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Bowery Capital

Opportunities In Vertical Software v5.0 (2022)

Summary /

We See Continued Opportunities For Disruption in Vertically Focused Business Software

Industry	Mkt Size	Mkt Growth	Competition	Opportunities	Overall
Transport & Logistics	●	●	●	●	●
Restaurant & Travel	●	●	●	●	●
Insurance	●	●	●	●	●
AgTech	●	●	●	●	●
Cannabis	●	●	●	●	●
Legal	●	●	●	●	●
AEC	●	●	●	●	●
Energy & Utilities	●	●	●	●	●
Education	●	●	●	●	●
Manufacturing	●	●	●	●	●

Key

Positive / High	●
Intermediate	●
Negative / Low	●

Since Version 4.0, Industries & Subsequent Software Spending Adjusted To A “New Normal”

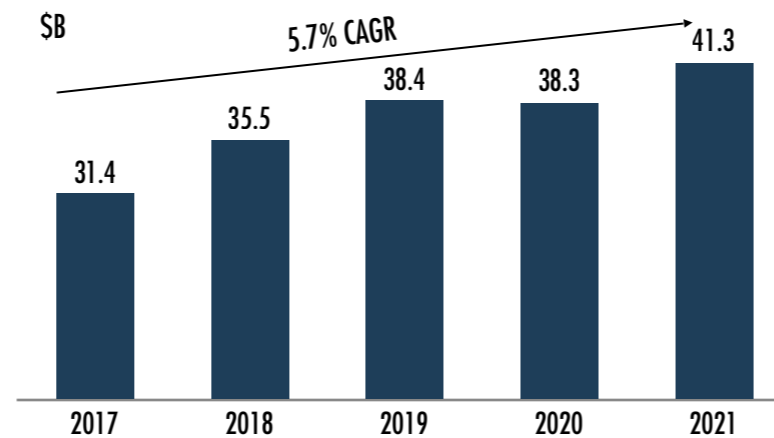
- Every vertical market we explored since the v4.0 report has continued to see the effects of COVID-19 – both positive and negative.
- Across the board, we witness slight increase in IT spend because the COVID-19 pandemic revealed issues with legacy systems. This has prompted an accelerated transition towards cloud and “next-gen” systems.
- Software spending for select verticals accelerated and has been given greater focus due to the global pandemic:
 - Education - The market was forced to adapt to a new normal and embrace software solutions despite its historical resistance to technology (especially in K-12).
 - Transportation & Logistics - Greater concern for securing the supply chain and solving for the myriad of post COVID-19 logistics problems ensured continued growth in this vertical.
 - Cannabis - The software market rose with the emerging industry’s growth as both a comfort during chaos and a potential tax revenue opportunity amidst a recession.
 - Drones - Accelerated as a sooner-than-expected solution due to social distancing rules and necessary delivery solutions.
- On the other hand, some markets contracted from major disruptions:
 - Agriculture - The food supply chain and worker safety precautions caused a decline in overall software spend.

I. Transport & Logistics /

COVID-19 & Geopolitical Tensions Drive Growing Levels Of Transport & Logistics Funding

- Prior to COVID-19, T&L was growing quickly as companies proved a strong ROI and increased efficiency.
- The turbulence of the COVID-19 pandemic and geopolitical tensions has exposed the fragility of global supply chains.
- Revamping supply chains to make them more resilient while still cost-efficient could be a decade long opportunity.
- Last-mile delivery competition remains fierce.
- Warehouse automation technology offers a promising road to boost labor productivity, enhance efficiency, and reduce shipping times.

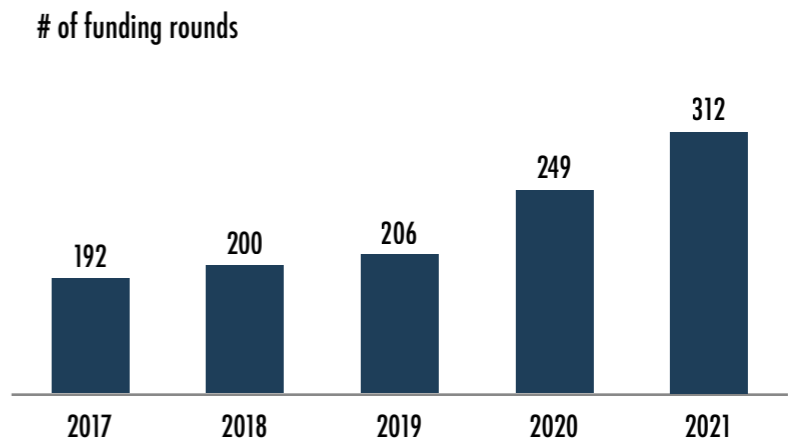
Software Spend Rises Amid Fierce Competition



Transport & Logistics IT Spend As Percent Of Revs



Funding Levels Increase with Focus on Optimization



Top Venture Capital Investors



Scores

Market Size	●
Market Growth	●
Competition	●
Investment Opportunity	●
Overall	●

Industry Leaders

Public



Private



Key Trends

- Shortening e-commerce delivery timelines will likely catalyze further investment in technology development across the vertical. There is persistent competition to match Amazon's e-commerce speed and efficiency across the vertical.
- An increasing number of startups are pursuing opportunities to bring first-world supply chain technology and last-mile delivery to developing countries to enhance quality, increase shipping efficiencies, and provide higher consumer optionality.
- The past two years of COVID-19 accelerated new ventures in delivery services, ride hailing, and micro mobility. Venture investing responded at a high clip focusing on mobility-related startups.
- Autonomous vehicles, EV's, and micro mobility represented the spaces with the largest volume of deals completed within the broader transportation space.

Transport & Logistics Industry Software: Profiles Of Disruptors & New Entrants



Headquarters: San Francisco, CA

Business Overview

Founded in 2020

Employees: 350

- Developer of smart loading docks designed to handle supply chain processes
- Kargo's smart loading dock solution uses IoT sensors and computer vision to verify and quality control inbound and outbound freight
- Their dashboard enables various industries such as logistics, automotive, and distribution to save time, gain insights, and make better business and operational decisions
- Founders: Samuel Lurye

Investors

Total Funding: \$33.94MM

Key Milestones

Raised \$29.9MM Series A in March 2022



Headquarters: San Francisco

Business Overview

Founded in 2013

Employees: 3210

- Flexport is digitizing freight forwarding, creating more visibility and control for the shippers in the process. It provides one end to end platform to streamline communication between the various parties involved in a shipping process, and also allows for cargo owners to track their shipments real time, enabling logistics companies to optimize transportation routes and inventory management.
- Founders: Ryan Peterson, Anthony Chen, Susanne Schoneberg

Investors

Total Funding: \$2.4B

Key Milestones

Raised \$935MM Series E in February 2022 at a \$8B Valuation



Headquarters: Tel Aviv, Israel

Business Overview

Founded in 2016

Employees: 83

- Developer of short wave infrared imaging systems designed to save lives and reduce risks of accidents in all weather and lighting conditions
- Their semiconductor technology and products are used to accelerate pixel levels in a camera which solves the automotive low-visibility challenge, enabling autonomous vehicles to have optimal sight under common low visibility conditions
- 75% of pedestrian fatalities occur at night or adverse weather. TriEye seeks to address these gaps in existing auto sensor solutions via a SWIR sensor which can detect material differences that are invisible to the naked eye.
- Founders: Aviv Bakal, Uriel Levy, Omer Kapach

Investors

Total Funding: \$96.1MM

Key Milestones

Raised \$74.0MM Series B in November 2021



Headquarters: Sherman Oaks, CA

Business Overview

Founded in 2014

Employees: 627

- Developer of self-driving robotic delivery vehicles designed to revolutionize food and package deliveries.
- Starship is applying autonomous driving on a micro scale to make neighborhood deliveries more affordable and ubiquitous
- Partner stores, corporations, and restaurants to make local delivery fast and cost-efficient, enabling consumers to send and receive products anytime and anywhere
- Their robots have driven over 100,000 km in 100 cities
- Founder: Janus Friis, Ahti Heinla

Investors

Total Funding: \$212.2M

Key Milestones

Raised \$130.0MM Series B in March 2022

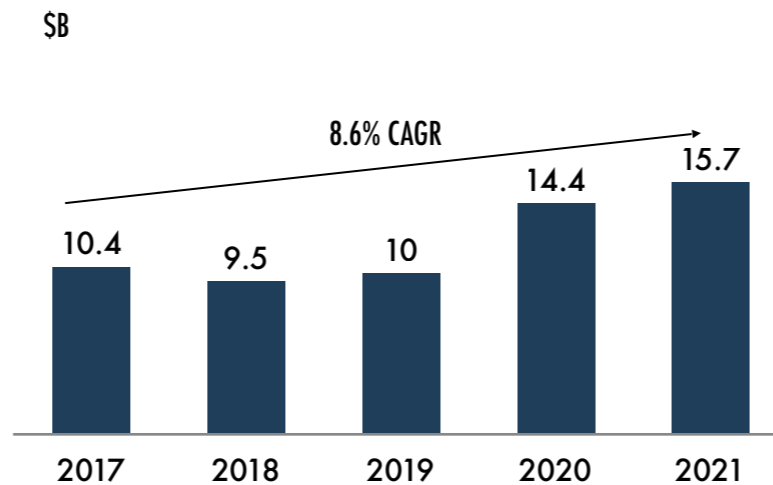


II. Restaurant & Travel /

Management Software Solutions Are Spurring A New Wave Of Hospitality

- Restaurants and hotels are seeking more automated solutions in an effort to cut costs and boost productivity. The widespread adoption of POS solutions and CRM software is helping digitize the hospitality industry as a whole.
- Automated inventory management is enabling restaurants to seamlessly track food and beverage stocks, reducing both costs and operating time.
- As a direct result of the pandemic, contactless payment has seen rapid growth and adoption. It's estimated that contactless transactions will continue to grow and increase 3X to \$6T by 2024.

Management Solutions Driving Growth

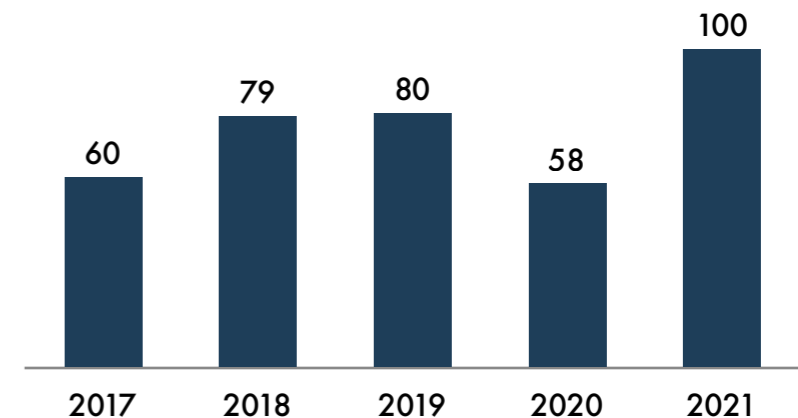


Restaurant & Travel IT Spend As Percent Of Revs



Funding Hits Record High in 2021

of funding rounds



Top Venture Capital Investors



Scores



Industry Leaders

Public



Private



Key Trends

- Cloud-based point-of-sales systems continue to be responsible for a large share of this segment's growth. POS software now features applications such as ordering for restaurants, billing, payment processing, sales tracking, etc. Furthermore, cloud communications are improving back office efficiency at low acquisition costs.
- Hotels are largely focused on improving the client experience through automation and digitization. Advancements in AI have enabled the automation of many service tasks, freeing up hotel staff for more valuable work. Additionally, improvements in IoT devices and natural language processing have made many hotel features contactless, satisfying consumer demand for fewer points of contact following the pandemic. IoT technology has allowed hotel guests to further customize their experience by automating room controls.
- More restaurants are utilizing AI chatbots that are able to suggest menu items, make reservations, collect feedback, and take orders without the cost of additional labor.

Restaurant & Hotel Industry Software: Profiles of Disruptors / New Entrants



Headquarters: Los Angeles, CA
Employees: 1200

Business Overview

Founded in 2019

- Creates and operates digital restaurant brands made for delivery, commonly known as “ghost kitchens” in the Latin American market.
- Specializes in creating brands from scratch and the operating and scaling them quickly to profitability.
- Founders: Daniela Izquierdo and Juan Guillermo Azuero

Investors

Total Funding: \$84.5MM

Key Milestones

Raised \$50MM in a Series B in October 2022



Headquarters: San Francisco, CA
Employee: ~250

Business Overview

Founded in 2009

- Empowers hoteliers to connect directly with guests at every touchpoint to deliver delightful experiences and drive direct revenue.
- The company's software helps to build a personalized relationships with guests through email marketing, upsells, guest profiles and guest surveys, enabling hotels to deep dive into data and boost online rankings through consolidated reputation management and guest surveys
- Founder: Mark Heynecker

Investors

Total Funding: \$105MM

Key Milestones

Raised \$39MM Series E in August 2021



Headquarters: San Diego, CA
Employees: ~740

Business Overview

Founded in 2012

- Cloudbeds' mission is to power properties globally with its integrated, cloud-based hospitality management platform. The company empowers independent hoteliers and hosts with the technology they need to grow their revenue, streamline operations, and deliver memorable guest experiences with confidence and ease
- In May 2022, Cloudbeds introduce Amplify, a done-for-you digital marketing service. It allows firms in the hospitality industry to stay competitive in paid metasearch engine results, increase property visibility, and optimize listings
- Founders: Adam Harris, Phillip Kopp, Richard Castle

Investors

Total Funding: \$248.4MM

Key Milestones

Cloudbeds acquired guest engagement solution Whistle in June of this year. It closed a \$150M Series D in November 2021.



Headquarters: Pasadena, CA
Employees: ~150

Business Overview

Founded in 2017

- Customers can place an order digitally using Kitchen United's proprietary MIX platform via web, mobile, or an in-person ordering kiosk and choose to pick up their meal onsite or have it delivered.
- Entrepreneurial caterers, pop-ups, mobile food vendors, and start-ups provide shared commercial kitchen space, business intelligence, and resources to succeed with minimal risk and capital outlay.
- Founders: Harry Tsao, John Miller, Massimo Noja De Marco

Investors

Total Funding: \$150MM

Key Milestones

Raised \$100MM Series C in August 2022

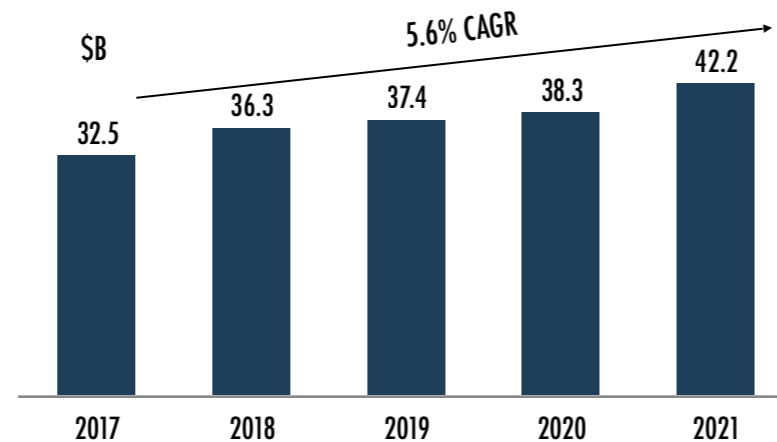


III. Insurance /

Technology Focuses On Cost Reduction While Spending Remains Robust Amid Climate Concerns

- As the economy comes out of a global pandemic, insurers expect accelerating recovery and investment into digital technologies in 2022.
- Insurers face risks right now around inflation, a potential recession, sustainability concerns, and changing customer preferences.
- The need to embrace digital technologies, most notably in automation, machine learning, and IoT, drives customer experience and cost reduction.

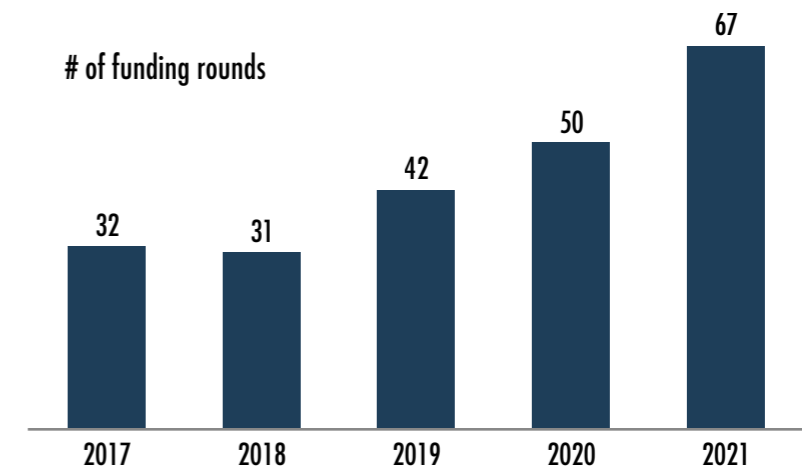
Digitization Remains A Growing Focus



Insurance IT Spend As Percent Of Revs



Funding Levels Highlight Market Growth



Top Venture Capital Investors



Scores



Industry Leaders

Public	Private

Key Trends

- Technology players are switching from competing directly with insurance companies to partnerships, helping traditional players deliver products more efficiently.
- Embedded insurance (\$3T market) solutions lead to an increasing number of strategic acquisitions in the space by traditional players.
- Emerging technologies moves away from being solely CX-focused:
 - IoT drives innovation in distributed infrastructure and telematics, assisting insurance companies to identify risks and provide real-time services.
 - AI/ML powers automation from first notice of loss to adjustment and settlement, contributing to significant savings for P&C and life insurers.
- Compared to other fintech markets, insurance remains underinvested. Among insurance deals, reinsurers are active through their own venture capital arms, mainly focused on climate resilience.
- Cyber risk management will become a prominent area of IT spend, driven by blockchain innovation.

Insurance Industry Software: Profiles Of Disruptors & New Entrants



Headquarters: Cambridge, MA

Business Overview
Founded in 2013

Employees: ~150

- Platform to compare, buy, and manage car, home, and life insurance, integrating more than 100 carriers and using Artificial Intelligence to personalize insurance online shopping
- Addresses the hassle of insurance comparison and switching, achieving an approximate cost reduction of \$500 per year per customer
- Includes two embedded insurance products through partnerships with Toyota Insurance Management Solutions and Nationwide
- Founders: Snejina Zacharia, Giorgos Zacharia, Tod Kiryazov

Investors

Total Funding: \$129.60MM

Key Milestones

Raised \$100MM Series B in September 2021, led by Motive Ventures



Headquarters: New York, NY

Business Overview
Founded in 2014

Employees: ~525

- Online insurance marketplace combining cutting-edge technology with the expertise of real licensed agents to help people get the coverage they need to protect their family, property, and finances
- Founders: Francis de Lame, Jennifer Fitzgerald

Investors

Total Funding: \$276MM

Key Milestones

Raised \$125MM Series E in March 2022



Headquarters: Toronto, CAN

Business Overview
Founded in 2019

Employees: ~50

- Provides an online platform for brokers and agents to add specialty lines to their clients proposals.
- Users fill a unified application form that is used to collect quotes instantly or through an email process, and create proposals automatically.
- Relay specializes in cyber insurance, but also supports other lines such as management liability, reps and warranties, terrorism, and small business owner policies
- Founder: Greg Boutin

Investors

Total Funding: \$8.00MM

Key Milestones

Raised \$5MM in May 2022 from Amex Ventures



Headquarters: Chicago, IL

Business Overview
Founded in 2016

Employees: ~350

- DTC home insurance company focusing on appropriately assessing and pricing the risk of homes, emphasizing climate risks
- Provides more affordable insurance options, by segmenting the risk and only attributing additional cost to homes that are facing the risks, in contrast to legacy insurance companies that provide a higher quote due to their inability to accurately assess the risks
- Founders: Lucas Ward, Sean Harper

Investors

Total Funding: \$238.20MM

Key Milestones

Raised \$82M Series D in March 2022, led by QED Investors

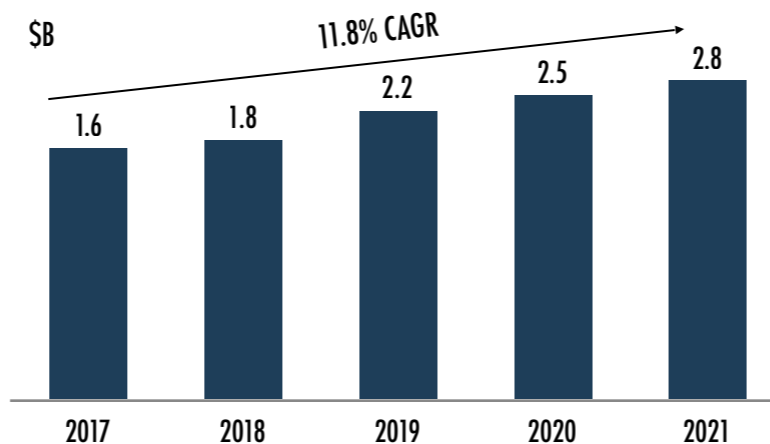


IV. Agriculture /

Evolving Environmental & Geopolitical Concerns Make Agriculture Tech More Relevant Than Ever

- Evolving environmental and geopolitical events has increased investment activity.
- The war in Ukraine diminished global supplies of fertilizer and agricultural goods, including wheat, corn, and vegetable oil. Surging fertilizer and commodity crop prices pose a growing threat to global food supplies and geopolitical stability.
- Disrupted supply chains have enhanced focus on technologies that enable local and adaptable food production in order to reduce reliance on imports and the probability of future disruptions.

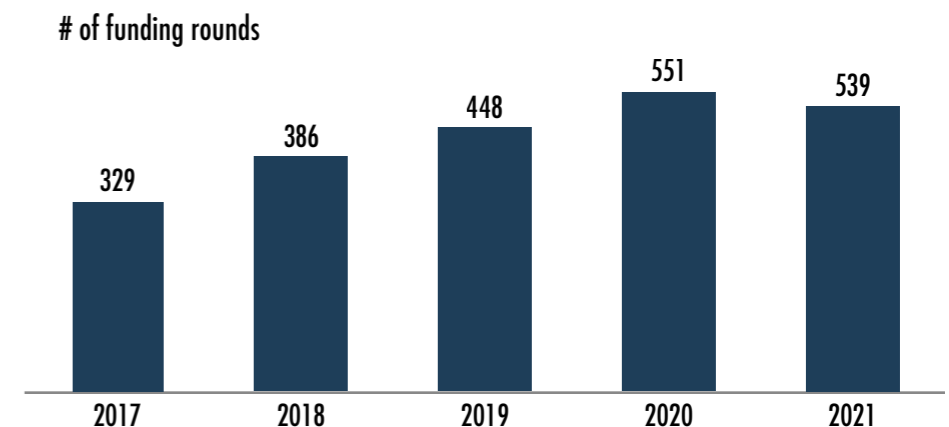
Stable Rise Of Spend In Pursuit Of Efficiency



Agriculture IT Spend As Percent Of Revs



Funding Activity Flat As Priorities Realign



Top Venture Capital Investors



Scores



Industry Leaders

Public



Private



Key Trends

- Agriculture's contribution towards greenhouse gasses are leading to frequent extreme weather events that threaten crop yields. This is creating opportunities for new technologies and techniques such as carbon monitoring tools, biochemicals, and field machinery that improve soil health, or feed additives that reduce enteric fermentation.
- Over the past 10 years, VC funding in AgTech has grown to \$10.5 billion in 2021, a 41.6% CAGR. This explosive growth results directly from two primary factors: population growth and climate change.
- VC enthusiasm for AgTech startups persisted in Q1 2022 despite volatility in the public markets that has negatively affected major indexes and AgTech stock prices.
- The global population is expected to swell to 9.8 billion by 2050, which is intensifying food demand. Many countries are seeking to increase the food they produce to improve food security and cut down on the effects of supply chain disruption.

Agriculture Technology Industry Software: Profiles Of Disruptors & New Entrants



Headquarters: Berkeley, CA

Business Overview

Employees: ~280

Founded in 2010

- Microbial biofertilizer company that makes environmentally friendly alternatives to fertilizers.
- Supported by early grants from the Gates Foundation, Pivot Bio was born with an ambition to replace synthetic nitrogen fertilizer with a more sustainable and safer tool for farmers
- Their eco-friendly nature can improve both the fertility of soil and yields over time. The war in Ukraine has sent fertilizer prices surging. Pivot Bio's microbes offer farmers a more efficient and sustainable nitrogen to fuel their crops
- Offers two commercial products to U.S. farmers. PROVEN® for corn, and RETURN® for wheat and introduced sorghum
- Founders: Karsten Temme and Alvin Tamsir

Investors

Total Funding: \$691.75MM

Key Milestones



Closed on a \$430 million funding round led by DCVC and Temasek Holdings in July 2021



Headquarters: Fayetteville, AR

Business Overview

Employees: ~100

Founded in 2014

- Agricultural real estate investing platform that helps buyers to buy shares of farmland through an online platform
- Provides investors, buyers, and sellers with unique access to land, data, and tools that enable them to transact efficiently
- Since its founding in 2018, AcreTrader has broadened access to buy, sell, and invest in land for thousands of investors, farmers, and landowners across the U.S.
- Founder: Carter Malloy

Investors

Total Funding: \$77.81MM

Key Milestones



Raised \$810K from undisclosed investors in July 2022. Previously, the company raised \$60 million of Series B venture funding in a deal led by Anthemis Group



Headquarters: Yakima, WA

Business Overview

Employees: ~15

Founded in 2020

- Operator of industrial automation company intended to automate farming processes. The company offers a Fruit Recognition System with a deep learning classifier trained on young fruit that automatically trains itself as the fruit grows throughout the season and its instruments orchards the same way manufacturing lines are instrumented with computer vision, using the camera already in the growers' pockets, enabling growers to manage their production to hit specific targets.
- The FruitScout solution increases the level of precision in farming by providing accurate fruit counts throughout the season, while giving growers actionable steps to take at each stage in the cycle.
- Founders: Matt King & Jeffery Kahan

Investors

Total Funding: \$4.4MM

Key Milestones



Raised \$4MM seed round in September 2021



Headquarters: San Francisco, California

Business Overview

Employees: ~390

Founded in 2013

- Operator of the largest indoor vertical farm intended to grow fresh and nutritious produce that is available everywhere
- Uses vertical and hydroponic growing technologies that are 20 times more efficient in water and nutrient usage than conventional growing methods
- Partnered with grocers such as Walmart, Good Eggs, Albertsons
- Founders: Arama Kikutai, Matt Barnard

Investors

Total Funding: \$941.0MM

Key Milestones



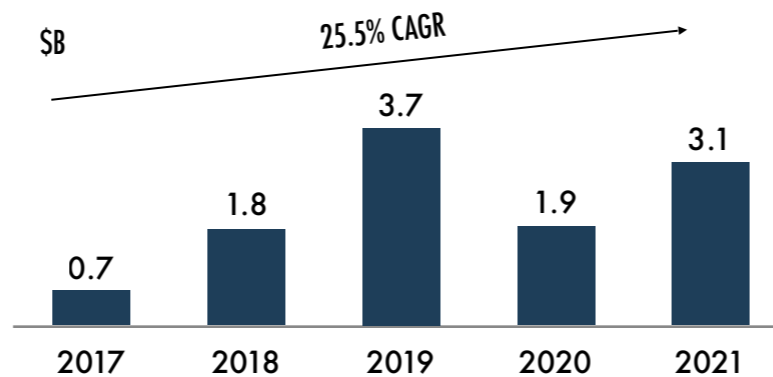
Closed a \$40 million Series E led by One Madison and JS Capital Management with a post-money valuation of \$1.4 billion

V. Cannabis /

Consumer Demand For Cannabis Continues To Drive Rapid Growth Despite Funding Slowdown

- In the first half of 2022, venture investment in cannabis totaled roughly \$294M, only one third of what was raised in the first half of 2021. The decrease in VC activity can largely be attributed to underperforming public companies that are struggling to achieve profitability.
- Despite a decrease in VC activity, as restrictions around marijuana usage continue to ease, the global cannabis market size is expected to grow at a CAGR of 25.5% from 2022 to 2030.
- A steady increase in cannabis operators and marketplaces will drive future software opportunities related to POS systems, CRM tools, greenhouse tech, etc.

Decline In Public Success Shrinks Financing

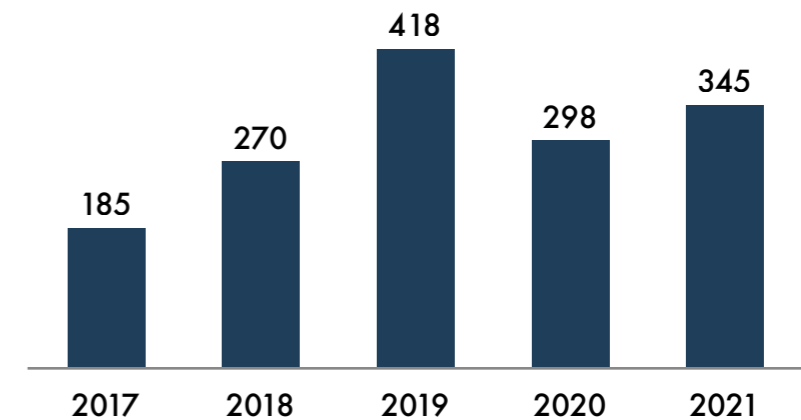


Cannabis IT Spend As Percent Of Revs

N/A

Funding Activity Slows Post-Pandemic

of funding rounds



Top Venture Capital Investors



Scores



Industry Leaders



Key Trends

- Federal illegality and other regulatory hoops continue to propel the growth of cannabis-specific fintech, specifically point-of-sale systems. This technology allows dispensaries to handle seed-to-sale tracking, age verification, and tax reporting among other compliance tasks unique to the cannabis vertical.
- Multi-state cannabis operators aim to strengthen their grip on the industry by acquiring top performing firms in high growth markets. This could mean more small to mid-size M&A deals can be expected.
- Brands will see growth in all sectors (cultivation, extraction, and retail) as consumer demand for alternative forms of consumption such as vaporizers and edibles increase. Companies are allocating more of their tech spend to developing consumer friendly products as the market share of cannabis flower declines.
- Emerging data-centered firms are leveraging AI/ML to curate specialized cannabis recommendations for consumers.

Cannabis Industry Software: Profiles Of Disruptors & New Entrants



Headquarters: Israel
Employees: ~30

Business Overview

Founded in 2016

- Developer of a genetics-based breeding technology designed to support cannabis cultivation.
- The company's technology utilizes an innovative breeding method based on CRISPR-Cas9 in order to provide cannabis and hemp growers with enhanced stable seeds, enabling growers to produce new varieties, and incorporating new traits that are not today available across all crops due to the limitations of conventional breeding
- Founder: Ido Margalit & Tal Sherman Ph.D

Investors

Total Funding: \$7MM

Key Milestones

Raised \$7MM in September 2022



Headquarters: Bend, Oregon
Employees: ~680

Business Overview

Founded in 2017

- All-in-one tech platform empowering businesses with POS, e-commerce, and payments
- Charges dispensaries a monthly fee to run their websites and manage orders. They currently works with over 5,000 dispensaries in North America and has processed over \$14B in sales
- Started as a way for dispensaries to advertise their menus online. Rapidly expanding e-commerce and delivery operations only continues to increase Dutchie's market share
- Founders: Ross Lipson, Samuel Ellis, Zach Lipson

Investors

Total Funding: \$603MM

Key Milestones

Raised \$350M Series D in October 2021 led by D1 Capital Partners, a \$3.75B valuation



Headquarters: San Francisco, CA
Employees: ~280

Business Overview

Founded in 2007

- Initially launched in 2007 with hopes of creating a cannabis vaporizer. Since then, the company has become the most successful vaporizer brand in the industry
- Currently expanding into new markets such as Canada as well as exploring the CBD space
- While originally a hardware company, Pax is spending an increasing share of its budget on software that aims to enhance and customize user experience for vaporizers
- Founders: Adam Bowen, James Monsees

Investors

Total Funding: \$445.5MM

Key Milestones

Raised \$420M at a valuation of \$1.7B in April 2019 with Tiger Global, Tao Capital Partners, and Prescott GP.



Headquarters: San Francisco, CA
Employees: ~50

Business Overview

Founded in 2018

- Cannabis ERP seed-to-sale platform. It has become the prominent seed-to-sale company for large multi state operators, being built on integrations such as Sage Intacct, product costing tools, and multi-facility management.
- Plans to use its Series A funding to develop novel features for cultivation forecasting, material resource planning, and warehouse management
- A large share of Canix's growth is driven by the firm's compliance software, which addresses a major pain point in the cannabis vertical
- Founders: Artem Pasyechnyk, Stacey Hronowski

Investors

Total Funding: \$14MM

Key Milestones

Canix raised a \$10M Series A in June of 2022.

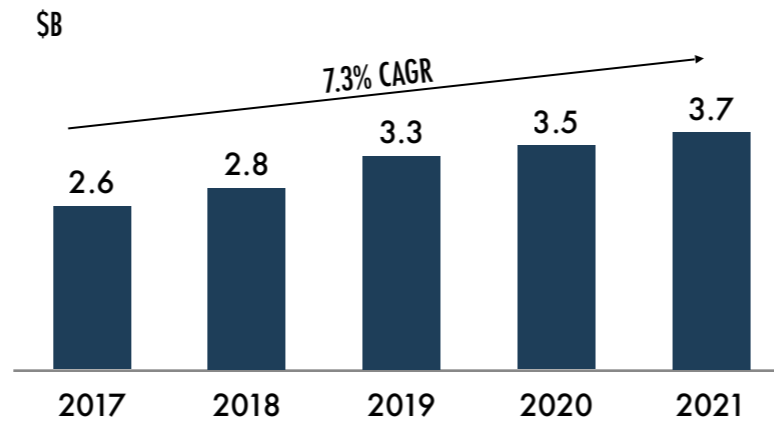


VI. Legal /

Legal Industry Doubles Down On Automation To Optimize Efficiencies

- The legal industry's digital transformation post COVID-19 is driven by the emergence of remote work and a desire to adopt cost-cutting measures. Legal tech can help firms reduce spend by analyzing their expenses and assist lawyers via contract cycle management and e-discovery tools.
- By 2025, tech budgets for legal departments are expected to triple from where they were in 2020.
- Advances in natural language processing and machine learning are helping further automate various legal functions. For example, nearly half of the legal work associated with major corporate transactions is expected to be automated by 2024.

Larger Software Budgets Fuel Industry Digitization

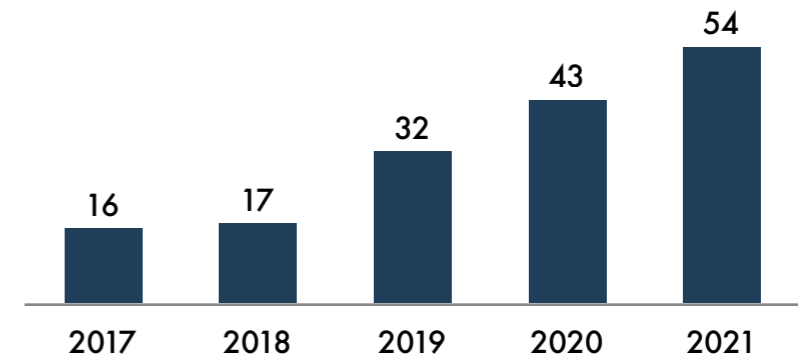


Legal IT Spend As Percent Of Revs



Funding Increases Capture Growing Legal Tech Demand

of funding rounds



Top Venture Capital Investors



Scores



Industry Leaders

Public	Private

Key Trends

- Cybersecurity is becoming increasingly relevant as firms transition to hybrid or remote work. Law firms are prioritizing security as hybrid work environments carry greater risk for information breaches. The greater risk of cyberattacks has also accelerated firms' transition to cloud-based data storage.
- Investors are funding more privacy technology start-ups. According to Gartner, by 2023, in-house legal spend on solutions dedicated to handling requests for data subject rights will increase 150%. This spend will drive growth in software that automates the processes for filing a claim on this subject.
- In order to synthesize better litigation strategies, lawyers are leveraging AI and ML to identify privileged documents in huge document volumes.
- Demand to integrate legal tech's new software solutions is attracting interest in platformization. Firms want a central platform to organize their workflows, creating a seamless user experience that will drive productivity.

Legal Industry Software: Profiles Of Disruptors & New Entrants



Headquarters: Portland, OR
Employees: 600

Business Overview

Founded in 2004

- Developer of governance, risk management and compliance (GRC) software designed for corporations, law firms, government and law enforcement agencies.
- The company's software and comprehensive platform automate the complex interconnections of privacy, legal operations, digital investigations, cybersecurity response, compliance and information governance, enabling users to automate the legal hold process, manage custodians' data sources, streamline collection workflow, facilitate vendor relations and track review and production processes.
- Founders: Bobby Balachandran & Shashidhar Angadi

Investors

Total Funding: \$100MM



Coller Capital

Key Milestones

Reached Unicorn status in July 2022, after a private equity round led by Coller Capital and Glendower Capital



Headquarters: New York, NY
Employees: ~180

Business Overview

Founded in 2016

- All-in-one platform that empowers legal professionals to focus on clients by automating a variety of legal processes. The software improves law firm efficiencies by integrating client relationship management, document and case management, and communications all in one platform
- The Brooklyn Defender Services recently chose Litify as its official technology platform to better help the borough's residents. BDS is one of the largest defense offices in the United States, providing free legal services to tens of thousands of Brooklyn residents
- Founder: Reuven Moskowitz, Steven Mandel

Investors

Total Funding: \$58.7MM



TIGERGLOBAL

Key Milestones

In June of 2021, Litify acquired Salesforce-based e-billing solution LegalStratus.



Headquarters: Tokyo, JAP
Employees: 68

Business Overview

Founded in 2017

- Operator of a legal data analysis platform intended to provide contract review support service to professionals
- The company's platform combines artificial intelligence technology with attorney expertise to identify the risks lurking in contracts, and support a series of contract-related operations, enabling legal professionals to strengthen the system and improve the quality and efficiency of legal operations
- More than 450 customers excluding trial customers have implemented its AI-enabled Contract Management Suite "LegalForce Cabinet"
- Founders: Masataka Ogasawara

Investors

Total Funding: \$115MM



Key Milestones

The company raised JPY 13.7 billion of Series D venture funding in a deal led by SoftBank Group in June 2022



Headquarters: Salt Lake City, UT
Employees: ~450

Business Overview

Founded in 2014

- Fully-featured suite of tools for every part of a moving case
- Allows lawyers to assign tasks, upload files or images, monitor staff productivity, and communicate with clients directly
- Acquired Outlaw in May 2021. In the past two years, Outlaw saw 198% growth in annual recurring revenue and more than 400% YOY ARR growth
- Filevine's retention rate in 2021 was over 130%, with over 700 new customers closed during the year
- Founders: Jim Blake, Nathan Morris, Ryan Anderson

Investors

Total Funding: \$226.1MM



GOLUB CAPITAL

Key Milestones

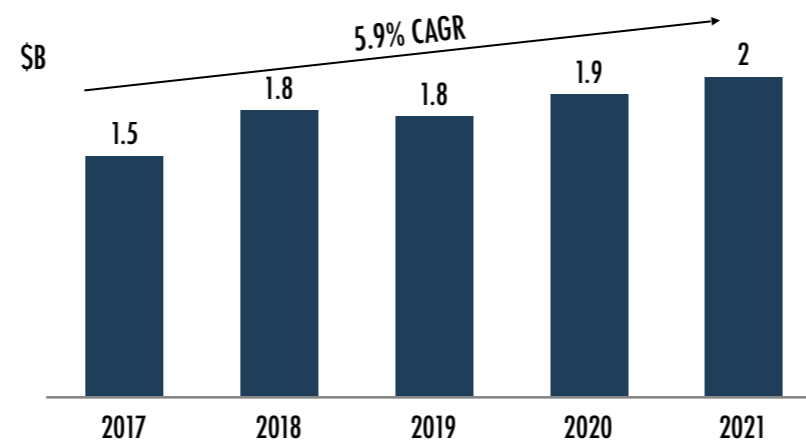
Filevine landed a \$108M Series D round led by StepStone Group, Golub Capital, and Signal Peak Ventures in April 2022.

VII. Architecture, Engineering, & Construction (AEC) /

Need For Innovation Capabilities Remain But Investment Slows Post-COVID

- COVID-19 catalyzed tech adoption as it exposed supply chain vulnerabilities and the need for remote visibility.
- Construction companies have been slow to technology because many construction tech tools do not immediately increase ROI and struggle to accommodate to the entire workflow.
- The industry has moved towards 'connected construction' utilizing analytics, data, and automation.

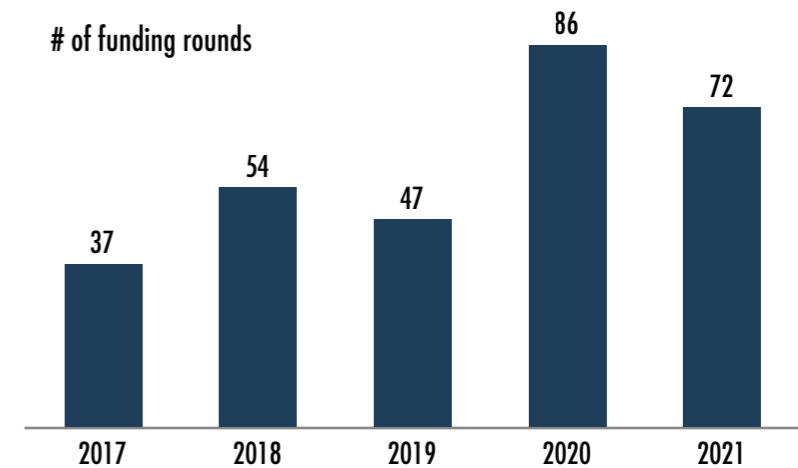
AEC Companies Are Making Investments In Tech



AEC IT Spend As Percent Of Revs



Funding Levels Drop As The Market Matures



Top Venture Capital Investors



Scores



Industry Leaders



Key Trends

- VC investors focus on the ease of integration and efficiency of driving quantifiable ROI when assessing construction tech startups.
- Most construction tech startups started with focusing on the job sites, while more of them emerged out of the data management and analysis space. In the next 5-10 years, the industry is projected to witness consolidation to better serve the complete construction process.
- Emerging technologies focus on robotics, data management, automation, and augmented reality:
 - Robotics are leveraged to draw more precise models, replacing hand-drawn layout on the project sites. This also includes autonomous heavy equipment, smart drones supervising sites, automated demolition, and semi-automated masonry.
 - Data management and analytics focus on driving efficiency through process management.

AEC Industry Software: Profiles Of Disruptors & New Entrants



Headquarters: San Francisco, CA

Business Overview
Founded in 2017

Employees: ~175

- Machine vision product company designed to solve problems in construction and related industries. Addresses the cost and efficiency issues of manual and paper-based expense management
- Core product uses artificial intelligence to automatically create navigable, complete photo representations of job sites that allows for faster data capture compared to traditional, manual methods and also offers the ClearSight product suite which is AI-powered analytics that can quantify progress, enabling builders to collaborate and reduce risk far more efficiently than text-based workflows.
- Founders: Jeevan Kalanithi, Philip DeCamp Ph.D, Michael Fleischman Ph.D

Investors

Total Funding: \$199MM

Key Milestones

The company raised \$111 million of Series D in August 2022



Headquarters: Oakland, CA

Business Overview
Founded in 2017

Employees: ~55

- Preconstruction collaboration platform company designed to improve collaborative decision-making.
- Offers real-time cost trends, visualizes estimated budget, and manages risks and opportunities, enabling contractors and design teams to reduce project risk resulting in greater confidence in cost accuracy, profitability, and project value.
- Used by Industry leaders such as Clark Construction, DPR Construction, McCarthy, and the STO Building Group
- Founders: Andrew Zukoski, Drew Wolpert, Jim Forester,

Investors

Total Funding: \$28MM

Key Milestones

Raised \$16MM Series A in June 2022



Headquarters: Vienna, Austria

Business Overview
Founded in 2013

Employees: ~400

- Offers digital task management, communication, and on-site reporting for AEC and Real Estate teams to operate projects and collaborate
- Allows users to create tickets directly on site, assign a ticket to a responsible individual with an automatic notification, and scroll through digital plans without delay.
- Features include photo documentation, report templates, BIM model, plan comparison & annotation, and project reports
- Founders: Matthew Calvano, Henry Bradlow, Francisco Enriquez

Investors

Total Funding: \$103.10MM

Key Milestones

Raised \$70MM Series B in January 2022, led by Insight Partners and Quadri Capital



Headquarters: New York, NY

Business Overview
Founded in 2019

Employees: ~30

- Construction procurement platform intended to streamline interactions in the construction industries.
- Offers multiple bids on a project and stays ahead of deadlines, manage and keep track of all bid version and responses on one platform and seamlessly communicate with suppliers, enabling the construction industries to streamline their procurement process from request for quotation issuance to proposal signing
- Founders: Anwar Ghauche, Douglas Reed

Investors

Total Funding: \$108MM

Key Milestones

Raised \$100MM+ Seed Round in June 2022



VIII. Energy & Utilities /

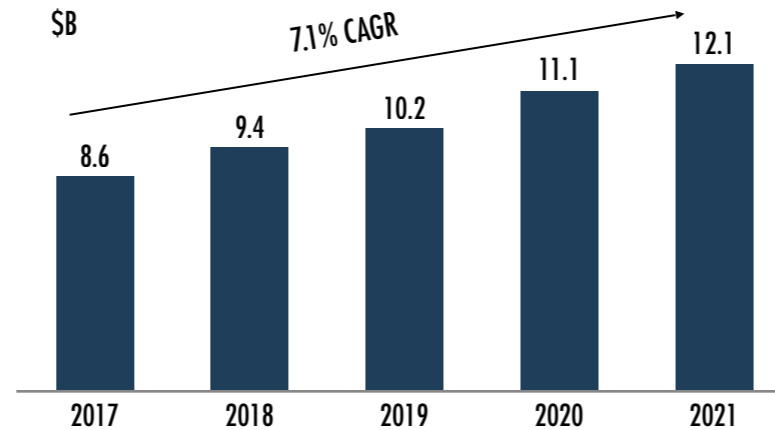
Heightened Need For Energy Independence Amid Geopolitical Tensions

- Russia's invasion of Ukraine demonstrated the vulnerability of energy markets. Before the war Russia supplied 20%+ of Europe's oil and 30%+ of its gas. Energy independence to reduce cross-border reliance will be a key trend for years to come.
- Renewable energy is gaining market share given it is the fastest way to meet global decarbonization goals and increase energy independence. The market is increasing from \$880B to \$2T by 2030.
- Consumer demand for utility services are increasing as remote work continues to be adopted globally. The industry will need to continue modernizing power grids to make them more reliable and cost-effective.

Scores



Exponential Rise Of E&U Spend To Optimize Ops



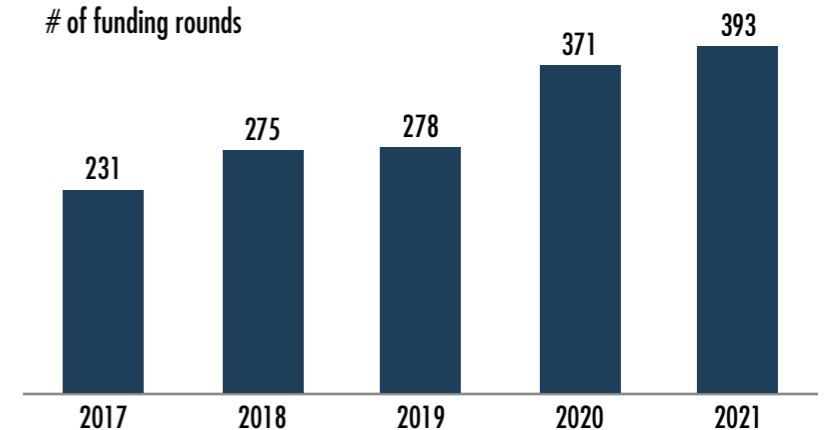
Energy & Utilities IT Spend As Percent Of Revs



Industry Leaders



Energy Independence & Renewables Spur Funding



Top Venture Capital Investors



Key Trends

- The world committed a record \$755 billion to decarbonize the energy system in 2021, beating the previous year by 27%.
- There has been a steady rise in Electric Vehicles on the road. Almost 20MM passenger EVs and 1.3MM commercial EVs. In order to increase usage and meet future demand, improved charging infrastructure needs to be deployed as it is very unevenly dispersed across the U.S and Europe today.
- ESG factors become more important to investors as consumers become more environmentally conscious putting pressure on fossil fuel, coal, and oil and gas firms. Intensifying pressures and demands for corporations to adopt ESG standards persist, however, many are challenged in doing so effectively by an absence of globalized standardized metrics.
- After an 85% cost decline over the past decade, solar panel systems are among the most cost-competitive energy resources in the market.
- 5G will be leveraged more to expedite the modernization of power grids.

Energy & Utilities Industry Software: Profiles Of Disruptors & New Entrants

SOLARIA®

Headquarters: Fremont, CA

Business Overview
Founded in 2000

Employees: ~100

- Manufacturer and producer of solar panels intended to unlock the potential of solar energy and distribute clean energy
- Products include solar panels and systems for rooftop which increases energy production more than conventional modules and creates building facades and greenhouses, enabling users to get access to cheap and renewable sources of energy as well as reduce energy costs
- Complete Solaria will list publicly on NYSE through Business Combination with Freedom Acquisition Corp, expected in the first half of 2023
- Founder: Suvi Sharma

Investors

Total Funding: \$310MM

Key Milestones



Solaria and Complete Solar reached a definitive to form Complete Solaria in October 2022 via \$888 million SPAC deal

FERVO ENERGY

Headquarters: Houston, TX

Business Overview
Founded in 2017

Employees: ~40

- Developer of proprietary clean energy technology designed to generate power from enhanced geothermal systems
- Fervo's proprietary technology is used to develop and operate flexible geothermal assets enabling companies to increase the productivity of geothermal wells, making geothermal more scalable.
- Announced execution of a 33 MW power purchase agreement that will provide 24/7 carbon-free geothermal power to Clean Power Alliance (CPA), a community-driven, locally operated Southern California electricity provider
- Founders: Timonhy Latimer, Jack Norbeck

Investors

Total Funding: \$180MM

Key Milestones



Raised \$138MM in July 2022

Arcadia

Headquarters: Washington, DC

Business Overview
Founded in 2014

Employees: 282

- Designed to facilitate easy access to clean energy, optimize energy usage and decarbonize the grid
- Facilitates data and billing integrations across utilities in the country and aggregates clean energy supply, enabling users to ensure optimal energy control
- Arcadia's data and API platform, Arc, empowers companies to monitor, report, and act on their carbon footprint. By providing companies with easy-to-use data, they can assist companies in achieving their sustainability goals
- Founders: Kiran Bhatraju, Kate Henningsen

Investors

Total Funding: \$397.0MM

Key Milestones



Raised \$200.0M Series E in May 2022

SPARKMETER

Headquarters: Washington, DC

Business Overview
Founded in 2019

Employees: 34

- Grid management software designed to access electricity possible in hard-to-reach places and underserved markets
- 3.5 billion people across the world live without reliable electricity access. Their platform helps utilities to provide reliable power to their customers, increase electricity access and invest in renewable energy and energy efficiency in their systems, enabling rural areas to access sustainable, reliable, and efficient power distribution
- Founders: Allison Archambault, Tokunboh Ishmael

Investors

Total Funding: \$34.84MM

Key Milestones



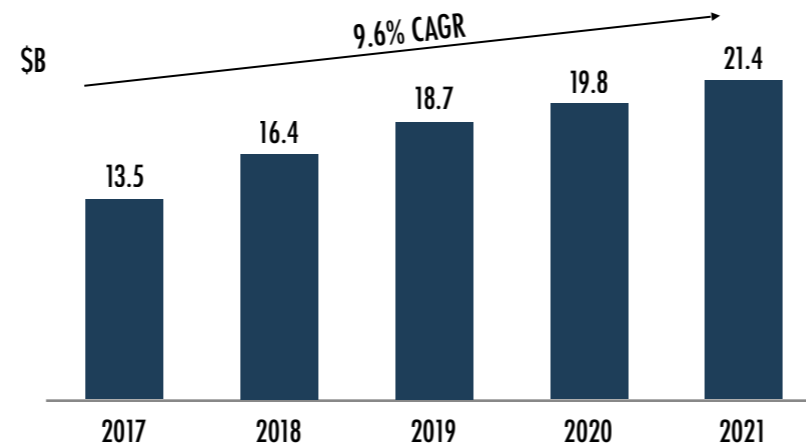
Raised \$10.0M Series A in March 2022

IX. Education /

Education Technology Spend Grows Yet Funding Trends In Opposite Direction

- The COVID-19 pandemic drove digital transformation within the classroom, as remote learning proved the advantage of digital learning over conventional models.
- Growth slows in the edTech industry, proving difficulty to achieve superior returns among venture capital.

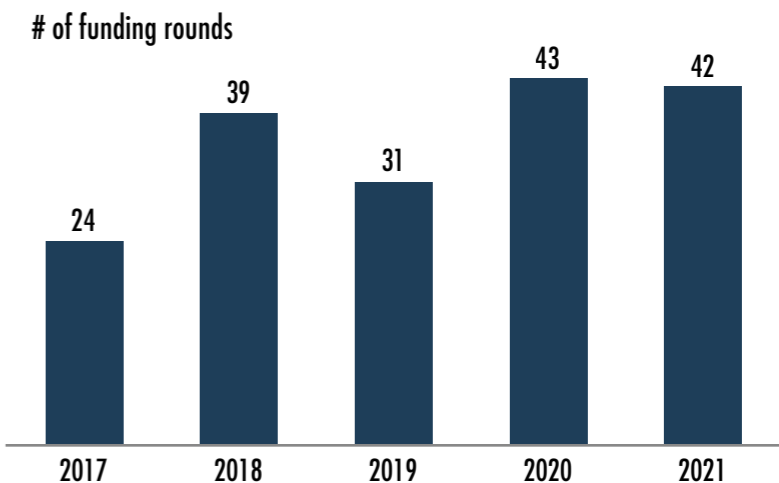
Ed Tech's Technology Investment Stays Strong



Education IT Spend As Percent Of Revs

3.6 % / 1% YoY

Funding Levels Stagnate as Market Matures



Top Venture Capital Investors



Scores

Market Size	
Market Growth	
Competition	
Investment Opportunity	
Overall	

Industry Leaders

Public	Private

Key Trends

- K12 gamified learning is the fastest growing technological adoption in the industry, with a 20% CAGR between 2020 and 2025. AR and VR spend is forecasted to increase by \$12.6B, 2x the projected spend on AI/ML, further driving gamified learning experience and enhancing student engagement.
- AI/ML powers personalized learning, applying data stored in learning management systems.
- The cultivation of computational thinking becomes more prevalent in edtech tools, as we brace ourselves for a fully digital future.
- Many EdTech have emerged from Africa and the Middle East in 2022, addressing the need for up-skilling in the workforce.
- The biggest challenge remains equipping educators with the necessary skills to fully harness the tools' functionalities.

Education Technology Industry Software: Profiles Of Disruptors & New Entrants

GUILD

Headquarters: Denver, CO

Business Overview

Founded in 2015

Employees: ~1500

- Education platform that offers education benefits and tuition reimbursement and includes online classes, programs, and degrees with personalized advising and retention coaching, enabling employers to offer education as a benefit to their employees.
- Named one of Time 100's most influential companies of 2022, helps bridge the gap between education and employment, making every career opportunity possible
- Partners with companies like Disney, Walmart, Macy's, Lowe's, Taco Bell, UHealth, Pepsico, Chipotle, Discover, Target, and Children Hospital Colorado
- Founders: Rachel Carlson

Investors

Total Funding: \$650MM

Key Milestones

Raised \$265MM in Series F funding

GENERAL CATALYST

lemonade
CAPITAL

upGrad

Headquarters: Mumbai, India

Business Overview

Founded in 2015

Employees: ~5000

- Developer of an online learning platform designed to offer professional diplomas and post-graduate courses.
- The company's platform offers a range of diploma and certification courses on digital marketing, product management, entrepreneurship, and data analytics, enabling students and professionals to earn certified knowledge in technology and business and build better career opportunities
- The company's platform offers a range of diploma and certification courses on digital marketing, product management, entrepreneurship, and data analytics, enabling students and professionals to earn certified knowledge in technology and business and build better career opportunities
- Founders: Mayank Kumar, Rohinton Screwvala, Phalgun Kompalli, Ravikot Chugh

Investors

Total Funding: \$475MM

Key Milestones

Raised \$210MM in August 2022

IIFL
FINANCE

TEMASEK
HOLDINGS

U
UNILAZER

ClassDojo

Headquarters: San Francisco, CA

Business Overview

Founded in 2011

Employees: ~200

- Developer of a classroom communication application designed to streamline classroom tools by building a classroom community that connects teachers with students and parents
- The company's application helps to share photos, videos, and messages, as well as bring big ideas to life in classrooms and homes, enabling students to work together and learn more while staying connected with their parents even during school
- ClassDojo is used with 95% of US Schools day, so the founders are focused on using Series D funding will be used to integrate the Metaverse into ClassDojo.
- Founders: Usamah Caudhary, Liam Don

Investors

Total Funding: \$221MM

Key Milestones

Raised \$125MM Series D round in September 2021

SHASTA

GENERAL CATALYST

CAREER KARMA

Headquarters: San Francisco, CA

Business Overview

Founded in 2018

Employees: ~100

- Platform for students and working professionals to find the best bootcamp programs for their price point and career goals, helping them find a career in tech
- Matches students with a career coach and provides a community feature for peer-to-peer mentorship
- Founders: Artur Meyster, Ruben Harris, Timur Meyster

Investors

Total Funding: \$51.90MM

Key Milestones

Raised \$40MM Series B in January 2022, led by Tor Tier Capital Partners

TopTier

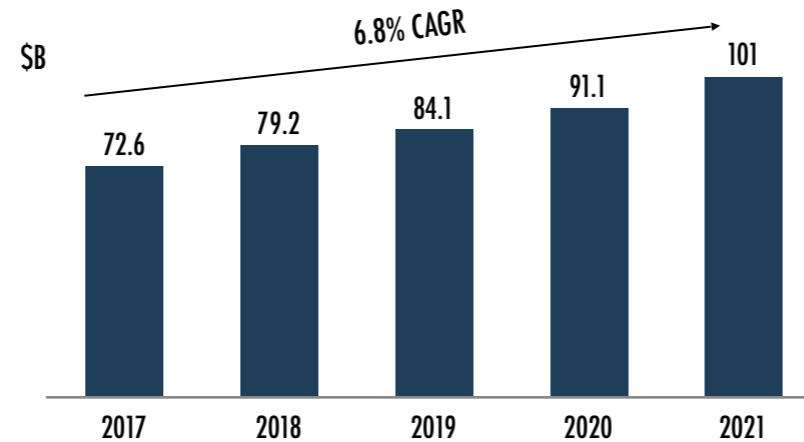
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X. Manufacturing /

Interconnectivity, Remote Work & Rapid Prototyping Drive Innovation In Manufacturing

- Prior to 2020, manufacturing startups had long struggled to secure early-stage funding, but COVID-19 inverted this trend.
- Supply chain issues and factory shutdowns underscore the growing importance of manufacturing softwares.
- Venture capital firms invest more heavily into predictive technology, vertical software, and AI-powered tools.
- Fierce competition in the space makes it difficult for new entrants to stand out.

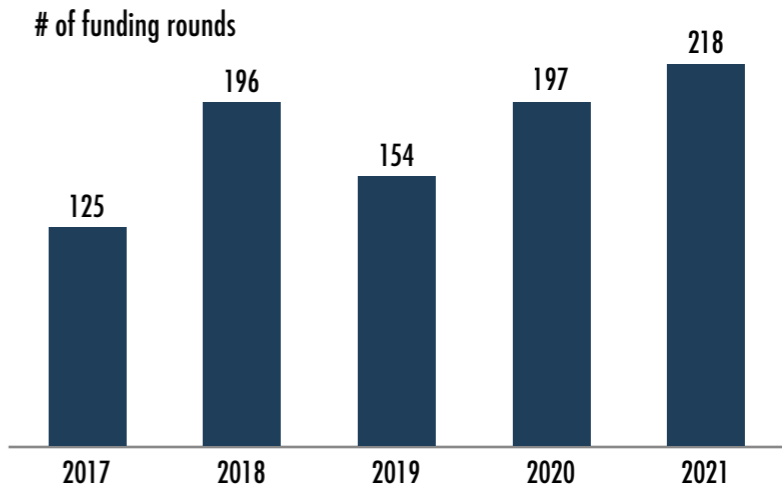
Digitization Remains Key For Manufacturers



Manufacturing IT Spend As Percent Of Revs



Funding Levels Highlight Industry Maturity



Top Venture Capital Investors



Scores



Industry Leaders



Key Trends

- Emerging technologies focus on driving interconnectivity in the industrial process:
 - Industrial Internet of Things (IIoT) connects smart sensors installed in the supply chain, gathering performance data and conducts local data analysis through edge computing.
 - A private 5G network powers instant data transmission and then AI analyzes and detects data anomalies, achieving predictive maintenance before faults occur.
- Blockchain technology has the potential to further advance supply chain management, with the potential to automate many transactions.
- Digital twin allows virtual equipment testing under different conditions. 3D printing helps with personalization, as it eliminates the need for economies of scale and enables rapid prototyping.
- Automation remains a significant driving force on the assembly line as robots, cobots, and dark factories continue to grow as groups look to move away from human-dependence.

Manufacturing Industry Software: Profiles Of Disruptors & New Entrants



Headquarters: New York, NY

Business Overview
Founded in 2015

Employees: ~30

- Operator of an automated machine learning platform intended to offer industrial data analytics for factories.
- The company's automated platform uses artificial intelligence for data analysis to predict the quality of materials used for production and to also predict machine failure and downtime, enabling companies in the industrial sector to optimize their energy efficiency in order to reduce their production costs and thereby increase their productivity.
- Fero is gaining press attention due to its commitment to mitigating 800MT CO2e so its software helps make production decisions that prevent major Scope 2 and 3 emissions.
- Founders: Alp Kucukelbir Ph.D, Pamir Ozbay, Berk Birand Ph.D

Investors

Total Funding: \$16MM

Key Milestones

Raised \$12MM Series A in July 2021



Headquarters: Palo Alto, CA

Business Overview
Founded in 2015

Employees: ~75

- Manufacturing software solution which replaces onsite inspection, founded by two former mechanical engineers at Apple
- Collects data in the normal testing process, searches for anomalies through a high-resolution camera placed on the assembly line, and combines data from the two data sets to reveal issues and root causes using ML
- Targets brands that hire manufacturing facilities, helping them resolve issues and roll out products faster
- Founders: Anna-Katrina Shedletsky, Samuel Weiss

Investors

Total Funding: \$80.30MM

Key Milestones

Raised \$50M Series C in February 2022, led by BAM Elevate



Headquarters: San Francisco, CA

Business Overview
Founded in 2018

Employees: ~400

- Provider of an automation software designed to assist businesses to meet the growing demands of manufacturing as well as employer of "micro-factories" made up of robot cells for the purpose of automating electronics manufacturing and inspection
- The company's software leverages artificial intelligence, machine learning, and production data to develop robots that are sensor-rich, have computer vision, and are adaptable, enabling clients to have improved yields at lower costs.
- In 2019 Bright Machines was named a "Technology Pioneer" by the World Economic Forum and one of "America's Most Promising Artificial Intelligence Companies" by Forbes.
- Founder: Amar Hanspal

Investors

Total Funding: \$315MM

Key Milestones

Raised \$71MM Series B in April 2022



Headquarters: San Francisco, CA

Business Overview
Founded in 2016

Employees: ~80

- Operator of a cloud platform intended to accelerate the development, sale and servicing of formulations in the chemical industry.
- The company's platform offers customizable lab management software that digitizes the business processes related to lab work, enabling clients in the chemical industry to get significant turnaround time on lab work, efficient throughput from the lab and real-time status metrics on customer-requested and internal projects.
- Founders: Sasha Novakovich

Investors

Total Funding: \$12MM

Key Milestones

Raised \$3MM of funding in August 2022



Thank You /

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