVATION

## What do you look for in foodtech companies and when should they come to you?

We keep it simple and ask four key questions when we evaluate potential investments. One, what issue does it solve; two, how does it solve the issue; three, who is the team driving this; and four, how we can be helpful in catalysing and widening its positive impact. We emphasise a lot on the technology and reflect on how we can harness our strengths to work together to add value. **As realising solutions is central to our investing, we are less concerned about the stage the company is at, and can invest for the long term, as long as we can eventually deliver something useful.**

## What can you offer to foodtech companies you work with?

We offer our partners our scale, reach, and commitment. With our strong connection to farmers, merchants, and logistics service providers, we can help test, prove, and commercialise solutions. We can also aggregate valuable consumer feedback to help optimise solutions.

## As we see in this report, the growth of European foodtech is led by what is happening in alternative proteins and grocery delivery. Do you have a vision to share on what you think may be the future of these sectors?

We are looking at both sectors closely as they are already significantly changing how people relate to food.

**Within the space of alternative proteins, we hope to see solutions that put consumers' health first.** We are working on a research project on the health impact of plant-based alternative meat to assess this, because we want to invest in solutions that are healthful for consumers. We also hope that more products are designed to address different market preferences. For instance, in China, pork is more frequently consumed than beef, and cooking methods are also different. It would be useful to develop products that match these preferences.

Grocery delivery is a space we are working on as well. **In August 2020, we launched Duo Duo Grocery, our**

**next-day self-pickup service matching local demand and supply to cut waste and provide consumers with fresher and more affordable produce.** In this space, we are looking closely at ideas that improve environmental sustainability, whether from the emissions or food loss and waste angles, while maintaining consumer satisfaction with price, quality, and time. We think that there are still a lot of technology solutions such as in algorithm design and cold-chain optimisation that can be implemented.

# FOODTECH IN EUROPE IN 2022

## II - INNOVATION HUBS

**75%** of 2021's investments were made in startups located in 10 cities.

*Micronutris, alongside Ynsect and InnovaFeed in France, Protix in the Netherlands, and many others in the continent, is one of the leading European startups working on insects used as animal feed. It raised €100M in 2021, the biggest deal not related to delivery.*













# INNOVATION HUBS

## A HEAVILY CONCENTRATED ECOSYSTEM

European FoodTech remains highly concentrated in a handful of cities which seem to be becoming even more attractive than before as their local ecosystems are thriving.

It is logical that most of the investments has gone to companies located in the countries where the « FoodTech revolution » started in Europe (or arrived from the US, to be more exact). However, we could have expected this to change over the years, but this doesn't seem to be happening, or only exceptionally.

### Top countries by funding

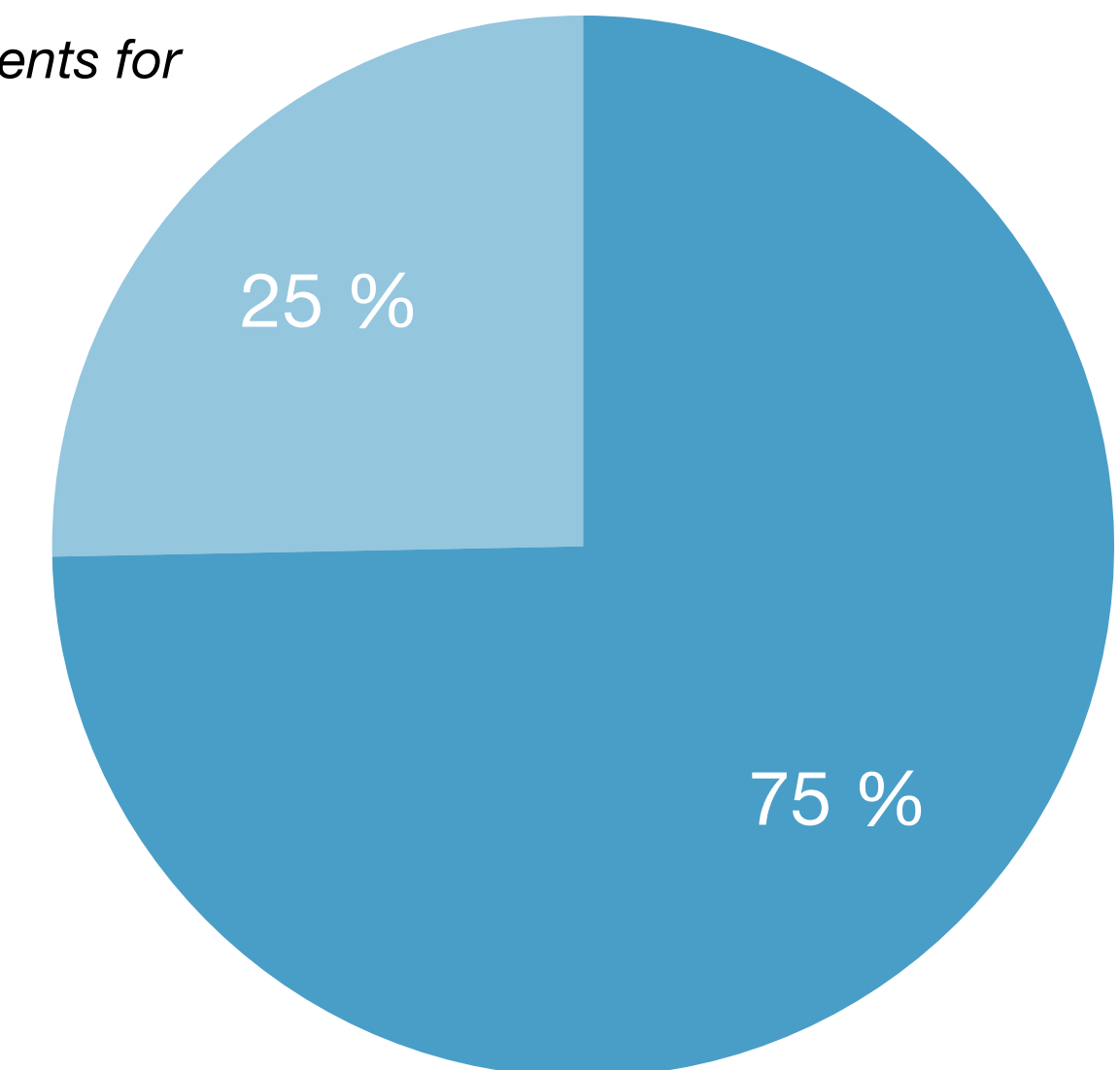
Rank 2021	Country	Evolution since 2020	Share of the investments	Cumulative share of investments
1	Germany 	↑ +2	31 %	31 %
2	UK 	↓ -1	12 %	43 %
3	France 	↓ -1	10 %	53 %
4	Netherlands 	↑ +1	9 %	62 %
5	Estonia 	↓ -1	7 %	69 %
6	Spain 	↑ +1	7 %	76 %
7	Finland 	↓ -1	6 %	82 %
9	Sweden 	↓ -4	4 %	86 %
8	Czech Republic 	↑ +26	4 %	90 %
10	Norway 	↑ +2	3 %	93 %

### Top 10 cities vs. the rest of Europe

Berlin, London, Paris, Amsterdam, Copenhagen, Stockholm, Helsinki, Dublin, Tallinn & Barcelona.

Distribution of the investments for startups located in the:

- Top 10 cities
- Rest of Europe



# INNOVATION HUBS

## FROM PARIS TO TALLINN

We can identify 5 clear hubs in Europe when we talk about Foodtech.

Someone observing from outside the continent should take note of:

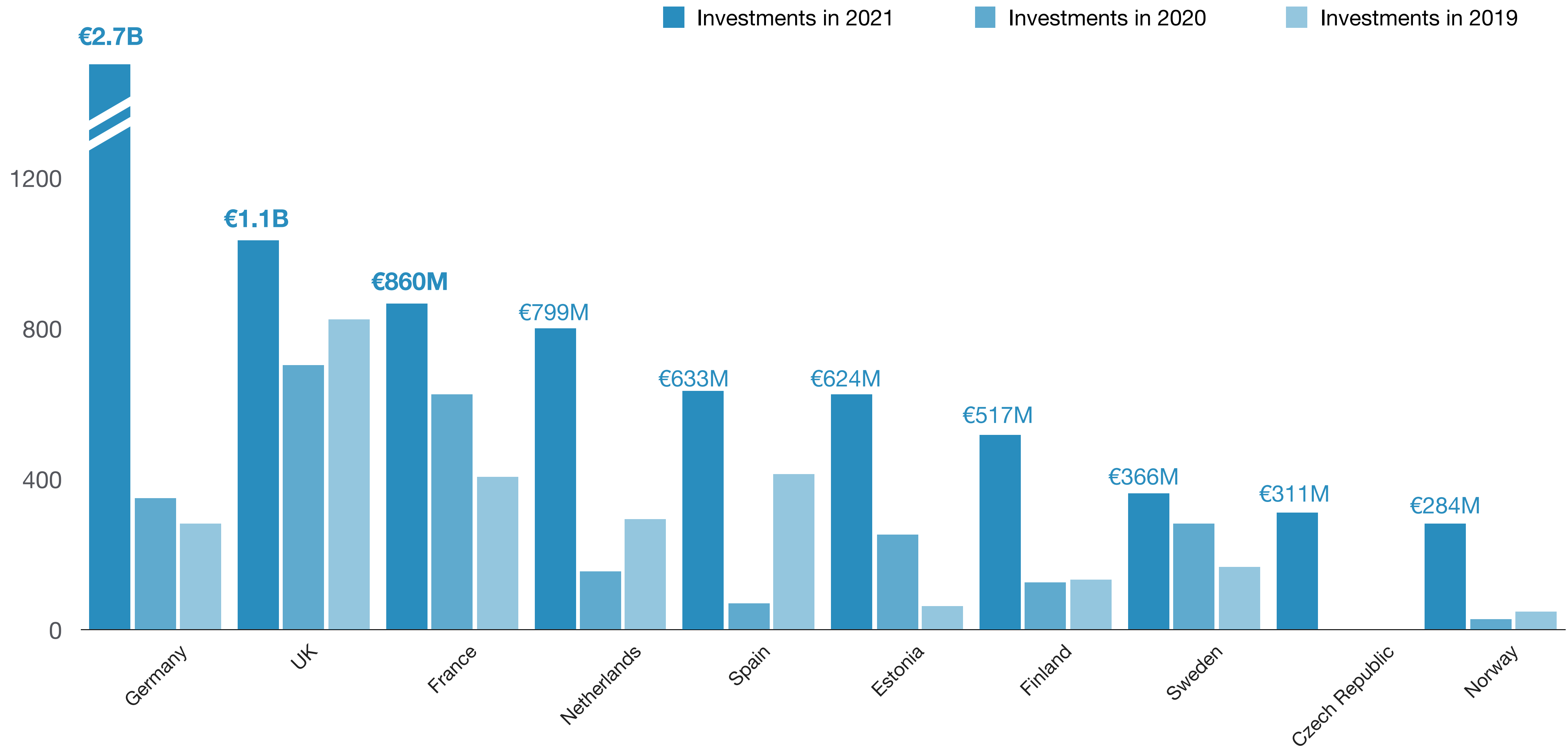
- 1 - **Berlin**, to explore the potential of the DACH region to create unicorns with explosive growth
- 2 - **London**, for its diverse ecosystem, and maybe Dublin for its AgTech startups
- 3 - **Stockholm**, to meet with the rich Nordics ecosystem (notably innovations around food products and delivery)
- 4 - **Paris**, to find AgTech and Foodservice startups (notably working on insects and payment solutions)
- 5 - **Amsterdam**, for AgTech and Delivery startups

Other locations have their strengths, but are often limited to one key company absorbing all the attention.



# INNOVATION HUBS

## TOP 10 COUNTRIES FOR FOODTECH INVESTMENT



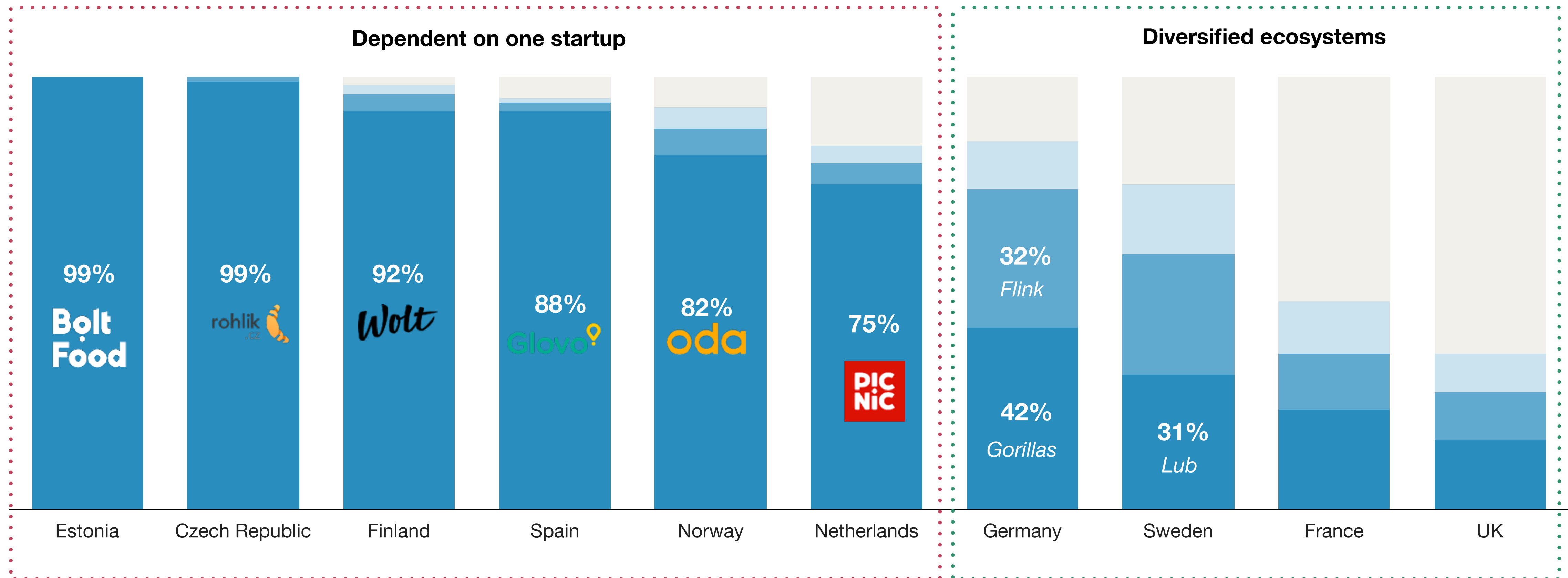


# INNOVATION HUBS

## SOME AREAS DEPEND ON 1 OR 2 STARTUPS

Share of the country's FoodTech investments going to:

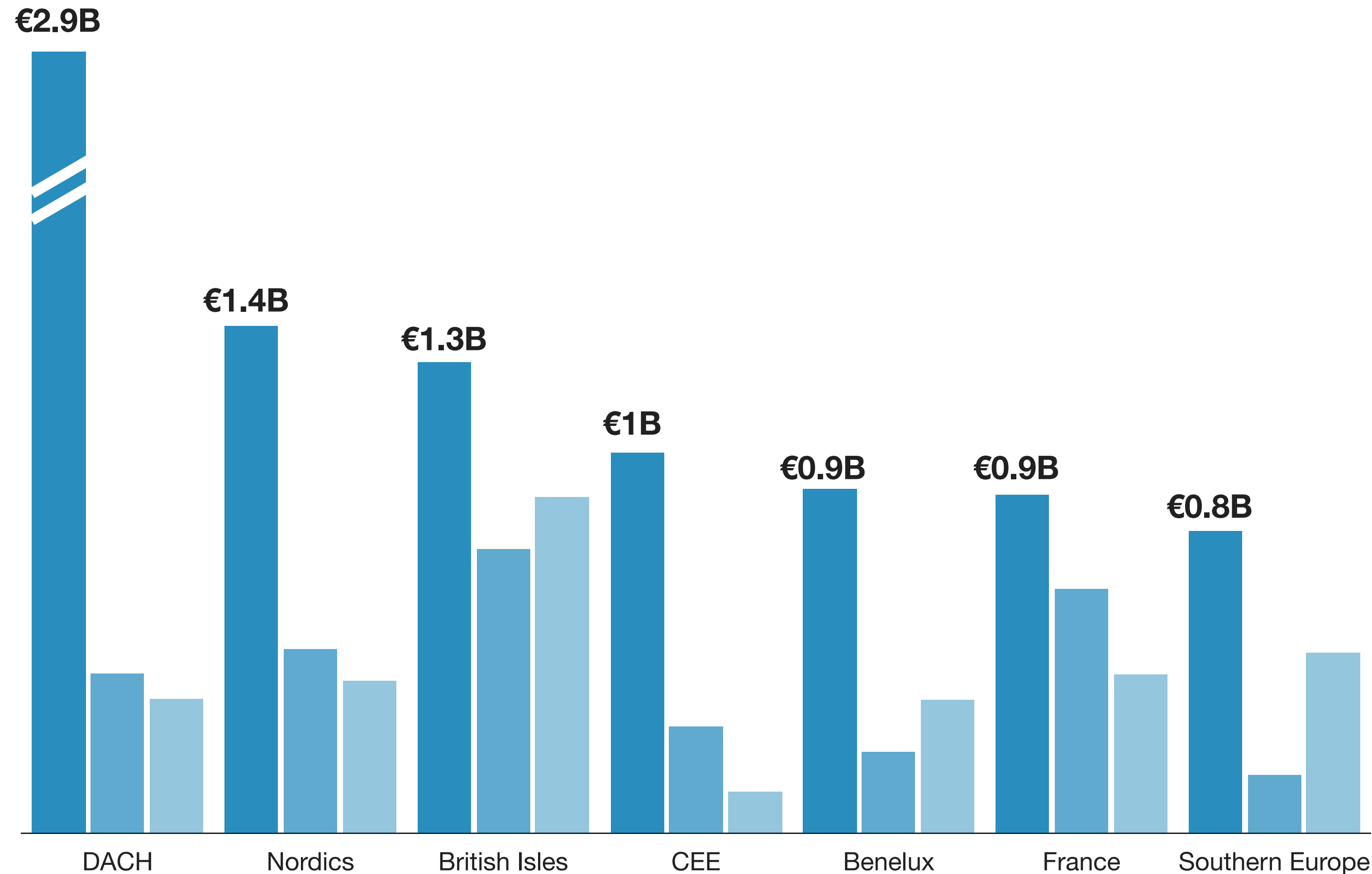
- The startup having raised the most in 2021
- The startup having raised the second biggest amount in 2021
- The startup having raised the third biggest amount in 2021
- Others



# INNOVATION HUBS

## BREAKDOWN BY « INVESTMENT REGIONS »

■ Investments in 2021 ■ Investments in 2020 ■ Investments in 2019

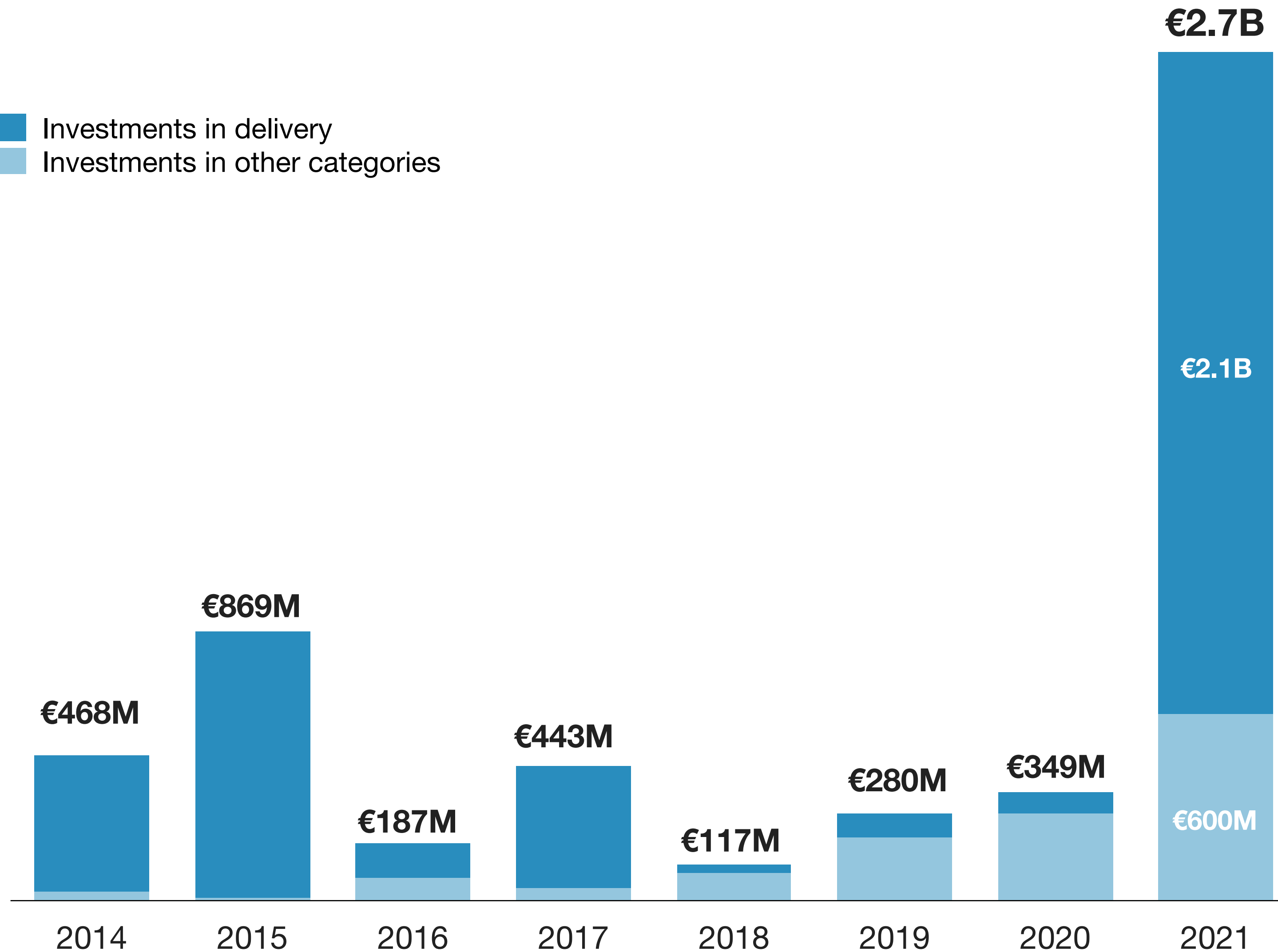


- Beyond their home country, investors tend to invest in what could be called « investment regions ». We have identified 6 of them: DACH (Germany, Austria, Switzerland), the Nordics, the British Isles, CEE (Central and Eastern Europe), the Benelux, Southern Europe and France (with no clear pattern).
- The 6 regions, while widely different in population and size, received comparable investments in 2021 (with Germany standing out). Looking back to previous years, we observe that the CEE and Southern Europe regions lag behind, even more in terms of investment per inhabitant.



# INNOVATION HUBS LEADING BEYOND QUICK-COMMERCE

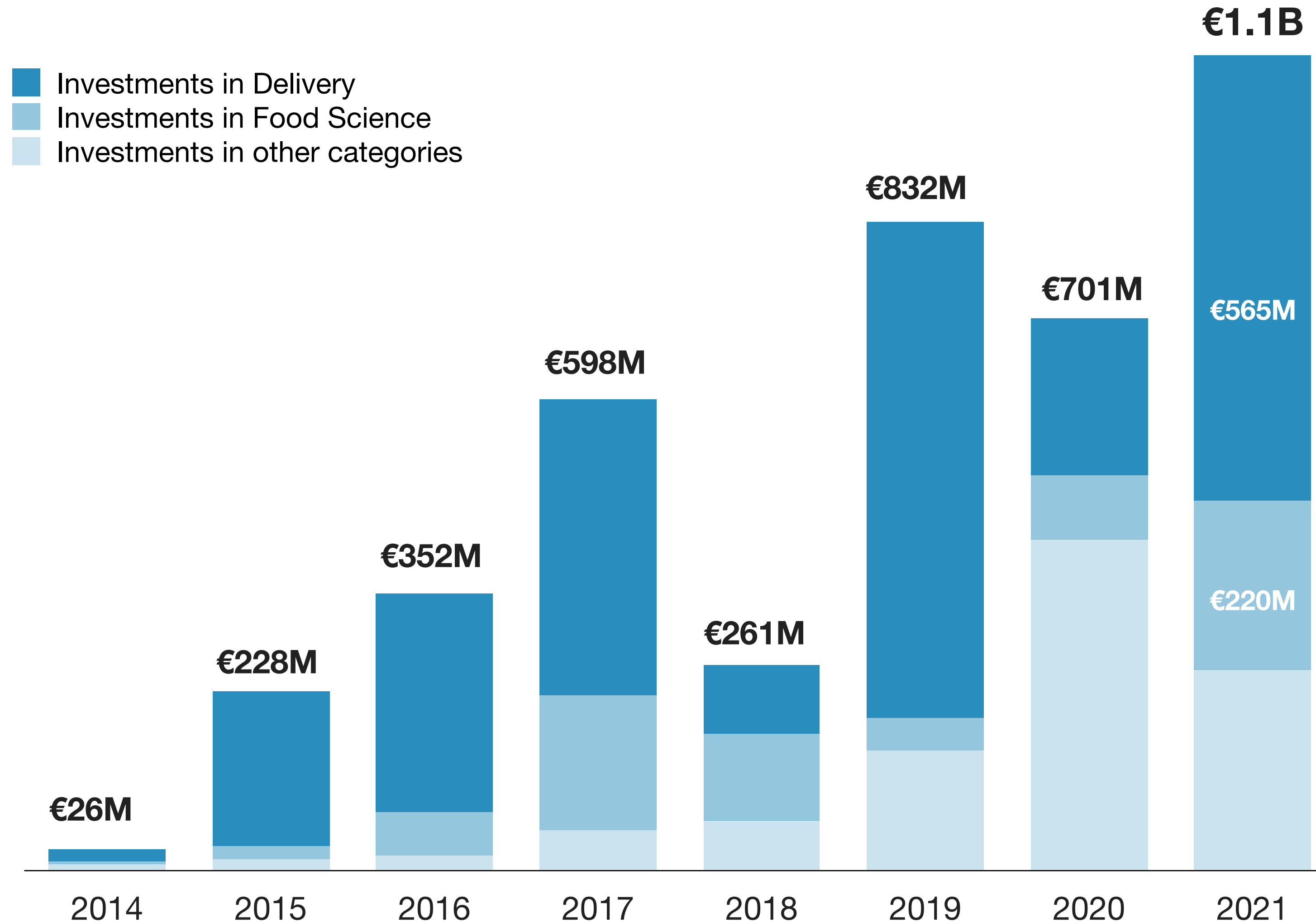
■ Investments in delivery  
■ Investments in other categories



- Germany's FoodTech ecosystem leads by a wide margin. This is mostly due to Gorillas and Flink which raised a combined €2.1B.
- Without its quick-commerce giants, the German FoodTech ecosystem would still remain one of the most interesting in Europe with high-potential startups in:
  - AgTech, with Infarm and Stenon
  - Foodservice, with Choco
  - Food science, with an ability to grow valuable direct-to-consumer brands (as proven in 2021 by Just Spycy's acquisition by Kraft Heinz).



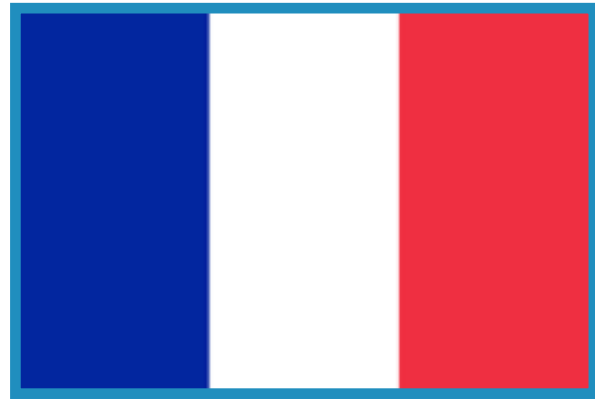
# INNOVATION HUBS LEADING IN MANY FUTURE TRENDS



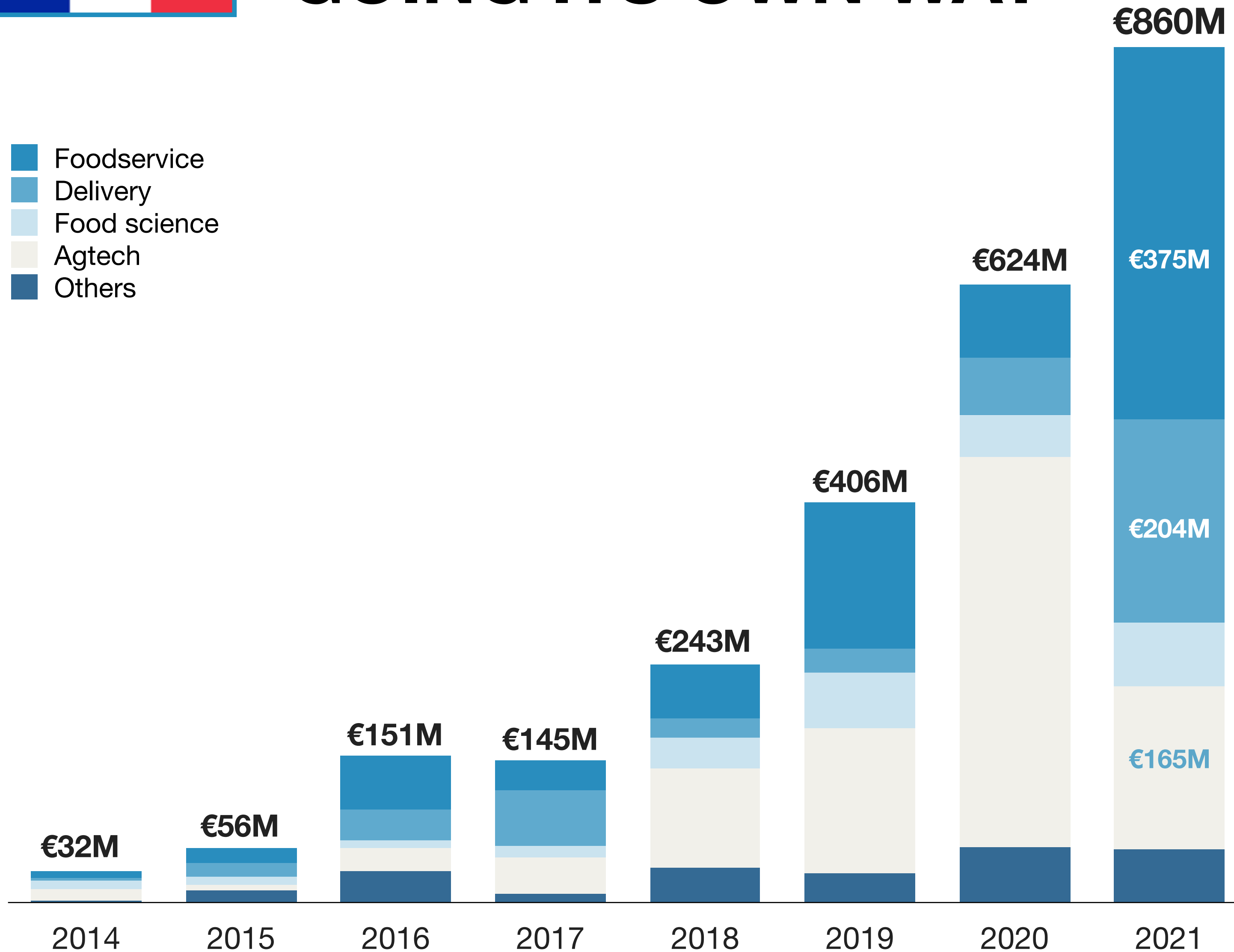
🎯 The British FoodTech ecosystem remains the most diverse in Europe with leading startups in all of DigitalFoodLab's six FoodTech categories:

- Delivery: Deliveroo (which raised €180M before its IPO), Zapp, Gousto and many others;
- AgTech: IGS, Tropic Biosciences;
- Food science: Enough, Huel, Ivy Farm;
- Foodservice: Collectiv Food, Karma;
- Consumer Tech: Oviva;
- Supply Chain: Olio.

🎯 One challenge remains: the ability to grow food product startups beyond the UK's borders, something that Nordics startups have been more successful at.



# INNOVATION HUBS GOING ITS OWN WAY



- Each year, the French ecosystem stands out as somehow living « in its own FoodTech world » and separate from trends observed elsewhere:
  - Beyond Cajoo (€40M raised) and La Belle Vie (€25M), the grocery delivery « revolution » was mostly driven by foreign players.
  - No significant deals in food science
- Investments in foodservice have mostly been driven by « quasi-fintech » startups such as Swile and Sunday, which focus on payment.
- Investments in cloud kitchens and virtual restaurants (Not So Dark, Taster...) also explain the growth in foodservice and delivery.

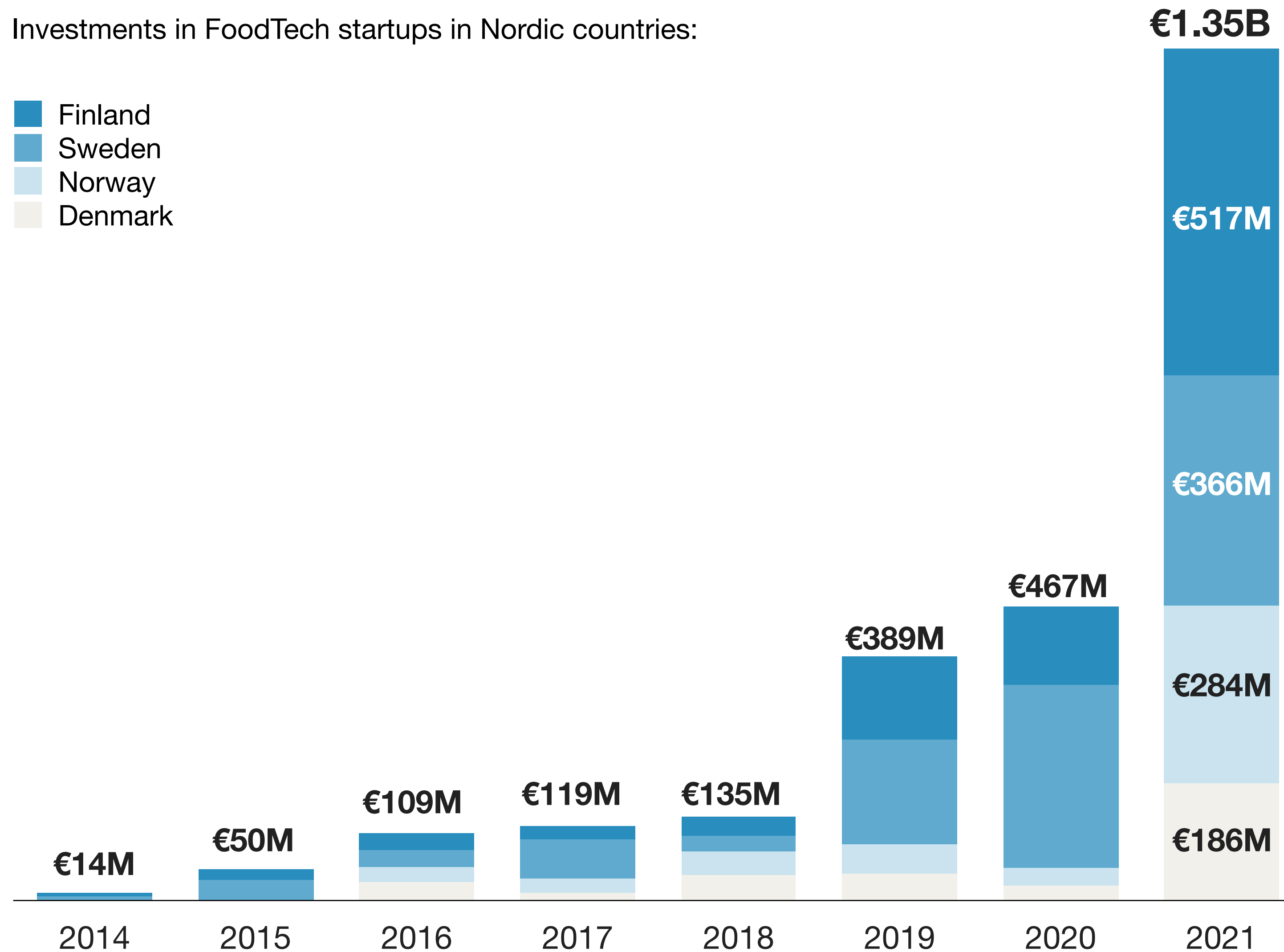


# INNOVATION HUBS

## THE FUTURE MAIN FOODTECH HUB?

Investments in FoodTech startups in Nordic countries:

- Finland
- Sweden
- Norway
- Denmark



- The continuous and uninterrupted growth in investments in FoodTech startups in the Nordic countries is impressive. Taken together, their population is only a third of Germany's or half of the UK's.
- 2021's growth was led by investments in food delivery startups (notably Wolt, Oda and Mathem). Otherwise, the ecosystem is strong in AgTech (notably indoor farms) and food science (from product innovations to longer-term disruptions such as Solar Foods' protein created from CO2).
- With this momentum, the Nordics (and especially Stockholm) may become the FoodTech hub that Europe is still looking for.

# FOODTECH IN EUROPE IN 2022

## III - CATEGORIES & TRENDS

x55

Increase in investments in food science (the foods of the future) over the past 7 years.

*Gourmey reinvents one of the most iconic French foods, foie gras, by using one of the most advanced technologies: cellular agriculture. It has already raised more than \$10M.*

*This combination of science and culture may be the best way for European FoodTech startups to differentiate themselves in an ever more competitive and globalised food landscape.*



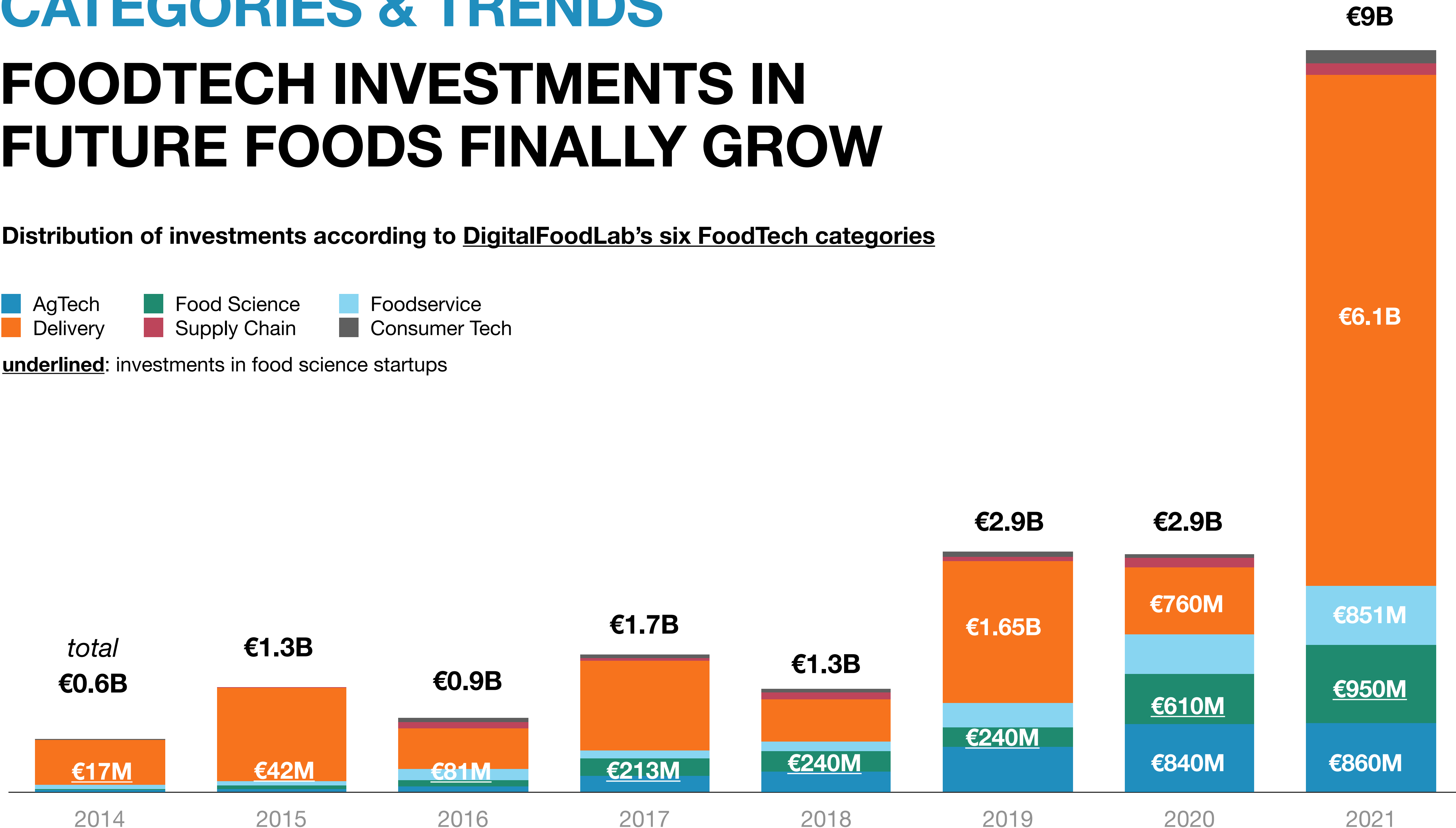
# CATEGORIES & TRENDS

## FOODTECH INVESTMENTS IN FUTURE FOODS FINALLY GROW

Distribution of investments according to DigitalFoodLab's six FoodTech categories



underlined: investments in food science startups

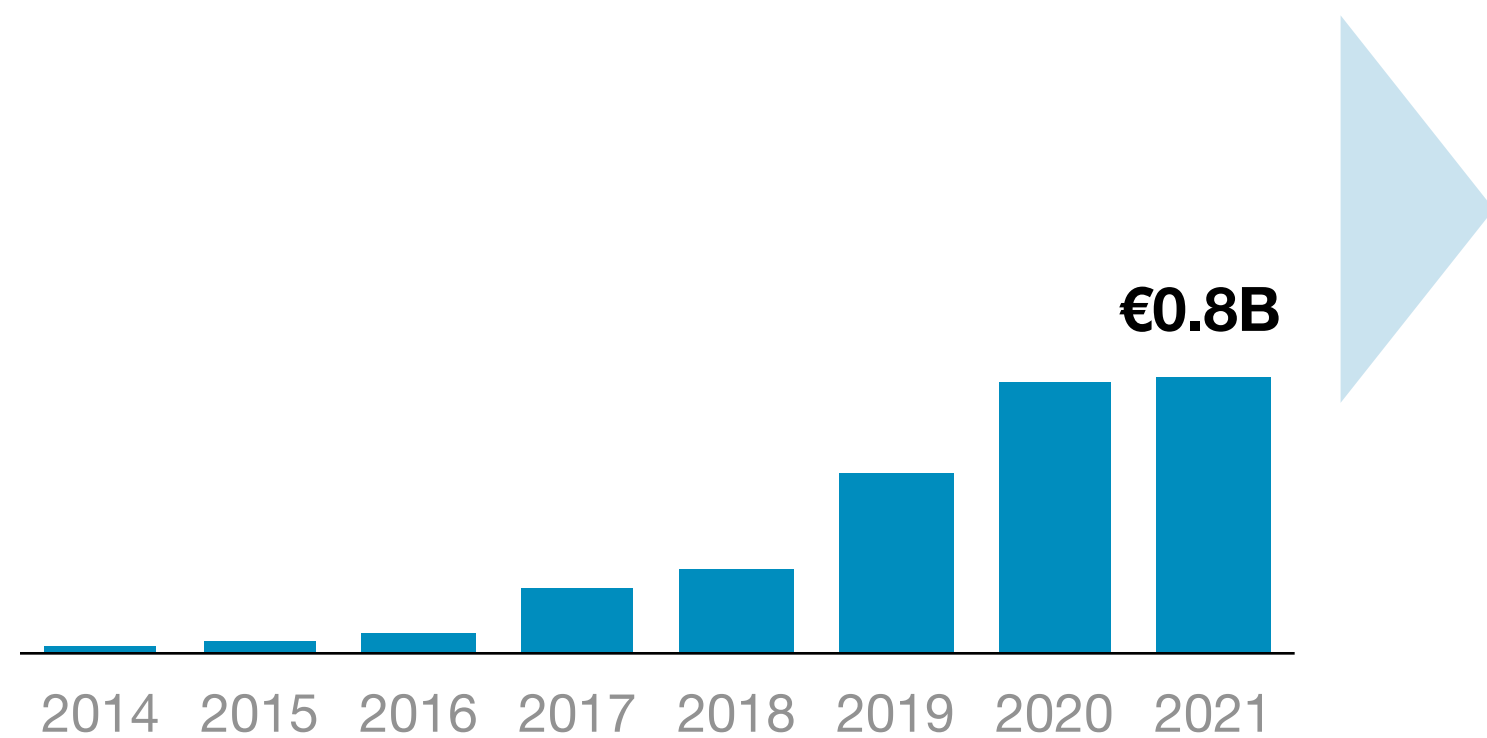




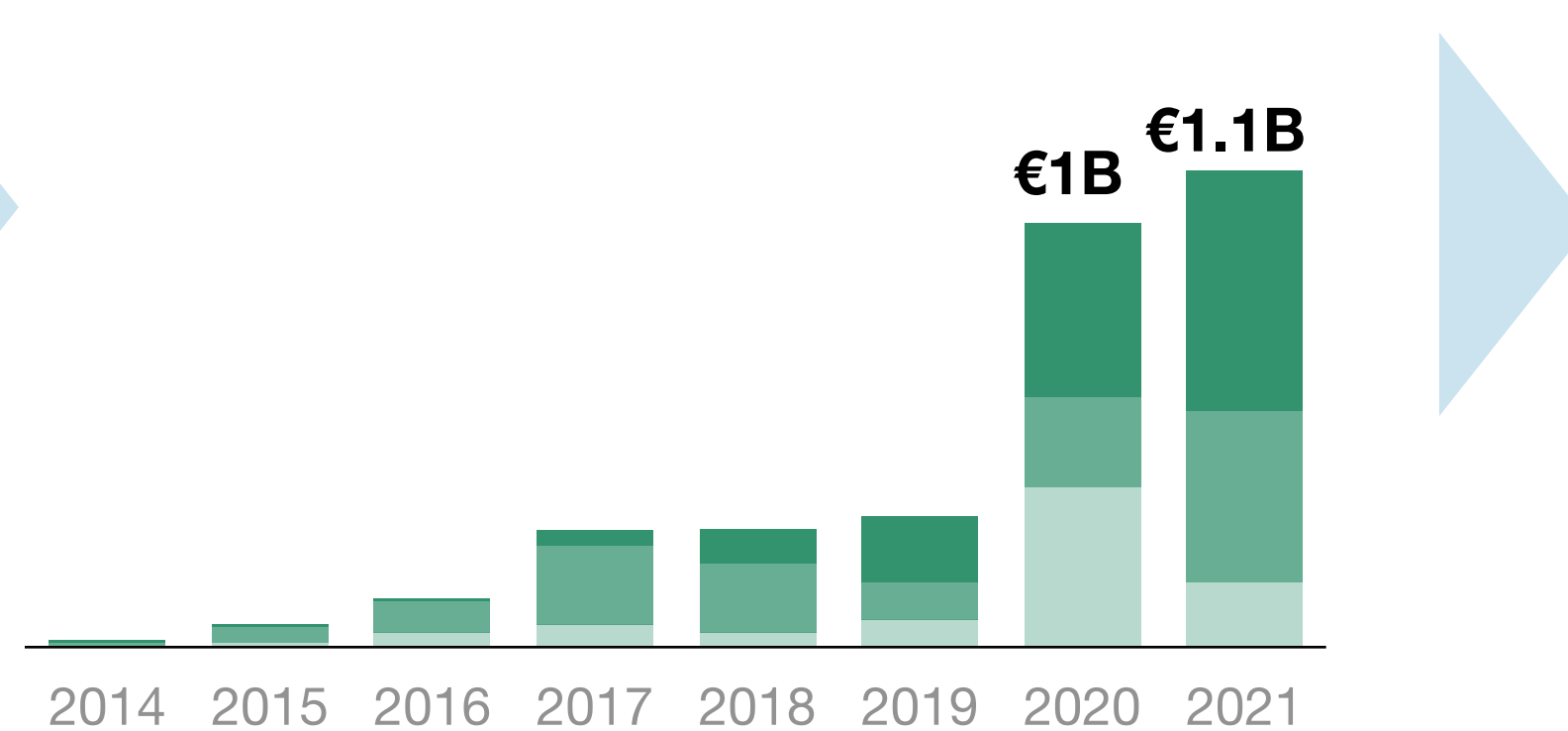
# CATEGORIES & TRENDS

## INVESTMENTS ACROSS THE VALUE CHAIN

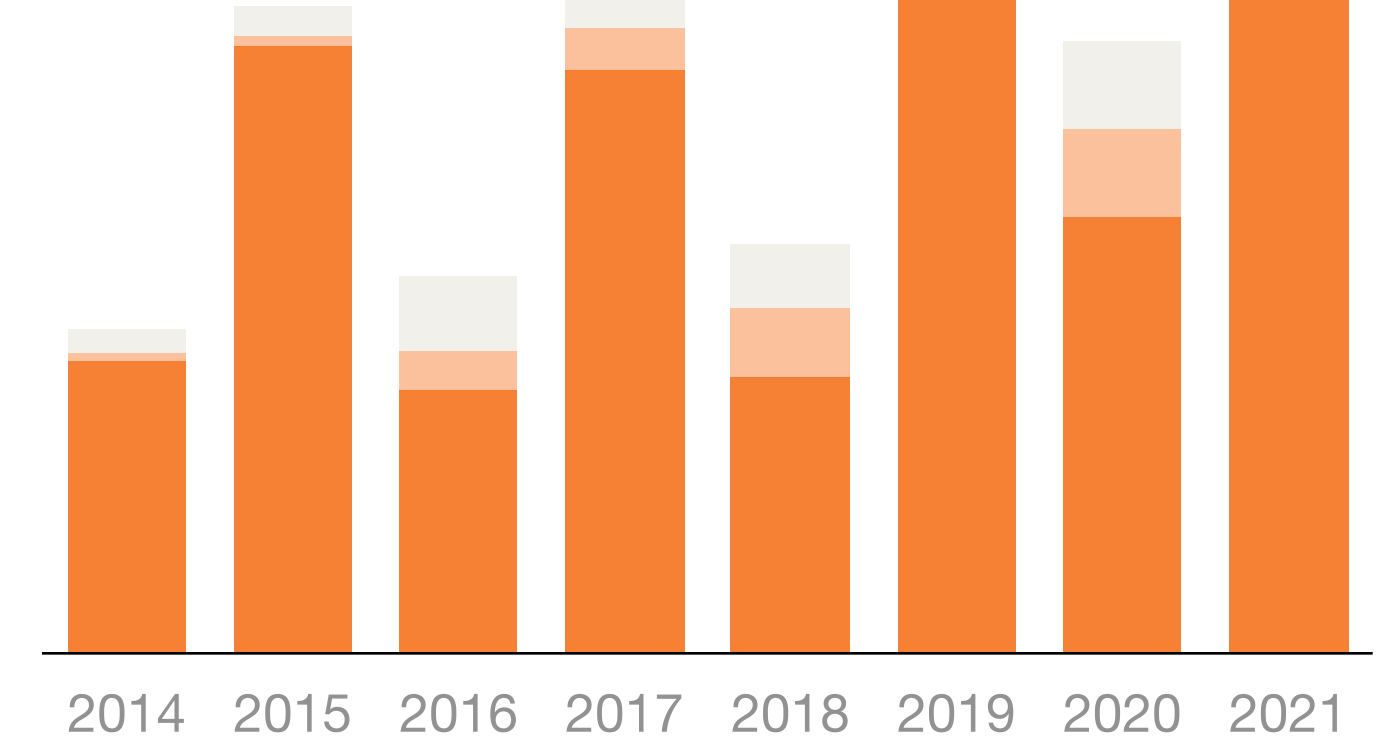
DISRUPTING AGRICULTURE



DISRUPTING TRANSFORMATION



DISRUPTING DISTRIBUTION



Investments in AgTech startups

Alternative proteins  
Non-disruptive new food products (CPG brands, new beverages...)  
Cloud & virtual kitchens

Investments in delivery  
Supply chain & Consumer Tech  
Other Foodservice

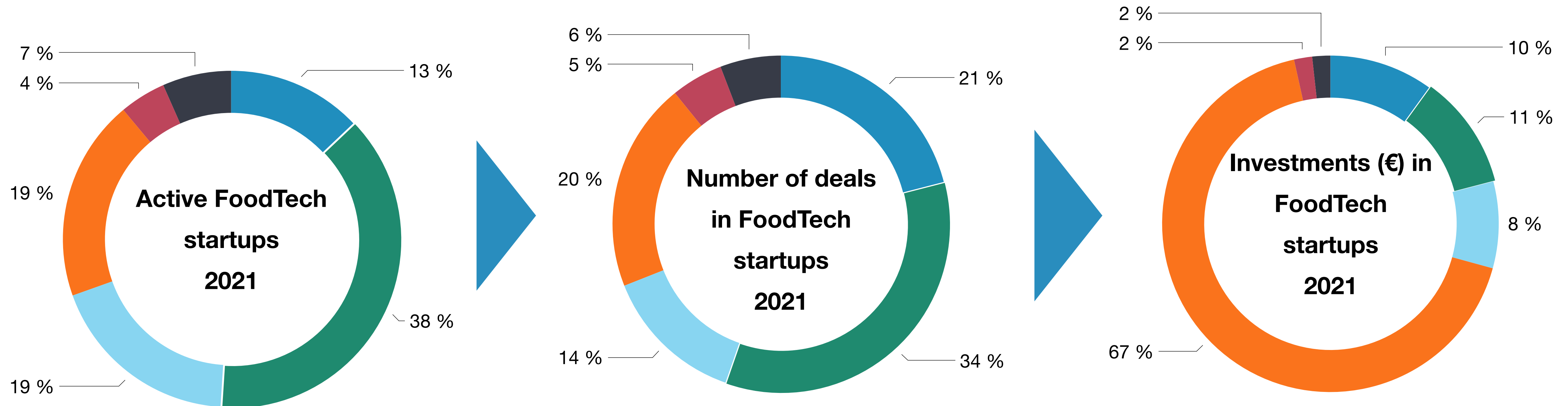
The graphs on the previous page and those above show that things are happening beyond the delivery sector, even if it dwarfs everything happening upstream. Prior to 2020, investments were concentrated mostly upstream (around agriculture) and downstream (distribution). Now investments in the food value chain have been adjusted and more focus has been given to transformation. **In DigitalFoodLab's analysis, the sector around new food products (from deep to low tech innovations) may now be the space with the biggest potential for growth.**

# CATEGORIES & TRENDS

## THE GREAT REBALANCING



The three graphs below showcase the differences between the distributions of the active startups, the number of deals made in 2021 and the amounts invested.



Compared to previous years, the most notable fact is the rising number of food science startups. This category attracts more entrepreneurs every year, as it enables them to focus either on the short term (with product innovations that bring slightly innovative products to the market) or on the longer term by focusing on subjects such as alternative proteins.

# CATEGORIES & TRENDS

## AGTECH

**AgTech**: startups disrupting agriculture. They come up with solutions to improve farming output and quality using drones, sensors and farm management software. AgTech is also about new farm products, next generation farms and urban farming.

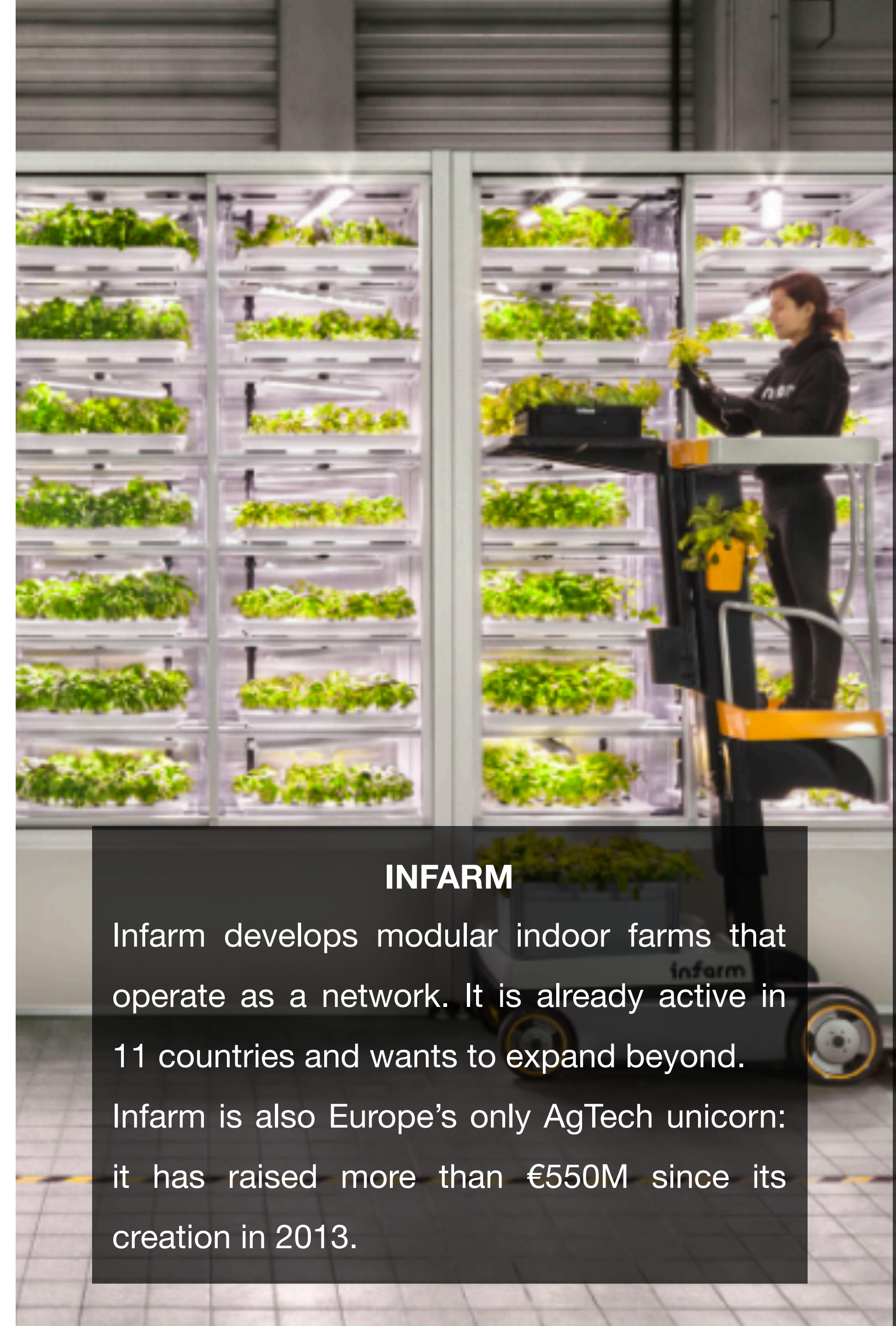
**Ag-Biotech**: Startups innovating on living systems and organisms for agriculture (notably crops), animal feed and health.

**Farm robotics**: Startups providing farmers with robots to replace or complement humans for certain challenging jobs.

**Agricultural marketplaces**: Startups working on B2B e-commerce marketplaces for farmers (with products ranging from seeds to equipment).

**Farm management software**: Startups assisting farmers in managing, organising and optimising all of the tasks on their farm, with data capturing devices or decision support software.

**Urban and novel farms**: Startups developing urban and indoor farms to reduce the distance between production and consumption while increasing yields, quality and sustainability.



### INFARM

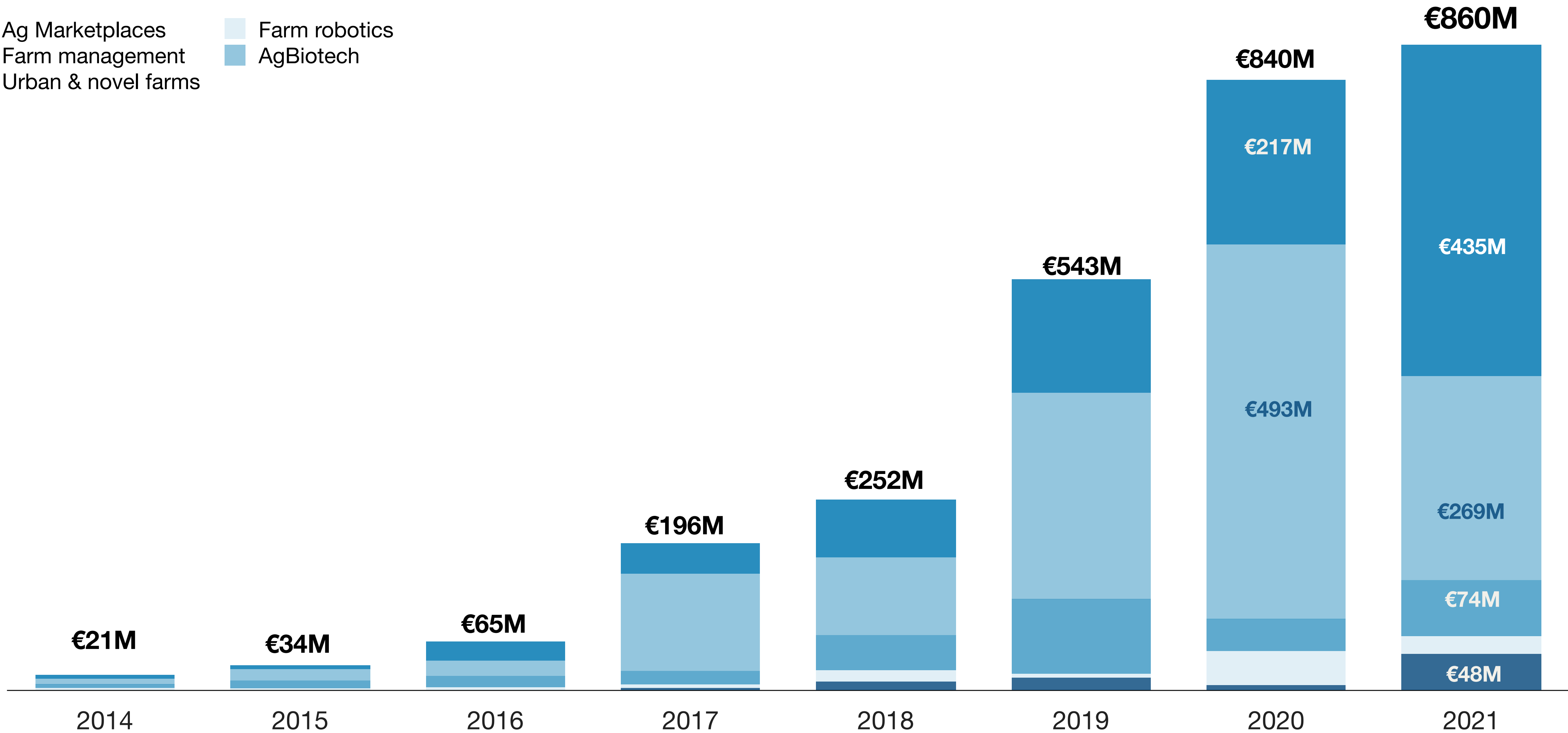
Infarm develops modular indoor farms that operate as a network. It is already active in 11 countries and wants to expand beyond.

Infarm is also Europe's only AgTech unicorn: it has raised more than €550M since its creation in 2013.

# CATEGORIES & TRENDS

## AGTECH

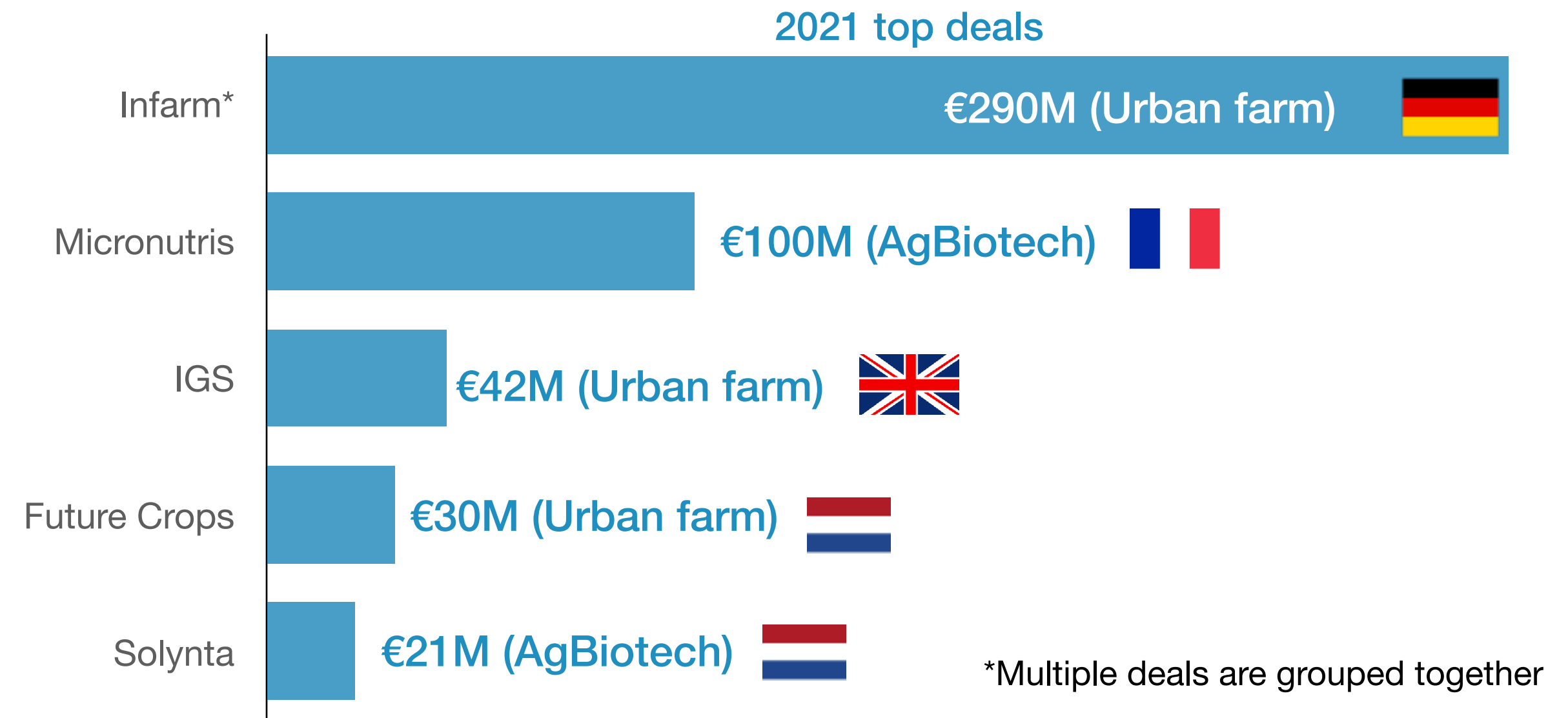
- Ag Marketplaces
- Farm management
- Urban & novel farms
- Farm robotics
- AgBiotech



# CATEGORIES & TRENDS

## AGTECH: ECOSYSTEM ANALYSIS

- ① The rise in investments in European AgTech startups has been driven by AgBiotech companies, especially in one niche: insects (to be used for animal feed). This very specific sector is one of the few areas where Europe dominates (almost all the biggest deals have occurred here). Decreasing investments (only one mega deal with Micronutris raising €100M) in 2021 have impacted the overall category performance.
- ② Conversely, investments in urban & novel farms increased spectacularly (mega deals in InFarm, IGS, Future crops, Onna...).
- ③ Investments in farm robotics are still not taking off in Europe even as they multiply elsewhere (notably in the US).

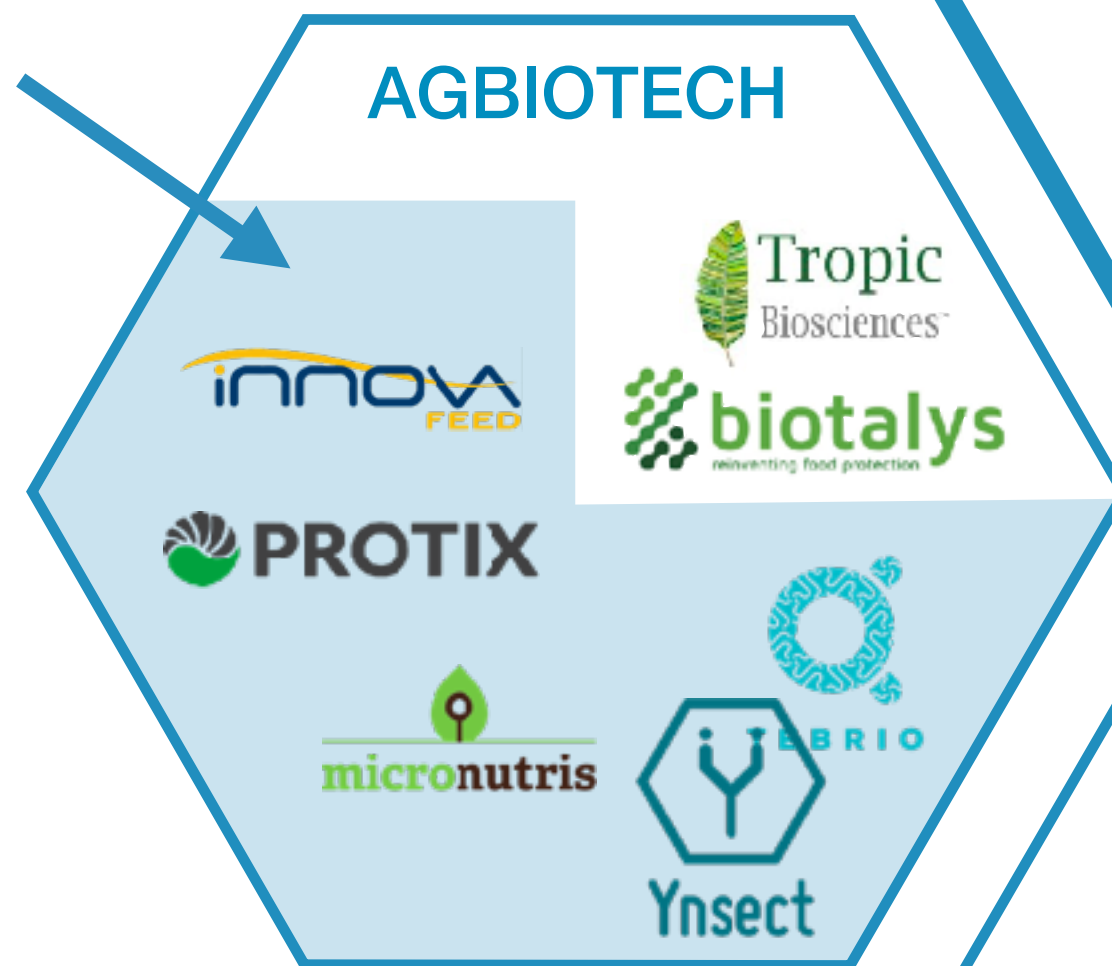


Startups developing insect-based ingredients may have a new market beyond animal feed: pet food. Many entrepreneurs are venturing into this space. It remains to be seen if owners will be willing to feed their beloved pets bugs while remaining reluctant to eat them themselves.

# CATEGORIES & TRENDS

## AGTECH LEADERS IN EUROPE

Strong focus on insects used for animal feed and relatively few startups and funding (compared to other locations) in crop protection and crop optimisation.



Urban farming (which means indoor farming inside cities while targeting profitability) was almost non-existent 5 years ago. Now, with mega deals (€20M+), this category now leads AgTech in Europe. As the required infrastructure investments to make urban farming meaningful in size are gigantic, we can expect it to remain strong in the coming years.



This space remains a large opportunity. Europe has nothing approaching Farmers Business Network (FBN), a US-based unicorn connecting thousands of farmers.



Few new players here in a space that has gotten a bit crowded in the past years.



Farm robots are getting more specialised with interesting applications in weeding.

# CATEGORIES & TRENDS

## DELIVERY

**Delivery: startups developing services to order and deliver groceries and meals**

Meal kits: Startups regularly delivering ingredients to their customers to make meals or ready-to-eat meals.

New retailers: Startups developing grocery e-commerce platforms, including farm-to-home solutions and delivery from stores.

Restaurant Delivery: Startups enabling their customers to order meals and get delivered from nearby restaurants.

Q-Commerce: Startups operating dark stores (a small warehouse that is used exclusively for online deliveries) to bring groceries to consumers almost instantly.

Restaurant delivery: Startups enabling their customers to order meals and get them delivered from nearby restaurants.

Delivery robotics: Startups developing drones, robots and autonomous cars for food deliveries.

Discovery box: Delivery services to receive products selected by experts every month. Wine, tea, coffee and exotic new products from around the world are among the most popular themes.

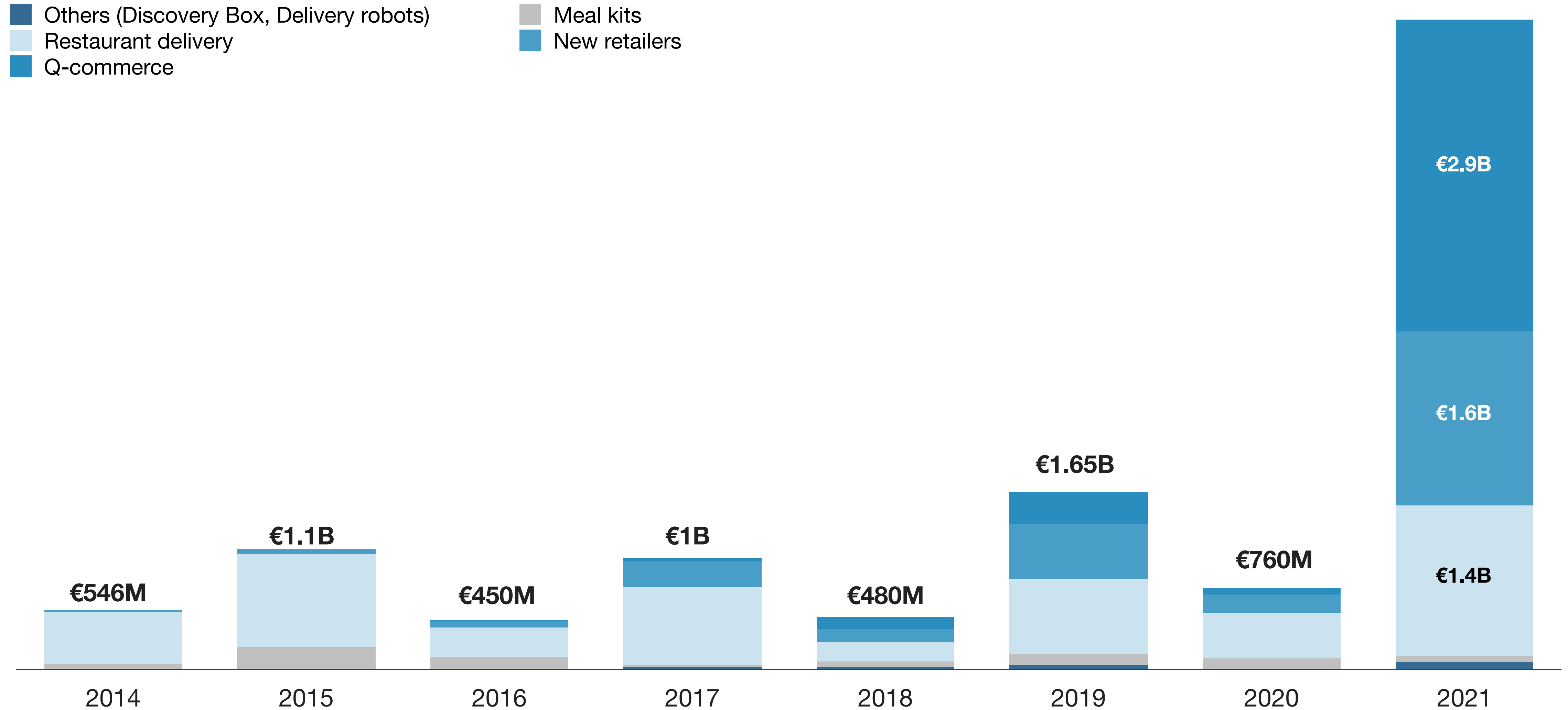


### **Cortilia**

Cortilia is a new approach to online food groceries. It solves the « farm-to-home » problem. For each location, it selects the best farmers and manages the logistics and the delivery to the consumer. Founded in 2012 in Italy, it has already raised €51M.

# CATEGORIES & TRENDS

## DELIVERY: REINVENTING GROCERIES AT FULL SPEED

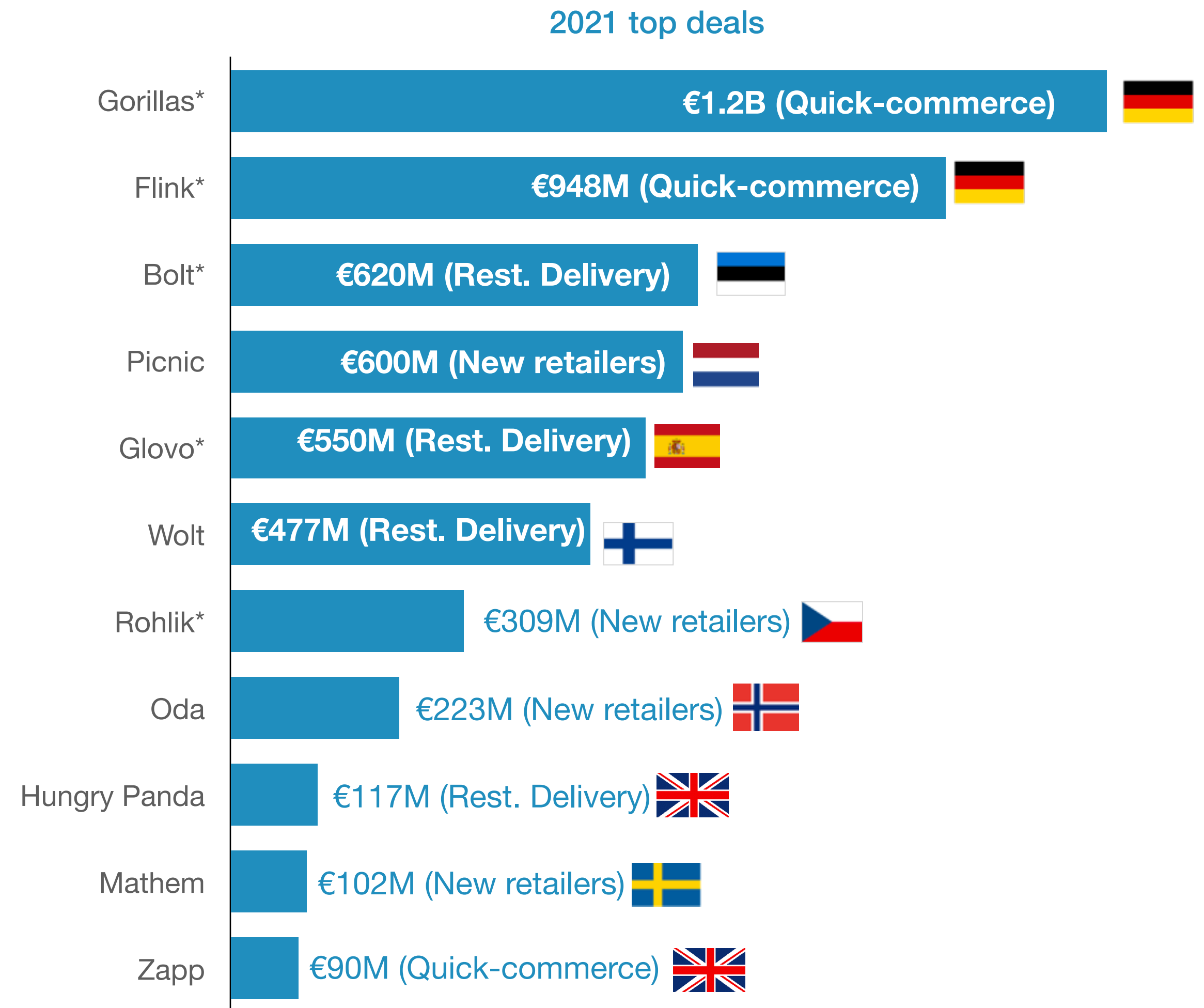




# CATEGORIES & TRENDS

## DELIVERY: ECOSYSTEM ANALYSIS & FUTURE

- Quick-commerce startups (a handful of them actually) raised exactly the same amount of money (€2.9B) as the whole FoodTech ecosystem in 2020. Such growth is totally unheard of for an ecosystem which was basically nonexistent 2 years ago.
- Beyond quick-commerce, the increase in the investments made in new retailers is almost as impressive.
- Even the money invested in restaurant delivery companies (Bolt, Wolt, Glovo) was targeted toward groceries.
- The acquisitions of Wolt and Glovo may signal a larger wave of concentration.



\*Multiple deals are grouped together

# CATEGORIES & TRENDS

## DELIVERY: LEADERS

We observe a multiplication within a new generation of ready-to-eat meal kits (always a week's worth but different when compared to the « old model » where ready-to-cook ingredients were delivered). These new services are often 100% plant-based.



72% of investments in delivery went to new retailers and quick-commerce. We are just starting to feel the impact of this huge amount of money.



In one year, we went from a multiplication of small players, to concentration with a handful of startups.

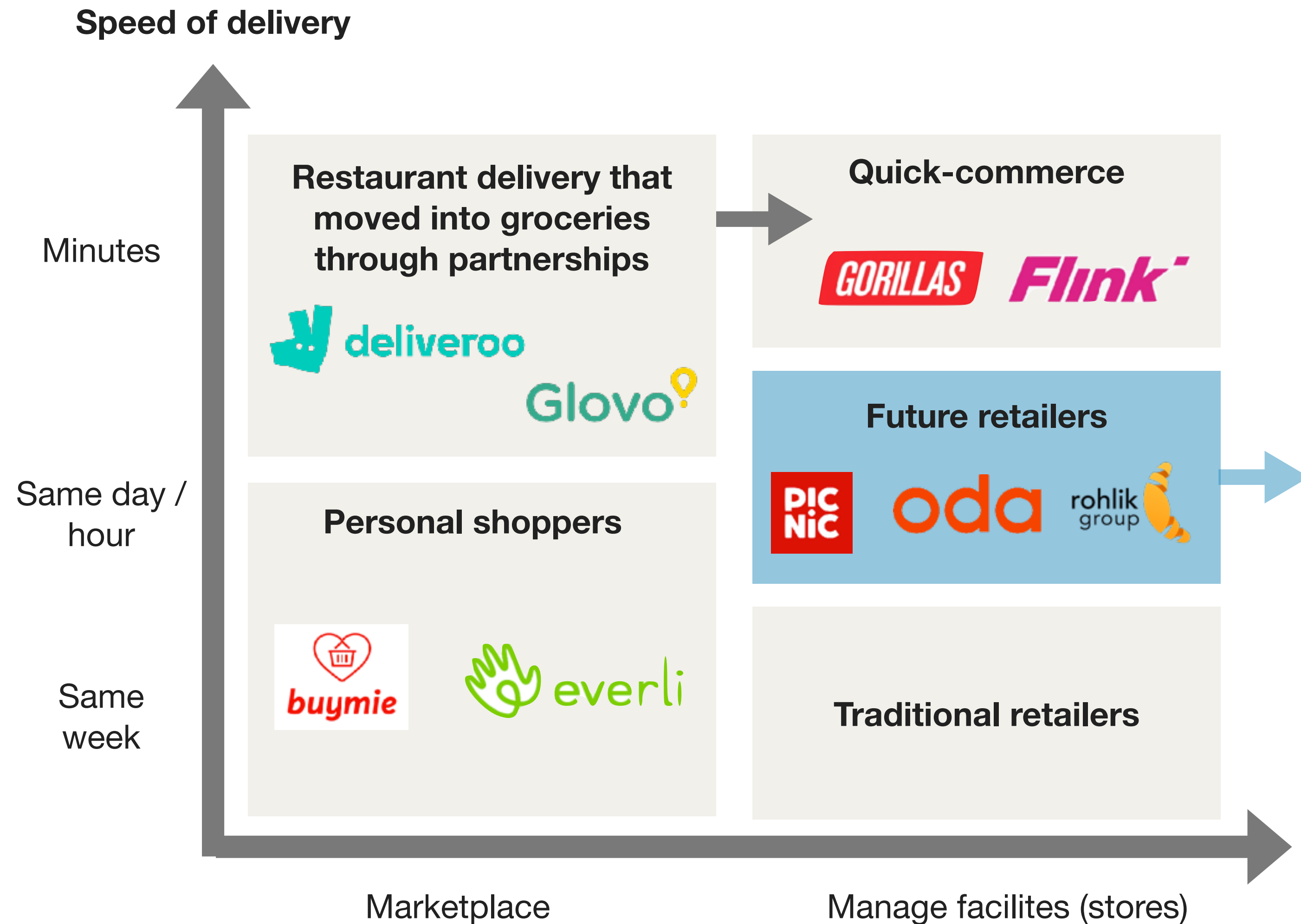
Robotic delivery is one of the most exciting areas to look at. It has the potential to complete the disruption that began as restaurant and grocery delivery by making it much more affordable (and profitable).



Most restaurant delivery startups are now public (IPO) or have been acquired.

# CATEGORIES & TRENDS

## DELIVERY: MULTIPLE FUTURES FOR GROCERIES



If attention is still very much focused on quick-commerce startups, it seems relevant to spend some time to look at the other startups reinventing groceries. Their much more solid path to profitability and their various business models attract many investors.



# CATEGORIES & TRENDS

## FOOD SCIENCE

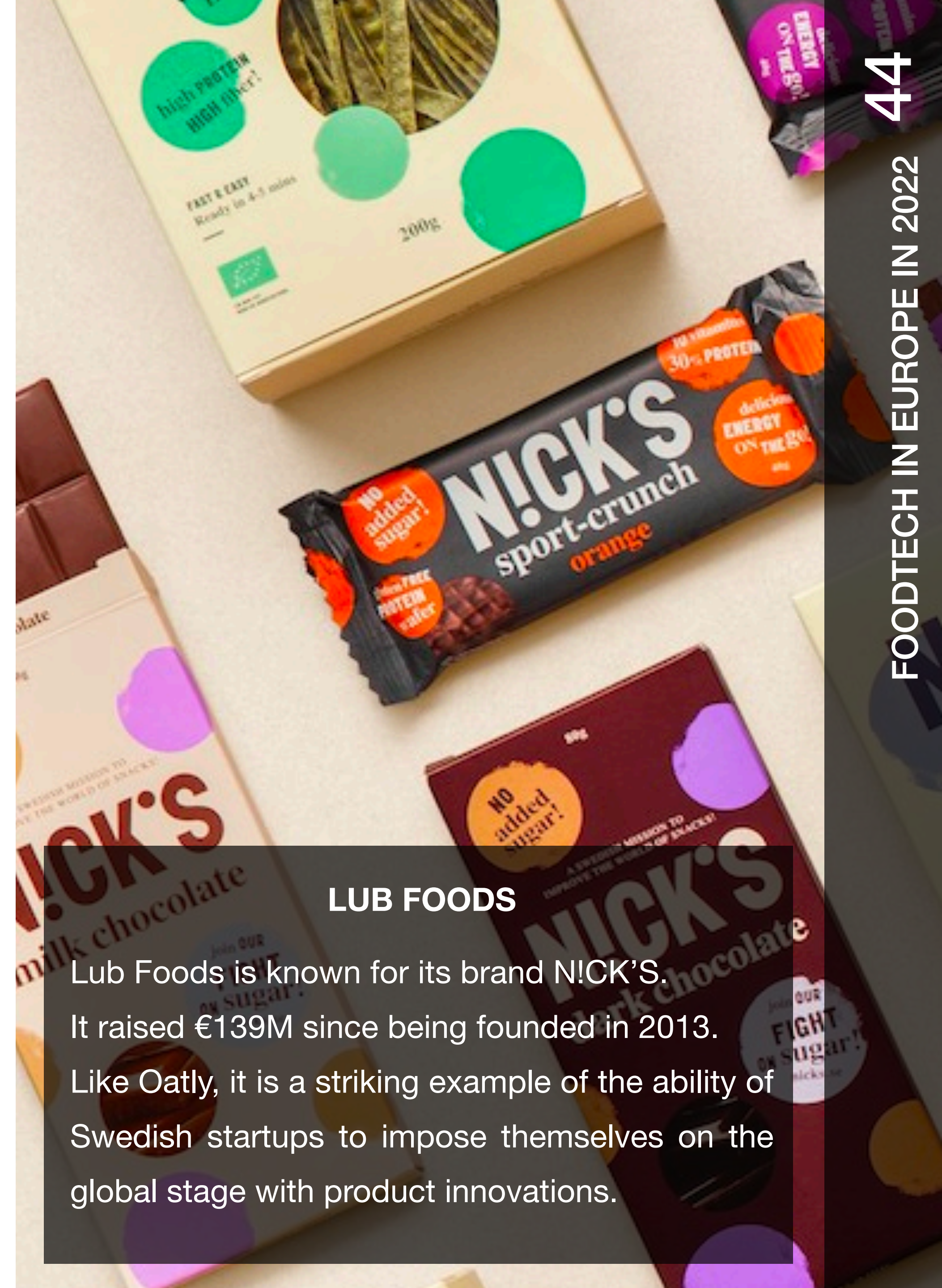
**Food Science:** startups developing new ingredients and food products

**Alternative proteins:** Startups developing alternative protein products or ingredients. They mostly work with plant-based, fermentation, and cellular agriculture ingredients.

**CPG Products:** Startups developing incremental innovations for already well-established ingredients or markets. They differentiate through innovation in the product itself, the transparency of its composition, the means of distribution or greater customisation of the products.

**Drinks & beverages:** Startups working on new forms of drinks, alcoholic or otherwise, to promote new ingredients or a healthier lifestyle.

**Functional ingredients:** Startups developing new ingredients replacing additives, adding functionalities (such as reducing sugar), and improving the taste of food products.



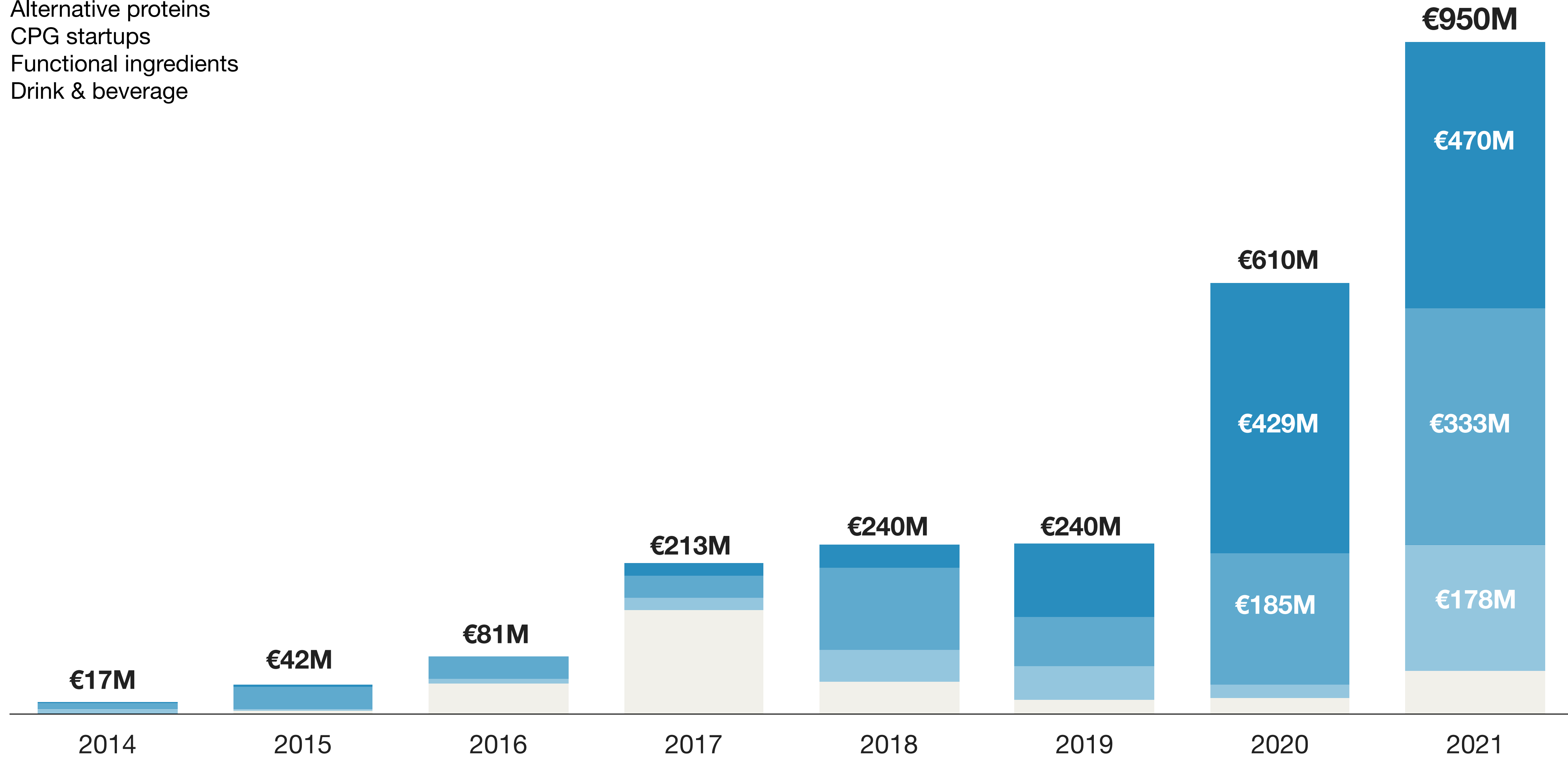
### LUB FOODS

Lub Foods is known for its brand N!CK'S. It raised €139M since being founded in 2013. Like Oatly, it is a striking example of the ability of Swedish startups to impose themselves on the global stage with product innovations.

# CATEGORIES & TRENDS

## INVESTMENT IN FOOD SCIENCE IS TAKING OFF

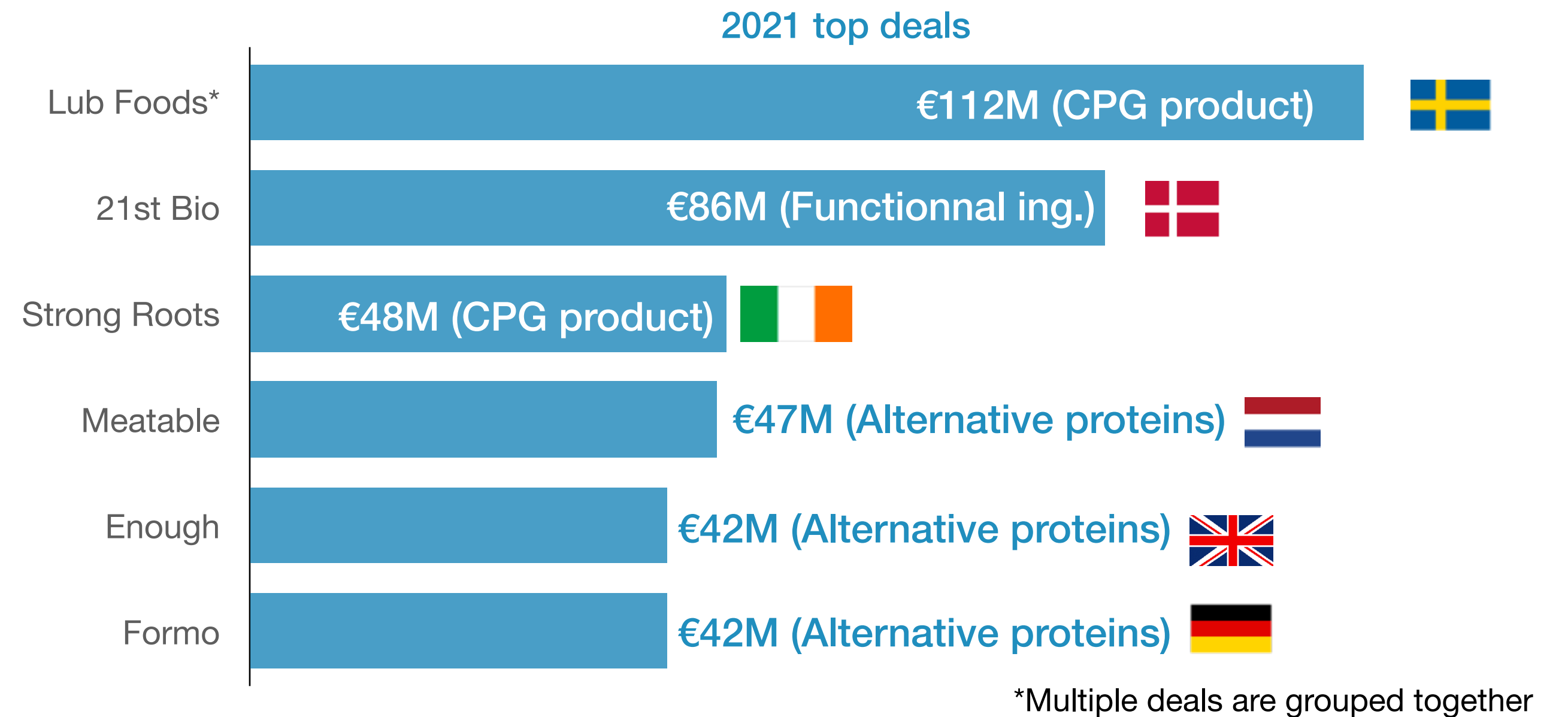
- Alternative proteins
- CPG startups
- Functional ingredients
- Drink & beverage



# CATEGORIES & TRENDS

## FOOD SCIENCE: ECOSYSTEM ANALYSIS & FUTURE

- Finally, after years of stagnation, investments in the core of FoodTech, i.e. the food of the future, are increasing.
- The observed increase in 2020 and 2021 is exciting for the ecosystem as it is both
  - an increase in investments for the short term with more money for product innovations (CPG, drinks & beverage startups);
  - a growing appetite for the medium and long term with increasing investments in alternative proteins (plant-based, cellular agriculture, fermentation) and functional ingredients (B2B)
- We can expect more funding as most of the categories in this space match long-term trends and will require huge infrastructure spending to match needs.



CPG product startups such as Strong Roots (Ireland, \$55M raised in 2021) generate less « hype ». However, they have the strongest track record of investments by corporations (McCain invested in Strong Roots) and acquisitions (Kraft Heinz acquired Just Spice).

# CATEGORIES & TRENDS

## ALTERNATIVE PROTEINS: NOT ONLY ONE BUT AT LEAST FIVE VERY DIFFERENT TECHNOLOGIES

Most of the attention given to food science goes toward alternative protein startups. This is quite reasonable as these companies may make significant contributions toward a solution to reduce the negative impact of the current food system on the environment (and our health). However, we see three misconceptions around this space:

1 - Alternative protein is not something in itself; it is a **combination of at least 5 very different technologies**: plant-based, precision fermentation, cellular agriculture, biomass fermentation and molecular farming.

2 - Investments will have to shift from technology and brand to **infrastructure building**. Taking even the slightest share of the animal protein market will require huge investments in facilities and equipment.

3 - It's not growing slowly, but rather exponentially. Costs of lab-grown foods (cellular agriculture and precision fermentation) have decreased dramatically over the last decade. At their current pace, they could be at price parity with animal products in 5 to 10 years.



# CATEGORIES & TRENDS

## FOOD SCIENCE LEADERS





# CATEGORIES & TRENDS

## FOODSERVICE

**Foodservice:** startups reinventing the hospitality industry. They improve the way out-of-home businesses are managed today. They also create the conditions for the restaurant of the future with robotics and cloud kitchens.

**Reservation platforms:** Services to book a restaurant table, generally with discounts. These startups can be generalists or be more specific (by targeting a food category or high-end restaurants).

**Foodservice management:** Services to improve restaurant management. They help restaurateurs improve operations in terms of their online presence, marketing, customer feedback, procurement, inventory management and transparency.

**Payment services (ePOS):** Services managing the point of sale of the restaurant, generally acting as a hub for other services connected to it.

**Virtual restaurants:** Startups operating restaurant brands that are only available online. While most have a B2C business model through restaurant delivery platforms (or their own), others are B2B focused and act as virtual canteens.

**Foodservice robotics:** Startups developing cooking robots to help or even replace human workers. This also includes 3D printers, automated kiosks and bartending robots.

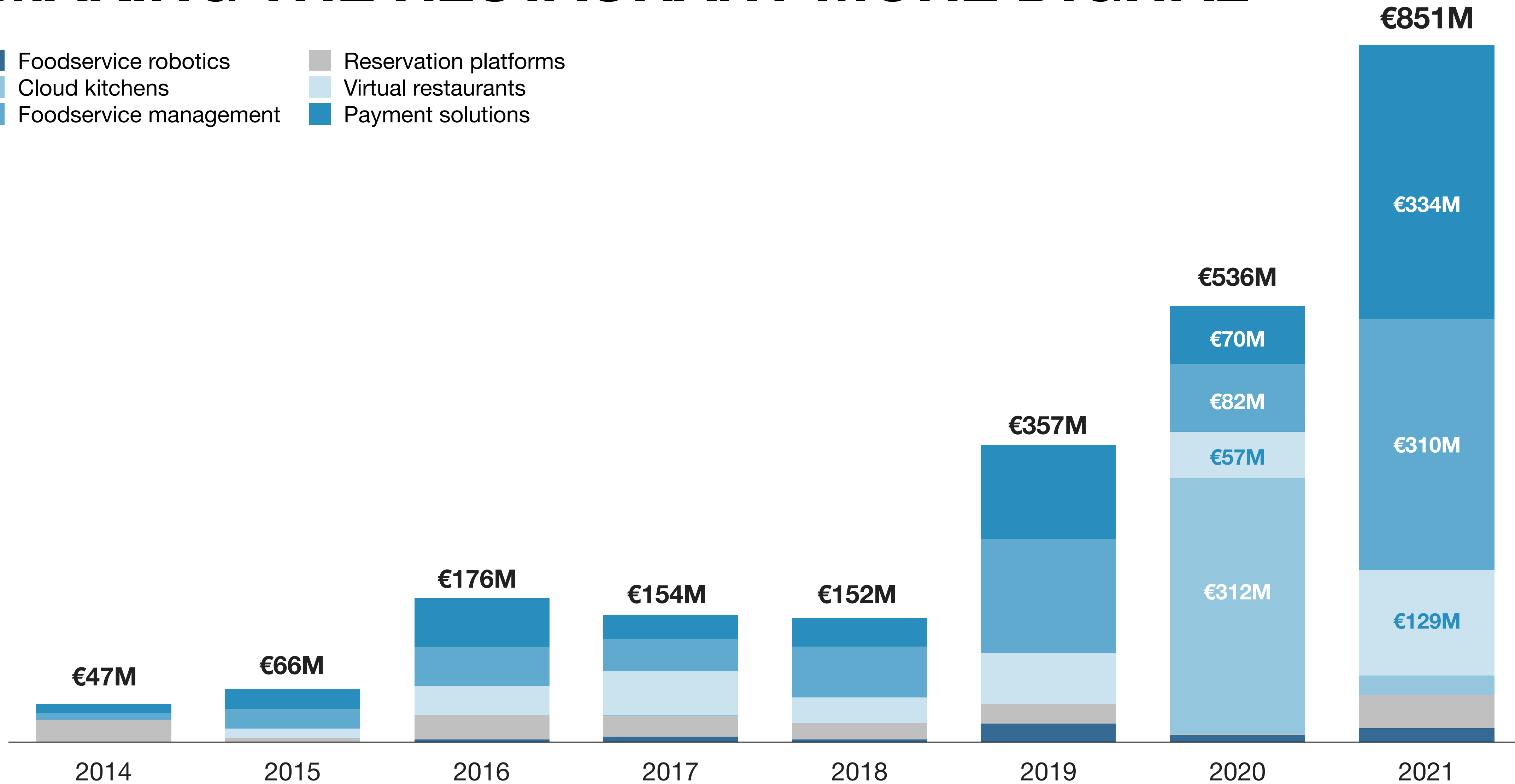
**Cloud kitchens:** Startups managing kitchens and renting them out to other companies (often directly to virtual restaurants) to let them operate delivery operations.



# CATEGORIES & TRENDS

## MAKING THE RESTAURANT MORE DIGITAL

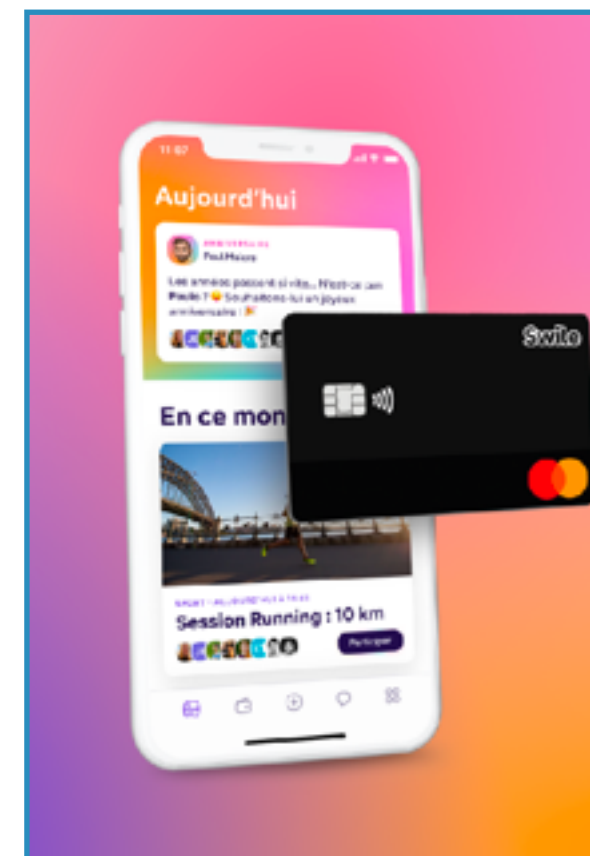
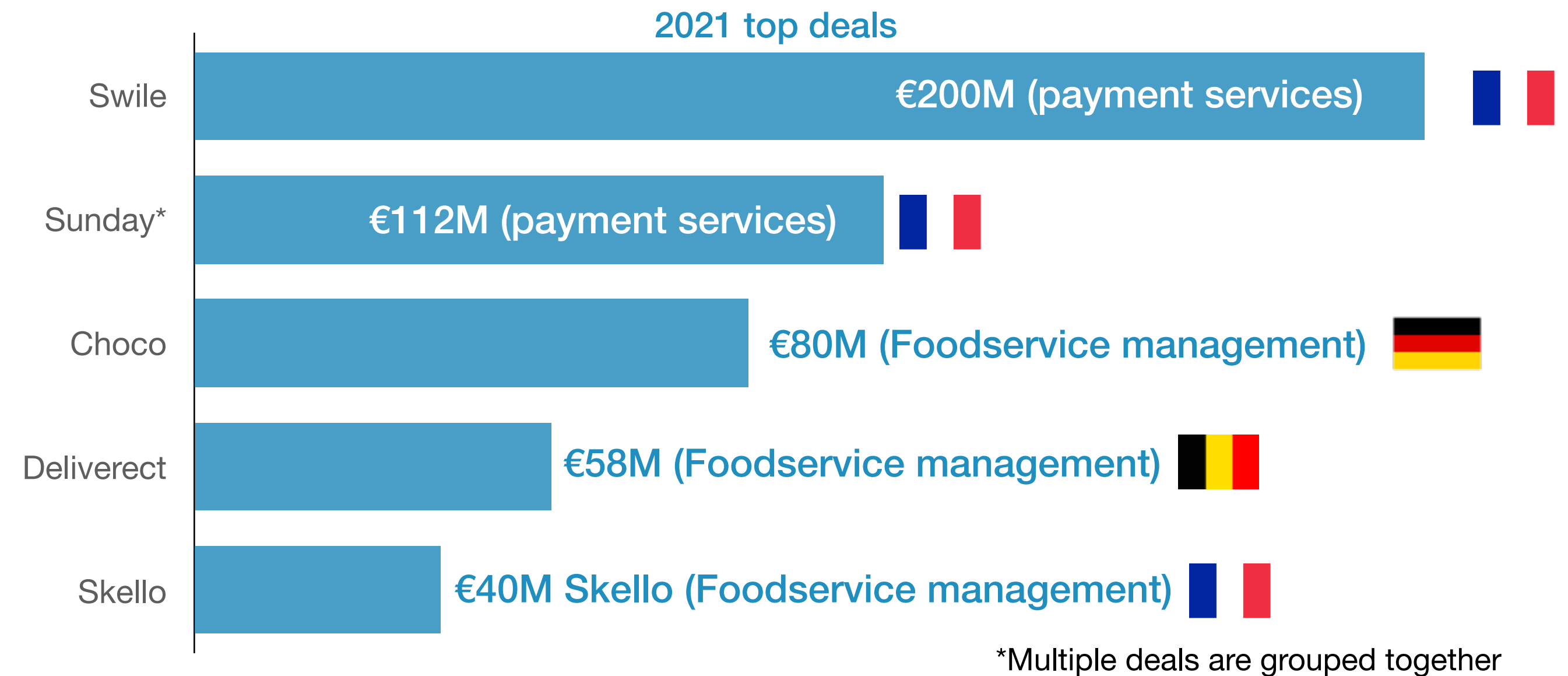
- Foodservice robotics
- Cloud kitchens
- Foodservice management
- Reservation platforms
- Virtual restaurants
- Payment solutions



# CATEGORIES & TRENDS

## MAKING THE RESTAURANT MORE DIGITAL

- While 2020 was dominated by cloud/dark kitchens, investments there have almost vanished in Europe (while they have remained quite significant in the US).
- Similarly, investments in virtual restaurants have not taken off. Most of the big names of 2020 are now either facing difficulties or changing their business models as the end of the pandemic means less growth for restaurant deliveries.
- Investments in payment (ePOS and pay-at-table schemes) and food marketplaces have restarted after a year-long « pause ». The appetite to digitise is now stronger than ever for new, digital-native, restaurant owners.



Many startups created around foodservice are looking to expand into other territories. That is the case of Swile which is marketing itself as a rewards company rather than « just » a meal voucher service. This is also the case of Skello which expanded its schedule management solution to other industries.

# CATEGORIES & TRENDS

## FOODSERVICE LEADERS IN EUROPE

The number of players managing kitchen space in Europe is extremely limited compared with the US.



In 2021, this space has grown significantly compared to previous years. Cooking robots have moved from the realm of science fiction to near future realities.

### PAYMENT SERVICES (ePOS)



Contrary to what we could have expected during the lockdowns, startups working on digitising the foodservice industry have come back stronger than ever. That is particularly the case for ventures focused on payment.

### VIRTUAL RESTAURANTS



Virtual brands operating cloud kitchens have had a hard time as the pandemic restrictions have been relaxed. On the contrary, virtual canteens such as Foodles boomed.

### FOODSERVICE ROBOTICS



### FOODLES

### FOODSERVICE MANAGEMENT



Startups in this space are attracting more and more attention. This is notably the case for those enabling restaurants to manage their delivery operations and those creating B2B food marketplaces.

# CATEGORIES & TRENDS

## SUPPLY CHAIN

**Supply Chain:** startups developing solutions for the food supply chain and food retail industry, from digitalisation to automation.


**Smart and autonomous stores:** Startups developing technologies that improve the in-shop consumer experience or make the store more, or even fully, autonomous.

**Food waste management:** Startups using data to avoid food waste either by managing prices or by creating the right connections with food banks or consumers.

**Data for supply chain:** Startups enabling food business all along the supply chain to create, access and share data on products. This data can be used internally, between businesses (for compliance and tracking) or shared with the consumers.

**Packaging:** Startups developing smarter and more sustainable food and beverage packaging.

# SCOTTISH LARDER

**HAGGIS, NEEPS & TATTIES** £6.50  3.4 kg CO<sub>2</sub>e  
Grant's of Speyside haggis, Scottish turnip and Benzie's potatoes with an Arran mustard sauce

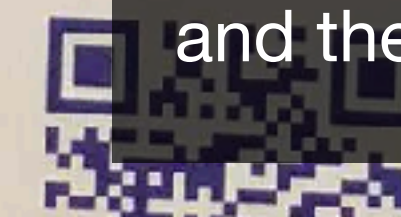
**VEGETARIAN HAGGIS, NEEPS & TATTIES** £6.50  0.6 kg CO<sub>2</sub>e  
Grant's of Speyside haggis, Scottish turnip and Benzie's potatoes with a thyme sauce  
**- PLANT-BASED**

**BRAISED SCOTTISH VENISON CASSEROLE** £8.00  1.7 kg CO<sub>2</sub>e  
winter vegetables, Scottish mushrooms, Benzie's potatoes and herb dumplings

### KLIMATO

Klimato, born in Sweden, is a startup that helps chefs and restaurant owners indicate the CO<sub>2</sub> equivalent of each item on their menu. This drives consumers to choose meals that are better for the planet, while often also being better for their health

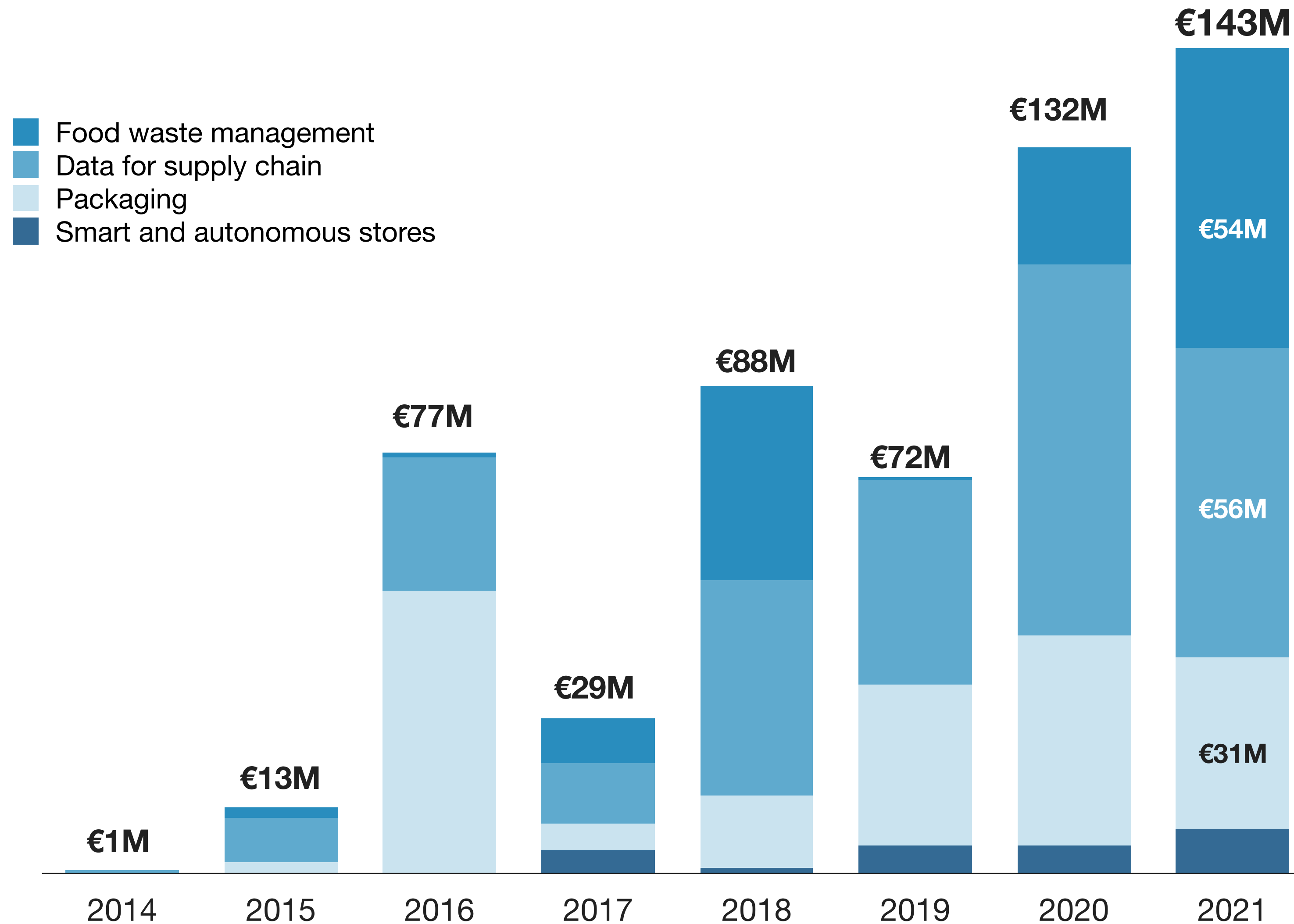
and the restaurant's margins.



## A RECIPE FOR CHANGE

# CATEGORIES & TRENDS

## LIMITED INVESTMENTS IN THE SUPPLY CHAIN



- ⦿ This category has long been stagnant, even if it covers some of the most pressing issues of large food corporations (packaging, data, robotics). It seems to be awakening with larger deals and more interesting ventures.
- ⦿ Packaging remains a small ecosystem in Europe. Most of the disruptive innovation comes from other locations.
- ⦿ The acquisition of Alkemics (a solution to manage e-commerce data for brands) by its American counterpart is both encouraging and also a sign that Europe is not ready for prime time in this category.

# CATEGORIES & TRENDS

## CONSUMER TECH

**Consumer Tech:** startups developing services and devices to help the consumer cook, identify the best foods for him and help him reach his personal goals.

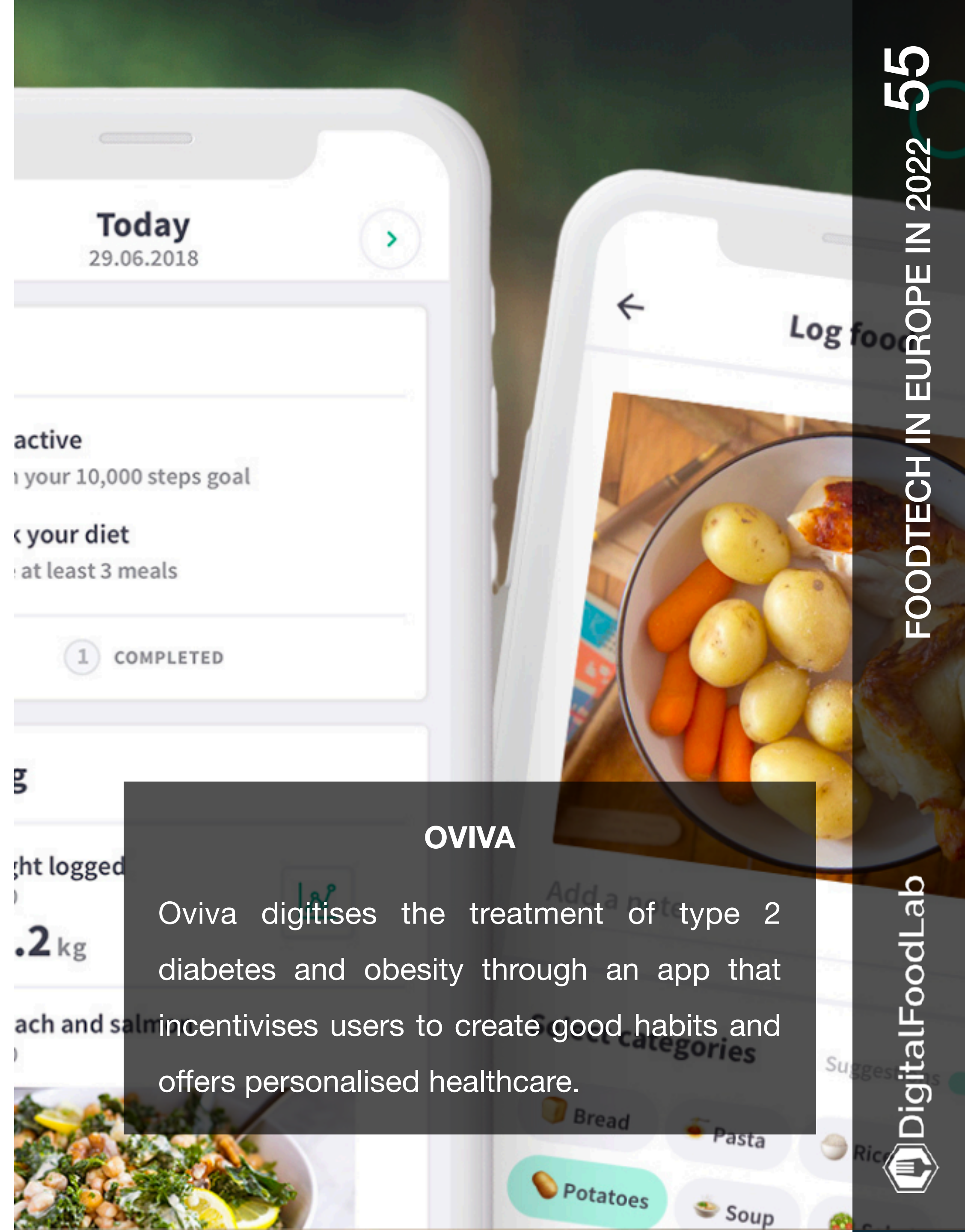
**Nutrigenomics:** Startups developing services and devices that make sense of the consumers' biomarkers (such as those included in the genome, microbiome and blood) to then make personalised recommendations regarding the foods they should consume or avoid.

**Recommendation:** Startups answering the questions “what should I eat (or drink)?” and “is that food good for me?”. They can offer recommendations of meals, recipes, shopping lists or wines based on each customer's expectations.

**Recipes:** Startups reinventing the recipe as we know it with new formats such as interactive games or addictive video broadcasts on social networks.

**Food experiences:** Startups creating tourist experiences around food-related points of interest (breweries, vineyards...) or reinventing access to cooking classes.

**Appliances & cookware:** Startups developing a new generation of appliances or cookware. They provide more technology, new distribution channels or more personalisation.

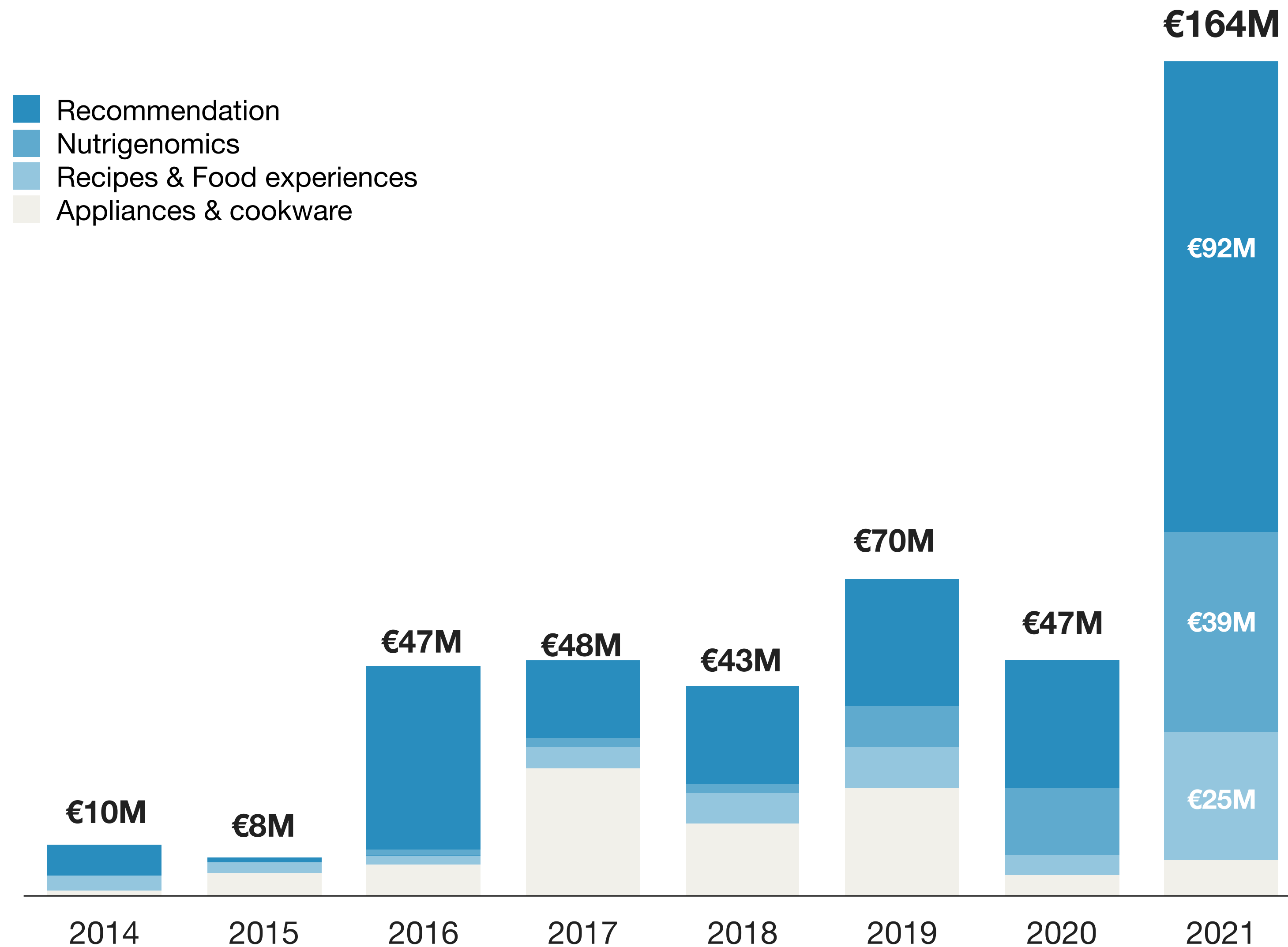


### OVIVA

Oviva digitises the treatment of type 2 diabetes and obesity through an app that incentivises users to create good habits and offers personalised healthcare.

# CATEGORIES & TRENDS

## HELPING CONSUMERS EAT BETTER



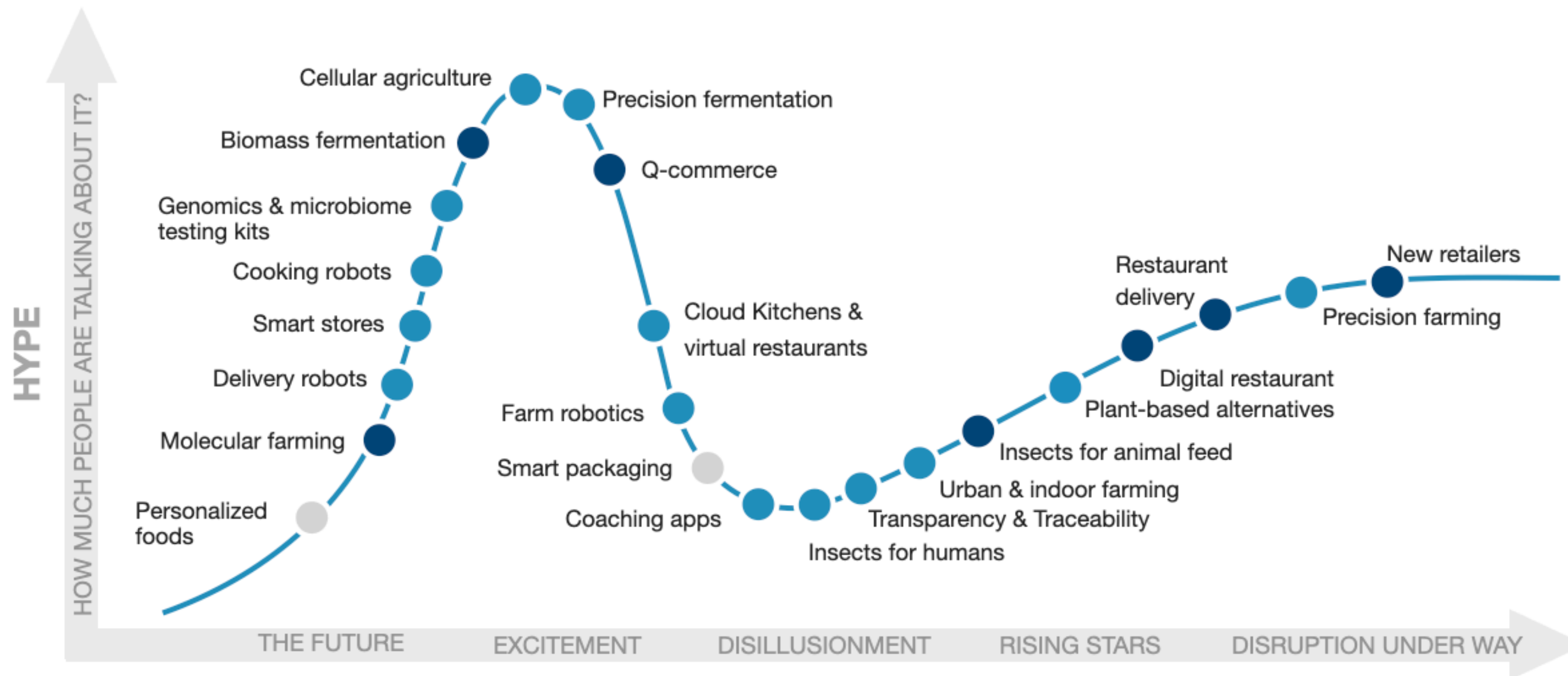
- After years of stagnation, the consumer tech category is finally growing.
- In all sub-categories, investments are driven by a renewed focus on helping consumers adopt healthier food habits either in a preventive or curative way:
  - with nutrigenomics (startups using microbiome and glucose monitoring devices such as Zoé);
  - with recommendation systems adapted to persons suffering health issues such as diabetes (Oviva).
- This ecosystem still has a lot of room to grow in Europe.



# CATEGORIES & TRENDS

## FOODTECH TRENDS: WORLD VS. EUROPE

● Europe is a leader ● Europe is a strong follower ● Europe is a weak follower or absent



This graph represents the main domains of interest for FoodTech startups around the world and their advancement along the « hype curve », from 'idea' to 'being available and used by all'. For more details, please see [DigitalFoodLab's annual report on Global FoodTech Trends](#).

⊙ Compared to previous years, one difference is striking: **the quasi-absence of trends where the European FoodTech ecosystem is a laggard.** Though Europe may not yet be a leader in most areas, it has at least a handful of interesting startups.

⊙ For the ecosystem, it's a very good sign that we can easily identify many interesting startups across the « four types of trends »:

- short-term
- hype (when a lot of people talk about it but with a long road still ahead)
- Long-term / niche
- Disregarded / facing doubts

# FOODTECH IN EUROPE IN 2022

## IV - INVESTMENT ACTIVITY

*Biotech Foods, a Spanish startup working on cellular agriculture, has become the first startup to be acquired in this space (globally). In 2021, the Brazilian meat giant JBS said that it invested \$100M to acquire the startup and invest in technology. It says that it will bring cellular agriculture meat to the market by 2024.*

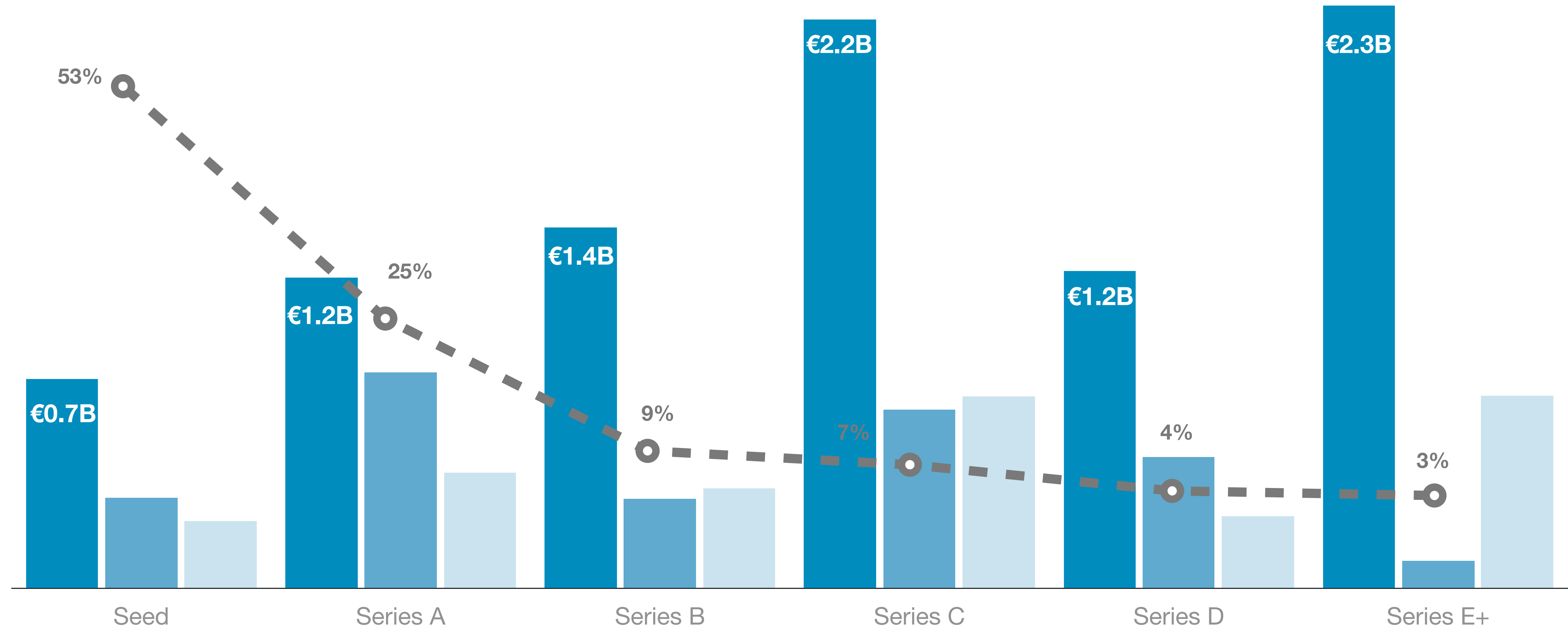


# INVESTMENT ACTIVITY

## INVESTMENT FUNNEL

Investments raised per stage in: ■ 2021 ■ 2020 ■ 2019

○ % of deals per stage in 2021 (number of deals)

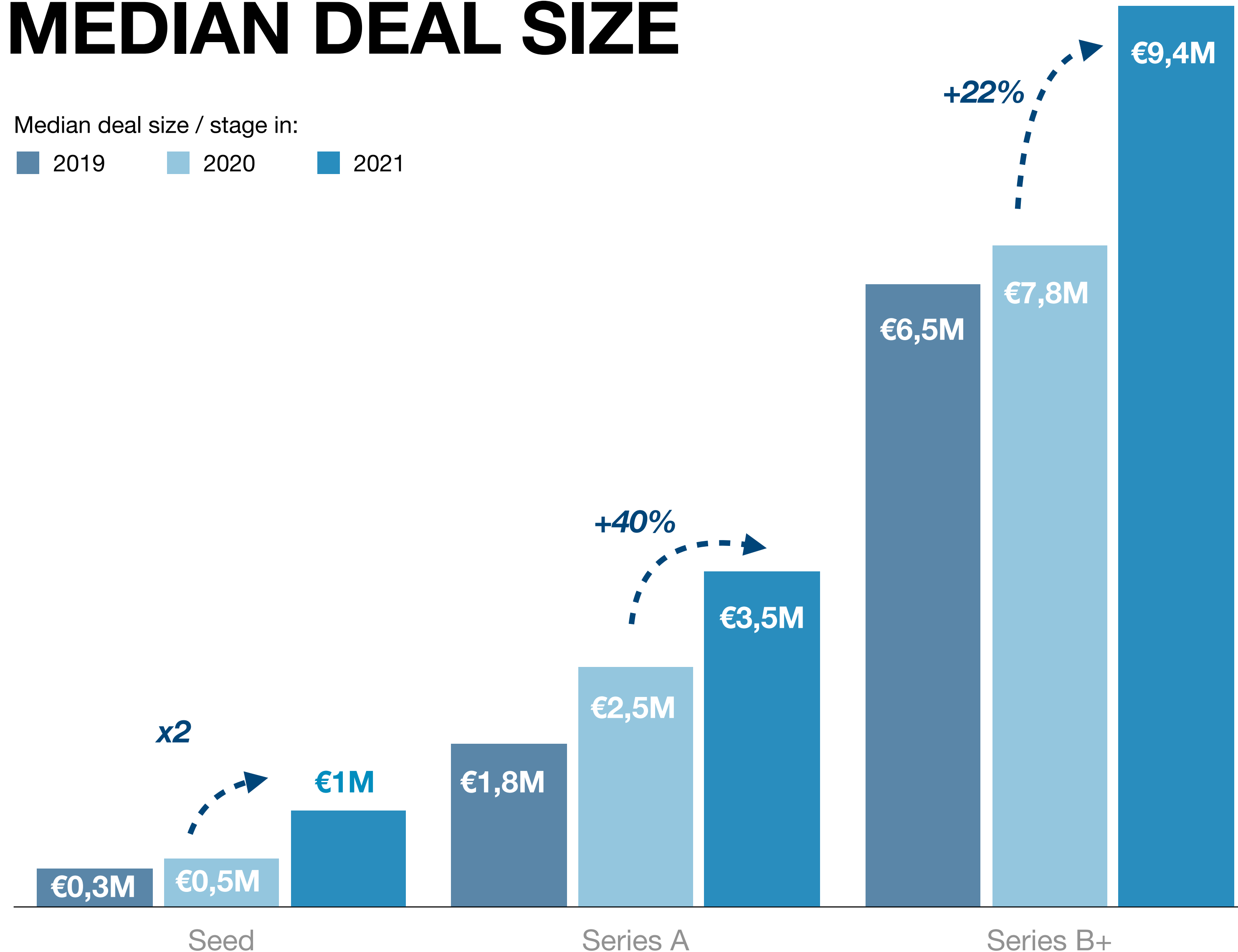


# INVESTMENT ACTIVITY

## MEDIAN DEAL SIZE

Median deal size / stage in:

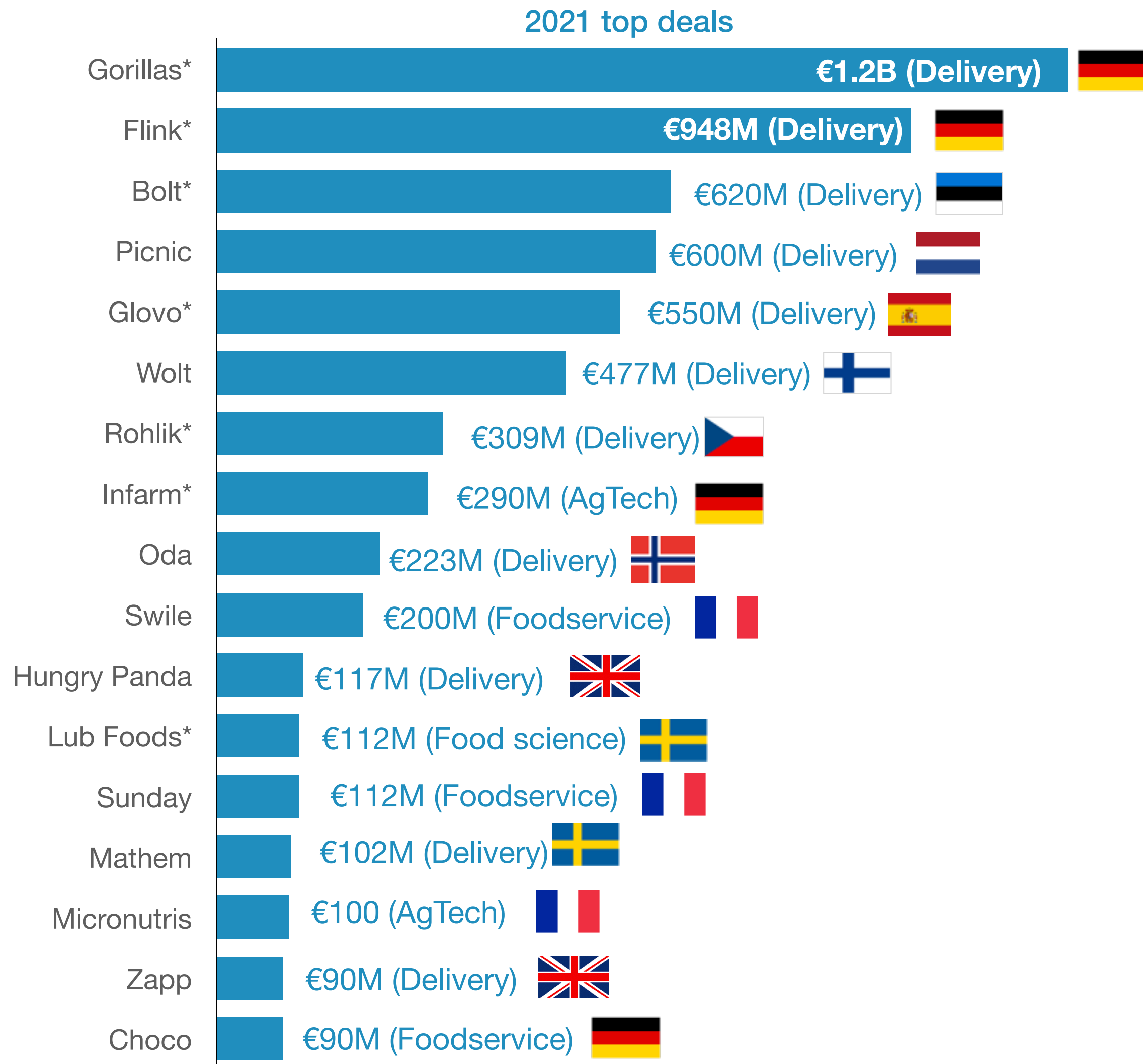
■ 2019 ■ 2020 ■ 2021



- The median deal has doubled from €0,9M in 2020 to €1,8M in 2021. This is a reflection of the steep increase in the investments in the ecosystem. As shown in the graph, the increase is highest during the first stages of financing. This can be explained both by:
  - a growing appetite of investors to bet heavily on young ventures
  - the growing number of €1M+ deals which make small rounds less interesting for startups to communicate (these don't appear in DigitalFoodLab's data)
- This increase shows that the balance of power is shifting rapidly toward founders, even at earlier stages, as investors fight for the best deals. The right team with the right idea can now raise significant money with little to show beyond a powerpoint.

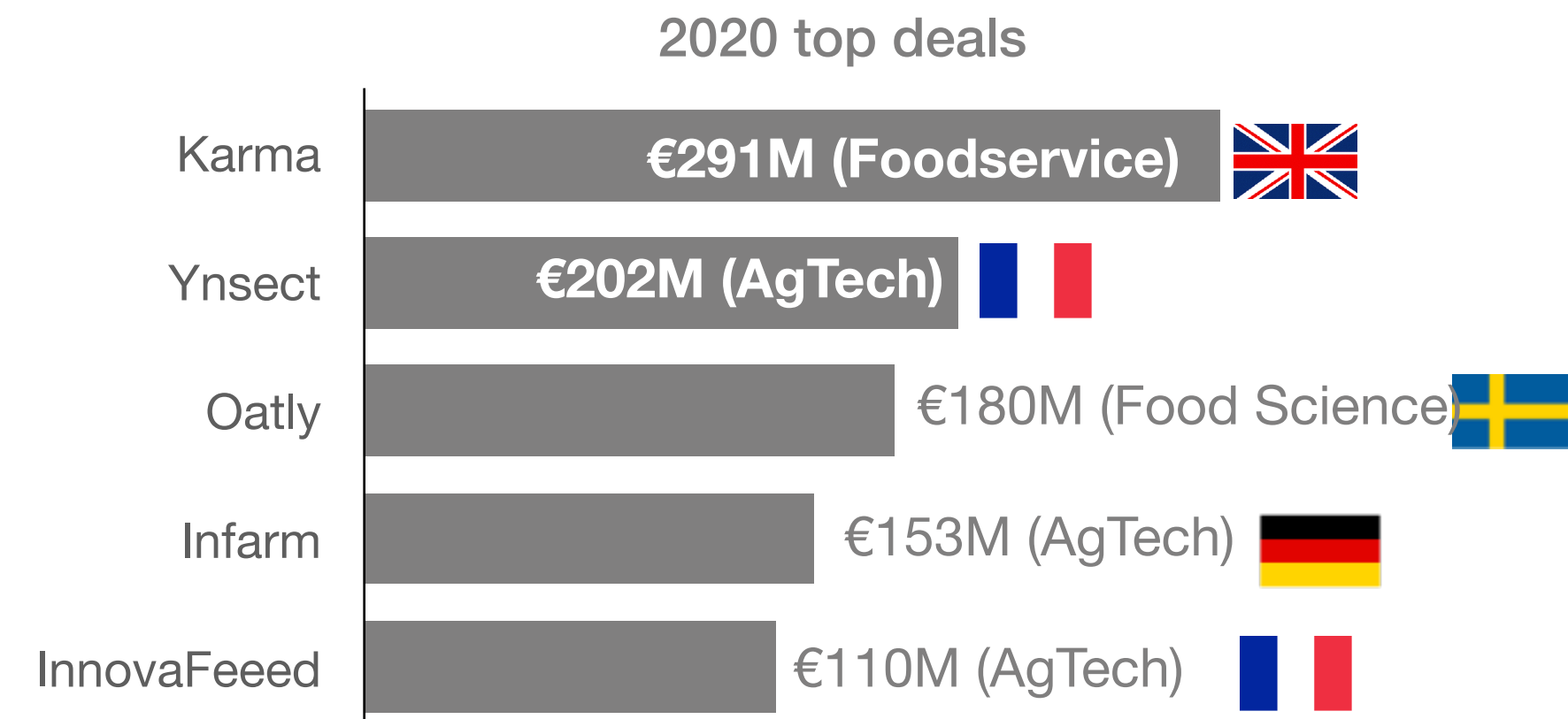
# INVESTMENT

## 9 OF THE 10 BIGGEST DEALS WERE IN DELIVERY



Both the amounts displayed and the presence of so many « multiple deals » among 2021's top deals is impressive compared to previous years. These two elements are signs of an appetite for « hypergrowth » (and also an appetite for risk) in FoodTech, especially delivery.




















The other striking element of this graph is that 2 companies near the top (Glovo and Wolt) have been acquired in a year when they raised (multiple) mega deals.



\*Multiple deals are grouped together

# INVESTMENT ACTIVITY























## NOTABLE INVESTMENTS BY CORPORATIONS

STARTUP	CATEGORY	DEAL SIZE	CORPORATION
	Delivery	\$180M	
	Delivery	\$750M	
	Delivery	€900M	
	Delivery	€40M	
	AgTech	€100M	
	Food science	\$55M	
	Food science	€40M	
	Delivery	€33M	
	Consumer Tech	€14M	
	AgTech	€13M	
	AgTech	€9M	 We create chemistry
			

# INVESTMENT ACTIVITY

## NOTABLE ACQUISITIONS IN EUROPE - 1/2
























■ Key/structuring deals

STARTUP	CATEGORY	ACTIVITY	COUNTRY (startup / acquirer)	AMOUNT	ACQUIRER
	Delivery	Restaurant Delivery + Quick-commerce	Spain / Germany	€2.3B	
	Delivery	Restaurant Delivery	Finland / USA	€7B	
	Consumer Tech	Data	UK / USA	Undisclosed	
	Foodservice	Catering software	UK / USA	Undisclosed	
	Food science	Cellular agriculture	Spain / Brazil	Part of a larger \$100M investment	
	Food science	DTC spice brand	Germany / USA	Undisclosed	
	Supply Chain	Data for e-commerce supply	France / USA	Undisclosed	
	Supply Chain	Food waste management	Italy / France	Undisclosed	
	Foodservice	Foodservice management	France / Italy	Undisclosed	
	Delivery	Quick-commerce	UK / Turkey	Undisclosed (Getir said at the same that it was looking to invest £100M in the UK)	
	Food science	Gummies / food supplements	France / France	Undisclosed	

# INVESTMENT ACTIVITY

## NOTABLE ACQUISITIONS IN EUROPE - 2/2

■ Key/structuring deals

STARTUP	CATEGORY	ACTIVITY	COUNTRY (startup / acquirer)	AMOUNT	ACQUIRER
	Supply chain	Data for e-commerce	France / USA	Undisclosed	
	Delivery	Delivery of fresh foods from corner stores	France / France	Undisclosed	
	Foodservice	ePOS	France / UK	Undisclosed	
	Delivery	Meal delivery / Smart canteen	France / France	Undisclosed	
	ConsumerTech	Recipe app	Germany / Germany	Undisclosed	
	Food science	Fresh pasta maker	UK / italy	Around £40M	
	AgTech	Insects	France / Netherlands	Undisclosed	
	Delivery	Grocery delivery	Portugal / Spain	Undisclosed	
	Delivery	Grocery delivery	Italy / Spain	Undisclosed	
	Food science	Plant-based burgers	Netherlands / USA	Undisclosed	
	Food science	Gaming nutrition	Germany / UK	Over €31M	
	Delivery	Quick-commerce	UK / USA	Undisclosed	



# INVESTMENT ACTIVITY

## DTC ACQUISITIONS

STARTUP	STARTUP ACTIVITY	ACQUIRER
	DTC Gummies / food supplements	
	DTC spice brand	
	DTC Fresh pasta maker	
	DTC Gaming nutrition	

### INVESTMENTS IN DTC STARTUPS

Among the many acquisitions of European FoodTech startups, one pattern was particularly striking: the acquisition of Direct-To-Consumer (DTC) startups by larger corporations.

While some are directly using these acquisitions to venture into new online channels (such as Barilla through the Pasta Evangelists' deal), others are using acquisitions to explore spaces that are new for them (spices for Kraft Heinz).

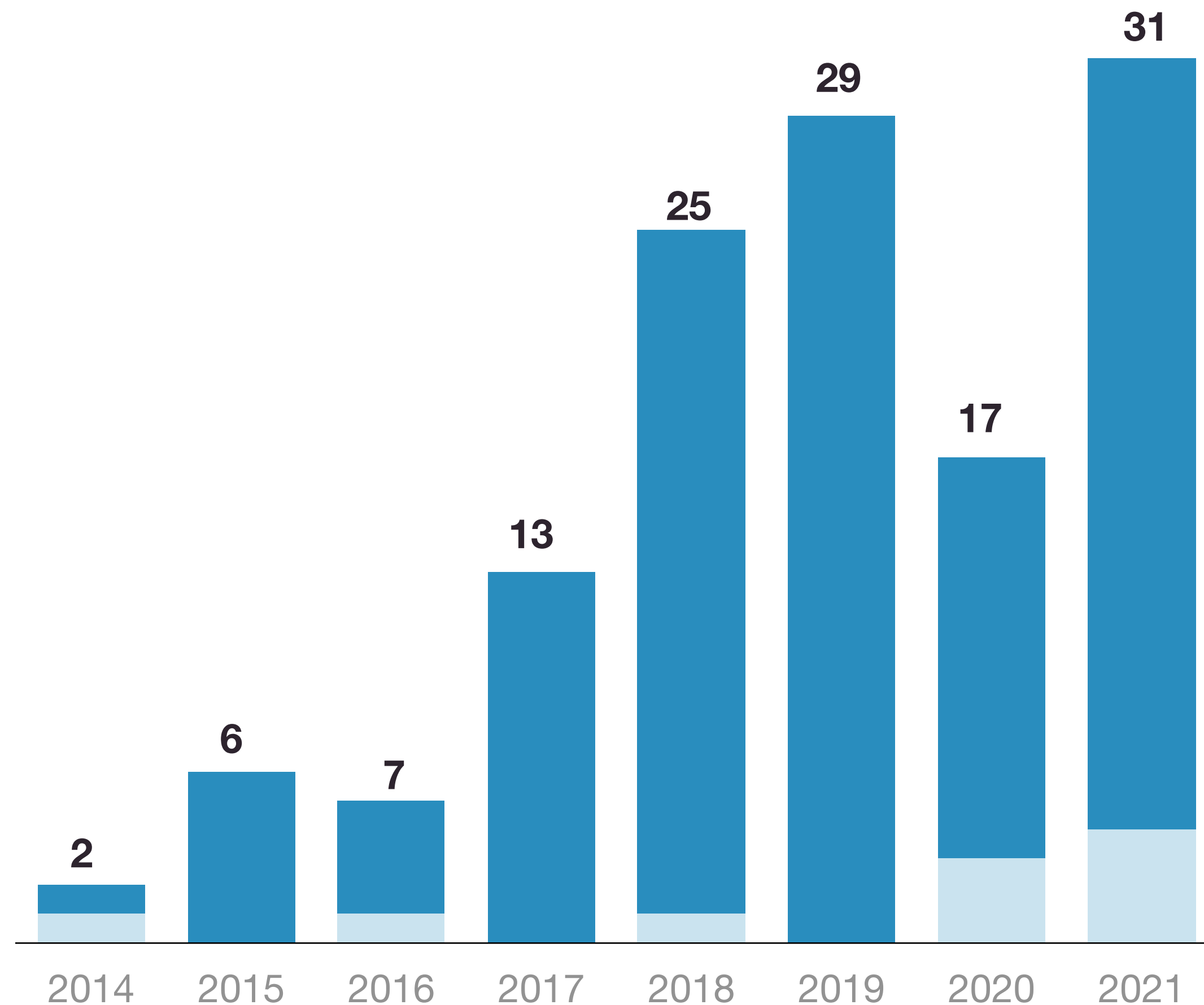
In any case, this confirms the growing appetite of corporations (from giants to small pharmaceutical players) to include startup acquisitions in their growth strategy.

We can expect these deals to increase significantly in 2022 as more and more of these DTC startups mature and become interesting for corporations.

# INVESTMENT ACTIVITY

## A NARROW PATH TO EXIT

■ Number of IPOs ■ Number of acquisitions



### 1% OF THE OVERALL NUMBER OF STARTUPS EXIT EACH YEAR

Compared to the number of startups (around 3,600 active startups in 2021), only 1% of them exit each year. Interestingly, this 1% rule seems to have been consistent over time.

As the number of meaningful acquisitions (mergers between startups that have not raised money are counted as failures) has not increased, eyes are set on the public markets. However, while rising, the number of IPOs in Europe is still limited.

### A PILE OF ZOMBIE STARTUPS?

We have identified nearly 2,000 active startups that have raised some money over the past 7 years but have not exited. This increasing number should be a point of attention. If, for some external reason, investors « discover » that they have financed the emergence of a set of slow-growth food SMEs rather than that of a portfolio of fast-rising startups, they could decide to move « en masse » out of the FoodTech ecosystem.

# INVESTMENT ACTIVITY

## OPTIMISM ACROSS THE BOARD FOR 2022

IPO IN 2021



€1B+ ACQUISITION



**LE CERCLE VERTEUX SE MET EN PLACE: + DE STARTUPS, + D'INVESTISSEMENTS, + DE RACHATS**

The foreign graphs and lists, notably compared to previous years', show a steep increase all over the investment funnel, from creation to the number of significant deals, to exits and acquisitions.

The augmentation of « mega deals » which create startups with the means of developing their vision, and ultimately IPOs, starts a virtuous circle. In those startups, founders but also many employees develop knowledge on how to implement and manage hyper-growth. They also create a network and, if they are fortunate, some money. Then, they can either invest this (human and financial) capital into new ventures or be the founders of new startups themselves. Many quick-commerce startups, such as Dija (founded by former Deliveroo employees), are already good examples.

**ONE WARNING: WHERE IS THE VALUE GOING?**

DigitalFoodLab's analysis of the investment data has yielded one significant reservation regarding the general optimism of this report: the growing presence of foreigners in the biggest investments (with well-known names such as SoftBank's Vision Fund and Tiger) and acquisitions (by large US startups (DoorDash, GoPuff) and corporations (Kraft Heinz)).



# GOT A QUESTION? CONTACT US!

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