



# Follow the MONEY

## ROBOTICS, AI AND HEALTHCARE TECHNOLOGY — A PERFECT STORM OF CAPITAL

Past the halfway mark, 2021 is shaping up to be another record year for mergers, acquisitions and venture funding in robotics, AI and healthcare technology. Over the past six months, eight members of the ROBO Global innovation indices received takeover offers, reflecting a growing corporate urge and appetite for advanced technologies. In this report, we look at the key trends, including venture funding, a record birth of unicorns, big IPOs, and the most important acquisitions.

The combination of digital and physical transformations over the past year has created a perfect storm of capital flowing into robotics, AI and healthcare technology. Supply-chain disruptions, semiconductor and labor shortages, rising commodity prices and other critical chokepoints in this booming economic recovery amid a global pandemic highlight businesses' need for automation and digital tech in order to adapt. De-risking these points of failure has become a priority in boardroom discussions, leading to a boom in M&A activity as both offensive and defensive measures to future-proof businesses.

While Covid-19 created chaos in 2020, it also provided a peek into a future where agile organizations thrive, with quick and snappy supply chains for one-day order deliveries and touchless and automated retail experiences. Here at ROBO Global, we see the path towards increasingly frictionless operations as inevitable. This will require companies large and small to build or acquire robotics, automation and AI capabilities to remain competitive in the eyes of both customers and shareholders.



In 2021, we have seen massive automation deployments across all sectors of the economy. AI has engraved itself into the "Covid-19-induced" digital transformations in its various forms and is now considered standard operating procedure at most Fortune 500 companies. Barring any significant external shock, we think the pace of acquisitions across robotics, AI and healthcare is unlikely to slow and competition for quality assets to drive transaction values even higher. We are in the early innings of massive disruption in the global healthcare sector, as healthcare continues its path toward digitization. Over the next decade, we expect acceleration in investments to improve healthcare efficiencies and productivity, as hospitals and doctors around the world embrace cloud and AI capabilities.



**Corporate M&A activity, in general, is breaking records, with a combination of record-high valuations, strong cashflows and low borrowing costs enabling companies to accelerate their plans to digitize and future-proof their portfolios.**

According to Refinitiv, the \$3.6 trillion total pending and completed deals year-to-date already surpasses last year's \$3.59 trillion. In the US, looming tax hikes accelerated the pace with nearly \$2.4 trillion in M&A deals. Meanwhile, the global stress of Covid-19 has also brought more attention to operational excellence and focus, with carve-out activity expected to follow. While it is not a surprise that the technology sector led the way with \$800 billion in transaction value, financial services M&A was also particularly strong, exceeding \$442 billion. Another notable trend is that renewable energy has brought in approximately \$18 billion in deals, more than double last year.



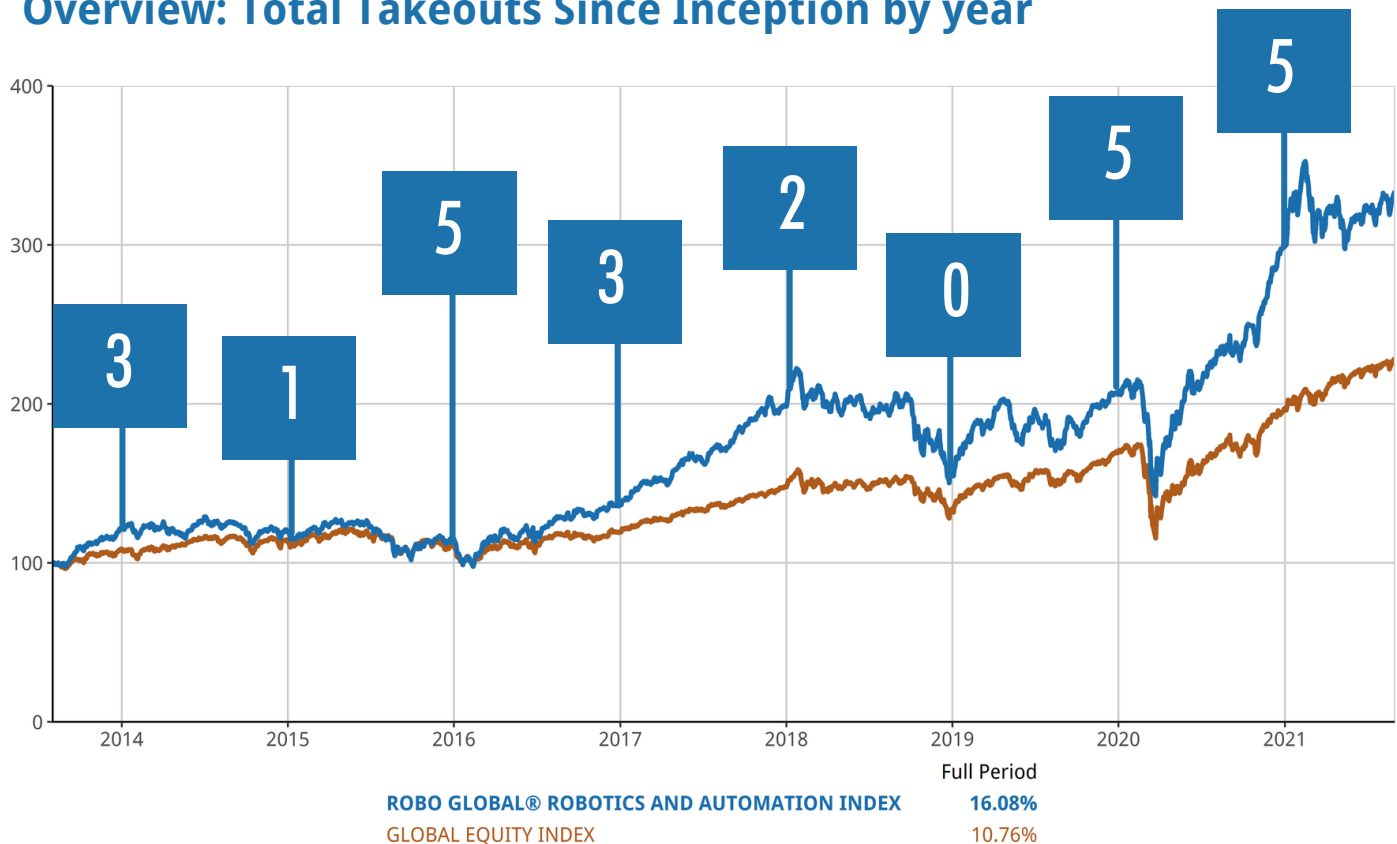
- Global M&A hit another record high in 2Q at \$1.5 trillion, up 13% from 1Q
- Dealmaking including IPOs in the US grew to \$2.4 trillion
- Europe is second place at \$657 billion while Asia Pacific M&A was \$620 billion
- SPAC momentum continues with a record \$495 billion raised year-to-date
- Private Equity buyouts are up 152% to \$512 billion
- Technology is leading the way followed by FinTech, Industrials and Healthcare

Source: Refinitiv

## ROBO: Robotics & Automation Index

M&A has provided a strong tailwind to ROBO since its inception in 2013 with a total of 25 attempted takeovers of index members in seven years, reflecting the increasingly high value given to robotics, automation, and AI technologies by large companies.

### Overview: Total Takeouts Since Inception by year



*Rebased 100 on August 02, 2013; Total Return through August 31, 2021; Periods greater than 1 year have been annualized*





## Overview: Total Takeouts Since Inception

Announcement Date	Acquirer	Target Company (Index Members)	Deal Value (\$MM)	Completed
9/25/2013	Stryker	Mako Surgical	\$1,650	YES
4/11/2014	Ametek	Zygo Corp.	\$280	YES
6/18/2014	TE Connectivity	Measurement Specialties	\$1,700	YES
9/26/2014	KUKA	Swisslog Holdings	\$357	YES
9/20/2015	Dialog Semi	Atmel Corp.	\$4,600	NO
5/18/2016	Midea	Kuka	\$5,000	YES
5/19/2016	FMC Corp (merger)	Technip (merger)	\$13,000	YES
10/26/2016	GE	Arcam	\$700	YES
10/26/2016	GE	SLM Solutions	\$733	NO
12/12/2016	Teledyne	E2V Technologies	\$789	YES
3/13/2017	Intel Corp	Mobileye	\$15,300	YES
10/31/2017	Emerson	Rockwell	\$29,000	NO
11/6/2017	Broadcom	Qualcomm	\$146,000	NO
3/1/2018	Microchip Technology	Microsemi Corp	\$9,838	YES
9/20/2018	Medtronic	Mazor Robotics	\$1,340	YES
2/10/2020	Atlas Copco	ISRA Vision	\$1,200	YES
3/3/2020	Thermo Fisher Scientific	Qiagen	\$12,600	NO
8/2/2020	Siemens Healthineers	Varian Medical Systems Inc	\$16,365	YES
12/8/2020	Baxter International	Omniceil	\$5,300	NO
12/18/2020	Philips Holding USA	BioTelemetry	\$2,683	YES
1/4/2021	Teledyne Technologies	FLIR Systems	\$7,500	YES
4/12/2021	Microsoft	Nuance Communications	\$16,351	PENDING
6/21/2021	CNH Industrial	Raven Industries	\$2,100	PENDING
8/3/2021	Investor Group	Hollysys Automation Technology	\$1,200	PENDING
8/31/2021	Investor Group	Blue Prism	N/A	N/A



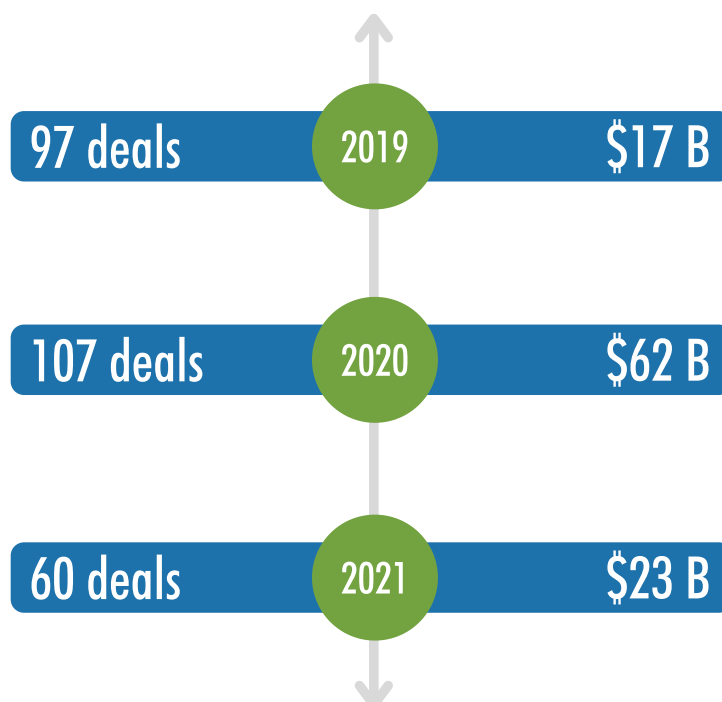
So far in 2021, four ROBO index members (FLIR, Nuance, Hollysys and Raven) have received takeout offers on the heels of a banner year in 2020, when a record seven index members received offers.

- **FLIR Systems**, a leader in thermal imaging sensors and solutions, agreed to be acquired for \$8 billion by Teledyne, another ROBO index member. FLIR's thermal sensors, drones and vision capabilities will strongly complement Teledyne's digital imaging and instrumentation businesses and boost scale economies.
- **Nuance**, a member of the ROBO, THNQ and HTEC indices, agreed to be acquired by Microsoft in a \$16 billion deal. Nuance is a pioneer in conversational AI with strong solutions to automate the workflow of clinician-patient encounters. The pending deal would be Microsoft's second-largest acquisition behind the \$26 billion purchase of LinkedIn in 2016.
- **Raven Industries**, a leader in precision agriculture technology, agreed to be acquired by CNH International, a leader in agriculture machinery for \$2.1 billion, a 34% premium to its 4-week average market value prior to the offer. Raven's precision farming portfolio, including autonomous solutions, will accelerate CNH's pivot towards agriculture technology as it refocuses its portfolio and sells its truck, bus and engine units.
- **Hollysys Technologies**, a China-based leader in factory automation and high-speed train control systems, received another offer to go private, led by a founder and former chairman of the company. This offer is in competition with another offer from the prior CEO of the company.



## All-Time ROBO Deals

M&A Activity involving ROBO index members robotics and automation companies remain very strong in 2021 after record 2020, with 60 deals involving 32 ROBO index members totaling more than \$23 billion in value. This compares to 107 deals in 2020 involving 40 index members and totaling over \$62 billion, and remains higher than 97 deals in 2019 worth over \$17 billion.



**Rockwell Automation**, the US leader in factory automation controls and digital transformation solutions, acquired Plex Systems for \$2.22 billion in cash in June. Plex Systems is a leading pure-play SaaS platform for manufacturing execution, supply chain visibility and quality management. Plex has over 700 customers helping manage over 8 billion transactions daily. The acquisition gives Rockwell a complementary cloud-native system to support their industry-leading platform to help customers track, automate and analyze operations.

**Hexagon**, a global leader in geospatial and metronomy solutions, acquired Infor's Enterprise Asset Management (EAM) business as part of a carve-out and partnership agreement for \$2.75 billion. Through this agreement, Hexagon brings on 500 employees and industry-specific asset management solutions expected to bring hundreds of millions of synergies over the next five years. Additionally, Hexagon acquired CADLM to enable complex, multi-physics real-world applications for simulations such as car collisions.

Swiss-based **Tecan**, a ROBO & HTEC index member and market leader in laboratory automation solutions, acquired California-based Paramit for \$1 billion, bringing along \$300 million in projected revenue and essentially doubling Tecan's addressable market to \$13–15 billion by expanding into medical devices. The acquisition boosts Tecan's projected revenue to over \$1 billion and is 15–20% accretive to EPS.

With spending in warehouse automation expected to grow over 23% annually, the market is up for grabs as supply chain optimization providers ramp up technology investments through M&A. (Source: Robotics & Automation News)

**Zebra Technologies**, the global leader in automatic identification and tracking solutions, continues to pursue best-in-class solutions to complement its strong logistics and warehouse automation portfolio. Its three acquisitions this year, Fetch Robotics, a provider of autonomous mobile robots for \$295 million, as well as Adaptive, a machine vision provider for fixed industrial scanners, and Antuit.ai, a provider of AI-powered Software-as-a-Service (SaaS) solutions to help retail and CPG customers forecast and merchandise, reflect strategic priority and ability to execute on its vision of Enterprise Asset Intelligence.

**John Deere** acquired Bear Flag Robotics in August for \$250 million, to help boost their farming automation to help match both global labor shortage and improve agriculture yields.

**Novanta**, a leader in photonics, vision and precision motion for the medical and advanced industries like robotics, purchased ATI Industrial Automation for \$172 million and Schneider Electric Motion for \$115 million. These two acquisitions will significantly boost Novanta's robotics and automation capabilities, adding intelligent subsystem content and further expanding their exposure to the life sciences and medical end markets, as well as the electric vehicle industry.



## Rise in Venture Funding

Venture capital is reaching new highs with \$156 billion raised in Q2 globally, the highest in the past decade, with the number of global exits (IPOs, M&As and SPACs) up over 109% YoY, reaching an all-time high of 3,000.



## \$156 billion raised in Q2 globally, the highest in the past decade

Compared to 2020, healthcare and fintech saw the biggest boosts while robotics M&A slowed down versus the prior year. Geographically – while most of the world has seen accelerated growth in venture and M&A – China saw a decline of nearly 20% in funding amid a regulatory crackdown in certain areas. Cybersecurity saw multiple large public listings with SentinelOne (\$8.9 billion) and UK-based DarkTrace (\$2.3 billion).

Most recently, Q2 saw some of the most impressive funding with 24 new unicorns (private companies valued over \$1 billion) minted in the AI space. This was driven largely by transportation (autonomous vehicles), cybersecurity, healthcare and fintech companies. The US remained the number one spot for AI investments, followed by China and the UK.

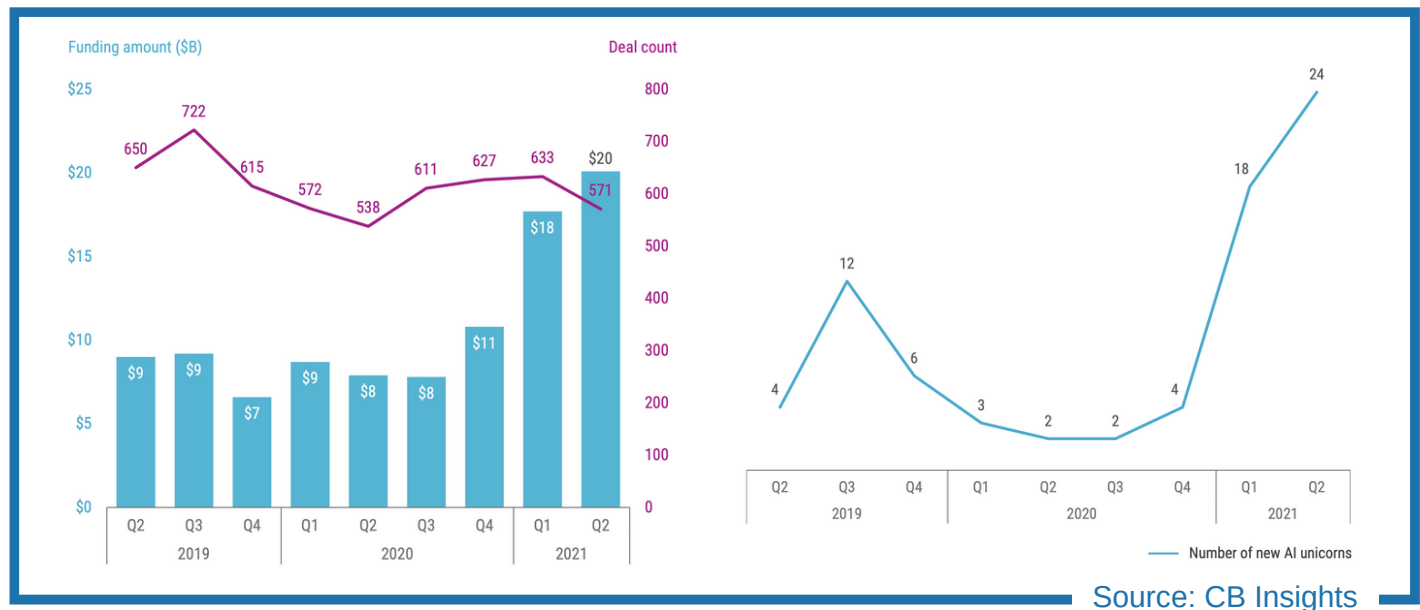
Exits in AI are ramping up – with **NVIDIA** and **IBM** being two of the most active acquirers. We saw the largest AI IPO with UiPath, the global leaders in Robotics Process Automation, at \$35 billion, and soon-to-be-public Databrick at \$38 billion. In healthcare, AI drug discovery saw multiple billion dollar exits including Recursion Pharmaceuticals at \$2.9 billion valuation. Also in the mRNA space, we saw Sanofi's acquisition of Translate Bio for \$3.2 billion as players look to catch up with **Moderna**.

The battle for the future of transportation is also ramping up with an additional \$2.5 billion in investments to Waymo from multiple sponsors, and a \$750 million round into majority GM-backed Cruise from Walmart.

\*Companies bolded in blue are members of at least one of the ROBO Indices.

## AI Investments

Investors continues to pour \$ into AI startups with record AI unicorns in 2021



Here are some of the most exciting funding details and valuations of private robotics and AI companies.

- **Rivian**, an electric vehicle company, raised \$2.5 billion during the most recent round and recently filed for an IPO at a valuation of \$80 billion
- **Databricks**, an enterprise AI software company, raised \$1.6 billion at \$38 billion at Series H
- **UiPath**, a software robotic company, raised \$1.35 billion at a market cap of \$35 billion at the IPO debut
- **Mollie**, a digital payment service provider, raised \$800 million in a Series C with a valuation of \$6.5 billion
- **Relativity Space** (3D Printed Rockets) raised \$650 million at \$4.2 billion valuation – putting pressure on SpaceX with potentially lower build-cost rockets
- **Klarna**, an AI-powered fintech provider, raised \$639 million at a valuation of \$45 billion
- Smart Drone provider **Anduril** raised \$450 million in Series D at a valuation of \$4.6 billion
- **Bowery Farms** raised \$300 million to build out its indoor farming platform at over a \$2 billion valuation

Source: Crunchbase and CB Insights



## THNQ: Artificial Intelligence Index

Artificial Intelligence in all its forms has seen one of the fastest adoption rates and usage across nearly all industries, even before the pandemic began. The Covid-19 pandemic has accelerated gains and is already changing how we live, work and play. Enterprises around the world are reprioritizing business strategies to quickly analyze and extract intelligent insights to make better business decisions.

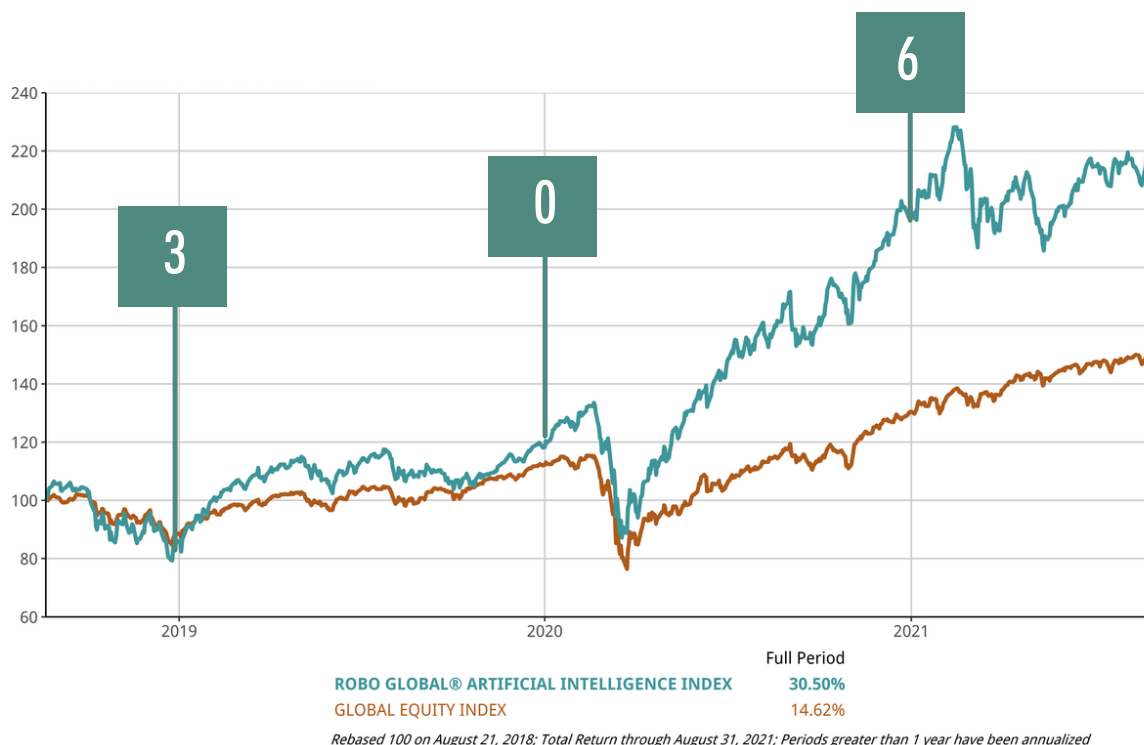
Data analytics companies around the world are looking for ways to build infrastructure that will give them a more modern approach to processing tons of data for their customers. The first-generation open-source platforms that disrupted the data warehousing industry are no longer relevant, and enterprises are demanding lower time to value for their data initiatives and seeking high-quality insights using AI. Whether through APIs or self-service markets, the cloud services industry is rapidly changing as enterprises are looking for more off-the-shelf solutions combined with the flexibility of the cloud solutions they are deploying.



Five THNQ index members have received takeout offers so far in 2021, as the race to build the best cloud-based data platform is underway.

Apart from **Microsoft** (a THNQ member), which acquired **Nuance** (another THNQ and ROBO member), the deals were led by private equity firms, which have plenty of dry powder – \$2 trillion in assets are available for private equity investments, according to Deloitte and Bain & Co. We anticipate continued momentum in M&A especially for AI-enabled providers and advanced analytics solutions.

## Overview: Total Takeouts Since Inception by year



## Overview: Total Takeouts Since Inception

Announcement Date	Acquirer	Target Company (Index Members)	Deal Value (\$MM)	Completed
5/17/2019	Hewlett Packard Enterprise	Cray	\$1,300	YES
6/10/2019	Salesforce	Tableau	\$15,300	YES
6/11/2019	Dassault Systemes	Medidata	\$5,800	YES
3/10/2021	Thoma Bravo	Talend SA	\$2,394	YES
4/12/2021	Microsoft Corp	Nuance Communications	\$16,3351	PENDING
4/26/2021	Thoma Bravo	Proofpoint Inc	\$11,110	YES
6/1/2021	Clayton Dublier & Rice LLC (Clayton) and Kohlberg Kravis Roberts & Co LP	Cloudera Inc	\$5,288	PENDING
8/5/2021	Sunshine Holdings (Clearlake Capital Group)	Cornerstone OnDemand	\$3,805	PENDING
8/31/2021	TPG Capital, Vista Equity Partners	Blue Prism	N/A	NO



Private equity firms and large tech giants are gobbling up enterprise software companies for AI talent as well as for their subscription revenue platforms. AI capabilities are now a crucial component to most of the enterprise IT architecture, and the race to hire AI talent is a big challenge. **Cloudera**, a THNQ index member and an Enterprise AI data analytics platform provider, was acquired by two PE firms for \$5.3 billion, representing a 24% premium for shareholders. Cloudera has had some difficulties in the past digesting a very large acquisition and was faced with requiring more resources to upgrade their infrastructure as the cloud industry is moving quickly. PE firms will provide the resources the company needs to move to a modern data-processing marketplace.

**Talend SA**, another index member, was acquired by a PE firm, Thoma Bravo, for \$2.4 billion with a 29% premium over the previous close. The company began its IPO debut about 5 years ago and has quickly become a leader in AI data integration riding the cloud transformation wave. Talend has seen tremendous growth with data analytics and companies requiring rapid shifts to more digital and remote-friendly platforms due to the pandemic. Much like Cloudera, Talend was faced with requiring more financial resources and expertise to drive product-led growth and expand their addressable market opportunity.

**Proofpoint** was also another takeover candidate by Thoma Bravo, with a 34% premium over the closing price at \$12.4 billion. Proofpoint is the largest cloud acquisition by a private equity firm and the second THNQ member acquired by Thoma Bravo in a period of two months. PFPT is one of the original cyber security vendors that developed and used ML/AI for their email security solutions, which is a key area, as over 50% of all cyber-attacks are accomplished via email.

Meanwhile, Clearlake Capital, a private equity fund with \$39 billion AUM, purchased talent management platform company, **Cornerstone OnDemand** for \$3.8 billion. Cornerstone, an index member has over 6,000 customers and supports 75 million users. With the help of the PE firm, Cornerstone can now double down on its investments related to its employee learning management platform as it is seeing a resurgence driven by the pandemic. With the employee churn and the push by employers to upskill their existing workforce, Cornerstone believes they have an opportunity to accelerate their revenue growth as a private entity.

Since inception of THNQ index, there has been total of nine takeover attempts with 6 occurring in 2021 alone. Furthermore, as of 9/1/21, there have been 97 completed acquisitions by THNQ index members and 48 deals totaling over \$74 billion in value. E-commerce, fintech, supply chain and logistics and cybersecurity providers with strong balance sheets have been unstoppable with its acquisition spree.

## Chipmakers Seeking to Strengthen AI & Cloud Portfolio

While **Nvidia**, a member of ROBO and THNQ indices, awaits approval for its \$40 billion acquisition of ARM to round out its portfolio of offerings to be the leader in AI and data center customers, it has continued its acquisition spree by buying Palo Alto-based Deepmap (undisclosed value), a developer of high-definition maps for self-driving vehicles.



ROBO index member **Qualcomm** announced its intent to acquire Veoneer for \$4.6 billion as the company continues to diversify its portfolio beyond Smart Phone segment and into IoT and Automotive technologies. Early this year, Qualcomm purchased NuVia Inc. for \$1.4 billion to help transition away from ARM for their Snapdragon processors, automotive, PC and 5G infrastructure networks.

Meanwhile, Marvell struck a deal to buy cloud and edge networking solutions company Innovium for \$1.1 billion. With this acquisition, Marvell may have the broadest portfolio of silicon solutions for hyper-scale data centers to help the cloud providers design their next-generation architecture. The industry for hyper-scale data centers is a two-horse race between Broadcom and Marvell.



**Building the banking and commerce platform of the future:** THNQ index member **Square** acquired Afterpay for \$29 billion. Square's acquisition of Afterpay represents one of the largest M&A deals of the year and signals its vision to become one of the biggest digital banks in the world. Square is connecting its banking, payment and seller ecosystems to deliver solutions that put power back in the hands of small businesses. In recent quarters, Square has ramped up its investment in building out its blockchain-based support and applications to provide a full-stack solution for consumers, merchants and developers for crypto assets.

**Autodesk's** acquisition of Innovyze, a provider of smart water infrastructure modeling and AI simulation company, for \$1 billion, also shouldn't be overlooked. Given the impact of global warming and ever-increasing flooding catastrophes and the importance of water preservation and control, they are looking to provide much-needed holistic solutions to design for the future.

As the world becomes more and more digital centric, the need to protect that data from internal and external threats becomes more important. **Rapid7 Inc**, which offers security analytics and automation for leading companies around the globe, acquired IntSights Cyber Intelligence for \$335 million to expand its capabilities and cover more external threats while giving more integrated tools to security teams.



## HTEC: Healthcare Technology & Innovation Index

### Ongoing Digitization and Vertical Integration are Driving Healthcare Technology M&A

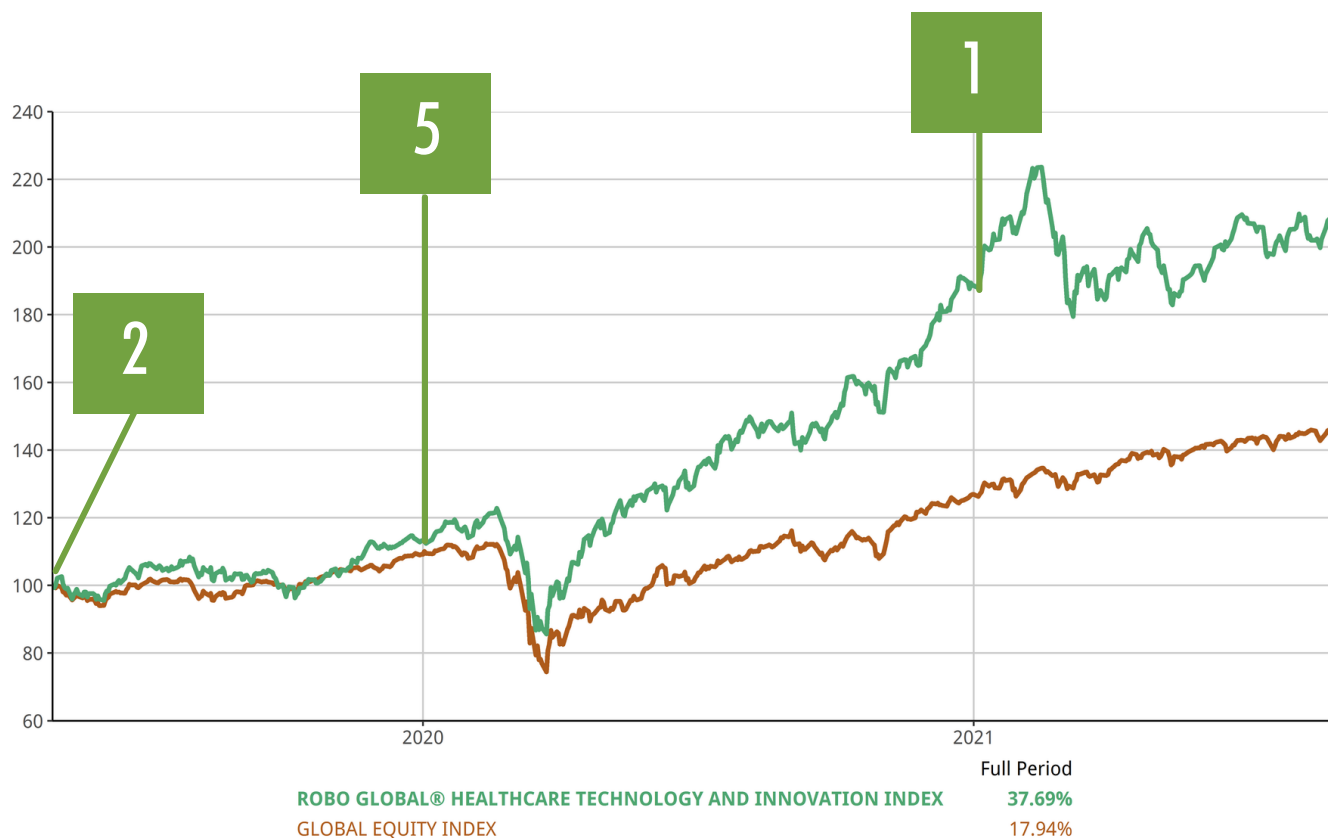
We anticipate M&A will increase in the coming year with a shift towards AI, data analytics and other technology solutions that will improve the efficiency of care that can help produce faster and better healthcare outcomes and help reduce physician burnout. Additionally, we expect continued consolidation of the rapidly verticalizing digital health industry.

In particular, innovation in molecular science, data analytics, and enabling technology is really taking off, and companies are racing to lock in their place to capitalize on new and growing markets. The key theme is convergence of digital technology and medical diagnostics for early diagnosis and prevention.



For HTEC, there have been 73 deals (completed and pending) worth \$50.1 billion made by index members as of September 1, 2021, on track to surpass full-year 2020's total of 93 deals valued at \$66.7 billion which had vastly overtaken HTEC Index Members 2019's 59 deals totaling \$16.8 billion. Since HTEC inception, there have been 6 takeout offers, and its members have completed 225 deals totaling over \$100 billion.

## Overview: Total Takeouts Since Inception by year



Rebased 100 on April 30, 2019; Total Return through August 31, 2021; Periods greater than 1 year have been annualized

## Overview: Total Takeouts Since Inception

Announcement Date	Acquirer	Target Company (Index Members)	Deal Value (\$MM)	Completed
6/12/2019	Dassault Systemes	Medidata Solutions	\$5,900	YES
7/29/2019	Exact Sciences	Genomic Health	\$2,500	YES
3/3/2020	Thermo Fisher Scientific	Qiagen	\$12,900	NO
8/2/2020	Siemens Healthineers	Varian Medical Systems	\$16,364	YES
8/5/2020	Teladoc Health	Livongo	\$17,539	YES
12/8/2020	Baxter International	Omniceil	\$5,000	YES
12/18/2020	Philips Holding USA	BioTelemetry Inc	\$2,683	YES
4/12/2021	Microsoft Corp	Nuance Communications	\$16,351	PENDING



**The top areas of healthcare M&A this year for HTEC have been in contract research, life science, and process automation, to deliver more efficient and faster drug development.**

**Thermo Fisher Scientific's** acquisition of PPD, a drug development company, for \$17.4 billion is the second largest mega-deal this year, expanding Thermo's capabilities as a player in the drug development space – where the global CDMO market is expected to reach \$236 billion by 2026. PPD has facilitated over 500 new drug approvals in the past 5 years and had \$4.7 billion in trailing revenues.

**Danaher**, a leading manufacturer of life science diagnostic and lab automation technologies, announced their intent to acquire clinical research organization Aldevron for \$9.6 billion to expand their offering to include and work with genomic medicines. Aldevron plays a key role as a supplier to Moderna with their plasmid DNA in generating the Covid-19 mRNA vaccine and other investigational treatments in Moderna's pipeline.

**Perkin Elmer**, a leading provider of diagnostic equipment for life sciences, announced its largest acquisition in the history of the company with \$5.25 billion for BioLegend, a provider of antibodies and reagents in areas such as cytometry, proteogenomics, multiplex assays, recombinant proteins, magnetic cell separation, and bioprocessing. This deal adds \$300 million of immediate revenue and expects to see \$100 million in synergy to address oncology, neurology, diagnostics, and immunology markets.



### Medical Instruments also saw activity as many players look to expand and improve offerings as the world re-focuses on the importance of healthcare:

**Boston Scientific** has been active this year, as per usual, continuing to expand their offerings in Cardiac and beyond

- In June, Boston Scientific purchased the remaining 73% stake in Farapulse, a new, non-thermal ablation system for the treatment of atrial fibrillation, for \$295 million. This adds novel and proprietary superior technology to help treat the underlying cause for potentially millions who get strokes and heart failure and is currently a fast-growing \$10 billion market.
- Boston Scientific purchased Lumenis's Surgical Business Segment for \$1 billion, which includes premier laser systems, fibers and accessories for urology and otolaryngology procedures, adding \$200 million in revenue.
- Preventice Inc \$1.25 billion acquisition of wearable cardiac monitoring platform provider helps expand their holistic cardiac division further beyond surgical to comprehensive care.

**Veracyte**, a leading provider of genomic testing for cancers, acquired HalioDx (\$317 million) and Decipher Biosciences (\$600 million) to add to its diagnostic portfolio that now covers 8 of the 10 most common and deadly cancers.

## Private Funding Already Surpassed Last Year's Record

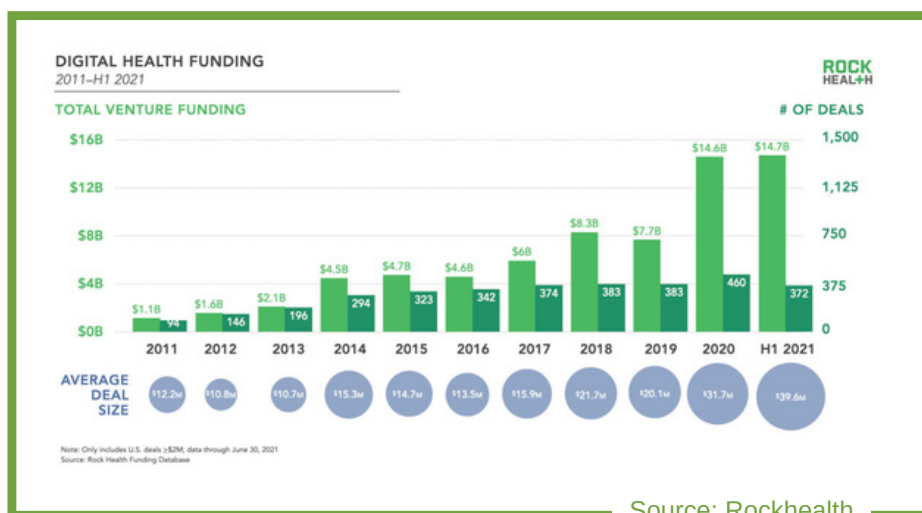
Digital health companies have seen \$14.7 billion in venture funding so far in 2021, outpacing 2020's record-breaking funding.

Source: Rockhealth

Venture activity in healthcare is at all-time highs, as many of the world's brightest talent and investors shifted focus to solve some of the hardest problems in healthcare. AI-enabled healthcare companies will inevitably continue to draw higher valuations as innovations bring a rotating charcuterie of timely opportunities.

### Digital Therapeutics, Virtual + Augmented Reality, telehealth and drug discovery ramps up.

With Covid-19 disruptions fostering the need for at-home and remote patient care models, both existing companies and new entrants across the healthcare spectrum saw massive fundraising and adoption.



The biggest rounds this year were a \$500 million funding round for Ro, a patient-driven telehealth start-up, and a \$400 million round for Insitro, a machine-learning-based drug discovery company, and \$540 million for Noom, which is expanding from a digital-forward pureplay weight-loss program into more acute conditions such as diabetes prevention.

Beyond diabetes, one of the hottest areas includes remote muscular skeletal (MSK) support, one of the highest areas of spend, and root cause of other healthcare issues in the US, including opioid addiction.

Using a combination of wearables, computer vision and analysis combined with professional coaching, the following companies are paving a path forward for the future of MSK care: Hinge Health, self-described as the world's first digital clinic for back pain, raised \$300 million at a \$3 billion valuation early 2021 and even acquired a remote medical device and wearable company, Enso, which provides targeted electrical stimulation with an easy setup.

Another area that is being disrupted with new entrants is the massive, fast-growing \$80 billion mental health technology and services market, which includes everything from therapy, measurement and diagnostics, digital therapeutics, wearables, wellness and alternative medicine. In late August, popular medication and wellness app Headspace announced their intent to merge with Ginger.io, which provides on-demand mental health and therapy support, for a combined value of \$3 billion.

## ROBO: 2021 M&A Activity

Announcement Date	Acquirer	Target Company (Index Members)	Deal Value (\$MM)	Completed
1/4/2021	Teledyne Technologies Inc	FLIR Systems Inc	\$7,501	YES
1/13/2021	Qualcomm Inc	NuVia Inc	\$1,400	YES
1/13/2021	AeroVironment Inc	Arcturus UAV Inc	\$405	YES
2/23/2021	Autodesk Inc	Innovyze Inc	\$1,000	PENDING
4/14/2021	ATS Automation Tooling Systems Inc	BioDot Inc	\$84	YES
4/26/2021	Brooks Automation Inc	Precise Automation Inc	\$70	PENDING
5/17/2021	Siemens AG	Supplyframe Inc	\$700	YES
6/23/2021	Tecan Group AG	Paramit Corp	\$1,000	YES
6/25/2021	Rockwell Automation Inc	Plex Systems Inc	\$2,220	YES
6/28/21	John Bean Technologies Corp	Prevenio LLC	\$170	PENDING
7/1/2021	Zebra Technologies Corp	Fetch Robotics Inc	\$290	YES
7/6/2021	Hexagon AB	Infor Global Solutions-EAM	\$2,767	PENDING
7/12/2021	Novanta Inc	Schneider Electric Motion USA	\$115	PENDING
7/19/2021	Novanta Inc	ATI Industrial Automation Inc	\$172	PENDING
7/20/2021	Schneider Electric SE	IGE + XAO SA	\$127	INTENDED
7/26/2021	Omnicell Inc	FDS Inc	\$177	PENDING
8/5/2021	Qualcomm Inc	Veoneer Inc	\$4,142	PENDING
8/5/2021	Deere & Co	Bear Flag Robotics Inc	\$250	YES
8/24/2021	Nordson Corp	NDC Technologies Inc	\$180	PENDING

SOURCE: FACTSET



## THNQ: 2021 M&A Activity

Announcement Date	Acquirer	Target Company (Index Members)	Deal Value (\$MM)	Completed
2/3/2021	Veracyte Inc	Decipher Biosciences Inc	\$600	YES
2/8/2021	Electronic Arts Inc	Glu Mobile Inc	\$2,378	YES
2/23/2021	Autodesk Inc	Innovyze Inc	\$1,000	PENDING
3/12/2021	Tencent Holdings Ltd	Rakuten Inc	\$606	YES
3/22/2021	JD.com Inc	Dada Nexus Ltd	\$800	PENDING
1/21/2021	Boston Scientific Corp	Preventative Solutions Inc	\$950	PENDING
4/12/2021	Microsoft Corp	Nuance Communications Inc	\$16,351	PENDING
5/17/2021	Twilio Inc	Zipwhip Inc	\$850	YES
5/26/2021	Amazon.com Inc	MGM Holdings Inc	\$8,450	PENDING
6/1/2021	Veracyte Inc	Haliidx Sasu	\$318	YES
6/2/2021	Etsy Inc	Depop Ltd	\$1,625	YES
6/10/2021	Nvidia Corp	DeepMap Inc	N/A	YES
6/14/2021	Shopify Inc	Stripe Inc	\$350	YES
6/23/2021	Electronic Arts Inc	Playdemic Ltd	\$1,400	PENDING
7/14/2021	NortonLifeLock Inc	Avast PLC	\$8,697	PENDING
7/19/2021	Tencent Holdings Ltd	Sumo Group PLC	\$1,105	PENDING
7/19/2021	Rapid7 Inc	Intsights Cyber Intelligence	\$335	YES
8/2/2021	Square Inc	Afterpay Ltd	\$26,848	PENDING
8/19/2021	Adobe Inc	Frame.io Inc	\$1,275	PENDING

SOURCE: FACTSET

## HTEC: 2021 M&amp;A Activity

Announcement Date	Acquirer	Target Company (Index Members)	Deal Value (\$MM)	Completed
1/5/2021	Hologic Inc	Biotheranostics Inc	\$230	YES
1/7/2021	PerkinElmer Inc	Oxford Immunotee Global PLC	\$571	YES
1/15/2021	Thermo Fisher Scientific Inc	Henogen SA	\$881	YES
1/19/2021	Koninklijke Philips NV	Capsule Technologies Inc	\$635	PENDING
1/19/2021	Thermo Fisher Scientific Inc	Mesa Biotech Inc	\$550	YES
1/21/2021	Boston Scientific Corp	Preventative Solutions Inc	\$950	PENDING
2/3/2021	Veracyte Inc	Decipher Biosciences Inc	\$600	YES
2/17/2021	Charles River Laboratories International Inc	Cognate Bioservices Inc	\$875	YES
3/1/2021	Grifols SA	BPL Inc-Plasma Donation Center	\$370	YES
3/2/2021	Agilent Technologies Inc	Resolution Bioscience Inc	\$695	YES
3/3/2021	Boston Scientific Corp	Lumenis Ltd-Global Surgical	\$1,070	YES
3/15/2021	Roche Holdings AG	GenMark Diagnostics Inc	\$1,842	YES
4/1/2021	IQVIA Holdings Inc	Q Sqd Solutions Hldg LLC	\$760	YES
4/8/2021	Hologic Inc	Mobidiag Oy	\$793	YES
4/11/2021	DiaSorin SpA	Luminex Corp	\$1,787	PENDING
4/15/2021	Thermo Fisher Scientific Inc	PPD Inc	\$17,307	PENDING
5/17/2021	Charles River Laboratories International Inc	Vigene Biosciences Inc	\$350	YES
6/1/2021	Veracyte Inc	Haliodx Sasu	\$318	YES
6/7/2021	1Life Healthcare Inc	Iora Health Inc	\$1,998	YES
6/17/2021	Danaher Corp	Aldevron LLC	\$9,600	YES
6/23/2021	Tecan Group AG	Paramit Corp	\$1,000	YES
6/24/2021	Health Catalyst Inc	Twistle Inc	\$170	PENDING
7/19/2021	Novanta Inc	ATI Industrial Automation Inc	\$172	PENDING
7/26/2021	PerkinElmer Inc	Biolegend Inc	\$5,250	PENDING
8/30/2021	Catalent Inc	Bettera Holdings LLC	\$1,000	PENDING

SOURCE: FACTSET

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