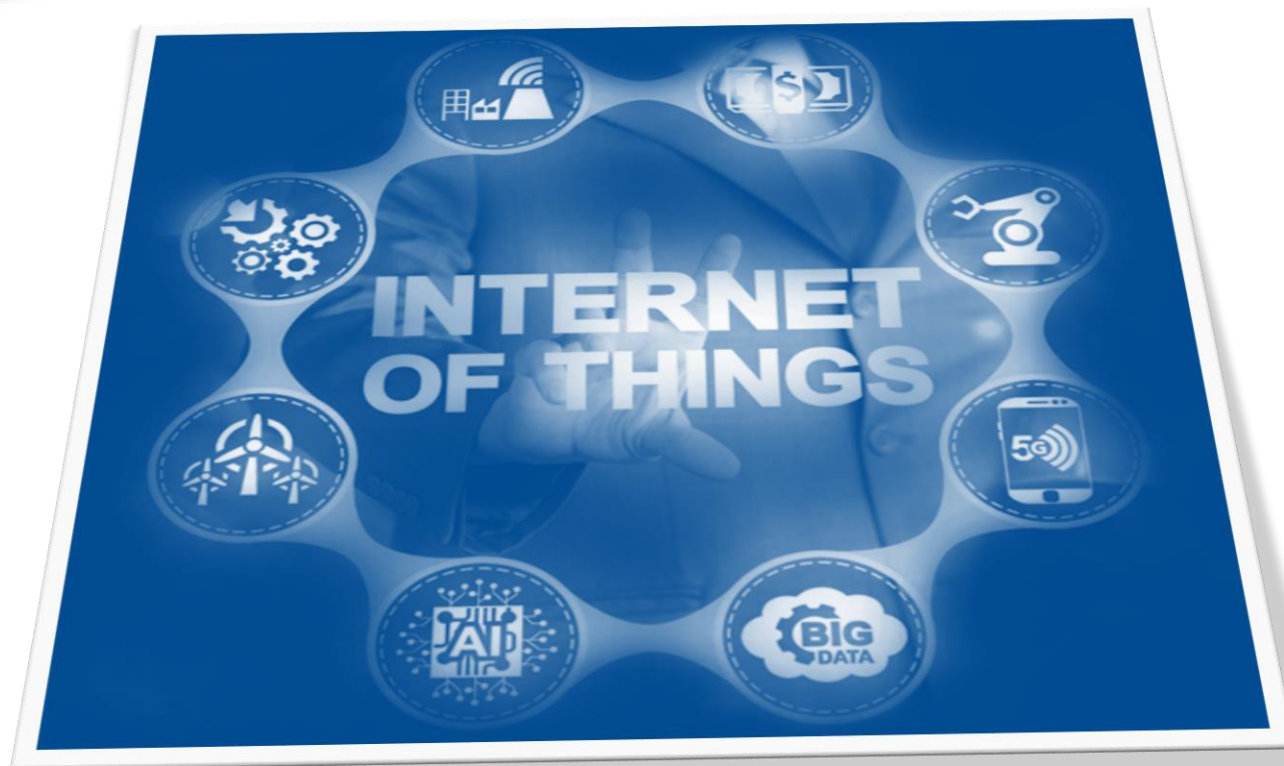


August, 2019  
INSIGHTS



## IoT & The Enterprise

### *Emerging Trends*

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*Bob Renner, Partner  
Ben Howe, CEO  
Jon Guido, COO & Partner  
Fred Joseph, Partner*



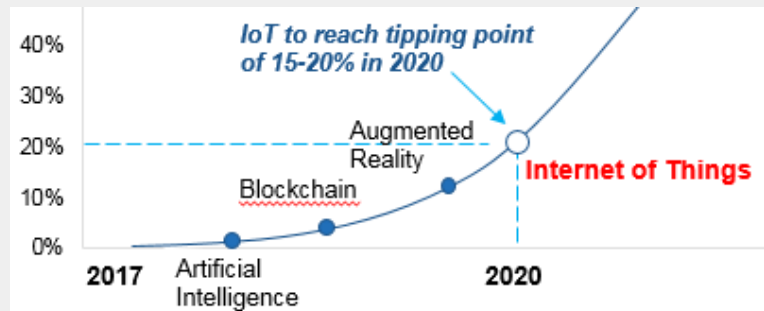
## IoT is fast approaching critical mass in terms of units installed

- By 2020, IoT will surpass mobile phones, laptops and tablets collectively as the largest category of connected devices (11.6B)
- Enterprise sets up as the next leg of exciting growth in the extended IoT adoption wave, leveraging the mass adoption achieved by consumers and asset heavy industries

## Enterprise deployments and planning are well under way

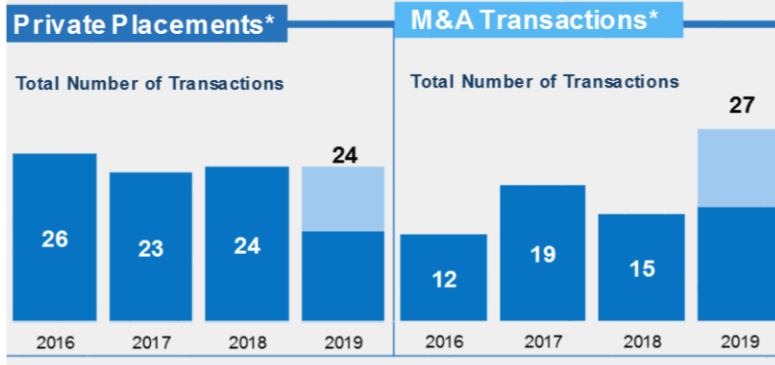
- 84% of enterprises expect to complete their IoT implementations within two years
- At 69% of enterprises, a record number, have a pre-emptive, proactive approach to IT security and network management

### Tipping Point Fast Approaching: IoT Adoption Rate



## Private markets activity in the Enterprise IoT space has ramped in recent years, with over 40 transactions occurring annually and hundreds of millions in deployed capital

- 2018 marked the fourth year of \$400M+ of capital invested across two dozen or more financing transactions
- On the M&A front, deal volumes are up nearly two-fold YTD
- Notable large transactions include Munich Re's \$300M acquisition of Relayr and C3IoT's \$106M Series F financing, both in 2018
- With nearly 100 companies identified in AGC's Enterprise IoT landscape, this is a rapidly emerging segment within IoT



\* 2019 values represent annualized totals

Source(s): Bain, Crunchbase, Forbes

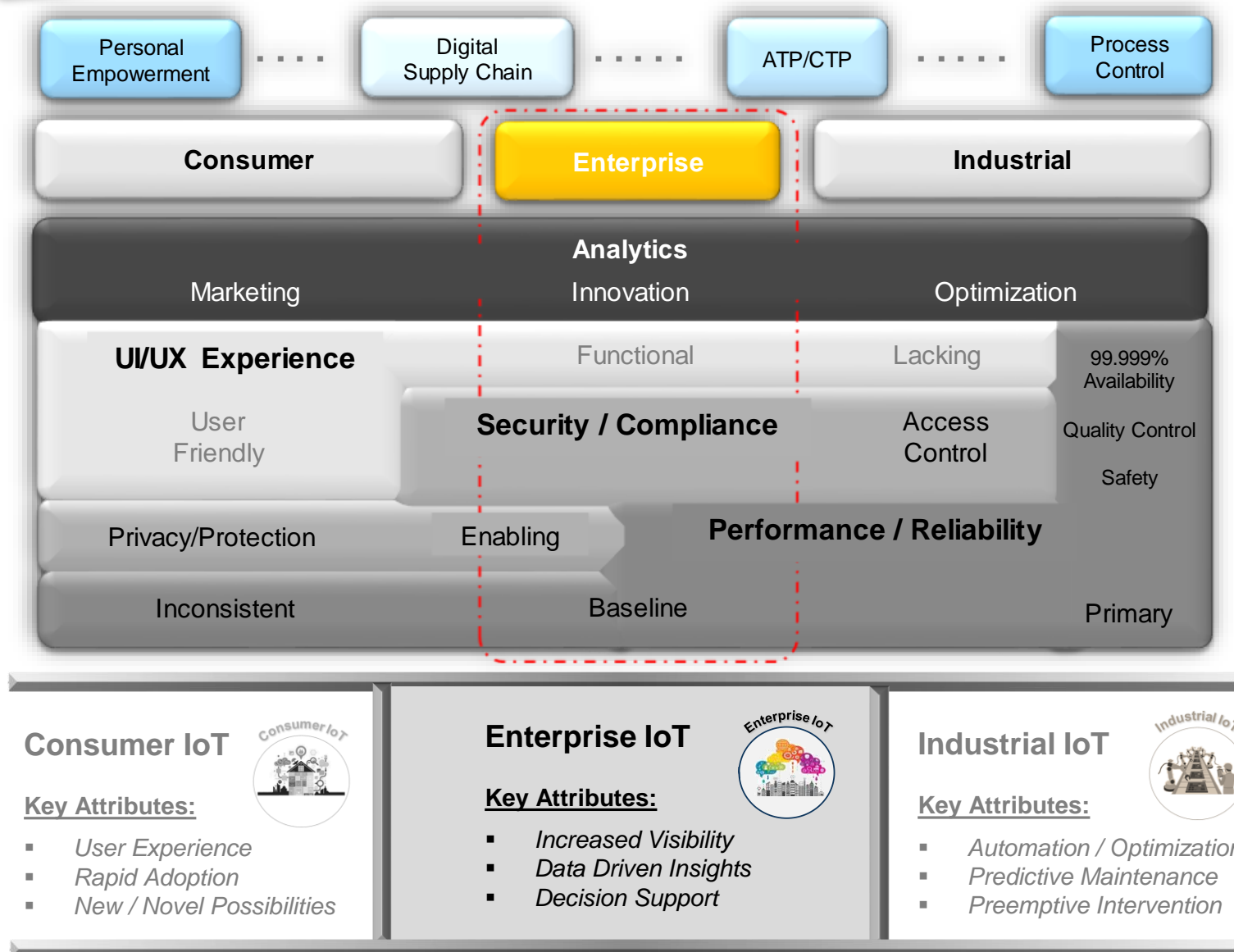
# Internet of Things (IoT): Segments Defined



The Internet of Things (IoT) can be represented as a cross section of technologies and techniques spanning three major sectors:

- **Consumer IoT:** The fast paced innovation in the Consumer Electronics market which has embraced IoT to provide consumers greater control and visibility into their daily lives
- **Enterprise IoT:** The need for event driven / real time data in the new Digital Enterprise includes Enterprise security and Business to Business supply chain as primary drivers
- **Industrial IoT:** In many ways the most critical and pervasive uses of IoT to further automate instrument process control and industrial applications.

# Enterprise IoT: Focus & Functionality



# Enterprise IoT: Technology Defined



Enterprise IoT is about connecting devices, as well as monitoring and managing business processes in an intelligent way through connected devices, real-time data, defined applications and integration with back-end enterprise systems.

- Enterprises are increasingly adopting IoT solutions to support their existing business models, and as a means of establishing new competitive practices.

Examples of Enterprise IoT solutions:

## Backend Services:

- ✓ Remote monitoring, control and data collection of assets or devices – which is then integrated with other enterprise applications.

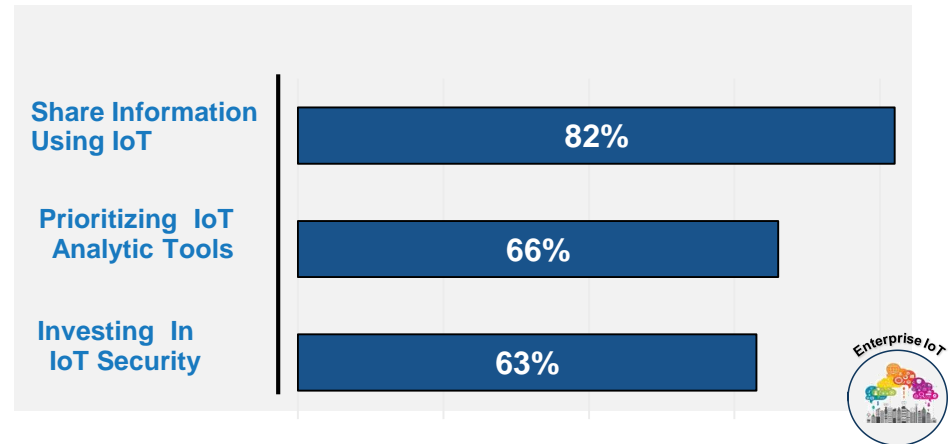
## Remote Communication

- ✓ The facilitator of communication between assets and backend devices – usually via satellite or mobile network.

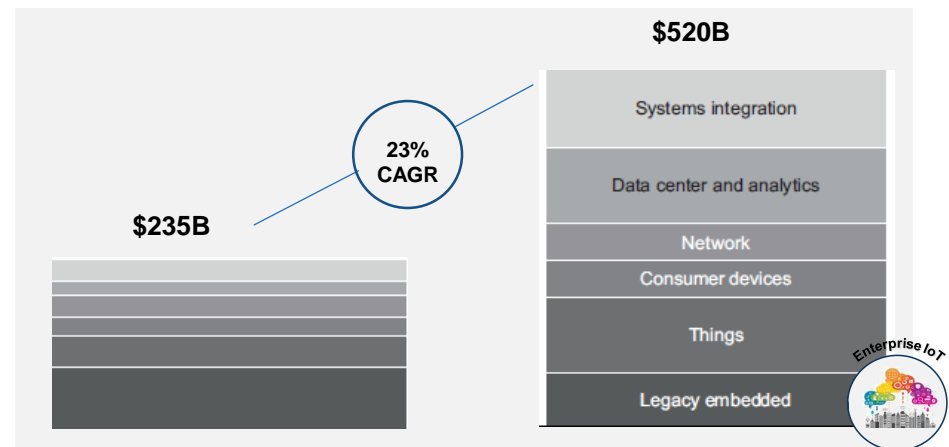
## On-Asset Hardware / Software

- ✓ On-Hardware – A gateway that enables local and remote connectivity.
- ✓ On-Software – A local agent enabling local integration and remote communication.

## Corporate IoT Trends



## IoT Spending by Category – 2017 -2021



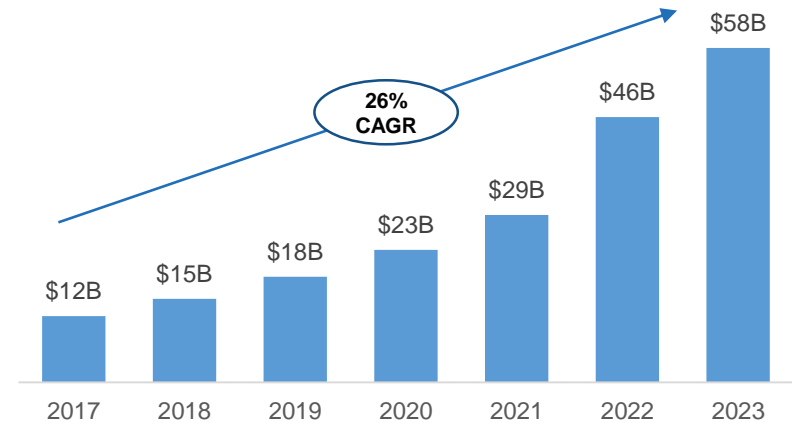
# Enterprise IoT: Market Size and Forecast



**The global IoT Enterprise market is expected to reach ~\$58 billion by 2023, progressing at a CAGR of ~26% during the forecast period**

- IoT goes hand in hand with AI/ML, and together they are having a profound impact on factories of the future before spreading to the rest of the industrial enterprise and non-industrial industries
- New Enterprise IoT devices are being integrated with AI and Machine learning devices, leading to greater efficiency. These capabilities allow enterprises to gather actionable, real-time insights and to streamline business processes
- Surge in enterprises integrating IoT systems to collect data, fueling business innovation through analytics collection
- Awareness of the more efficient and effective data-gathering capabilities of medical IoT devices among health enterprises

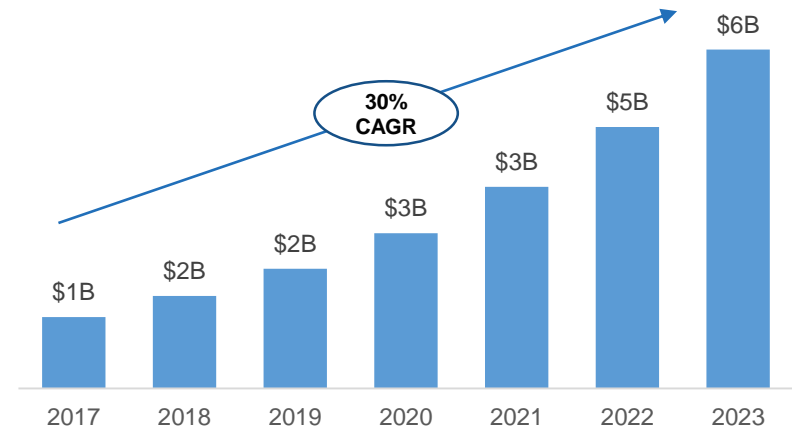
**IoT Enterprise Market (\$B USD)**



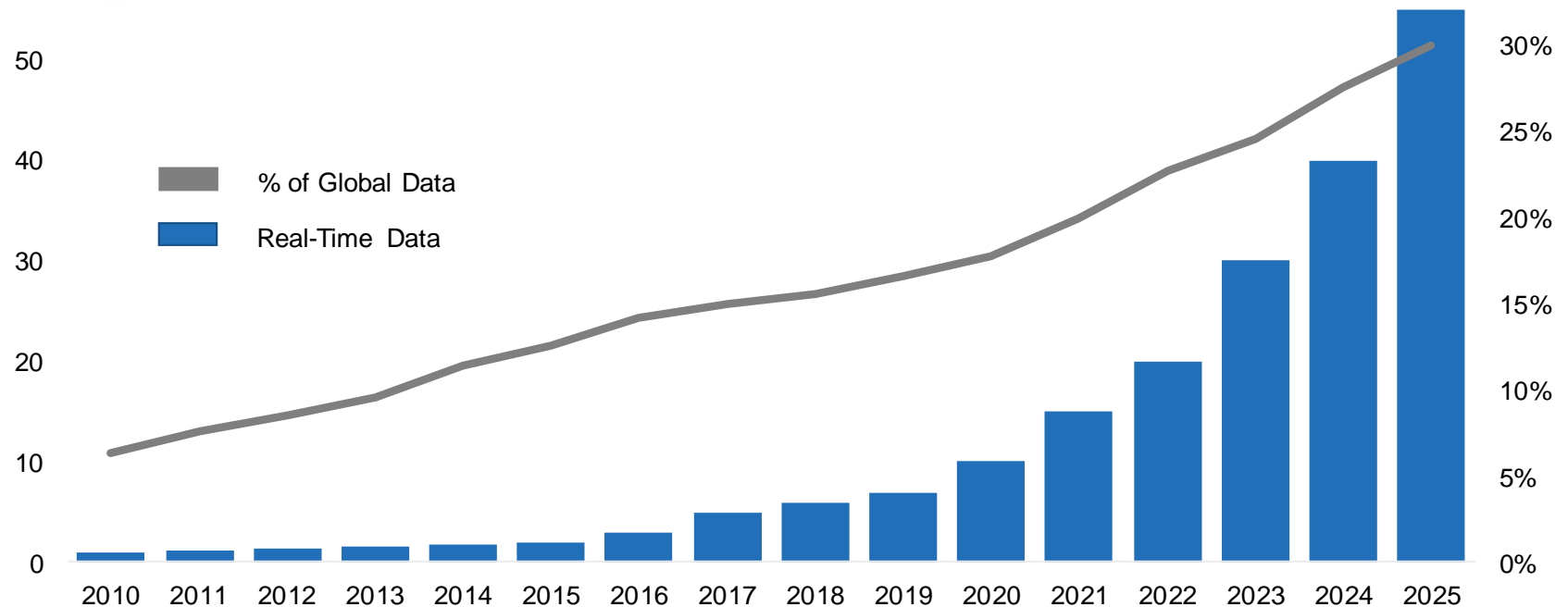
**The global IoT Security market is the fastest growing segment within IoT Enterprise, progressing at a CAGR of ~30% during the forecast period**

- Surging demand for enhanced privacy is driving the market
- Increasing government efforts to implement stringent regulations to restrict the amount of data collected by IoT devices by industries such as BFSI, retail, and healthcare is expected to stimulate the growth of the market
- Increasing use of 3G and 4G long-term evolution (LTE) as well as wireless networks and technologies is augmenting the risk of cyber-attacks
- Adoption of cloud technologies by various organizations for storing confidential data gives rise to risk of unauthorized access to data

**IoT Security Market (\$B USD)**



# Real-Time Data a Powerful Driver for Adoption



- Most forecasters now call for more than 40B to 50B connected devices globally by 2025, most of which will be creating data in real time.
- Connected devices can mean anything from smart phones to laptops to IoT sensors—anything with an IP stack. Increasingly, IoT is emerging as the largest and fastest growing category of connected devices
- Real-time data represents approximately 5% of total global data generated in any given year, but that mix is expected to shift dramatically over the next 7 years, with real-time data reaching 50 Zettabytes or 30%+ of all data generated by 2025.
- IoT will be the primary driver of this explosive growth, in turn fueled by increased adoption by Consumer, Industrial and Enterprise users, and expected to accelerate from this point forward.



# Enterprise IoT: Growing Data Volumes

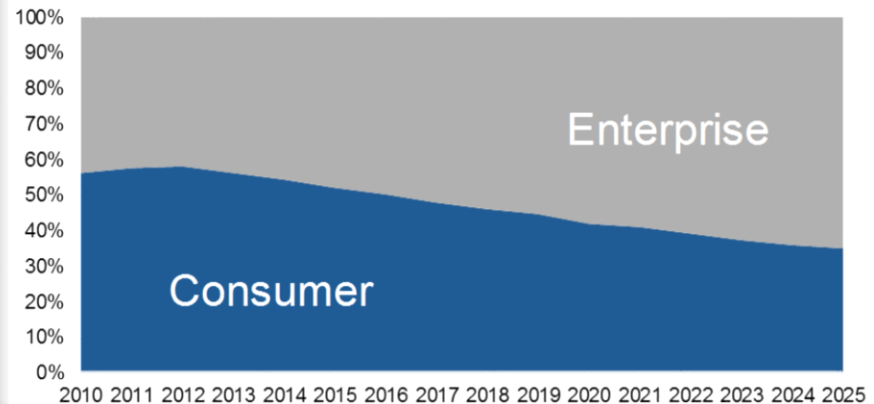


**Installed enterprise bytes are expected to represent over 80% of global installed bytes in 2025, at 13.6ZB**

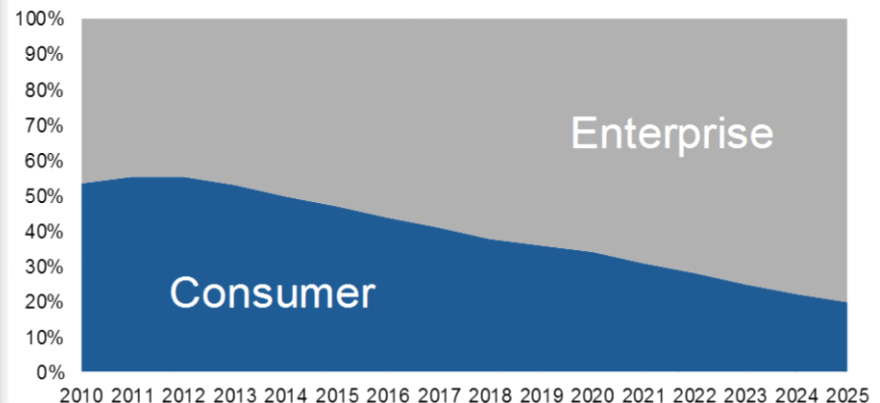
- The enterprise continues to see its share of global data stewardship grow, with the share of data generated by Enterprises rising to 64% in 2025 from 53% today.
- This shift is largely driven by the increasingly always-on and “sensorized” world that is capturing and analyzing our environments and creating data 24x7.
- In the past, consumers were responsible for much of their own data, but as data becomes increasingly centralized across enterprise core and edge infrastructure, the responsibility to maintain and manage it is shifting to enterprise/cloud provider datacenters.
- The enterprise is already the primary source and steward of data creation and storage, and the trend continues to amplify these responsibilities

**Take Away:** *Investors and technology spend will likely “follow the Data” and Enterprise IoT is beginning to shift the balance of Data accumulation from Consumer to the Enterprise.*

## Enterprise vs. Consumer Datasphere



## Installed Base of Bytes







## Data Management & Analytics

*Legacy solutions for Data Management & Analytics largely will not work for IoT environments due to data volumes and real-time considerations. Largely as a result of new use cases, the IoT analytics market size is expected to grow from USD 7.2 billion in 2017 to USD 27.8 billion by 2022, at a Compound Annual Growth Rate (CAGR) of 31.0% during the forecast period.*



## Connectivity & Middleware

*A growing need for centralized monitoring, increased cloud adoption, increase in regulatory compliance, evolution of high speed network technologies, and rising adoption of next-generation technologies are expected to drive the global IoT middleware market. In fact, the global IoT middleware market size is expected to grow from USD 6.9 billion in 2018 to USD 19.5 billion by 2023, at a Compound Annual Growth Rate (CAGR) of 23.0%*



## IoT Platforms

*IoT Platforms are the support software that connects everything in an IoT system. At the center of Enterprise IoT architectures, the IoT Platforms market will register a 28.8% CAGR in terms of revenue, the global market size will reach US\$ 6110 million by 2024, from US\$ 1340 million in 2019.*



## Security & Compliance

**New Challenges:** *Connected devices present new Enterprise security considerations and issues which is why Gartner predicts the IoT security market will reach \$3.1B by 2021.*

**New Solutions:** *Although IoT devices raise new challenges, agents and agentless IoT solutions can play a key role in securing unmanaged devices on Enterprise networks such as laptops, phones and smart TV's in conference rooms*



## Systems & Device Management

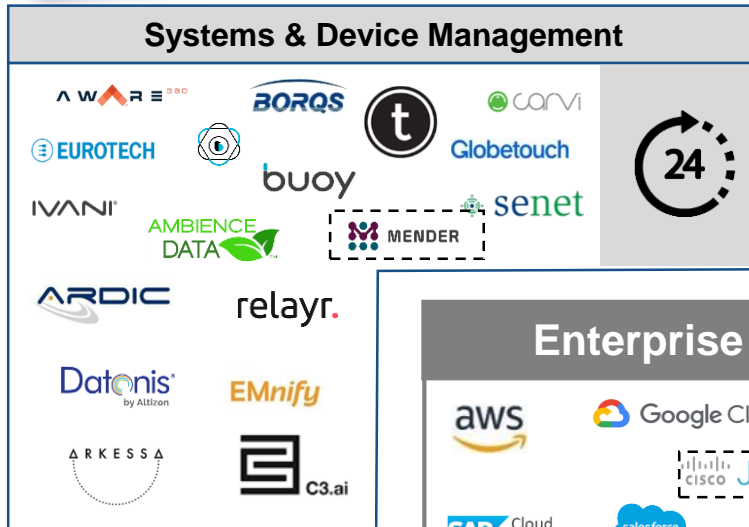
*For the Enterprise, performance and reliability center on a combination of Cloud computing infrastructure and traditional Data Center infrastructure. As with security, the IoT will have a destabilizing impact due to the sheer volumes of real-time data the IoT can produce and the immaturity of the technology. However, the more interesting application of the IoT may be the counter balance provided by sensor data and other IoT enabled event triggers that can stabilize and improve the reliability / performance of the modern "data center".*

# Enterprise IoT Company Landscape

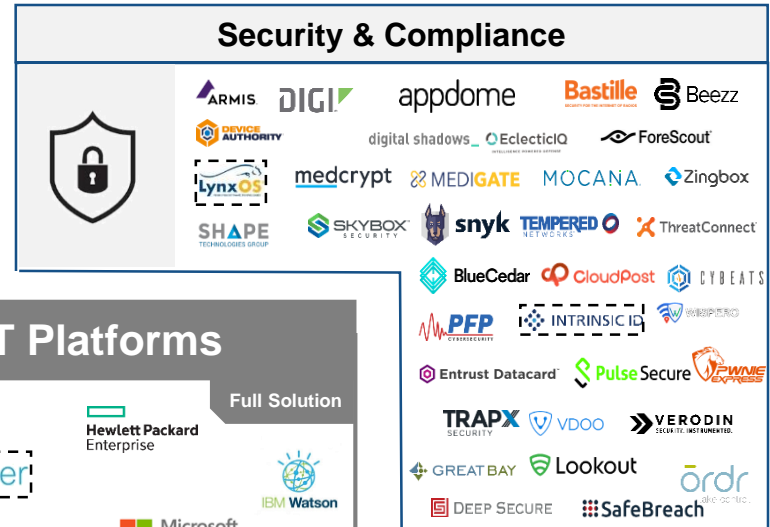


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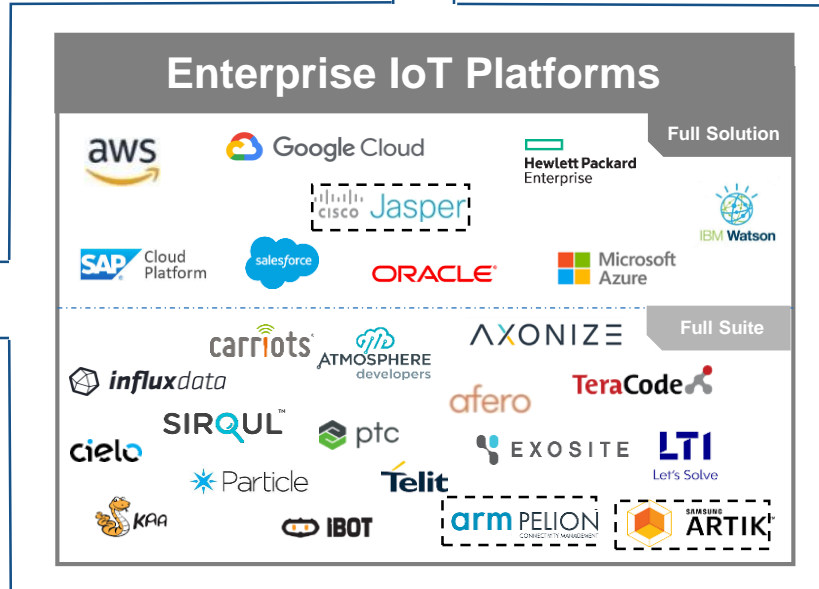
## Systems & Device Management



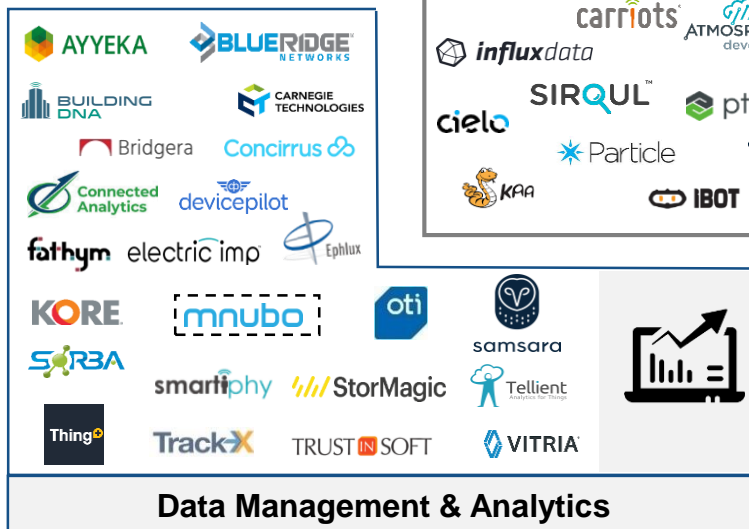
## Security & Compliance



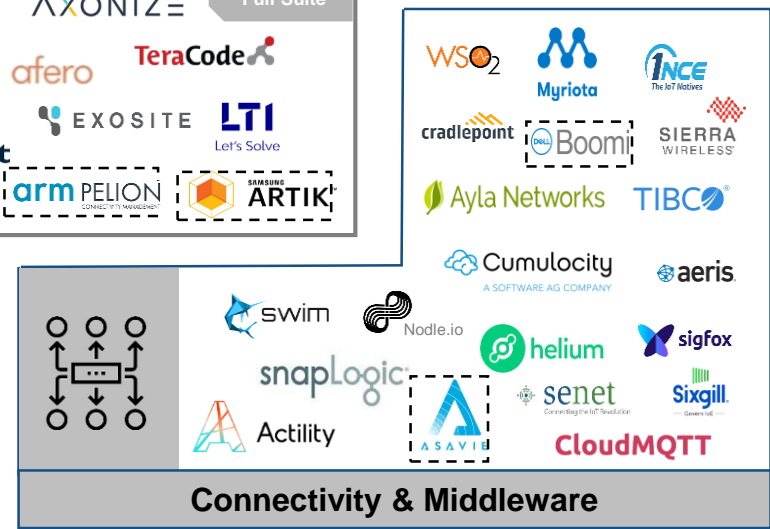
## Enterprise IoT Platforms



## Data Management & Analytics



## Connectivity & Middleware



DISCLAIMER: This is only a representative list and may not include all relevant companies. If your company is not on the list and would be added for future publications, kindly shoot us a note at [brenner@agcpartners.com](mailto:brenner@agcpartners.com) and we would be happy to consider adding.

# Enterprise IoT Segment Definitions



## Systems & Device Management

*IoT device management is the process of authenticating, provisioning, configuring, monitoring and maintaining the device firmware and software that provides its functional capabilities.*



*Effective device management is critical to establishing and maintaining the health, connectivity, and security of IoT devices.*

## Security & Compliance



*IoT security is the technology area concerned with safeguarding connected devices and networks in the internet of things (IoT).*

*IoT security addresses unique challenges that arise when adding internet connectivity to systems of computing devices, mechanical and digital machines, objects, animals and/or people.*

## Enterprise IoT Platforms

*An IoT platform is an end-to-end software framework. It's the glue that pulls together information from sensors, devices, networks, and software that work together to unlock valuable, actionable data.*

*An IoT platform should have the ability to:*

- *manage and allow remote connections to devices*
- *collect, manage data to enable analytics / visualization*
- *integrate with IT and cloud services.*

*The platform plays a key role in an IoT solution development journey for enterprises to enable value for the business and its customers.*

*IoT analytics can be described as applying data analysis tools and techniques to derive value from the vast amounts of data generated by connected IoT devices.*

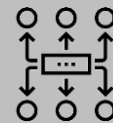
*For Enterprises to act on IoT data in a timely manner, they may be forced to augment their traditional solutions with streaming or real-time analytics.*



## Data Management & Analytics

*The Internet of Things is making it possible for just about anything to be connected and to communicate data over a network.*

*Middleware is part of the enabling infrastructure for a huge number of diverse IoT devices. It provides connectivity for sensors and applications to ensure effective communications across an enterprise's IoT network.*



## Connectivity & Middleware



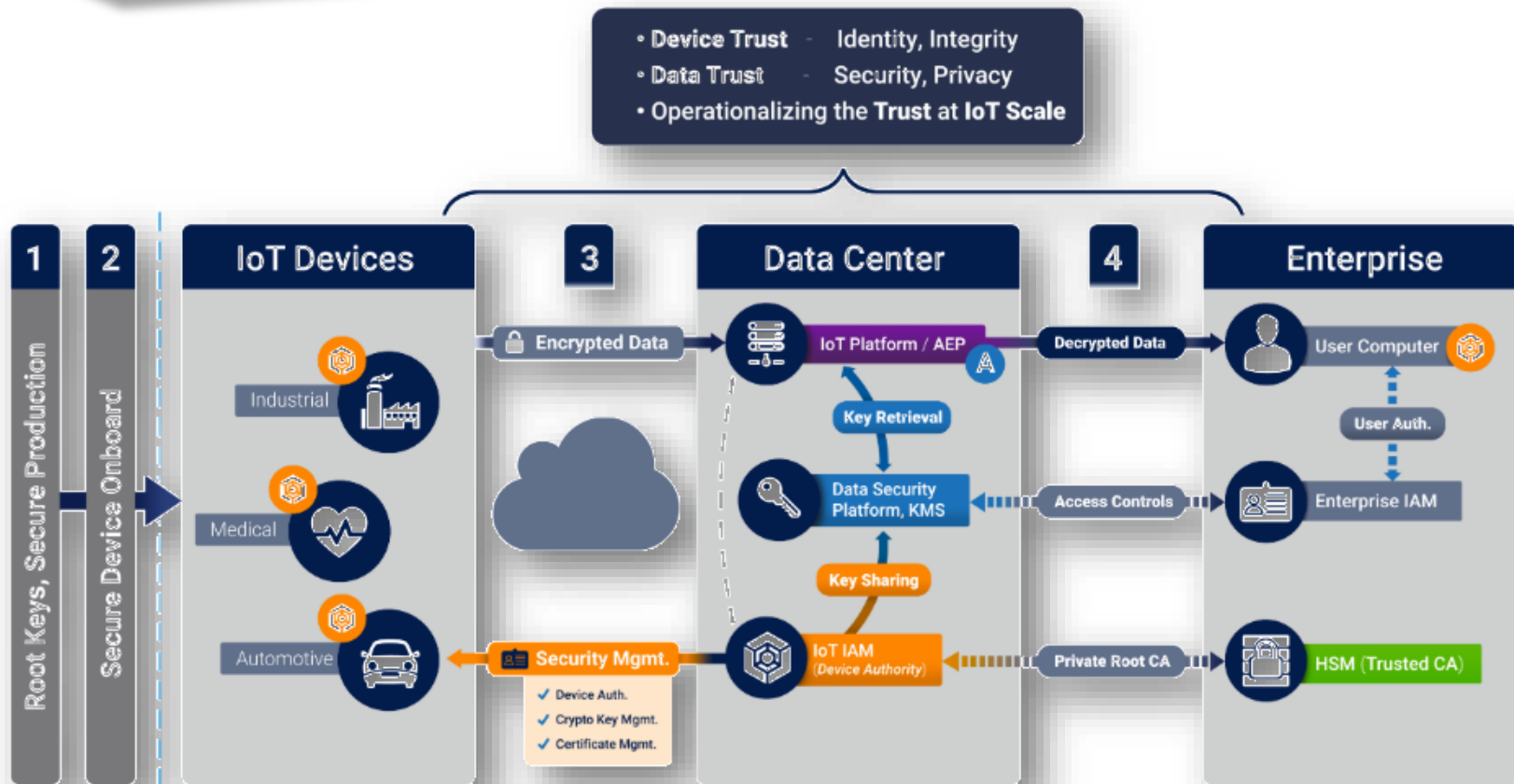
## What is unique about Enterprise IoT Security?

- Emerging Enterprise IoT security is being shaped by two key elements: speed and scale.
- As Enterprises are accelerating adoption of IoT offerings it is creating new and unique security concerns, from inherent flaws that put data at risk to the “weaponization” of connected devices.
- The scale of IoT deployments can also be problematic for traditional Enterprise security models.
- In addition to the traditional requirements of confidentiality, data integrity and systems availability, securing a vast number of IoT devices demands comprehensive, real-time authentication, monitoring and management.
- As a result, expanding IoT networks quickly ramp up security complexity.

## Why is it important?

- While Enterprises have been slow to adopt the IoT, vendors are now rushing to deliver market-ready IoT devices for the Enterprise.
- This means that security is often skipped in favor of functionality, opening the door for various attacks such as distributed denial-of-service that leverage connected and unprotected devices within the enterprise.
- Both device makers and users contribute to this concerning security landscape: In fact, in a recent survey, just 28 percent of organizations say IoT-specific security strategies are “very important” despite plans to adopt these devices in greater numbers.

# What Security Looks Like in an IoT Deployment



- Unpatched IoT devices were behind many of the big DDoS hacks, such as GitHub, the frequency of which rose by 84% in Q1 2019.
- This underscores the importance of tracking the dependencies in shipped IoT devices and their known vulnerabilities, and building a strong continuous update mechanism to deliver patches.



## Digital Supply Chain (Events / Signaling)

According to Gartner a thirty-fold increase in internet-connected physical devices will “significantly alter how the supply chain operates.” More specifically, managing complex supply chains is largely focused on identifying, locating, and tracking the status of assets. According to Forrester, 58% to 77% of surveyed organizations consider locating objects, containers, and personnel as the top fundamental functions of IoT solutions.



## Customer Engagement

In the Forbes Insights study, 90% of executives said that potential improvements to customer experience was one of the most important opportunities for the IoT. While this seems obvious in the consumer space, the IoT can also dramatically impact how customers procure and consume business services and products, all based on real-time data and data collected on past behavior all from the IoT.



## Digital Twin Modeling

Enterprise IoT is enabling “Digital Twins” used to describe and model traditional business processes in a digital context. In fact, according to a Bosch Software Innovations, in the IoT, a digital twin can provide a holistic view of most, if not all, capabilities of an asset. This, of course, can provide a powerful digital sandbox for Enterprise IT enabled projects and overall business transformation.



## Asset Tracking & Management

IoT takes typical asset management software to the next level by allowing connected devices to automatically send information about their status without manual intervention. In fact, a study conducted by Forrester and SAP shows two-thirds of companies in asset intensive industries are using or planning to use IoT-enabled monitoring solutions to overcome a lack of visibility of their critical asset.



## Financial Decision Making

Clearly there are implications of the IoT on visibility into individual businesses and their day to day financials metrics / decisions. However, according to a recent E&Y report, “IoT could become a destabilizing factor for some of the more traditional elements of the entire financial sector by increasing the availability of reliable and real-time data”. This could have the potential to change the delicate balance of information symmetry that exists today among market participants.

# Case Study #1: Digital Supply Chain



## Vendor Profile



Aeris supplies IoT connectivity via the Aeris Connectivity Platform (ACP), which enables **ROAMWORKS**' products in the Middle East. The partnership with Aeris ensures **ROAMWORKS**' devices can rely on IoT connectivity worldwide

**ROAMWORKS** platform and solution leveraged new and cost-effective IoT technology to deliver a rich stream of real-time data from special devices and sensors attached to the cargo assets

## Business Challenge



Provide enhanced visibility and security which are the key enablers of productive cargo operations in the modern transportation industry.

Tracking cargo movement to securely deliver the right shipping cargo and freight to the right owners and distributors has emerged as a growing challenge in the fast-paced civil transportation segment.

**Customer:** Dubai Airports Company was structured in 2008 to take control of Al Maktoum International Airport at Dubai World Central in Jebel Ali, Dubai International Airport, and Dubai Cargo Village. Aviation and logistics is an important sector of Dubai's economy. In fact, Emirates Airlines and Dubai Airports Company account for 26% of the country's GDP (2011)

**Solution:** The solution tracks cargo location and reports on tampering or breaches. It works by using cellular and satellite technologies to communicate instantly with its control center and report on the location of the conveyances of intermodal containers. Should the container be compromised, the event is detected instantly. An alert is transmitted in real time, and can be shared with selected service partners and stakeholders

**Results:** By sharing this data with senior service partners, such as Dubai Customs and Dubai Police, as well as with internal security and management, Dubai Airports empowered all stakeholders to act in a highly efficient manner in matters relating to the secure transport of air cargo.



# Case Study #2: Customer Engagement



## Vendor Profile



Founded in 2009, C3.ai's cloud-based software uses machine learning to expedite the integration and analysis of disparate enterprise data and provides predictive maintenance, fraud detection, energy management and sensor network health pre-built SaaS applications, enabling organizations to improve operational efficiencies, enhance customer engagement and differentiate products and services.

## Business Challenge



In tandem with its 6 year-long smart meter rollout plan, a classic Enterprise IoT use case, Con Edison sought to implement Advanced Metering Infrastructure (AMI) operations on top of a comprehensive enterprise data analytics platform for improved operational insight and customer service for its base of more than four million customers.

**Customer:** One of the world's largest energy delivery systems. Founded in 1823 as the New York Gas Light company, our electric, gas, and steam service now provides energy for the 10 million people who live in New York City and Westchester County.

**Solution:** The utility's smart meter, IoT deployment will generate between 100 terabytes and 1 petabyte of data per year. To put the foundational enterprise data analytics platform in place, C3.ai and the utility worked together to aggregate data covering 5 million customer accounts. Once in place, the team configured machine learning algorithms and analytics to identify deployment and installation issues and determine meter and network health to reach their objectives of improved visibility and customer experience.

**Results:** The utility can now monitor smart meter deployment to identify any installation or configuration issues. The application also provides real-time status at any level of aggregation—from individual meter to the overall system—and a prioritized list of meters that require attention. In future phases, the company plans to build on its enterprise data analytics plan for additional customer insight applications and distribution and transmission automation capabilities.

# Case Study #3: IoT Enabled “Digital Twin”



## Vendor Profile



Dassault Systèmes (NYSE Euronext:DSY) is a subsidiary of the Dassault Group created in 1981. Dassault Systèmes develops and markets PLM software and services that support industrial processes by providing a 3D vision of the entire lifecycle of products from conception to maintenance.

## Business Challenge



Imagine the shopper being able to easily locate items on their shopping list leveraging a geo-localization function integrated into the retailer's mobile application

The business challenge was to enrich both the shopping experience and real business results by utilizing 3D virtual store environments (e.g. a Digital Twin of the store) and intelligent labels enabled through the IoT.

**Customer:** Intermarché, a French retailer, is the brand of a general commercial French supermarket, part of the large retail group 'Les Mousquetaires' founded in 1969 under the name EX Offices, by Jean-Pierre Le Roch. EX Offices was renamed Intermarché in 1972.

**Solution:** Dassault Systèmes teamed up with Store Electronic Systems, an innovator in electronic shelf labels, to connect our two technologies to create a seamless end-to-end digital solution which has completely reimaged how technology can accelerate business results at Retail. We call it the 'Connected Store'.



**Results:** Store Electronic Systems built geo-referencing indicators into their shelf labels with the precise position of each product memorized. The actual layout of the store shelf was integrated by Atos, an international IT services company, into the 3D Perfect Shelf merchandising solution from Dassault Systèmes. The result is a disruptive innovation which integrates the actual location of each product on the shelf and selling data into a 'virtual twin' of the store.

# Case Study #4: Asset Tracking & Management



## Vendor Profile



Connected Analytics identified a need and developed a comprehensive software solution for businesses to manage their IoT connectivity all in one place, SIMetric™.

SIMetric™ is a SaaS platform hosted in the Microsoft Azure Cloud, utilizing APIs to connect to carrier based IoT platforms to provide advanced analytics and management of SIM-enabled IoT devices

## Business Challenge



- Existing operational tools and manual processes were unable to deal with the volume and complexity of managing hundreds of thousands of devices across multiple carriers
- Staff overwhelmed and unable to manually reconcile adjustments, lack of visibility and delays in deactivating invalid devices resulting in excessive connectivity expenses
- Inability to manage / track firmware updates across SIMs population

**Customer:** The CallPass Companies provide a wide array of GPS and IoT based Solutions, as well as, Integration Platforms allowing companies to maximize profitability through improved efficiency. These solutions include Tracking and Sensor Data for many markets including: agriculture, construction, equipment rental, refrigeration, waste management transportation and vehicle industries.



**Solution:** Connected Analytics **SIMetric™** IoT Management platform is used by CallPass to control, manage and automate internal processes across hundreds of thousands of connected devices, and avoid individual, manual processes to adjust, change or reconfigure connectivity settings. **SIMetric™** generates reports on performance and usage trends, provides predictive analytics on connectivity expenses, and automatically optimizes rate plan assignments to improve profitability.

**Results:** The Connected Analytics platform substantially streamlined and automated CallPass' operations. The solution provided: a "single pane of glass" view of device data consumption across all their carriers, identify and track anomalies, customized alerts on usage patterns, quickly identify malfunctioning devices and connectivity status used to manage/optimize costs. One-time tasks also benefited from the **SIMetric™** IoT solution. In fact, a bulk SIM management task that historically would've taken the CallPass staff twenty-five man hours to complete, was instantly automated allowing CallPass to redirect their efforts to more mission-critical tasks.

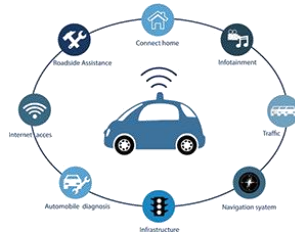
# Case Study #5: Financial Decision Making



## Vendor Profile



Zubie is a connected-car platform that provides location tracking, driver scoring, alert and location sharing services. Zubie's location services are used for connecting and protecting family members, monitoring and alerting based on location geo-fences, and ad-hoc location-sharing; and driving analytics services, such as dashboards, reports, and analytics on driving, trips, and car performance with helpful comparisons. The Company was founded in 2012 and is based in Bloomington, MN.



## Business Challenge



Auto insurers have historically relied on indirect indicators, such as the age, address, and credit worthiness of a driver, when setting premiums, which are imperfect ways of measuring potential risk.

Data on driver behavior and the use of a vehicle, such as how fast the vehicle is driven and how often it is driven at night, are more accurate indicators for insurance companies to determine driver risk profiles, however, this data was not previously available to insurers. New IoT applications of such technology now make it possible for insurers to actively track and record driver information, resulting in more accurate risk assessments.

**Customer:** Progressive, one of the largest providers of car insurance in America, insures motorcycles, boats, RVs and commercial vehicles. Progressive sells their products and services to end consumers, primarily in the United States.

**Solution:** In 2014, Progressive signed a partnership agreement with Zubie, allowing Progressive to enhance their insurance product/service mix while fine tuning economics of their current products. Progressive leverages the data collected through Zubie's connected car IoT platform to more efficiently structure and price insurance offerings.

**Results:** These types of partnerships provide both sides with access to valuable sensor data and has set the groundwork for new hybrid insurance models to be created based on in-depth driver behavior. Several Usage-based insurance models have now emerged such as Pay-As-You-Drive (PAYD), Pay-How-You-Drive (PHYD), and Pay-As-You-Go (PAYG), and has resulted in a global \$34B market opportunity growing to an expected \$107B by 2024. This is essentially providing for new financial instruments and associated insurance products.



## Better Decision Making and Monitoring of Devices

- Near real-time feedback and control
- Granular visibility into system behaviors can yield new insights and innovations
- Ability to analyze larger trends from empirical data

## Supports macro trends in Enterprise initiatives

- Augments event driven security and compliance programs
- Extension of Digital Transformation initiatives
- Provides a basis for robust device management

## Supports advanced Digital Enterprise Patterns

- Edge computing is highly compatible with IoT deployments
- Integration with Machine Learning and AI is delivering additional value to IoT and vice versa
- IoT data facilitates / enhances modeling “Digital Twins”



## Security & Compliance

More to Secure

- Security and compliance are key considerations to adopting IoT Platforms
- Large centralized and federated (edge) data repositories magnify data security challenges for already stretched CISOs

## Maturity & Complexity

- IoT development is getting more complex leading to a steep learning curve for developers and application architects
- The lack of standards and proprietary “point solutions” is adding barriers to Enterprise wide adoption within the IoT industry

## Business Case or Leap of Faith

- Stand alone business case(s) for IoT projects have been challenging for sponsors to demonstrate a clear ROI
- Many have compared IoT capabilities to the transformational potential to email, phone systems and even the Internet (all were very difficult to justify in a standard ROI based Business Case).



## Vision

“In the next 10 years, the IoT revolution will dramatically alter power, water, agriculture, transportation, construction, health care, oil, gas and every other industrial sector of the economy. These sectors account for nearly two-thirds of the global GDP.” – Timothy Chou, Lecturer, Stanford

### Past – Exploration

- 1980's:** *At Carnegie Melon University, a Coca Cola Machine was connected by programmers to the Internet*
- 1999:** *The Internet of Things, as a concept, was officially named*
- 2013:** *IoT had evolved into to a system using multiple technologies, ranging from micro-electromechanical systems (MEMS) to embedded systems.*

### Present – Balance

#### Drivers:

- *Changing Competitive Environment*
- *Real-Time needs*
- *Self-Service / Empowerment*
- *Digital Transformation*

#### Cautions:

- *Lack of Standards*
- *IoT Data Volumes / Analysis*
- *Security & Compliance issues remain*
- *Cloud / Wireless limitations*

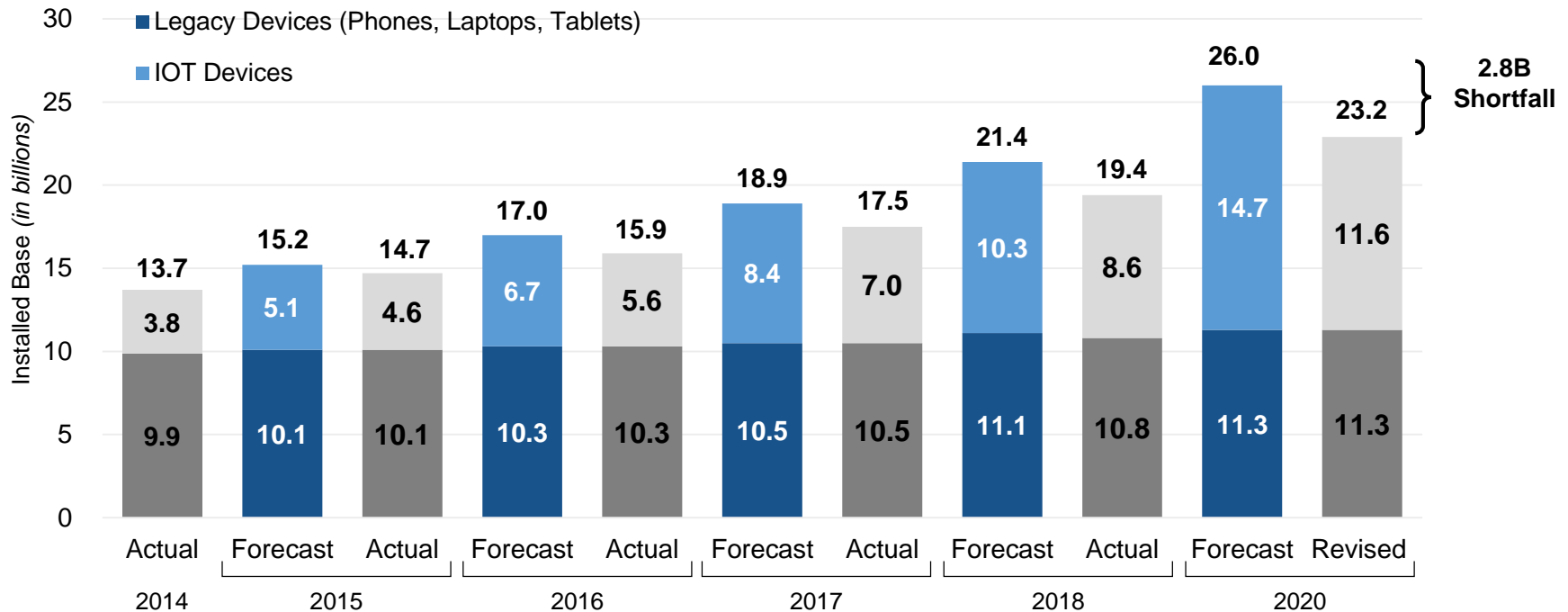
### Future - Enabling

- IoT software will contribute to enterprise efficiency / profitability and be adopted on a large scale.
- Enterprise IoT devices will be adopted as a way to reinvent business models and increase revenue.
- The 5G network will further establish the Internet of Things as mainstream.
- Advancements in reliability pioneered in Industrial IoT and the usability of Consumer IoT will influence Enterprise IoT.
- Security issues will not be solved but will normalize to risk levels comparable to other Enterprise IT systems.





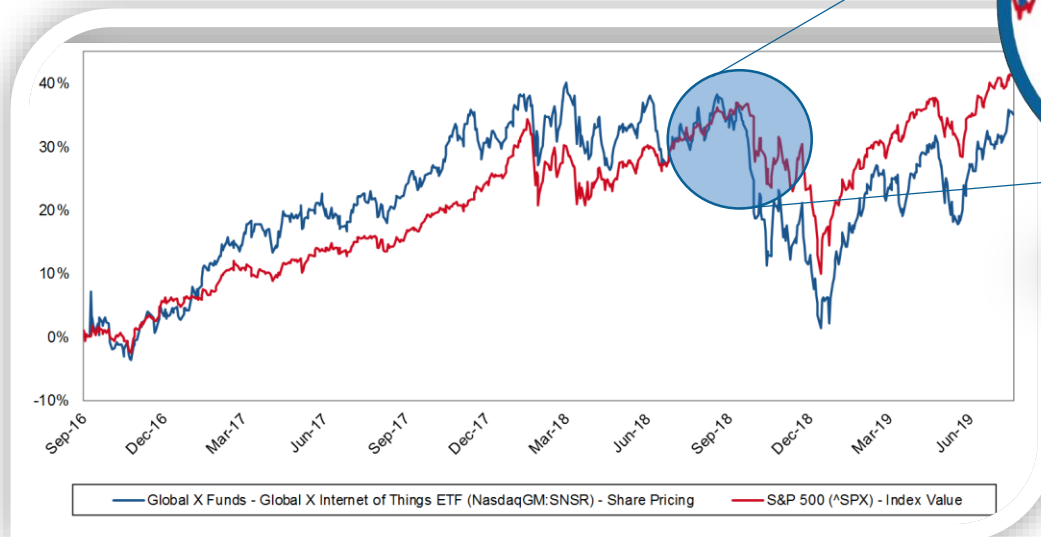
## Connected Devices By Category 2014 - 2020



- Ericsson's Annual Mobility Report first began making forecasts for IoT adoption in 2015. At the time, the total installed base of connected devices, including IoT devices, was projected to exceed 21B in 2018 and 26B in 2020
- A key driver of this growth, as envisioned, would be increased standardization of connectivity solutions at dramatically reduced costs, making the adoption of cheap IoT devices effortless and ubiquitous
- The adoption cycle has stretched out longer than initially expected due in part to a slower roll out of new standards and a highly fragmented connectivity landscape; however, the potential is still massive and the tipping point for acceleration is quickly approaching



## Global X Internet of Things Thematic ETF



### Inflection point events:

- › In what would have created an IoT hardware and connectivity juggernaut, China blocks Qualcomm's \$44B merger with NXP
- › That same month, GE puts GE Digital up for sale. This includes Predix, an industry pioneer in IoT platform development.

### IoT's Journey Up and Down the Tech Hype Cycle: A Timeline

**2014** (Technology Trigger) – The Internet of Things (“IoT”) enters mainstream IT lexicon with the launch of IDC’s first IoT spending forecast.

**2016** (Peak of Inflated Expectations) - Internet of Things (IoT) gets its own ETF (NASDAQ: SNSR), reflecting sky high investor enthusiasm. At the time, expectations range from between 50B and 150B IoT connections within a decade’s time

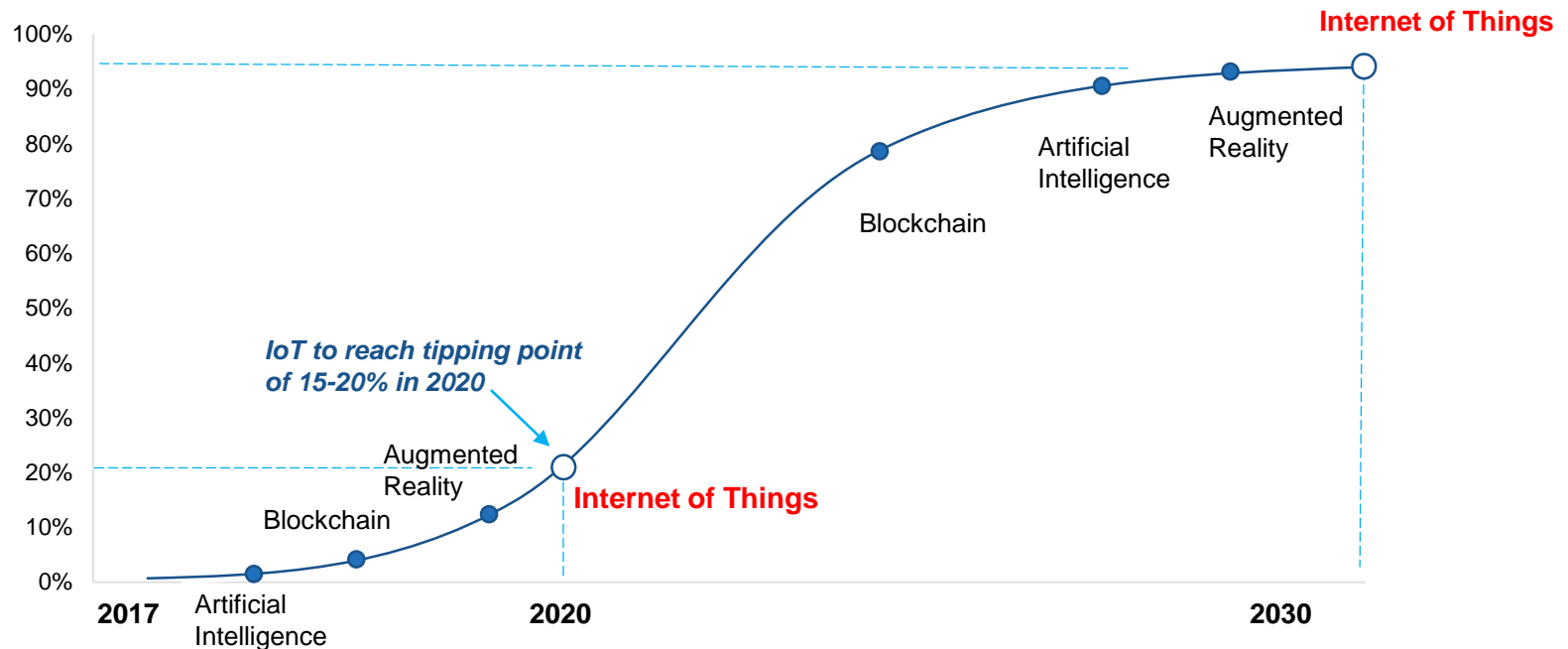
**2018** (Trough of Disillusionment) - Positive momentum in IoT related stocks begins to stall coinciding with tempered expectations, reduced forecasts

**2019** (Slope of Enlightenment) - After underperforming the S&P 500 by a full 10 percentage points since mid-2018, the IoT ETF begins to recover

**2020** – (Unknown) The move to 5G networks picks up steam; IoT overtakes all others as the world’s most connected “device” (11.6B units)



## IoT Adoption to Approach 100% over the next 10 Years



- Advancements in Artificial Intelligence, Augmented Reality, and Blockchain technologies are bringing forward new applications of IoT while simultaneously addressing security and privacy concerns, which have held back IoT adoption
- Consumers are leading the trend of IoT adoption, accounting for more than 60% of IoT devices globally, followed closely by commercial industries such as manufacturing and transportation
- On a dollar basis, however, Consumer represents the minority of total IoT spend (~15%) with Industrial and Enterprise combining for the majority



## IoT Adoption Gaining Momentum

|   | 2016  | 2017  | 2018  | 2020  |
|---|-------|-------|-------|-------|
| IoT Units Installed Base - Total            | 5.6B  | 7.0B  | 8.6B  | 11.6B |
| World Population                            | 7.4B  | 7.6B  | 7.7B  | 8.1B  |
| Addressable Market (Devices) <sup>(1)</sup> | 37.0B | 38.0B | 38.5B | 40.5B |
| IoT Adoption Rate                           | 10%   | 11%   | 13%   | 17%   |

*(1) Assumes 5 devices per person and installed base split of 60% Consumer and 40% Enterprise & Industrial*

- According to the Diffusion of Innovation Theory, technologies reach an inflection point and then experience significant acceleration of adoption when the adoption rate reaches 15-20%, which is expected to occur by 2020
- As adoption increases, the number of use cases for IoT related products and services will start to increase as well, creating a growing and ever evolving addressable market for the IoT industry



The Internet of Things is a dynamic and emerging market with tremendous potential in the wave of Enterprise digitization. Therefore, it is both intriguing and important to track the ways in which IoT is evolving and adapting to meet real business needs.

In this section we will briefly explore a few of these emerging dynamics:

- **Enterprise Security:** IoT brings new security challenges introduced by the scale and pace of adoption, as well as the physical consequences of compromised security.
- **IoT Technology Convergence:** The crossover effects of innovations from consumer and industrial IoT to factor into the Enterprise I.T. conversation
- **Digital Twins:** The use of IoT to enable advanced digital modeling of physical entities is morphing into Business processes and ecosystems models
- **Intelligent Enterprise:** IoT's role in the digital maturity model for Enterprises is becoming more evident. For example, the shift toward a desired state of awareness and efficiency described as the "Intelligent Enterprise" and other frameworks is based in large part on Enterprise IoT adoption.

*These concepts can provide insights into the future use of IoT in Enterprises and a roadmap for evaluating vendors and investments in this rapidly evolving market.*



## What is IoT Convergence?

- Initial IoT adoption has come largely from Consumer and Industrial use cases where the value proposition is clear and compelling.
- This has provided a wealth of practical advancements in IoT that can and likely will be adapted for Enterprise uses.

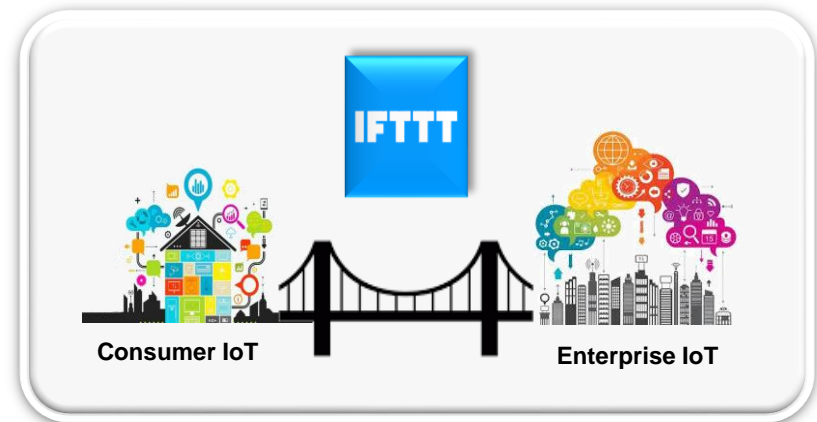
## Why is it important?

- Consumer IoT solutions have emphasized ease of use, rapid adoption and out of the box convenience.
- Scenarios from home automation (Smart Home) to Personal Health products are making consumers lives better at a price point often around \$100 per unit.
- The innovations in this area can contribute to the Enterprise adoption and deployments by tackling deployment and training issues that often plague large Enterprise initiatives.
- Industrial IoT picks up where classic process control solutions left off with a focus on high reliability and precision control of automated manufacturing.
- Industrial IoT solutions have tackled some of the most important dimensions of successful Enterprise initiatives including: high availability, low touch upgrades and support and integration to 3rd party systems.
- As such, Enterprise IoT vendors can benefit from lessons learned in the more advanced Industrial IoT market.



## Consumer IoT, Enterprise IoT use:

- It is easy to see how the distinct IoT domains that exist today, Consumer, Enterprise and Industrial, were purpose built for their respective audiences.
- However, savvy Private Equity firms and strategic investors alike would do well to evaluate cross-domain business integration opportunities that take the strengths from each and propagate them beyond their initial intent.
- Consumer IoT offerings being self service driven and relatively easy to use should begin to cross over into the Enterprise IoT.
- Other self service and user friendly technologies like Integration Platform as a Service (iPaaS) from companies including MuleSoft/SalesForce and Dell/Boomi saw quick acceptance in the Enterprise space and the market has rewarded their investors by tapping into and overcoming these deficiencies of typical Enterprise solutions.
- IFTTT, a Consumer IoT enabler, received another \$24M in funding in 2018 bringing their total to \$63M, which is not all that interesting unto itself in the tech world.
- What is interesting is who invested; Enterprise software giants such as SalesForce and IBM among others. IFTTT has a Consumer IoT solution that can and will likely accelerate the Enterprise IoT.







## What is a Digital Twin?

- A bit confusing, but increasingly important tech jargon is being associated with Enterprise IoT deployments.
- For example, the general concept of representing the physical in digital form through dynamic models.
- Gartner incorporated this generalized concept (circa 2012) into their more recent IoT research.
- It defines a digital twin as a software design pattern that represents a physical object with the objective of understanding the asset's state, responding to changes, improving business operations and adding value.



## Why is it important?

- 13% of organizations implementing Internet of Things (IoT) projects already use digital twins, while 62% are either in the process of establishing digital twin use or plan to do so, according to a recent IoT implementation survey by Gartner.



**As of the first quarter of 2019, according to Gartner research, 24% of organizations with IoT technologies in production or IoT projects in progress use digital twins. Another 42% plan to use digital twin technology within the next three years.**

- Intermarché: The French supermarket uses data from IoT-enabled shelves and sales systems to create a digital twin of brick-and-mortar stores, enabling managers to get real-time insight on stocks and test the efficacy of different store layouts.
- GE: The tech giant is using digital twins to model supply chain and factory processes at its Nevada facility in order to improve inventory management.
- Dassault Systems: The healthcare company is building a library of realistic human heart simulations that physicians can consult to better understand a patient's condition in real-time.
- The global digital twin market is expected to reach \$15 billion by 2023, with a compound annual growth rate (CAGR) of 37 percent between 2017 and 2023.
- Major companies such as General Electric, IBM, and Microsoft are using digital twin technology to optimize products and services, perform predictive maintenance and health monitoring, and design new products.
- Gartner named digital twins as one of the top 10 technology trends for 2019, noting that the focus of this technology will be in IoT.



## What is the Intelligent Enterprise?

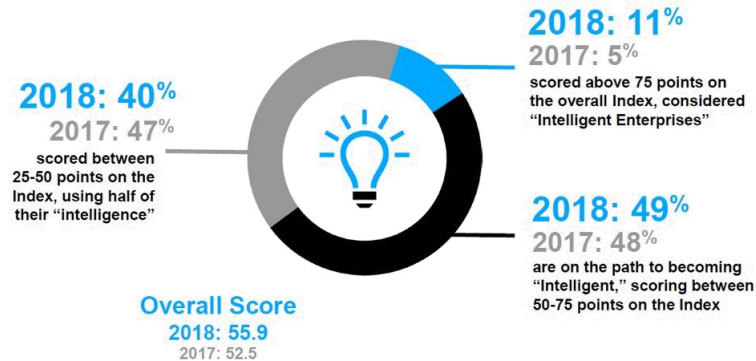
- The Intelligent Enterprise Index is a global survey performed by Zebra Technologies that measures where companies are on the journey to becoming an “intelligent enterprise”
- One that connects the physical and digital worlds to drive innovation through real-time guidance, data-powered environments and collaborative mobile workflows.

## Why is this important and how is this related to Enterprise IoT adoption?

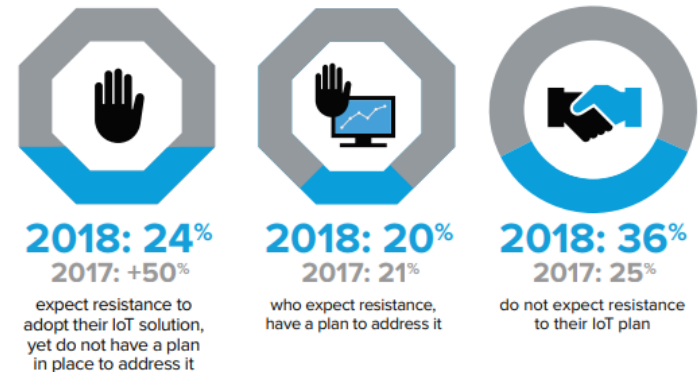
- Companies pursuing a Digital Transformation, increasingly need to benchmark their progress and journey using objective criteria.
- The Intelligent Enterprise Index, and other similar measures, can provide a score card of sorts for enterprises seeking to evaluate their progress relative to other companies on a similar path.
- This year’s findings show that, among participants in the Intelligent Enterprise Index survey, IoT investment is up, and resistance to adoption is down.
- Also, nearly half of those surveyed anticipate investment growth of 11-20 percent.
- IoT in the Enterprise appears to not only be increasing in adoption rates, but is also a key measure of any Digital Transformation progression.



## The Intelligent Enterprise Index



## Adoption



|    | Criteria                 | Description  | Weight |
|----|--------------------------|--|--------|
| 1  | IoT Vision               | Driving transformational innovation starts with a vision                   | 10%    |
| 2  | Business Engagement      | Complex initiatives require a clear business case                          | 10%    |
| 3  | Technology Partner       | Intelligent IoT solutions require a holistic perspective                   | 10%    |
| 4  | Adoption                 | New user adoption is one of the most cited challenges                      | 10%    |
| 5  | Change Management        | Key to success is the end-user utilization                                 | 10%    |
| 6  | Point-of-Use Application | IoT solutions offer contextual and situational awareness                   | 5%     |
| 7  | Security                 | IoT solutions need to be monitored to prevent disruption                   | 10%    |
| 8  | Deployment               | Time to implementation is a key consideration                              | 10%    |
| 9  | Infrastructure           | IoT execution requires a system to manage the technologies                 | 5%     |
| 10 | Data Management Plan     | One of the greatest challenges with IoT is how to best manage all the data | 10%    |
| 11 | Intelligent Analysis     | Insights derived by data can be instrumental for the business              | 10%    |

## IoT VISION



**4%** Increase in average annual spend on IoT from 2017 to **\$4.6 million**

**86%** expect that number to increase in the next **1-2 years**

**49%** expect their IoT investment to increase by **11-20%**



**55%** have an IoT vision and are currently executing their IoT plans

**38%** currently have company-wide deployments

**30%** of remaining companies plan to deploy IoT company-wide in the future



- As the market matures, strategic buyers are executing on both scale based “roll up” strategies and filling gaps via technology purchases.
- Not surprisingly, M&A “roll up” activities are often initiated by IoT platform providers and larger IoT vendors who already have significant customer coverage and scale.
- IoT is a key area for “Buy versus Build” as companies push to stay relevant, extend their reach and enhance their scale-based economics.
- Enterprise IoT vendors are re-positioning either by adding complimentary functionality or backing into other extensions in the space.
- Tech consolidation continues as M&A markets strengthen and the IPO market remains uneven.

## Potential Strategic Buyers



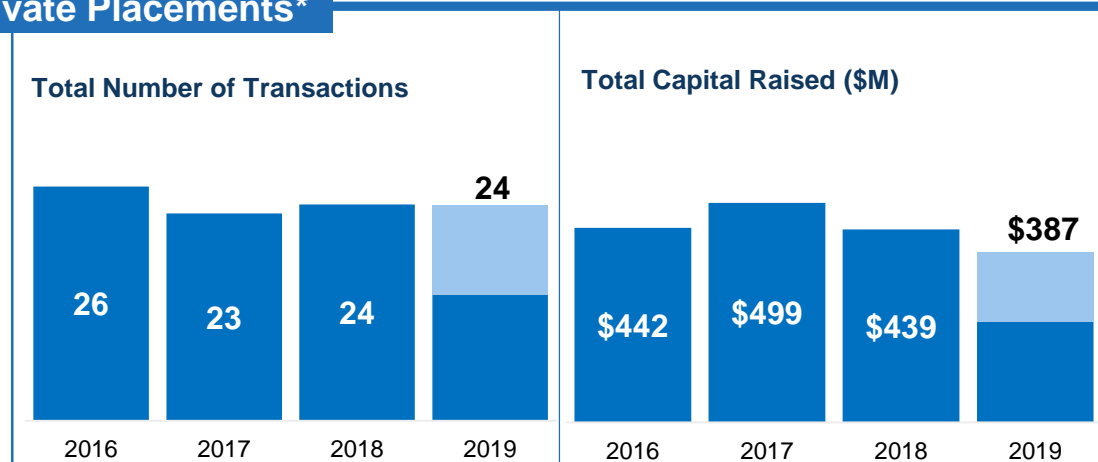
## Private Equity Buyout Firms



# Transaction Activity Summary



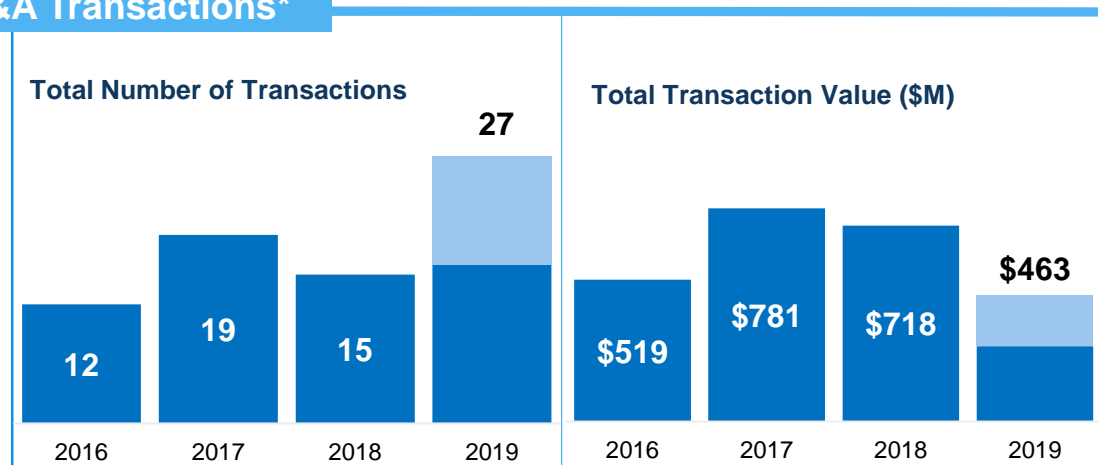
## Private Placements\*



## Highlights:

- Notable Private Placement transactions:
  - › SigFox's \$160M Series E (Oct-16)
  - › Particle's \$112M Series E (Nov-17)
  - › C3 IoT's \$106M Series F (Jan-18)

## M&A Transactions\*



- Notable M&A Transactions:
  - › Pacific Acquisition Corp's buyout of BORQS to form BORQS Technologies (\$303M; Dec-16)
  - › HSB / Munich Re's acquisition of Relayr (\$298M; Sep-18)
  - › FireEye's acquisition of Verodin (\$250M; May-19)

# Top M&A Deals (2016 – 2019 YTD)























| Date   | Target  | Acquirer  | Size (\$M) | Sector                      | Target Business Description  | Deal Rationale   |
|--------|---|---|------------|-----------------------------|--|--|
| Dec-16 |    |    | 303        | Systems & Device Management | Manufactures and sells Android-based mobile devices such as smart phones, tablets and smart watches, to device providers. Also provides related software and services.   | Access to public capital markets via PAACU, a listed SPAC, will fuel Borq's R&D efforts and business growth, enabling it to execute more rapidly and efficiently in delivering and scaling new IoT designs and products.   |
| Sep-18 |    |    | 298        | Systems & Device Management | Provides Industrial Internet of Things (IIoT) technology that connects various industrial equipment.   | The unique combination of the companies demonstrates the importance to deliver business outcomes to customers and the need to combine first-class technology and its delivery with powerful financial and insurance offerings.   |
| May-19 |    |    | 250        | Security & Compliance       | Provides automated security attack simulation SaaS for enterprises, enabling the preventative assessment of the effectiveness of existing security controls.   | Verodin gives us the ability to automate security effectiveness testing using the sophisticated attacks we spend hundreds of thousands of hours responding to, and provides a systematic, quantifiable, and continuous approach to security program validation.        |
| Mar-16 |    |    | 190        | Data Management & Analytics | Provides M2M connectivity and network and device management software for wireless telecommunications service providers, device manufacturers and businesses globally.  | With the addition of Wyless, KORE's expanded workforce, sizable customer footprint and more than six million managed connections position it as a top 10 global provider in terms of on-net connections.   |
| Dec-18 |    |    | 140        | Connectivity & Middleware   | Provides master data management SaaS for enterprises. Software enables users to model, data match and govern master data. Software can be deployed on-premises, in a private cloud or AWS.                                       | Orchestra, an industry-leading master data management solution, will be further amplified as part of the TIBCO Connected Intelligence Cloud. Orchestra customers will gain instant access to our leading integration and analytics capabilities for their data assets. |
| Nov-18 |    |    | 113        | Security & Compliance       | Provides operational technology (OT) and industrial network monitoring software for critical infrastructure and manufacturing companies globally.  | SecurityMatters' technology and talent will accelerate our success in securing OT, expand our total addressable market and reinforce our solution as the industry's only, end-to-end agentless device visibility and control platform.                                 |
| Aug-17 |   |   | 107        | Connectivity & Middleware   | Provides sensor and GPS-based wireless machine-to-machine (M2M) systems and software for businesses and government agencies globally.  | The acquisition expands Sierra Wireless' position as a leading global IoT pure-play and will significantly increase its subscription-based recurring services revenue.   |
| Jul-19 |  |  | 78         | Data Management & Analytics | Provides AI-based analytics SaaS that enables IoT data processing to help service providers build and deploy IoT customer experience applications at enterprise scale.   | Accelerates the realization of AspenTech's vision for the next generation of asset optimization solutions that combine deep process expertise with AI and machine learning.  |
| Feb-17 |  |  | 55         | Security & Compliance       | Provides machine learning-enabled behavioral analytics SaaS for enterprises. Software provides features for the detection and forensic analysis of network security anomalies for the purposes of detecting threats and attacks. | With this transaction, Niara continues to innovate at the Intelligent Edge with software-defined solutions to better protect customers' business and IoT data.   |













# Most Active Acquirers (2016 – 2019 YTD)



| Acquirer  | Number of Acquisitions  | Notable Transaction                   | Representative Acquisitions   |
|---|---|---------------------------------------|---|
|    |  6   | Dec-18 - Orchestra Networks (\$140M)  | Alpine Data Labs, Nanoscale.io, Orchestra Networks, Scribe Software, SnappyData, Statistica |
|    |  6   | Aug-17 - Numerex Corp. (\$107M)       | Blue Creation, Cambridge Executive, Flow Search, GenX Mobile, GlobalTop Technology, Numerex |
|    |  4   | Oct-17 - TempAlert (\$45M)            | Accelerated Concepts, FreshTemp, SMART Temps, TempAlert                                     |
|    |  3   | Jun-19 - TWNKLS (ND)                  | Factoria Solutions, TWNKLS, Waypoint Labs   |
|    |  2   | Jan-19 - Ruletronics (\$7M)           | N+P, Ruletronics,   |
|    |  2   | Feb-17 - Neokami (ND)                 | Neokami, Proximity  |
|    |  2   | Mar-16 - Wyless (\$190M)              | NGA Holding, Wyless   |
|  |  2 | Oct-17 - NL Noodvermogenpool (ND)     | Abeeway, NL Noodvermogenpool  |
|  |  2 | Feb-17 - Gainspan (\$8M)              | Gainspan, Stollmann Entwicklungs  |
|  |  2 | Nov-17 - Netsnapper Technologies (ND) | Netsnapper Technologies, Teramatrix Technologies  |











# Top Financings (2016 – 2019 YTD)



| Date   | Company  | Size (\$M) | Sector                      | Investors   | Series   | Description  |
|--------|--|------------|-----------------------------|---|----------|--|
| Oct-16 |  sigfox                                   | \$160      | Connectivity & Middleware   | IDInvest Partner; Intel Capital; Bpifrance; Alto Invest; Elliott Management; iXO; Farouk, Maamoun Tamer; Total Energy Ventures; Air Liquide ; Salesforce Ventures; Swen Capital | Series E | Provides cellular connectivity for Internet of things (IoT) and machine-to-machine communications.   |
| Jan-18 |  C3.ai                                    | \$106      | Systems & Device Management | Sutter Hill Ventures; TPG Growth; Breyer Capital  | Series F | Develops and delivers enterprise software solutions.   |
| Dec-18 |  samsara                                  | \$100      | Data Management & Analytics | General Catalyst Partners; Andreessen Horowitz  | Venture  | Develops Internet connected sensor systems that combine plug-and-play sensors, wireless connectivity, and cloud-hosted software integrated for deployment. |
| Apr-17 |  Actility<br>Connecting with intelligence | \$75       | Connectivity & Middleware   | IDInvest Partners; Bpifrance; BNP Paribas; Hon Hai Precision; Inmarsat; Creadev, Cisco Investments; Robert Bosch; Swisscom; Orange Capital; Ginko; KPN Ventures                 | Series D | Develops a machine-to-machine communication platform, designed for massively scalable deployments of mission-critical applications.                        |
| Sep-16 |  C3.ai                                    | \$70       | Systems & Device Management | InterWest Partners ; Sutter Hill Ventures; TPG Growth   | Series D | Develops and delivers enterprise software solutions.   |
| Apr-19 |  armis<br>See Every Thing                 | \$65       | Security & Compliance       | Insight Venture Partners; Temasek Holdings; Voice One; Bain Capital Ventures; Tenaya Capital; Sequoia Capital   | Series C | Develops an Internet of things (IoT) security solution to control and detect activity and threats on devices and networks.                                 |
| Jan-19 |  influxdata                               | \$60       | Enterprise IoT Platforms    | Battery Ventures; Mayfield Fund; Norwest Venture Partners; Trinity Ventures; Sapphire Ventures ; Sorenson Capital; Harmony Partners   | Series D | Provides open source platforms to manage time-series data at scale.  |
| Oct-17 |  Ayla Networks                          | \$60       | Connectivity & Middleware   | Run Liang Tai Investment Company Limited; SUNSEA Telecom Hong Kong Limited  | Series D | Provides an Internet of Things (IoT) platform for manufacturers and service providers.   |
| Mar-18 |  samsara                                | \$50       | Data Management & Analytics | General Catalyst Partners; Andreessen Horowitz  | Series D | Develops Internet connected sensor systems that combine plug-and-play sensors, wireless connectivity, and cloud-hosted software integrated for deployment. |
| Oct-17 |  Globetouch                             | \$40       | Systems & Device Management | Verizon Ventures; Hermes Growth Partners; Zeev Ventures; Impact Venture Capital   | Series C | Provides cloud-based global ecosystem solutions for mobile devices.  |






# Top Funded Companies



| Company  | Total Funding (\$M) | Sector                      | Lead / Majority Investors  | Business Description   |
|--|---------------------|-----------------------------|--|--|
|  TIBCO®   | 366.9               | Connectivity & Middleware   | Virgo Capital; Vista Equity Partners   | Provides infrastructure and business intelligence software worldwide.  |
|  sigfox   | 325.3               | Connectivity & Middleware   | Intel Capital; Elaia; Telefonica Ventures; Khazanah Nasional   | Provides cellular connectivity for Internet of things (IoT) and machine-to-machine communications.   |
|  Lookout  | 281.0               | Security & Compliance       | Accel; Andreessen Horowitz; Bezos Expeditions; BlackRock; Deutsche Telekom; Goldman Sachs Group; Greylock Partners; Index Ventures | Provides cloud-based technology solutions for mobile security.   |
|  C3.ai  | 251.6               | Data Management & Analytics | Breyer Capital; InterWest Partners; Sutter Hill Ventures; TPG Growth; Wildcat Venture Partners; Wildcat Ventures                   | Develops and delivers enterprise software solutions.   |
|  samsara  | 215.0               | Data Management & Analytics | General Catalyst Partners; Andreessen Horowitz   | Develops Internet connected sensor systems that combine plug-and-play sensors, wireless connectivity, and cloud-hosted software integrated for deployment. |
|  snapLogic®   | 143.8               | Connectivity & Middleware   | Ignition Partners; Vitruvian Partners; Andreessen Horowitz; Microsoft; Silver Lake Waterman  | Delivers cloud Integration Platform-as-a-Service solutions for citizen integrators.  |
|  Ayla Networks   | 118.9               | Connectivity & Middleware   | Ant Capital Partners; Run liang Tai Fund; Sunsea   | Provides an Internet of Things (IoT) platform for manufacturers and service providers.   |
|  influxdata   | 118.1               | Enterprise IoT Platforms    | Battery Ventures; Norwest Venture; Sapphire Ventures   | Provides open source platforms to manage time-series data at scale.  |
|  Actility<br><small>Connecting with Everything™</small> | 112.7               | Connectivity & Middleware   | IDInvest Partners; Electranova Partners; Ginko Ventures  | Develops a machine-to-machine communication platform, designed for massively scalable deployments of mission-critical applications.                        |
|  armis<br><small>See Every Thing™</small>               | 112.0               | Security & Compliance       | Bain Capital Ventures; Cerca Partners; Sequoia Capital; Temasek Holdings; Tenaya Capital   | Develops an Internet of things (IoT) security solution to control and detect activity and threats on devices and networks.                                 |

# Most Active Investors (2016 – 2019 YTD)



| Investor   | Number of Investments | Investments   |
|--|-----------------------|---|
| <b>/sway</b> ventures  | 5                     | Blue Cedar Networks (x2), MedCrypt, Mocana Corporation (x2) |
| ANDREESSEN<br>HOROWITZ   | 4                     | Samsara (x3), SnapLogic                                     |
| GENERAL  CATALYST         | 3                     | Samsara (x3)  |
|  TPG                      | 3                     | C3 IoT (x3)   |
|  investments              | 3                     | Actility, Ayla Networks, Verodin                            |
|  Trinity<br>VENTURES      | 3                     | InfluxData (x3)   |
| SUTTER HILL<br>VENTURES  | 3                     | C3 IoT (x3)   |
| <b>ignition</b>  | 3                     | SnapLogic, Tempered Networks (x2)                           |
|  BV<br>Battery Ventures | 3                     | InfluxData (x3)   |
| <i>Mayfield</i>  | 3                     | InfluxData (x3)   |



## Mergers & Acquisitions 2016 – YTD 2019



| Date   | Target                           | Acquirer  | Size (\$M) | TTM Rev | EV / Rev | Target Description   |
|--------|----------------------------------|---|------------|---------|----------|--|
| Jul-19 | Mnubo                            | Aspen Technology                                  | \$78       | ND      | ND       | Provides AI-based analytics SaaS that enables IoT data processing to help service providers build and deploy IoT customer experience applications at enterprise scale.                                     |
| Jul-19 | DevSecCon                        | Snyk  | ND         | ND      | ND       | Provides workshops and discussions on DevSecOps ,the practice of making development and delivery more secure.  |
| Jul-19 | Lymbyc Solutions                 | Larsen & Tourbro Infotech                         | \$6        | \$1     | 5.4x     | Designs and develops analytical product Leni, a self-service, predictive, and insights platform catering to CPG and retail industry and life science industry.   |
| Jun-19 | AllThingsTalk                    | ALSO Holding AG                                   | ND         | ND      | ND       | Provides subscription-based Internet of Things (IoT) device management SaaS for makers, developers and businesses globally.  |
| Jun-19 | TWNKLS                           | PTC [fka Parametric Technology Corp]              | ND         | ND      | ND       | Provides augmented reality (AR) software and content development services for businesses in Europe. Services include education, 3d modeling, computer vision software development and systems integration. |
| May-19 | Verodin                          | FireEye   | \$250      | ND      | ND       | Provides automated security attack simulation SaaS for enterprises, enabling the preventative assessment of the effectiveness of existing security controls.   |
| Apr-19 | Factora Solutions                | PTC   | ND         | ND      | ND       | Plans, designs, and implements manufacturing execution systems (MES) and manufacturing operations management (MOM) application software.   |
| Apr-19 | SeNet International              | Gaming Laboratories International [aka GLI Group] | ND         | ND      | ND       | Provides information security consulting and penetration testing services for businesses and the public sector.  |
| Mar-19 | Buoy Labs                        | Resideo Technologies                              | ND         | ND      | ND       | Provides home water management hardware, water management SaaS and a related application for consumers in the US.  |
| Mar-19 | Buoy Labs                        | Resideo Technologies,                             | \$6        | ND      | ND       | Develops a smart water leak detection and control device for homes.  |
| Mar-19 | SnappyData                       | TIBCO Software [Vista Equity Partners]            | ND         | ND      | ND       | Provides Apache Spark-based analytics software integrated with in-memory database software, for businesses.  |
| Feb-19 | Nielsen + Partner [dba N+P]      | Larsen & Toubro Infotech                          | ND         | ND      | ND       | Provides Temenos WealthSuite and Appway-based systems integration and IT consulting services to businesses.  |
| Feb-19 | Sierra Wireless (iTank business) | DataOnline  | ND         | ND      | ND       | Provides tank monitoring systems and web-based software for distributors and resellers of bulk lubes and fluids.   |
| Jan-19 | Ruletronics                      | Larsen & Toubro Infotech                          | \$7        | \$3     | 2.2x     | Provides a multitude of services in Pega space.  |

# M&A Transactions (Cont'd)



| Date   | Target                                     | Acquirer                               | Size (\$M) | TTM Rev | EV / Rev | Target Description   |
|--------|--|--|------------|---------|----------|--|
| Dec-18 | WiSeKey                                    | DigiCert [Thoma Bravo]                 | \$45       | ND      | ND       | Provide managed public key infrastructure (PKI) and transport layer security (TLS) and secure socket layer (SSL) certificate services for digital and website authentication for businesses. |
| Dec-18 | NGA Holding                                | KORE Wireless Group                    | ND         | ND      | ND       | Provides advanced connectivity, core network, and eSIM solutions.  |
| Dec-18 | Orchestra [dba Orchestra Networks]         | TIBCO Software [Vista Equity Partners] | \$140      | \$35    | 4.0x     | Provides master data management SaaS for enterprises. Software enables users to model, data match and govern master data. Software can be deployed on-premises, in a private cloud or AWS.   |
| Nov-18 | SecurityMatters                            | ForeScout Technologies                 | \$113      | \$8     | 14.2x    | Provides operational technology (OT) and industrial network monitoring software for critical infrastructure and manufacturing companies globally.  |
| Sep-18 | Shanghai KADI Technologies Co.,            | Borqs Technologies                     | ND         | ND      | ND       | Designs and develops software and hardware for core electric control modules of electric vehicle.  |
| Sep-18 | Relayr                                     | HSB Group                              | \$298      | ND      | ND       | Provides Industrial Internet of Things (IIoT) technology that connects various industrial equipment.   |
| Jul-18 | Arkessa                                    | ECI Partners LLP                       | ND         | ND      | ND       | Provides wide area connectivity solutions to operate, monitor, manage, and control remote devices through desktops, tablets or smart phones.   |
| Jul-18 | Telit Communications (automotive division) | TUS International Limited              | \$105      | \$63    | 1.7x     | Designs and manufactures CDMA, GSM, GRPS and Wi-Fi semiconductors for use in machine-to-machine (M2M) communication systems for the automotive sector globally.                              |
| Jun-18 | Connected Analytics                        | Deloitte Touche Tohmatsu               | ND         | ND      | ND       | Develops a comprehensive software solution for businesses to manage their IoT connectivity all in one place. SIMetric™ was conceived and created with our customers needs in mind.           |
| Jun-18 | Waypoint Labs                              | PTC                                    | ND         | ND      | ND       | Develops real-time movement software.  |
| Jun-18 | Scribe Software [Mustang Group]            | TIBCO Software [Vista Equity Partners] | ND         | \$20    | ND       | Provides CRM and ERP-focused automated data integration SaaS and cloud migration platform-as-a-service (PaaS) and iPass for enterprises operating in hybrid network environments.            |
| Mar-18 | RedBear                                    | Particle                               | ND         | ND      | ND       | Manufactures MCM Electronics-licensed IoT hardware for businesses.   |
| Jan-18 | Accelerated Concepts                       | Digi International                     | \$17       | ND      | ND       | Provides networking OEMs and commercial businesses with Ethernet- and cellular-based LTE routers and modems for network connectivity.  |
| Jan-18 | Shanghai KADI Machinery Technology         | Borqs Technologies,                    | ND         | ND      | ND       | Engages in the development of embedded software and hardware for core electric control modules of electric vehicle.  |



# M&A Transactions (Cont'd)



| Date   | Target                                  | Acquirer                               | Size (\$M) | TTM Rev | EV / Rev | Target Description  |
|--------|---|--|------------|---------|----------|---|
| Nov-17 | Alpine Data Labs                        | TIBCO Software [Vista Equity Partners] | ND         | ND      | ND       | Provides machine learning-based advanced analytics SaaS to businesses. Software provides features for collaborative analytics reporting and business management.  |
| Nov-17 | Netsnapper Technologies                 | GlobeTouch                             | ND         | ND      | ND       | Provides security offerings for connected car, industrial Internet of things (IoT), and smart city applications.  |
| Oct-17 | TempAlert                               | Digi International                     | \$45       | ND      | ND       | Provides wireless remote monitoring sensors, Bluetooth-enabled temperature probes and related analytics SaaS for businesses.  |
| Oct-17 | NL Noodvermogenpool                     | Actility                               | ND         | ND      | ND       | Operates as a demand response aggregator that offers additional power to balance the electricity grids in the Netherlands.  |
| Aug-17 | Numerex                                 | Sierra Wireless                        | \$107      | \$69    | 1.8x     | Provides sensor and GPS-based wireless machine-to-machine (M2M) systems and software for businesses and government agencies globally.   |
| Aug-17 | Flow Search                             | Sierra Wireless                        | \$0        | ND      | ND       | Operates as a real-time, online information exchange.   |
| Jul-17 | Nanoscale [dba nanoscale.io]            | TIBCO Software [Vista Equity Partners] | ND         | ND      | ND       | Provides microservices and API software development tools and SaaS for developers, enabling the creation of microservices-based APIs deployable in the cloud, on-premise or on handheld devices.          |
| Jun-17 | Teramatrix Technologies                 | GlobeTouch                             | ND         | ND      | ND       | Builds software platform to analyze complex events emanating from sensors, devices, data-streams and users and enable applications for seamless management, integration and correlation.                  |
| Jun-17 | Carriots                                | Altair Engineering                     | \$7        | ND      | ND       | Provides software for the development of M2M/IoT applications, and sells professional services and consulting to help businesses develop M2M applications.  |
| Jun-17 | broTECH Solutions                       | TrackX                                 | \$3        | ND      | ND       | Provides SCM software, systems integration, consulting and software development services for the transportation, distribution and logistics sectors.  |
| Jun-17 | Brocade Communications Systems          | Pulse Secure                           | ND         | ND      | ND       | Manufactures virtual application delivery controller (vADC) products and is located in the United States.   |
| May-17 | Statistica [Quest Software][Dell]       | TIBCO Software [Vista Equity Partners] | ND         | ND      | ND       | Provides predictive analytics SaaS to businesses. Software provides features for data monitoring and aggregation, standardized reporting and data deployment to sensors, smart devices and IoT equipment. |
| May-17 | Abeeway                                 | Actility                               | ND         | ND      | ND       | Provides GPS-based geolocation software and hardware to enable businesses to track items via low power wide area networks (LPWAN).  |
| Apr-17 | Blue Ridge Networks (AppGuard business) | Blue Planet-works                      | ND         | ND      | ND       | Provides desktop, laptop and endpoint anti-malware software for consumers, businesses and enterprises.  |

# M&A Transactions (Cont'd)



| Date   | Target               | Acquirer                         | Size (\$M) | TTM Rev | EV / Rev | Target Description   |
|--------|----------------------|----------------------------------|------------|---------|----------|--|
| Apr-17 | GlobalTop Technology | Sierra Wireless,                 | \$3        | \$5     | 0.6x     | Designs and manufactures positioning modules for industrial, consumer, and automotive sectors.   |
| Mar-17 | Cumulocity           | Software AG                      | \$53       | ND      | ND       | Provides multi-carrier enabled, Web-based M2M wireless device management SaaS, enabling remote management and control, real-time analytics and predictive maintenance, online services for consumer products.                    |
| Feb-17 | Neokami              | Relayr,                          | ND         | ND      | ND       | Develops and markets Machine-Learning-as-a-Service solutions.  |
| Feb-17 | Niara                | Hewlett Packard Enterprise       | \$55       | \$2     | 27.5x    | Provides machine learning-enabled behavioral analytics SaaS for enterprises. Software provides features for the detection and forensic analysis of network security anomalies for the purposes of detecting threats and attacks. |
| Feb-17 | GainSpan             | Telit Communications             | \$8        | ND      | ND       | Designs and develops ultra-low-power Wi-Fi and Bluetooth modules for IoT enabled devices for businesses and consumers. Also provides embedded software and software development services.  |
| Jan-17 | SMART Temps          | Digi International               | \$36       | ND      | ND       | Designs and develops temperature management systems.   |
| Dec-16 | Borqs International  | Pacific Special Acquisition Corp | \$303      | ND      | ND       | Operates as a holding company whose subsidiaries manufacture and sell Android-based mobile devices such as smart phones, tablets and smart watches, to device providers. Also provides related software and services.            |
| Dec-16 | Proximity            | Relayr                           | ND         | ND      | ND       | Develops software solutions that manage the Internet of Things (IoT) from various remote sensing devices and related applications to systems in aircraft and critical infrastructure.  |
| Nov-16 | Pravala Networks     | Carnegie Technologies,           | ND         | ND      | ND       | Builds connectivity software that improves and optimizes wireless networks for mobile devices and connected vehicles.  |
| Nov-16 | Blue Creation        | Sierra Wireless                  | \$7        | ND      | ND       | Provides Bluetooth and wireless modules, software development kits and mobile embedded middleware for wireless device OEMs. Also provides outsourced contract design services.   |
| Nov-16 | Cambridge Executive  | Sierra Wireless,                 | \$4        | ND      | ND       | Designs and develops Bluetooth, Bluetooth Low Energy, Wi-Fi, and other embedded wireless technologies and their interactions with smartphones, tablets, and other equipment.   |
| Nov-16 | FreshTemp            | Digi International               | \$4        | ND      | ND       | Provides monitor and alert systems for food service, transportation, healthcare, and industrial customers that produce, ship, or store temperature sensitive products worldwide.   |
| Aug-16 | Genx Mobile          | Sierra Wireless                  | \$8        | ND      | ND       | Manufactures and sells in-vehicle wireless communications and tracking systems for transportation and fleet-management companies in North America and Europe.  |
| May-16 | Solair               | Microsoft Corp.                  | ND         | ND      | ND       | Provides (IoT) platform-as-a-service (PaaS) to enable enterprises to develop Web-based applications for machine-to-machine (M2M) connectivity, data gateway, edge computing and remote M2M monitoring and analytics.             |

# M&A Transactions (Cont'd)



| Date    | Target   | Acquirer             | Size (\$M) | TTM Rev | EV / Rev | Target Description   |
|---------|--|----------------------|------------|---------|----------|--|
| Apr-16  | DeviceAuthority [aka Device Authority]             | Cryptosoft .         | ND         | \$3     | ND       | Provides IoT device-based identity and access management (IAM) and machine-to-machine (M2M) multi-factor authentication software for businesses, device and gateway manufacturers and IoT service platforms. |
| Apr-16  | DeviceAuthority,                                   | Device Authority     | ND         | ND      | ND       | Offers technology and products to enable high-assurance authentication for machine-to-machine (M2M) and multi-factor security applications.  |
| Apr-16  | Bluebox Security,                                  | Lookout              | ND         | ND      | ND       | Operates as a stealth startup tackling enterprise mobile security company.   |
| Mar-16  | Wyless   | KORE Wireless Group  | \$190      | \$60    | 3.2x     | Provides M2M connectivity and network and device management software for wireless telecommunications service providers, device manufacturers and businesses globally.  |
| Jan-16  | Stollmann Entwicklungs und Vertriebs GmbH (assets) | Telit Communications | \$5        | ND      | ND       | Provides embedded radio frequency (RF) wireless and Bluetooth modules and related integration services for the industrial and OEM sectors.   |
| MEDIAN  |  |                      | \$17       | \$8     | 3.2x     |  |
| AVERAGE |  |                      | \$68       | \$24    | 6.7x     |  |



## Private Placements 2016 – YTD 2019

# Private Placement Transactions



| Date   | Target                | Round       | Size (\$M) | Investors  | Target Description   |
|--------|-----------------------|-------------|------------|--|--|
| Jul-19 | TrapX Security        | Series C    | \$18       | BRM Group; Intel Capital; Opus Capital; Ibox Investors; Strategic Cyber Ventures; Liberty Technology Venture Capital               | Develops a deception technology that detects, analyzes, and defeats ransomware attacks.  |
| Jun-19 | Digital Shadows       | Series C    | ND         | Octopus Ventures; National Australia Bank  | Provides protection from data loss and targeted cyber attack for organizations.  |
| Jun-19 | ThreatConnect         | Growth      | ND         | Providence Strategic Growth Capital Partners   | Provides threat intelligence solutions for Fortune 5000 organizations and allied government agencies worldwide.  |
| May-19 | Helium Systems        | Series C    | \$15       | FirstMark Capital; Union Square Ventures; Khosla Ventures; GV; MunichRe/HSB Ventures; Multicon Capital Management                  | Operates an IoT smart sensor device for enterprises and industries.  |
| May-19 | MedCrypt              | Series A    | \$5        | Y Combinator Management; ENIAC Ventures; Section 32  | Provides medical device data security as a service.  |
| Apr-19 | 1248 dba Device Pilot | Growth      | \$2        | ND   | Provides automated device management solutions.  |
| Apr-19 | VDOO Connected Trust  | Venture     | \$32       | 83North; NTT DOCOMO; GGV Capital; Dell Technologies Capital; MS&AD Ventures; WRVI Capital  | Offers an end-to-end Internet of Things (IoT) security platform.   |
| Apr-19 | Armis                 | Series C    | \$65       | Insight Venture Partners; Temasek Holdings; Voice One; Bain Capital Ventures; Tenaya Capital; Sequoia Capital                      | Develops an Internet of things (IoT) security solution to control and detect activity and threats on devices and networks.   |
| Mar-19 | Blue Cedar Networks   | Series B    | \$17       | Grayhawk Capital; Benhamou Global Ventures; C5 Capital ; Sway Ventures   | Develops no code mobile app security platform to secure custom and third-party mobile apps.  |
| Mar-19 | Digital Shadows       | Growth      | ND         | Plug and Play  | Provides protection from data loss and targeted cyber attack for organizations.  |
| Feb-19 | Mocana Corporation    | Growth      | \$15       | Shasta Ventures; Sway Ventures; ForgePoint Capital   | Operates an enterprise mobile application security platform that facilitates organizations to deliver business-critical mobile applications for internal and external users. |
| Feb-19 | MedCrypt              | Accelerator | \$0        | Y Combinator Management  | Provides medical device data security as a service.  |
| Jan-19 | Medigate              | Series A    | \$0        | U.S. Venture Partners; Blumberg Capital; YL Ventures GP  | Owns and operates a medical device security platform which protects all connected medical devices on health care provider networks.  |
| Jan-19 | InfluxData            | Series D    | \$60       | Battery Ventures; Mayfield Fund; Norwest Venture Partners; Trinity Ventures; Sapphire Ventures; Sorenson Capital; Harmony Partners | Provides open source platforms to manage time-series data at scale.  |

# Private Placement Transactions (Cont'd)



| Date   | Target               | Round    | Size (\$M) | Investors  | Target Description   |
|--------|----------------------|----------|------------|--|--|
| Dec-18 | Samsara Networks     | Venture  | \$100      | General Catalyst Partners; Andreessen Horowitz   | Develops Internet connected sensor systems that combine plug-and-play sensors, wireless connectivity, and cloud-hosted software integrated for deployment.   |
| Dec-18 | Cybeats Technologies | Venture  | \$3        | Inovia Capital; Maple Leaf Angels; MaRs Discovery District, Investment Arm; GreenSoil Investments; Ripple Ventures | Provides an immune system for Internet of Things (IoT) devices.  |
| Oct-18 | 1NCE GmbH            | Venture  | ND         | ND   | Provides Internet data connectivity services.  |
| Sep-18 | Snyk                 | Series B | \$22       | Accel; GV; BOLDstart Ventures; Heavybit, Inc.  | Provides a software platform that enables users to find, fix, and monitor for known vulnerabilities in Node.   |
| Sep-18 | Concirus             | Growth   | \$7        | IQ Capital Partners; EOS Venture Partners  | Operates a cloud platform that enables clients to connect any data source or device, draw any data type, and issue commands as required.                     |
| Sep-18 | Nodle.io             | Seed     | \$2        | BootstrapLabs; Yeoman's Capital; Blockchange Ventures; Olymp Capital   | Offers low cost and low energy connectivity service for the Internet of things using smartphones as a base station.  |
| Jul-18 | Swim.Ai              | Series B | \$10       | Silver Creek Ventures; ARM Limited; Barton Asset Management; Cambridge Innovation Capital                          | Provides edge-based software that executes real-time analytics and machine learning for IoT.   |
| Jun-18 | MedCrypt             | Seed     | \$2        | ENIAC Ventures; Sway Ventures; Nex Cubed; Friedman BioVenture; Oronoco Investments,                                | Provides medical device data security as a service.  |
| Jun-18 | Verodin              | Series B | \$21       | Bessemer Venture Partners; Citi Ventures; Ten Eleven Ventures; Capital One Growth Ventures                         | Develops and provides emerging instrumented security.  |
| Jun-18 | CloudPost Networks   | Series A | \$8        | Wing Venture Partners; Ten Eleven Ventures   | Develops Internet of things (IoT) security and risk-reduction solutions that protect business-critical devices and systems.                                  |
| Apr-18 | Buoy Labs            | Venture  | \$0        | ND   | develops a smart water leak detection and control device for homes.  |
| Apr-18 | Axonize              | Series A | \$6        | Deutsche Telekom; StageOne Ventures; Cornerstone Venture Partners; Meron Capital                                   | Develops technology platform that provides cloud based backend server to IoT manufacturers.  |
| Apr-18 | Armis                | Series B | \$30       | Temasek Holdings Limited; Bain Capital Ventures; Tenaya Capital; Sequoia Capital Israel                            | Develops an Internet of things (IoT) security solution to control and detect activity and threats on devices and networks.                                   |
| Mar-18 | Myriota              | Series A | \$2        | SingTel Ventures; Blue Sky Private Equity; Right Click Capital Management; Boeing HorizonX; Main Sequence Ventures | Develops low power micro transmitters that send multiple small packets of data that is received by low earth orbit satellites and satellite ground stations. |

# Private Placement Transactions (Cont'd)



| Date   | Target               | Round    | Size (\$M) | Investors  | Target Description  |
|--------|----------------------|----------|------------|--|---|
| Mar-18 | Samsara Networks     | Series D | \$50       | General Catalyst Partners; Andreessen Horowitz   | Develops Internet connected sensor systems that combine plug-and-play sensors, wireless connectivity, and cloud-hosted software integrated for deployment.  |
| Mar-18 | SnapLogic            | Growth   | \$8        | ND   | Delivers cloud Integration Platform-as-a-Service solutions for citizen integrators.   |
| Mar-18 | Snyk                 | Series A | \$7        | Canaan Partners; BOLDstart Ventures; Heavybit; Fund Fire                                     | Provides a software platform that enables users to find, fix, and monitor for known vulnerabilities in Node.  |
| Mar-18 | Blue Cedar Networks  | Venture  | \$4        | ND   | Develops no code mobile app security platform to secure custom and third-party mobile apps.   |
| Mar-18 | Wispero Networks     | Venture  | \$0        | ND   | Provides software-as-a-service through a security analytic platform, which automatically tracks vulnerability and threat inspection.  |
| Jan-18 | InfluxData           | Series C | \$35       | Battery Ventures; Mayfield Fund; Trinity Ventures; Sapphire Ventures ; Harmony Partners      | Provides open source platforms to manage time-series data at scale.   |
| Jan-18 | VDOO Connected Trust | Venture  | \$13       | 83North; Dell Technologies Capital   | Offers an end-to-end Internet of Things (IoT) security platform.  |
| Jan-18 | C3 IoT               | Series F | \$106      | Sutter Hill Ventures; TPG Growth; Breyer Capital   | Develops and delivers enterprise software solutions.  |
| Jan-18 | Cybeats Technologies | Pre-Seed | ND         | Inovia Capital; Maple Leaf Angels  | Provides an immune system for Internet of Things (IoT) devices.   |
| Dec-17 | Tempered Networks    | Venture  | \$7        | Ignition Partners; Rally Capital; Ridge Ventures; Fluid Capital Group                        | Provides connectivity solutions for critical infrastructure, industrial control systems, and the Industrial Internet of Things applications in water, energy, petroleum, manufacturing, and other industries. |
| Nov-17 | Relayr               | Venture  | \$2        | ND   | Provides Industrial Internet of Things (IIoT) technology that connects various industrial equipment.  |
| Nov-17 | Particle             | Series E | \$112      | ND   | Makes it easy to prototype, scale, and manage IoT products.   |
| Nov-17 | Medigate             | Seed     | \$5        | Blumberg Capital; YL Ventures GP   | Owns and operates a medical device security platform which protects all connected medical devices on health care provider networks.   |
| Nov-17 | Rapid Focus Security | Growth   | \$8        | Ascent Venture Partners; .406 Ventures; Fairhaven Capital Partners; VCET Capital Corporation | Provides threat detection for wireless and wired devices in and around workplaces.  |



# Private Placement Transactions (Cont'd)



| Date   | Target             | Round    | Size (\$M) | Investors   | Target Description   |
|--------|--------------------|----------|------------|---|--|
| Oct-17 | GlobeTouch         | Series C | \$40       | Verizon Ventures; Hermes Growth Partners; Zeev Ventures; Impact Venture Capital   | Provides cloud-based global ecosystem solutions for mobile devices.  |
| Oct-17 | Ayla Networks      | Series D | \$60       | Run Liang Tai Investment Company Limited; SUNSEA Telecom Hong Kong Limited  | Provides an Internet of Things (IoT) platform for manufacturers and service providers.   |
| Oct-17 | Afero              | Venture  | ND         | Ryoyo Electro Corporation   | Provides an Internet of Things Platform-as-a-Service solution for developing and deploying connected devices.  |
| Sep-17 | Bastille Networks  | Series B | \$27       | Bessemer Venture Partners; Comcast Ventures; Spinnaker Ventures; Ballentine Partners; Keel Funds  | Develops enterprise threat detection solutions through software-defined radio.   |
| Jul-17 | ZingBox            | Venture  | \$22       | ND  | Develops an enterprise Internet of Things (IoT) security solution to discover and protect the connected equipment.   |
| Jun-17 | CloudPost Networks | Seed     | \$4        | Wing Venture Partners   | Develops Internet of things (IoT) security and risk-reduction solutions that protect business-critical devices and systems.  |
| Jun-17 | Concirus           | Growth   | \$4        | Touchstone Innovations  | Operates a cloud platform that enables clients to connect any data source or device, draw any data type, and issue commands as required.                                     |
| Jun-17 | Samsara Networks   | Series C | \$40       | General Catalyst Partners; Andreessen Horowitz  | Develops Internet connected sensor systems that combine plug-and-play sensors, wireless connectivity, and cloud-hosted software integrated for deployment.                   |
| Jun-17 | Armis              | Venture  | \$17       | Tenaya Capital; Sequoia Capital Israel; Cerca Partners  | Develops an Internet of things (IoT) security solution to control and detect activity and threats on devices and networks.   |
| Jun-17 | TrapX Security     | Venture  | \$14       | ND  | Develops a deception technology that detects, analyzes, and defeats ransomware attacks.  |
| May-17 | SIGFOX SA          | Growth   | \$17       | International Finance Corporation   | Provides cellular connectivity for Internet of things (IoT) and machine-to-machine communications in France and internationally.   |
| May-17 | SIGFOX SA          | Growth   | ND         | Khazanah Nasional Berhad  | Provides cellular connectivity for Internet of things (IoT) and machine-to-machine communications in France and internationally.   |
| May-17 | Mocana Corporation | Growth   | \$11       | Trident Capital; Shasta Ventures; GE Ventures; Sway Ventures  | Operates an enterprise mobile application security platform that facilitates organizations to deliver business-critical mobile applications for internal and external users. |
| Apr-17 | Actility S.A.      | Series D | \$75       | IDInvest; Bpifrance; BNP Paribas; Hon Hai Precision; Immarsat; Creadev; Cisco Investments; Robert Bosch; Swisscom Ventures; Orange Capital; Ginko Ventures; KPN | Develops ThingPark, a M2M communication platform, designed for massively scalable deployments of mission-critical applications.  |

# Private Placement Transactions (Cont'd)



| Date   | Target              | Round       | Size (\$M) | Investors  | Target Description  |
|--------|---------------------|-------------|------------|--|---|
| Mar-17 | Borqs Technologies  | Series E    | \$10       | Accel; QUALCOMM Ventures   | Provides development services, software solutions, and products for Android-based smart connected devices in China, India, the United States, and internationally.  |
| Mar-17 | C3 IoT              | Series E    | \$12       | Sutter Hill Ventures; TPG Growth; Breyer Capital; Wildcat Venture Partners   | Develops and delivers enterprise software solutions.  |
| Feb-17 | Senet               | Growth      | \$12       | ND   | Operates a public provider of low power wide area networks with modulation for Internet of Things (IoT) applications.   |
| Nov-16 | SnapLogic           | Series F    | \$40       | Ignition Partners; Vitruvian Partners; Triangle Peak Partners; Andreessen Horowitz ; Capital One Growth Ventures; NextEquity   | Delivers cloud Integration Platform-as-a-Service solutions for citizen integrators.   |
| Oct-16 | Ambience Data       | Accelerator | \$0        | 500 Startups   | Offers real time sensor datasets of temperature, weather, air quality, water levels, water quality, to private businesses, municipalities, and research organizations.  |
| Oct-16 | SIGFOX              | Series E    | \$160      | IDInvest; Intel Capital; Bpifrance; Alto Invest; Elliott Management; iXO; Farouk, Maamoun Tamer; Total Energy Ventures; Air Liquide; Salesforce Ventures; Swen Capital     | Provides cellular connectivity for Internet of things (IoT) and machine-to-machine communications in France and internationally.  |
| Sep-16 | GlobeTouch          | Venture     | ND         | Group 11   | Provides cloud-based global ecosystem solutions for mobile devices.   |
| Sep-16 | C3 IoT              | Series D    | \$70       | InterWest Partners; Sutter Hill Ventures; TPG Growth   | Develops and delivers enterprise software solutions.  |
| Aug-16 | InfluxData          | Series B    | \$15       | Battery Ventures; Insight Venture Partners ; Mayfield Fund; Trinity Ventures; Bloomberg Beta   | Provides open source platforms to manage time-series data at scale.   |
| Aug-16 | Tempered Networks   | Series B    | \$10       | IDG Ventures; Ignition Partners; Rally Capital   | Provides connectivity solutions for critical infrastructure, industrial control systems, and the Industrial Internet of Things applications in water, energy, petroleum, manufacturing, and other industries. |
| Aug-16 | MedCrypt            | Seed        | \$1        | Safeguard Scientifics  | Provides medical device data security as a service.   |
| Jul-16 | Blue Cedar Networks | Series A    | \$10       | Grayhawk Capital; Benhamou Global Ventures; Sway Ventures  | Develops no code mobile app security platform to secure custom and third-party mobile apps.   |
| Jun-16 | Ayla Networks       | Series C    | \$39       | CrossLink; Voyager; Mitsui & Co.; International Finance; SJF Ventures; SAIF Partners; Cisco Investments; 3NOD Digital; Linear Venture; Acorn Pacific; Oriza Ventures; Ants | Provides an Internet of Things (IoT) platform for manufacturers and service providers.  |
| Jun-16 | Verodin             | Series A    | \$10       | CrossLink Capital; The Blackstone Group; Cisco Investments; Rally Ventures   | Develops and provides emerging instrumented security.   |

# Private Placement Transactions (Cont'd)



| Date    | Target                          | Round       | Size (\$M) | Investors   | Target Description   |
|---------|---------------------------------|-------------|------------|---|--|
| May-16  | Lookout                         | Series F    | ND         | ND  | Provides cloud-based technology solutions for mobile security.   |
| May-16  | 1248                            | Venture     | \$1        | Wayra UK Limited  | Provides automated device management solutions.  |
| May-16  | Afero                           | Series A    | \$20       | Presidio; Samsung Venture Investment; Sanshin Electronics; SoftBank Capital; Fenox Venture Capital; Assembly Partners | Provides an Internet of Things Platform-as-a-Service solution for developing and deploying connected devices.  |
| Apr-16  | Blue Cedar Networks             | Series A    | ND         | ND  | Develops no code mobile app security platform to secure custom and third-party mobile apps.  |
| Apr-16  | Helium Systems                  | Series B    | \$20       | FirstMark Capital, L.L.C.; Khosla Ventures; GV  | Operates an IoT smart sensor device for enterprises and industries.  |
| Apr-16  | Electric Imp                    | Series C    | \$21       | Redpoint Ventures; Rampart Capital  | Operates an Internet of Things (IoT) platform that securely connects devices with advanced cloud computing resources.                                    |
| Apr-16  | Rapid Focus Security            | Series B    | \$13       | Ascent Venture Partners; .406 Ventures; Fairhaven Capital Partners, ; VCET Capital Corporation; MassMutual Ventures   | Provides threat detection for wireless and wired devices in and around workplaces.   |
| Mar-16  | Axonize                         | Venture     | \$2        | StageOne Ventures; Cornerstone Venture Partners   | Develops technology platform that provides cloud based backend server to IoT manufacturers.  |
| Mar-16  | EMnify GmbH                     | Seed        | ND         | ND  | Provides cloud services to enable connectivity for the Internet of things.   |
| Feb-16  | TrackX Holdings                 | Growth      | \$3        | ND  | Deploys Software-as-a-Solutions for use in the tracking, management, analyzing, and utilization of physical assets primarily in the United States.       |
| Feb-16  | Buoy Labs                       | Accelerator | \$0        | Highway1  | Develops a smart water leak detection and control device for homes.  |
| Feb-16  | Altizon Systems Private Limited | Series A    | \$4        | Lumis Partners; Centre for Innovation Incubation and Entrepreneurship; Hive India; Wipro Ventures                     | Offers a platform that provides a device cloud, and performs large-scale data ingestion and aggregation using big data technologies on time series data. |
| Jan-16  | Axonize                         | Seed        | ND         | StageOne Ventures   | Develops technology platform that provides cloud based backend server to IoT manufacturers.  |
| MEDIAN  |                                 |             | \$12       |   |  |
| AVERAGE |                                 |             | \$23       |   |  |



## About AGC Partners

Note: This document is intended to serve as an informative article only in order to further discussion, analysis and independent verification. This document is based upon sources believed to be reliable, however, we do not guarantee the sources' accuracy. Unless otherwise indicated, AGC does not believe that the information contained herein is sufficient to serve as the basis of an investment decision. There can be no assurance that these statements, estimates or forecasts will be attained and actual results may be materially different. This is not a solicitation of an offer of any kind. To learn more about the company/companies that is/are the subject of this commentary, contact one of persons named herein who can give you additional information.



**Bob Renner**  
*Partner*

- Bob is a Partner at AGC Partners in the Company's Atlanta Office
- Prior to joining AGC, Bob was a Co-Founder, President, and CEO of Liaison Technologies, a Merck GHI funded data integration & management company, before successfully exiting to OpenText in December 2018.
- During his 17 years at Liaison, Bob successfully executed over 11 strategic acquisitions. Bob also played a key role as the Company's first employee helping it raise approximately \$200M in funding
- Before Liaison, Bob was the head of Electronic Commerce for Georgia-Pacific Corp., one of the world's largest forest products companies
- Bob holds an MBA from Emory University and a B.S. in Electrical Engineering from California State University (Fullerton)



**Benjamin Howe**  
*Co-Founder, CEO*

- Ben is a co-founder and the CEO of AGC Partners
- In 30+ years as an investment banker, Ben has completed more than 300 transactions
- Prior to AGC, he served as Managing Director, Head of M&A and Executive Committee Member at SG Cowen Securities, and prior to that served as Head of Technology Investment Banking for the East Coast and Europe at Montgomery Securities
- He serves as co-chairman of Excel Academy, which has four charter schools in East Boston, and served on the board of Portsmouth Abbey and the advisory board of Trinity College
- He holds a B.A. in Economics from Trinity College and an M.S. in Accounting from The Stern School of Business at NYU



**Jon Guido**  
*COO, Partner*

- Jon is a founding partner and Chief Operating Officer at AGC Partners, with a focus on Software and Internet/Digital Media sectors
- As Jon approaches 20 years as an investment banker, he has completed more than 80 transactions
- Jon helped found AGC in February 2003, coordinating the infrastructure build, capital raise, and recruiting effort
- In his role as COO, he works on developing and implementing the firm's financial, operational, and business development strategies
- Prior to joining AGC, Jon worked in SG Cowen's Mergers and Acquisitions Group
- He received a B.A. with honors from Colgate University



**Fred Joseph**  
*Partner*

- Prior to AGC, Fred spent 7 years at Cowen & Co., and held positions at J.P. Morgan and Smith Barney
- Fred was a founding member of Beechtree Capital, a middle market leveraged buyout firm
- With more than 120 completed transactions in his 25 plus years in the industry, Fred has raised public and private capital for both early stage and late stage corporations in the technology and healthcare sectors
- The majority of Fred's work has been in Mergers & Acquisitions, where, cumulatively, he has executed in excess of \$7 billion in transactions
- Fred holds a B.A. from Swarthmore College and an M.B.A. from Columbia University



# AGCPARTNERS

Overview

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**2003**  
*Founded*

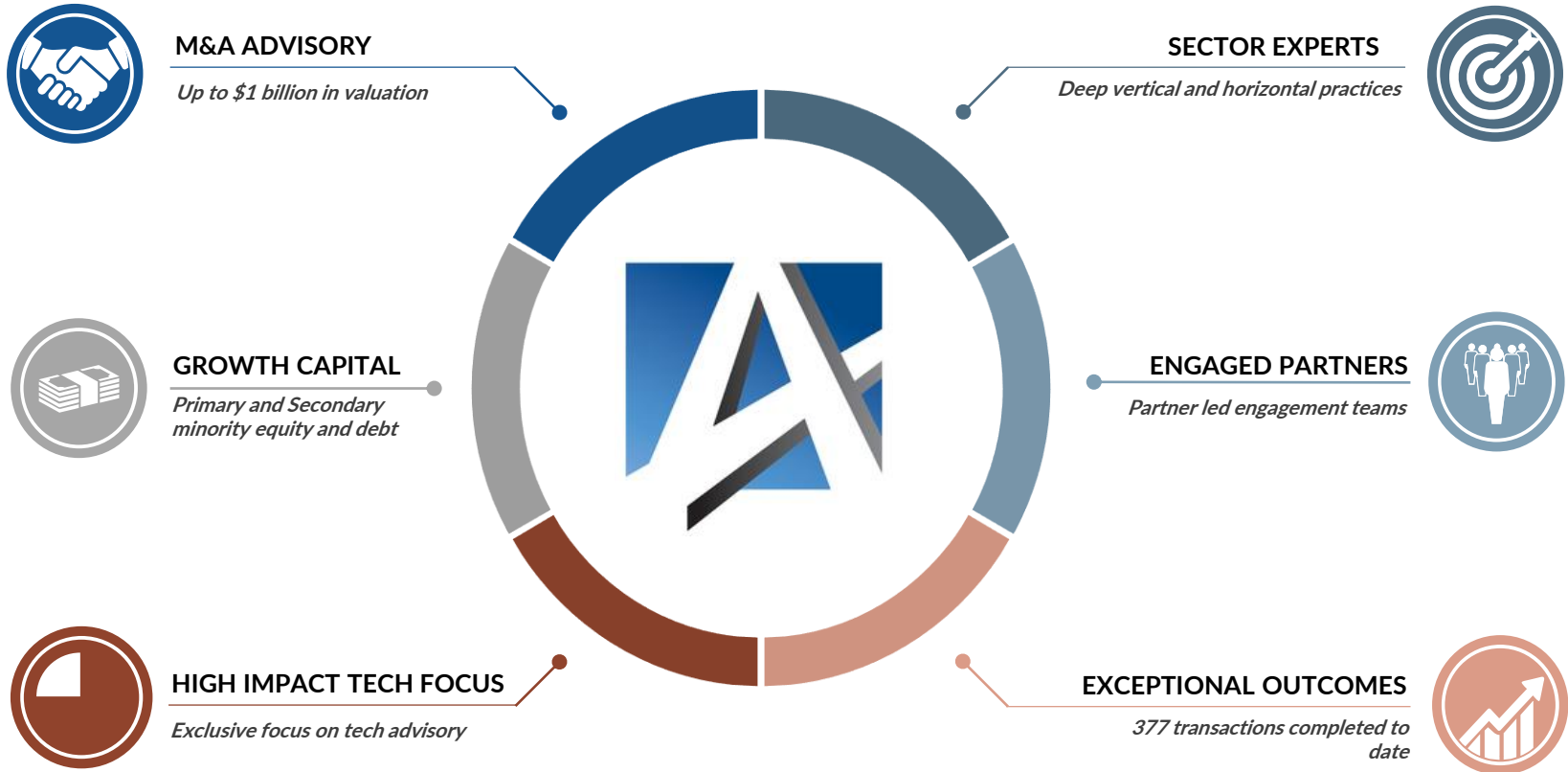
**377**  
*Transactions*

**9**  
*Offices  
Globally*

**78**  
*Cross-Border  
Transactions*

**3**  
*Major  
Conferences*

# Unrivalled M&A and Growth Capital Experience



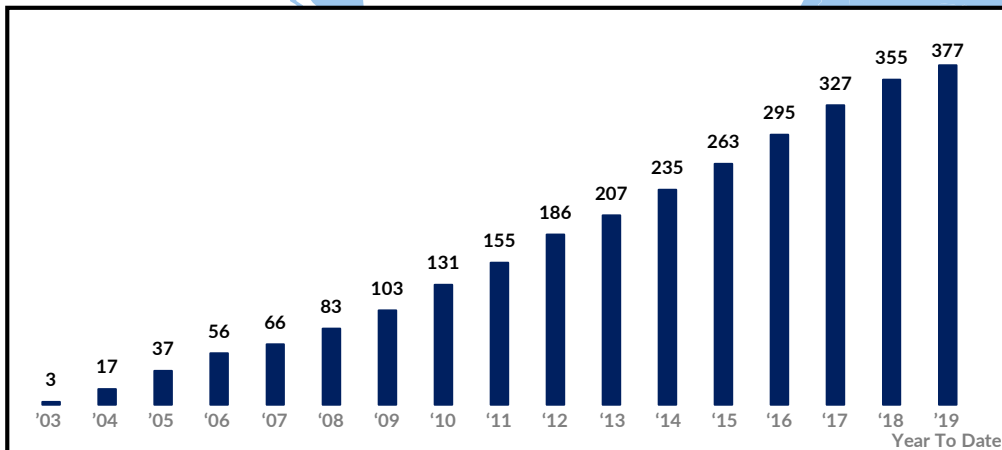


# Global Leader in Tech Advisory – 377 Closed Deals



- AGC is consistently ranked as the most active pure-play tech boutique
- Plugged into every facet of the private tech capital markets with over 50 active engagements today
- Headquartered in Boston with offices in Atlanta, Chicago, Dallas, London, Los Angeles, Minneapolis, New York and Silicon Valley

AGC Cumulative Deal Count



## TOP DEALMAKERS (2014-2018)

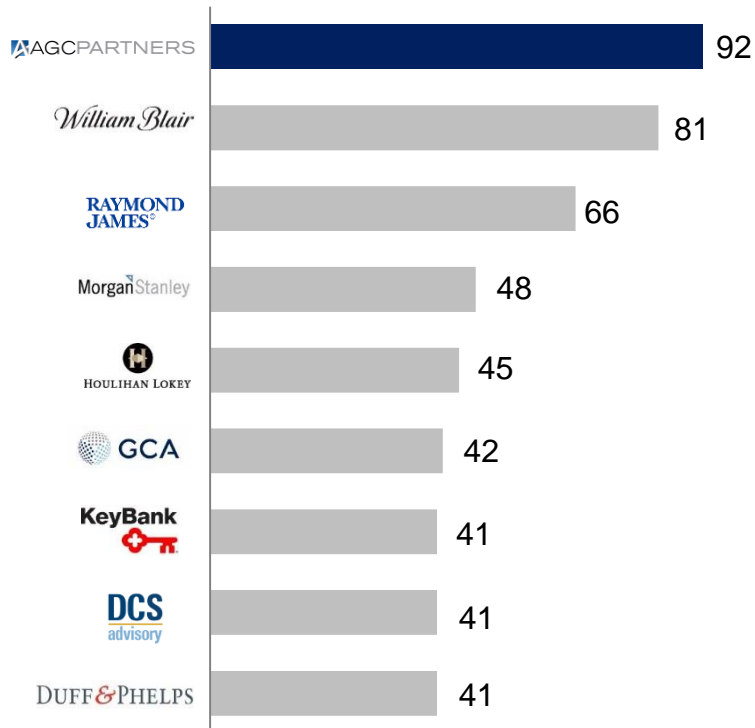
|     | Firm                          | # Trans.   |
|-----|-------------------------------|------------|
| 1.  | Morgan Stanley                | 179        |
| 2.  | Raymond James                 | 150        |
| 3.  | William Blair                 | 150        |
| 4.  | Houlihan Lokey                | 129        |
| 5.  | J.P. Morgan Securities        | 124        |
| 6.  | <b>AGC Partners</b>           | <b>120</b> |
| 7.  | Evercore Partners             | 119        |
| 8.  | GCA Advisors                  | 117        |
| 9.  | Goldman Sachs                 | 113        |
| 10. | Jefferies                     | 92         |
| 11. | Lazard                        | 79         |
| 12. | Petsky Prunier                | 79         |
| 13. | Mooreland Partners            | 78         |
| 14. | DCS Advisory                  | 77         |
| 15. | Pagell Duff & Phelps          | 74         |
| 16. | Bank of America Merrill Lynch | 73         |
| 17. | Robert W. Baird               | 70         |
| 18. | Catalyst Partners             | 69         |
| 19. | Arma Partners                 | 68         |
| 20. | GP Bullhound                  | 68         |
| 21. | KeyBank Capital Markets       | 62         |
| 22. | Credit Suisse Securities      | 60         |
| 23. | Stifel, Nicolaus & Company    | 60         |
| 24. | Needham & Company             | 59         |
| 25. | Barclays Capital              | 53         |

Source: 451 Research

# AGC is the Leading SaaS Investment Bank



## 451 Ranking of SaaS Advisory 2010 to 2019



Source: 451 Research

## AGC's SaaS Performance Exam

|                      | Below   | Benchmark  | Above    |
|----------------------|---------|------------|----------|
| ARR Scale            | <\$8M   | \$8-20M    | \$20M+   |
| Rev. Growth Rate     | 5-20%   | 20-50%     | 50%+     |
| Customer Retention   | 90%     | 90-95%     | 95%+     |
| % Subscription       | <70%    | 70-90%     | 90%+     |
| Gross Margin         | <60%    | 60-75%     | 75%+     |
| Rule of 40%          | <20%    | 20-40%     | 40%+     |
| LTV / CAC            | <3x     | 3-5x       | 5x+      |
| Avg. ACV             | <\$25k  | \$25k-250k | \$250k+  |
| Avg. Contract Length | <1 year | 2 years    | 3+ years |
| TAM                  | \$500M  | \$1-2B     | \$2B+    |
| Barriers to Entry    | Low     | Medium     | High     |
| Revenue Multiple     | 2-4x    | 4-6x       | 7-10x+   |

# The Global Leaders in Tech Strategic Advisory



**Rob Buxton**  
*Partner*  
*San Francisco*



**Eric Davis**  
*Partner*  
*Boston*



**Linda Gridley**  
*Partner*  
*New York*



**Jon Guido**  
*COO*  
*Founding Partner*  
*Boston*



**Hugh Hoffman**  
*Partner*  
*Minneapolis*



**Ben Howe**  
*CEO*  
*Founding Partner*  
*Boston*



**Doug Hurst**  
*Partner*  
*New York*



**Fred Joseph**  
*Partner*  
*Boston*



**Maria Lewis Kussmaul**  
*Founding Partner*  
*Boston*



**Elena Marcus**  
*Partner*  
*Los Angeles*



**Mike Parker**  
*Partner*  
*Chicago*



**Bob Renner**  
*Partner*  
*Atlanta*



**Greg Roth**  
*Partner*  
*San Francisco*



**Dennis Rourke**  
*Partner*  
*Boston*



**Charlie Schopp**  
*Partner*  
*Boston*



**Tristan Snyder**  
*Partner*  
*Dallas*



**Sean Tucker**  
*Partner*  
*London*



**Russ Workman**  
*Partner*  
*Boston*

# Deep Domain Knowledge Shared via Market Leading Research



## Horizontal SaaS

BI / Analytics  
CRM  
ECM  
ERP / Supply Chain  
FinTech / Payments  
HCIT / Life Sciences  
HR Tech  
IT Services  
MarTech  
Technical Software



## Vertical SaaS

Automotive  
Building / Engineering  
Education  
Healthcare  
Legal  
Public Sector  
Real Estate  
Retail  
Travel & Leisure



## Security

Cybersecurity  
Advanced Threat Defense  
CASB  
Endpoint  
Identity Access Management  
Network  
Security Orchestration  
Security Services  
Threat Intelligence  
User Behavior Analytics  
Vulnerability  
IOT / SCADA



## Digital Media and Internet

AdTech  
Consumer  
E-Commerce  
Food Tech  
Gaming  
Internet  
Mobile  
Social  
Virtual Reality / Augmented Reality



## Infrastructure

Big Data  
Cloud Computing  
Communication  
Data Center  
Energy & Industrial Tech  
Internet of Things  
Mobility Solutions  
Semiconductors  
Smart Cities  
Storage

## Selected Recent Partner Authored Whitepapers



Construction Tech



CRM



Travel Tech



Payments



Edge Computing



HR Tech



Smart Cities and IoT



Auto Tech



Supply Chain Software



EdTech

# Longstanding & Deep Relationships With PE Firms and Strategics



## Trusted Advisor of Financial Sponsors

- High volume of successful transactions with and for financial sponsors and their portfolio companies
- Relationships developed over the long term providing AGC access and credibility with key decision-makers
- In depth insights into each financial investor's unique investment criteria, approach and behavior

## Leading Private Equity Clients



## Trusted Advisor of Strategic Buyers

- Strong relationships and a proven track record with the leading strategic acquirers
- Knowledge of development roadmaps + buy vs build priorities allows us to strategically position businesses to achieve optimal outcomes
- Deep sector expertise ensures unique and customized positioning for each buyer

## Tech Giant Strategic Acquirers



# Unrivalled Experience in the PE marketplace



|   |                                |                                |                                |                                |   |   |
|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|---|---|
| <br><i>Financed by</i><br><br>                                      | <br><i>Acquired by</i><br><br> | <br><i>Financed by</i><br><br> | <br><i>Financed by</i><br><br> | <br><i>Financed by</i><br><br> | <br><i>Acquired by</i><br><br>                                      | <br><i>A portfolio company of</i><br><br>                                 |
| <br><i>A portfolio company of</i><br><br><i>Financed by</i><br><br> | <br><i>Financed by</i><br><br> | <br><i>Acquired by</i><br><br> | <br><i>Financed by</i><br><br> | <br><i>Acquired by</i><br><br> | <br><i>A portfolio company of</i><br><br><i>Financed by</i><br><br> | <br><i>Acquired by</i><br><br>  |
| <br><i>Acquired by</i><br><br>                                      | <br><i>Acquired by</i><br><br> | <br><i>Financed by</i><br><br> | <br><i>Financed by</i><br><br> | <br><i>Financed by</i><br><br> | <br><i>Financed by</i><br><br>                                      | <br><i>A wholly owned Subsidiary of</i><br><br><i>Acquired by</i><br><br> |

# AGC Engineers High Valuation Outcomes



## Majority and Minority Growth Capital

## Strategic Acquisitions

| Client | Investor                 | Revenue Multiple | Client | Acquirer | Revenue Multiple |
|--------|--------------------------|------------------|--------|----------|------------------|
|        | <u>THE CARLYLE GROUP</u> | 8.0x             |        |          | 8.5x             |
|        |                          | 6.1x             |        |          | 15.3x            |
|        |                          | 4.2x             |        |          | 7.4x             |
|        |                          | 8.4x             |        |          | 6.8x             |
|        |                          | 6.5x             |        |          | 5.8x             |
|        |                          | 6.0x             |        |          | ND               |
|        |                          | 10.0x            |        |          | 8.4x             |
|        |                          | 6.5x             |        |          | 14.5x            |
|        |                          | 5.7x             |        |          | 6.2x             |
|        |                          | 6.4x             |        |          | 4.8x             |
|        |                          | 10.0x            |        |          | 20.0x            |



# AGC is at the Center of the Private Equity Build and Buy Ecosystem



- Buy and Build is the primary driver of valuation creation, typically through 3 add-on acquisitions per platform deal
- There were over 1,500 Private Equity Technology deals in the last 18-months
- 1,000 of those deals were add-on acquisitions, which are ever increasing given the growing base of platform portfolio companies



# Long History With the top Strategic Technology Buyers



|   |   |   |   |   |  |   |  |  |
|---|---|---|---|---|--|---|--|--|
| <br><b>CASK</b><br>Acquired by<br><b>Google</b><br>Advisor to Cask<br>AGCPARTNERS   | <br><b>LIAISON</b><br>A portfolio company of<br><b>MERCK</b><br>Acquired by<br><b>opentext</b><br>Advisor to Liaison<br>AGCPARTNERS | <br><b>L2</b><br>A portfolio company of<br>GENERAL CATALYST<br>Acquired by<br><b>Gartner</b><br>Advisor to Sellers<br>AGCPARTNERS | <br><b>Geezeo</b><br>Acquired by<br><b>jack henry &amp; ASSOCIATES INC.</b><br>Advisor to Geezeo<br>AGCPARTNERS   | <br><b>WhiteHat SECURITY</b><br>A portfolio company of<br><b>JMI</b><br>Acquired by<br><b>NTT</b><br>Advisor to WhiteHat<br>AGCPARTNERS | <br><b>PETH</b><br>A portfolio company of<br>GENERAL CATALYST<br>Acquired by<br><b>Guidepost</b><br>Acquired by<br><b>sas</b><br>Advisor to Sellers<br>AGCPARTNERS | <br><b>ManageIQ</b><br>Acquired by<br><b>redhat</b><br>Advisor to ManageIQ<br>AGCPARTNERS | <br><b>appsee</b><br>Acquired by<br><b>now</b><br>Advisor to appsee<br>AGCPARTNERS                             | <br><b>BLUE WILLOW Systems</b><br>Acquired by<br><b>PHILIPS</b><br>Advisor to Blue Willow Systems<br>AGCPARTNERS |
| <br><b>LOGFIRE</b><br>A portfolio company of<br><b>edisonpartners</b><br>Acquired by<br><b>ORACLE</b><br>Advisor to LOGFIRE<br>AGCPARTNERS                            | <br><b>CLOUD CRUISER</b><br>Acquired by<br><b>Hewlett Packard Enterprise</b><br>Advisor to Cloud Cruiser<br>AGCPARTNERS             | <br><b>BOOMI</b><br>Acquired by<br><b>DELL</b><br>Advisor to Boomi<br>AGCPARTNERS   | <br><b>HEALTH CAREERS DHI</b><br>A wholly owned subsidiary<br>Acquired by<br><b>everyday HEALTH</b><br>A wholly owned subsidiary<br><b>j2 Global</b><br>Advisor to Sellers<br>AGCPARTNERS | <br><b>G analytics</b><br>Acquired by<br><b>nielsen</b><br>Advisor to Sellers<br>AGCPARTNERS  | <br><b>harvest.ai</b><br>Acquired by<br><b>amazon</b><br>Advisor to Sellers<br>AGCPARTNERS   | <br><b>Fundamo</b><br>Acquired by<br><b>VISA</b><br>Advisor to Fundamo<br>AGCPARTNERS     | <br><b>LIVE LOOK</b><br>Acquired by<br><b>ORACLE</b><br>Advisor to Sellers<br>AGCPARTNERS                      | <br><b>EXTEND MEDIA</b><br>Acquired by<br><b>CISCO</b><br>Advisor to ExtendMedia<br>AGCPARTNERS                  |
| <br><b>iSIGHTPARTNERS</b><br>A portfolio company of<br><b>BESSEMER VENTURE PARTNERS</b><br>Acquired by<br><b>FireEye</b><br>Advisor to iSight Partners<br>AGCPARTNERS | <br><b>bowstreet</b><br>Acquired by<br><b>IBM</b><br>Advisor to Bowstreet<br>AGCPARTNERS  | <br><b>orderTalk</b><br>Acquired by<br><b>Uber</b><br>Advisor to orderTalk<br>AGCPARTNERS   | <br><b>Optelligent</b><br>A portfolio company of<br><b>G/ SCALE</b><br>Acquired by<br><b>vmware</b><br>Advisor to Sellers<br>AGCPARTNERS  | <br><b>active endpoints</b><br>Acquired by<br><b>Informatica</b><br>Advisor to Active Endpoints<br>AGCPARTNERS                          | <br><b>CODESHIP</b><br>Acquired by<br><b>cloudbees</b><br>Advisor to Codeship<br>AGCPARTNERS   | <br><b>proginet</b><br>Acquired by<br><b>TIBCO</b><br>Advisor to Proginet<br>AGCPARTNERS  | <br><b>InventionMachine</b><br>Acquired by<br><b>IHS Markit</b><br>Advisor to Invention Machine<br>AGCPARTNERS | <br><b>where</b><br>Acquired by<br><b>ebay</b><br>Advisor to Where<br>AGCPARTNERS                                |

# Over 75 Cross-Border Transactions Since Inception



**mnu**bo  
Acquired by  
**aspentech**  
Advisor to Mnu

**Hansoft**  
Acquired by  
**PERFORCE**  
A portfolio company of  
**SUMMIT PARTNERS**  
Advisor to Hansoft

**gen**go  
A portfolio company of  
**ATOMICO** **intel**  
Acquired by  
**LIONBRIDGE**  
A portfolio company of  
**H.I.C. CAPITAL**  
Advisor to Sellers

**lean**kit  
A portfolio company of  
**INSIGHT**  
Acquired by  
**PLANVIEW**  
A portfolio company of  
**THOMABRAVO**  
Advisor to Sellers

**crisp**  
Financed by  
**BAIRD**  
Advisor to Crisp

**TEMPO**  
A wholly owned subsidiary of  
**origo**  
Acquired by  
**DIVERSIS CAPITAL**  
Advisor to Origo

**kubu**  
Acquired by  
**GARMIN**  
Advisor to sellers

**FORTSCALE**  
Sold to  
**RSA**  
A wholly owned subsidiary of  
**DELL**  
Advisor to Crisp

**OpusCapita**  
A wholly owned subsidiary of  
**posti**  
Acquired by  
**PROVIDENCEEQUITY**  
Advisor to Posti

**M-Files**  
A portfolio company of  
**Draper Esprit**  
Financed by  
**partech**  
Advisor to sellers

**CapitalStream**  
A wholly owned subsidiary of  
**HCL**  
Acquired by  
**Linedata**  
Advisor to HCL

**utimaco**  
A portfolio company of  
**EQT**  
Acquired  
**Atalla**  
A wholly owned subsidiary of  
**MICRO FOCUS**  
Advisor to Utimaco/ EQT

**SIMPLYGON**  
Acquired by  
**Microsoft**  
Advisor to Simplygon

**FRS**  
Acquired by  
**aquila**  
A wholly owned subsidiary of  
**MANITOWOC**  
Advisor to FRS

**distil networks**  
A portfolio company of  
**BESSEMER VENTURE PARTNERS**  
Acquired by  
**imperva**  
A portfolio company of  
**THOMABRAVO**  
Advisor to sellers

**KickApps**  
Acquired by  
**kitdigital**  
Advisor to KickApps

**VIRYANET**  
Acquired by  
**VERISAE**  
Advisor to Viryanet

**propertybase**  
Acquired by  
**BOSTONLOGIC**  
A portfolio company of  
**PROVIDENCEEQUITY**  
Advisor to Propertybase

**mpl systems**  
Acquired by  
**IFS**  
A portfolio company of  
**EQT**  
Advisor to mpl Systems

**dapresy**  
Financed by  
**verdone capital**  
Advisor to Dapresy

**audiokinetic**  
Acquired by  
**SONY**  
Advisor to sellers

Undisclosed  
Acquired by  
**Apple**  
Advisor to sellers

**denyall**  
Acquired by  
**ROHDE & SCHWARZ**  
Advisor to Denyall

**OnForce**  
Acquired by  
**beeline**  
A wholly owned subsidiary  
**Adecco**  
Advisor to OnForce

# Over 800 Private Tech Companies Participate in our Conference Series



|                       | San Francisco | London | Boston | Total |
|-----------------------|---------------|--------|--------|-------|
| Attendees             | 1,375         | 354    | 600    | 2,329 |
| Private Companies     | 485           | 112    | 225    | 822   |
| Investors             | 343           | 85     | 190    | 618   |
| Strategics            | 233           | 26     | 50     | 309   |
| Total 1-on-1 Meetings | 3,000         | 915    | 1,950  | 5,865 |

## Select Strategic Attendees



## Select Private Equity Attendees



# What Clients Say About Us



## *Skuid needed a highly dedicated financial advisor...*

*"We chose AGC Partners because of their reputation with high-growth software businesses and investors. AGC's understanding of the industry and key players led to Skuid securing a terrific new partner in Marlin for our investors, shareholders, customers and employees."*

*- Skuid sold to Marlin Equity Partner*



## *We are delighted with the awesomeness...*

*"We were one united team and AGC worked relentlessly to get a fantastic outcome, that exceeded our initial expectations. Deals are complex, but I took great comfort in knowing [the] team [was] in my court. We started this journey as a client, we end as family"*

*- Titus sold to Blackstone*



## *AGC was instrumental in helping us navigate this process...*

*"The AGC team did a great job of understanding the Criteria story and identifying the decision makers at the financial partners whose goals and philosophy were well aligned with ours."*

*- Criteria sold to Sumeru Equity Partners*



## *I would highly recommend AGC...*

*"The AGC team had solid subject matter expertise and their approach to our engagement was thoughtful and ultimately produced a very positive outcome for our shareholders, customers, employees and the acquiring business. [The] team played a key role in the timing of the process, the positioning of the business overall and in every stage leading to Closing."*

*- Liaison sold to OpenText*



## *The AGC Team exceeded expectations...*

*"AGC's commitment was evident in working seemingly round-the-clock to respond to the dozens of parties involved in the deal. In the end, the board and executive team are very pleased with the outcome and we are now working with an investment partner that will help us scale through the next phase of growth."*

*- Approved sold to Vista Equity Partners*



## *It was a pleasure to have them on our team...*

*"The AGC team was instrumental in ensuring the success of our transaction. They served as trusted advisors through every step of the process, with intense focus on every detail and proven knowledge of companies and deals like ours."*

*- Certify sold to K1 Investment Management*

