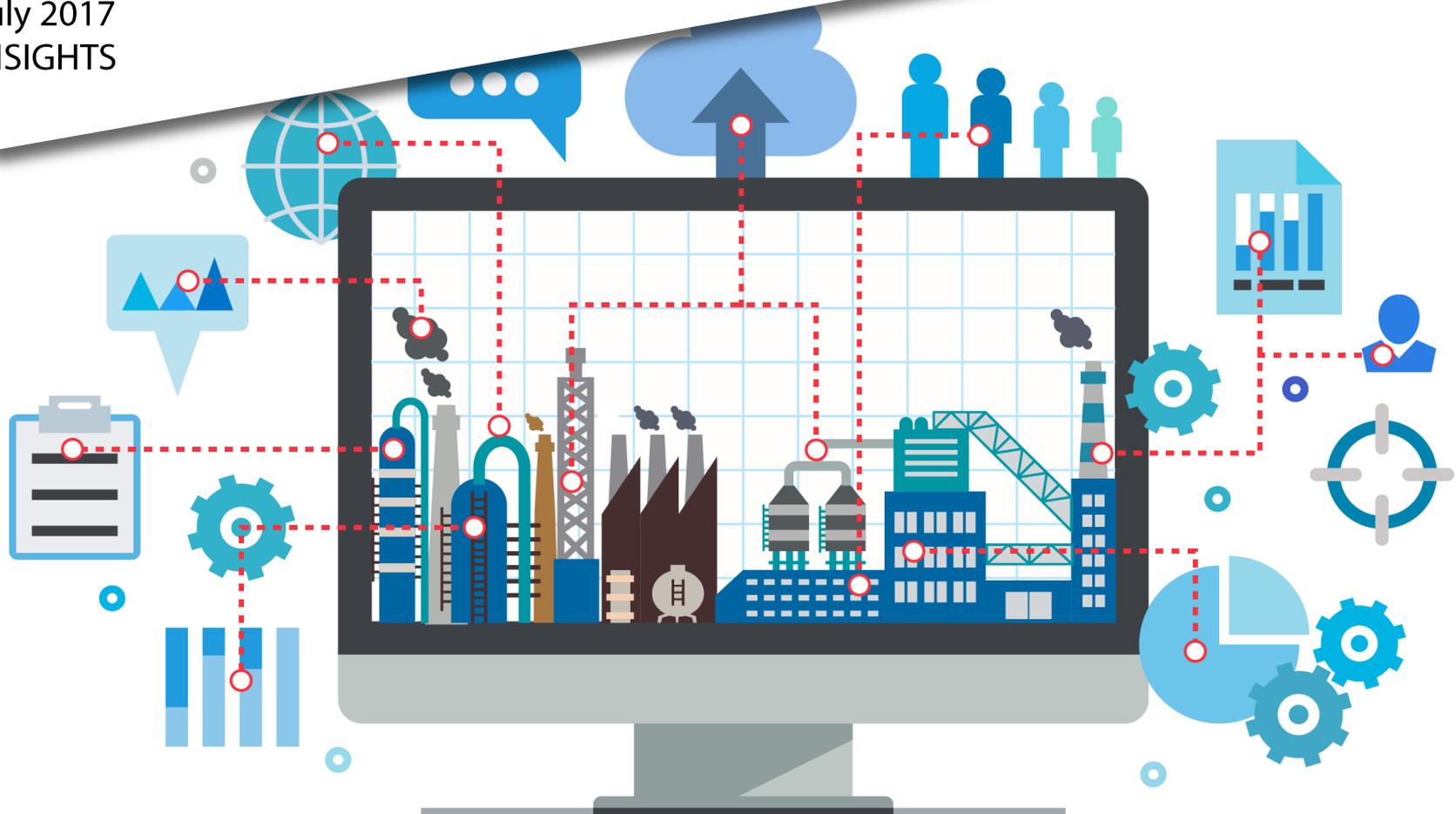


July 2017
INSIGHTS



Manufacturing Analytics

*Taking Big Data from the
Carpet to the Concrete*

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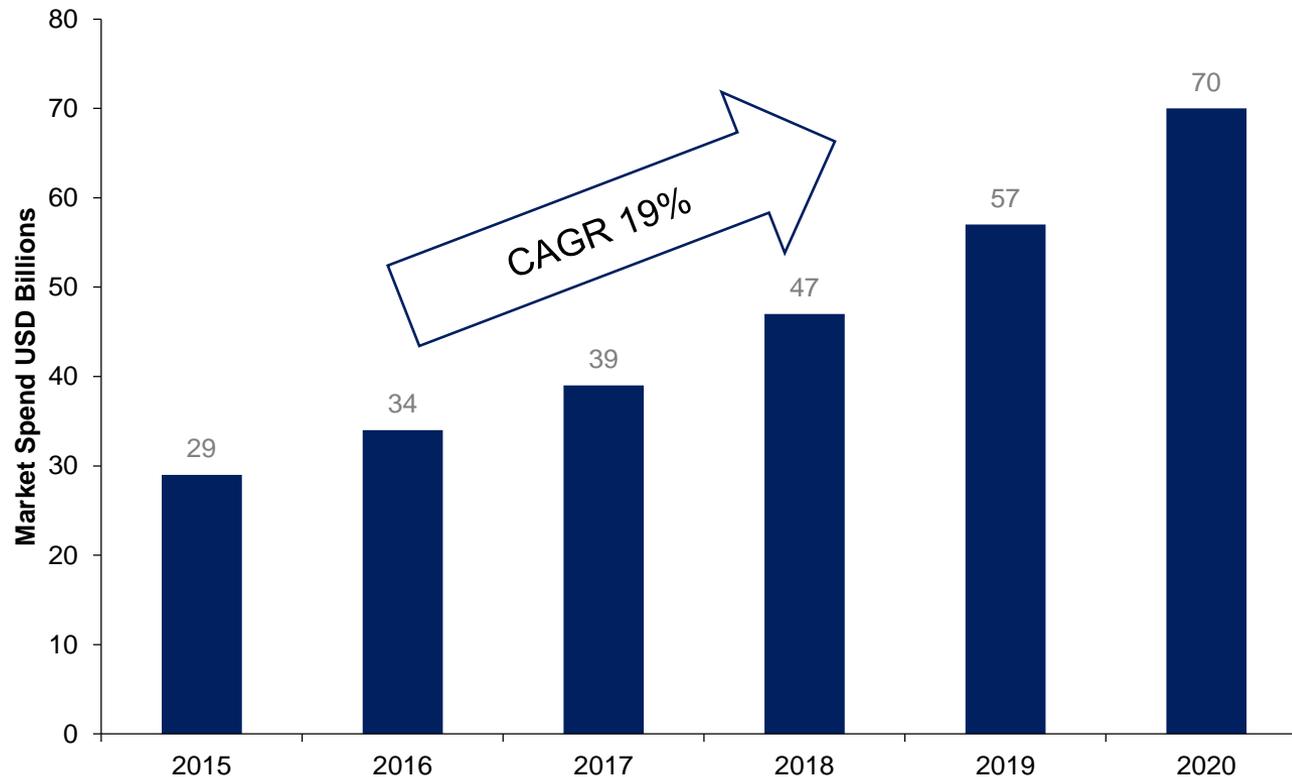
Manufacturing Analytics can leverage existing under-utilized data to improve manufacturing processes and increase equipment uptime

- Unlike many verticals where the rate of IIoT deployments is limited by access to data, **factories already have an abundance of data** as a result of widespread industrial automation
- Manufacturers need unique analytics solutions that can convert this existing data into **factory-wide and enterprise-wide insight into operations and efficiency**
- Manufacturing Analytics deployments have achieved compelling results with companies often seeing **paybacks in less than one year**; As a result, 87% of manufacturing companies report that **Big Data Analytics is within their top 3 priorities**¹
- Manufacturing Analytics and IIoT in factories is predicted to create **\$1.2T to \$3.7T of value by 2025**², and multiple groups of incumbents are competing for leadership of this market
- Software leaders such as **IBM and SAP** need to move from the front office to the factory floor; Industrial Automation leaders such as **GE and Siemens** are working to transform into software companies; Cloud Platform leaders such as **Amazon and Google** have strength in Big Data and Machine Learning but lack manufacturing domain expertise
- Manufacturing Analytics startups such as **Augury, Falconry, and Sight Machine** have a head start combining modern Big Data analytics and Machine Learning techniques with a deep understanding of manufacturing processes and factory floor protocols and data formats

As Big Data Analytics and Cloud Technologies move from IT to OT environments (from the Carpet to the Concrete) so too must Cybersecurity solutions

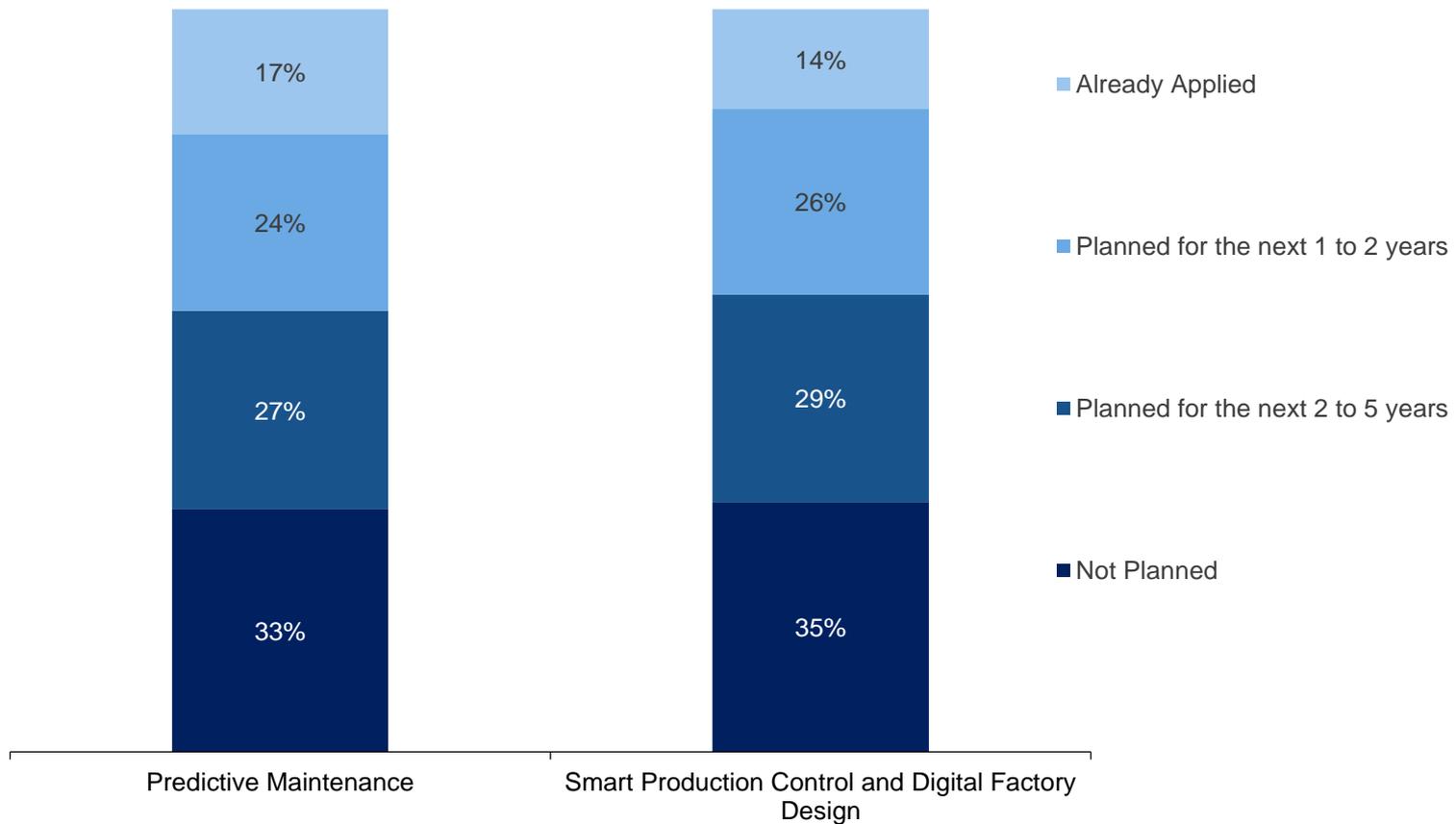


Investment by manufacturers in IIoT devices and analytics is expected to grow rapidly





Adoption is expected to grow from ~15% to over 50% within 5 years



Leadership Driven by Pure Play Vendors



Incumbents



SIEMENS



IoT
Leaders



Pure Play Vendors

Optimization Focus

Predictive Maintenance Focus



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



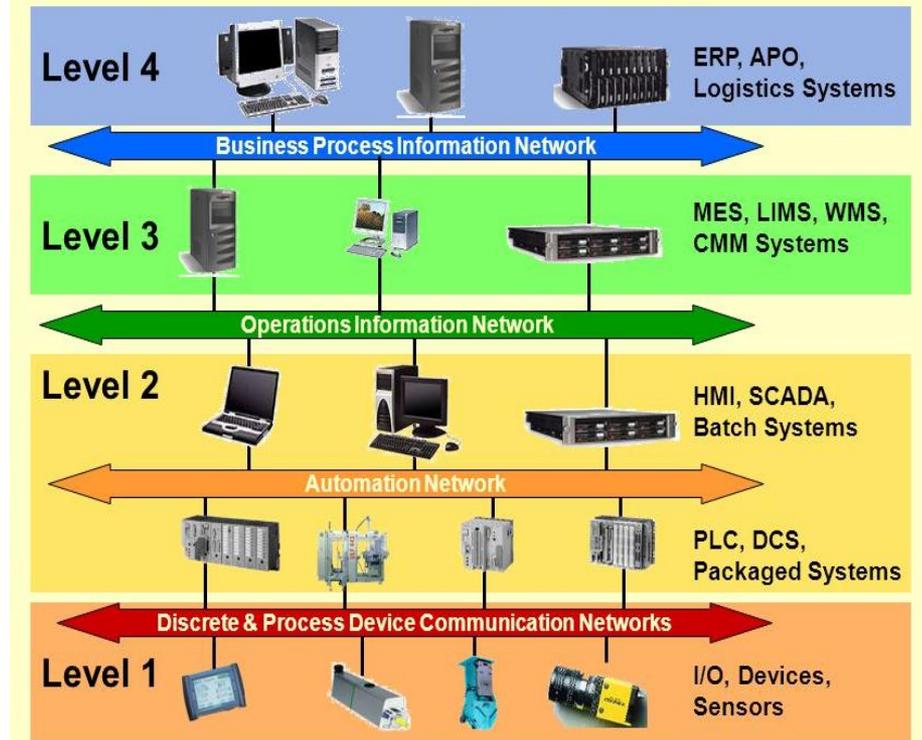
Data in the Factory Setting:

- **Monitoring and operational data** is collected during normal factory operation. Data types depend on the process but include temperature, RPM, Vibration, Pressure, and many others
- **Built-in sensors** collect data that is transferred through PLCs or other devices and collected by SCADA or other similar systems, which display raw data for operators
- **Millions of measurements** can be made and stored in a single factory shift
- **Historian software** stores this data for later access. Data is often stored siloed for one machine, one process, or one factory. Cutting edge operations can store enterprise wide data in a unified manner

Existing Sources of Insight:

- **Manual analysis** is the traditional way of gaining insight from data
- **Topical solutions** to factory issues can be developed with many hours of work, but are often inflexible
- **MES and ERP** do not provide the granular insight necessary for factory operations

Conceptual Topology – IT View



“Data flows across the lifecycle of every product, and yet more than 90% of that data is thrown away, there’s an enormous gap between what people actually use and the size of the opportunity”

–William King, Chief Technology Officer at the Digital Manufacturing and Design Innovation Institute¹



The greatest value add is expected to come from **Process Optimization at \$633M to \$1.7T**, followed by **Predictive Maintenance at \$240M to \$627M by 2025¹**

Process Optimization

- Analytical insights that can improve the efficiency of operations, usually measured by Overall Equipment Effectiveness (OEE)
- Analytics Software can improve each of the three components of OEE:
 - › **Uptime** – Ensuring that machines are running is especially difficult in large and complicated systems
 - › **Throughput & Performance** – Maximizing throughput by preventing slowdowns or minor stops that are not traditionally visible to management can greatly increase output
 - › **Quality** – Reworks and scrap cost the manufacturer directly - especially important in Pharmaceuticals and Oil & Gas

Predictive Maintenance

- Analytical insights that help to predict and prevent machine failure and malfunction
- Algorithms analyze historical machine data to determine what indicators signal the malfunction or failure of a machine so that these events can be predicted and prevented
 - › Replaces standard manufacturer recommended maintenance schedules with a more informed and dynamic service plan
 - › Requires good historical data, which is often difficult for companies who are updating legacy systems to better collect and store

Are these truly unique categories?

Currently they are perceived as separate applications, with many companies focusing on one or the other. However as solutions mature we believe these two categories will converge, as machine uptime is a critical determinant of OEE



Many additional opportunities exist as extensions to the capabilities of Manufacturing Analytics software

Product Development Optimization

- Software can identify errors in product design, root causes of manufacturing quality issues, and faulty inputs from suppliers
- Shortening the time required to move a product from design and product engineering to full scale production can have an enormous impact on profitability, especially in markets such as consumer electronics with short product life cycles
- Allows for a shortened troubleshooting process by product engineers who are often geographically distant from the manufacturers producing their products
- This type of Manufacturing Analytics application would fit especially well with PLM incumbents

Inventory Optimization

- Software can optimize the ordering and management of raw materials inventories, ensuring that the smallest necessary amount of inventory is purchased and stored
- Managers often have thousands of different products to track, purchase, monitor, and manage
- Demand prediction, market price prediction, and risk assessment are some of the key analytical tasks for Inventory Optimization
- Without the insight of software, managers often err on the side of caution, incurring high inventory costs

Enabling Advanced Manufacturing

- Increased digitization of manufacturing and more precise understanding and control of manufacturing brought by Manufacturing Analytics can also enable other areas of advanced manufacturing including:
 - › Augmented reality
 - › Increased use of robotics
 - › Additive manufacturing
 - › Re-onshoring
 - › Hub and spoke manufacturing
 - › Closed loop control and optimization



Data Analytics is a revolution in the manufacturing industry, allowing companies to cash in on data to significantly cut costs

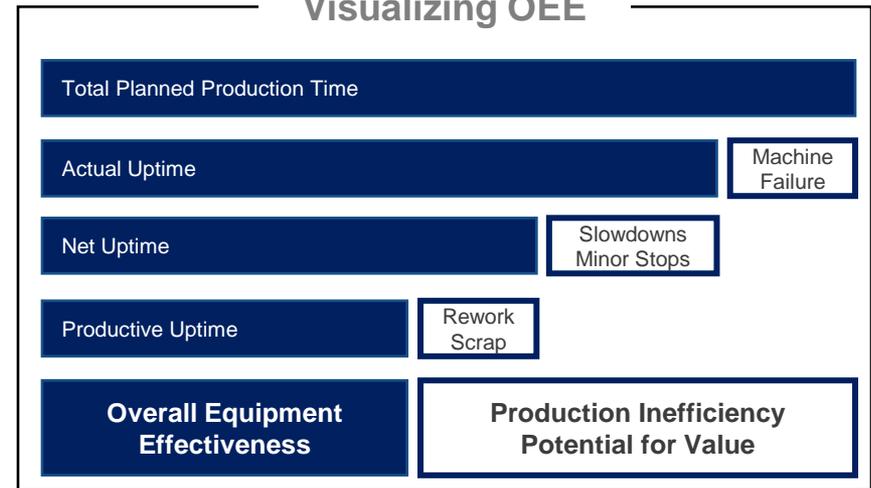
Potential Cost Benefits of Manufacturing Analytics Software¹

- ✓ Reduce maintenance costs by 40%, reduce downtime by 50%, and reduce equipment capital investment by 3-5%
- ✓ Reduce worker injuries by 10-25%, saving companies \$225M collectively
- ✓ Reduce energy use by 10-20%
- ✓ Improve labor efficiency by 10-25%
- ✓ Increased consistency & repeatability

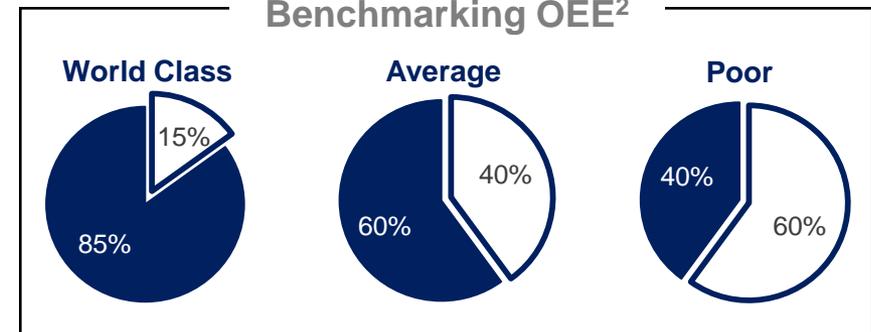
“Unfortunately, paper and Microsoft Excel spreadsheets, collected manually with questionable, not-so-timely data, continues to be the leading way of collecting Overall Equipment Effectiveness. Luckily, the trend is for customers to expect to know how they are doing now instead of how they did last week.”

-Mike Pantaleano, Business Manager for Information Software and Manufacturing Intelligence, Rockwell Automation

Visualizing OEE



Benchmarking OEE²

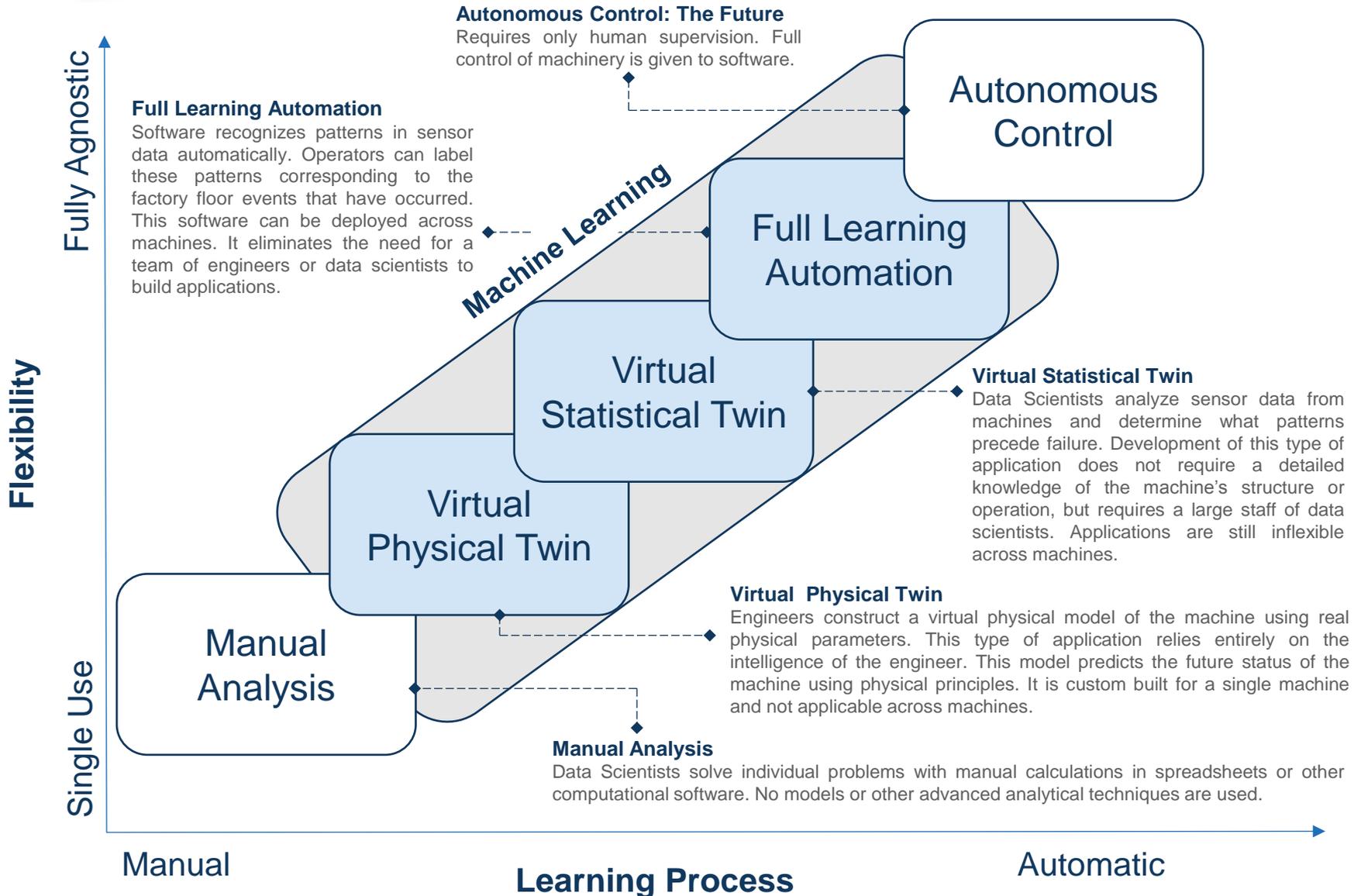


Customer Case Studies by Vertical



Electronics	Aerospace	Apparel	Food and Beverage	Chemicals
<p>Consumer Electronics Manufacturer with Multiple Facilities</p>		<p>Leading Global Athletic Apparel Brand</p>		
<p>The Issue A consumer electronics manufacturer was experiencing blocked and starved conditions on an SMT line</p> <p>The Resolution Sensors and an IIoT platform were already installed, but the company was unable to identify which of the machines was causing problems at any given time. Sight Machine's software determined the cause of the issues and increased throughput by 15%</p> 	<p>The Issue LMI Aerospace was seeking a software to capture utilization metrics, to deliver real time status and alerts, and to track cycle times</p> <p>The Resolution Vimana (FKA System Insights) software connected to the legacy machine tools on the shop floor and easily visible dashboards were installed. LMI discovered that some of its prior metrics were inaccurate and realized a 15% increase in overall efficiency</p> 	<p>The Issue A global apparel manufacturer needed to reduce the time to quality stabilization on new product lines</p> <p>The Resolution Tulip connected equipment through an IIoT gateway, installed tablets to collect data from operators, and installed visible dashboards. Tulip's software identified key error sources, dropping quality errors from 50% to 15% and enabling 50% faster TTM</p> 	<p>The Issue Strauss Group's food and beverage operation was looking for greater data insights on legacy equipment</p> <p>The Resolution Panoramic Power connected its sensors to monitor the power usage of Strauss' cooling compressors, their biggest energy users. The software discovered an incorrect sequence of operation that was causing surges in usage. Strauss realized \$150,000 in savings annually</p> 	<p>The Issue Praxair had over 7,000 refined gas products and tracked between 1 and 12 quality parameters for each.</p> <p>The Resolution NWAssoft's system automated all statistical queries and reporting, saving valuable employee time. Quality assurance data from a system of 45 sensors was delivered to customers with ease. Praxair improved profitability and customer relations</p> 

Evolution of Analytics Methods in Manufacturing





Manufacturing presents unique organizational and technical challenges which require tailored analytics solutions

Organizational

- **Mission Critical** – Manufacturing is the lifeblood of many companies, so the risk associated with potential failure of manufacturing analytics applications is greater than many other analytics use cases
- **Mindset** – Manufacturing and operations are inherently conservative and often don't trust IT. In order for an IT solution to succeed in operations it must clearly demonstrate value for both operations employees and the enterprise
- **Domain Expertise** – New vendors must develop a deep understanding of the complicated processes of their customers operations. The subject matter experts at each plant must be convinced of the reliability and value

Technical

3 V's
of Big
Data

- **Volume** – Manufacturing may generate similar amounts of data to other use cases, but understanding the source and meaning of each data point can be more challenging than other applications
- **Velocity** – Manufacturing data is generated at high velocity and insight is especially time sensitive as significant value can be lost from manufacturing errors or production stoppages
- **Variety** – Data in manufacturing comes in a wide variety of formats including continuous measurements, spot measurements, alarm codes, images, video, audio, 3D scans, operator logs, product SKU's and many more. Many Manufacturing Analytics solutions have the capability to ingest, condition and normalize data from a broad range of sources
- **Time Series Data**– Manufacturing produces predominantly time series data, which requires a different analytical approach than other event based data. In addition, each sensor throughout a factory captures data at fixed rates, yet those rates differ for each sensor which can make correlating data challenging
- **Unreliable Data** – To be reliable and accurate, manufacturing analytics applications must be able to identify and handle missing data points, outliers, high autocorrelation, and sensor drift



Can Manufacturing Analytics bridge the gap between process and discrete manufacturing?



Process Industries

- Food and Beverage
- Pharmaceuticals
- Oil and Gas
- Chemicals

Traditionally, the unique challenges of process and discrete manufacturing have required distinct solutions, but a number of new Manufacturing Analytics vendors are branding themselves as process and machine agnostic and believe they can address both of these historically separate sectors



Discrete Industries

- Consumer Packaged Goods
- Automotive
- Electronics
- Textiles

Process Manufacturing Focus

Discrete Manufacturing Focus

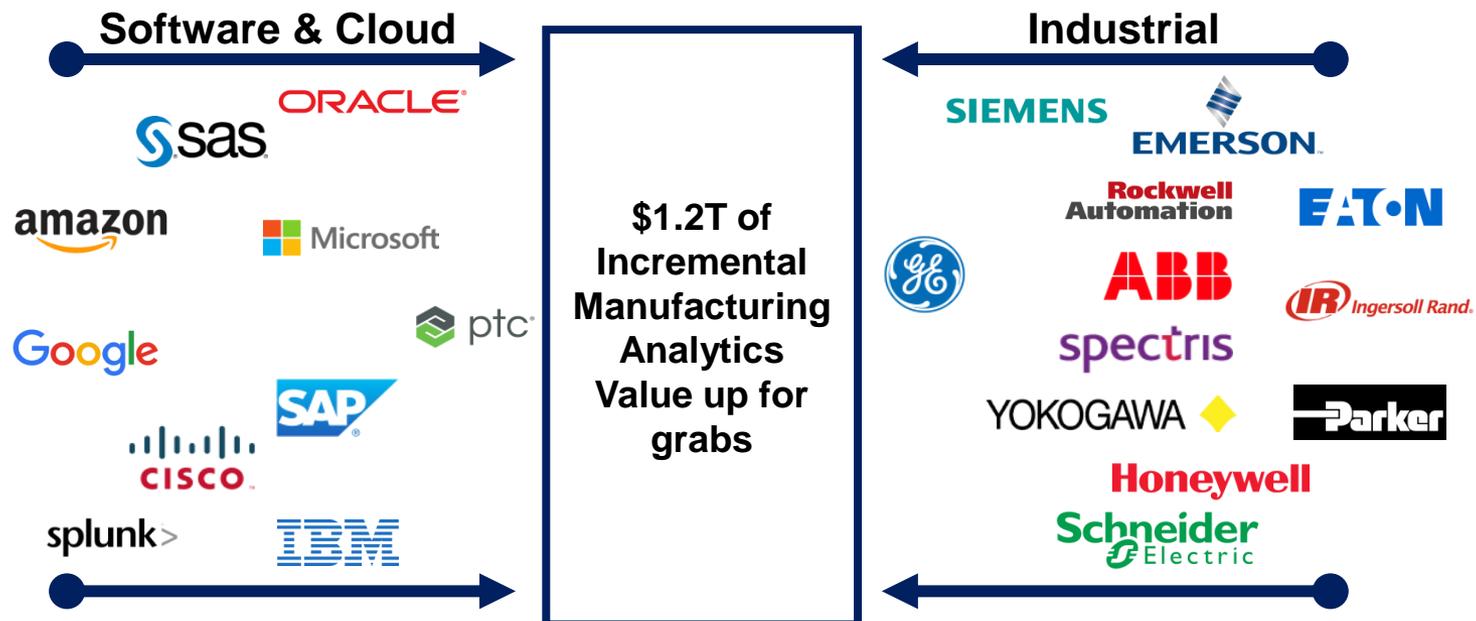
The image displays a collection of logos for manufacturing analytics vendors. On the left, under 'Process Manufacturing Focus', logos include PRECOGNIZE, NORTHWEST ANALYTICS, ELEMENT ANALYTICS, SIGHT MACHINE, AUGURY PRESENZO, falkonry, TULIP, COVACSIS, COPADATA, FOGHORN, RITECH SOFTWARE, SageClarity, actvcontent, INFINITE UPTIME, C-Labs, and KONUX. On the right, under 'Discrete Manufacturing Focus', logos include INSTRUMENTAL VIMANA, DATTUS, Predikto, BEET, THNGTRAX, fero labs, SensrTrx, machineometrics, predictionics, DEVICE INSIGHT, acumence, AUTHENTISE, OMAIVE, FORCAM, TEEP TRAK, and SCYTEC.

Two Strong Incumbent Buyer Groups



Software and Cloud companies as well as Industrial Automation and Instrumentation companies are competing to address the Manufacturing Analytics market opportunity, including through M&A

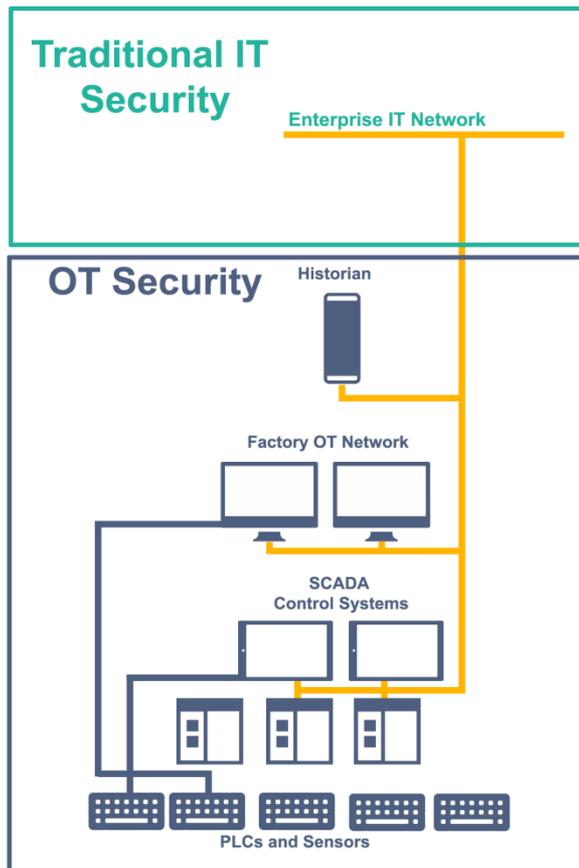
- Two distinct groups of incumbents are vying to control this very large market opportunity
 - Software and Cloud Companies need to find their way from the carpet of the front office to the concrete of the factory floor, but lack manufacturing domain expertise and credibility with customer's operations departments
 - Industrial Companies have the domain expertise in manufacturing and appropriate customer relationships, but are coming from behind in analytics, Cloud and machine learning expertise
- It remains uncertain who will establish dominance in this market, and the acquisition of the right startup combining world class software capabilities and deep manufacturing domain expertise could be the deciding factor



OT Environments Require Distinct Cybersecurity Solutions



As analytics make manufacturing more intelligent and processes change based on data, the need for OT specific Cybersecurity solutions on the factory floor increases

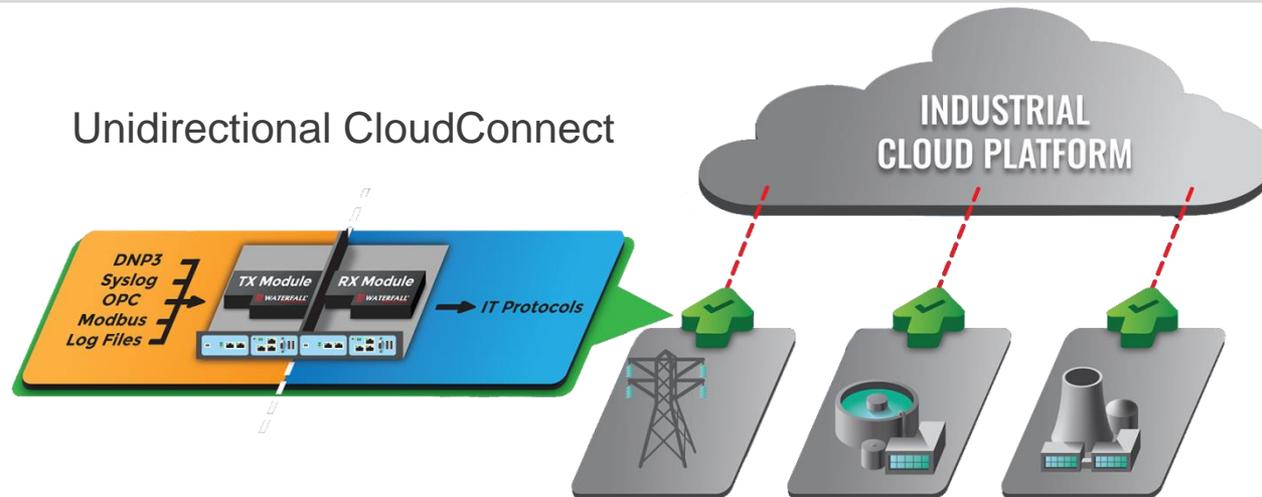


- The IT industry has decades of experience developing and deploying IT security solutions
- Awareness of cyber risk is pervasive, and IT departments have significant financial and personnel resources devoted to mitigating this risk
- OT consists of systems that monitor and control physical equipment and processes, such as Distributed Control Systems, SCADA Systems and PLCs, which are not found in IT environments and use a wide variety of networking and communication protocols
- Relatively limited Cybersecurity experience in the OT world
- The main risks in OT environments include production manipulation impacting product quality, facility downtime, physical damage to equipment or assets and threats to human safety
- OT assets typically have very long refresh cycles so many systems remain deployed that were not designed to be secure when connected to IT networks or accessed remotely, and may not be able to be upgraded
- Heightened need for prevention rather than detection of breaches
- Strong concern in OT environments that active or intrusive network monitoring could interfere with the reliable operation of control systems



As Manufacturing Analytics move from On-Premise to the Cloud, additional protections are required to avoid creating new vulnerabilities

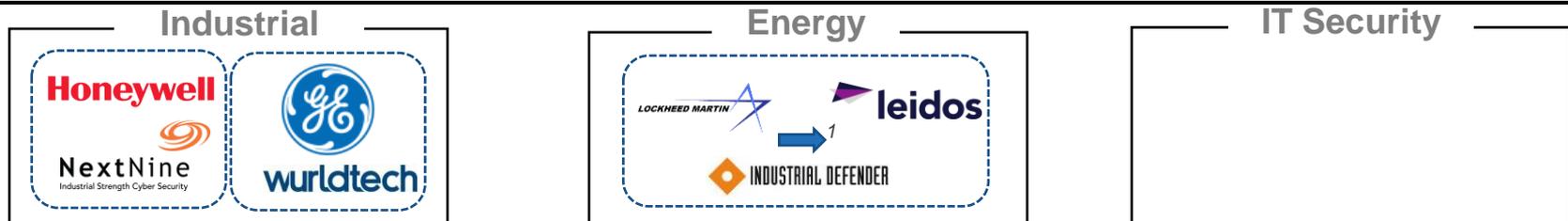
Many early Manufacturing Analytics deployments are being made on-premise. Moving Manufacturing Analytics to the Cloud, including Industrial Cloud Platforms such as GE Predix or Siemens MindSphere, can allow for faster and cheaper deployment as well as use against data across multiple factories, but care must be taken to avoid creating new vulnerabilities for factory OT networks.



On July 20, 2017 FireEye, a leader in IT security, announced a partnership with Waterfall Security, a leader in OT security, to be able to deploy FireEye's cloud-based Threat Analytics Platform for use with industrial networks using Waterfall's Unidirectional CloudConnect



Incumbents Making OT & IoT Security Acquisitions



OT & IoT Security Vendors



Extensive OT Security Startup Activity – Following in the footsteps of Industrial Defender, Mocana, Nextnine, Waterfall Security and Wurldtech which were all founded 10+ years ago, a large number of additional OT and IoT Security startups have been founded and/or raised initial venture rounds in the past 5 years

Very Rapid Growth for IoT Security – The IoT Security market is expected to grow at a 55% CAGR from 2014-2019 by Technavio and at a 33% CAGR from 2015-2020 by marketsandmarkets.

Large ICS Security Market – The ICS Security market is estimated to be \$9B in 2016 and \$10.2B in 2017², representing a large addressable market for emerging OT Security vendors.

Exit Activity – While large incumbent IT Security vendors have waited for clear OT and IoT security leaders to emerge, a number of Industrial and Energy focused incumbents have already made OT Security acquisitions, in part to enable service offerings to their existing customers

¹ Industrial Defender was acquired by Lockheed Martin, but transferred to Leidos as part of a subsequent transaction
DISCLAIMER: This is only a representative list and may not include all relevant companies. If your company is not on the list and would like to be added for future publications, please kindly shoot us a note at jdeaws@agcpartners.com and we would be happy to consider.
² Report Linker, Markets and Markets



Manufacturing Analytics

Company	Total Funding (\$M)
 AUGURY	\$26
 SIGHT MACHINE	25
 KONUX	19
 FOGHORN	15
 TULIP	13
 Predikto	11
 Qualtera	9
 ELEMENT ANALYTICS™	7

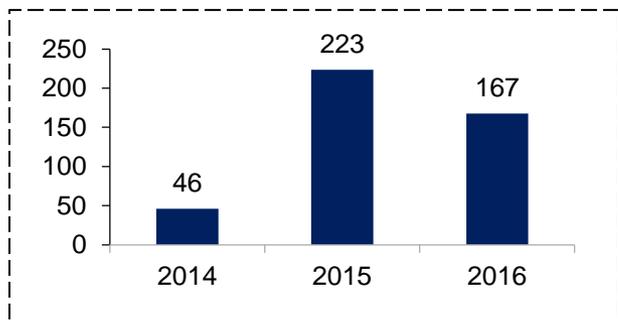
OT & IoT Security

Company	Total Funding (\$M)
 MOCANA	\$81
 THETARAY	33
 TEMPERED NETWORKS	32
 CLAROTY	32
 Indegy	18
 CyberX	11
 BAYSHORE™	11
 IoTium	8

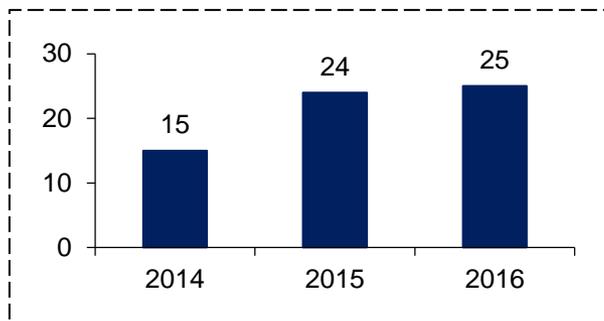


Private Placements

Total Capital Raised

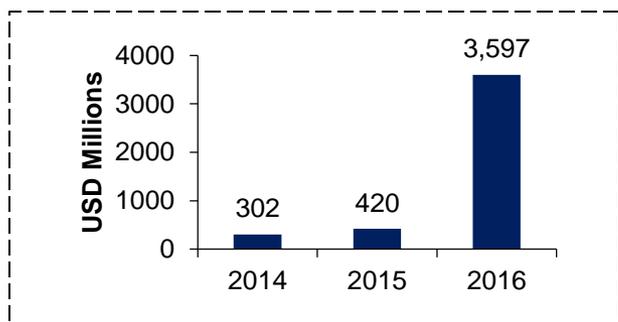


Total Number of Transactions

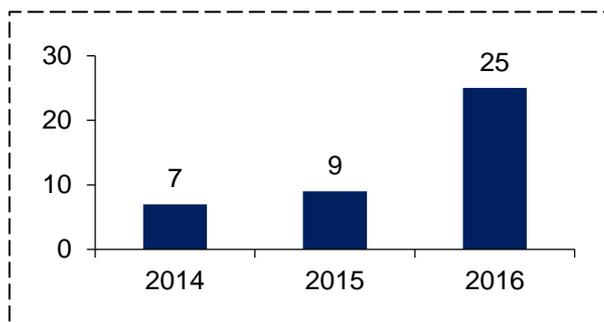


M&A Transactions

Total Transaction Amount



Total Number of Transactions



Key Takeaways

- **Manufacturing Analytics is a new sector with high strategic value and potential for growth**
 - › Many pure play companies in the sector are still early stage
- **As adoption and awareness of Manufacturing Analytics increases, likely so too will transaction activity**
 - › Adoption of new technologies in manufacturing is often an “avalanche.” First movers gain a competitive advantage, and all other players follow suit or risk losing market share
- **M&A Total Transaction Amount and Number of Transactions both increased dramatically in 2016**
- **Median disclosed EV/LTM Revenue over the period 2014 to 2017 YTD was 8.1x**

Most Active Acquirers & Investors 2014 – July 2017



Large Incumbents are actively acquiring and investing in Startups

Investor	Acquisitions	Investments	Targets
	6	9	nurego BITSTEWSYSTEMS Wise.io servicemax THETARAY wurldtech FOGHORN SIGHT MACHINE meridium IOTIUM MOCANA
YOKOGAWA	2	2	KBC INDUSTRIAL evolution FOGHORN BAYSHORE
	2	2	SAGGEZZA Jasper BITSTEWSYSTEMS COVACSIS intelligence differentiates
NEA	4		TULIP KONUX UPTAKE
	3		kepware COLDLIGHT Axeda
	3		PLAT.ONE Fedem Technology Roambi
Pritzker Group	3		SIGHT MACHINE AUGURY
	3		THETARAY
	2		solair REVOLUTION ANALYTICS



In November 2016, GE Digital announced an acquisition of field service management SaaS platform ServiceMax for \$915 million. The acquisition will help GE to enhance their overall technology stack around the Predix platform and advance their Industrial Internet vision.



ServiceMax Field Service Functionality Application Platform Overview:

ServiceMax's offering is a scalable, mobile and secure platform for featuring an entire set of field service management capabilities together in a single license. The platform leverages both customer and asset data and provides all the relevant service functionality and business processes. The platform aids with warranties & contracts, scheduling, service requests & work orders, parts management, reporting & analytics and other functions.

Rationale:

- GE Digital is looking to build upon their ongoing efforts to enhance their overall technology stack around the Predix platform and advance and improve productivity for their Industrial Internet service. This transaction is directly aligned with GE's stated goal of driving growth both inorganically and organically by building the capabilities to support their digital industrial transformation through Predix, APM and the Digital Thread.



Predix Predictive Analytics Data Integration Platform Overview:

GE Digital's Big Data initiative involves using its Predix platform to create applications for the Industrial Internet of Things. The Predix operating system is powering digital industrial businesses by connecting industrial equipment, analyzing data, and delivering Real-Time insights. Predix's purpose is to generate built-to-order software services that deliver actionable intelligence, transformative insights, and effective control that can be leveraged to generate better asset management decisions, more higher quality and more efficient manufacturing and solutions architecting.

Market Implications:

- With this transaction, GE Digital makes further headway in the Industrial Internet of Things (IIoT) segment as it transforms itself from a product supplier to a service provider. GE Digital is grabbing a big slice of the pie that other IoT platforms need to buy into. Competition includes major OT providers also moving into the IIoT realm such as Honeywell, Rockwell Automation and Schneider Electric. Field service organizations (FSOs) worldwide are also feeling the winds of change in their industry as their traditional preventative maintenance as a service structure is impacted by IoT/IIoT.



In November 2016, GE Digital announced its plan to acquire predictive analytics data integration solutions platform Bit Stew for \$153 million. Bit Stew's Mlx Core will provide Predix with the capability to integrate data in motion, from the edge to the cloud, and accelerate operational agility of GE's APM applications.



MlxCore Data Integration and Machine Learning Platform Overview:

Bit Stew's Mlx Core™ is purpose-built to handle complex data integration and analysis across connected devices, OT and IT systems, and external sources. Bit Stew applies its machine learning and artificial intelligence capabilities to automate the process of data modeling, mapping and ingestion helping accelerate time to value for our customers.

Rationale:

- GE Digital's acquisition of Bit Stew and plans for its integration with Predix advances GE's goal for Predix to be the all-encompassing platform for the Industrial Internet of Things (IIoT). Bit Stew provides intelligence for data in motion in an IIoT setting from the edge to the cloud, which will bolster Predix's ability to gain Real-Time insights into machinery, equipment and devices, while quickening data integration regardless of the data's source or format.



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Market Implications:

- The acquisition of Bit Stew by GE Digital signifies the growing need for dynamic data integration solutions. As businesses seek to begin utilizing the seemingly infinite universe of data provided by the Internet of Things, they require robust technological solutions that will allow them to scale and customize Real-Time data to generate actionable intelligence

Acquisition Case Study: Industrial Evolution acquired by Yokogawa



In January 2016, Yokogawa Electric announced the acquisition of industrial plant data sharing SaaS platform Industrial Evolution. The acquisition aims to strengthen Yokogawa's provision of advanced solutions to process industries and will allow them to provide a Data-as-a-Service (DaaS) solution to their global customer base.



Industrial Evolution's Secure, Cloud-based Platform:

Industrial Evolution's service provides Web-based industrial plant data sharing Data-as-a-Service that collects and shares machine-to-machine real-time process data from devices and systems at industrial facilities, for industrial plants and manufacturers. The service is capable of collecting data from firewall protected systems and securely shares this with authorized users via website or mobile access.

Rationale:

- Yokogawa sees Industrial Evolution as a pioneer in the utilization of IoT, and their technology will allow Yokogawa to expand their range of solutions and provide new value to their customers. With Industrial Evolution's cloud-based service as a core offering, Yokogawa will now be able to enhance its advanced solutions business. Industrial Evolution's customers will also benefit from Yokogawa's global reach and expanded capabilities.



Yokogawa's Industrial Automation System Overview:

Yokogawa provides industrial automation and control systems and services, including energy optimization, plant asset management, measurement and control, physical security, electrical engineering and control room design, for oil and gas, petrochemical, pharmaceutical, steel, paper pulp and food and beverage manufacturing and energy businesses globally.

Market Implications:

- Expansion of the advanced solutions business in the industrial automation and control field is one of the main strategies set out in Yokogawa's Transformation 2017 mid-term business plan. Based on Industrial Evolution's cloud business environment, Yokogawa will provide Data-as-a-Service, an advanced solution that will generate new value for its global customer base. This acquisition could signify increased future movement from major players to add IoT or DaaS offerings, which they can then upsell to their global customer base.



AGC is a leading investment bank with a focus on providing strategic advisory services to technology companies, helping them achieve their vision. With more than 50 investment banking professionals across the Americas and in Europe, we provide global coverage across all products and sectors, from software and digital media to tech-enabled services and mobile communications. Since our inception in 2003, AGC Partners has completed 313 investment banking transactions for emerging growth companies.



Joe Dews
Partner

Joe is a Partner in AGC's Silicon Valley office focused on IoT and Energy & Industrial Technology

He has over 20 years of experience in technology investment banking at firms including ThinkEquity, Needham & Company and CIBC

Joe also worked as an FAE in the semiconductor industry at Cirrus Logic KK in Japan and in the software industry as VP of Business Development at Versata

Joe received a B.S. in Applied & Engineering Physics from Cornell University

Joe was named as an "AlwaysOn Power Player in GreenTech" and has spoken at or moderated panels at the IoT Stream Conference and the UCI/IEEE IoT Conference



Scott Card
Partner

Scott is a Partner in the Investment Banking Group and founding team member at AGC Partners, focused on Enterprise Infrastructure sectors including Cloud Infrastructure, Data Analytics, Storage & Security

In his 20 plus years as an investment banker, Scott has completed more than 50 M&A and debt / equity financing transactions

Prior to joining AGC Partners, Scott was part of Deutsche Bank Alex Brown's Technology Investment Banking Group in Boston

Previously, Scott was an Associate in Global Mergers & Acquisitions at SBC Warburg and an Analyst in the Financial Institutions Group at Merrill Lynch & Co. in New York

Scott holds a B.S. in Electrical Engineering from Cornell University and an M.B.A. from the Amos Tuck School at Dartmouth College



Dennis Rourke
Partner

Dennis brings more than 25 years of experience in investment banking to his role at AGC and has been a Partner with AGC since it was founded in early 2003

Dennis has completed more than 80 transactions, primarily for software companies

Previously, Dennis was a Managing Director at Banc of America Securities and a Founding Member of Montgomery Securities' East Coast Technology Group

He holds a B.A. in English from Middlebury College, an M.A. in German Literature from the Johannes Gutenberg Universität in Mainz, Germany, and an M.S. in Finance from the MIT Sloan School of Management



Private Placements

Financing Activity



	Date Announced	Target Name	Buyers/Investors	Target Description	Size (\$M)
1.	Jun-17	Augury	HSB Group, Inc, Investment Arm; Lerer Hippeau Ventures; Pritzker Group Venture Capital; Sound Ventures; Eclipse Ventures, LLC; First Round Capital	Develops a software platform that enables facility owners and service companies to deploy predictive maintenance strategies	\$ 17.0
2.	Jun-17	Tulip	New Enterprise Associates; Pitango Venture Capital; others	Develops shopfloor application software for Fortune 500 companies in the manufacturing industry	13.0
3.	May-17	ThingTrax	Force Over Mass Capital	Provides Software-as-a-Service based connected manufacturing solutions that allow customers to connect and monitor legacy machines with the cloud for real time configuration, monitoring, and control	0.3
4.	May-17	Narrativewave	ND	Develops situational intelligence platform for the industrial Internet	2.0
5.	May-17	IoTium	Juniper Networks, Investment Arm; GE Ventures; March Capital Partners	Provides a managed secure network infrastructure for industrial Internet of Things	8.4
6.	May-17	Mocana	Trident Capital, Inc.; Shasta Ventures; GE Ventures; Sway Ventures	Operates an enterprise mobile application security platform that facilitates organizations to deliver business-critical mobile applications	11.0
7.	Mar-17	fero labs	Bowery Capital; Sinovation Ventures	Develops automated machine learning and artificial intelligence platform for the industrial sector	1.5
8.	Mar-17	Tulip	New Enterprise Associates, Pitango Venture Capital	Develops shopfloor application software for Fortune 500 companies in the manufacturing industry	13.2
9.	Feb-17	Predikto	Fidelis Capital; TechOperators	Offers monitoring and analytic cloud services to predict asset failures and improve their performance	4.0
10.	Feb-17	BEET Analytics	ND	Provides diagnostic and analytical tools to accelerate problem solving for operations facing complex assembly and automation challenges	2.0
11.	Jan-17	UpTake	Revolution Growth	Develops a predictive analytics platform that analyzes data to predict and prevent failures, uncover hidden profits, and discover new opportunities	90.0
12.	Jan-17	Falkonry	Polaris Partners; Start Smart Labs; Zetta Venture Partners	Offers real-time condition prediction services from sensor datasets	5.3
13.	Jan-17	Element Analytics	Kleiner Perkins Caulfield& Byers	Designs and develops a software platform for industries that turns raw data into useful insights	7.0
14.	Dec-16	Infinite Uptime	ND	Provides an integrated industrial solution with hardware, cloud analytics, and control software to monitor equipment, diagnose problems, and drive smart decision making	1.4
15.	Dec-16	MachineMetrics	Bolt Innovation Group; Hub Angels Investment Group; MassVentures; Valley Venture Mentors	Develops real-time production monitoring software for manufacturing companies	3.8
16.	Dec-16	Precognize	Maverick Ventures	Develops predictive maintenance software for heavy industry	ND

Financing Activity



	Date Announced	Target Name	Buyers/Investors	Target Description	Size (\$M)
17.	Nov-16	Clearblade	ND	Develops and provides a platform to build industrial Internet of Things solutions	3.7
18.	Oct-16	Nozomi Networks	Lux Capital Management; GGV Capital; Planven Investments SA	Offers cybersecurity and operational visibility solutions for industrial control systems (ICS)	7.5
19.	Oct-16	MachineMetrics	ND	Develops real-time production monitoring software for manufacturing companies	2.6
20.	Sep-16	OT Claroty	Bessemer Venture Partners; Mitsui & Co., Ltd. (TSE:8031); Temasek Holdings (Private) Limited; Israel Cleantech Ventures; Innovation Endeavors; Marker LLC	Operates an OT security platform that enables engineers, operators, and cyber security professionals to protect and optimize OT networks	32.0
21.	Aug-16	Narrativewave	ND	Develops situational intelligence platform for the industrial Internet	1.3
22.	Aug-16	Tempered Networks	IDG Ventures; Ignition Partners; Rally Capital, LLC	Provides connectivity solutions for critical infrastructure, industrial control systems, and the Industrial Internet of Things applications in water, energy, petroleum, manufacturing, and other industrie	10.0
23.	Aug-16	Cyber X	GlenRock Israel, Ltd.; Swarth Investments L.L.C.; ff Venture Capital; Gliot Capital Partners; Flint Capital	Operates a platform for real-time security of the industrial Internet	9.0
24.	Jul-16	Foghorn Systems	March Capital Partners, GE Ventures, Robert Bosch Venture Capital GmbH, Yokogawa Electric Corporation (TSE:6841), Darling Ventures LLC, Dell Technologies Capital, Saudi Aramco Energy Ventures LLC	Develops an Internet of Things application platform for remote monitoring and diagnostics, predictive maintenance, anomaly detection, alarm management, and asset and yield optimization solutions	15.0
25.	Jul-16	ActvContent	Plug and Play Tech Center	Develops a smart manufacturing solution that leverages mobile technology and sensors for real-time visibility during production	ND
26.	Jun-16	Indegy	Vertex Ventures Israel; Magma Venture Partners; SBI Holdings, Inc. (TSE:8473); Aspect Ventures	Operates an industrial cyber security platform	12.0
27.	Jun-16	Northwest Analytics	Undisclosed Angel Investor	Delivers manufacturing-intelligence and statistical process control (SPC) software solutions for specialty producers	1.5
28.	Jun-16	Instrumental	Root Ventures; First Round; Eclipse	Engages in the design, implementation, and integration of high-performance computing, data storage, business continuity, and cloud security solutions for data-intensive environments in government and commercial sectors	7.5
29.	Jun-16	Presenso	Janvest Capital Partners C, LP; SeedLL; AfterDox Angels Investment Group	Develops a software that uses deep learning, machine-learning, and real-time analysis algorithms to precisely predict machine degradation	2.0
30.	Jun-16	Qualtera	Omnes Capital; Serena Capital	Provides big data solutions for semiconductor test and manufacturing	3.4
31.	Jun-16	Dattus	ND	Develops and offers a platform which provides real-time access to data, equipment status, and other information on-site and off-site via web and mobile APIs	1.9
32.	May-16	Bit Stew	ND	Provides a data intelligence platform that solves the data integration needs of utilities, oil and gas, aviation, and manufacturing industries	1.2

Financing Activity



	Date Announced	Target Name	Buyers/Investors	Target Description	Size (\$M)
33.	May-16	Eigen Innovations	BDC Venture Capital, New Brunswick Innovation Foundation, Investment Arm	Develops quality inspection and process control solutions for industrial manufacturers. It offers Intellexon, a vision analytics platform for the industrial Internet of Things that learns what operators are looking for and then calculates the optimal machine settings.	1.4
34.	Apr-16	Device Authority	Alsop Louie Partners; TERN plc (AIM:TERN)	Designs and develops identity and access management solutions for the Internet of Things (IoT)	1.9
35.	Apr-16	Bayshore Networks	Yokogawa Electric Corporation (TSE:6841); Benhamou Global Ventures LLC; Samsung NEXT	Develops cyber security software for the industrial Internet of things (IoT)	11.1
36.	Apr-16	KONUX	MIG Verwaltungs AG; HMW Emissionshaus AG; New Enterprise Associates; Unternehmertum Venture Capital Partners GmbH Buyer Funds: MIG Fund 6; MIG Fund 15; MIG Fund 8; UnternehmerTUM Fund	Designs and develops Industrial Internet of Things (IIoT) solutions that integrate smart sensor systems and artificial intelligence based analytics	17.3
37.	Mar-16	Bit Stew	Yaletown Venture Partners Inc.; Kensington Capital Partners Limited; BDC Capital Inc.; GE Ventures	Provides a data intelligence platform that solves the data integration needs of utilities, oil and gas, aviation, and manufacturing industries	1.1
38.	Mar-16	Sight Machine	GE Ventures; IA Ventures; Mercury Fund; Two Roads Group, LLC; Huron River Venture Partners; Orfin Ventures, LLC; Jump Capital; O'Reilly AlphaTech Ventures, LLC; Pritzker Group Venture Capital	Develops a manufacturing analytics platform	19.5
39.	Jan-16	Sentryo	Groupe Rhône-Alpes Création, ACE Management, Breed Reply Investments Buyer Funds:R2V, Rhône-Alpes Création II, SCR	Develops and provides cybersecurity and situation awareness solutions to industrial networks and the Internet of Things	2.8
40.	Dec-15	ThetaRay	Jerusalem Venture Partners; Poalim Ventures Ltd.; Alibaba Group Holding Limited (NYSE:BABA); GE Ventures	Provides big data analytics solutions that detect threats and discover opportunities	20.0
41.	Oct-15	NexDefense	ND	Develops cyber security software for automation and control systems	5.6
42.	Oct-15	C-Labs	ND	Provides industrial-grade connectivity software solutions for the Internet of Things (IoT)	2.7
43.	Oct-15	UpTake	Caterpillar Inc. (NYSE:CAT); GreatPoint Ventures; Lightbank LLC; New Enterprise Associates	Develops a predictive analytics platform that analyzes data to predict and prevent failures, uncover hidden profits, and discover new opportunities	45.0
44.	Oct-15	DN2K	ND	Develops machine-to-machine remote monitoring and management systems that allow customers to monitor the real-time performance and operations of remote assets	15.3
45.	Sep-15	Augury	HSB Group, Inc, Investment Arm	Develops a software platform that enables facility owners and service companies to deploy predictive maintenance strategies	ND
46.	Aug-15	Augury	Formation8 Partners; Lerer Hippeau Ventures; Pritzker Group Venture Capital; First Round Capital Buyer Funds: Eclipse Ventures Fund I, L.P.	Develops a software platform that enables facility owners and service companies to deploy predictive maintenance strategies	7.0
47.	Jul-15	Mocana	Sway Ventures	Operates an enterprise mobile application security platform that facilitates organizations to deliver business-critical mobile applications for internal and external users	14.8

Financing Activity



Date Announced	Target Name	Buyers/Investors	Target Description	Size (\$M)	
48.	Jul-15	IQMS	Technology Crossover Ventures; Banneker Partners, LLC	Designs and develops manufacturing and enterprise resource planning (ERP) software for manufacturing industries	39.5
49.	Jun-15	MachineMetrics	Long River Ventures	Develops real-time production monitoring software for manufacturing companies	ND
50.	May-15	Mnubo	White Star Capital, L.P.; McRock Capital	Provides smart data management and analytics for Internet of Things (IoT) for enterprises, service providers, and device manufacturers	6.0
51.	May-15	KONUX	Founder.org	Designs and develops Industrial Internet of Things (IIoT) solutions that integrate smart sensor systems and artificial intelligence based analytics	1.6
52.	May-15	Eigen Innovations	New Brunswick Innovation Foundation, Investment Arm	Develops quality inspection and process control solutions for industrial manufacturers. It offers Intellexon, a vision analytics platform for the industrial Internet of Things that learns what operators are looking for and then calculates the optimal machine settings.	0.2
53.	May-15	Bit Stew	Yaletown Venture Partners Inc.; Cisco Investments; BDC Capital Inc.; GE Ventures	Provides a data intelligence platform that solves the data integration needs of utilities, oil and gas, aviation, and manufacturing industries	20.9
54.	May-15	Sentryo	ND	Develops and provides cybersecurity and situation awareness solutions to industrial networks and the Internet of Things	0.4
55.	Apr-15	Predixion	Software Aktiengesellschaft (XTRA:SOW); GE Ventures	Develops real-time edge analytics platform that provides real-time and visual edge analytics solutions for devices and gateways for original equipment manufacturers and enterprises	4.0
56.	Apr-15	Narrativewave	Frost Data Capital	Develops situational intelligence platform for the industrial Internet	1.4
57.	Feb-15	Vimana (FKA System Insights)	ND	Develops and supplies manufacturing operations management software solutions	0.6
58.	Feb-15	RtTech	McRock Capital; New Brunswick Innovation Foundation, Investment Arm Buyer Funds: McRock INFund LP	Develops solutions to help manufacturing companies improve their asset availability, asset utilization, and utilities consumption	2.4
59.	Feb-15	Tempered Networks	IDG Ventures; Ignition Partners	Provides connectivity solutions for critical infrastructure, industrial control systems, and the Industrial Internet of Things applications in water, energy, petroleum, manufacturing, and other industries	20.1
60.	Jan-15	Sight Machine	Huron River Venture Partners; Orfin Ventures, LLC; IA Ventures; FundersClub Inc., Investment Arm; O'Reilly AlphaTech Ventures, LLC; eLab Ventures; Mercury Fund	Develops a manufacturing analytics platform	5.0
61.	Jan-15	Qualtera	Soridec SA; Sofilaro S.A.S.; Serena Capital; Toplink Innovation SARL	Provides big data solutions for semiconductor test and manufacturing	3.6
62.	Jan-15	2lemetry	Salesforce Ventures	Operates an Internet of things (IoT) platform and technology company	4.0

Financing Activity



	Date Announced	Target Name	Buyers/Investors	Target Description	Size (\$M)
63.	Jan-15	Predikto	TechOperators	Offers monitoring and analytic cloud services to predict asset failures and improve their performance	3.6
64.	Dec-14	Eigen Innovations	New Brunswick Innovation Foundation, Investment Arm Buyer Funds:Startup Investment Fund	Develops quality inspection and process control solutions for industrial manufacturers. It offers Intellexon, a vision analytics platform for the industrial Internet of Things that learns what operators are looking for and then calculates the optimal machine settings.	0.1
65.	Dec-14	Indegy	Magma Venture Partners	Operates an industrial cyber security platform that enables operational engineers and cyber security personnel to gain control over industrial-networks, detect malicious activities, and identify unauthorized changes	6.0
66.	Dec-14	Mocana	ND	Operates an enterprise mobile application security platform that facilitates organizations to deliver business-critical mobile applications for internal and external users	4.5
67.	Dec-14	NexDefense	Buckhead Investments LLC; Mosley Ventures	Develops cyber security software for automation and control systems	2.4
68.	Oct-14	Qualtera	Soridec SA	Provides big data solutions for semiconductor test and manufacturing	0.2
69.	Oct-14	Predikto	ND	Offers monitoring and analytic cloud services to predict asset failures and improve their performance	3.6
70.	Aug-14	Narrativewave	ND	Develops situational intelligence platform for the industrial Internet	2.0
71.	Aug-14	Augury	ND	Develops a software platform that enables facility owners and service companies to deploy predictive maintenance strategies	2.0
72.	Jul-14	ThetaRay	Jerusalem Venture Partners; General Electric Company (NYSE:GE); Poalim Ventures Ltd.	Provides big data analytics solutions that detect threats and discover opportunities	10.0
73.	Jun-14	Northwest Analytics	ND	Delivers manufacturing-intelligence and statistical process control (SPC) software solutions for specialty producers	1.4
74.	Jun-14	Cyber X	GlenRock Israel, Ltd.; Swarth Investments L.L.C.; Gliilot Capital Partners	Operates a platform for real-time security of the industrial Internet	2.0
75.	May-14	Covacsis	Blume Venture Advisors, Gennext Ventures, Cisco Investments Buyer Funds:Blume Ventures, Gennext Ventures	Designs and implements intelligent plant framework (IPF) for manufacturing industries	ND
76.	Mar-14	Tempered Networks	ND	Provides connectivity solutions for critical infrastructure, industrial control systems, and the Industrial Internet of Things applications in water, energy, petroleum, manufacturing, and other industries	2.0
77.	Feb-14	DataRPM	InterWest Partners LLC; CIT GAP Funds	Develops and provides a cognitive data science platform that automates machine learning on-cloud or on-premise for enterprises	5.1
78.	Jan-14	ThetaRay	Poalim Ventures Ltd.	Provides big data analytics solutions that detect threats and discover opportunities	3.0
Median					3.8



M&A Transactions



	Date Announced	Target Name	Acquirer Name	Target Description	EV (\$M)	LTM REV	EV/LTM REV
1.	Jun-17	Nextnine	Honeywell	Develops operational technology security management software	ND	ND	ND
2.	May-17	OSISoft ¹	Softbank Group	Provides an open enterprise infrastructure to connect sensor-based data, operations, and people to enable real-time and actionable insights	ND	ND	ND
3.	May-17	MYNAH Technologies	Emerson Electric	Provides process simulation, industrial Ethernet, and plant floor data communications solutions for process industries	ND	ND	ND
4.	May-17	Statistica	TIBCO Software	Develops analytics solutions for decision-making and risk mitigation	ND	ND	ND
5.	May-17	Saggezza	Cisco	Develops software solutions that enables businesses to collect, analyze, and interrogate vast amounts of information	ND	ND	ND
6.	Apr-17	Avant	Biesse	Designs and develops a software for the integration and supervision of machining lines and working cells	ND	ND	ND
7.	Apr-17	Metrosage	Capvidia	Provides inspection analysis and simulation software and services for factory applications	ND	ND	ND
8.	Mar-17	DataRPM	Progress Software	Develops and provides a cognitive data science platform that automates machine learning on-cloud or on-premise for enterprises	30	ND	ND
9.	Feb-17	Predixion Software	Jvion	Develops real-time edge analytics platform that provides real-time and visual edge analytics solutions	ND	ND	ND
10.	Feb-17	Nurego	General Electric	develops Web-based business optimization solution for cloud companies	ND	ND	ND
11.	Jan-17	WEBfactory	Technische Werke Ludwigshafen	Provides software for the surveillance and control of machines and industrial systems, and for the online analysis and assessment of production data	ND	ND	ND
12.	Nov-16	EKHOSOFT	Power Factors	Develops and delivers operational management and intelligence software solutions for asset performance management	ND	ND	ND
13.	Nov-16	Bit Stew Systems	General Electric	Provides a data intelligence platform that solves the data integration needs of utilities, oil and gas, aviation, and manufacturing industries	153	ND	ND
14.	Nov-16	Wise.io	General Electric	Develops machine learning applications for the customer experience market	ND	ND	ND
15.	Nov-16	ServiceMax	General Electric	Develops cloud-based field service software solutions that help companies to manage contracts, scheduling, and parts	915	90	10.2x



	Date Announced	Target Name	Acquirer Name	Target Description	EV (\$M)	LTM REV	EV/LTM REV
16.	Oct-16	Mtelligence	Aspen Technology	Provides asset performance optimization software to manufacturers and utilities globally	37	ND	ND
17.	Sep-16	Plat.One Inc	SAP	Develops enterprise-grade software and industrial solutions for businesses and organizations to leverage the power of Internet of Things (IoT) to transform their operations	ND	ND	ND
18.	Sep-16	eMaint Enterprises	Fluke	Provides Web-based computerized maintenance management software to customers worldwide	ND	ND	ND
19.	Sep-16	Verisae	Accruent	Provides cloud-based maintenance, energy, and sustainability management software solutions for retailers and manufacturing companies worldwide	185	ND	ND
20.	Sep-16	Predixion Software	Greenwave Reality	Develops real-time edge analytics platform that provides real-time and visual edge analytics solutions	ND	ND	ND
21.	Sep-16	EFT Energy	Koch Minerals; Koch Technology and Optimization	Provides Software-as-a-Service solutions in the fields of industrial and manufacturing predictive analytics, process optimization, and industrial and commercial energy management	ND	ND	ND
22.	Sep-16	Meridium	General Electric	Provides asset performance management software and services worldwide	495	ND	ND
23.	Sep-16	LogFire	Oracle	Provides cloud-based inventory and warehouse management solutions	ND	ND	ND
24.	Jul-16	Dglogik	Acuity Brands	Develops software solutions that enable and visualize the Internet of Everything (IoE)	ND	ND	ND
25.	Jul-16	M2M Data	Caterpillar Oil & Gas	Provides Software as a Service based remote asset monitoring and management services to oil and gas, water and wastewater, power generation, and heavy equipment industries	ND	ND	ND
26.	Jun-16	Eniram	Wartsila	Provides maritime energy management systems for the shipping industry	48	11	4.4x
27.	Jun-16	Fedem	SAP	Develops and distributes software for dynamic simulations	ND	ND	ND
28.	Jun-16	Capstone Technology	Spectris	Provides practical software and training solutions to process manufacturers worldwide	23	ND	ND
29.	May-16	Solair	Microsoft	Develops a platform for enterprises to develop IoT applications from sensors, through the edge, to the cloud	ND	ND	ND
30.	Apr-16	OSISoft ¹	Mitsui & Co	Provides an open enterprise infrastructure to connect sensor-based data, operations, and people to enable real-time and actionable insights	110	ND	ND



	Date Announced	Target Name	Acquirer Name	Target Description	EV (\$M)	LTM REV	EV/LTM REV
31.	Mar-16	IQity Solutions	Netsuite	Provides cloud-based enterprise performance management (EPM) software	ND	ND	ND
32.	Feb-16	KBC Advanced Technologies	Yokogawa Electric	Provides technical and organizational consulting and software solutions to companies in the energy, and oil and gas industries worldwide	232	110	2.1x
33.	Feb-16	MeLLmo (DBA Roambi)	SAP	Develops mobile business applications	ND	ND	ND
34.	Feb-16	Jasper Technologies	Cisco	Provides a cloud-based Internet of Things (IoT) platform	1400	120	11.7x
35.	Jan-16	AssetPoint	Aptean	Provides computerized maintenance management software/enterprise asset management (CMMS/EAM) solutions for enterprise and SMB companies	ND	ND	ND
36.	Jan-16	Industrial Evolution	Yokogawa Electric	Provides Web-based industrial plant data sharing Data-as-a-Service that collects and shares machine-to-machine real-time process data from devices and systems at industrial facilities	ND	ND	ND
37.	Dec-15	Kepware	PTC	Develops software solutions that help bridge the communication gap between diverse hardware and software applications for the industrial automation industry worldwide	118	20	5.9x
38.	Nov-15	Panoramic Power	Centrica Nederland B.V.	Develops and provides cloud-based energy management solutions	60	ND	ND
39.	Sep-15	SeeControl	Autodesk	Develops and operates an enterprise Internet of Things (IoT) cloud service that helps manufacturers to connect, analyze, and manage their products	ND	ND	ND
40.	Sep-15	Paradox Engineering	MinebeaMitsumi	Designs and develops solutions and services for industrial condition monitoring, oil and gas, machine-2-machine, home area networks, internet of things (IoT), and engineering and telemetry projects	ND	ND	ND
41.	Jul-15	Syntricity	PDF Solutions	Develops and delivers Web-based enterprise yield management solutions for the semiconductor industry worldwide	8	ND	ND
42.	May-15	Coldlight	PTC	Develops a Software-as-a-Service and cloud-based predictive analytics platform	104	8	13.8x
43.	Mar-15	2lemetry	Amazon	Operates an Internet of things (IoT) platform and technology company	ND	ND	ND
44.	Jan-15	Revolution Analytics	Microsoft	Provides big data predictive analysis software solutions for analytics-driven business, big data, data science, and industrial applications	115	4	28.8x
45.	Jan-15	InSync Software	ORBCOMM	Provides Internet of Things (IoT) enterprise solutions for radio frequency identification (RFID), GPS, and sensor-driven asset tracking applications	16	ND	ND

M&A Activity



	Date Announced	Target Name	Acquirer Name	Target Description	EV (\$M)	LTM REV	EV/LTM REV
46.	Dec-14	IBS Aktiengesellschaft	Siemens	Provides industrial productivity management software solutions and services	ND	ND	ND
47.	Nov-14	Strypes Bulgaria	ICT Group N.V.	Designs, develops, and implements embedded and industrial softwaresolutions	7	ND	ND
48.	Sep-14	InStep Software	Schneider Electric	Provides real-time performance management and predictive analytics software solutions	ND	ND	ND
49.	Jul-14	Axeda	PTC	develops a cloud-based service and software for managing connected products and machines and implementing machine-to-machine (M2M) and Internet of things (IoT) applications	170	ND	ND
50.	May-14	Wurldtech	General Electric	Provides security solutions against the threat of cyber attack on critical infrastructure	ND	ND	ND
51.	Apr-14	I4C Analytics	Accenture	Develops advanced analytics applications for decision-makers and business users	ND	ND	ND
52.	Apr-14	Industrial Defender	Lockheed Martin (Leidos)	Develops cybersecurity, compliance, and change management solutions for the control systems	125	25	5.0x
Median					113	23	8.1x

A collage of black and white photographs of various global cityscapes, including New York City, London, and other urban centers. The images are arranged in a grid-like fashion, with some overlapping. A semi-transparent white banner is overlaid across the center of the collage, containing the text 'Leading Technology Bank with Global Reach'.

Leading Technology Bank with Global Reach



- M&A and Growth Equity focus – Enterprise value between \$50M and \$350M
- Reputation for closing deals at premium valuations
- A record 32 announced transactions in 2016 and 18 year-to-date in 2017 with buyers from around the world including Microsoft, Oracle, HPE, Rakuten, Carlyle, and Vista, and more than 50 current engagements
- High transaction volume fuels deep market knowledge and extensive worldwide technology contacts
- One of the largest tech banking teams in the world with 50 employees
- 15 years in business, 313 completed transactions, and 52 consecutive quarters of profitability
- Headquartered in Boston with offices in Silicon Valley, New York, London, and Minneapolis

Tech M&A Banking Top 2016 Dealmakers



TECHNOLOGY		
	Firm	# Trans.
1.	Morgan Stanley	45
2.	William Blair & Co	30
3.	J.P. Morgan Securities Inc.	29
4.	Goldman Sachs	27
5.	Evercore Partners	23
6.	AGC Partners	22
7.	Houlihan Lokey	22
8.	Raymond James	22
9.	GCA Altium	20
10.	BOA Merrill Lynch	17
11.	Jefferies	17
12.	Qatalyst Partners	16
13.	Arma Partners	15
14.	Petsky Prunier	15
15.	Pacific Crest Securities	13
16.	Pagemill Duff & Phelps	13
17.	Robert W. Baird & Co.	12
18.	JEGI	12
19.	Signal Hill	12
20.	Credit Suisse Securities	11



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 Real Estate
 Retail
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Fred Joseph Jon Guido Ben Howe Dennis Rourke Hugh Hoffman



Doug Hurst Greg Roth Elena Marcus Trevor Martin Charlie Schopp

SECURITY

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



Maria Lewis Kussmaul Ben Howe Joe Dews Russ Workman Eric Davis

DIGITAL MEDIA & INTERNET

AdTech
 Consumer
 E-Commerce
 Food Tech
 Gaming

Internet
 Mobile
 Social
 Virtual Reality / Augmented Reality



Jon Guido Elena Marcus Gee Leung Linda Gridley Mike Parker

INFRASTRUCTURE

Big Data
 Cloud Computing
 Comms Infrastructure
 Data Center

Energy & Industrial Tech
 Internet of Things
 Mobility Solutions
 Semiconductors
 Storage



Scott Card Markus Salolainen Joe Dews Rob Buxton Fred Joseph



Market-Defining Financings

Client	Investor	Check Size / Enterprise Value	Process and Outcome
 travel & expense made easy		ND / ND	<ul style="list-style-type: none"> AGC advised Certify, a leading enterprise SaaS company, on a majority investment from K1 Investment Management, a leading technology-focused PE fund In a targeted approach, AGC reached out to a select group of the top PE technology investors in a highly competitive process The invested capital provides liquidity for the founders and angel investors, enables a large acquisition for Certify, and allows for the significant operational expertise of K1 to help Certify continue to scale
 ZAPPROVED	 Vista Equity Partners	ND / ND	<ul style="list-style-type: none"> Zapproved engaged AGC Partners to complete a large minority/majority PE financing In less than 30 days, AGC had engaged the leading global PE tech investors in a highly competitive auction which resulted in Vista Equity taking a controlling position in the company The investment provided liquidity for angel investors, added cash to the balance sheet, and resulted in a strong strategic relationship for Zapproved to benefit from Vista's expertise in building enterprise SaaS companies
		\$27M / ND	<ul style="list-style-type: none"> AGC helped Building Engines, a leading real estate software provider, raise \$27M After bringing in multiple term sheets, with both minority and majority options, AGC assisted Building Engines in choosing the right partner with which to move forward The capital was a mix of primary and secondary for liquidity to shareholders and fuel strategic growth
		\$65M / ND	<ul style="list-style-type: none"> AGC kicked off a highly competitive growth equity process that ultimately brought in 8 term sheets from prospective investors Buildium moved forward with Sumeru and closed a \$65M capital raise The capital was a mix of primary and secondary to provide liquidity to shareholders and K1, and to fuel future strategic growth
		\$49M / ND	<ul style="list-style-type: none"> AGC advised Litmus on a \$49M capital raise that valued the company at 6x revenues AGC leveraged inbound interest to drive an intense 60-day process, soliciting multiple preemptive term sheets from top PE and strategic buyers, representing a valuation that was over 2x the original offer The invested capital was a mix of primary and secondary to provide liquidity to the existing shareholders and to drive strategic growth initiatives
		\$25M / ND	<ul style="list-style-type: none"> AGC closed a \$25M investment led by North Bridge Growth Equity The transaction included primary and secondary capital to provide liquidity to shareholders and to finance erecruit's first growth equity round
		\$375M / \$535M	<ul style="list-style-type: none"> AGC advised Planet Fitness on a \$375M capital raise led by TSG Consumer Partners at a \$535M value AGC conducted a frenzied auction in the middle of August and signed the definitive agreement roughly 60 days after signing the engagement letter Planet Fitness went public on the NYSE in August 2015 opening at an implied equity value of \$1.6B, 4.3x the pre-money equity valuation at the close of the AGC transaction
		\$70M / \$145M	<ul style="list-style-type: none"> AGC advised Mandiant on a \$70M capital raise at a \$145M valuation and 5.1x revenue multiple The proceeds were used to repurchase shares from investors and to fuel strategic growth initiatives Mandiant leveraged KPCB's knowledge and expertise following the investment and grew rapidly before being acquired by FireEye in 2014 for \$1B, 6x the pre-money equity value of the AGC growth equity transaction



Market-Defining M&A

Client	Buyer	EV / Revenue Multiple	Process and Outcome
 SIMPLYGON™	 Microsoft	ND / ND	<ul style="list-style-type: none"> AGC advised Simplygon, an AR / VR company, on its sale to Microsoft in January, 2017 Within two weeks of launching a market test, AGC generated multiple in-person meetings including several top global technology strategic buyers The highly competitive process generated multiple strategic bids Upon receiving Microsoft's term sheet, AGC negotiated seller friendly terms and our client signed the term sheet within 24 hours
FMCGDirect	 DELUXE	\$200M / ND	<ul style="list-style-type: none"> AGC advised FMCG Direct, a leading data-driven marketing services provider to financial services on its sale to Deluxe Corporation (NYSE: DLX) The Company had inbound interest from multiple parties which AGC fielded, keeping the appropriate amount of tension to create a competitive bidding environment AGC commenced outreach in less than two weeks of engagement resulting in over 40 NDAs signed and ~20 meetings with management AGC leveraged the high level of interest it collected from the outreach to negotiate a more compelling offer and better terms for FMCG
 L2	 Gartner	ND / ND	<ul style="list-style-type: none"> AGC advised L2, a provider of digital performance benchmarking to Fortune 500 brands, on its sale to Gartner AGC ran a highly efficient, disciplined process, reaching out to a carefully selected group of top digital media buyers and receiving multiple term sheets The Company's price expectations were very specific; AGC drove effective price valuation rationales to get buyers to meet those expectations and adopt a view of L2's data driven digital measurement capabilities as potentially transformative to their business
 iSIGHTPARTNERS	 FireEye™	\$275M / 7.4x	<ul style="list-style-type: none"> AGC initially advised iSIGHT on their \$30M capital raise from Bessemer in 2014, and subsequently advised the Company on their sale to FireEye (Nasdaq: FEYE) in January 2016 In light of inbound interest, AGC was engaged to run a rapid, highly disciplined M&A process to test the market and simultaneously stoke existing interest from the buyer at the table By positioning iSIGHT's superior technology, continued market traction, and viable growth strategy to the market, AGC was able to drive a competitive process that improved negotiating leverage resulting in optimal deal terms and a massive exit multiple
 Cognilytics <small>Analyze • Visualize • Monetize</small>	 CenturyLink™	ND / ND	<ul style="list-style-type: none"> AGC advised Cognilytics on a sale to CenturyLink AGC reached out to a targeted group of potential acquirers; of that group, several parties conducted an evaluation of the business and held introductory meetings with the management team Following receipt of an LOI, AGC pushed other prospective acquirers into a competitive process that resulted in a higher enterprise value and better terms with the ultimate acquirer, CenturyLink
 PROLEXIC	 Akamai	\$400M / 8.5x	<ul style="list-style-type: none"> AGC initially advised Prolexic on their \$30M capital raise led by Trident Capital and Intel in 2013, and subsequently advised the Company on their \$400M dollar sale to Akamai Following a competitive financing round, Prolexic was approached by Akamai to be acquired By driving an extremely competitive process and providing access to the right decision makers, AGC was able to achieve an 8.5x acquisition transaction multiple
 SS&C	 THE CARLYLE GROUP	\$1B / 8.0x	<ul style="list-style-type: none"> AGC advised SS&C on a \$1 billion dollar sale to the Carlyle Group at an 8x revenue multiple AGC set up an intense 2-day roadshow with the top 6 technology buyout firms: Carlyle, Summit, Thomas Lee, Tudor, Warburg Pincus, Welsh Carson AGC created an auction environment and generated bids in 30 days AGC drove a 80% premium to the pre-deal trading price



AGC Works With Over 800 Global Strategic Buyers

Accenture	CableVision	Fiserv	Johnson Controls	QinetiQ	Telefonico
Activision	Capgemini	France Telecom	Juniper Networks	Quintessence Software	Teradata
Adobe	CBS	Fujitsu	Kronos	RackSpace	Thales
ADP	Check Point	Gannett	L3	Raytheon	Thomson Reuters
Affinion	Cisco	GE Security	LG	ReachLocal	TIBCO
Akamai	Citrix Systems	Gemalto	Liberty Media	Redhat	Time Warner
Alcatel-Lucent	Comcast / NBC	Genband	LinkedIn	Rediff.com	Trend Micro
Alibaba	commvault	General Dynamics	Lockheed Martin	RocketHub	Trustwave
Amazon	Compuware	Getty Images	Lock Martin	Sage	Twitter
Amdocs	Constant Contact	Google	LSI	SAIC	Tyco
Ancestry.com	CSC	Groupm	Manhattan Associates	Salesforce	Ultra Electronics
AOL	Deloitte	GSI Commerce	Manpower	Samsung	Unify
Apple	Descartes	Harland Clarke	ManTech	SAP	United Online
ASG Software	Deutsche Telecom	Harris	Mercadolibre	Schneider Electric	ValueClick
Assurant	Digital River	Harte-Hanks	Micro Strategy	Scripts	Verizon
AT&T	Discover	HCL	Microsoft	Seagate	VeriSign
Avast	Discovery	Hitachi	Motorola	Siemens	Virgin Media
Avaya	Disney	Honeywell	NEC	SingTel	Visa
AVG	eBay	HP	NetApp	SK Telecom	Vivendi
BAE Systems	Electronic Arts	HTC	Netscout	Software AG	VMware
Baidu	EMC	Huawei	New / Asurion	Solarwinds	Web.com
Barracuda Networks	Equifax	IAC	New York Times	Sony	Webroot
BestBuy	Equinix	IBM	News Corp.	Sprint	Western Digital
Blue Coat	Ericsson	Informatica	Nokia	SRA	Western Union
BMC software	Expedia	Infospace	Nokia Siemens Networks	Staples	Wipro
Boeing	Experian	Infosys	Northrop Grumman	Sunguard	WPP
Bosch Security	f5	Intel	NTT	Symantec	Xerox
British Sky Broadcasting	Facebook	Intermec	Oracle	Syntel	Yahoo!
Brocade	For Software	Internet Brands	Orbitz	ATA	Yandex
BT	FICO	Iron Mountain	Open Systems	Tech Mahindra	Lynka
CA	First Data	JDSU	Pitney Bowes	Tekelec	





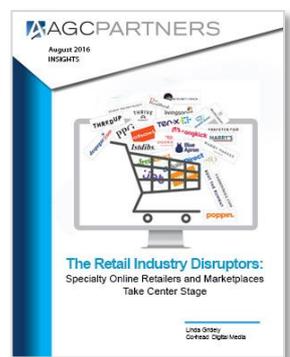
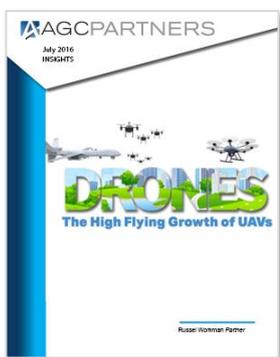
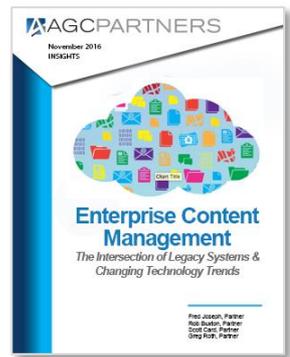
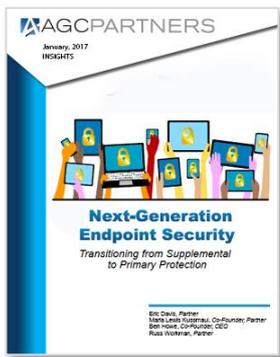
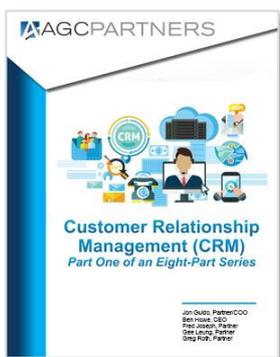
Premier Industry Investor / Buyer Conferences



- Three annual technology conferences optimized for private companies and entrepreneurs
- Leveraging a robust and proprietary 1-on-1 meeting format to arrange 6,000+ meetings between private company CEOs and investors/buyers at events throughout the year
- High-caliber panel discussions featuring renowned tech industry experts on hot topics and trends
- Leading public and private emerging growth companies spanning all major tech sectors, including Cloud/SaaS, FinTech, HCIT, E-Commerce, Infrastructure, IoT, Security, Mobile and Social, regularly attend our conferences
- 2,000 professionals from all of the leading PE / VC firms and corporate venture funds and strategic buyers attended our conferences over the past 12 months
- San Francisco 2017 featured 450 technology companies and 3,500+ 1-on-1 meetings
- Boston 2016 featured 170 technology companies and 1,500+ 1-on-1s
- London 2017 featured 100 technology companies and 1,000+ 1-on-1s



Deep Domain Expertise Across Sectors



- Our Partner authored “Insights” publications insure that we are ahead of important sector and financing trends
- We uncover new technologies that are beginning to emerge
- We uncover new companies in emerging landscapes
- We maintain dialog with the most active investors and strategic buyers
- We distribute to a proprietary list of over 10,000 industry participants



Global Expertise: 48 Cross-Border Deals in 18 Countries



AGC Works Smart and Hard – 313 Closed Deals

INFORMATION SECURITY & DEFENSE

SOFTWARE / TECH ENABLED SERVICES / IOT / ENERGY TECH

COMMUNICATIONS / SEMICONDUCTOR / IT INFRASTRUCTURE

DIGITAL MEDIA & INTERNET

HCIT

FIN TECH



Continued Momentum: 18 Deals Completed YTD in 2017

 **SIMPLYGON**[™]

sold to

 **Microsoft**

erecruit

merged with

 **BOND**

 **CARTERA**
commerce

sold to

 **EBATES**

a subsidiary of

 **Rakuten**

certify 

financed by





sold to

Gartner[®]

 **ZAPPROVED**[™]

financed by

 **VISTA**
EQUITY PARTNERS

 **Vigilent**

financed by

Undisclosed Investor

 **Apprise**

sold to

 **APTEAN**

 **dapresy**

financed by

 **verdane**
capital

propertybase 

sold to

BOSTONLOGIC
Technology Partners, Inc.

 **AVENTURA**
Situational Awareness

sold to

PHILIPS

 **Visible**
MEASURES

sold to

acuity 

 **DOOSAN**

has divested

 **DOOSAN** Doosan Hydro
Technology

in a sale to

 **SafBor**

FONALITY

sold to

 **NetFortris**

 **CLOUD**
CRUISER

sold to

 **Hewlett Packard**
Enterprise

 **Aptelligent**

sold to

vmware[®]

PRIMORDIAL 

sold to

 **NUANCE**

NON-DISCLOSED

A US security
technology company

sold to

A US application & net-
work performance man-
agement company



What Clients Say About Us

**Gary Gauba, President,
Advanced Solutions Group,
CenturyLink**

Gary founded and successfully sold three companies—Softline, Systech, and Cognilytics—all with AGC Partners as his advisor



There is nobody I would rather have in my corner...

“AGC inherited a complex situation, boiled it down to a very consumable story and ran a highly efficient and effective process. Ultimately they found the best buyer in Providence Equity, and drove a premium valuation for Untangle. There is nobody I would rather have in my corner than Russ and AGC.” – **Untangle sold to Providence Equity**

Provided invaluable counsel and execution support...

“Jon and his team were an incredible team of advisors and execution partners. At every step they provided invaluable counsel and execution support that changed what could have been a challenging process into an event that changed the lives of our senior officers and entire team. We were so delighted with the AGC Partners team that we increased their compensation above our initial agreement.” – **FMCG sold to Deluxe Financial**

Leveraged multiple indications of interest into an excellent outcome...

“AGC leveraged multiple indications of interest into an excellent outcome for all of our stakeholders, and provided advice to the Board and management that effectively balanced the deal structure and pricing.” – **M-Files raised a financing round from Partech Ventures**

We’re thrilled with the outcome...

“We’re thrilled with this outcome and greatly appreciate Maria’s hard work over the years as well as that of her team in helping to guide us to this point.” – **iSight Partners sold to FireEye**

24 x 7 commitment, creativity, and persistence...

“Their 24x7 commitment, creativity, and persistence drove continuous progress and kept communications flowing throughout the engagement.” – **Cognilytics sold to CenturyLink**

Super smart, responsive, and insightful...

“It was a pleasure working with AGC. Their commitment to the process was palpable. They have a very strong team who were not only super smart and responsive but also insightful and very well versed on our industry.” – **Litmus raised a financing round from Spectrum Equity**

Head and shoulders above the others...

“I’ve had the chance to work with many investment banks over the years. AGC stands head and shoulders above the others in three areas: they invested the time and energy to get to know our business at a really granular level; they were tirelessly persistent in working to achieve a great outcome; and the quality of both tactical and strategic advice that I received from Jon Guido was exceptional.” – **Cartera Commerce sold to Ebates**



- ✓ Strong Relationships with the Leading Strategic and Financial Buyers and Growth Equity Investors
- ✓ Outstanding Sector Knowledge Enables AGC to Effectively Position our Clients in the Market
- ✓ One of the Largest Global Technology Banking Teams
- ✓ Engagements Led by Partners, Not Handed Down to Junior Bankers
- ✓ Premier Industry Investor Conferences
- ✓ AGC Drives Both Big and Small Deals to Premium Valuations