

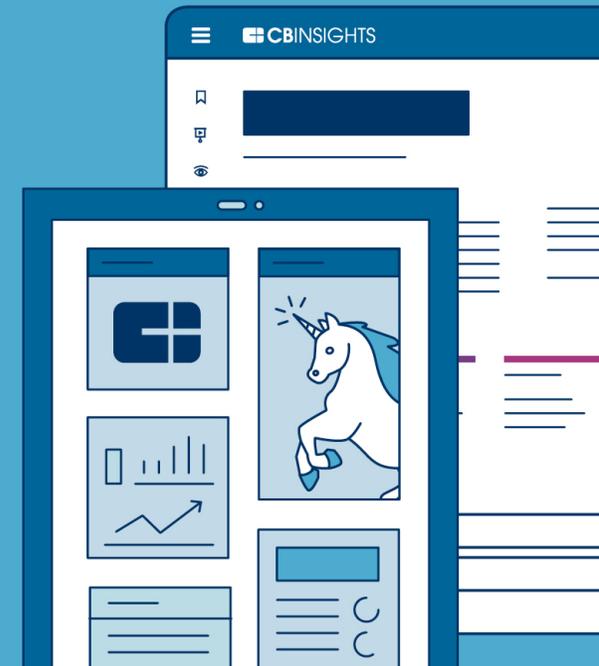
State Of Retail Tech: Ahead In 2020



WHAT IS CB INSIGHTS?

CB Insights is a tech market intelligence platform that analyzes millions of data points on venture capital, startups, patents, partnerships, and news mentions to help you see tomorrow's opportunities, today.

[CLICK HERE TO LEARN MORE](#)



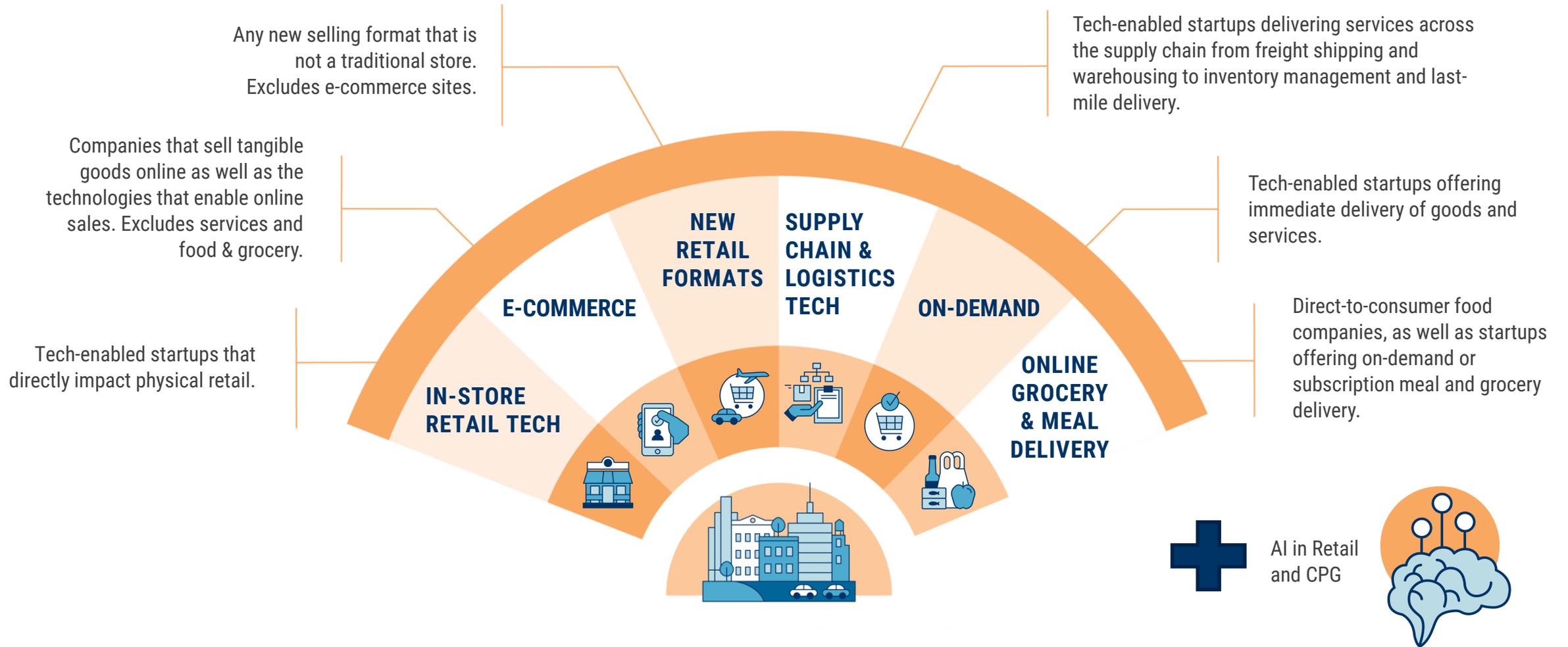
“As a 75-year old company, Rich Products has adapted to a rapidly changing market with the help of CB Insights. We can now quickly gain insights about emerging technologies and trends and make decisions that drive growth.

Kara Burke

Vice President of Innovation and Growth,
Rich Products Corporation



WHAT THIS REPORT COVERS



Contents

6	Summary Of Findings: Retail Tech In 2019	15	2019 Retail Tech Investment Highlights
			In-Store Retail Tech
			E-Commerce
			New Retail Formats
			Supply Chain & Logistics Tech
			On-Demand
			Online Grocery and Meal Delivery
			<i>Spotlight: AI in Retail and CPG</i>
8	Looking Ahead: 2020 Predictions	50	Appendix
			Methodology
10	2019 Retail Tech Investment Trends		
	Annual Deals & Dollars		
	Deal Stage Trends		
	Global Trends		
	2019 Retail Tech Unicorns		

Summary Of Findings: Retail Tech In 2019

While financing slowed overall, key drivers of long-term efficiency and growth are gaining traction.

Funding to retail tech companies slowed in 2019. Financing decreased by 31% to \$45.2B while deals were down by 5% compared to 2018, this dip is largely due to a slide in funding to e-commerce platforms and enabling technologies. Conversely, funding increased to companies driving physical retail productivity, improving supply chain efficiency, and using tech to make retail more personalized.

Retail tech deals shifted toward later stages. Funding is gradually moving beyond early stage deals and toward growth, driven by maturing e-commerce platforms. Seed deal share in 2019 was flat compared to 2018 (35%), but the share of mid-stage (Series B-C) deals in retail tech has grown from 14% of deals in 2015 to over 17% in 2019. Late-stage deals (Series D+) have gone from just over 4.5% of deals in 2015 to 6.5% of deals in 2019.

Companies in Asian countries are winning more deals. North America's share of deals has shrunk over time (from 44% in 2015 to 35% in 2019) as digital retail grows in developing markets, particularly India, where e-commerce is growing into second-tier markets, and China, which is pioneering many forms of retail innovation.

Among the unicorns born in 2019, 31 were retail tech companies. Only one (KK Group) formally has brick-and-mortar locations. But others reach across online and offline retail channels, whether via shopper marketing (Ibotta), autonomous delivery (Nuro), or inventory tracking & store analytics (Trax).

Summary Of Findings: Retail Tech In 2019

Funding is flowing to companies elevating the store experience and driving precision.

In-store retail technology investment grew significantly in 2019. Even though in-store tech deals declined by 21% in 2019 compared to the previous year, dollars invested increased by nearly 60% to \$3.7B, with a median deal size of \$7M. As stores close across retail channels, surviving retailers are recognizing the need to invest in tech that promises to improve productivity and profitability. Autonomous & unmanned checkout was a notable investment focus in 2019.

Funding to e-commerce companies and related technologies declined in 2019. Deals to e-commerce companies last year were down by 7% compared to 2018 and dollars invested declined 8% to \$19.7B as the boom in direct-to-consumer online businesses slowed.

Deals to new retail formats also slowed in 2019. While the number of deals going to new retail formats saw an annual decline of 46% last year, dollars invested only slipped by 6% to \$538M. Brands and retailers continue to experiment with new ways to reach consumers, who are growing accustomed to more omnipresent commerce.

Funding to supply chain & logistics tech continued to rise. Investment in supply chain and logistics tech increased in 2019 by 14%, compared to the year prior, to reach \$15.7B. The number of deals over the same period also rose by about 14%. Consumer demand for speed coupled with retailers' desire for profitability are driving continued advances in reverse logistics, inventory management, and unmanned delivery.

Deals to on-demand businesses slipped slightly. Funding to on-demand retail tech companies declined by 27% last year, compared to 2018, to \$13.6B – though total deals only decreased by 9%. Activity clustered among established players and smaller entrants specializing in serving narrow customer bases.

Online grocery and broader food delivery deals declined. Following a spike in funding in 2018, last year's funding to online grocery and meal delivery companies declined 21% to \$6.2B. Deals also fell by 21% compared to the previous year. The D2C consumables landscape, including food and meal delivery, remains crowded.

Funding for artificial intelligence (AI) companies working across retail tech functions accelerated in 2019. AI retail tech deals increased at an annual rate of 13% as funding grew by 65% to reach a year-end total of \$1.5B. AI is driving personalization for consumers in stores as well as online. Meanwhile, retailers are turning to machine learning and computer vision to help boost efficiency.

Looking Ahead: 2020 Predictions

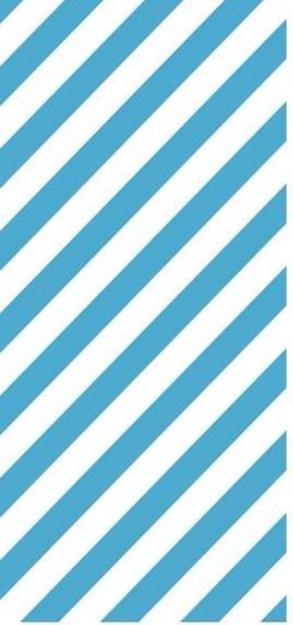
Considerations for retail tech in 2020.

1. **Smarter stores:** Computer vision and AI will fuel better shopper and inventory tracking, as well as enabling more cashier-less checkouts. The power for retailers and brands to process consumer insights will be crucial and boosting supply chain speed will become a priority.
2. **Blue light specials 2.0:** Look for more electronic shelf tags and mobile shopper analytics to get the right deals to the right shoppers, driving loyalty and profitability. This trend will require a deeper understanding among brands and retailers of how price changes impact basket sales.
3. **Just for you:** AI will enable more personalized product recommendations, while brands will develop on-demand manufacturing. Some retailers and brands will “know” consumers via facial recognition. As a result, consumers will expect even more relevant experiences.
4. **Level-up shopping:** Retailers will deploy augmented and virtual reality across platforms to enable try-on, product interaction, and customer service. Watch for retailers to hire e-game developers to get their content up to speed.
5. **Retail everywhere:** Car commerce, smart vending, and online-to-offline (O2O) pop-ups will multiply. It will become crucial for retailers to expand their understanding of the customer journey to purchase.

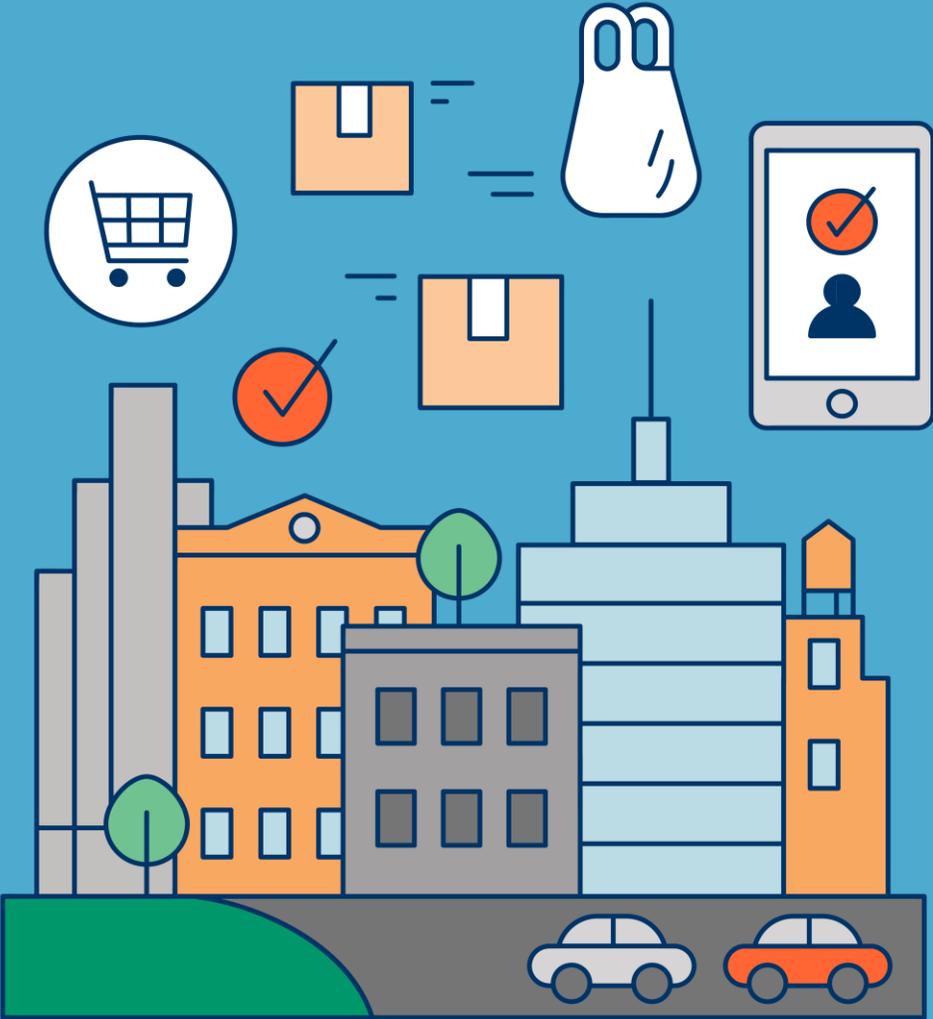
Looking Ahead: 2020 Predictions

Considerations for retail tech in 2020.

6. **Hyper-niche marketplaces:** Marketplaces with more narrow missions will tailor experiences and assortments, with the aim of boosting productivity and profitability. In the move away from “mass,” brands will need to establish where their products fit.
7. **Rise of the robots, part 1:** Automation and robots will speed up fulfillment in the store back room and boost efficiency on the floor. Retailers and manufacturers will need to carefully align supply chain timing with profitability goals and technology requirements.
8. **Rise of the robots, part 2:** Outside the store, expect more robotic last-mile fulfillment tests in urban areas. Brands and retailers should seek to understand how fulfillment modes fit different trip types.
9. **Return to sender:** More stores will function as return depots, and startups will promise that they can reduce returns. Manufacturers and retailers must work to better educate shoppers to make returns less likely. It will also be crucial to build more efficient reverse supply chains.
10. **Special deliveries:** D2C food will remain competitive as companies in the space, as well as meal delivery services, narrow their audiences.

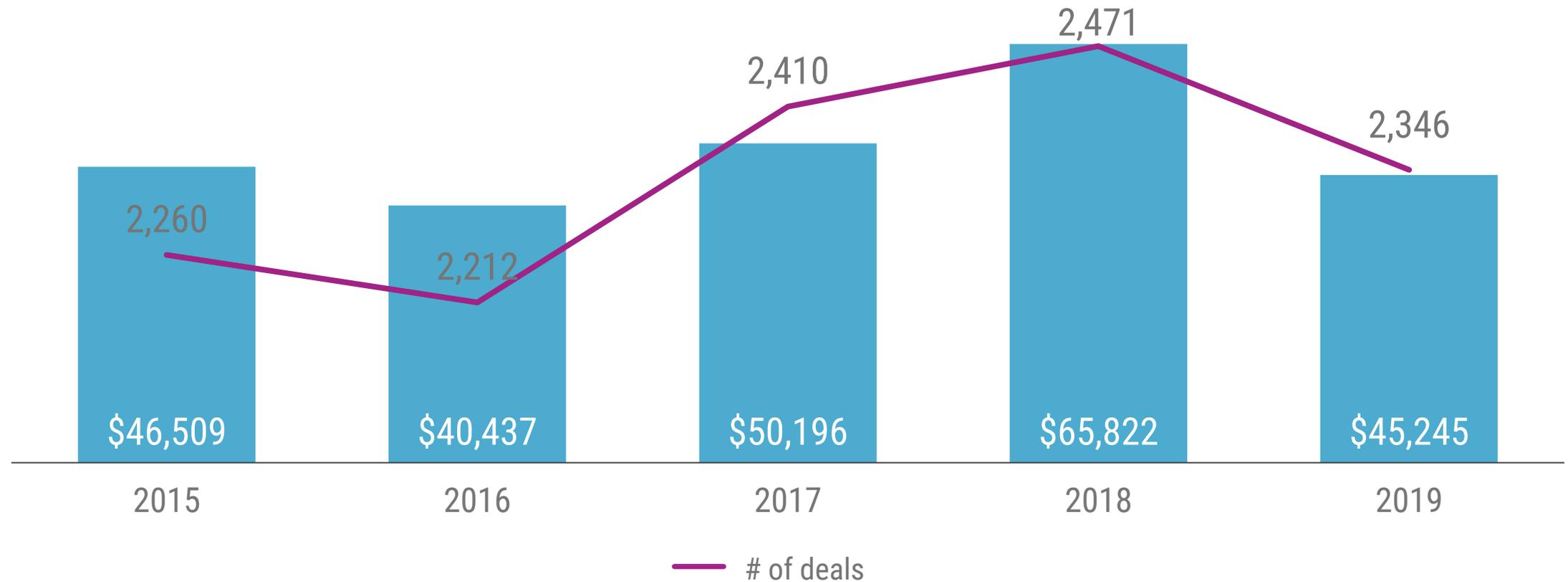


2019 Retail Tech Investment Trends



Deal count and dollars dip in 2019

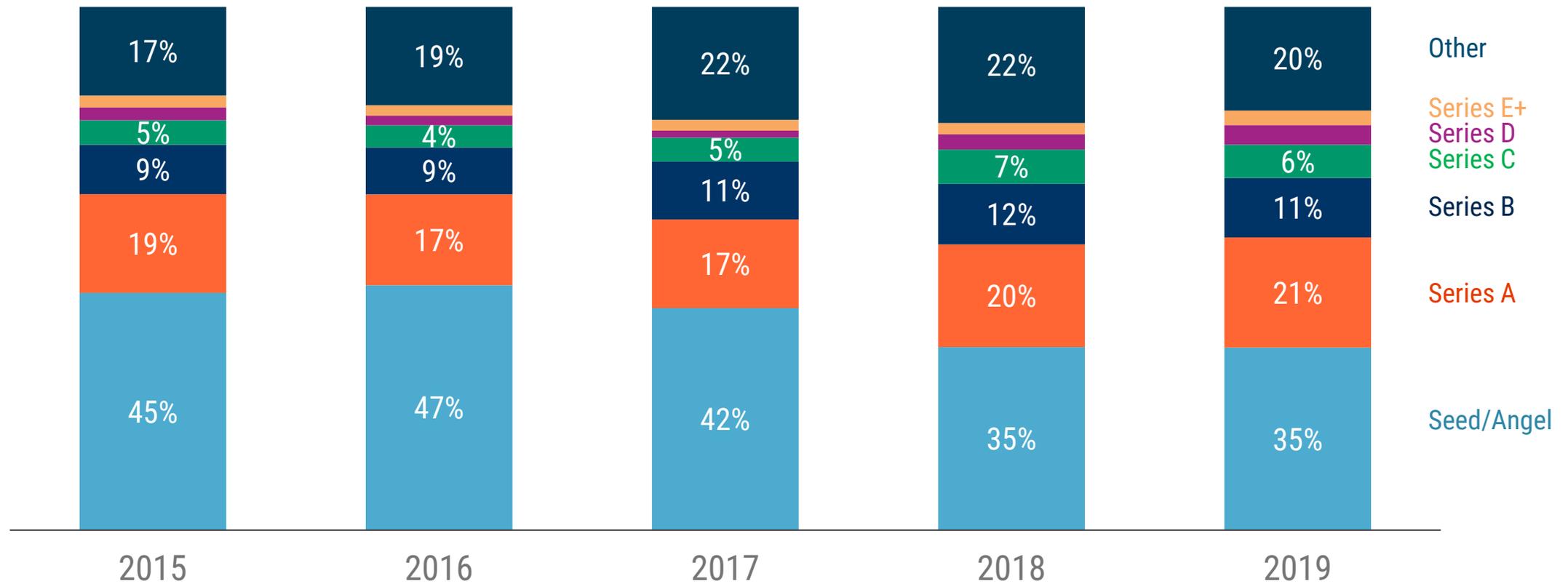
Annual global retail tech deals and financing (\$M)



DEALS FOCUS ON GROWTH

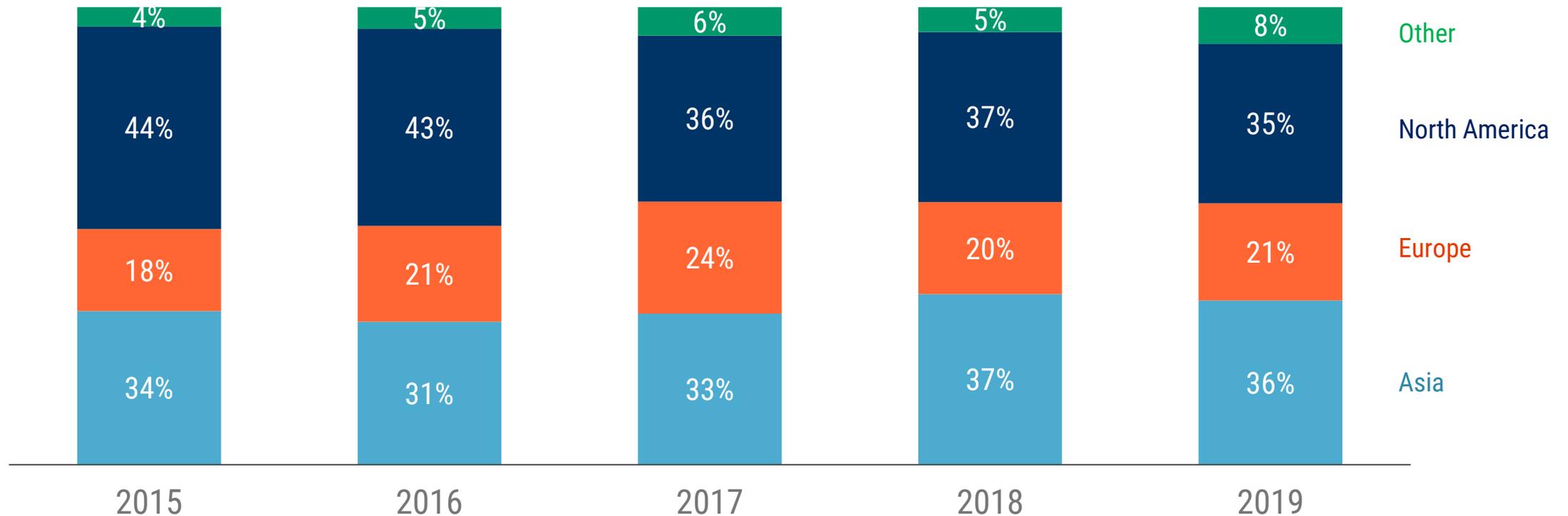
Funding shifts toward later-stage deals

Share of annual global retail tech deals by funding stage



Asia's retail tech deal share pulls ahead of North America

Share of annual global retail tech deals by region



Other category includes Africa, Australia, Middle East, and South America.

Source: CB Insights

31 retail tech unicorns were born in 2019

E-commerce

Resale marketplace

stockX Vinted 再 VROOM

D2C

AWAY Casper Glossier.
hims lenskart.com

Small business marketplace

ACV ezcater FAIRE

Grove 妙手医生 MUSINSA
COLLABORATIVE www.miaoshou.com

RENT THE RUNWAY



Store-based retail

KiK KK馆

Retail enablement

Delivery

bigbasket DELHIVERY
Glovo Loggi ПУГО
壹米滴答

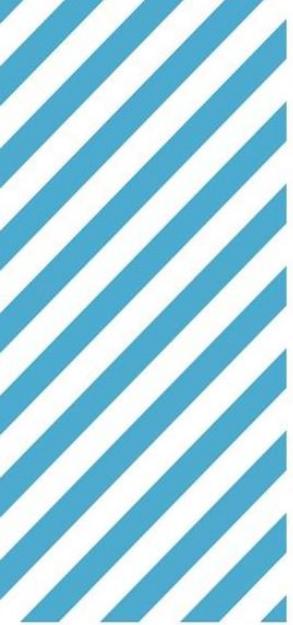
Shopper rewards & payments solutions

ibotta MARQETA nuvei
riskified

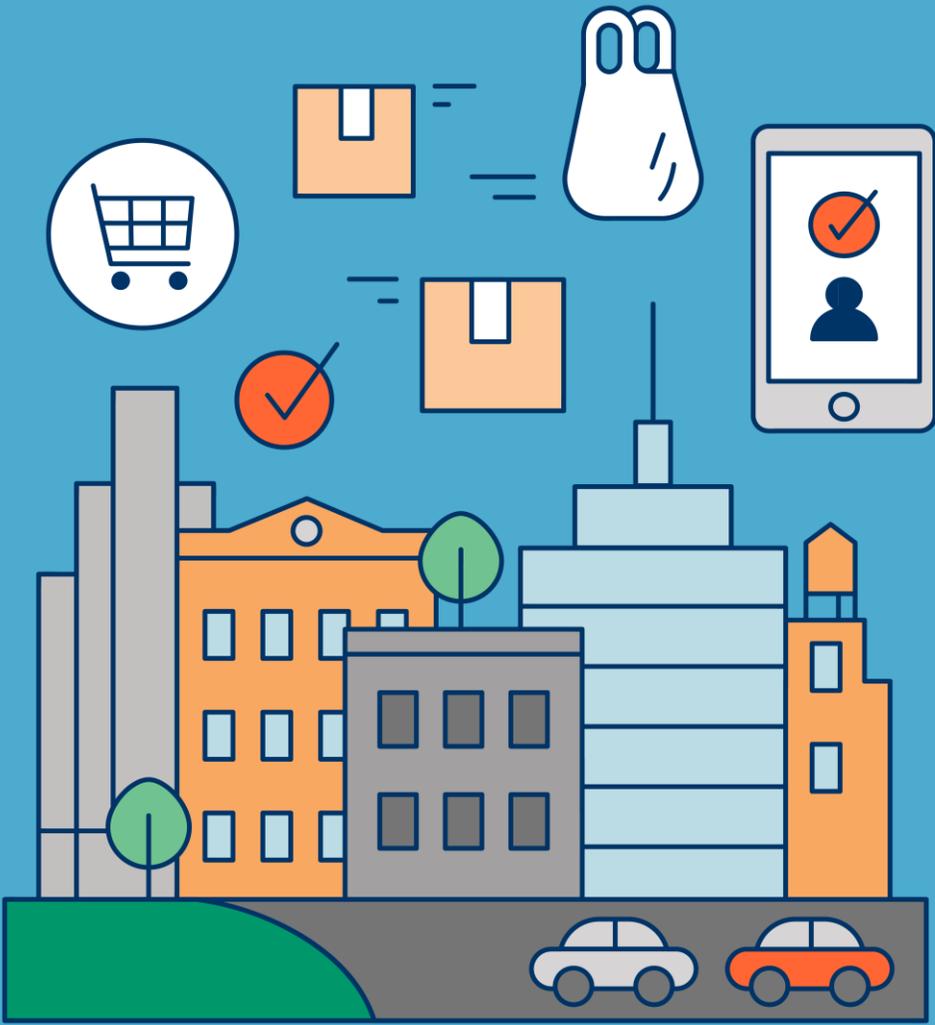
Cross-border payments

EBANX Rapyd
checkout.com

trax

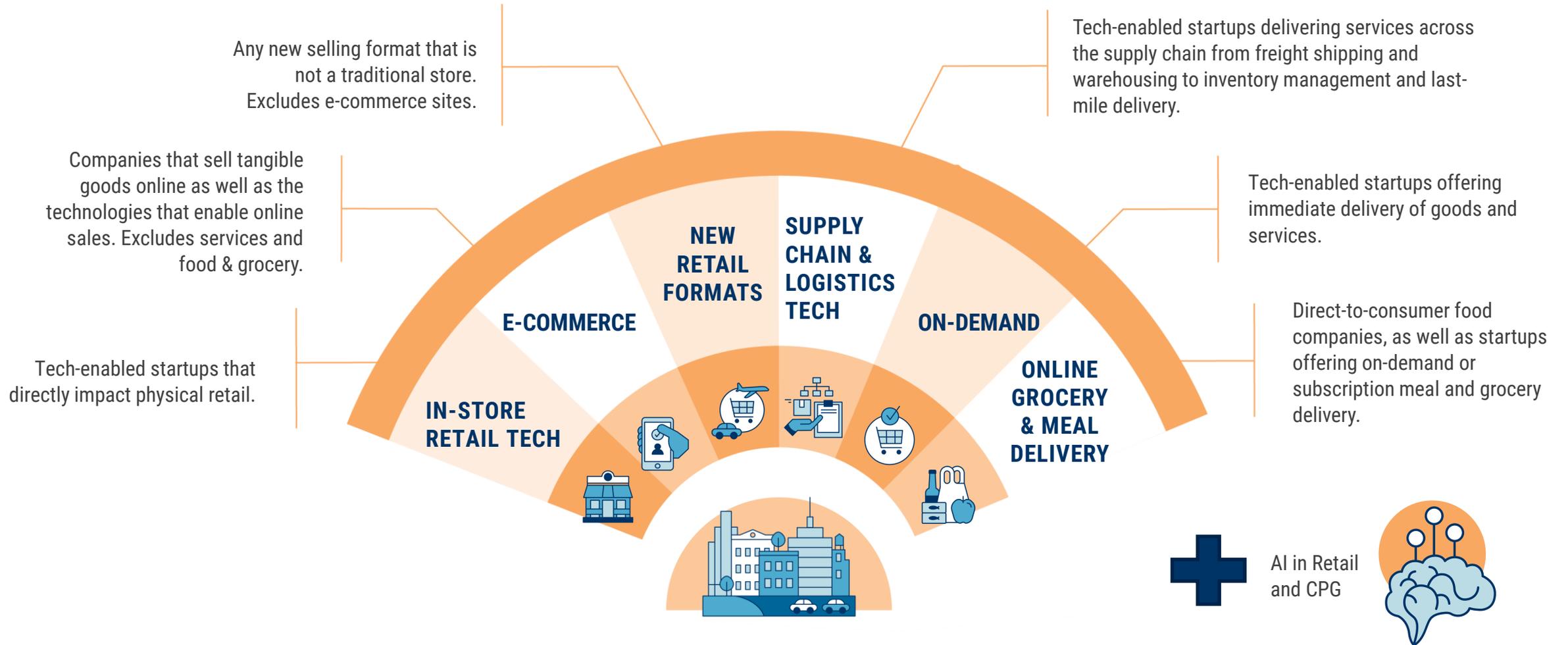


2019 Retail Tech Investment Highlights

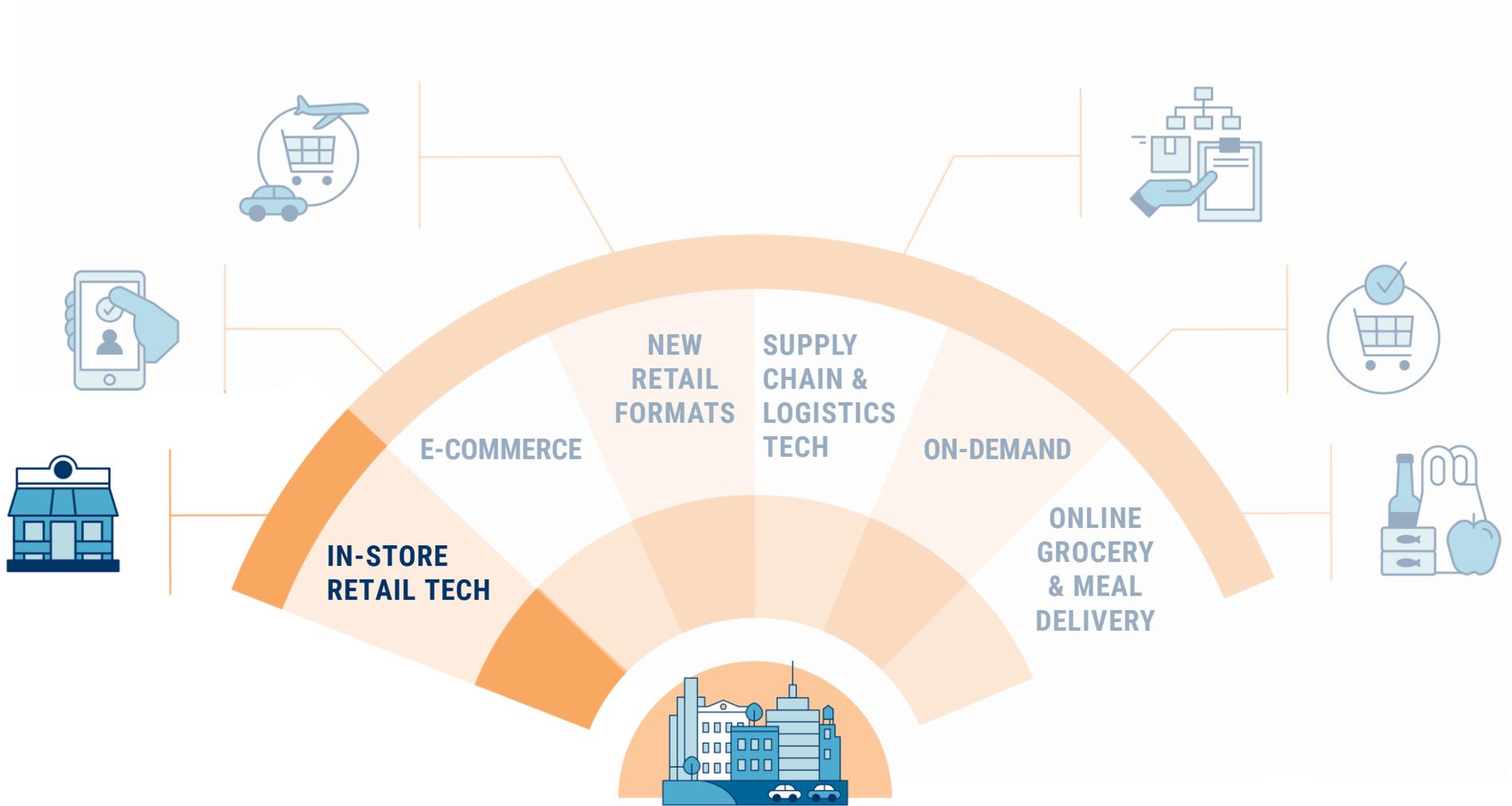


STATE OF RETAIL TECH: AHEAD IN 2020

Highlights companies funded in 2019 that represent significant retail trends.

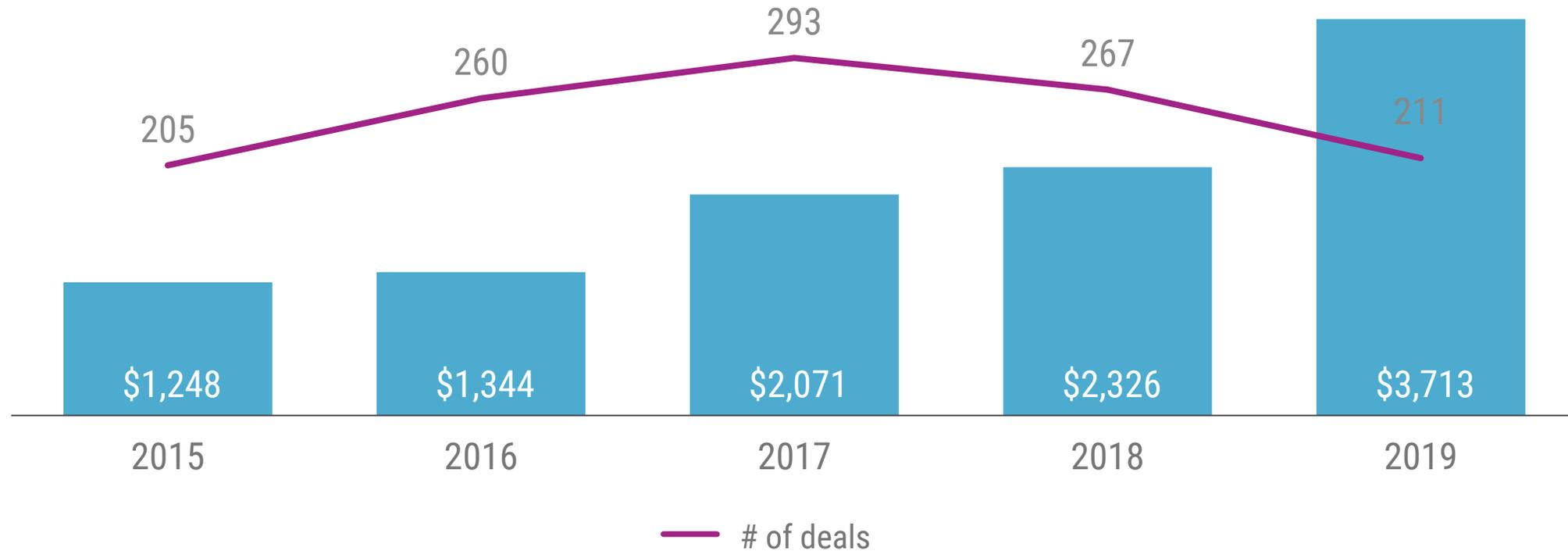


IN-STORE RETAIL TECH



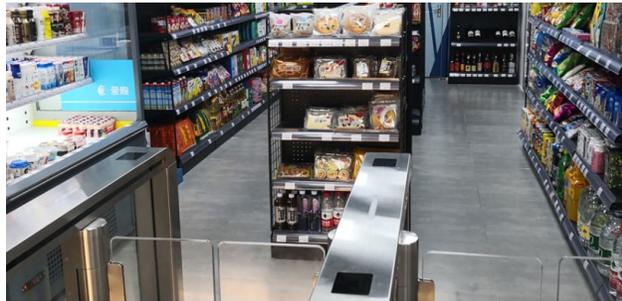
Dollars to in-store retail tech reaches \$3.7B

Annual in-store retail tech company deals and financing (\$M), 2015-2019



HIGHLIGHT #1: THE AMAZON GO EFFECT

Autonomous checkout picks up speed



AiFi

Total disclosed funding: \$15M

2019 funding stages: Series A

Deployment: Ahold Delhaize's HQ "NanoStore," Amsterdam's Schiphol Airport, autonomous convenience stores in Campbell, CA, and Shanghai



Grabango

Total disclosed funding: \$12M

2019 funding stage: Series A

Deployment: Pilot at Giant Eagle supermarket



Zippin

Total disclosed funding: \$15M

2019 funding stage: Series A

Deployment: Checkout-free stores in San Francisco and at Golden 1 Center (the Sacramento Kings' arena)

HIGHLIGHT #2: INVENTORY MANAGEMENT

New solutions for in-store inventory management



Pensa Systems

Total disclosed funding: \$17M

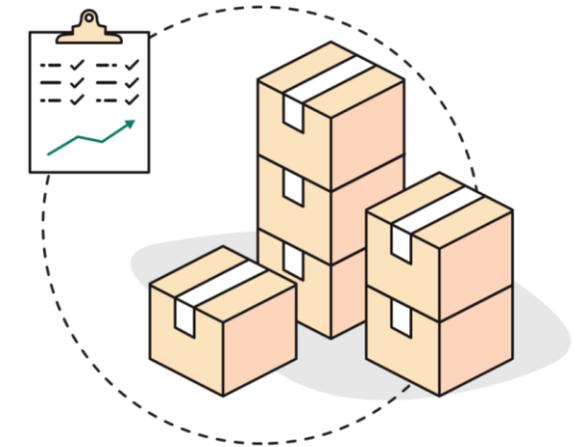
2019 funding stage: Seed

Pensa developed an indoor flying drone that uses cameras to provide live inventory visibility for brands and retailers.



Inventory planning solution

Take control of your inventory with RELEX's inventory planning software. Our solutions cut the time you spend on order placements, reduces inventory levels, and maintains 99+% availability.



RELEX Solutions

Total disclosed funding: \$224M

2019 funding stage: Growth Equity

Relex offers AI-powered inventory planning software to retailers that aims to minimize inventory and help optimize sales.



HIGHLIGHT #3: STORE ANALYTICS

Store productivity measurement gets more precise

trax



Total disclosed funding: \$373M

2019 funding stage: Series D

Trax uses computer vision to offer a broad range of services to help retailers run their stores (including store execution monitoring and inventory tracking). In 2019, along with hitting unicorn status, Trax acquired **Planorama**, a France-based image recognition company focused on retail.



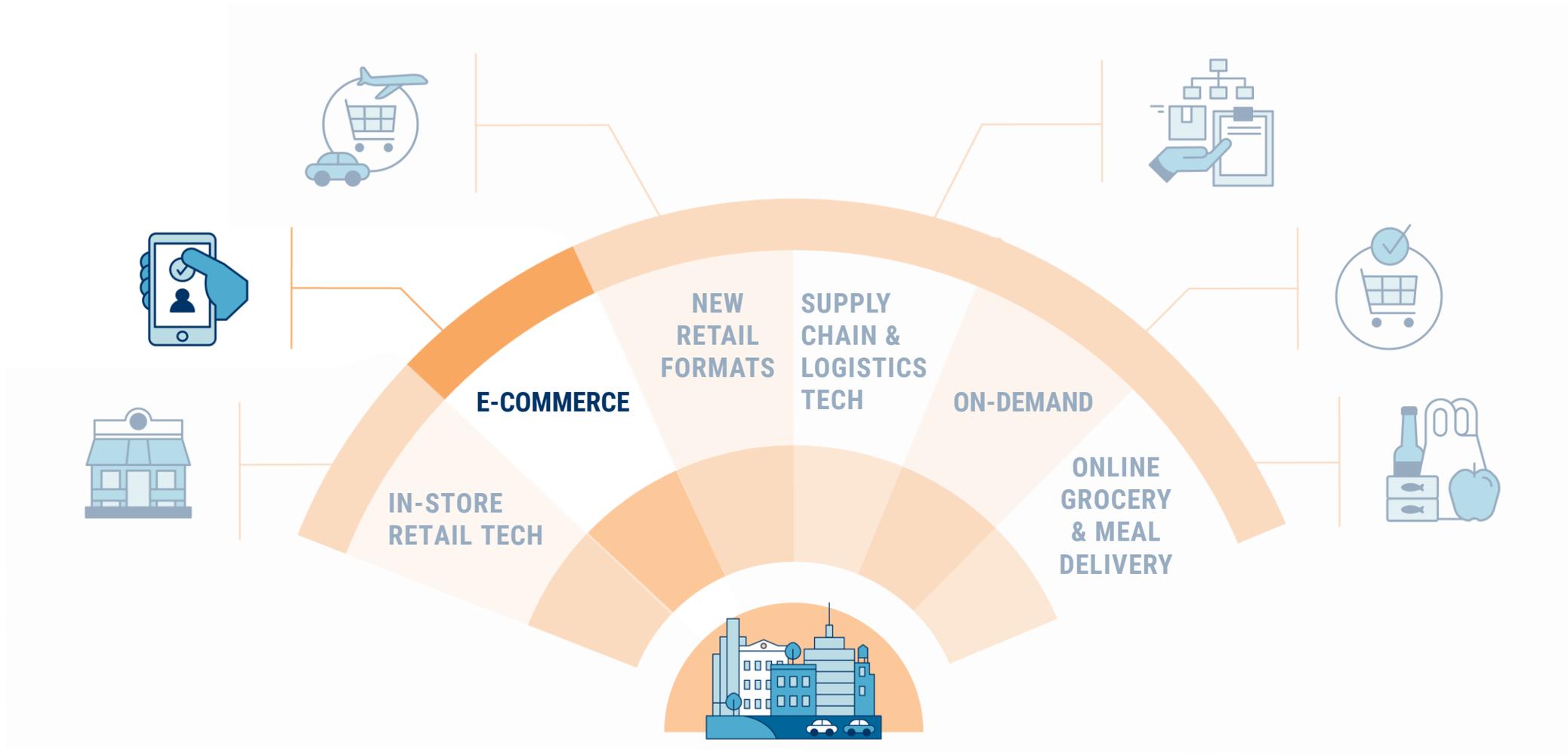
SKUPOS

Total disclosed funding: \$36M

2019 funding stage: Series B

SKUPOS' analytics platform caters specifically to the growing convenience store channel. The company partners with stores, distributors, and brands to provide real-time sales analytics, demand forecasts, and consumer insights for personalized promotions.

E-COMMERCE



E-commerce funding levels off in 2019

Annual e-commerce company deals and financing (\$M), 2015-2019



HIGHLIGHT #1: RESALE

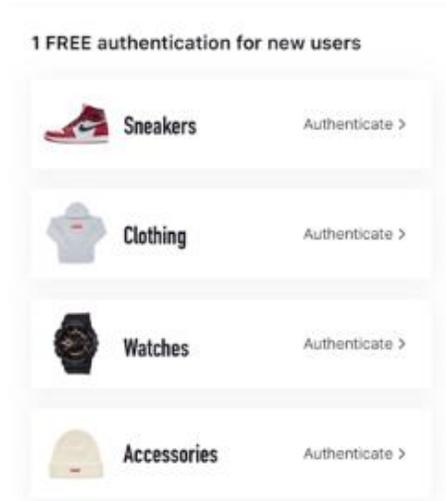
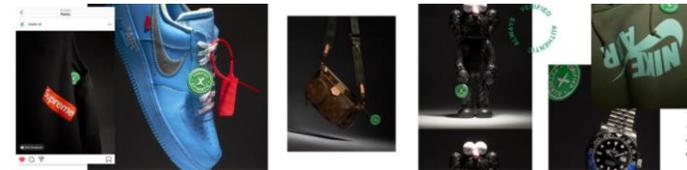
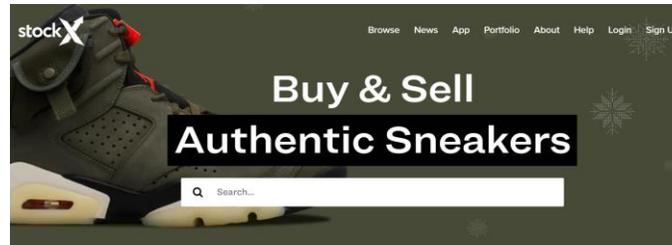
StockX capitalizes on specialized assortment, social selling



Total disclosed funding: \$160M

2019 funding stage: Series C

Detroit's **StockX** was one of two high-end sneaker resale marketplaces that hit unicorn status in 2019; the other was **Poizon**, based in Shanghai. Resale marketplaces continue to expand and evolve as consumers look for unique products as well as more sustainable retail options.



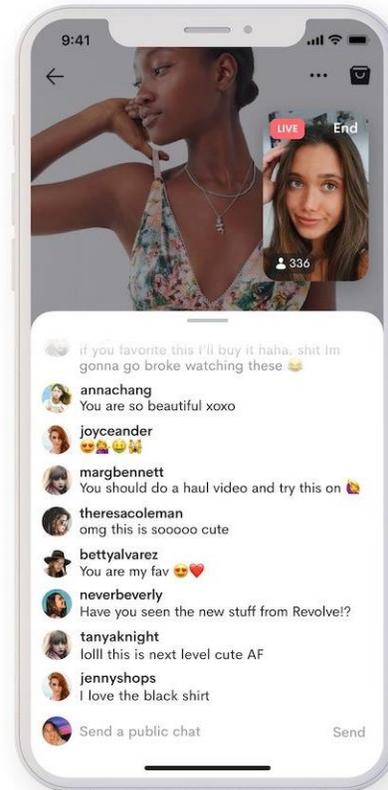
HIGHLIGHT #2: LIVESTREAM COMMERCE

Livestream commerce goes global

Total disclosed funding:
\$20M

2019 funding stage: Series A

ShopShops connects shoppers in China with brands and retailers in the US. It hosts livestream visits to stores that viewers can then shop directly on their phones. The service capitalizes on the expansion of livestream shopping in China and its potential in Western countries.



Total disclosed funding: \$19M

2019 funding stage: Series B

Dote targets young shoppers with its assortment of apparel, beauty, and personal care. It features live video “shopping parties” where influencers stream their shopping trips, allowing other customers to comment and ask questions along the way.

HIGHLIGHT #3: CROSS-BORDER E-COMMERCE ENABLEMENT

Payment companies streamline global e-commerce expansion

The logo for Rapyd, featuring the word "Rapyd" in a bold, italicized, black sans-serif font.

Total disclosed funding: \$175M

2019 funding stages: Series B, Series C

London-based **Rapyd** is a “fintech-as-a-service” platform that e-commerce companies can use to consolidate their global payment systems and accept local payment methods. Demand for such services will likely increase as e-commerce reaches more consumers across borders. Rapyd became a unicorn in 2019.

The logo for Ebanx, featuring a blue square icon with a white triangle pointing right, followed by the word "EBANX" in a bold, blue, sans-serif font.

Total disclosed funding: \$30M

2019 funding stage: N/A

Ebanx, based in Brazil, caters to businesses looking to expand across Latin America. Its services include access to payment methods, payment processing, fraud tolerance, and more. Ebanx also reached unicorn status in 2019.

HIGHLIGHT #4: AI IN RETAIL

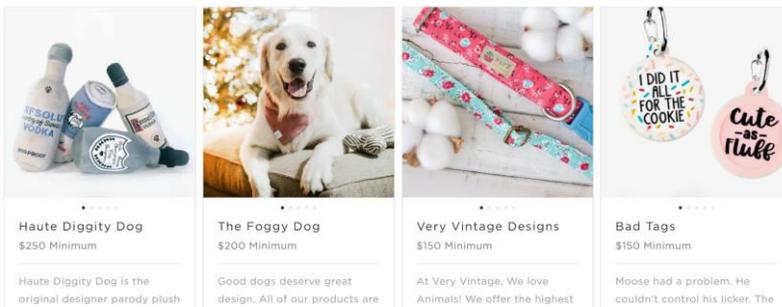
AI could make marketplaces smarter

F A I R E

Wholesale Pet Supplies

Wholesale Dog, Bird, and Grooming Supplies

233 Results



Total disclosed funding: \$266M

2019 funding stage: Series D

Faire is a wholesale marketplace that caters to small retailers by offering distinctive products and terms that reduce the risk of trying something new (e.g. free returns of unsold inventory). The company uses AI to help forecast inventory efficiently. The platform focuses on eco-friendly and handmade products, as well as products made in the US. Faire reached unicorn status in 2019.

THE YES

Shopping Made Genius

Total disclosed funding: \$30M

2019 funding stage: Series A

The Yes' has revealed few details about its new retail platform, except that it will use AI to deliver product recommendations. Julie Bornstein, former COO at Stitch Fix and previously an exec at Sephora, Urban Outfitters, and Nordstrom, founded the site with Amit Aggarwal, an engineer formerly of Bloomreach and Groupon. The platform is set to launch in the first half of 2020.

HIGHLIGHT #5: CUSTOMIZED REPLENISHMENT

Subscription services move beyond recommendations to one-on-one connection



For the love
of dogs.

Total disclosed funding: \$49M

2019 funding stage: Series B

Farmer's Dog sells human-grade dog food by subscription. Owners build a profile for their dogs that is used to create a meal plan with personalized contents and portions.

Your Personalized Serum, Created for
You Each Month

GET STARTED NOW →

Atolla

Total disclosed funding: N/A

Funding stage: N/A

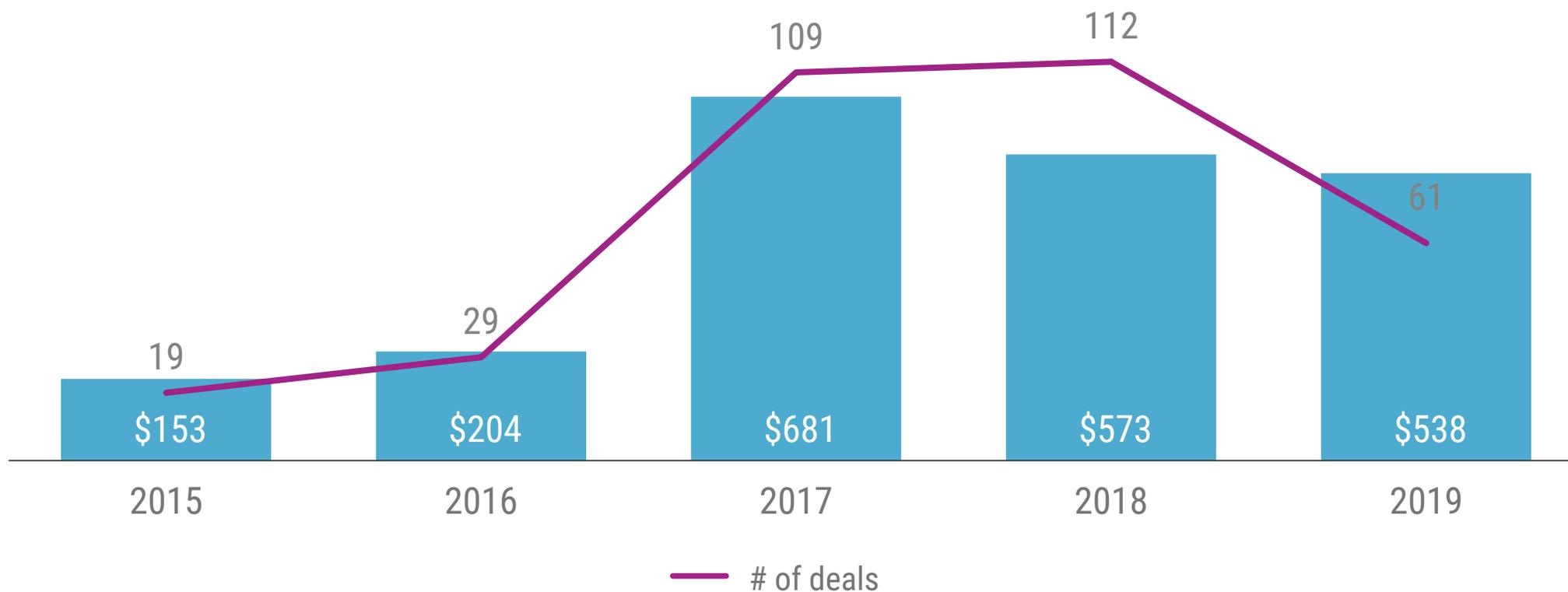
Atolla uses a home skin test kit and AI to formulate personalized skin serums for customers. Users get a new skin analysis kit every month to track their skin's changes.

NEW RETAIL FORMATS



Investment in new retail formats slows

Annual new retail formats company deals and financing (\$M), 2015-2019



HIGHLIGHT #1: ENGAGING RETAIL EXPERIENCES

New physical showcases for brands and discovery



Welcome to b8ta Chicago.

b8ta is located in The Shops at North Bridge in the famed Magnificent Mile. Take a short detour from Chicago's famed attractions like the Chicago Riverwalk or Millennium Park to browse and try breakthrough innovations.

b8ta

Total disclosed funding: \$90M

2019 funding stages: Series B, Incubator/Accelerator, Series C

B8ta uses its “retail-as-a-service” platform to showcase brands and new technologies in physical retail. The company has 24 of its own stores as well as a lifestyle store called Forum. It also runs the reincarnated, interactive Toys R Us stores, has a store-within-a-store partnership with Macy’s, and launched a new platform called Ark Marketplace that retailers can use to operate their own retail-as-a-service platforms in their stores.



SHOWFIELDS

Total disclosed funding: \$9M

2019 funding stage: Seed

Showfields’ brick-and-mortar store offers space to online, direct-to-consumer brands. Its physical presence includes “House of Showfields,” an “immersive theater experience” to promote retail and various brands.

HIGHLIGHT #2: O2O COMMERCE

KK Group aligns its assortment with shoppers' preferences



Total disclosed funding: \$173M

2019 funding stage: Series D

KK Group, an O2O (online-to-offline) retailer based in Guangdong, China, reached unicorn status in 2019. The retailer offers a variety of products imported from around the world and regularly changes its assortment based on demand.



HIGHLIGHT #3: MOBILE POINTS OF SALE

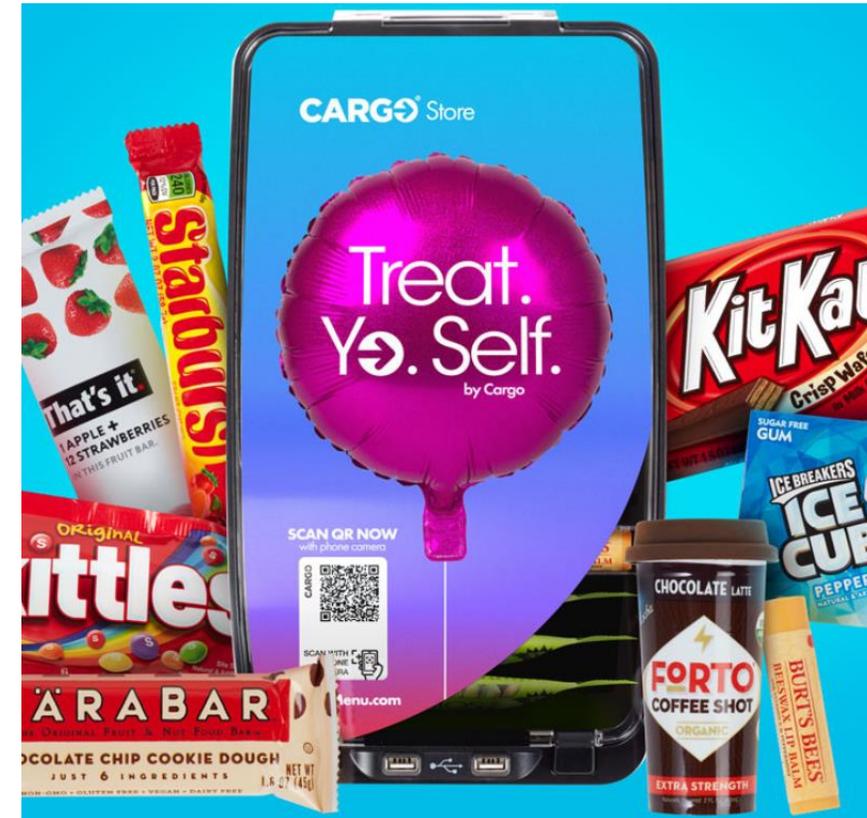
Cargo sets the stage for in-transit vending

Meet the rideshopper.

Total disclosed funding: \$37M

2019 funding stage: N/A

Using the **Cargo** Box, ride-hailing drivers can sell a convenience store-style assortment of goods to passengers while they ride. Cargo offers brands the opportunity for sampling and to gain consumer insights.

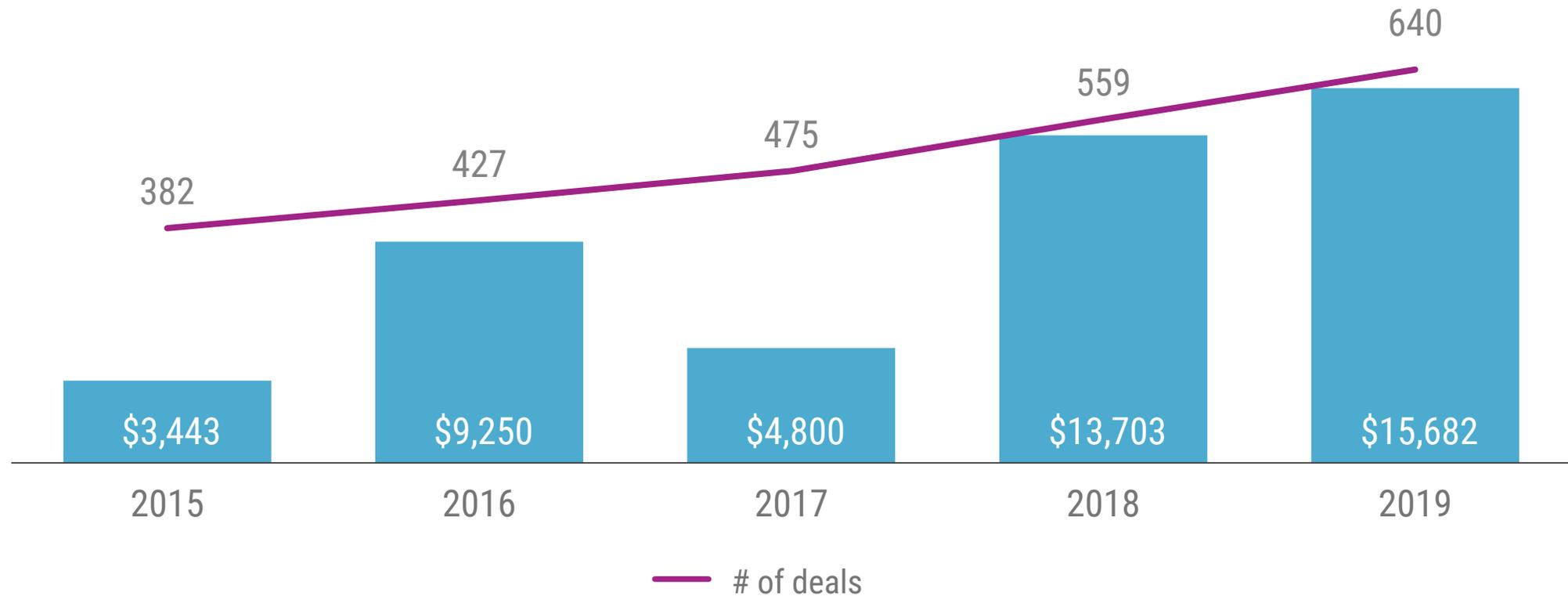


SUPPLY CHAIN & LOGISTICS TECH



Funding takes off in fulfillment innovation

Annual supply chain and logistics tech company deals and financing (\$M), 2015-2019



HIGHLIGHT #1: MICRO-FULFILLMENT

Takeoff brings robot fulfillment to the store



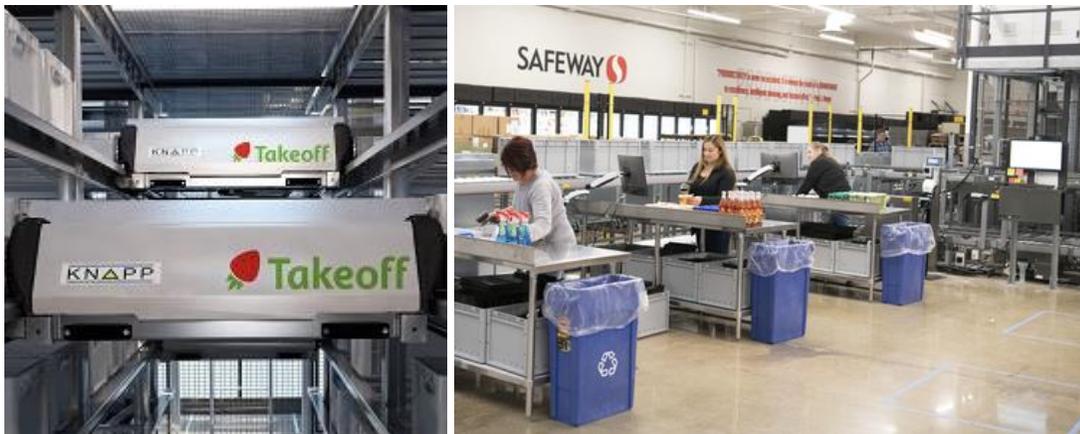
Total disclosed funding: \$64M

2019 funding stages: Series B, Series C

Takeoff Technologies creates tech-driven micro-fulfillment centers that partner with retailers to help fulfill online grocery orders quickly. Takeoff has partnered with retailers including Alhold Dehaize and Albertsons.

By squeezing warehouses into dense urban areas and cutting down the distance to customers, retailers can reduce the cost of last-mile delivery.

Takeoff is one of several startups, including Fabric and Attabotics, that are offering micro-fulfillment technology that could be placed inside existing stores.



HIGHLIGHT #2: AUTONOMOUS DELIVERY

Autonomous delivery startups gain investor traction



Nuro

Total disclosed funding: \$1B

2019 funding stage: Series B

The startup develops autonomous delivery carts that transport goods like groceries. It has partnered with Kroger and Walmart.



Neolix

Total disclosed funding: \$15M

2019 funding stage: Series A

Neolix provides autonomous mobile vending machines where customers can purchase items via mobile phone. It deployed vehicles in China and partnered with UAE-based online retailer Noon.



Manna

Total disclosed funding: \$5M

2019 funding stage: Seed

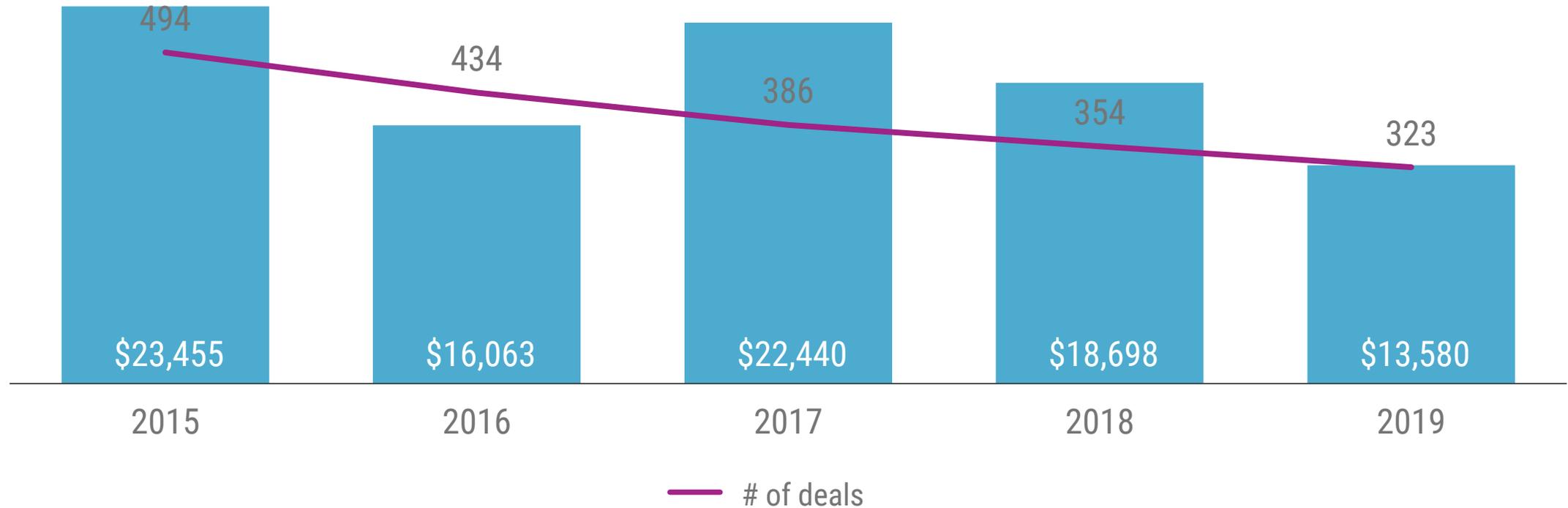
The company operates a drone delivery service that it plans to launch in Europe in 2020. It is partnering with restaurant-ordering platform Flipdish.

ON-DEMAND



On-demand funding slows

Annual on-demand company deals and financing (\$M), 2015-2019



HIGHLIGHT #1: ON-DEMAND RIDE-HAILING

Large on-demand ride-hailing platforms raise mega-rounds

In addition to the IPOs of Uber and Lyft, major international ride-hailing apps raised billions in funding.



Headquarters: Singapore

Largest disclosed round of 2019:

Series H // \$1.5B // Q1'19

Select Investor: SoftBank Group



Headquarters: Indonesia

Largest disclosed round of 2019:

Series F // \$1B // Q1'19

Select Investor: Tencent Holdings



Headquarters: China

Largest disclosed round of 2019:

Corporate Minority // \$600M // Q3'19

Select Investor: Toyota

HIGHLIGHT #2: ON-DEMAND SPECIALTY SERVICES

Global on-demand specialty services win early-stage deals

Emerging on-demand players are exploring categories such as waste collection, pet care, and women-only ride-hailing. These startups are gaining investor traction across Europe, Africa, and South America.



Headquarters: Brazil

Service: Women-only ride-hailing

Latest round: Angel // \$0.6M // Q4'19



Headquarters: Egypt

Service: Petcare at home

Latest round: Seed // Q4'19



Headquarters: France

Service: On-demand waste collection

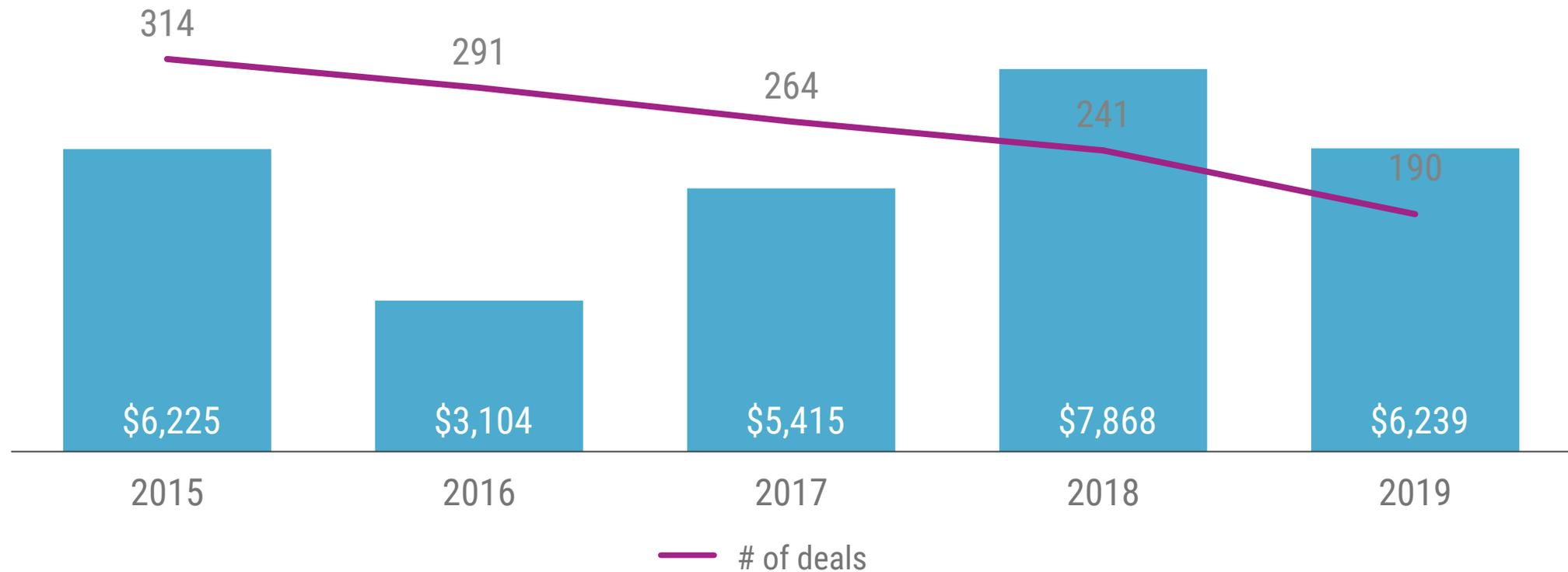
Latest round: Seed // \$2M // Q4'19

GROCERY & MEAL DELIVERY



Online food investment declines

Annual online grocery and meal delivery company deals and financing (\$M), 2015-2019



HIGHLIGHT #1: VIRTUAL KITCHENS

Virtual kitchens take hold



Total disclosed funding: \$1.5B

2019 funding stage: Series G



UK-based **Deliveroo** manages 2,000 online-only restaurant brands from 1,200 restaurant partners through its network of delivery-only kitchens, dubbed “Deliveroo Editions.” While the food-delivery giant has been experimenting with “virtual kitchens” since 2017, other players have also jumped on board. These include **Uber Eats**, **Grab**, **Virtual Kitchen Co**, and more.

HIGHLIGHT #2: TAILORED FOOD DELIVERY

Food delivery makes a variety of diets more accessible



simple feast

Total disclosed funding: \$45M

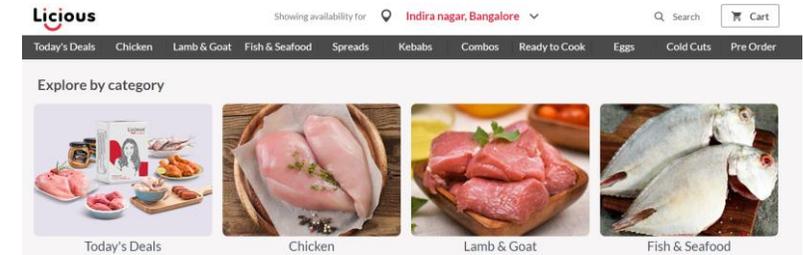
2019 funding stages: Angel, Series B

Denmark-based **Simple Feast** offers subscription-based vegetarian and vegan meals. The organic meals are delivered semi-cooked and are intended to need around 10 minutes of at-home preparation.

Simple Feast ships its meals in packaging without plastic or Styrofoam. Investors include Balderton Capital, 14W, and byFounders, among others.

Simple Feast is representative of a larger shift toward sustainability taking place across food, grocery, and delivery.

Licious



Total disclosed funding: \$94M

2019 funding stage: Series E

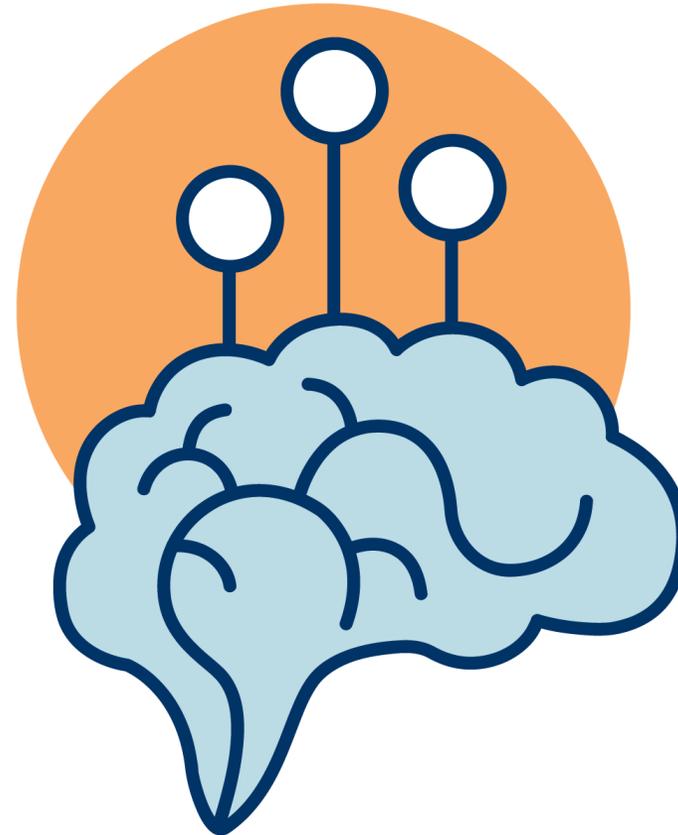
Licious is expanding access to fresh protein in India by offering an end-to-end, direct-to-consumer meat and seafood delivery platform. Selling products like chicken, fish, lamb, and goat, the startup focuses on procuring quality meat.

Licious owns its entire supply chain, allowing the startup to better control variables like the temperature of its products during processing and shipping.

Spotlight: Artificial Intelligence In Retail & CPG

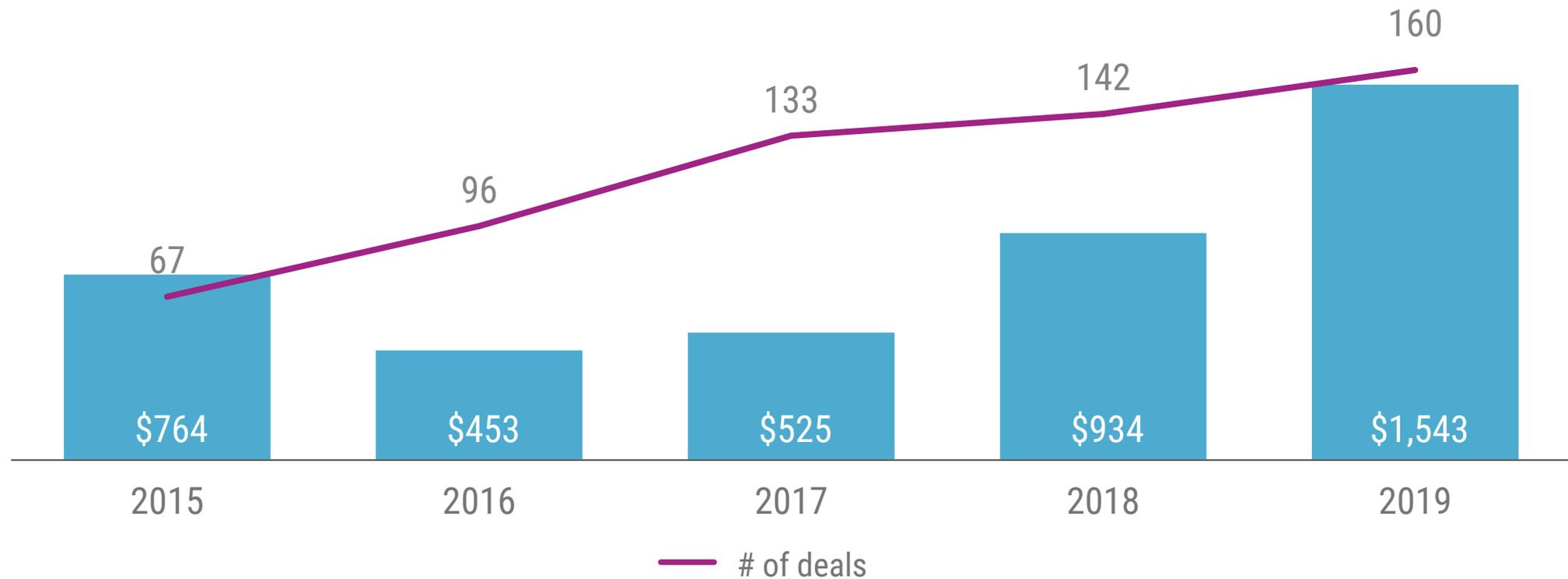
Key functions among companies that use AI across retail and CPG include:

- Merchandising
- Inventory management
- Checkout-free store tech
- Point-of-sale shrinkage monitoring
- Omnichannel marketing
- Retail supply chain optimization
- E-commerce search



Funding for retail and CPG AI accelerates

Annual retail and CPG AI company deals and financing (\$M), 2015-2019

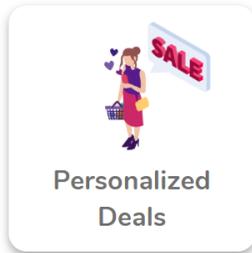


HIGHLIGHT #1: PERSONALIZED MARKETING

Personalizing pricing to tailor the experience & drive profits



How Swiftly Helps Your Store



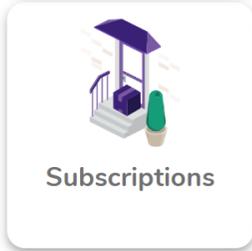
Personalized Deals



Digital Loyalty



SwiftLane App Checkout



Subscriptions

Total disclosed funding:
\$16M

2019 funding stage: Seed

Swiftly offers supermarkets an app that uses machine learning to create personalized deals and coupons for shoppers. The app, which bills itself as an “operating system for grocery stores,” also offers mobile checkout capabilities that integrate AI and computer vision to monitor shrink*.

*“Shrink” refers to shoplifting, other forms of theft, or other inventory losses in-store.



Punchh Acquire

Supercharge your customer acquisition by optimizing omnichannel marketing and analytics



Punchh Offers

Get a competitive edge, with an end-to-end, consolidated view of the entire offer lifecycle – in real-time



Punchh Loyalty

Build customer lifetime value with all-inclusive programs that turn brand loyalists into superfans

Total disclosed funding: \$63M

2019 funding stage: Series C

Punchh is a marketing and loyalty company that uses AI to target key customers with rewards to help elevate online and in-store conversion.

HIGHLIGHT #2: IMAGE RECOGNITION

Image recognition graduates from recommendations to forecasts



Optimize product assortment

Detect trends and optimize assortment to transform your products into long-lasting successes



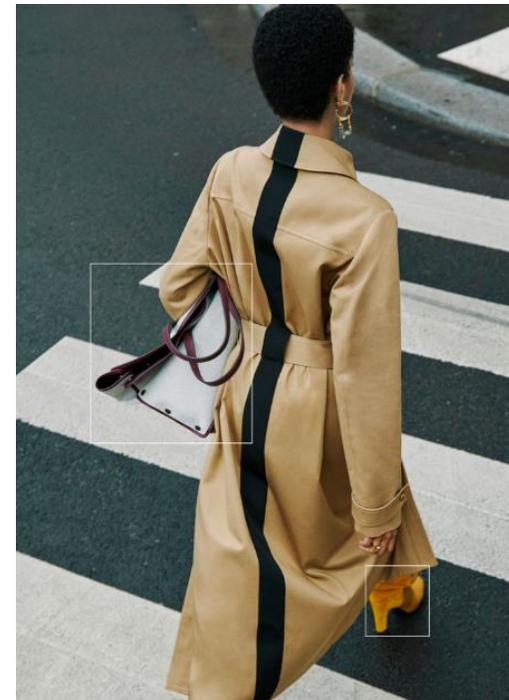
Forecast product quantities

Leverage real-time and future market signals to forecast quantities more accurately

Total disclosed funding: \$6M

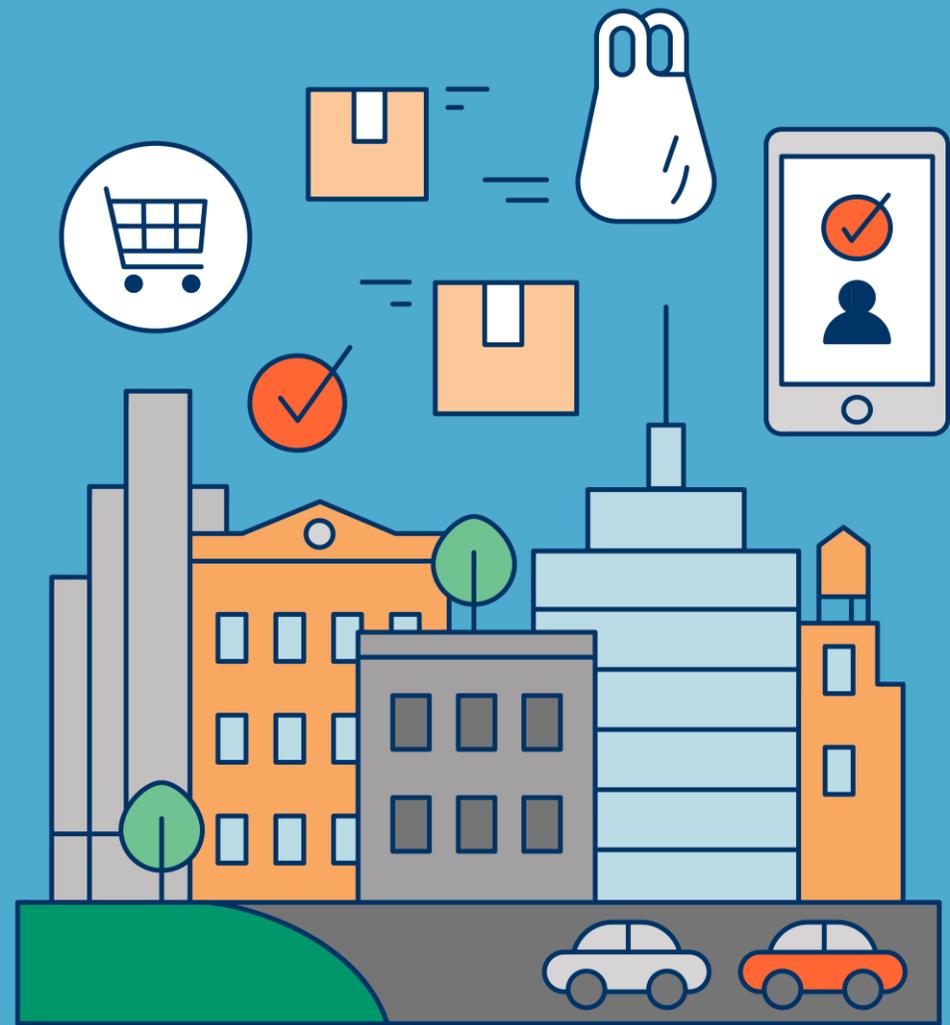
2019 funding stages: Incubator/Accelerator, Seed, Series A

Heuritech, based in Paris, uses image recognition technology to track fashion trends on social media. Brands can then use the data to forecast their assortments.





Appendix



Methodology

CB Insights encourages you to review the methodology and definitions employed to better understand the numbers presented in this report. If you have any questions about the definitions or methodological principles used, we encourage you to reach out to CB Insights directly. Additionally, if you feel your firm has been under-represented, please send an email to info@cbinsights.com and we can work together to ensure your firm's investment data is up to date.

What is included:

- Financing, equity deals only, for startup and other private tech-enabled retail- and consumer-oriented companies as prescribed by the 7 categories (Collections) highlighted in this report.
- Along with B2C companies, the Collections include B2B retailers and providers. The On-Demand Collection also includes service providers.
- Categories are not mutually exclusive (for example, a smart vending machine company is included in both the In-Store Retail Tech and New Retail Formats Collections). Criteria for categories can be found on pages 4 and 16.
- Historical funding data is subject to change as our technology & data operations explore data sets globally and refine company classifications.

What is excluded:

- Many startups and other private tech-enabled companies for which retail and consumer businesses are not the primary focus. This ranges from marketing companies to certain forms of e-commerce enablement (e.g., payments).

GET ALL THE DATA USED IN THIS REPORT

E-Commerce Collection

Supply Chain & Logistics
Tech Collection

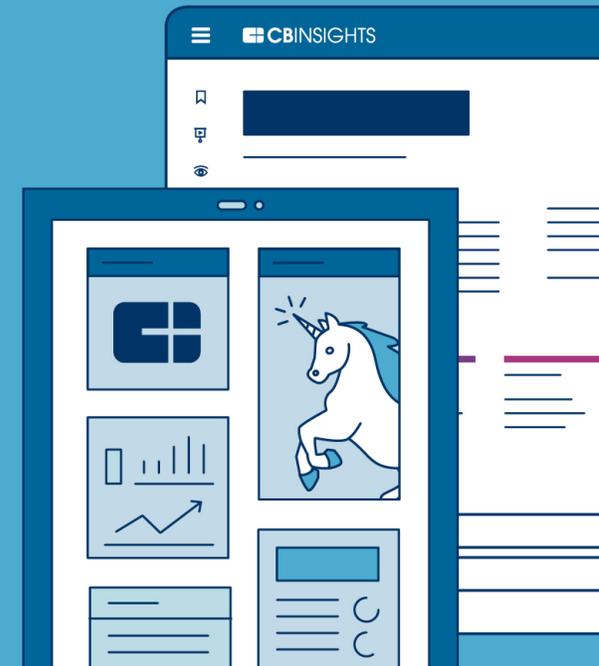
In-Store Retail Tech
Collection

On-Demand Collection

New Retail Formats
Collection

Food Delivery
(Grocery & Meals)*

Artificial Intelligence
Collection**





WHERE IS ALL THIS DATA FROM?

**The CB Insights platform
has the underlying data
included in this report**

[CLICK HERE TO SIGN UP FOR FREE](#)

