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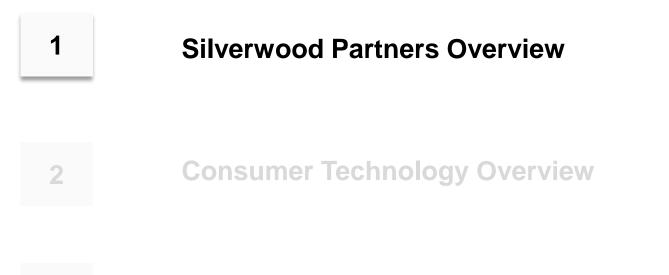
Consumer TECHNOLOGY Strategic Industry Analysis

January 2018

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International







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SILVERWOOD PARTNERS

A specialized boutique investment bank focused on transaction advisory across three core industries

- Sell Side M&A
- Buy Side M&A
- Strategic Alternatives Analysis
- Financial Advisor to Corporate Venture Investors

- Strategic Investments
- Growth Equity Private Placements (Series A, B, C)
- Financial Advisor to Family Offices
- Financial Advisor to Ultra-High Net Worth Individuals



TECHNOLOGY

- Mobile & Wireless
- Internet of Things (IoT)
- Big Data & Analytics
- Augmented & Virtual Reality
- Artificial Intelligence
- Media & Consumer Technology



CONSUMER

- Food and Beverage Products
 - LOHAS
 - Natural
 - Organic
 - Functional
- Active Lifestyle Products
 - Performance Apparel
 - Sports Equipment



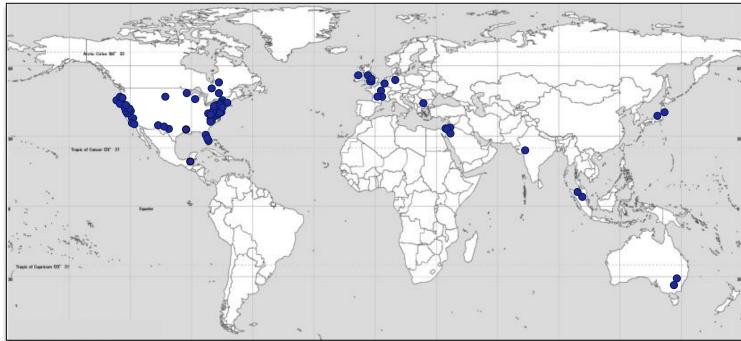
HEALTHCARE

- HC Information Technology
- HC Information Services
- Technology Enabled Services
- Outsourced Medical Device Technology
- OTC/Consumer/Pharma



Silverwood combines Tier I transaction advisory capabilities with a global focus:

- Clients and active contacts in the Americas, Europe and Asia Pacific
- Deep expertise in cross border transactions understand the complexities and intricacies involved in executing complex, cross border deals



Representative Silverwood Engagements and Clients



THE SILVERWOOD INVESTMENT BANKING TEAM

Jonathan Hodson-Walker

Founder, Managing Partner



- 25+ years of investment banking experience in the US and Europe
- MD and Group Head at Gleacher & Co. (First Albany)
- Co-founded, co-managed IBD at H.C. Wainwright
- Corporate Finance VP at CS First Boston in New York and London (UK country desk)
- Fulbright Scholar with MBA from the Kelley School of Business at Indiana University

Ned Montenecourt

Managing Director Advisor



- Founder and Managing Director of LaunchSail, a consulting group focused on strategic introductions and intellectual capital
- Previous roles as Director and Chief Compliance Officer of Risk-Distribution & Execution at BlackRock and Pierpont Securities
 BS and BA, Finance and Architecture from Lehigh University

Gwendalyn S. Moore

Senior Analyst



- Consumer, Technology, and Healthcare coverage
- Previous experience in strategic business operations at VMTurbo and technology investment banking at AGC Partners
- BA, summa cum laude, and MS in Economics from Tufts University

Bryan J. Prohm Managing Director



- 12+ years of international technology industry experience in business intelligence, consulting, market research and strategy roles at Ericsson, Gartner and Motorola
- 8+ years of TMT equity research experience at Cowen & Company
- B.A. in International Studies from UNC Chapel-Hill and MA, Russian & East European Studies from University of Michigan

Lawrence E. Hem Managing Director



- Head of Silverwood's consumer practice
- Previous investment banking experience at J.P. Morgan, Valuefinder Group and Stonebridge Associates
- Founder and former Co-CEO of CATZ Sports Performance
- MBA in Finance and Strategy from The Kellogg School at Northwestern University

Joshua Stinehour, CFA Managing Director Advisor

- Principal Analyst at Devoncroft Partners
- Media technology sector coverage; 10 years of experience
- Former lead software analyst at EMC integration of VMWare, Documentum, Legato
- MBA from Babson; M.S. in Computer Science from Rochester Institute of Technology; B.S. Computer Science from Union College

INDUSTRY ADVISOR TEAM - TECHNOLOGY



Stephanie Atkinson Industry Advisor CEO at Compass Intelligence



Wendy Chou Industry Advisor Founder and President at CHOUMedia



John Ellis Industry Advisor Founder and Managing Director at Ellis and Associates



Eric Baron Industry Advisor CEO and Founder EBA Performance Ltd, Head of EMEIA at Ericsson



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George Elsaesser Industry Advisor President at GEA & Associates



Rimas Buinevicius Industry Advisor Co-Founder of Madcelerator



Bob Egan Industry Advisor Chief Research Officer and Founder at Sepharim Research Group



Michael Frank Industry Advisor Consultant and Advisor for IoT, e-commerce, mobile/wireless technologies



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Joop Janssen

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MD at YOAP Holdings

Former CEO of EVS

Former CEO of Vitec Videocom



William Jefferson Black Industry Advisor Managing Director at Finance Information Group



Allexe Law Industry Advisor Founder of Art Science Group, Executive Coach and Mentor

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Senior Industry Advisor

VP Video Sales at Tektronix.

Global team leader

Tom Lamar

Industry Advisor

Founder LaunchSail LLC, SVP at Apto

Solutions

JP Laqueur

Senior Industry Advisor

Principal and Chief Connector

at BrandFoundations

Dan Ledger Industry Advisor Principal and Founder of Path Collaborative, Principal and Founder At Endeavour Partners



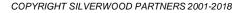
Phil Marshall Industry Advisor Chief Research Officer at Tolaga Research; Former Executive at Yankee Group

CE F

Steve Matthews Industry Advisor CEO of the Roberts Group Former COO of Omgeo



Jeff Moore Industry Advisor Principal at Wave7 Research



INDUSTRY ADVISOR TEAM – TECHNOLOGY (CONTINUED)



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Bill Patrizio Industry Advisor President Consumer Media, RealNetworks, Leadership Roles at Red Bee Media, Technicolor



Sarah Priestnall Senior Industry Advisor President at Purple Pixel Consulting, VP, Market Development at Codex



David Sowerbutts Industry Advisor CEO, Oxygen Associates Former Global Channel and Partner Manager at Microsoft



Yojak Vasa Industry Advisor Executive with Cisco, and Sony Ericsson



Katie Wasserman Industry Advisor Founder Wasserman Consulting, Marketing in IoT and Technology Sectors



Kathy Weidman Industry Advisor Senior VP and GM of Metadata at TiVo, Leadership Roles at Red Bee Media, Technicolor, Avid



Stephen Wharton *Industry Advisor* Chief Technology Officer at SkyCam President of Kinemetric Holdings

Joe Zaller Senior Industry Advisor Owner and President of Devoncroft Partners



INDUSTRY ADVISOR TEAM - CONSUMER



Steven Bock

Industry Advisor Former President and CEO of Rotobrush and Unger Software Corporation



Rimas Buinevicius Industry Advisor Co-Founder of Madcelerator



Oswaldo da Costa e Silva Industry Advisor Founder of InnoCrest Consultancy



Fred Coutts Industry Advisor President and Founder of Waypoint Marketing Group Organic, Natural Living Markets



Greg Doherty Industry Advisor **EVP and Managing Director Dietary Supplements Bolton & Company**











Mark Haas Industry Advisor Sr. Partner at Helmsman Group, worked with Annie's, Kashi, Hain Celestial

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Industry Advisor

Senior Executive, Harry &

David, Neiman Marcus

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Board Member and Private

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Industry Advisor Founder & CEO of New Era



Josh Kohnstamm Industry Advisor Founder & CEO of Kohnstamm Communications

Saul Katz

Nutrition



Jim Lamie Industry Advisor VP Global Marketing, SMS Audio, Gillette Co.

Allexe Law Industry Advisor Founder of Art Scinence Group, Consultant and Mentor

Carol Nicholson Industry Advisor Owner and CEO of International Marketing Company

INDUSTRY ADVISOR TEAM – CONSUMER (CONTINUED)



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Michele Sawyer Industry Advisor CEO and Founder Sawyer Design, Consumer and Healthy Living Industry





Four CEO

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Michael Schultz

Industry Advisor

Managing Partner MGSS

Holdings, Founder, CEO

Sedulous Foods

Andy Stallone

Industry Advisor

CEO of SAS Sales and

Marketing, Executive

Consultant



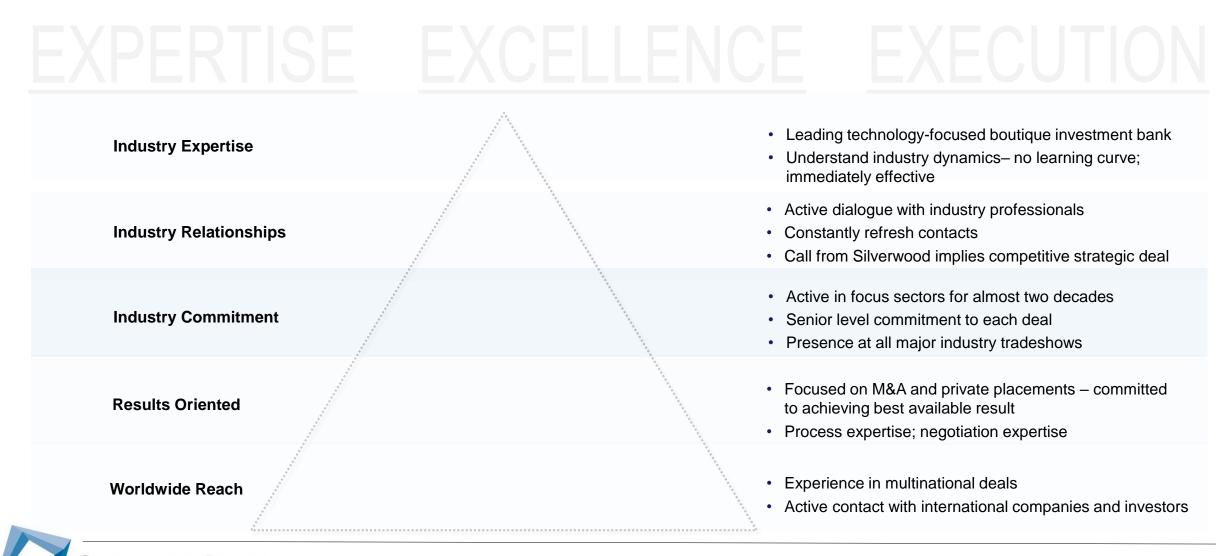
Philip Teverow Industry Advisor Founder Solid Brands Natural Products Consulting



Michael Theodor Industry Advisor President of MTC Organic and Natural Products Consulting



Eugene Wang *Industry Advisor* Managing Partner at Sophie's Kitchen



RELATIONSHIPS, REPUTATION, RESULTS

Silverwood Partners – Premier Reputation within the Technology Industry

- Maintains an active dialogue with large technology buyers and private equity firms with an interest in the technology industry
- Proprietary industry knowledge base constantly updated by active presence at all major industry tradeshows and a growing network of industry advisors
- Industry analyses are widely disseminated to over 10,000 contacts throughout the institutional community

- Organizes and hosts networking events at major industry tradeshows – attendees typically include key technology company executives and investors focused on the technology sector
- Presents unique opportunity for industry professionals to interact and network in a collegial setting



INDUSTRY ADVISOR PROGRAM – INTERESTED?

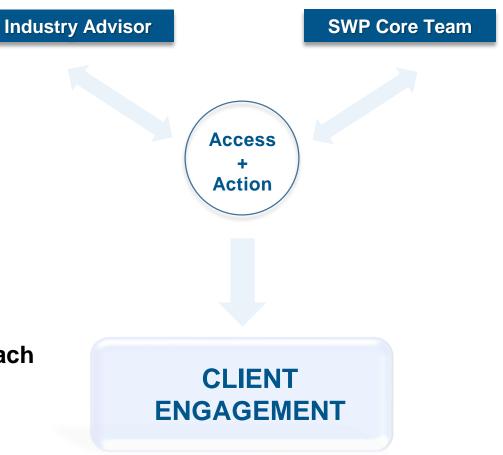
Formal Consulting Affiliation with Silverwood Partners

- Personal Business Development Opportunity
- Revenue Opportunity
- Board Member Opportunities
- Investment Opportunities
- Networking Opportunities
- No Costs, Conditions, or Commitments

Click Link to Learn More About Program

Contact Silverwood Partners to Discuss Interest and Approach

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SILVERWOOD TEAM HAS DEEP TECHNOLOGY RELATIONSHIPS

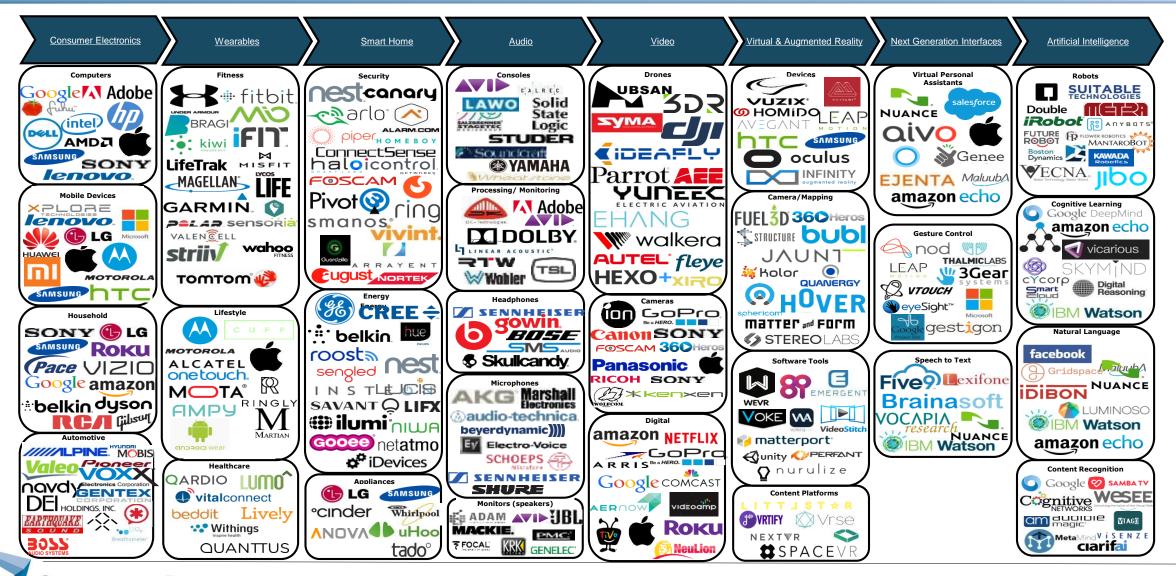




DEEP MEDIA TECHNOLOGY EXPERTISE



SILVERWOOD CONSUMER TECHNOLOGY INDUSTRY MODEL













TOP CONSUMER ELECTRONIC TECHNOLOGY TRENDS



Artificial Intelligence Facilitating the Convergence of Everything



Virtual Digital Assistants (VDA) Are VDAs poised for broad mainstream adoption?



Autonomous Systems Connected Cars, Robots, and Beyond



Smarter Homes and Cities A Networked Society Enabling Everything As A Service



Is Blockchain the Real Value of Bitcoin? Cryptocurrencies & Digital Tokens - Just Hype, or the Real Deal?



Further Growth

Technology Companies Adding Media Capabilities Tech becoming media companies – original content initiatives

Software & Technology Consuming Economy

Media Companies Transitioning to Direct-To-Consumer

Billion Dollar Markets Like Food & Agriculture Technology are Necessary for

Media Companies Adding New Technology Capabilities



Immersive Experiences

Augmented and Virtual Reality Systems Designed for Complete Immersion

SOFTWARE & TECH CONSUMING THE ECONOMY

Software pumping \$1 Trillion and more into the economy each year - but what is next?

- Major software providers (especially the "Big 5") are going on acquisition sprees and building their own "megaplatforms", with each racing to become the fist one-stop-shop for consumers' software needs
- "Exponential" technologies including robotics, virtual and augmented reality (VR) (AR), 3-D printing, and artificial intelligence (AI) have been seeing heavy interest and funding
- Big Data is developing highly advanced capabilities through the embedding of various cognitive technologies such as machine learning, natural language processing, and speech and pattern recognition in software applications
- Blockchain, the foundation for the digital currency bitcoin, will severely impact the ways in which companies
 manage online transaction data
- Organizations' struggle to extract value from the huge volumes of data they are now collective is expected to drive greater investment in software
- IoT, "Anything as a service" offerings (ones which allow usage-based consumption), and cybersecurity will likely continue to experience massive growth
- In the wake of appification and IoT, agriculture and food technology are quickly becoming areas of interest for innovators seeking the next billion-dollar opportunity as these historically stagnant markets are ripe for disruption







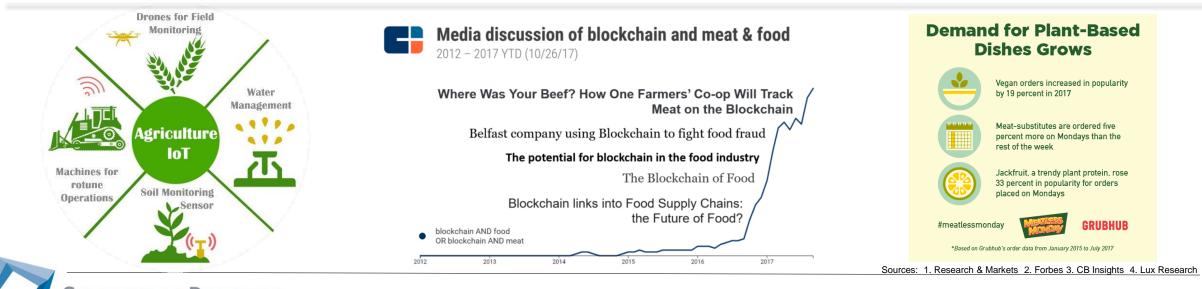
Uber's Highly Focused, Integrated Platform

Sources: Forbes, Deloitte

THE NEXT WAVE OF INNOVATION: FOOD AND AGRICULTURAL TECHNOLOGY

As Software Continues to Consume the World, Technologists are Now Seeking to Reshape Worldwide Cultivation, Production, and Procurement of Foods

- The global food technology market is expected to grow over \$250.43 billion by 2022, at a CAGR of 5.8%¹
- The Amazon/Whole Foods merger has permanently altered the grocery landscape by forcing traditional brick-and-mortar grocery retailers to adopt technological solutions in order to remain competitive. In order to guarantee future success, it will be crucial for operators to allocate more funds into technological infrastructure and channel partners, internal training to support increased demand for delivery and takeout, and development for menu items which will specifically hold up well to travel.²
- Food technology is also making its way beyond web-based and delivery services, directly into the kitchen and meal preparation process. There has recently been a rise in demand for smart chefs and cooking robots - Moley Robotics has created a fully automated, intelligent cooking robot designed precisely to create meals; the consumer version is expected to launch in 2018.
- The myriad ways in which technology can improve traditional agriculture methods renders the space ripe for disruption. Following Monsanto's \$1B acquisition of the Climate Corporation in 2013, the agriculture technology space has continued to attract significant attention.
- In 2017 alone, investors deployed more than \$700M into the space, with funding on track to beat the previous two years combined, and deals expected to rise 65% year-over-year. Additionally, more than 200 unique investors make at least one agricultural technology investment in 2017. The biggest increase was due to venture capital interest, which, after years of stagnation, nearly doubled between 2016 and 2017. There had been 118 unique venture funds invested in agricultural technology in 2017 as of early December.³
- Another huge area of growth in food technology is that of meat substitutes. Demand for alternative proteins is expected to double by 2024 with soybean, pea and oat proteins emerging as the leading alternates⁴
- Continued advances in genetic engineering and plant-based innovation will enhance taste, flavor, and health benefits to incentivize consumption. However, the primary challenges
 producers face and barriers to mainstream adoption are cost and scale. Innovators must find ways to lower production costs and find economically viable ways to produce their
 substitutes at high volumes if they want to see their products move from novelty purchases to kitchen staples.



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DISRUPTIVE AGRICULTURE AND FOOD TECHNOLOGY STARTUPS

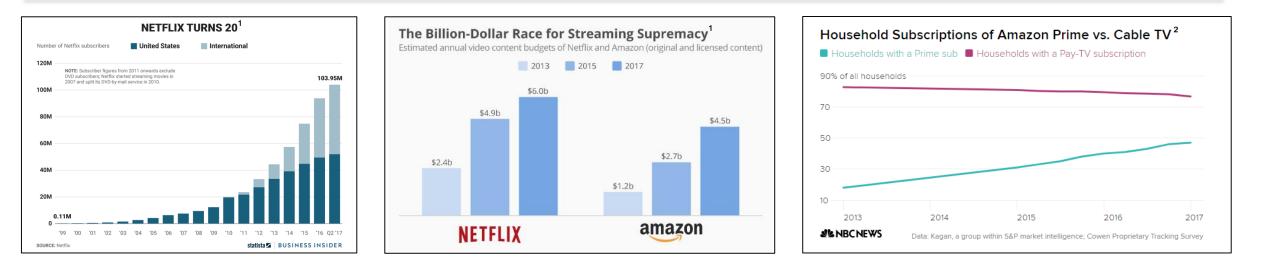


Source: CB Insights

MEDIA COMPANIES TRANSITIONING TO DIRECT-TO-CONSUMER

Content providers rapidly transitioning to direct-to-consumer distribution, bypassing traditional distribution channels

- Media landscape is increasingly defined by direct relationships between content creators and consumers
- Traditional TV networks are facing unprecedented competition from OTT video providers such as Netflix and Amazon
- Multiple walled ecosystems being developed with highly sophisticated, proprietary ad targeting based on deep, technology-based understanding of customers (Amazon, Apple, Facebook, Google, Netflix) – no interest in or need for industry standards or point solution technology providers
- New media ecosystem providers indifferent as to where, how media consumed maintain customer relationship through constant customer presence and not just a transactional or event-based media consumption experience
- Consumer-direct allows for complete control by the producer/developer audience relationship, plus control of prices, margins, release dates, marketing message, in addition to actual content



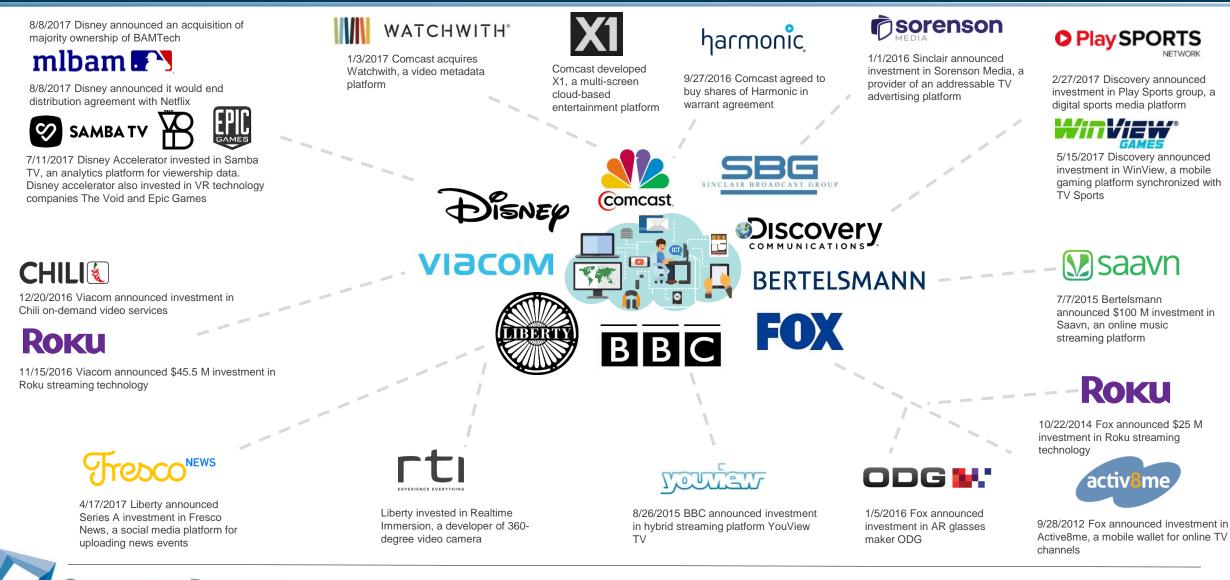
1. Statista 2. S&P Market Intelligence



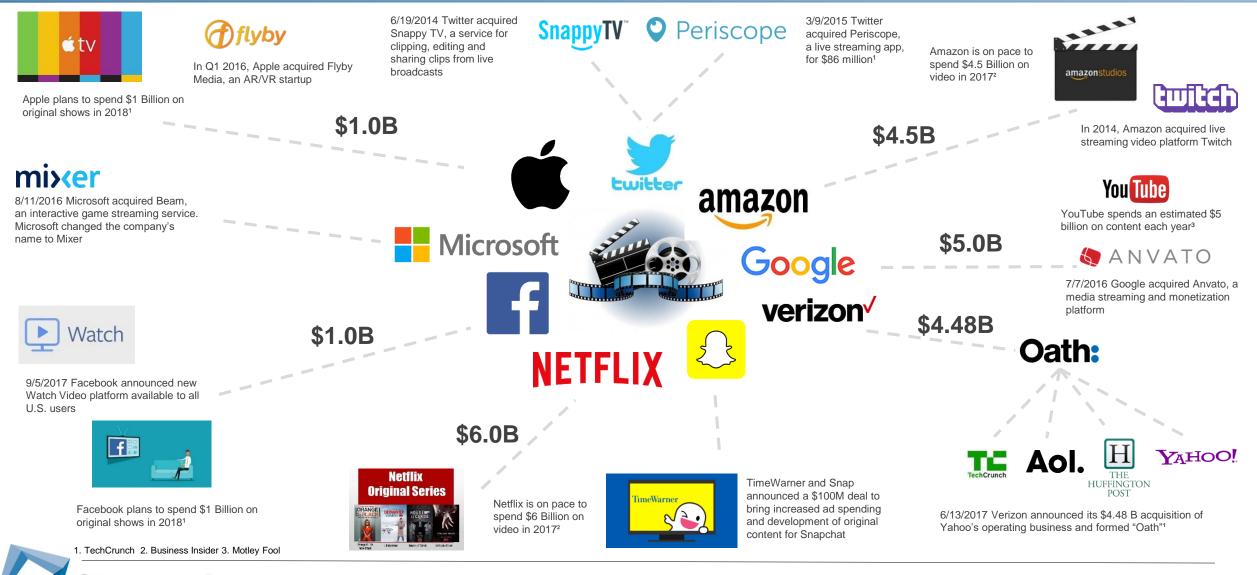
LEADING NEW MEDIA PLATFORMS – ORIGINAL CONTENT INITIATIVES

facebook	Facebook launched live video in 2016. Since the launch, people have created more than 670,000 live streams which have generated over 8.5 billion views, up from 246,000 live streams with over 5.7 billion views at the beginning of March ¹ . In 2017, Facebook announced Live 360 videos to allow 360 degree live video recording – Facebook is also releasing a standalone app for televisions that will let users watch videos from friends, "liked" pages, and top live videos. In Q3 2017, Facebook announced plans to invest \$1 billion in original content in 2018 ⁵ .
amazon	Amazon Prime Video expands to 200 new countries and territories with the potential to reach 100M subscribers by 2018 ⁵ . Amazon is looking to bring Twitch to the core of its business as Amazon Prime subscribers have access to Twitch. People watching games on Twitch can now purchase games directly. Amazon has also struck a \$50 Million deal with the NFL to stream 10 Thursday Night Football games ³ . Amazon Prime is on pace to spend \$4.5 billion on video content over the course of 2017 ⁵ .
twitter	Periscope reports 110 years worth of video is watched every day on company's platform, up from 41 years in August 2015 ⁴ Twitter plans to launch a new feature called Project Lightning, which offers a feed of photos, videos and tweets tied to specific live events. Twitter has partnered with Brandlive, Livestream, and Telescope in 2017 to allow an open live video platform.
You Tube	In Q1 2017, Google announced YouTube TV, which allows subscribers to watch live feeds online from top television networks and is set to launch 2H 2017. YouTube is now enabling live video recording from its mobile app to users with at least 10,000 subscribers and hopes to expand its reach in the future. In Q1 2017, YouTube also announced Super Chat, a paid comment live stream viewers can purchase and send as a donation to creators in exchange for having comments highlighted or pinned.
<u></u>	Snapchat released Live Stories in 2014, which is an amalgamation of snaps, submitted by users and assembled by Snapchat. Live stories is a camera version of live-tweeting that holds storytelling potential. Live stories draw 10-20 million millennials each day. Snapchat and the NFL made a deal in 2015 - other sports partnerships include MLB, NCAA, NBA and PGA.
Ú	In Q3 2017, Apple confirmed a budget of \$1 billion to spend on creating its own programming in 2018 ⁵ . Earlier in 2017, Apple debuted original content including Carpool Karaoke and Planet of the Apps on the Apple Music platform. Apple could add as many as 10 more TV shows to its offering in 2018.
verizon	In Q3 2017, Verizon completed its acquisition of Yahoo. Verizon combined Yahoo's assets with AOL to create Oath, a subsidiary with more than 50 media and technology brands – including Huffington Post, AOL.com and Yahoo Sports ² . Verizon is looking to build powerful brands through the integration of strong technology, differentiated content, and trusted data.
Baid的百度	In Q2 2017, Baidu began to aim more spending toward content for its video streaming and news aggregation services. In Q2, Baidu's iQiyi agreed to a deal with Netflix to gain licensed content – alongside existing partnerships with BBC, Discovery Channel, and Universal Music ³ . In Q1, iQiyi announced it doubled its paid subscribers to 10 million ³ . Baidu also has its own in-house production company called iQiyi Pictures and another subsidiary called Baifa Youxi, which lets small investors back movie productions.
 腾讯 Tencent	In Q3 2017, Tencent announced plans to invest \$300 million into original content on its live streaming platform QQ ⁶ . Tencent is ramping up its efforts to connect social networking with live streaming to attract more users. Tencent plans to offer core resources through its WeChat and QQ Social networking platforms to encourage original content production.
	1. Tubular Labs 2. WSJ 3. Business Insider 4. Tubefilter 5. TechCrunch 6. China Daily

MEDIA COMPANIES ADDING NEW TECHNOLOGY CAPABILITIES



TECH COMPANIES ADDING MEDIA CAPABILITIES, \$20+ BILLION INVESTED



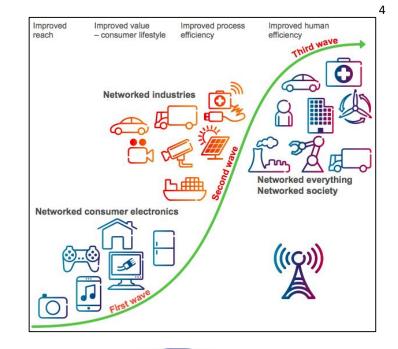
Building a Fully Integrated Internet of Things Ecosystem Using the Smartphone as a Foundation

- Extraordinary success and scale of the smartphone which connected billions of people to the Internet over the past ~10 years has driven extreme reductions in the cost of hardware, sensors, processing power, wireless bandwidth and wireless connectivity
- Removal of such barriers has laid foundation for rapid growth of the Internet of Things (IoT) a third wave of Internet development and proliferation that will
 result in tens of billions of additional "things" being connected during the next 5-10 years
- Developing value-added IoT use cases is imperative to increasing mainstream awareness and acceptance, as well as to fueling continued investment in IoT technology enablers, including platforms and platform-enabled solutions
- As of November 30th 2016, US venture investors had poured \$1.3B into IoT-related companies¹ over 60% of projected IoT investment in IoT through 2020 is expected to relate to hardware and application development²



The World Is Currently Only Scratching the Surface of IoT's Potential

- An increasing diversity of companies are leveraging the smartphone supply chain and creating new connected devices and experiences that combine the physical and digital worlds and capture new data sets
- The transformational potential of IoT lies in the ability to capture, transmit, manage, analyze and act upon diverse and disparate data sets in real-time from anywhere
- However, it is estimated that less than one percent of the IoT data currently being created by connected devices is actually being used¹
- This opportunity continues to attract widespread interest and investment across the IoT value chain including more than \$7 billion in financing since 2010² – even through the overall landscape remains highly fragmented
- Continued development of IoT's central infrastructure, D2X communication and data analytics capabilities will meaningfully improve the utility of IoT data
- Improvements in IoT interoperability and security are critical to manage increasing network complexities and unlock the full network effect of billions of connected devices
- Compelling long-term economic and societal rationale exists to drive IoT penetration from new consumer experiences and insights to new markets and economic models
- Further development of IoT's central infrastructure and device to device communication ability will improve meaningful use of IoT data
- Ultimately, a mature, fully integrated and networked global IoT ecosystem will mesh and manage billions of physical, digital and virtual things and impact all aspects of our lives

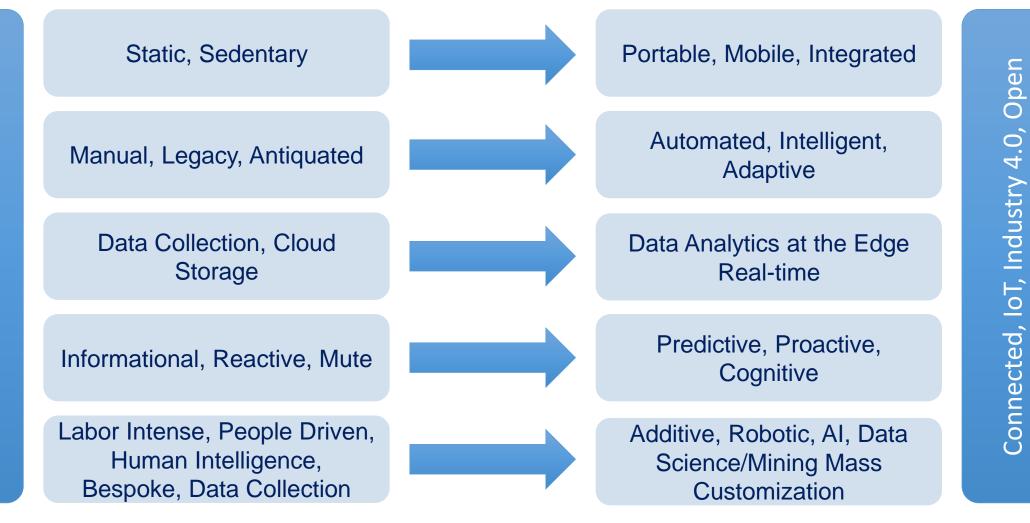




1. CB Insights 2. McKinsey & Company 3. Cisco 4. Ericsson



IOT AND EMERGING TECH: WHAT IS HAPPENING?



Source: Compass Intelligence

Data, Processes

Information, Assets,

CONSUMER INDUSTRIES ADVANCING IN IOT AND AUTOMATION



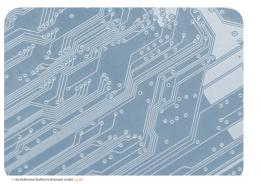
Smart Home

Lighting Home Entertainment Appliances HVAC Security Surveillance Energy Management



Vehicles

Safety Repair In Car Entertainment Broadband Traffic & Routing Gaming Fuel Management



Electronics

Embedded Computing Smart Consumer Electronics Wearables Entertainment & Content

Media Information Sharing



Customer X

Customer Service Billing Installation & Repair Self-Services Alerting & Notification Client Portal Services

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Source: Compass Intelligence

AUGMENTED AND VIRTUAL REALITY – EMERGING DISTRIBUTION PLATFORMS

AR and VR Are Evolving from Vertical Use Cases to Broad-Based Computing, Consumption and Distribution Platforms

- Immersive, real-time multi-platform technologies and experience enablers continue to generate substantial investment interest from leading media and technology companies
- Augmented Reality is an increasingly common theme at industry events its straightforward, productivity value proposition is driving interest and adoption
 across enterprise, healthcare, industrial and security markets, while multiple consumer offerings are poised to reach the market in 2018¹
- Virtual reality should see improved traction in 2018 as today's leading platforms and commercial solutions address shortcomings (cost, hardware, etc.), new mobile ecosystem players enter the space and the supply of differentiated, consumer-facing content and experiences begins to increase (e.g. spatial audio)¹
- Expect entertainment and media systems to increasingly transition to AR/VR platforms as higher quality headsets and capture systems reach the market



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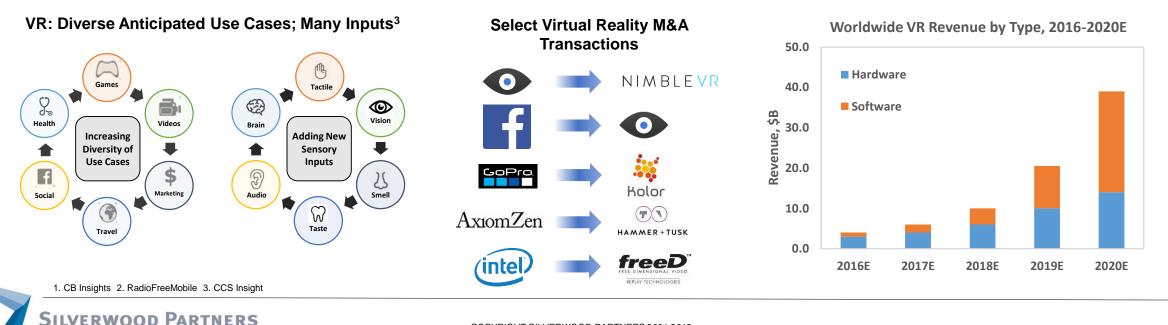
1. RFM Research 2. Gartner 3. Ptichbook

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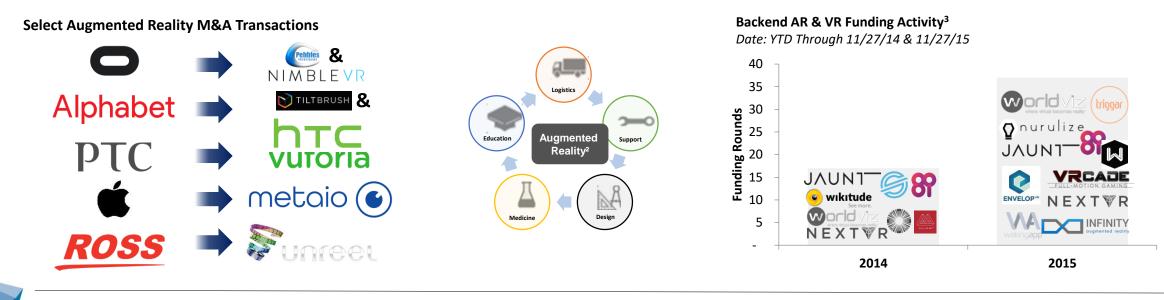
Virtual Reality Market Still Approaching Mass Market Inflection Point

- Total Augmented and Virtual Reality VC investments reached 76 deals totaling \$1.3 billion during the first half of 2016, versus \$700 million total invested during 2015. Investments are moving beyond hardware and peripherals into advertising, apps, distribution, games, marketing, video and solutions/services¹
- Virtual reality could see improved traction in 2017 as today's leading platforms and commercial solutions such as Oculus (Facebook), HTC, Sony and Samsung – address 2016 shortcomings (cost, hardware, etc.), new mobile ecosystem players enter the space and the limited supply of consumer-facing content increases²
- Immersive, realistic multi-platform technologies and experience enablers (e.g. 360°video) continue to generate strong investment interest from leading media and technology companies given their ability to quickly integrate, innovate and scale



Increasing Diversity of Market-Making Platforms Pushing AR Content into New Markets

- Technological advancements still appear necessary to maximize consumer usage wearables, prosthetics, visualization technology
- Longer-term augmented reality has the potential to generate revenue across a very broad base of industries and applications
- Augmented reality poised to accelerate in 2017 after major acquisitions and platform investments from technology giants total market for augmented reality projected to reach \$150 billion by 2020¹
- Mobile use will play a huge role in furthering the augmented reality market, as smartphones and applications increasingly are becoming the technological control hub for consumers worldwide. The mobile application market alone for augmented and virtual reality is expected to grow at a CAGR exceeding 74% between 2016-2020²



More Data \rightarrow More Information \rightarrow More Intelligence \rightarrow More Money

- Artificial Intelligence (AI) has moved beyond brute force compute power and is now at a key inflection point in 2017 – AI is likely to be among the most significant investment and M&A themes across the broader technology sector with the broadcast and media industries well represented
- AI is the fastest growing workload in the data center according to Intel, growing at ~2X the overall computing market – by 2020 Intel expects more servers running data analytics than any other workload
- Distributors are integrating AI voice and gesture control features to improve content search, discovery and the overall user experience - programmers are actively working with personal digital assistants as content owners embrace AI to better connect, measure and analyze user patterns in order to maximize consumer content engagement¹
- In the broadcast and media technology sectors AI is likely to become a significant long-term differentiator by enabling hyper-tailoring of contextual content – and advertising – to every consumer
- A 2016 GE report suggests ~75% of companies struggle to optimize the use of big data due to its variety, velocity and volume successful broadcast and media companies will reposition as data-first companies
- Big IT and other large technology vendors and particularly the established search engines generating the most data – currently best positioned to collect, analyze and act upon the massive amounts of information increasingly generated in the data center
- Al investment is increasingly global in scope the Chinese government has recently pledged to invest ~\$15 billion in domestic Al initiatives by 2018²
- There are still many limitations to AI systems, perhaps the most significant of which is AI's reinforcement of stereotypes and biases. Because intelligent systems must "learn" from historical data, much work remains to be done in teaching AI to correct stereotypes before AI can be safe for mainstream adoption

Selected AI Media + Data Initiatives



IBM Watson's computer vision algorithms were employed at this years' Masters tournament to identify and extract contextual content from the tournament's live video streams.

IBM says its Cognitive Highlights application is the first time a system is using cognitive computing methods to rank sports highlights



A Google demonstration website allows video annotation - the API identifies key objects within the video, detects scene changes and provides shot labels of video events over time.

Google also announced plans to use machine learning to better identify objectionable content in videos and help advertisers manage where their ads appear

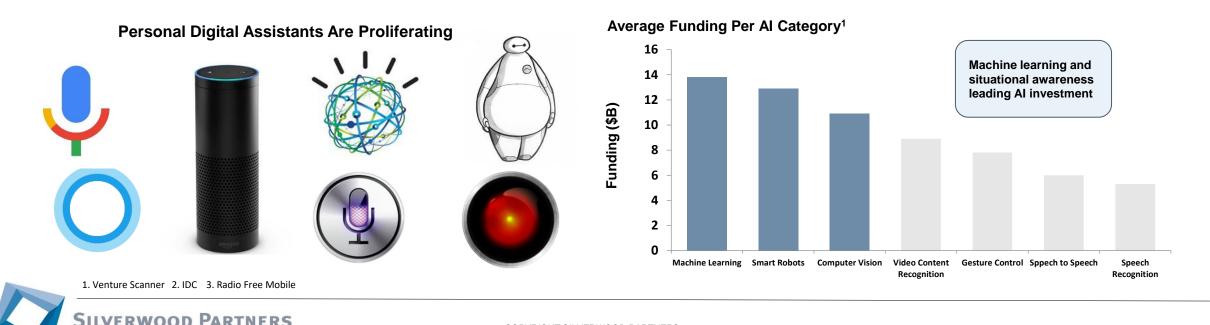


Al is driving the growth of a variety of emerging Amazon service initiatives, including Prime Air's delivery via autonomous drones, Go – a grocery experience where consumers can just walk in and walk out, and Alexa, the already well-known personal digital assistant.

1. CableFax 2. MIT Technology Review

Consumer Electronics Will Become Adaptive, Living Systems and Social Machines

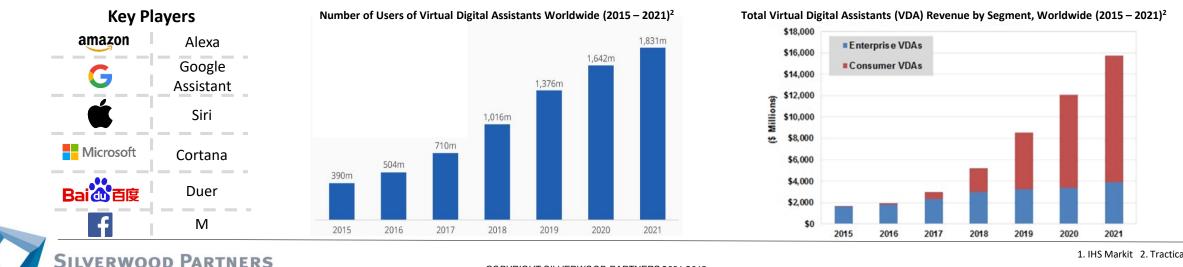
- Al has reached a key inflection point having moving beyond brute force compute power and heuristics to reinforced learning and eventually could be integrated into all a variety of consumer devices and industrial machines
- Consumers are becoming familiar with AI via the proliferation of Personal Digital Assistants on mobile devices and in smart homes
- Global AI market revenue is forecast to increase from \$8.0 billion in 2016 to more than \$47 billion in 2020. Almost 50% of AI market revenue will come from software including applications and platforms²
- There are several major AI opportunities for companies to solve: 1) to improve AI training while using less data, 2) to create an AI which can take learnings from one task and apply them to others and 3) to creation an AI capable of building models independent of human inputs³



VIRTUAL DIGITAL ASSISTANTS (VDA)

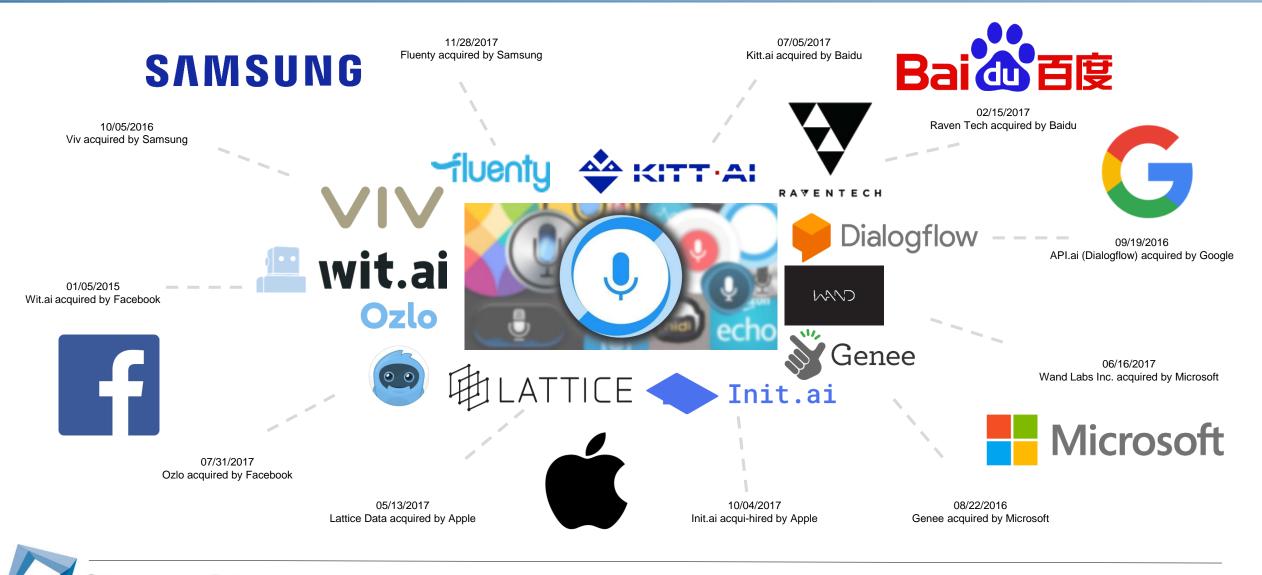
Advancements in AI capabilities (NLP, search) and an increasing number of integrations will drive consumer uptake of digital assistants

- The global market for virtual digital assistants is expected to grow to \$15 billion and 1.8 billion active users by 2021, with consumer-specific VDA revenues growing at a CAGR of 195.7%². Virtual digital assistants reached 4 billion devices in 2017¹
- Digital assistants are poised to bring value to consumer and enterprises through many applications; by interpreting voice commands, fulfilling user requests, and executing tasks, VDAs can, for example, book transportation, set appointments, or text or call individuals for consumers, and VDAs can automate processes like customer support for enterprises, among other applications
- As natural language processing (NLP) and search algorithms improve, digital assistants will be able to provide users services and more relevant results faster
- Like what the App Store did for the iPhone, opening digital assistant platforms to third-party developers will catalyze product integrations and novel use cases
 - Among its competitors, Amazon's Alexa currently has the highest number of integrations (>10,000)
- Privacy remains a large concern for many users, as digital assistants have access to increasing amounts of data in order to realize efficiencies for users



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VIRTUAL DIGITAL ASSISTANTS- INVESTING IN AI



Connected Cars Today, Autonomous Transportation Tomorrow

- A growing number and diversity of technology companies are entering the market for connected and autonomous vehicles from mobile ecosystems to smart homes to dedicated start-ups
- The market for autonomous vehicles is expected to accelerate over the next couple of decades by 2035, BCG expects more than 12 million fully autonomous vehicles to be sold globally
- On December 13, 2016, Google announced it would be spinning off its autonomous car project into a separate standalone business called "Waymo," which stands for "a new way forward in mobility"
- Several trends are driving the market 1) an increasingly software-defined experience in maximizing efficient transport from point A to point B, 2) vehicles can increasingly be equipped with a variety of sensors and connectivity for data capture, V2X exchange and analytics, 3) annual global production of cars and light trucks is peaking in the high 80MM/year range¹
- Research forecasts a global installed base of 220 million connected cars in operation by 2020² however, regulatory (government, insurance, etc.) and infrastructure hurdles will likely limit truly autonomous vehicles from widespread use before the 2020-2025 time frame
- Several critical technological enablers are likely to require significant additional investment to sufficiently advance most autonomous vehicle platforms for widespread adoption³:
 - 1) Improved high-definition maps/mapping for greater accuracy and V2X services integration
 - 2) Next-generation V2X positioning and sensing systems that can "read" those maps
 - 3) An artificial intelligence "engine" to operate the mature platform
- The potential savings to be realized is vast a recent Texas Transportation Institute report suggests the typical U.S. urban commuter spends 42 hours/year stuck in traffic jams, while national highway congestion costs \$160 billion per year in lost productivity and inefficient use of resources



Dozens of Sensors Producing More Valuable "Traffic"



1. IHS Automotive 2. Business Insider 3. RFM Research

CONNECTED VEHICLES – A RACE TO BUILD THE PLATFORM



SMART HOME – EXPECT SERVICES INNOVATION TO DRIVE ADOPTION

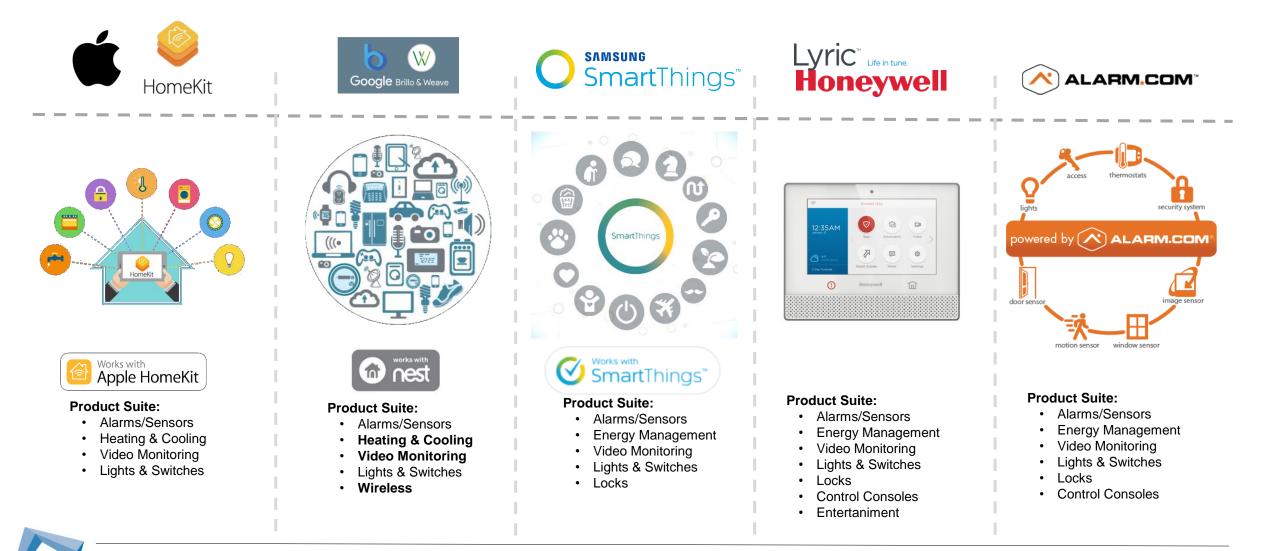
Consumer Acceptance of Innovative, New Smart Home Services Key To Long-Term Growth

- Smart homes will deliver a diverse range of innovative services across networks of smart, connected everyday things this is prompting some companies to shift their sector focus from devices to solutions – the smart home as a service (SHaaS)¹
- Smart home service providers are expected to increasingly partner or collaborate across vertical sectors to deliver the most compelling services and solutions as value creation is increasingly determined by the ecosystem/services provided rather than the connected devices
- Surveys suggest more than 2/3rds of consumers believe smart home technology will be as prevalent as smartphones by 2025³
- Growth in home entertainment centers, home security, appliance control, and healthcare services expected to be key growth sub-sectors
- Shipments of smart home devices expected to grow by a compound annual rate of 67% over the next five years¹ growth expected to be driven by increased comfort with everyday device connectivity, ease of use and demonstrable consumer ROI



Silverwood Partners

SMART HOME – A DIVERSITY OF PLATFORMS AND ECOSYSTEMS



NEXT STEP: SMART CITIES

Fostering of Innovation, Startups, and Tech Incubators

Use of Sensors, Smart Meters, High-Tech, IoT for Infrastructure

Advancement of Sustainable Practices, Green Tech & Ecofriendly Initiatives

Leveraging Mobile/Digitial/Online for Citizen Facing Services

Best-in-class Technology Infrastructure for Residents

Open Government Data Sharing and Interactiveness with Citizens

Superior High-tech Transit and Transportation Systems

Real-time Analytics focus on safety, management, and routing

A smart city is open, high-tech, eco-friendly, responsive, and innovative, supporting its citizens with optimized public services and enhanced connectivity, both socially and technologically.

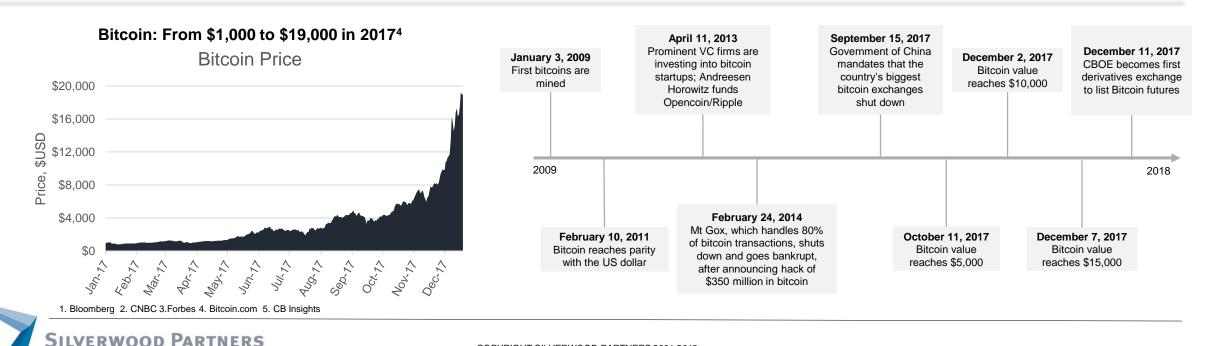
MARKET DRIVERS

- Foster New Business Growth
- Improve Quality of Life
- Increased Production
- Improve Citizen Safety
- Reduce Congestion and Pollution
- Economic Efficiency
- Automate Infrastructure

Cross collaboration & integration with Departments, Citizens, & Community

Bitcoin Approaching Mass Market Inflection Point

- On December 17th, Bitcoin surged past \$19,000 for the first time, just days after eclipsing the \$15,000 mark. Although Bitcoin has seen extreme price volatility, the question going forward is if cryptocurrency is the next bubble or ready for mainstream adoption.
- The heavily debated trend of 2018 for bitcoin and other cryptocurrencies is whether they will prove to be legitimate financial assets. Bitcoin increased in popularity because of it's decentralized structure; however, that may also be the reason behind its potential downfall. A recent Bloomberg article stated, "the value of ordinary currencies is underwritten by governments and stabilized by central banks acting as trusted monopoly producers, roles which Bitcoin and its rivals leave vacant."¹
- Investors that think cryptocurrencies will attain mainstream adoption feel that Bitcoin can reach price levels of \$40,000 in 2018 alone²; however those that feel these cryptocurrencies are not built on fundamental and technical analysis view the current market as a speculative bubble.



The Real Value of Bitcoin

- Underlying bitcoin is blockchain the world's leading software platform for digital assets. Blockchain is, in essence, a distributed public ledger that that stores blocks of cryptographically validated data that users cannot corrupt.³
- The global blockchain technology market is expected to reach \$7.8B by 2024 (GrandView)
- Even though blockchain technology began being used by cryptocurrencies, other industries are now uncovering different ways to put the technology to use.
- Most financial institutions are speculative of the value of bitcoin, and instead are actively looking for ways to utilize this underlying blockchain technology
- Key ways that blockchain technology can help financial institutions include reductions in counterparty risk, increased liquidity, faster transaction processing times and reduced costs.¹



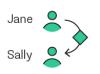
How Blockchain Works for Bitcoin

When payment is made with a physical coin, the person who handed it over can't spend it again. Preventing "double spending" in a digital currency is more complicated.

Transaction

Mining network

Verification



Jane uses bitcoin to buy a cup of coffee at Sally's internet café. using her private kev to transfer ownership of the currency.

Word of the transaction is sent through the bitcoin network to "miners" with powerful computers.



Block



Miners use trial-and-error computations to solve a puzzle created by combining data about recent transactions. The first to find the unique number that unlocks the puzzle earns the right to bundle the transactions into a confirmed batch known as a block.

The winning miner is rewarded with newly minted bitcoin – but only after other miners confirm that the block's transactions don't contain any attempts to spend the same funds twice.

The Chain



Blockchain acts as a public ledger showing all transactions, though the identities of participants are obscured. Each block has a cryptographic link to the previous one. Every addition of a new, linked block to the chain makes it harder for a rogue miner to steal Sally's bitcoin by rewriting the sequence of transactions.

Source: Bloomberg



1. Bloomberg 2. Coin Telegraph 3. Forbes 4. Bitcoin.com 5. CB Insights

CORPORATE BLOCKCHAIN INVESTORS









2

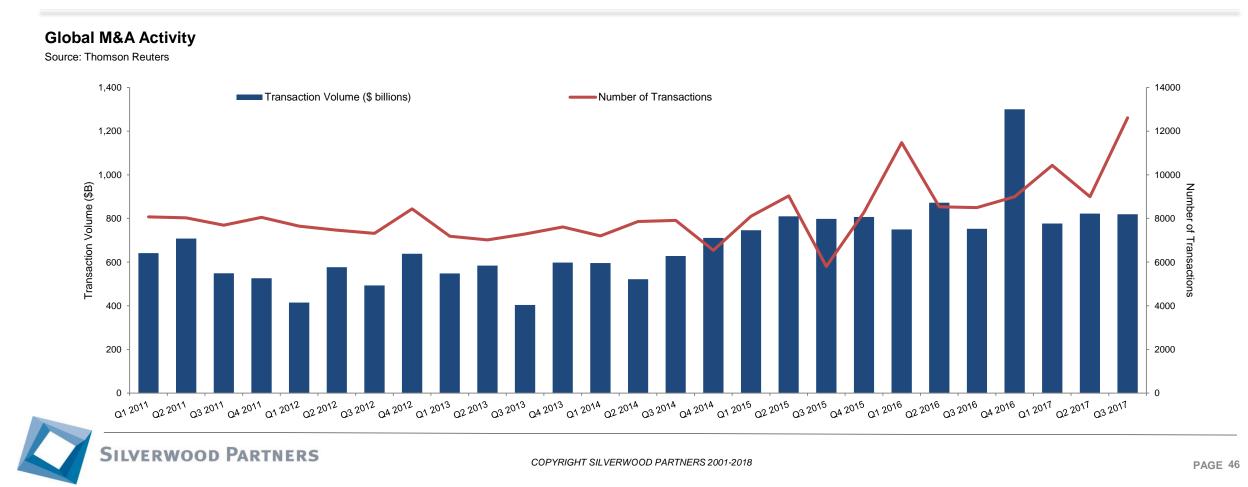
M&A and Financing Transaction Review



M&A ACTIVITY

M&A Market Perspectives

- Global M&A activity continued at a sustained high level in Q1-Q3 of 2017
- Over the first three quarters of 2017, global M&A deal activity was higher than that of the same period in 2016 (up 3% YoY)



CORPORATE VENTURE INVESTMENT ACTIVITY

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Corporate VC and Direct Investment Funding Continues to Remain an Active Trend in Startup Financing

- Corporate VC investment through the first half of 2017 was \$13.3 Billion over 798 deals, approximately even with the first half of 2016 at \$12.7 Billion over 633 deals
- Corporate venture capital participation decreased 7% Q/Q in Q3 '17, with corporate involvement in 26% of all VC deals

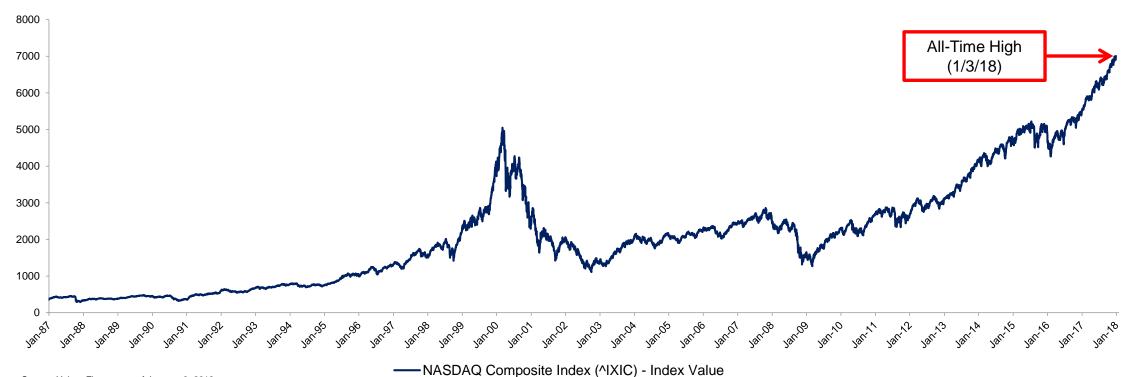
Corporate VC and Corporation Funding Source: CB Insights 12 450 400 10 350 Transaction Value (\$B) Number of Transactions 300 8 250 200 150 100 2 50 Q2 2015 Q1 2012 02 2012 Q3 2012 Q4 2012 Q1 2013 02 2013 Q3 2013 Q1 2014 02 2014 Q3 2014 Q4 2014 Q1 2015 Q3 2015 Q4 2015 Q1 2016 Q2 2016 Q3 2016 Q4 2016 Q1 2017 02 2017 Q4 2013 CVC Value (\$ billions) CVC Transactions

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EQUITY MARKETS AT ALL-TIME HIGHS

Equity Markets Continue to Climb as Market Volatility Decreases

- NASDAQ at an all-time high of 7,056 (1/3/18)
- S&P 500 at an all-time high of 2,708 (1/3/18)
- Dow at an all-time high of 24,903 (1/3/18)



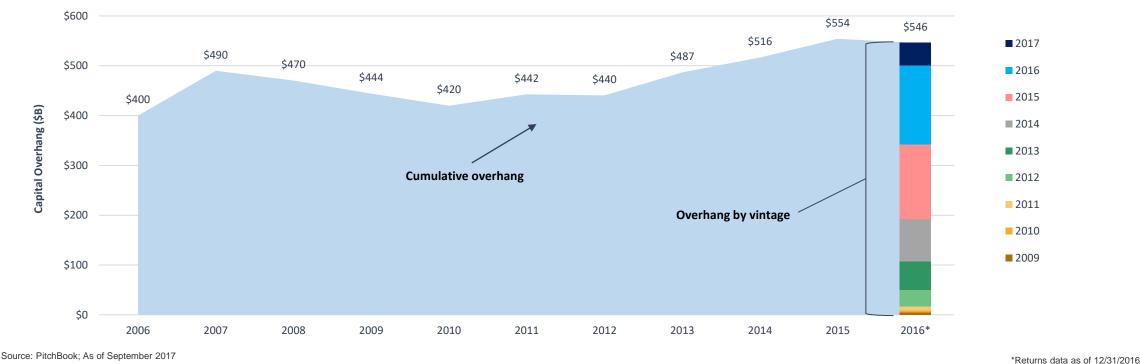


SIGNIFICANT PRIVATE EQUITY CAPITAL AVAILABLE

U.S. PE Firms Aggressively Searching for Acquisitions

- Over \$500 billion of U.S. PE capital available for equity investment
- Purchasing power 3x to 4x this amount with leverage, reinvested equity
- Significant sector interest by PE buyers

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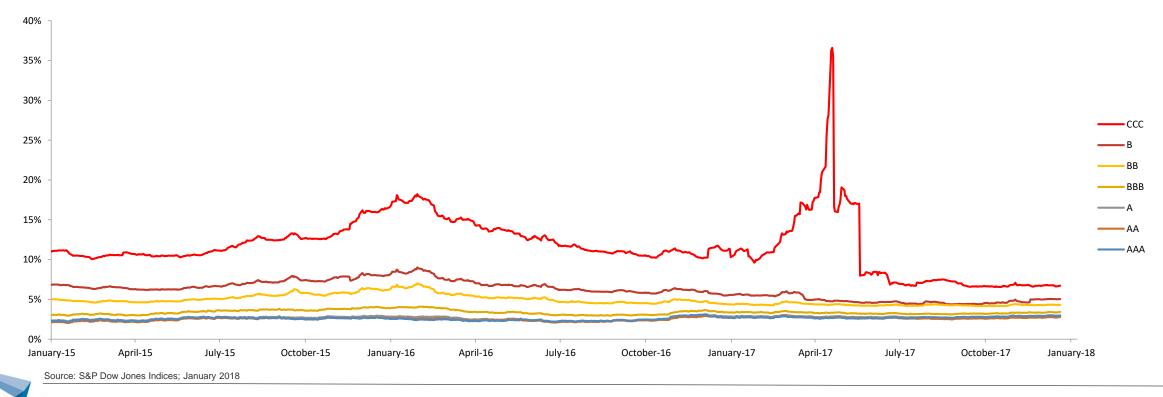


Private Equity Capital Overhang

BORROWING COSTS HISTORICALLY LOW

Corporate Bond Yields Decreased from Recent Highs in February 2016

- Spreads have tightened vs. Treasurys for corporate issuers
- Yields lowering for less than investment grade issuers
- · Market access more certain with decreased volatility

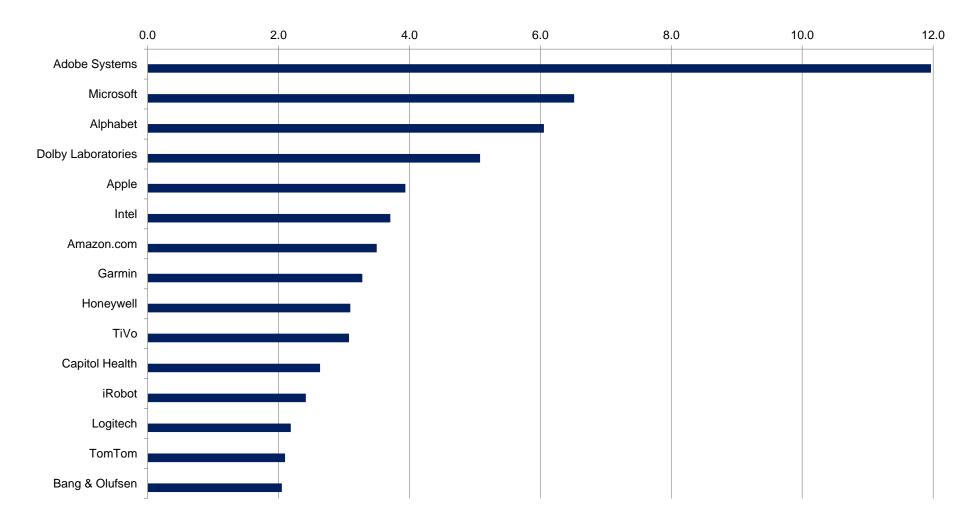


WHAT IS THE EQUITY MARKET REWARDING?



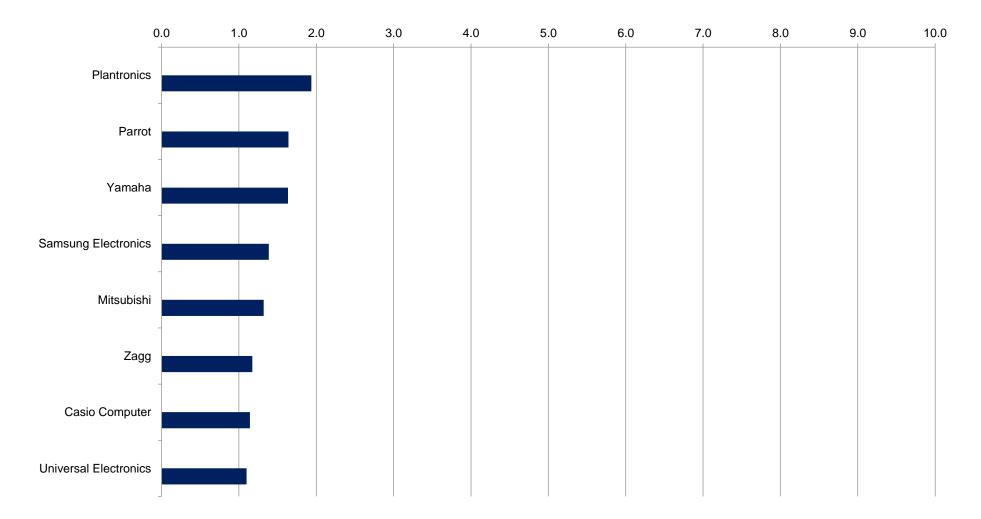


PUBLIC COMPANIES – EV/REVENUE OVER 2.0X



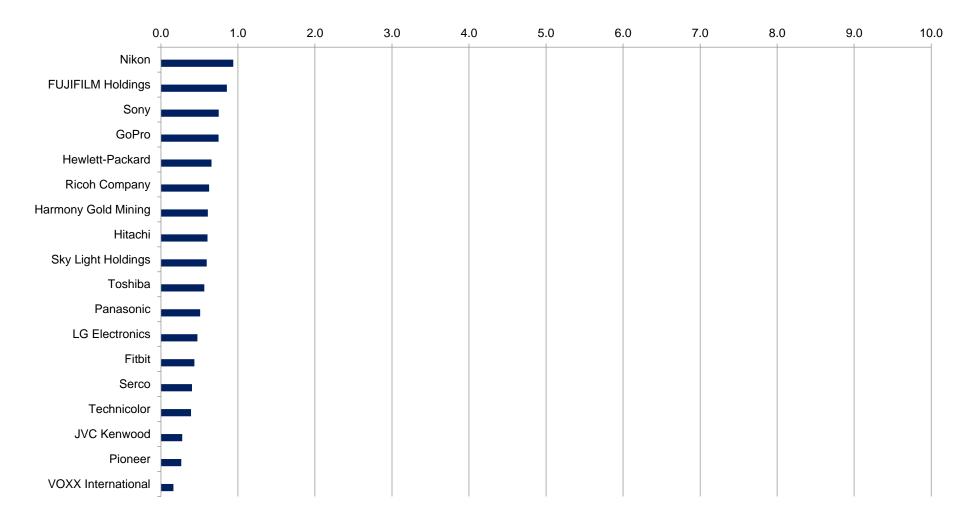
Source: Pitchbook Data as of December 31, 2017

PUBLIC COMPANIES – EV/REVENUE 1.0-2.0X





PUBLIC COMPANIES – EV/REVENUE BELOW 1.0X



Source: Pitchbook Data as of December 31, 2017

SELECTED M&A TRANSACTIONS

Date	Target	Buyer	Target Description	Deal Size (\$M)	Revenue (\$M)	EBITDA (\$M)
22-Dec-2017	Token Play	Stompy Bot	Developer of blockchain technology.	2.95	-	-
22-Dec-2017	Bright Box	Zurich Insurance Group	Provider of an AI-first connected car platform.	-	-	-
07-Dec-2017	Numerex	Sierra Wireless	Provider of machine-to-machine (M2M) technologies	125.00	63.25	(11.02)
05-Dec-2017	Minebox	ClearCenter	Developer of a NAS data storage system.	-	-	-
02-Dec-2017	BiWang Group	CollinStar Holdings	Provider of mining chip production and R&D services.	100.00	-	-
29-Nov-2017	Bitcoin Profits	Room 21 Media	Developer of a bitcoin education platform.	-	-	-
21-Nov-2017	Vrvana	Apple	Developer of virtual reality headsets.	30.00	-	-
16-Nov-2017	Canada Blockchain Hosting	Calyx Bio-Ventures	Developer of cryptocurrency technologies.	0.31	-	-
10-Nov-2017	Idelivr	Phonon Communications	Developer of artificial intelligence(AI) based chatbots.	-	-	-
09-Nov-2017	Restlet	Talend	Developer of cloud based API-first software.	-	-	-
02-Nov-2017	Vivant Digital	International Business Machines	Developer of artificial intelligence systems.	-	-	-
24-Oct-2017	Empressem Technologies	Netrix Systems	Provider of mobile application development services.	•	-	-
24-Oct-2017	AGE Technologies	4Sight Holdings	Provider of information technology systems and services.	5.85	-	-



Source: Pitchbook Data as of December 31, 2017

Date	Target	Buyer	Target Description	Deal Size (\$M)	Revenue (\$M)	EBITDA (\$M)
20-Oct-2017	Netsnapper Technologies	Globetouch	Provider of connectivity services and Internet of Things (IoT) platforms.	-	-	-
17-Oct-2017	Deep Relevance	Coupa Software	Developer of a fraud management platform.	-	-	-
12-Oct-2017	Linja Design	Vincit Group	Designer of digital products and services focused on industrial internet and Internet of Things.	-	-	-
10-Oct-2017	Neurensic	Trading Technologies International	Developer of a cloud based risk management software.	-	-	-
03-Oct-2017	Body Labs	Amazon.com	Developer of artificial intelligence application.	60.00	-	-
03-Oct-2017	AltSpaceVR	Microsoft	Developer of a virtual reality social platform.	-	-	-
02-Oct-2017	Robopolis	iRobot	Manufacturer of robotic products.	141.00	156.67	-
02-Oct-2017	Digital Lumens	OSRAM Licht	Developer of LED-based lighting systems.	-	-	-
30-Sep-2017	MOCAP Analytics	Sportradar Us	Developer of an artificial intelligence (AI) technology.	-	-	-
26-Sep-2017	Korbit	Nexon	Operator of a bitcoin exchange platform.	90.00	-	-
18-Sep-2017	Stringify	Comcast Spotlight	Developer of a technology platform.	-	-	-
15-Sep-2017	Cloud Technology Partners	Hewlett Packard Enterprise	Provider of cloud IT services.	-	-	-
14-Sep-2017	Alpaca(Japan segment business)	Undisclosed	Developer of artificial intelligence and database technology software.	-	-	-



Source: Pitchbook Data as of December 31, 2017

Date	Target	Buyer	Target Description	Deal Size (\$M)	Revenue (\$M)	EBITDA (\$M)
14-Sep-2017	Adacus	PaperG	Developer of a creative targeting and analytics platform.	-	-	-
13-Sep-2017	CXignited	Undisclosed	Provider of a cloud-based pervasive computing platform.	-	-	-
11-Sep-2017	Brilliant Basics	Infosys	Provider of digital product designing services.	9.74	-	-
10-Sep-2017	Evature	Booking.com	Developer of an Expert Virtual Agent technology.	-	-	-
07-Sep-2017	Cloudera Fast Forward Labs	Cloudera	Developer of machine intelligence research platform.	-	-	-
01-Sep-2017	El Labs India	Minda Corporation	Manufacturer of technology based products.	1.01	-	-
24-Aug-2017	Omni m2m	TraqIQ	Provider of cloud based software services and sensors for equipment.	-	-	-
16-Aug-2017	Scyfer	Qualcomm	Developer of artificial intelligence software.	-	-	-
16-Aug-2017	AIMatter	Alphabet	Developer of a photo editing application.	-	-	-
15-Aug-2017	Apprento	M-Files	Provider of artificial intelligence and natural language processing technology		-	-
08-Aug-2017	Planet OS	InterTrust Technologies	Provider of a cloud-based data infrastructure platform.	-	-	-
03-Aug-2017	SoftTelecom	Vipera	Provider of cloud based software development services.	1.54	0.87	-
02-Aug-2017	AdinCube	Моzоо	Developer of an artificial intelligence powered application.	20.00	-	-



Source: Pitchbook Data as of December 31, 2017

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Date	Target	Buyer	Target Description	Deal Size (\$M)	Revenue (\$M)	EBITDA (\$M)
01-Aug-2017	PierceMatrix	Zeneth Technology Partners	Provider of an online enterprise security platform.	-	-	-
31-Jul-2017	Ozlo	Facebook	Developer of an integrated knowledge platform.	-	-	-
28-Jul-2017	Thington	eero	Developer of a home management application.	-	-	-
27-Jul-2017	IQP	GE Digital	Developer of a code free application development tool.	40.00	-	-
26-Jul-2017	Covisint	OpenText	Developer of cloud-based platform designed for building Identity and Internet of Things (IoT) applications.	103.00	70.24	(5.45)
26-Jul-2017	Arrayent	Prodea	Provider of an internet of things platform.	-	-	-
12-Jul-2017	Halli Labs	Alphabet	Provider of artificial intelligence services.	-	-	-
10-Jul-2017	Setem Technologies	XMOS	Developer of noise controlling software.	-	-	-
05-Jul-2017	Kitt.Ai	Baidu	Developer of language and speech technologies.	-	-	-
03-Jul-2017	Simulity Labs	ARM	Provider of embedded communications software.	40.30	-	-
28-Jun-2017	Ubix	Samson	Developer of Internet-of-Things and automation platform.	-	-	-
21-Jun-2017	Mettle (SkyBox technology)	Adobe Systems	Developer of virtual reality software products.	-	-	-
21-Jun-2017	DeepIntent Technologies	Kitara Media	Developer of a data management platform.	8.00	-	-



Source: Pitchbook Data as of December 31, 2017

Date	Target	Buyer	Target Description	Deal Size (\$M)	Revenue (\$M)	EBITDA (\$M)
20-Jun-2017	codebender	Codeanywhere	Provider of a web-based development platform.	-	-	-
20-Jun-2017	Carriots	Altair Engineering	Developer of Internet of Things application enablement platform.	-	-	-
16-Jun-2017	VRB	Samsung Electronics	Provider of a virtual reality photo sharing platform.	5.50	-	-
16-Jun-2017	SensoMotoric Instruments Gesellschaft für innovative Sensorik	Apple	Developer of eye trackers and software products.	-	-	-
13-Jun-2017	Innovative Software Engineering	Trimble	Provider of engineering and systems integration services.	-	-	-
24-May-2017	Revolta Engineering	A1 Systems	Developer of internet of things software and services.	2.00	-	-
24-May-2017	RAVN Systems	iManage	Developer of artificial intelligence technology.	-	-	-
24-May-2017	MODELiiS	Altair Engineering	Developer of electronic design automation software.	-	-	-
24-May-2017	Hexadite	Microsoft	Developer of a security automation and orchestration platform.	100.00	-	-
24-May-2017	440Labs	Ecoark Holdings	Developer of mobile and web development software.	-	-	-
23-May-2017	Into The VR World	AppSwarm	Provider of virtual reality hardware.	-	-	-
23-May-2017	Interactions Digital Roots	Interactions	Developer of social artificial intelligence technology.	-	-	-
10-May-2017	Saiyan Productions	Imperium Media	Developer of augmented reality videos and image content.	-	-	-



Source: Pitchbook Data as of December 31, 2017

Date	Target	Buyer	Target Description	Deal Size (\$M)	Revenue (\$M)	EBITDA (\$M)
09-May-2017	Owlchemy Labs	Alphabet	Operator of a game development studio intended to create VR (Virtual Reality) experiences and games.	-	-	-
03-May-2017	Abeeway	Actility	Developer of geolocation systems.	-	-	-
27-Apr-2017	Automatic (Connected Car Company)	Sirius XM Radio	Provider of a driving assistant application.	115.00	-	-
26-Apr-2017	Mediachain	Spotify	Provider of blockchain data technology.	-	-	-
13-Apr-2017	xPerception	Baidu	Developer of vision perception software and hardware.	-	-	-
13-Apr-2017	Rage Frameworks	Genpact	Developer of knowledge-based automation technology and services.	0.13	8,000.00	-
04-Apr-2017	ViDi Systems	Cognex	Developer of deep learning software.	22.98	-	-
31-Mar-2017	Trustpoint Innovation Technologies	Escrypt	Developer of secure machine-to-machine (M2M) communication software.	15.00	-	-
31-Mar-2017	Infobright	Ignite Technologies	Developer of self-tuning analytic database.	-	-	-
29-Mar-2017	DataRPM	Progress Software	Developer of a cognitive predictive maintenance platform (CPdM).	30.00	-	-
27-Mar-2017	Cumulocity	Software	Developer of a cloud based device management and application enablemen platform.	t -	-	-
20-Mar-2017	Great Coin	Undisclosed	Operator of an online cryptocurrency platform.	-	-	-
09-Mar-2017	Creative Minds Consulting	Hoylu	Provider of next-generation IoT and connective technologies.	-	-	-



Source: Pitchbook Data as of December 31, 2017

Date	Target	Buyer	Target Description	Deal Size (\$M)	Revenue (\$M)	EBITDA (\$M)
01-Mar-2017	SmarterMe	E-Zest Solutions	Developer of an artificial intelligence mobile application.	-	-	-
28-Feb-2017	Neokami	Relayr	Developer of an artificial intelligence technology.	-	-	-
24-Feb-2017	Skry	Bloq	Developer of block-chain analytics and intelligence platform.	-	-	-
16-Feb-2017	Raven Tech	Baidu	Developer of smart home control and smart hardware system.	-	-	-
16-Feb-2017	Mistbase	ARM	Provider of wireless communication services.	-	-	-
10-Feb-2017	Fältcom	Telia Company	Developer of IoT system.	-	9.69	-
10-Feb-2017	Argo Al	Ford	Developer of artificial intelligence software.	1,000.00	-	-
04-Feb-2017	Perch (Software)	Samsung Electronics	Developer of do-it-yourself home monitoring software.	-	-	-
02-Feb-2017	Red Marker	Kaplan	Developer and operator of artificial intelligence and machine learning platform.	-	-	-
02-Feb-2017	MWPowerlab	Schneider Electric	Developer of 3D real-time software.	-	-	-
01-Feb-2017	GainSpan	Telit Communications	Developer of an ultra low-power Wi-Fi technology.	8.00	-	4.00
01-Feb-2017	Conversa Solutions	Vertex Wireless	Developer of mobile software.	-	-	-
31-Jan-2017	Apprion	Jacobs Engineering Group	Provider of industrial software applications.	-	-	-



Date	Target	Buyer	Target Description	Deal Size (\$M)	Revenue (\$M)	EBITDA (\$M)
30-Jan-2017	Lawnmower	CoinDesk	Developer of an investment and research platform for blockchain assets.	-	-	-
23-Jan-2017	Meta (AI)	Chan Zuckerberg Initiative	Provider of an artificial intelligence search engine.	-	-	-
18-Jan-2017	Intelligentsia.ai	Quartz	Provider of research and analysis services.	-	-	-
10-Jan-2017	Sailendra	Pharmagest Interactive	Provider of an artificial intelligence platform.		-	-



SELECTED PRIVATE PLACEMENT TRANSACTIONS (>\$10M)

Date	Target	Investor(s)	Target Description	Transaction Value (\$M)
21-Dec-2017	Socrates.Ai	Undisclosed	Developer of an intelligent assistant.	11.00
19-Dec-2017	One Concern	CrunchFund, Deep Fork Capital, Geodesic Capital, New Enterprise Associates, New Ventures, Pear Ventures, Urban.Us	Developer of an earthquake intelligence platform.	20.00
19-Dec-2017	Maana	Accenture Ventures, Chevron Technology Ventures, China International Capital Corporation, Eight Square Capital, GE Ventures, Intel Capital, Saudi Aramco Energy Ventures, Shell Technology Ventures, Sino Capital Group	Provider of a knowledge platform graph search engine.	28.00
19-Dec-2017	Kasisto	Commerce Ventures, MasterCard, Oak HC/FT, Partnership for New York City, Propel Venture Partners, Two Sigma Ventures	Developer of a virtual personal assistant technology.	17.85
19-Dec-2017	DigitalGenius	Compound VC, Global Founders Capital, Kairos, Lerer Hippeau Ventures, Lumia Capital, MMC Ventures, Paua Ventures, RRE Ventures, Runa Capital, Salesforce Ventures, Spider Capital Partners	Developer of an artificial intelligence platform.	14.75
14-Dec-2017	Life360	Cthulhu Ventures	Provider of a location and communication smartphone application.	18.49
14-Dec-2017	Leadspace	Arrowroot Capital, Jerusalem Venture Partners	Developer of a SaaS audience management platform.	21.00
14-Dec-2017	Instana	Accel, Target Partners	Provider of a big data and micro-services architecture monitoring platform.	20.00
13-Dec-2017	Dreamscape Immersive	21st Century Fox, AMC Theatres, Bold Capital Partners, Image Nation, UTA Ventures, Viacom, VRSense Solutions, Warner Bros. Entertainment	Developer of virtual reality technology.	29.55
08-Dec-2017	Vion Technology	ABB, Samsung Electronics, Tsing Capital, Waterwood Group	Developer of a series of core algorithms of image recognition, high performance AI hardware platforms.	20.00
07-Dec-2017	Relayr	Castor Ventures, Chestnut Street Ventures, The Yard Ventures	Provider of an industrial IoT middleware platform.	19.90
06-Dec-2017	BitPay	Aquiline Capital Partners	Provider of blockchain payments technology platform.	30.00
05-Dec-2017	Ngdata	Capricorn Venture Partners, HPE Growth Capital, IdInvest Partners, Nausicaa Ventures, Pamica, SmartFin Capital	Provider of a next generation customer data platform.	19.00
30-Nov-2017	Мојіо	Amazon Alexa Fund, BDC Capital IT Venture Fund, Deutsche Telekom Strategic Investments, Innogy Venture Capital, Kensington Capital Partners, Relay Ventures, Trend Forward Capital	Provider of a cloud-based connected car platform.	23.52
29-Nov-2017	Seebo	Autodesk, GiTV, Israel-Northeast Ventures, Pritzker Group Venture Capital, TPY Capital, Viola Ventures	Provider of software tools and technology.	16.50
29-Nov-2017	Luminance (AI platform)	Invoke Capital, Slaughter and May, Talis Capital	Provider of a legal document analysis software.	10.00
27-Nov-2017	Kneron	Alibaba Entrepreneurs Fund, CDIB Capital Group, Cyzone, Himax Technologies, Qualcomm, Sequoia Capital, ThunderSoft	Provider of an application-specific integrated circuit and software.	15.00



Date	Target	Investor(s)	Target Description	Transaction Value (\$M)
20-Nov-2017	Pixvana	Cisco Investments, Hearst Ventures, Madrona Venture Group, Microsoft Ventures, Raine Ventures, Vulcan Capital	Provider of a virtual reality video processing platform.	14.09
20-Nov-2017	AISense	500 Startups, Bridgewater Associates, Danhua Capital, Draper Associates, Draper Dragon, Horizons Ventures, Raptor Group, Slow Ventures, SV Tech Ventures, Tiny Capital	Developer of a speech recognition and deep learning technology.	10.00
13-Nov-2017	Globetouch	Deutsche Telekom Capital Partners, Hermes Growth Partners, Impact Venture Capital, Spark Ventures, Verizon Ventures, Zeev Ventures	Provider of connectivity services and Internet of Things (IoT) platforms.	12.65
10-Nov-2017	Malong Technologies	SB China Venture Capital	Provider of machine vision technologies.	33.00
07-Nov-2017	Jitterbit	Kohlberg Kravis Roberts	Provider of API integration platform.	25.00
02-Nov-2017	Zhuiyi	Banyan Capital, GGV Capital, Morningside Group, Sinovation Ventures	Developer of Saas based artificial intelligence chatbot platform.	21.00
01-Nov-2017	Globality	Raine Ventures, THK Private Equities	Operator of a global premium B2B services marketplace.	35.00
01-Nov-2017	AppZen	Arba Seed Investment Group, Hard Yaka, Redpoint Ventures, Resolute Ventures	Developer of a back office automation platform.	12.70
31-Oct-2017	LifeSmart	BridgeOne Capital, Walden International	Developer of mobile and ODM based home automation technologies.	12.00
31-Oct-2017	Fclassroom	Danhua Capital, XVC	Provider of an artificial intelligence-powered educational platform.	15.00
27-Oct-2017	Ambiq Micro	Kleiner Perkins Caufield & Byers, Mercury Fund, Panasonic Ventures, Tsing Capital	Developer of integrated circuits.	33.56
25-Oct-2017	DeePhi Tech	Ant Financial, Banyan Capital, China Growth Capital, China Merchants Group, GSR Ventures, MediaTek, Samsung Electronics, Sigma Square Capital, Tsinghua Holdings, Xilinx	Provider of a deep learning platform.	40.00
24-Oct-2017	Wibbitz	Associated Press, Bertelsmann Digital Media Investments, Horizons Ventures, lool Ventures, NantWorks, TF1 Group, Weather Group Television	Provider of an AI-powered video creation platform.	20.00
24-Oct-2017	Kindred	Eclipse Ventures, First Round Capital, Tencent	Developer of robots designed to have human-like intelligence.	28.00
23-Oct-2017	Tethr	CEB, Grotech Ventures, MissionOG	Developer of a communications intelligence platform.	18.20
23-Oct-2017	Abra (FinTech)	American Express Ventures, Arbor Ventures, Foxconn Technology Group, Honhai Capital Management, Ignia, Jungle Ventures, Lerer Hippeau Ventures, RRE Ventures, Silver 8 Capital	Developer of an application for online money transfer.	16.00
19-Oct-2017	LeapMind	Archetype, GMO VenturePartners, Intel Capital, ITOCHU Technology Ventures, NEC Capital Solution, NTT Data, Visionnaire Ventures	Provider of an artificial intelligence based cognitive technology.	10.00



Date	Target	Investor(s)	Target Description	Transaction Value (\$M)
19-Oct-2017	Automile	Dawn Capital, Insight Venture Partners, Point Nine Capital, SaaStr, Salesforce Ventures	Provider of mobile-first, design-first fleet and field service management services.	34.00
16-Oct-2017	Digital Asset	Goldman Sachs Principal Strategic Investments, Jefferson Capital Partners	Developer of distributed ledger technology.	40.00
11-Oct-2017	Comino	Exantech	Provider of a professional mining device.	10.00
11-Oct-2017	Attivo Networks	Bain Capital Ventures, Exigent, Omidyar Technology Ventures, Trident Capital Cybersecurity	Developer of a deception technology.	21.00
10-Oct-2017	BigScreen	Andreessen Horowitz, True Ventures	Provider of a virtual reality platform.	10.00
06-Oct-2017	Atheer	Undisclosed	Developer of an augmented interactive reality platform.	12.27
05-Oct-2017	Device Authority	Undisclosed	Developer of policy-driven data encryption technology.	10.00
04-Oct-2017	FogHorn	Darling Ventures, Dell Technologies Capital, GE Ventures, Honeywell Ventures, Intel Capital, March Capital Partners, Robert Bosch Venture Capital, Saudi Aramco Energy Ventures, The Hive, Yokogawa Electric	Developer of an edge intelligence software.	30.00
03-Oct-2017	Nanotronics Imaging	Founders Fund, Investment Corporation of Dubai	Developer of cutting-edge microscopy and machine learning software.	30.00
28-Sep-2017	Phytech	Syngenta Ventures, Tencent	Developer of plant-based practice applications.	11.00
28-Sep-2017	Drive.ai	Grab, HOF Capital	Developer of AI based self-driving technology.	15.00
26-Sep-2017	Drift	Charles River Ventures, General Catalyst Partners, HubSpot, Sequoia Capital	Developer of a conversation-driven marketing and sales platform.	32.00
26-Sep-2017	CareSyntax	Norgine Ventures, Surgical Intelligence	Developer of an IoT technology platform.	11.90
20-Sep-2017	Yi+	Bairongjun Group, Bank of Beijing Co., Haitong Securities	Provider of computer vision search engine.	15.00
07-Sep-2017	Tech Bureau	Jafco	Operator of a cryptocurrency exchange platform.	14.47
07-Sep-2017	Orion Labs	Allen & Company, Argentum Group, Avalon Ventures, Delta Partners Group, FUEL Capital, Mathers Associates, Motorola Solutions Venture Capital, Thermo Capital Partners	Developer of a wearable communication accessory.	18.26
04-Sep-2017	Cubic Motion	NorthEdge Capital	Developer of facial animation software.	26.58



Source: Pitchbook Data as of December 31, 2017

Date	Target	Investor(s)	Target Description	Transaction Value (\$M)
01-Sep-2017	SoundAl	Aplus Capital, Baidu Capital, Frees Fund, Linekong Interactive Group Company	Developer of an acoustic technology created to uphold the ideas of smarter communication.	15.00
30-Aug-2017	Appier	AMTD Group Company, EDB Investments, LINE, Naver, SoftBank Group	Provider of advertising technology services designed to make it easy for businesses to use artificial intelligence.	33.00
22-Aug-2017	Versive	Formation 8, Goldman Sachs Principal Strategic Investments, Madrona Venture Group, Vulcan Capital	Developer of an artificial intelligence cyber-security platform.	12.70
22-Aug-2017	Amplero	Greycroft, Ignition Venture Partners, Seven Peaks Ventures, Trilogy Equity Partners, Wildcat Venture Partners	Provider of a predictive customer lifetime value management platform.	17.00
21-Aug-2017	Hyper Anna	AirTree Ventures, Insurance Australia Group, Reinventure Group, Sequoia Capital China	Developer of a natural-language driven artificial intelligence data analytics platform.	12.67
18-Aug-2017	Immersv	East Ventures, Foundation Capital, Gigi Levy-Weiss, GREE, I-mobile, Initial Capital, MCJ Company, Metaps, Rogers Venture Partners, The Venture Reality Fund, Vive X Accelerator	Developer of a mobile 360 and virtual reality marketing platform.	10.50
17-Aug-2017	HiScene	Meitu, Sincere Capital, Star Capital, Suodao Capital	Developer of an augmented reality platform.	14.98
16-Aug-2017	Respond Software	Charles River Ventures, Foundation Capital	Provider of a security expert software system.	12.00
11-Aug-2017	ZingBox	Dell Technologies Capital, Envision Ventures, TriVentures, Wisemont Capital	Provider of an Internet of Things security platform.	21.74
11-Aug-2017	x.ai	DCM Ventures, Fenox Venture Capital	Provider of an artificial intelligence powered personal assistant application.	10.00
09-Aug-2017	Socure	Commerce Ventures, Flint Capital, Santander InnoVentures, Two Sigma Ventures, Work-Bench	Provider of a digital identity verification platform.	13.90
07-Aug-2017	InContext Solutions	Beringea, Green D Ventures, Hyde Park Angels, Intel Capital, Plymouth Growth Partners	Developer of 3D virtual simulation technology.	21.54
04-Aug-2017	TuSimple	Nvidia, Sina, Weibo, Zhiping Capital	Provider of an autonomous truck driving platform.	20.00
03-Aug-2017	Site 1001	Flyover Capital, Je Dunn Construction, KCRise Fund, Tifec, ward.ventures	Developer of an intelligent facilities management platform.	11.00
02-Aug-2017	Particle	Cito Ventures, Qualcomm Ventures, Spark Capital	Provider of an Internet of Things (IoT) platform.	20.00
27-Jul-2017	Callsign	Accel, AllegisCyber, NightDragon Security, PTB Ventures	Developer of an artificial intelligence-driven authentication platform.	35.00
26-Jul-2017	Within (Virtual reality)	21st Century Fox, Andreessen Horowitz, Emerson Collective, Raine Ventures, Stay Macro, Temasek Holdings, WPP Ventures	Developer of a virtual reality (VR) content and technology platform.	40.00



Date	Target	Investor(s)	Target Description	Transaction Value (\$M)
20-Jul-2017	Iguazio	CME Ventures, Dell Technologies Capital, Jerusalem Venture Partners, Magma Venture Partners, Pitango Venture Capital, Robert Bosch Venture Capital, Verizon Ventures	Developer of storage and data management technology.	33.00
20-Jul-2017	Graphcore	Amadeus Capital Partners, Atomico, C4 Ventures, Dell Technologies Capital, Draper Esprit, Foundation Capital, Pitango Venture Capital, Robert Bosch Venture Capital, Samsung Catalyst	Developer of a new generation computer processor designed to accelerate machine intelligence learning.	30.00
20-Jul-2017	Drayson Technologies	Woodford Investment Management	Developer of an Internet of Things platform	19.50
18-Jul-2017	Capital.com	Larnabel Ventures, VP Capital	Developer of an artificial intelligence based trading software.	25.00
17-Jul-2017	WaveOptics	Gobi Ventures, Octopus Ventures, Robert Bosch Venture Capital, Touchstone Innovations	Developer of an augmented reality (AR) technology.	15.60
13-Jul-2017	Menlo Micro	Corning, GE Ventures, Microsemi, Paladin Capital Group, Vertical Venture Partners	Developer and manufacturer of electronic switches.	22.46
11-Jul-2017	CIMCON Lighting	Clean Energy Venture Group, Energy Impact Partners, Launchpad Venture Group, Massachusetts Clean Energy Center, TiE-Boston	Developer of lighting control systems.	16.00
01-Jul-2017	Aisera	Undisclosed	Developer of an AI platform.	10.55
01-Jul-2017	AiCure	Baird Capital	Developer of clinically-validated artificial intelligence technologies.	15.00
27-Jun-2017	JASK	Battery Ventures, Dell Technologies Capital, Ten Eleven Ventures, Vertical Venture Partners	Provider of a cyber-security analytics software.	12.00
21-Jun-2017	Textio	Bloomberg Beta, Cowboy Ventures, Emergence Capital Partners, Scale Venture Partners, Upside Partnership	Provider of an augmented writing platform.	20.00
14-Jun-2017	Snips	Bpifrance, Eniac Ventures, Korelya Capital, MAIF Avenir	Provider of an on-device artificial intelligence based voice platform.	13.00
12-Jun-2017	CrowdFlower	Canvas Ventures, Industry Ventures, Microsoft Ventures, Salesforce Ventures, Trinity Ventures	Provider of an artificial intelligence based platform.	20.00
07-Jun-2017	Beyond Limits	BP Ventures	Developer of artificial intelligence and cognitive cloud computing based software.	20.00
06-Jun-2017	Armis Security	Cerca Partners, Sequoia Capital Israel, Tenaya Capital	Developer of an IoT security platform.	17.00
05-Jun-2017	Neva	March Capital Partners, Pelion Venture Partners, Slack, Vertex Ventures US	Provider of an AI-driven automation software.	12.44
05-Jun-2017	Mythic	Undisclosed	Developer of a local artificial intelligence platform.	10.00



Date	Target	Investor(s)	Target Description	Transaction Value (\$M)
31-May-2017	VeeR VR	Sierra Ventures	Developer of a VR (Virtual Reality) video platform.	16.00
23-May-2017	Coins.ph	Beenext, Digital Currency Group, Global Brain, IdeaSpace Foundation, Innovation Endeavors, Kickstart Ventures, Naspers Ventures, Pantera, Quona Capital, Rebright Partners, Wavemaker Partners	Provider of a blockchain-enabled platform.	10.00
16-May-2017	Mocana Corporation	GE Ventures, Shasta Ventures, Sway Ventures, Trident Capital	Provider of mission-critical IoT security solutions.	15.00
15-May-2017	FogHorn	Darling Ventures, Dell Technologies Capital, EMC Ventures, GE Ventures, March Capital Partners, Robert Bosch Venture Capital, Saudi Aramco Energy Ventures, The Hive, Yokogawa Electric	Developer of an edge intelligence software.	15.00
10-May-2017	Attivo Networks	Bain Capital Ventures, Macnica, Omidyar Technology Ventures, Trident Capital Cybersecurity	Developer of a deception technology.	15.00
04-May-2017	Symbiont	Hundsun Group, Medici Ventures, SenaHill Partners	Developer of distributed ledger technology.	10.00
03-May-2017	Enlighted	Kleiner Perkins Caufield & Byers	Provider of an IOT platform.	12.00
27-Apr-2017	CivicConnect	Atlantic Bridge Capital, Irish Venture Capital Association, Westcott	Developer of augmented reality platform.	11.36
24-Apr-2017	Shadow Creator	Everest Capital, Initial Capital, Shenzhen Fortune Venture Capital	Developer of augmented reality glasses.	14.52
24-Apr-2017	Sensoro	Robert Bosch Venture Capital, Sumitomo, Tsing Capital	Developer of advanced sensing technologies.	18.00
15-Apr-2017	Narrative Science	Jump Capital, Sapphire Ventures, United Services Automobile Association	Developer of automated business analytics and natural language communication technology.	11.00
13-Apr-2017	Pluto VR	Madrona Venture Group, Maveron, Trilogy Equity Partners	Developer of a collaboration and chat software designed to help people connect through virtual reality technology.	13.90
13-Apr-2017	Osaro	Abstract Ventures, Arab Angel, Fenox Venture Capital	Developer of machine intelligence software.	10.80
13-Apr-2017	CloudCar	DCM Ventures, Passport Capital	Developer of a connected car technology.	31.49
05-Apr-2017	Upskill	Boeing HorizonX, GE Ventures, New Enterprise Associates, S3 Ventures, SineWave Ventures	Developer of enterprise software for augmented reality devices.	12.00
30-Mar-2017	Filament	Backstage Capital, Bullpen Capital, CME Ventures, Crosslink Capital, Digital Currency Group, Flex's Lab IX, Haystack, Intel Capital, JetBlue Technology Ventures, R/GA Accelerator, Resonant Venture Partners, Samsung NEXT Ventures, Samsung Venture Investment, Tappan Hill Ventures, Techstars, Verizon Ventures, VTF Capital, Working Lab Capital	Provider of industrial wireless sensor network.	15.00
29-Mar-2017	ShapeShift	Access Venture Partners, Blockchain Capital, Digital Currency Group, Earlybird Venture Capital, FundersClub, Hard Yaka, Lakestar, Pantera	Developer of an online digital currency exchange.	10.40



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Date	Target	Investor(s)	Target Description	Transaction Value (\$M)
28-Mar-2017	Sliver.tv	Danhua Capital, DCM Ventures, Heuristic Capital Partners, Samsung NEXT Ventures, Sierra Ventures, Sony Innovation Fund, The Venture Reality Fund, ZP Capital	Developer of a virtual reality video platform.	15.97
23-Mar-2017	Paradata	PivotNorth Capital, Richmond Global Ventures, SAP	Producer of a data platform for supply chain management.	10.00
22-Mar-2017	Casetext	8VC, Canvas Ventures, Hard Yaka, Red Sea Ventures, Union Square Ventures	Developer of a software platform.	12.00
20-Mar-2017	Bayshore Networks	Benhamou Global Ventures, Samsung NEXT Ventures, Trident Capital Cybersecurity, Yokogawa Electric	Developer of cyber security software for industrial Internet of things (IoT).	11.20
15-Mar-2017	CloudLeaf	Bold Capital Partners, IndusAge Partners, Mahindra Partners, Tandem Capital	Developer of cloud-based enterprise software services.	14.66
14-Mar-2017	WayRay	500 Startups, Accel, Alibaba Group, Intel Capital, New Enterprise Associates, Sequoia Capital, Y Combinator	Developer of holographic augmented reality (AR) navigation systems.	18.00
13-Mar-2017	Algebraix Data	Undisclosed	Developer of data management software.	18.00
08-Mar-2017	Veem	GV, Kleiner Perkins Caufield & Byers, National Australian Bank Ventures, SBI Investment, SVB Capital, Trend Forward Capital	Provider of next generation platform for business to business payments.	23.94
07-Mar-2017	LoopMe	Harbert Management, Holtzbrinck Ventures, Impulse Incubator, Open Ocean Partners	Developer of a mobile video platform.	10.00
02-Mar-2017	C3 loT	Breyer Capital, Sutter Hill Ventures, TPG Growth, Wildcat Venture Partners	Provider of a cloud-based enterprise Platform as a Service (PaaS).	11.80
28-Feb-2017	Pypestream	The Chatterjee Group	Developer of a communication platform.	15.00
28-Feb-2017	Blue Ridge Networks	CAH Capital, North Atlantic Capital	Provider of military-grade network breach prevention, secure access, and endpoint security solutions.	13.70
17-Feb-2017	Tezos	Andreessen Horowitz, FinForge, Union Square Ventures	Provider of a blockchain platform.	10.00
13-Feb-2017	Xevo (Connected Car Software)	SPARX Group, Sumitomo Mitsui Banking, Toyota Motor	Provider of a next generation Software as a Service (SaaS) based automotive technology.	19.30
13-Feb-2017	8i	Baidu Capital, Hearst Ventures, Seed & Speed Ventures, Time Warner Investments, Verizon Ventures	Developer of a software platform.	27.00
07-Feb-2017	Dreamscape Immersive	21st Century Fox, Bold Capital Partners, IMAX, MGM Studios, Warner Bros. Entertainment, Westfield Realty	Developer of virtual reality technology.	11.36
07-Feb-2017	Chorus	Emergence Capital Partners, Redpoint Ventures	Provider of a conversation intelligence platform.	16.00



Date	Target	Investor(s)	Target Description	Transaction Value (\$M)
24-Jan-2017	WorkFusion	Georgian Partners, Greycroft, iNovia Capital, Mohr Davidow Ventures, NGP Capital, RTP Ventures	Provider of an intelligent automation platform.	35.00
17-Jan-2017	Moran Cognitive Technology	Matrix Partners China, Source Code Capital, Xiang He Capital	Developer of natural language recognition and processing technology.	10.00
13-Jan-2017	Serverless	Lightspeed Venture Partners	Provider of an online platform to build cloud based applications.	10.00
05-Jan-2017	Ngdata	Capricorn Venture Partners, IdInvest Partners, ING Corporate Investments, Nausicaa Ventures, Pamica, SmartFin Capital	Provider of a next generation customer data platform.	20.81
03-Jan-2017	AI Corp	Undisclosed	Provider of artificial intelligence research and development services.	11.20



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