



EMERGING TECH RESEARCH

Information Security Report

VC trends and emerging opportunities

Q4
2023

REPORT PREVIEW

The full report is available through the PitchBook Platform.





Contents

Vertical update	3
Q4 2023 timeline	4
Information security landscape	5
Information security VC ecosystem market map	6
VC activity	7
Emerging opportunities	15
Disinformation detection	16
Software supply chain security	18
Select company highlights	21
Exabeam	22
Lacework	25
Snyk	28

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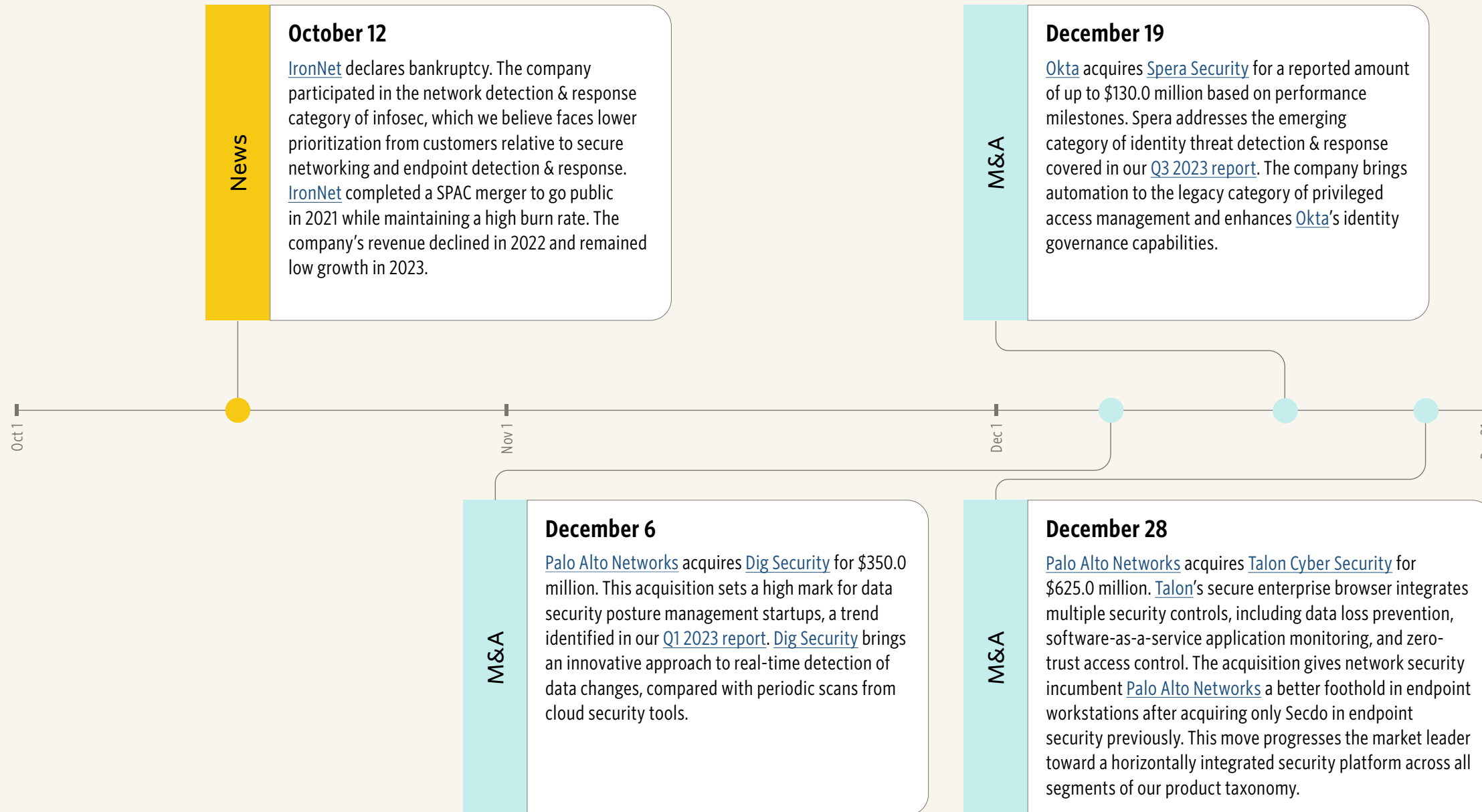
Publishing

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Q4 2023 timeline



Q4 VC deal activity

131
total deals

\$1.9B
total VC raised

-9.1%
deal value growth QoQ

YTD VC deal activity

693
total deals

\$9.6B
total VC raised

-28.4%
deal value growth YoY





Information security landscape

Threat surfaces

- 1** Cloud-based web applications & services
- 2** Corporate-owned endpoints
- 3** On-premise network
- 4** On-premise databases
- 5** On-premise data center servers
- 6** Employee-owned endpoints
- 7** Cloud-based databases
- 8** IoT devices/sensors
- 9** Industrial control systems

Product segments

-  Network security
-  Identity & access management
-  Application security
-  Endpoint security
-  Data security





Information security VC ecosystem market map

This market map is an overview of venture-backed or growth-stage companies that have received venture capital or other notable private investments. [Click to view the full map on the PitchBook Platform.](#)

1 Application security

Cloud workload protection platforms



DevOps security platforms



Web application protection



Web3 security

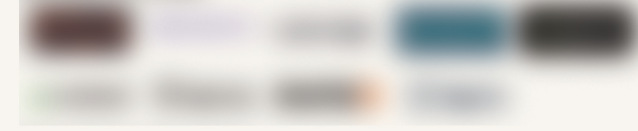


AI security

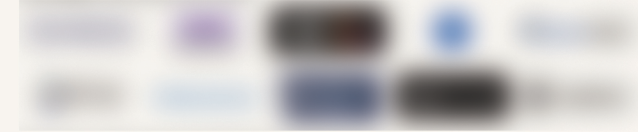


2 Security operations

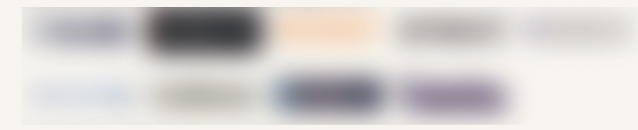
Log ingestion & SIEM



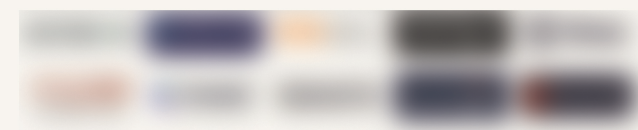
Managed security services



Security risk assessment & management

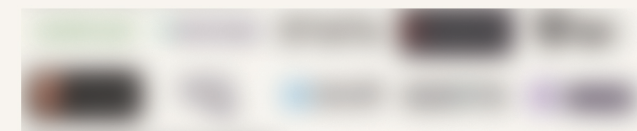


Security orchestration, automation & response

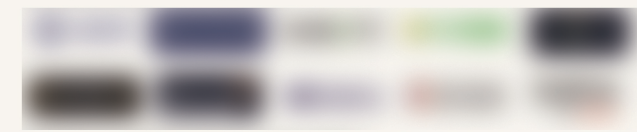


3 Data security

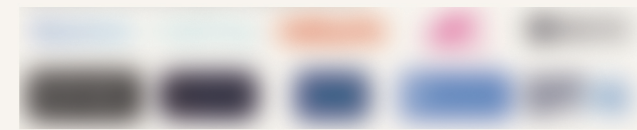
Data privacy & compliance



Data protection & encryption



Database monitoring & loss prevention

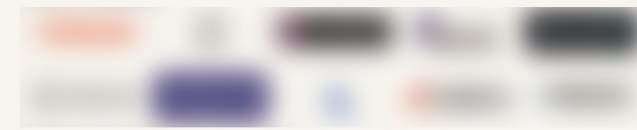


5 Endpoint security

Antiphishing platforms



IoT/OT security



Endpoint detection & response

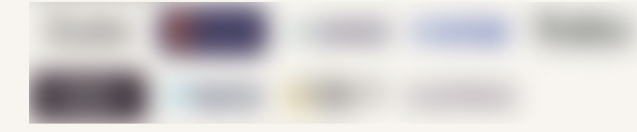


4 Identity & access management

Access management



Fraud prevention



Identity governance & administration



6 Network security

Cloud security



Network detection & response



Secure networking



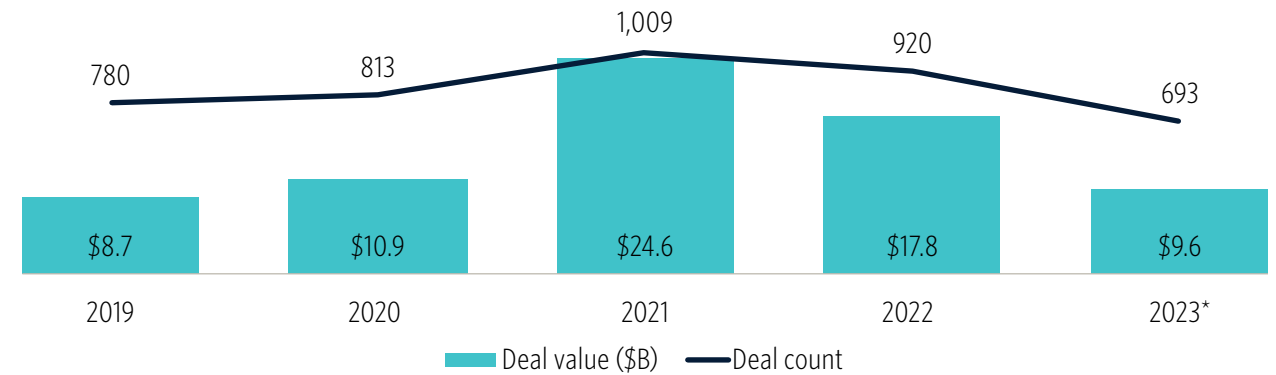


VC activity

Infosec VC funding continued to compress with deal value and deal count declining every quarter since the market downturn in Q2 2022. We tracked more late-stage VC deals than early-stage VC deals in 2023 for the first time, as generalist VCs shied away from the vertical. Even so, full-year late-stage deal value declined more than early-stage deal value, plunging 60.1% year over year. We tracked only three megadeals in Q4 2023, down from six in Q3 2023. In comparison, we tracked four down rounds during the quarter. Series B and C rounds that may have been megadeals in 2021 achieved valuation step-ups under 2.0x or raised extension rounds. As a result, we tracked only one new unicorn creation, for [BioCatch](#). Only four categories in our product taxonomy grew in VC funding year over year in 2023: AI protection, cloud security, fraud prevention, and secure networking. Infosec unicorns have faced declining valuation estimates across segments, challenging their road maps to IPOs.

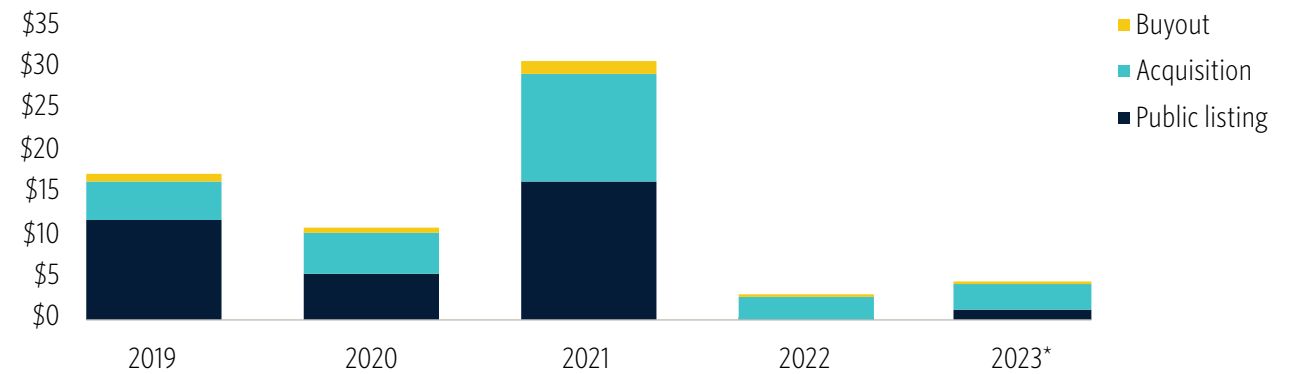
We tracked only three exit values during Q4 2023, yet these demonstrate that emerging trends can yield high-end M&A values. We have covered the emerging categories of browser security, identity threat detection & response, and data security posture management in prior reports, and each of these categories produced attractive acquisition multiples. Browser security startup [Talon Cyber Security](#) led the quarter in exit value with a \$625.0 million exit yet yielded only a 4.4x multiple on invested capital (MOIC) after raising \$143.0 million at an early stage. [Dig Security](#) and [Spera Security](#) earned higher MOICs of 7.8x and 13.0x, respectively, in smaller deals. These companies likely benefited from clean capital structures and not raising too much in the bull market. Recent additional announcements include [SentinelOne](#) acquiring cloud security platform [PingSafe](#), [Mimecast](#) acquiring security training startup Elevate Security, and [Cisco](#) acquiring cloud workload protection (CWP) startup [Isovalent](#). This rush of recent announcements suggests that a startup shakeout is in the works as IPOs recede into the distance.

Infosec VC deal activity



Source: PitchBook • Geography: North America & Europe • *As of December 31, 2023

Infosec VC exit value (\$B) by type



Source: PitchBook • Geography: North America & Europe • *As of December 31, 2023



VC ACTIVITY

Key infosec early-stage VC deals in Q4 2023*

Company	Close date	Deal value (\$M)	Category	Lead investor(s)	Valuation step-up (post to pre)
Chainguard	November 1	\$61.0	DevOps security platforms	Amplify Partners, Banana Capital, Mantis VC, Sequoia Capital, Spark Capital	1.8x
Halcyon	December 18	\$40.0	Endpoint detection & response	Bain Capital Ventures	2.0x
ArmorCode	December 4	\$40.0	DevOps security platforms	Highland Capital Partners	N/A
Oleria	December 14	\$30.8	Access management	N/A	3.0x
Cyble	November 14	\$30.2	Security risk assessment & management	King River Capital, Summit Peak Investments	2.2x
Privy	November 21	\$26.3	Web3 security	Paradigm	N/A
Cranium	October 26	\$25.0	AI protection	Telstra Ventures	2.5x
Opal	December 7	\$22.0	Access management	Battery Ventures	2.0x
Yardstik	October 17	\$20.0	Fraud prevention	MissionOG	2.9x
Spec	October 18	\$15.0	Fraud prevention	SignalFire	1.2x

Source: PitchBook • Geography: North America & Europe • *As of December 31, 2023



VC ACTIVITY

Key infosec VC exits in Q4 2023*

Company	Close date (2023)	Exit value (\$M)	Category	Acquirers(s)	MOIC
Talon Cyber Security	December 28	\$625.0	Endpoint detection & response	Palo Alto Networks	4.4x
Banyan Security	December 26	N/A	Secure networking	Elliott Investment Management, Fisher Lynch Capital, Francisco Partners, SonicWall	N/A
Tessian	December 19	N/A	Antiphishing platforms	Proofpoint, Thoma Bravo	N/A
Spera Security	December 19	\$130.0	Identity governance & administration	Okta	13.0x
Dig Security	December 6	\$350.0	Data protection & encryption	Palo Alto Networks	7.8x
WireWheel	December 4	N/A	Data privacy & compliance	Osano	N/A
DRACoon	November 21	N/A	Data protection & encryption	Kiteworks	N/A
Nuvolo	November 3	N/A	IoT/OT security	Trane Technologies	N/A
nextAuth	October 20	N/A	Identity governance & administration	Itsme	N/A
Revelstoke	October 10	N/A	Security orchestration, automation & response	Arctic Wolf	N/A

Source: PitchBook • Geography: North America & Europe • *As of December 31, 2023



SELECT COMPANY HIGHLIGHTS: SNYK



Overview

[Snyk](#) is a developer security company with a full suite of secure DevOps tooling, including SCA, application security testing, and application monitoring. [Snyk's](#) product is sold to developer teams via an open-source business model and has a highly starred SCA project on [GitHub](#). The company's product suite has achieved high traction in the developer community. SCA is commonly executed early in the software development lifecycle (SDLC), and [Snyk](#) is using its traction at the leftmost part of the SDLC to shift right into cloud application monitoring. In Q1 2024, the company acquired [Helios](#) for runtime monitoring to further its horizontal integration.

In Q3 2023, [Snyk](#) acquired [Enso Security](#) to enter into application security posture management. [Enso Security](#) raised seed funding from leading seed-stage infosec investor [YL Ventures](#) and offers discovery of application workloads and prioritization of remediation steps. [Snyk](#) seeks to become a full-lifecycle CNAPP platform, which would position the company as a leader in what we estimate to be an emerging \$10.0 billion category.

Leadership

[Snyk](#) was founded by Guy Podjarny, the former Chief Technology Officer of [Akamai](#). He is still with the company as President. [Snyk's](#) CEO is Peter McKay, a former [VMware](#) sales executive and co-CEO of [Veeam Software](#). The board is composed primarily of venture investors along with the former CPO of [Slack](#) and the chief financial officer of [Snowflake](#). Recent leadership additions

Key company information

Founded
2015

Last financing valuation
\$7.4B

Q3 2023
Leader in Forrester Wave for Software Composition Analysis

Employees
17

Last financing
Raised \$25.0M in late-stage VC

Lead investors
[ServiceNow](#), [Qatar Investment Authority](#), [Sands Capital](#), [Accel](#), [Tiger Global Management](#), [Addition](#), [Stripes](#), [Boldstart Ventures](#), [Canaan Partners](#)

Total raised
\$1.1B

May 2023
Leader in Gartner Magic Quadrant for Application Security Testing

Exit Predictor



Note: Probability data is based on [PitchBook VC Exit Predictor methodology](#).



SELECT COMPANY HIGHLIGHTS: SNYK

include Chief Marketing Officer Jonaki Egenolf from Riverbed Technology, Chief Information Security Officer Myke Lyons from Collibra, General Counsel David Morris from Vivid Seats, and Senior Vice President of Sales Michael Durso from CyberArk. Each of these leaders previously served in the same role at prior companies, giving [Snyk](#) public market experience in key seats.

Competitors

[Snyk](#) competes with application security testing incumbents, cloud security vendors, and open-source projects. SCA is offered by [GitHub](#), [Sonatype](#), and [Synopsys](#) via its acquisition of [Black Duck](#), among others. Legacy application security and cloud security solutions are not targeted at developers, leaving [Snyk](#) to compete with emerging players such as [Mend.io](#) for developer mindshare. Furthermore, developers have numerous open-source projects to select from for software composition, such as [Semmle's](#) LGTM.com, which was acquired by [GitHub](#) and is offered for free, as well as Renovate Bot. The company differentiates partly because of the quality of its database of open-source vulnerabilities, with [Red Hat](#) integrating the database with its OpenShift platform.

Outlook

[Snyk](#) is disrupting the application security market. Late-stage investors have backed the company to become a winner-take-all in cloud application security testing, providing the company with ample resources for marketing and acquisitions. We believe that a large company can be created in developer security, buoyed by [Okta's](#) acquisition of [Auth0](#) for \$6.5 billion. [Snyk's](#) valuation growth makes it richly valued relative to other DevOps tooling vendors, including formerly VC-backed [JFrog](#). We view the shift to secure DevOps as one that will likely require third-party vendors to implement, given the lack of experience most developers have writing secure code. For this reason, we believe that [Snyk](#) can grow to the scale of high-growth security vendors in other segments, such as [CrowdStrike](#), [Zscaler](#), and [Okta](#), even with the recent down round. The company plans to become free-cash-flow positive in 2024, which would position it to achieve a premium valuation multiple at that time.



SELECT COMPANY HIGHLIGHTS: SNYK

Financing history

Series B	Series C	Series D	Series E	Series F	Series G
August 23, 2019	January 21, 2020	September 9, 2020	June 21, 2021	January 10, 2022	December 1, 2022
Total raised: \$50.0M	Total raised: \$115.0M	Total raised: \$100.0M	Total raised: \$175.0M	Total raised: \$379.0M	Total raised: \$196.5M
Pre-money valuation: \$500.0M	Pre-money valuation: \$1.1B	Pre-money valuation: \$2.5B	Pre-money valuation: \$4.5B	Pre-money valuation: \$8.2B	Pre-money valuation: \$7.2B
Lead investor(s): Accel	Lead investor(s): Stripes	Lead investor(s): Addition	Lead investor(s): Tiger Global Management, Accel	Lead investor(s): Tiger Global Management, Sands Capital	Lead investor(s): Qatar Investment Authority

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