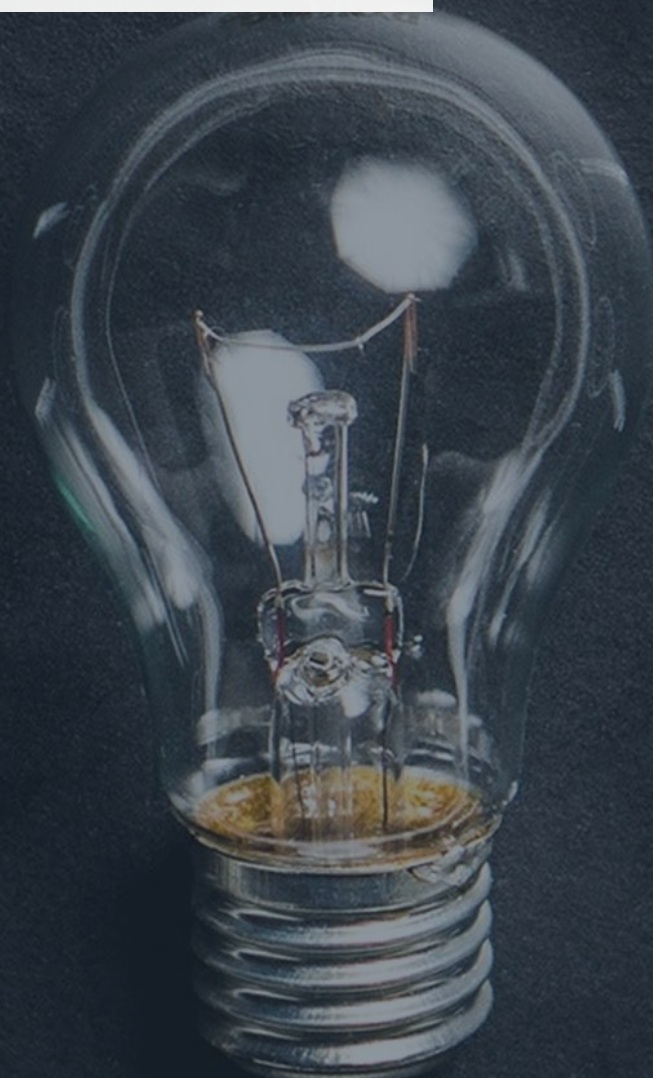


TOP 5 STARTUPS TO WATCH

AI FOR SUPPLY CHAIN MANAGEMENT

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INTRODUCTION

Digital leaps in areas like AI and autonomous technology are fundamentally changing the way goods and people move around the world. Startups are the lynchpin of this transformation, pinpointing areas of need that can be tackled by cutting-edge digital solutions, including digital freight services, warehouse robotics, AI for supply chain management, delivery robotics, and autonomous driving software. That's ultimately forcing incumbents to evolve or see their core businesses erode. Monitoring these startups thus offers unique insight into the development of the transportation and logistics industries at large, and how incumbents are defending their turf.

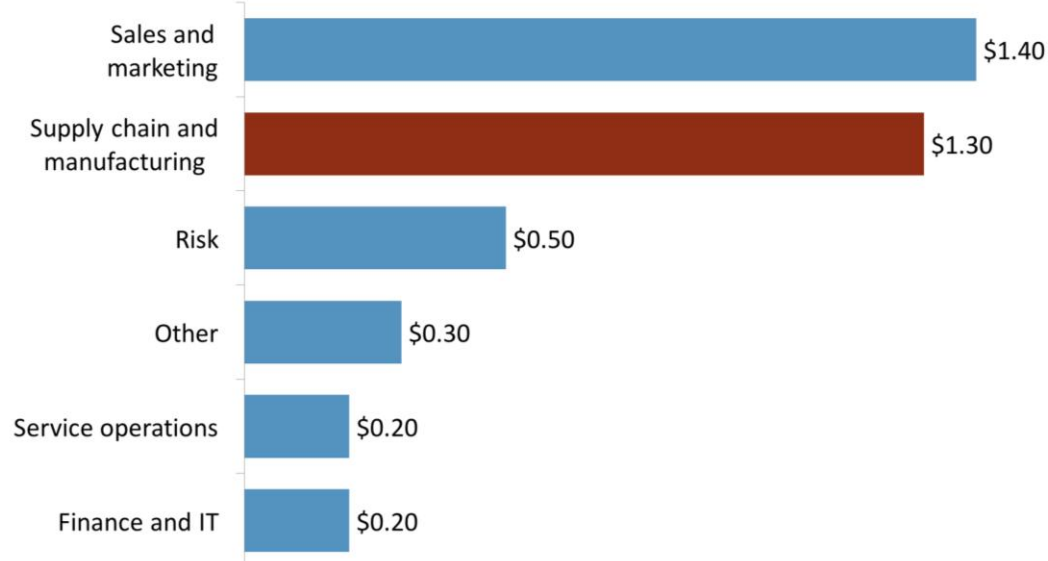
In a series of five notes, Business Insider Intelligence will look at the top startups disrupting transportation and logistics. In the first note, [we discussed](#) the leading startups in digital freight and offered an assessment of their value and impact to the sector. In the second note, [we examined](#) the startups spearheading the rise of warehouse robotics. In this third note, we explore the leading startups offering AI software to enhance the routing of shipments and speed up delivery times. The fourth note will dive into the robotics startups automating last-mile delivery, and the final note will analyze the startups developing autonomous driving software and how they're challenging big automotive and tech companies in the race to put a self-driving car on the road.

AI IN THE SUPPLY CHAIN: CUTTING COSTS BY OPTIMIZING DELIVERIES, INVENTORY MANAGEMENT, AND FLEET UTILIZATION

AI is an umbrella term used to describe technologies that can simulate human intelligence. Business Insider Intelligence is limiting the scope of this note to AI applications within supply chain management software, which we define as any AI-based software algorithms that help optimize the shipments of goods in transit. This includes delivery route optimization, predictive order and return volume algorithms, asset utilization tools, and inventory management tools. Specifically, we will discuss machine learning (ML) as it is applied within the supply chain management space. ML, which finds patterns in data and gets better at doing so over time, is the most commonly referenced technology by shipping companies that discuss AI.

Potential Economic Impact Of AI Over The Next 20 Years Across Different Business Segments

Global, Trillions (\$)



Source: McKinsey Global Institute, 2018

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McKinsey [estimates](#) that AI will create at least \$1.3 trillion worth of economic value over the next 20 years in the global supply chain and manufacturing business functions. That puts it in second place when it comes to potential for AI use of all the segments McKinsey profiled, after only sales and marketing applications. This value created by AI will help drive down logistics costs by at least 5% over the next 10 years and add \$25 billion in potential profits to the global logistics industry, according to Goldman Sachs estimates [cited](#) by The Economist. Although the logistics industry is still in the early stages of AI use, a handful of startups that burst onto the scene about five years ago are driving the implementation of these nascent technologies forward. That's pushing incumbent logistics firms to add AI to their arsenals in the hope that they'll cut costs, bolster efficiency, and speed up deliveries. Today, the largest shipping companies in the world — [including UPS](#), DHL, FedEx, and XPO Logistics — all use various types of AI in-house.

TOP 5 AI FOR SUPPLY CHAIN MANAGEMENT STARTUPS

Name	Total Investment	Notable Investors	Geographies/Markets	Highlights
Transmetrics	<\$1.9 million	<ul style="list-style-type: none"> LaunchHub Ventures 	<ul style="list-style-type: none"> Bulgarian startup that offers data cleansing and operates globally 	<ul style="list-style-type: none"> Can reduce shipping costs up to 9%
Shippo	\$29 million	<ul style="list-style-type: none"> Union Square Ventures Bessemer Venture Partners 	<ul style="list-style-type: none"> Offers an all-in-one, ML-based shipping and returns platform primarily for the US market 	<ul style="list-style-type: none"> Counts over 15,000 customers, including eBay, Martha Stewart, Ipsy
Clari	\$61 million	<ul style="list-style-type: none"> Bain Capital Ventures Sequoia Capital 	<ul style="list-style-type: none"> ML-based forecasting tool that primarily serves the US market 	<ul style="list-style-type: none"> Algorithm leads to a 93% increase in forecast accuracy
ClearMetal	\$12 million	<ul style="list-style-type: none"> New Enterprise Associates Eric Schmidt's Innovation Endeavors 	<ul style="list-style-type: none"> ML platform for global maritime shipping companies and retailers 	<ul style="list-style-type: none"> Counts paper goods giant Georgia-Pacific and Swiss logistics provider Panalpina as customers
TradeGecko	\$18 million	<ul style="list-style-type: none"> TNB Ventures Openspace Ventures Jungle Ventures 	<ul style="list-style-type: none"> Inventory management solution serving global companies 	<ul style="list-style-type: none"> Has over 17,000 customers in about 90 countries

Source: News reports, Crunchbase, company websites

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TOP 5 STARTUPS IN AI FOR SUPPLY CHAIN MANAGEMENT

We selected each startup based on the amount of funding it's received, the value of its products, the potential value of the market it serves, the quality and number of its customers and partners, and the number of noteworthy investors — either from within the industry or the technology space more broadly — it has secured. In addition, we took into account the magnitude of the problem the company is trying to solve.

Startup: Transmetrics

Founded: 2013

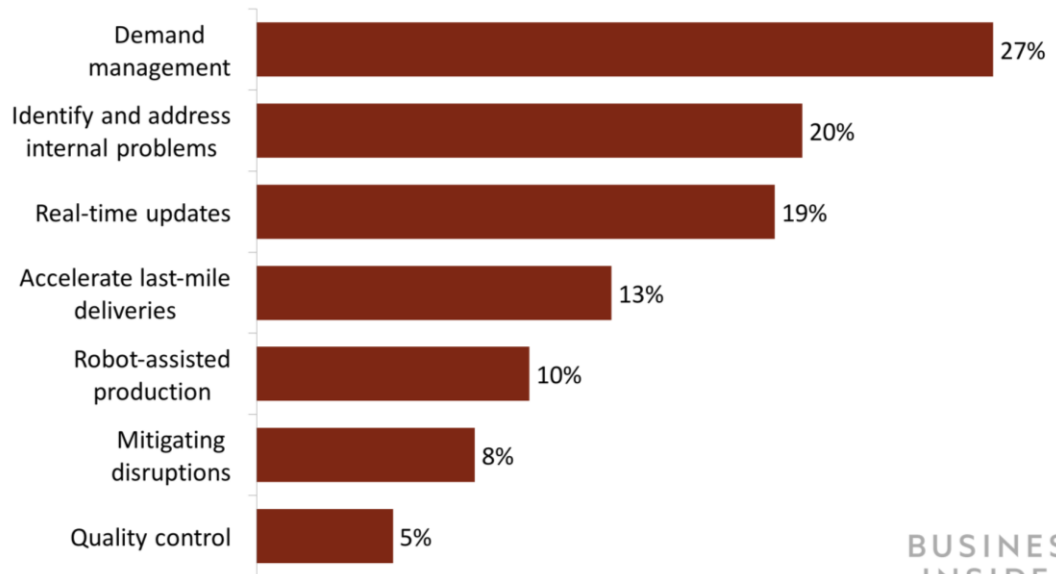
Notable investors: LaunchHub Ventures

Why it's worth watching: Transmetrics has built a predictive ML algorithm to help delivery companies better utilize their mobile assets, including trucks, planes, and rail cars. Although it hasn't raised nearly as much capital as the other startups on our list, the cost and time savings it has delivered to customers thus far is impressive. The firm's algorithm [analyzes](#) a customer's transportation management system to predict, usually with above 90% accuracy, its product demand and vehicle supply over the next couple weeks. That, in turn, helps supply chain managers to understand when and where they'll need their fleet. This ultimately helps maximize fleet capacity, a top pain point for players across the logistics industry. In the trucking industry, for instance, only [50%](#) of a fleet's total hauling capacity is used at any given time. Speedy, a European delivery courier, increased its fleet utilization rate from 72% to 82% by [working with](#) Transmetrics, reducing Speedy's total costs about 7-9%. These impressive results have helped Transmetrics [grab](#) customers like DHL and Agility Logistics.

What's next: Transmetrics told Business Insider Intelligence that it's in the early stages of diversifying beyond utilization of movable assets like trucks and into helping customers make better use of their fixed assets like containers and forklifts. Look for these efforts to accelerate in the next year, and for the company to expand its relationships with existing customers.

How AI Will Impact Retailers' Supply Chains And Logistics

Q: Where will AI have the most impact in the next 5 years?



Source: IBM, RetailWire, n=179 executives from retailers and retail vendors, 2017

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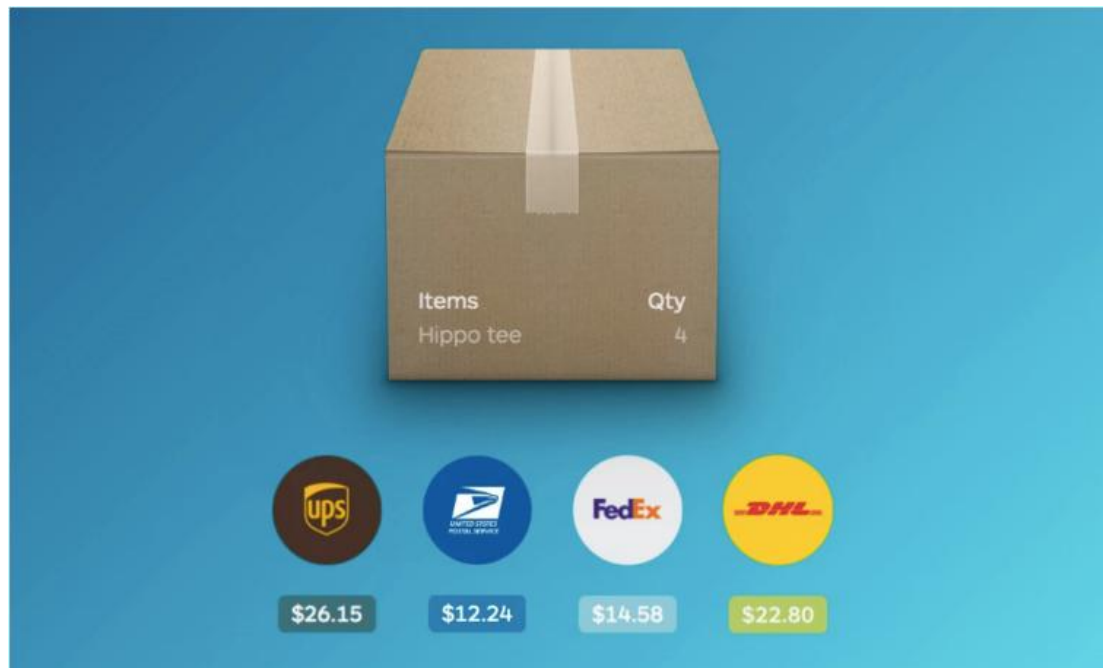
Startup: Shippo

Founded: 2013

Notable investors: Union Square Ventures, Bessemer Venture Partners

Why it's worth watching: Shippo offers an all-in-one, ML-based software platform that enables merchants to track and manage their shipments and returns. It includes rate comparisons across different parcel carriers depending on where and when the package needs to be delivered or returned, helping to streamline a process that's usually tedious and manual. The National Retail Federation [estimates](#) that US consumers returned \$351 billion worth of merchandise last year, or 10% of total retail sales, up from [8%](#) of total sales in 2015, and retailers can lose [up to 20%](#) of their profits from returned goods. Shippo's platform can streamline that process by tracking and routing returned products as they move from the consumer back to the merchant. Moreover, although not part of its AI capabilities, the company's platform can automate paperwork and label printing, slashing time from the shipping process. These capabilities have helped Shippo [capture](#) over 15,000 customers — including eBay, Martha Stewart, and Ipsy.

What's next: Shippo, which currently only operates in the US, has hinted at international expansion several times in the last 18 months. We expect the company will move into a lucrative e-commerce market like [Europe](#) in the near future.



Startup: Clari

Founded: 2012

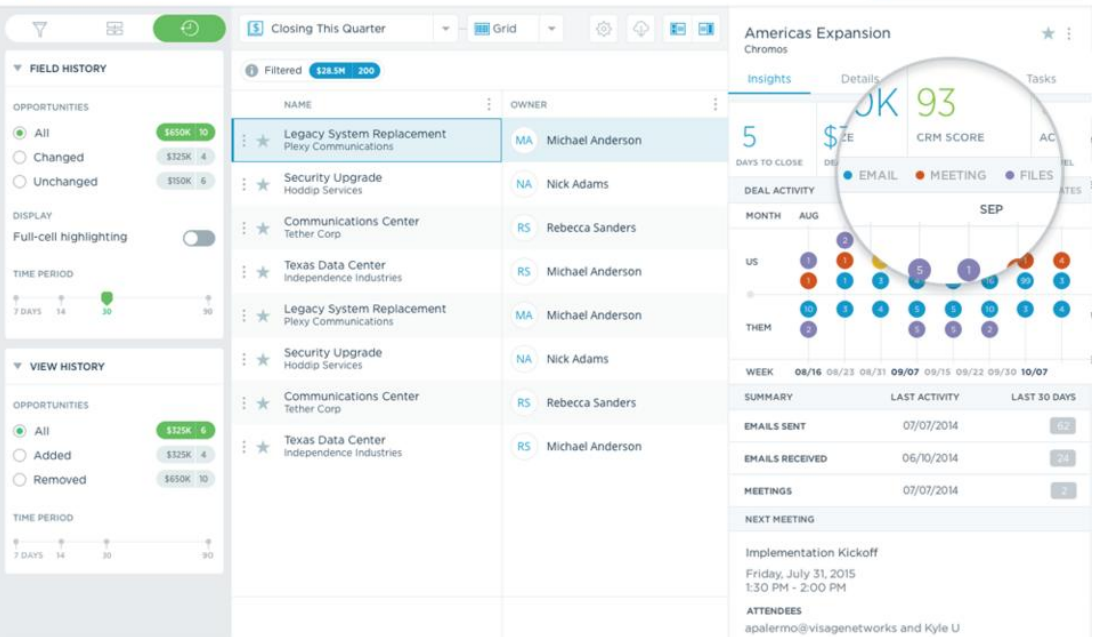
Notable investors: Bain Capital Ventures, Sequoia Capital

Why it's worth watching: Clari offers a set of forecasting algorithms that can predict demand for products or services based on past trends and patterns. Although applicable across a broad set of industries today — including freight and parcel delivery — it originally caught on with salesforces around the US. In its first few years, the firm [captured](#) impressive customers like Audi, Symantec, Intel, Adobe, and Hewlett-Packard Enterprise. Its algorithms have helped these customers achieve a 93% increase in forecast accuracy for their products or services. That performance enabled Clari to triple its customer base between February 2017 and 2018. When it closed its Series C funding round in March, the company [revealed](#) plans to tweak its core algorithms and move into the supply chain management space. Its extensive list of impressive customers and strong core product have enabled it to successfully make this transition. CEO Andy Byrne told Business Insider Intelligence that the company's customers are already using its AI predictions and recommendations to drive better supply chain and demand planning decisions.

What's next: Clari will likely need to make hires on the engineering and product side of its business as it moves further into the supply chain management space.

Opportunities

Search: All Opportunities



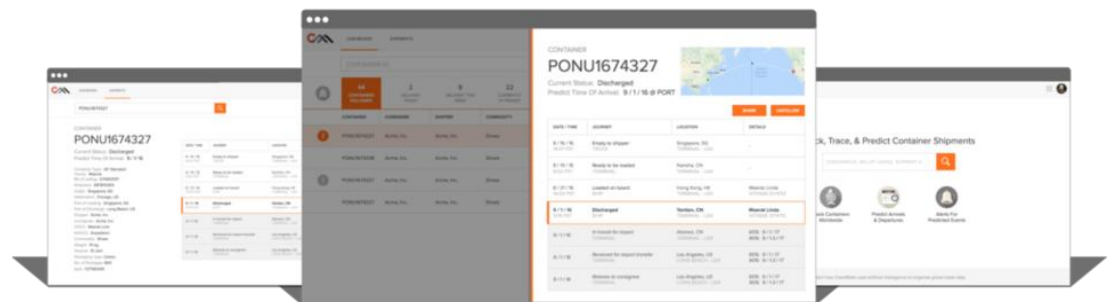
Startup: ClearMetal

Founded: 2014

Notable investors: New Enterprise Associates, Eric Schmidt's Innovation Endeavors

Why it's worth watching: ClearMetal offers an end-to-end Software-as-a-Service (SaaS) ML platform that helps retailers and maritime shipping companies route and track their ships and containers, which is typically a cumbersome process. The company's algorithms can also analyze data on currency rates, commodity trends, past shipping trends, and even weather patterns to predict delays. From there, ocean freight carriers can re-route their ships to avoid delays, saving time and money. The global logistics industry experiences over 500 million booking revisions — when a ship or truck doesn't arrive on time — annually, according to IHS Markit [estimates](#). Targeting this colossal problem helped ClearMetal grab an investment from long-time Alphabet chairman Eric Schmidt's venture firm, which led the company's Series A funding round last fall. That may have helped it capture its over two dozen customers, including high-volume firms like Swiss logistics provider Panalpina — which [earned](#) \$5.5 billion in total revenue last year — and paper goods behemoth [Georgia-Pacific](#).

What's next: ClearMetal told Business Insider Intelligence that it hopes to fortify its European presence over the next year and add about a dozen new workers on top of the 28 people it currently employs.



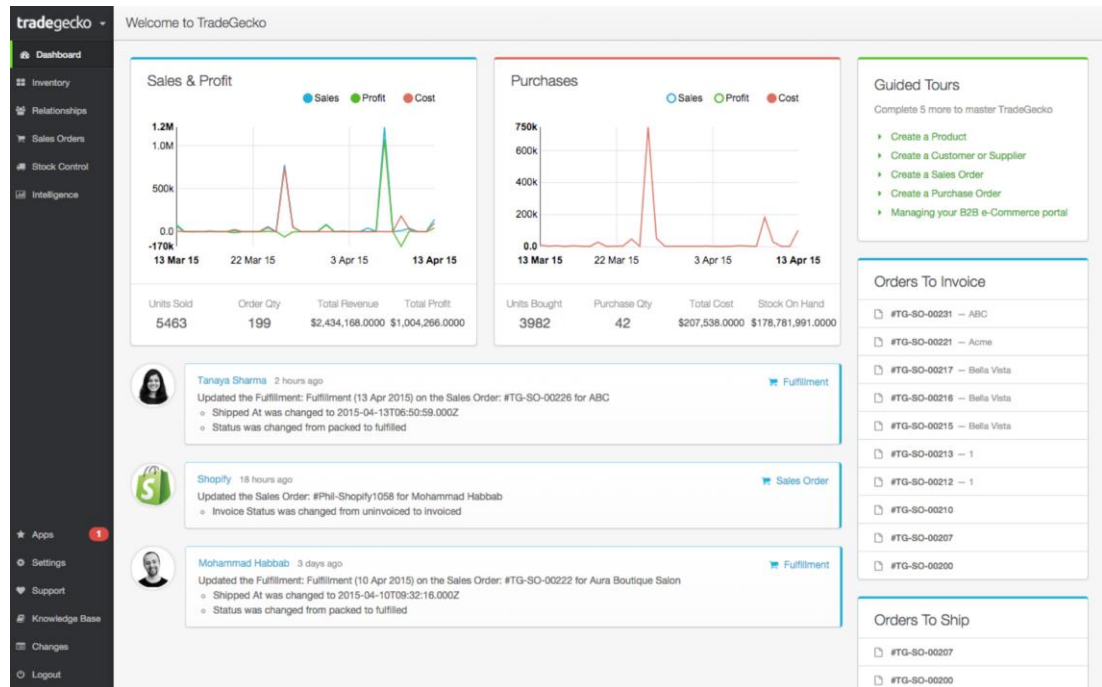
Startup: TradeGecko

Founded: 2012

Notable investors: TNB Ventures, Openspace Ventures, Jungle Ventures

Why it's worth watching: TradeGecko, which is based in Singapore but operates globally, offers an AI-based inventory management solution designed for small- to medium-sized online and brick-and-mortar retailers. Global retailers lose [over \\$1 trillion](#) annually due to their inability to align inventory with customer demand. TradeGecko's solution helps customers streamline the process of getting inventory out of their warehouses and on the way to customers. Its focus on smaller retailers — many of which don't have the cash to afford expensive tools offered by leading 3PLs — has helped it [secure](#) over 17,000 customers in a whopping 90 countries. These include Dead Studios, Brooklyn Bicycle Company, Maui and Sons, and Paula's Choice Skincare.

What's next: TradeGecko is the only startup on our list that's already exploring an initial public offering (IPO), which could occur as soon as next March. The company is looking to raise \$19 million in pre-IPO funding through convertible notes, according to [The Asian Financial Review](#). It's telling investors that it [plans](#) to use the capital for new hires — specifically in sales and marketing — and to expand into the UK and the western US.



[Download the charts and data in Excel »](#)

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