

2020 Emerging Technology Outlook

Predicting trends in mobility, fintech and IoT for the coming year

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Prediction: We expect electric air taxi startups to receive a record level of VC investment in 2020.

Rationale: We believe nontraditional venture investors remain attracted to the substantial market opportunity for autonomous electric air taxis. Our analysis shows that elevated venture funding activity in the electric air taxi space and rapid cash burn rates of leading air taxi startups have set the stage for potential VC mega-deals (\$100 million+) in 2020.

Caveat: Commercialization of air taxi services still faces significant hurdles associated with regulation and advances in autonomous and battery technology.

The air taxi industry—which we define as air taxi service providers as well as electric vertical take-off and landing (eVTOL) aircraft manufacturers—has the potential to significantly disrupt the landscape of urban mobility. Air taxis could dramatically lower the cost of long-distance urban transportation while reducing emissions and traffic congestion within cities. Although the industry faces significant technological and regulatory hurdles, we believe nontraditional investors such as manufacturers and corporates with vested interests in shaping the evolution of the transportation industry will continue to fund R&D in the space, which could drive significant funding for air taxi startups in 2020.

We believe the urban air mobility space has the potential to take a sizable chunk of market share from both ground-based transportation services and the helicopter industry. These industries combined represent a massive market of approximately \$1.1 trillion in annual spending.¹ Even assuming a small share of this market could represent substantial returns for early investors.

In the early phase of adoption, electric air taxis would primarily displace helicopter services. Helicopter transport has not seen widespread adoption in major cities, and we believe electric air taxis have several potential advantages. First, the cost of flying by helicopter is high—approximately \$9.00 per mile—and only makes economic sense for high-income commuters or business executives. Second,

1: "TET 2018—Chapter 6—Household Spending on Transportation," Bureau of Transportation Statistics, United States Department of Transportation, n.d.

air taxis could have lower operating and maintenance costs. This is because helicopters have a single point of failure—the main rotor—which necessitates recurrent and thorough inspections. Most air taxis in development have multiple motors and redundancies, which should reduce the frequency of inspections and thereby lower maintenance costs. Third, battery or hybrid powertrains of air taxis should lead to significant fuel cost savings. Finally, we anticipate autonomous technology will reduce the need for certified pilots, which would bring down the cost of operation significantly. Uber estimates that at scale, its autonomous electric air taxi service (dubbed “Elevate” in partnership with Bell Labs) could be priced similarly or lower than a car-based rideshare (approximately \$2.00 per mile). Air taxi startup Lillium claims that the cost of a trip from Manhattan to JFK Airport could be \$70, or approximately \$4.40 per mile. Citi estimates the cost of an air taxi ride could be around \$3.75 per mile.

While most major corporates and startups in the space have set targets for deployment in the mid-2020s, we believe this is an aggressive estimate given technological and regulatory barriers. For this potentially disruptive industry to progress, the energy density of lithium ion batteries will need to improve. China-based startup EHang’s two-seater aircraft currently has the capability to travel for only about 20 minutes before needing to recharge. Autonomous technology will also need to advance significantly to pass stringent flight control tests. Companies such as Daedalean, which raised a \$12.0 million early-stage VC round in July, are developing autonomous piloting systems to tackle this issue. Regulation represents yet another barrier to adoption as aviation authorities and city officials need to sign off on these services.

Key VC-backed air taxi companies

Company name	Total raised (\$M)	Last financing date	Last financing size (\$M)	Last known valuation (\$M)	Key investors
Joby Aviation	\$128.3	January 1, 2019	\$1.0	\$450.0	Capricorn Investment Group, Intel Capital, JetBlue Technology Ventures, Toyota AI Ventures, Trucks Venture Capital
Lilium	\$100.9	September 5, 2017	\$89.5	\$576.2	Asseily Ventures, Atomico, ESA Business Incubation Centre Bavaria, Freigeist, LGT Group, Obvious Ventures, Tencent Holdings
Volocopter	\$96.5	January 1, 2020*	--	\$249.4	b-to-v Partners, Daimler, Helvetia Holding, Intel Capital, Manta Ray Ventures, Micron Ventures, Zhejiang Geely Holding Group
EHang	\$52.0	October 31, 2019**	\$100.0	--	GGV Capital, Golden Partners Capital, PreAngel, ZhenFund
Skyryse	\$27.9	February 5, 2018	\$25.0	\$100.0	City Light Capital, Eclipse Ventures, Engage Ventures, Tech Square Venture Partners, Trucks Venture Capital, Venrock
Karem Aircraft	\$25.0	July 15, 2019	\$25.0	--	Hanwha

Source: PitchBook | Geography: Global

*Upcoming

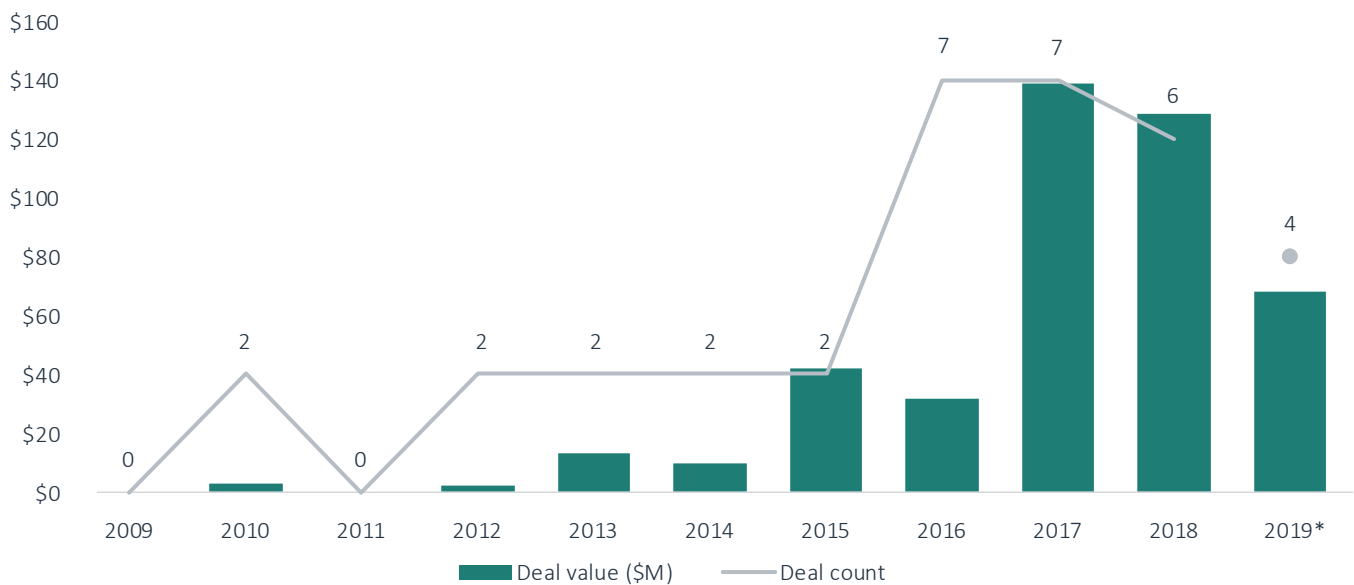
**Announced IPO

The industry also needs significant capital to fund R&D. The cost of developing and certifying new light aircraft can reportedly be \$1 billion or higher. This compares to just \$438.0 million total VC invested in the space since 2009. As disclosed in its F-1 financials, EHang generated operating losses of \$10.8 million on \$9.7 million in revenue in 2018. This loss was largely driven by R&D expenses. With approximately \$8.8 million in cash on its balance sheet at the end of 2Q 2019, the company will need to raise additional capital to continue operations. According to our data, most air taxi startups are in a similar predicament, with little revenue and rapid burn rates. The prevalence of nontraditional investors, including auto manufacturers and corporates such as Intel Capital and Tencent, could help solve these cash demands to some extent. These companies can afford to invest large amounts of capital over a lengthier time horizon than the comfort zones of most

conventional VCs. We believe Joby Aviation and Lilium are good candidates for mega-deals in the next 12 months. Notably, Lilium is reportedly seeking \$500.0 million in an upcoming Series C round from Tencent and other investors. Such a scenario could result in 2020 being a record year for VC investment in the air taxi space.

So far in 2019, \$68.4 million in VC has been invested in electric air taxi startups, marking a decline from the \$138.7 million invested in 2017 and \$128.5 million in 2018. 2017’s record amount was driven by Lilium’s \$90.0 million Series B round, which was led by Tencent and valued the company at \$576.0 million. In early 2018, Joby Aviation raised a \$100.0 million Series B round, which was led by Intel Capital and valued the startup at \$450.0 million. Joby Aviation’s Series B remains the largest single round and only mega-deal in the space. With that said, deal activity has picked up in the latter half of 2019. In September 2019, Volocopter raised a \$55.0 million Series B round valuing the company at \$249.0 million. In July 2019, Karem Aircraft raised a \$25.0 million Series A round. Notably, the first exits in the air taxi space may be on the horizon. In late October, EHang filed for an IPO with Nasdaq and is reportedly looking to raise as much as \$200 million.²

Air taxi VC deal activity



Source: PitchBook | Geography: Global
*As of November 14, 2019

²: "Chinese Passenger Drone Maker EHang Is Said to File for US IPO," Bloomberg News, Lulu Yilun Chen, Julia Fioretti and Evelyn Yu, September 25, 2019

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Prediction: Autonomous vehicle startups are prime acquisition targets for tech companies and automakers in 2020.

Rationale: Lengthening timelines for full Level 4/Level 5 autonomy are making it more difficult for early-stage autonomous vehicle startups to raise capital. We believe this dynamic creates attractive buying opportunities for incumbent tech companies and automakers seeking access to technology and talent at major valuation discounts.

Caveat: There is a great deal of risk and uncertainty involved in picking winners in an ecosystem that has yet to be defined. Incumbents may choose to wait on the sidelines before backing eventual winners. Alternatively, incumbents could hedge their bets by investing in self-driving startups without outright acquiring them.

The timeline for autonomous vehicle deployment has lengthened. A few years ago, market expectations were for rollouts of Level 4/5 autonomous vehicles—which are able to operate without driver input—by the early 2020s. That is no longer the case. Technological hurdles and setbacks, such as the fatal Uber crash, have reset expectations among investors. Today, general market consensus is that widespread Level 4/5 autonomy will be a longer-term (10+ years) trend.

This prolonged timeline is unfavorable for early-stage startups for two main reasons. First, raising capital is more difficult. We have heard anecdotally from startups about investors exerting increased pressure on them to show a pathway to commercialization. Second, early-stage startups are increasingly disadvantaged from a competitive standpoint. A protracted timeline favors larger companies with established business models and strong balance sheets that can support long-term investments.










This dynamic creates attractive buying opportunities for incumbent tech companies and automakers seeking access to technology and talent at discount valuations. Given the high capital intensity of developing self-driving technology, acquisitions may represent the only viable exit opportunity for many struggling startups. Discount acqui-hires and acquisitions are already beginning to occur in the space. In August 2019, DoorDash acquired Scotty Labs, which reportedly had difficulty raising capital after losing a major

customer. In June 2019, Apple acquired Drive.ai for \$77.0 million, significantly lower than the \$200.0 million valuation the startup had in mid-2017.

Attractive valuations also permeate the self-driving trucking industry. Startups such as TuSimple, Ike Robotics, Embark and Kodiak Robotics have lower valuations than leading autonomous car companies, which are largely owned or backed by major automakers and tech companies. In our view, these lower valuations are at odds with the potentially broader and more near-term market opportunity in automating logistics. Relative to urban consumer transportation, logistics automation has lower safety and passenger-experience requirements, potentially enabling earlier adoption and revenue generation.

In our view, Amazon would be an obvious buyer for a self-driving trucking startup. The company stands to benefit significantly from automating its vast logistics network. Amazon has more than enough cash on its balance sheet—over \$43 billion as of 3Q 2019. The company has also already made major investments into mobility companies, such as its \$700.0 million investment into electric vehicle maker Rivian in February 2019 and subsequent order of 100,000 electric delivery vans. Amazon has also invested in Aurora Innovation, a competing self-driving company focused on automating urban transportation. Finally, Amazon is reportedly already testing hauling cargo in self-driving trucks from Embark. Bringing these capabilities fully in-house makes logical sense and would round out Amazon’s portfolio.

Recent autonomous vehicle company post-money valuations

Self-driving cars	Post-money valuation	Self-driving trucks	Post-money valuation
 WAYMO	N/A (\$30B-\$45B estimated)*	 tu simple	\$1.2B
 cruise	\$19B	 plus.ai	\$1B
 MOBILEYE An Intel Company	\$15.3B	 EMBARK	\$520M
Uber ATG	\$7.3B	 Ike	\$250M
 ARGO	\$7.3B	 Kodiak	\$210M

Source: PitchBook | Geography: Global | *Internal estimates
 Note: Waymo is also reportedly testing its technology on long-haul trucks.

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Prediction: Bank fees and deposit interest rates will be the next battleground between incumbent banks and fintech companies for retail financial services.

Rationale: 2019 saw many of the major retail brokerages completely remove commission fees to better compete with fintech brokerages. We expect this trend to expand into other parts of retail financial services, including retail banking.

Caveat: The current customer bases of incumbent banks and fintech companies do not significantly overlap. If this remains the case, banks would feel less pressure to compete on pricing and product features. In addition, weak macroeconomic conditions can lead to a lower interest rate environment, decreasing the APY spread between fintech companies and incumbent banks.

In October 2019, Charles Schwab announced that it was removing commission fees for online trading of stocks, ETFs and options. The domino effect was swift, as Fidelity, TD Ameritrade, Bank of America Merrill Lynch, Interactive Brokers, E-Trade and other brokerages all followed suit in a matter of weeks. These brokerages were responding to competitive pressure from leading fintech companies such as Robinhood, which first began offering free trades in 2014. These developments have diminished Robinhood's competitive advantage in the brokerage space to some extent, and we expect a similar story to play out in retail banking over the coming year as fintech companies increasingly offer no-fee and high-yield savings accounts to lure customers away from incumbents.

Bank fees represent a massive revenue source for incumbent US banks. In 2014, the CFPB estimated the annual net fees (combined total bank fees) per account were \$118.³ We estimate that consumers are paying at least \$65 billion in fees to the retail banking industry annually. Unlike traditional checking and savings accounts, new products offered by fintech companies—including Robinhood's new Cash Management account—generally do not charge fees for monthly maintenance, overdrafts, foreign transactions, inactivity or failure to meet minimum balances. This mirrors similar offerings by other fintech companies including SoFi, Betterment, Wealthfront and Varo.

3: Data Point: Checking account overdraft, CFPB, July 2014

Deposit interest rates represent another emerging battle ground for customer deposits. Fintech companies typically pay an APY on customer deposit accounts in the 1.5%-2.0% range, which is 15-20 times higher than what incumbents pay. This strategy is aided by the ease with which customers can now find the highest-yielding products online and open and deposit funds into accounts within minutes. Like in the retail brokerage space, we expect this dynamic will put pressure on incumbent providers to change their current fee structures and raise APY on customer deposits. This is already happening to some extent as Citibank recently launched its Accelerate Savings account, which offers a competitive interest rate. However, the company still charges fees for account minimums and overdrafts. While high-margin fee revenue has been a staple of the banking industry for decades, fintech companies are making a bet that their relatively low-cost and scalable operating models can enable them to provide better value to consumers while still operating a successful business.

Current interest rates for deposit accounts*

Fintech company	Product	Interest rate
Varo Money	Save	2.02%
Betterment	Everyday Cash Reserve	1.85%
Wealthfront	Cash Account	1.82%
Robinhood	Cash Management	1.80%
SoFi	Money	1.60%
Aspiration	Spend & Save	1.00%
Incumbent bank	Product	Interest rate
Citibank	Accelerate Savings	2.05%
Bank of America	Advantage Savings (Standard)	0.03%
Wells Fargo	Way2Save Savings	0.01%
Chase	Savings	0.01%
US Bank	Standard Savings	0.01%

Source: PitchBook | Geography: Global
*As of November 21, 2019

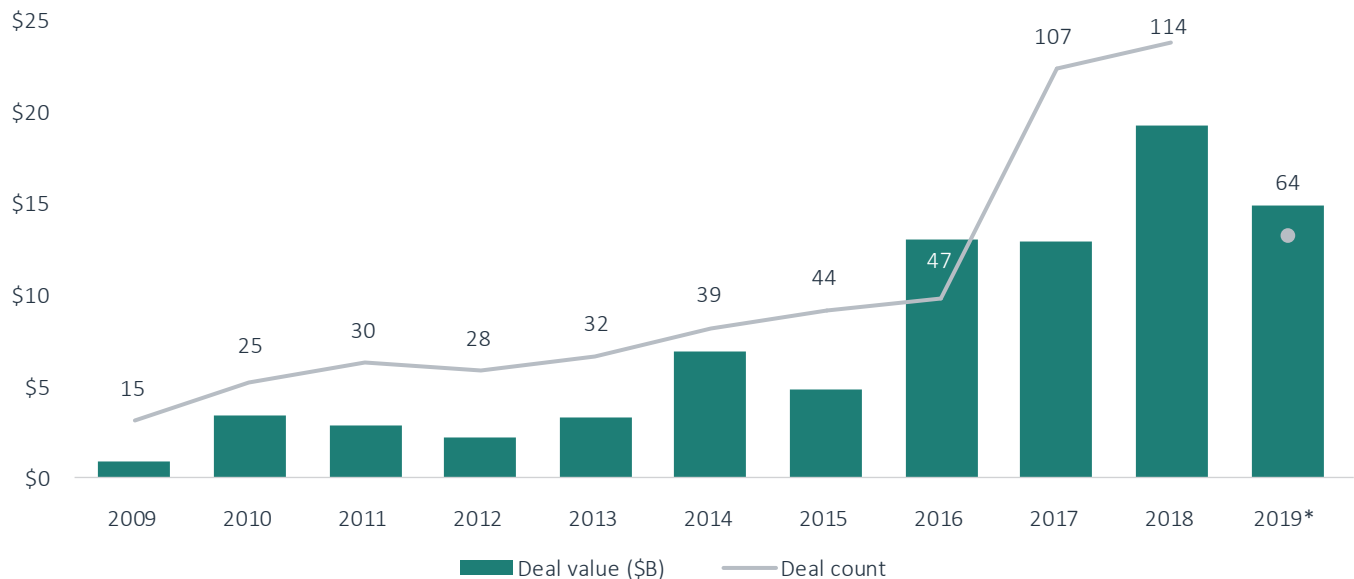
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Prediction: Large insurance corporations will fuel a record year of insurtech M&A.

Rationale: After a slowdown in M&A activity in 2019, large insurers will increase their pursuit of insurtech startups via increased M&A as internal digital initiatives fail to yield significant results.

Caveat: Insurers may choose to delay investments due to various unsystematic risks. For example, a massive catastrophic event could dent property and casualty insurers' balance sheets or decreasing interest rates could have a negative impact on health and life insurers' profitability.

Insurtech M&A activity



Source: PitchBook | Geography: Global
*As of November 21, 2019

After a record year of insurtech M&A activity in 2018, activity slowed yet remained elevated in 2019, with \$14.8 billion in total M&A value YTD. As insurers continue struggling to offer best-in-class technology capabilities, we expect the trend to pick back up in 2020, with strategic buyers (i.e. large insurance corporations) driving the majority of these investments.

When it comes to technology, insurance companies are faced with the decision to either acquire (or partner with) an insurtech company or build those solutions in-house. We believe that many insurance companies that have decided to

build solutions themselves face numerous difficulties, including high costs, long completion timelines and lower technological efficacies. For instance, Aetna shut down its CarePass app after spending a significant amount of capital on its launch and marketing. The application failed to gain market traction, with users reporting technical problems. Another disadvantage faced by large incumbents trying to build new technological capabilities internally is the complexity of implementing new solutions across the entire insurance value chain, including distribution, underwriting and claims management. For this reason, insurtech companies that tend to do one thing really well may prove to be attractive acquisition targets to the extent that they provide fast, cost-effective routes to digital improvements.

We believe the industry is increasingly aware of the growing disruptive threat posed by insurtech startups. As these companies improve their business models and add millions of customers, it puts pressure on incumbents to come up with a tech-driven response. For example, Lemonade has been able to offer competitively priced renters and home insurance to help drive growth while reducing its loss ratio by almost 16% per quarter during the past two years.

As late-stage insurtech deals become more frequent, another potential driver of M&A is the maturing of VC-backed insurtech companies that will likely seek a liquidity event in the near future. In 2019, there were over 50 late-stage deals in the insurtech space. This is up from just 10 deals five years ago and 38 deals in 2018. Many of these companies took capital from incumbent insurers via corporate VC arms. Although these strategic investors are less likely to pressure portfolio companies to exit prematurely, we believe this dynamic increases the chances of M&A by a corporate sponsor.

As insurtech M&A heats up, we would not be surprised to see significant transactions above \$500 million. In October, Prudential spent \$3.5 billion to acquire Assurance IQ, which was founded in 2016 and provides an online insurance marketplace that consolidates various consumer insurance products. We believe this deal sets a precedent for incumbents increasingly willing to make substantial bets on new technology.

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Prediction: Container security startups will see additional M&A and a mega-deal in 2020.

Rationale: Container security is a missing piece of incumbent product portfolios and is becoming increasingly crucial to enterprise customers given recent breaches and the rapid growth of container utilization. High levels of venture funding in 2017 and 2018 have created opportunities for late-stage mega-deals and further strategic acquisitions following the purchases of Twistlock and Aporeto by Palo Alto Networks.

Caveat: Many container security companies remain in the early stage and may not have gained the commercial validation necessary to attract growth-stage investors nor acquisition bids. Additionally, many incumbents have made cloud security acquisitions in the interest of developing container security tools internally. Lastly, cloud hosts may be able to offer competitive container security solutions to prevent startups from scaling.

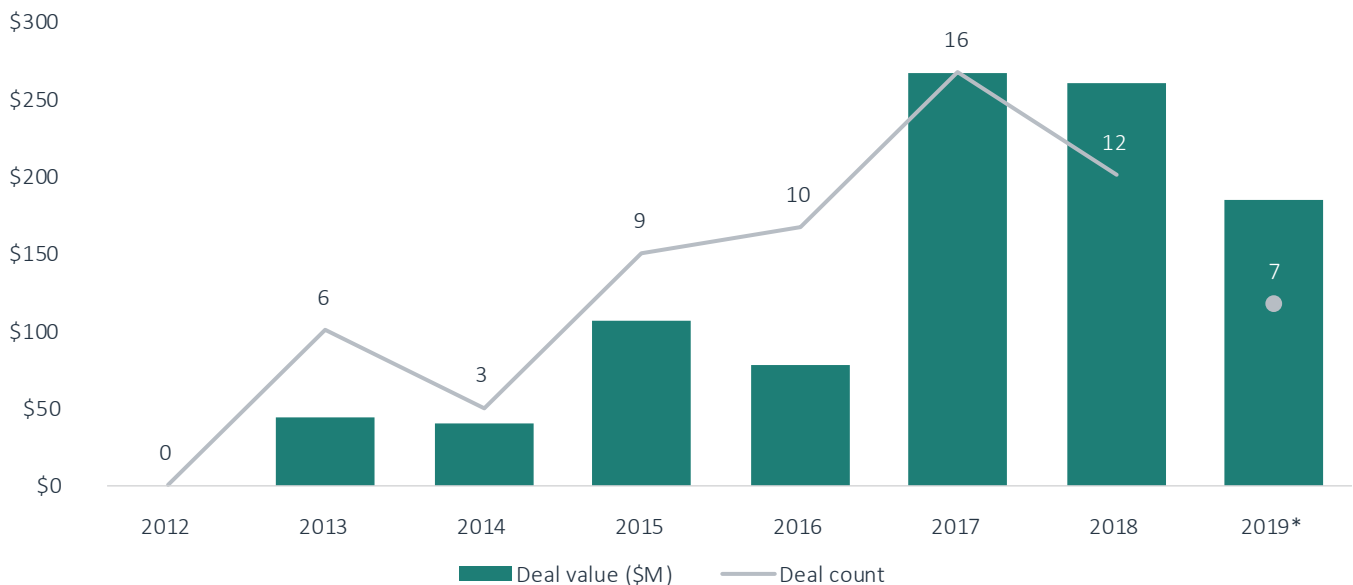
Containers have presented enterprise security vulnerabilities that will be critical to resolve going forward. Containers are mini-computing platforms that enable applications to run on servers across different operating environments without the need to set up backend resources for each deployment. Container adoption is rising rapidly, with over half of companies running 41% to 80% of their applications in container environments. These containers are typically unsecure by default since users are granted access to the kernel root account related to a given container. This design feature allows for simple container management but also enables lateral movement by attackers between containers and the underlying operating system. Given security teams' lack of experience and widely shared concerns with this emerging IT stack, we believe containers are weak links in the enterprise security stack.

Container security requires capabilities not currently offered by legacy network security and application testing platforms such as Fortinet, Check Point and Synopsys. We believe that incumbents aside from Palo Alto Networks, via its acquisition of Twistlock, are currently incapable of providing several key defenses for container environments including:

- Runtime application self-protection for container workloads to detect new vulnerabilities in runtime environments
- Microsegmentation of container environments to enable policy enforcement at the individual container level
- Zero trust framework for container access including whitelists of approved users and approved container behaviors
- Behavioral monitoring for both malicious attacks and unsafe developer behavior in container environments
- Compliance reporting via file integrity monitoring against a known baseline

The limitations of incumbents in this area make the space ripe for innovation, as reflected by recent deal activity. Container security is likely to see record VC and M&A activity in 2020. VC funding in container security has been increasing rapidly since 2014. Container security platforms collectively raised at least \$260 million in both 2017 and 2018 and are on pace to raise a comparable sum in 2019. As of yet, there have been no

Container security VC deal activity









Source: PitchBook | Geography: Global
 *As of November 22, 2019

disclosed mega-deals in the space and only two acquisitions of pure-play container security startups in Twistlock and Aporeto. The Twistlock acquisition was closed at a 27x EV/sales multiple according to Corum Group,³ suggesting that Palo Alto Networks forecasts high growth for the technology. We believe late-stage companies including Aqua Security, Guardicore and Sysdig are attractive candidates for mega-deals after raising late-stage rounds of over \$60 million in the past 18 months. Aqua Security claims to have quadrupled its customer base over the 12 months ending in April 2019 and has innovated a usage-based business model that allows it to land and expand. Sysdig claims to have tripled Fortune 500 customer deployments in 2018 and can upsell its customers with both security and monitoring modules. Guardicore has reportedly also achieved consistent growth among large enterprises, creating the potential for both strategic and financial investments going forward.

Numerous early-stage startups offer technology propositions that are compelling to incumbents, which may result in acquisitions. Before its acquisition by Palo Alto Networks, Aporeto developed encryption policies for container workloads that apply across container environments and do not require public keys, ensuring data security even if an administrative console is breached. NeuVector has built a container firewall based on similar principles of container workload isolation. Lacework detects a baseline of container activity and compares traffic to it, providing telemetry that conventional network security applications miss. Alcide enables DevOps teams to embed security policies in their container deployment pipelines and manage container access policy at a higher level than cloud providers offer. Each of these technologies may draw acquisition interest from a wide range of IT vendors including public network security vendors Fortinet, Check Point, Cisco and Zscaler, endpoint security vendors VMware and CrowdStrike, application security testing vendors Synopsys, Qualys and Rapid7 and application performance monitoring vendors DataDog, Cisco, New Relic, Sumo Logic and Dynatrace. Because of the pressing need for innovation in container security, Palo Alto Network's acquisitions of Twistlock and Aporeto may set a precedent for further acquisitions in this space.

Notable container security VC deals

Company	Close date	Series	Deal size (\$M)	Pre-money valuation (\$M)	Valuation step-up	Lead/sole investors
 Lacework	September 12, 2019	Series C	\$42.0	--	--	Sutter Hill Ventures
 Guardicore	May 21, 2019	Series C	\$60.0	--	--	Qumra Capital
 aqua	April 3, 2019	Series C	\$62.0	--	--	Insight Partners
 TIGERA	December 12, 2018	Series B	\$30.0	\$125.0	108%	Insight Partners
 Sysdig	September 12, 2018	Series D	\$68.5	\$275.0	45%	Insight Partners
 StackRox	April 10, 2018	Series B	\$25.0	\$125.0	198%	Redpoint Ventures

Source: PitchBook | Geography: Global

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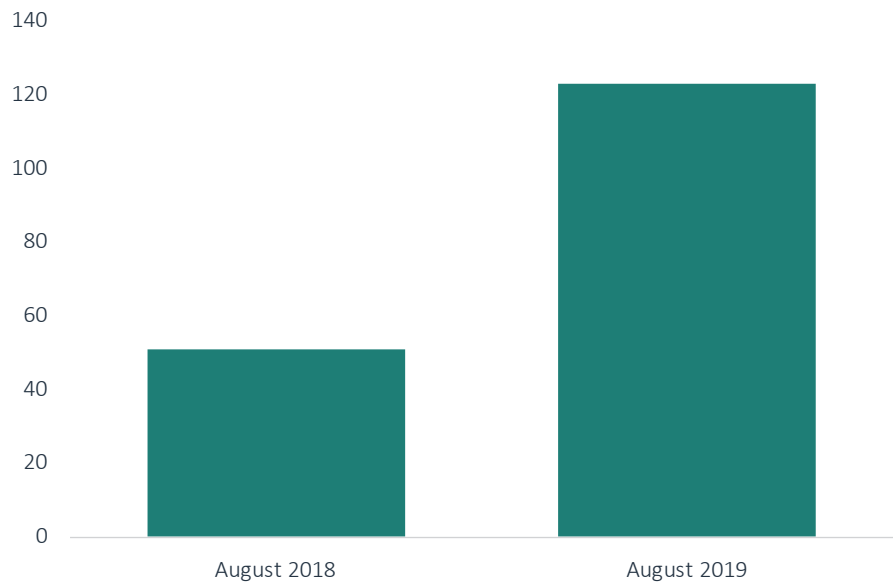
Prediction: Cellular low-power wide-area networks (LPWAN) will continue to grow rapidly and gain the upper hand in the IoT protocol wars.

Rationale: In 2019, cellular IoT connectivity protocols, including Narrowband IoT (NB-IoT) and LTE-M, more than doubled their number of networks. Competitors include Sigfox and LoRa, but these noncellular protocols have more limited use cases and less support from network operators. The support of network operators for cellular LPWAN may lead NB-IoT and LTE-M connections to outpace Sigfox and LoRa going forward.

Caveat: The low cost of noncellular protocols including Sigfox and LoRa may allow them to remain competitive. Both protocols currently have comparable traction to LTE-M and NB-IoT and significant support from corporate sponsors and governments, meaning that they may achieve competitive growth in 2020.

IoT devices are forecast to grow rapidly in coming years, yet they require low-cost networking that is not currently ubiquitous, creating a growth opportunity. IoT-specific networks, referred to as LPWAN, are in the early days of development and will be crucial to the growth of large-scale IoT deployments. There are four leaders competing for scale and market share in the “IoT protocol wars”: LTE-M, NB-IoT, Sigfox and LoRa. LTE-M and NB-IoT benefit from standards development from the 3GPP standards organization, which is also developing 5G standards at present. Further, they are cellular technologies, aligning with network operators’ current cellular portfolios. Both protocols offer low data rates and extended coverage indoors and underground, and they support battery lives extending over 10 years for IoT modules. NB-IoT has gained high traction in Europe due to local operator support while LTE-M is growing more quickly in the US. AT&T, T Mobile and Verizon have begun to develop LTE-M networks in the US from a base of zero in recent years, and we believe that high growth in this market is likely. We believe that in 2020 the number of connected devices on LTE-M in the US is likely to more than double.

Cellular LPWAN network deployments






Source: GSMA | Geography: Global

Lack of VC funding has made it difficult for startup LPWAN operators to compete with multinational operators. Ingenu, Senet and Sigfox were founded over the past 10 years to develop LPWAN networks, but they have not received substantial funding in recent years. Generally, IoT networking has historically received the least amount of venture funding of the IoT segments we cover in our Emerging Tech Research, and 2019 has been no exception. There are few companies and have been no outsized deals in the space. Our analysis shows that only eight VC investments have been made in IoT networking in 2019 through 3Q, with none over \$30 million. Sigfox has reportedly missed revenue and fundraising targets over the past three years, failing to achieve an expected IPO as a result. While these startups could pose credible competition to cellular LPWAN protocols, they appear to lack the funding necessary to build ubiquitous connectivity. Because of this, we believe that these venture-backed operators are unlikely to gain market share.

The strong support of mobile network operators for cellular LPWAN networks has implications for the growth of IoT. Availability of low-cost connectivity is likely to enable IoT growth in emerging use cases such as smart metering and asset tracking. Mobile network operators have been slow to offer roaming plans for LTE-M and NB-IoT, though we believe these capabilities will expand in 2020, enabling LPWAN to replace RFID in some asset-tracking applications and

enable new use cases in logistics. The increasing ubiquity of coverage will give enterprises more confidence in deploying IoT devices across their geographic footprint, enabling scale economies that can improve the value proposition of IoT deployments. A resolution to the IoT protocol wars may enable increasing growth in the industry, and we believe that winners may begin to emerge in 2020.

Notable VC-backed LPWAN network operators

Company	Primary protocols	Total capital raised (\$M)	Last known valuation (\$M)	Last financing date
 sigfox	Sigfox	\$324.5	\$654.7	May 24, 2017
 inGENU simply genius	Sigfox and LoRa	\$107.5	\$168.4	September 30, 2015
 senet Connecting the IoT Revolution	LoRa	\$33.1	\$29.4	March 15, 2017

Source: PitchBook | Geography: Global

2019 predictions scorecard

Below we summarize our predictions for 2019 and how they fared.

<p>We expect a secular shift away from pure-play shared mobility applications toward bundled mobility-as-a-service (MaaS).</p>	<p>PASS</p>	<p>Leading ridesharing platforms such as Uber, Grab, Didi and Lyft further expanded into additional services such as food delivery, micromobility and financial technology.</p>
<p>Autonomous vehicle partnerships and M&A activity will remain elevated.</p>	<p>PASS</p>	<p>M&A deals in the autonomous vehicle space increased in 2019, which also saw a multitude of announced partnerships between carmakers, suppliers and tech companies to develop autonomous technology.</p>
<p>The consumer fintech trend of product unbundling in North America and Europe will change course and move toward bundling to mirror trends seen in Asia.</p>	<p>PASS</p>	<p>Established consumer fintech companies such as SoFi, Monzo and Revolut branched out of their core offerings and released new financial services.</p>
<p>We expect technology conglomerates to make a grand entrance into the financial services sector via introduction of large-scale financial products, major acquisitions or profound partnerships.</p>	<p>PASS</p>	<p>Apple launched a credit card, Facebook formed the Libra Association, Google announced checking accounts and Uber rolled out Uber Money.</p>



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