



EMERGING TECH RESEARCH

Supply Chain Tech Report



Q1
2023

REPORT PREVIEW

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the PitchBook Platform.



Contents

Vertical overview	3
Q1 2023 timeline	5
Supply chain tech landscape	6
Supply chain tech VC ecosystem market map	7
VC activity	9
Emerging opportunities	16
Freight tech	17
Inventory tracking	18
Select company highlights	19
Verity	20
Plus One Robotics	21
Outrider	22

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Supply chain tech landscape

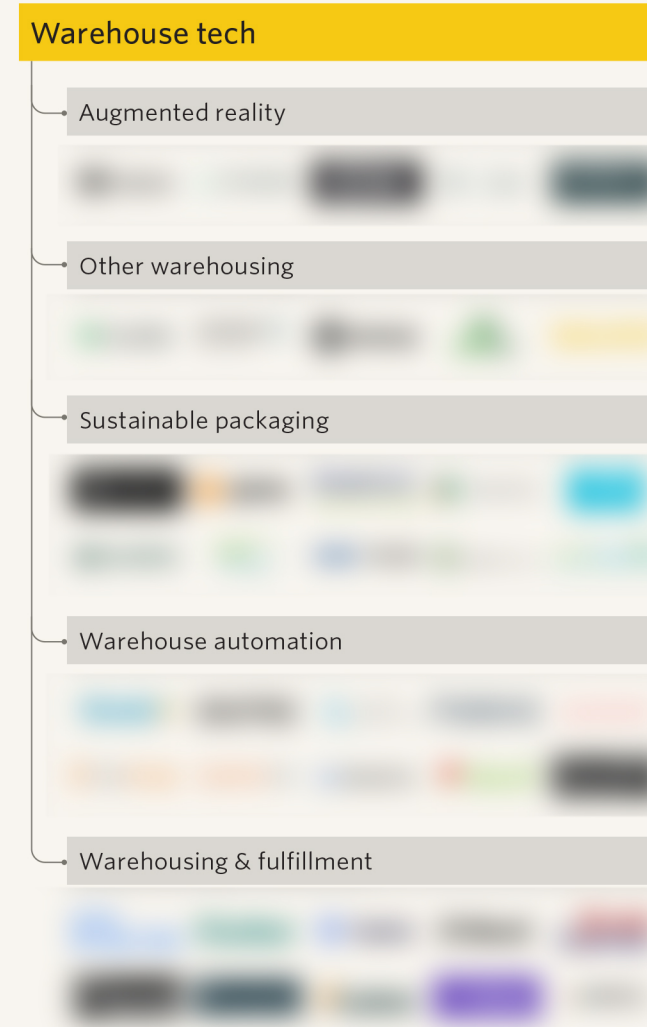
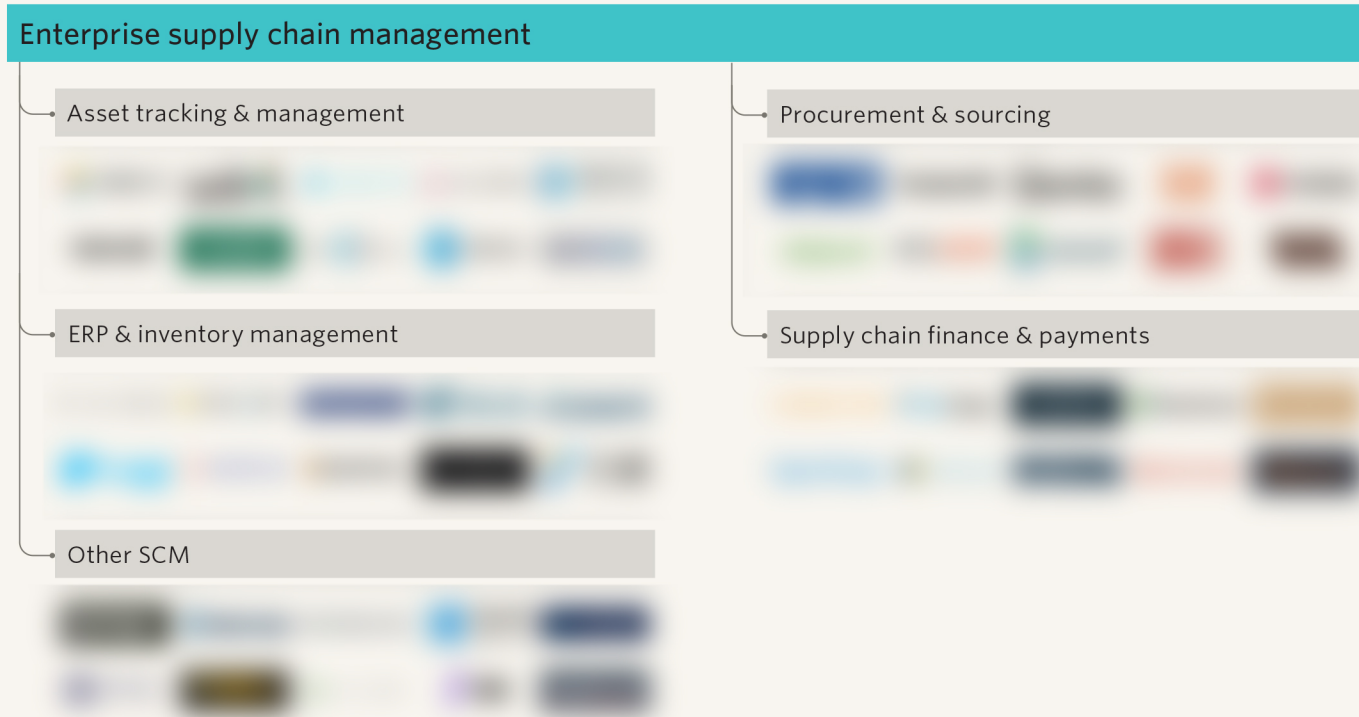
- 1** Enterprise supply chain management
- 2** Warehouse tech
- 3** Freight tech
- 4** Last-mile delivery





Supply chain tech VC ecosystem market map

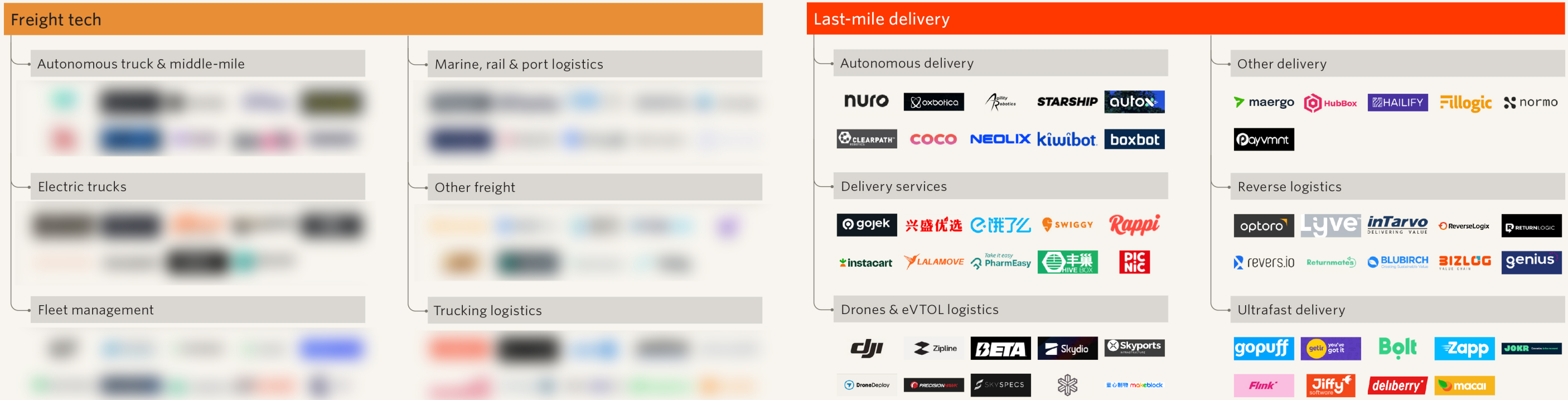
Market map is a representative overview of venture-backed or growth-stage providers in each segment. Companies listed have received venture capital or other notable private investments.





Supply chain tech VC ecosystem market map

Market map is a representative overview of venture-backed or growth-stage providers in each segment. Companies listed have received venture capital or other notable private investments.



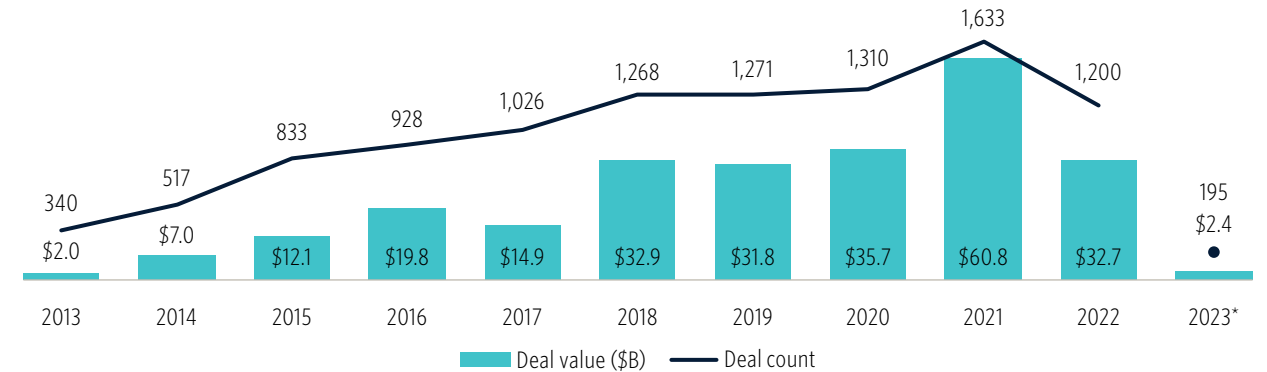


VC activity

During the first quarter of 2023, VC activity took another leg down from 2022's slower pace. The \$2.4 billion in deal value for supply chain tech companies represented a 45.3% decline QoQ and an 81.8% decline YoY. The overall Q1 deal count of 195 was down 19.4% QoQ and 49.7% YoY. Deal activity was higher in the first part of the quarter, possibly reflecting caution in March related to the issues surrounding Silicon Valley Bank. Across segments, freight tech experienced the greatest decline with deal value down 81.8% QoQ and Q1 deal count just one-third of Q4 2022 levels. The relative weakness in freight tech deal value stems largely from the segment's strength in Q4 2022, with outsized deals from [Einride](#) and [Volta Trucks](#), which were two of the largest deals across the entire vertical that quarter. Enterprise supply chain management saw the smallest QoQ decline for Q1. Across stages, angel and seed deals saw a slight improvement in Q1, rising 3.6%. Venture growth and early-stage VC experienced the largest declines QoQ, down 63.5% and 52.0%, respectively.

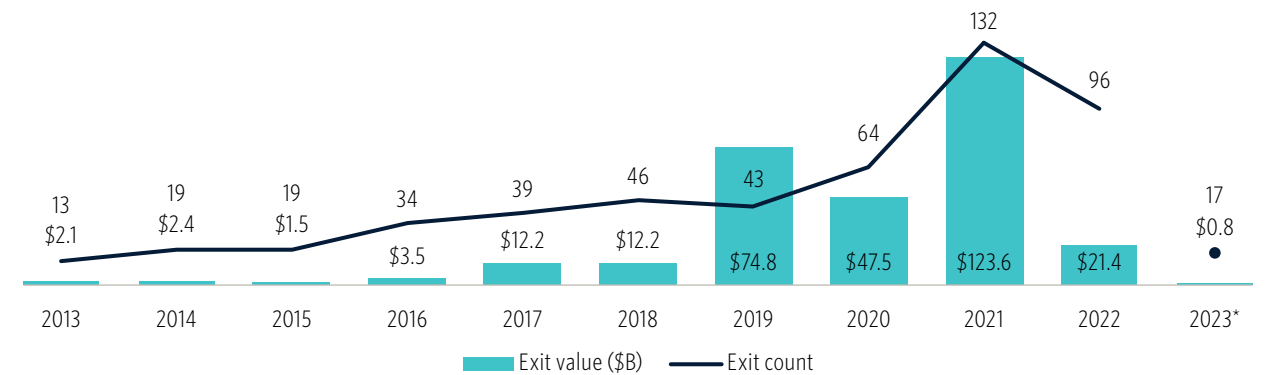
Notable deals in the quarter include Chinese software company [JD Industrial Products](#) raising \$300.0 million on March 9, 2023 in a deal led by G42 Global Expansion Fund and Mubadala Development Company. The deal resulted in a 3.0x valuation step-up and a pre-money valuation of \$6.0 billion. The company also filed to go public later in March. In January 2023, [Oxbotica](#), a UK-based developer of autonomous vehicles, completed a Series C round raising \$140.9 million, which resulted in 2.9x valuation step-up. The valuation improvements stand out against a broader backdrop of investor caution. The largest exit among supply chain tech companies in Q1 was the \$630.0 million acquisition of [VIA](#) on January 26, 2023. The commercial electric vehicle (EV) truck manufacturer was acquired by Ideanomics.

Supply chain tech VC deal activity



Source: PitchBook • Geography: Global • *As of March 31, 2023

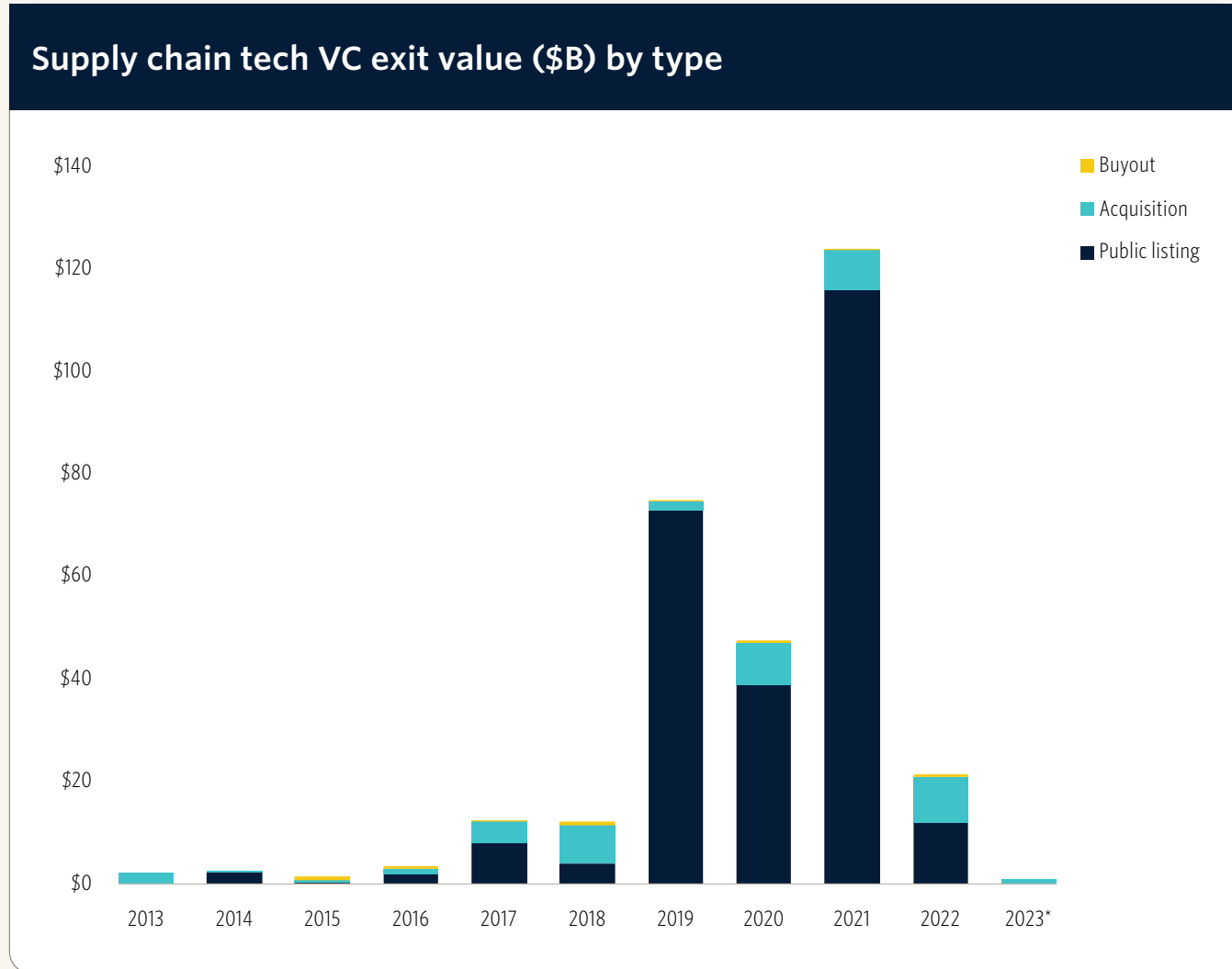
Supply chain tech VC exit activity



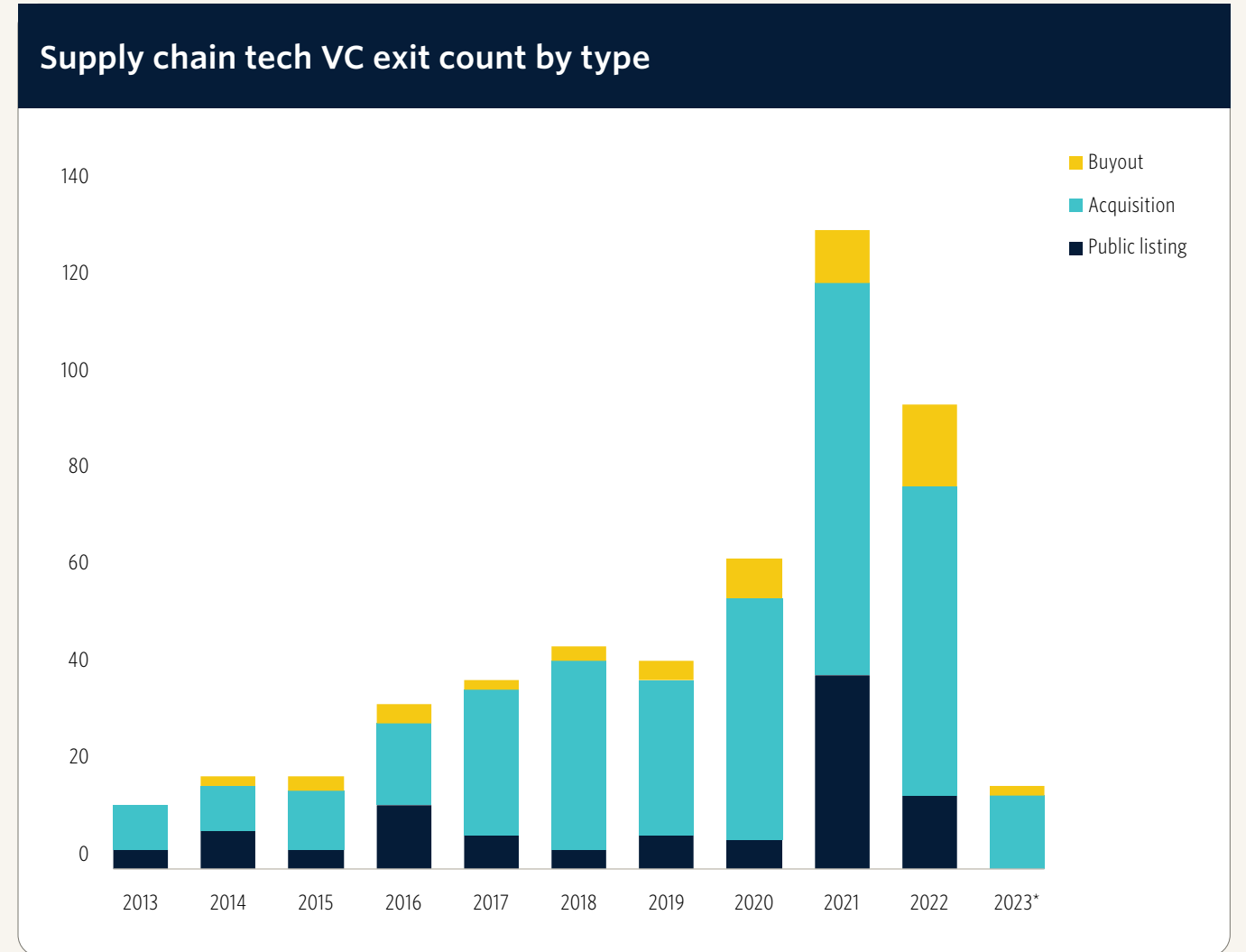
Source: PitchBook • Geography: Global • *As of March 31, 2023



VC ACTIVITY



Source: PitchBook • Geography: Global • *As of March 31, 2023



Source: PitchBook • Geography: Global • *As of March 31, 2023



Freight tech

While enthusiasm for autonomous passenger cars has ebbed, autonomous technologies for key segments of supply chains continue to flourish. Two of the top ten VC deals in Q1 were with startups focused on autonomous solutions. [Outrider](#) completed a Series C for \$73.0 million which resulted in a 1.8x valuation step-up. [Oxbotica](#) also completed a Series C round and saw a 2.9x step-up in valuation. The largest supply chain tech deal in Q4 2022 was [Einride's](#) \$500.0 million combination of debt and equity. Investors continue to be attracted to applications of the technology that solve specific issues and unlock value across supply chains.

[Gatik](#) is a good example of this focused approach. The startup has developed a fleet of light- and medium-duty trucks targeting autonomous middle-mile delivery. Routes are relatively short, simple, and fixed from 20 miles to 30 miles between warehouses, distribution centers, and stores. By eliminating the cost of the driver, retailers can run deliveries more frequently from warehouses and distribution centers and adapt new business models around stocking, fulfillment, and replenishment. The shorter, fixed routes require a much lighter load of compute overhead compared to a "robotaxi" or autonomous long-haul trucking operation, which must map entire cities or interstate highway systems. The company was founded in 2017 and began partnering with [Walmart](#) in 2019. In 2021, the two companies conducted driverless deliveries in Bentonville, Arkansas between a [Walmart](#) distribution center and local neighborhood markets. The company recently announced agreements with [Georgia-Pacific](#) and [Kroger](#). While numerous tech companies and startups are shedding staff, [Gatik](#) plans to double the size of its workforce this year.⁴ Delivering measurable business value within the limitations of what autonomous technology can deliver today appears to be a winning strategy for the startup.

4: ["Self-Driving Startup Gatik to Double Workforce, Strikes Kroger Deal," Reuters, Abhirp Roy, March 15, 2023.](#)

[Outrider](#) has a similar level of focus for its autonomous solutions: yard trucks. Distribution yards represent a key—yet often overlooked—link in global supply chains and are responsible for the movement of more than 20 billion tons of freight from warehouses out onto the open road every year.⁵ Improving and automating this important link could unlock significant value. Several years ago, the MIT Center for Transportation & Logistics conducted an exhaustive analysis of truckers' working hours and concluded that the cause of the well-known driver shortage is neither inadequate pay nor long hours away from family and home.⁶ Instead, it is detention time, the time spent waiting to be loaded or unloaded at warehouses, distribution centers, and ports. In fact, according to the study, drivers are only on the road approximately two-thirds of their legal daily driving hours, on average, with much of the downtime spent in detention. Similar to the advantages detailed in our [Q2 2023 Analyst Note: Autonomous and Remote-Controlled Heavy Equipment](#), the constrained environment of a distribution yard provides an ideal operating environment for autonomous vehicles. Customers can test, optimize, and run autonomous distribution systems safely and unburdened by the regulations of the public road. Traffic patterns and movement are limited and predictable, and models can be trained for far fewer unpredictable events. Automating the distribution yard reduces the number of dangerous, dirty, and monotonous routines required of the staff, freeing them for higher-value activities. [Outrider](#) targets an integrated solution that ties together electric autonomous vehicles, optimized site infrastructure, and management software, which works in concert with other warehouse and transportation management systems. For the near-to-medium term, autonomous solutions targeting constrained operating environments and focusing on solving distinct supply chain issues appear to be attracting outsized investor interest.

5: ["How Supply Chain Automation Provides Operational Efficiency to the Distribution Yard," Supply & Demand Chain Executive, Ira Renfrew, December 26, 2022.](#)

6: [The Magic Conveyor Belt: Supply Chains, A.I., and the Future of Work, Yossi Sheffi, MIT CTL Media, 2023.](#)

About PitchBook Emerging Tech Research

Independent, objective, and timely market intel

As the private markets continue to grow in complexity and competition, it's essential for investors to understand the industries, sectors and companies driving the asset class.

Our Emerging Tech Research provides detailed analysis of nascent tech sectors so you can better navigate the changing markets you operate in—and pursue new opportunities with confidence.

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