

## Global Industrial Report

۲

77000710101

6

## Redefining Industrial Intelligence

10101010 501110101000

How an Infusion of Technology Is Transforming How Companies Think and Act

#### CONTENTS

- 2 Unlocking Potential
- 12 Technology: A Disruptive Force in Industrials
- 14 Full Speed Ahead

Baird's Experts Discuss Continuing Developments at the Intersection of Technology and Industry

Embracing Transformational Technologies Is an Imperative and Opportunity for Global Industrial Companies

Baird Capital Discusses the Impact of Technology in the Transportation & Logistics Industry

Jon Langenfeld, CFA, is Baird's Head of Global Equities and Director of Research. He serves as part of the Baird Executive Committee and co-heads Baird's equity origination efforts. Prior to joining Baird in 2000, Jon was a senior manager at PricewaterhouseCoopers, providing supply chain consulting services.

## Redefining Industrial Intelligence

### How an Infusion of Technology Is Transforming How Companies Think and Act

2018 Global Industrial Report

#### A LETTER FROM JON LANGENFELD

The industrial sector is no stranger to upheaval. Over the past half-century, the rise of lean processes, a shift to outsourcing and the advent of automation have each transformed the industry. Today, an infusion of digital solutions is transforming plant floors and production lines and altering recruiting, business models and strategic planning – in many ways, a true reboot of the sector.

Baird has experienced the evolution of the global industrial sector firsthand. Founded in 1919 and headquartered in the center of the U.S. Industrial Belt, we have closely observed and actively participated in the growth of the sector by working with leading companies around the world. Baird's deep expertise, extensive experience and expansive relationship network enable us to support companies' growth and development through market cycles and secular changes.

Baird's annual Global Industrial Conference, now in its 47th year, provides attendees with unparalleled access to perspectives from the firm's renowned research analysts and senior executives from the world's foremost industrial executives. Our 2018 Global Industrial Report shares some of those insights and examines the trends that will transform the industrial sector.

Jon A. Tangenfild





# **Unlocking Potential**

### Baird's Experts Discuss Continuing Developments at the Intersection of Technology and Industry

A panel of Baird's senior research analysts gathered to discuss the infusion of technology into the industrial sector. In the following discussion, the group explores the implications of this intersection for industrial companies. Technology is becoming increasingly ubiquitous across the industrial space. Digital technologies, data analytics, artificial intelligence and connectivity are transforming traditional business models and bringing a new level of innovation to often slow-to-evolve industries. Today's industrial players aren't just developing competitive products and services – they are leveraging technology in transformative (and potentially disruptive) ways.

MODERATED BY ALLEN ROOT



ALLEN ROOT LEAD ANALYST, INDUSTRIAL SECTOR STRATEGIST



RICK EASTMAN SENIOR RESEARCH ANALYST, ADVANCED INDUSTRIAL EQUIPMENT



JAYSON NOLAND SENIOR RESEARCH ANALYST, IT SECURITY & INFRASTRUCTURE



**ROB OLIVER** SENIOR RESEARCH ANALYST, SOFTWARE & SAAS



TIMOTHY WOJS SENIOR RESEARCH ANALYST, BUILDING PRODUCTS AND GENERAL INDUSTRIALS

Companies also want real-time visibility into machine performance and product line functions, both to measure them and to help avoid unplanned downtime.

#### ALLEN ROOT:

HOW DO THE COMPANIES IN YOUR COVERAGE UNIVERSE VIEW INDUSTRIAL FIRMS? ARE THEY SEEN AS PARTNERS OR COMPETITORS? WILL TECHNOLOGY FIRMS LOOK TO DISINTERMEDIATE INDUSTRIAL SERVICE BUSINESSES WITH THEIR OWN DATA ANALYTICS?

#### ROB OLIVER:

We're not yet at the point where the Internet of Things (IOT) has had a meaningful impact on any of the businesses that we cover, but it's starting to. You can definitely feel the pull. A number of years ago, John Chambers from Cisco said IOT was going to be a \$19 billion market. I think we're a little closer to that now, but we're not at that point yet.

One of the overriding themes in our group is real-time visibility. That's a key driver for what we hear are increasingly the most urgent needs of industrial companies: insight into the sales pipeline, financial and accounting data, applications and more – particularly mobile applications that touch revenue. Companies also want real-time visibility into machine performance and product line functions,

both to measure them and to help avoid unplanned downtime. We believe companies want that data to be able to drive performance and analytics to avoid expensive offline time.

There are a lot of companies in my group talking about that. One example is PTC, the former Parametric. They've spent more than \$600 million since 2012 to amass an offering in IOT. They're doing about \$100 million in revenue in that business, so they are not yet close to recouping their investment. We think they have a decent shot because they are actually in the workflow of many of the industrial companies but in a different area. They've traditionally been in the product design area, not on the factory floor. Making that pivot out to the factory floor is not going to be easy. In general, our companies are going after real-time data to determine who the "winners" are, and each company in our group has specific ways they're trying to go at it.

#### RICK EASTMAN:

Real-time visibility is key for traditional industrial companies, too. I think industrial technologies have evolved to a point where they're certainly driving manufacturing efficiencies, quality, production line speeds and more. However, there's additional value to be gained from the data stream now being collected and used by companies like Rockwell Automation to drive supply chain and production efficiencies. Common production challenges such as "How much inventory is on the work cell?"; "How much is on the production line?"; "Where do 66 Manufacturing companies are willing to and in many cases have partnered with information technology companies with competencies rooted in data management tasks ranging from routing, storage, security to others. 99



we need to replenish inventories?"; and "Which asset is at risk for unplanned downtime?" There are dollars to be saved addressing deficiencies as a result of the insight gained from analyzing and applying business rules to this data stream.

The data flow is tremendous – it is still a challenge to manage production processes in concert with real-time visibility. We're not there yet, but that's the expectation. Another layer here is the analytics around predictive maintenance and preventative maintenance. I think we're digging deeper down into those levels of savings. The industry is not there yet by any means, but that's where the investment is being directed.

#### JAYSON NOLAND:

For our list of software and SaaS companies, like Cisco and HP, industrial firms are viewed as partners. There is a lot of talk about smart cities. Barcelona and responsive parking come up a lot. Singapore and the use of cameras for safety do too. You hear a lot of talk about predictive analytics and how they can be used to anticipate and develop a fix in industrial applications – school buses for safety and wireless access and sensors on everything from the shop floor out through industrial applications, for example. So from my world of IT storage, infrastructure and security, the industrial world is seen as both customer and partner.

#### RICK EASTMAN:

I think that from a manufacturing perspective, where the automation control layer (or Operational Technology) is provided by a Rockwell Automation or Siemens, for example, companies

are concerned with optimizing the production and assembly process and finding cost savings, whether it's in the supply chain or for the customers. Manufacturing companies are willing to and in many cases have partnered with information technology companies with competencies rooted in data management tasks ranging from routing, storage, security to others. What industrial companies are bringing to the table are the applications, domain expertise and real-time data collection capabilities, but it would be challenging to fund certain data management tasks on their own – so, they're more open to partnerships to achieve a robust solution.

#### ALLEN ROOT:

ARE THE SPECIALIZED NEEDS OF INDUSTRIAL COMPANIES DRIVING FURTHER INNOVATION IN TECHNOLOGY? OR, IS THE "LEARNING CURVE" ASSOCIATED WITH CERTAIN TECHNOLOGIES HOLDING BACK THE PACE OF ADVANCEMENT FOR INDUSTRIAL BUSINESSES?

#### JAYSON NOLAND:

As far as the adoption of IOT and other technologies go, I would say that this is going to be a long road. We've heard about the importance of IOT for many years, but even where those solutions make a lot of sense, it just takes time for municipalities, for a shop floor, for other applications to be implemented. Unless it's green-sealed, it's really hard to build these technologies internal to the systems but it's happening. Things like smart tractors and smart industrial equipment will happen, but I think it's going to progress at a fairly predictable and moderate pace.



#### ROB OLIVER:

One of the things that plays into that measured pace is companies' caution about getting locked into one vendor environment. It's sort of analogous to what's happening in the cloud infrastructure space after Amazon Web Services kind of jumped out to a big lead. We've seen companies retract and say, "I don't want to be blocked into one particular vendor." To illustrate the idea a bit, imagine you work with PTC. They could do a good job for you with the IOT access they have together, but you also do business with Cisco, and you've got folks from GE Predix calling you on top of everything else.

I think Predix is an illustrative example of the pace at which the market is evolving. GE has not had success with Predix early on – it came in with a sort of catchall solution and tried to be all things to all people. It's now retracting a bit and realizing that vertical expertise is important, which is why I feel like PTC has a chance because they vetted the workflow of the industrial manufacturing and aerospace spend for many years on the CAD and PLM side. You expect a company like an Aspen Tech, which is deeply embedded in the ERP workflow of oil, gas and process industry companies that are trying to come out with a massive performance monitoring, to excel. Companies could get that chance to be that successful because of the trust the partners have, the fact that they're embedded in the workflow and their understanding the data, but in general there's some trepidation about committing wholesale to one vendor right now.

### 66 More recently data security has become a major concern, whereas previously an asset's lack of connectivity provided the ultimate firewall. 99

#### RICK EASTMAN:

It's also important to distinguish between discrete manufacturing and process-oriented industries. There's more standardization around the automation function in the process industries than in discrete markets. In discrete manufacturing, there are a number of challenges the key players have been attacking, with data aggregation out of the work cells a major hurdle. Data transfer rates have also been a challenge (which could be addressed by 5G wireless communications in the future). More recently data security has become a major concern, whereas previously an asset's lack of connectivity provided the ultimate firewall. So, while there are some real challenges they are all being addressed, if you will, and that's where this area of vertical expertise and domain expertise has become very important. How do you get the data? How do you aggregate the data? How do you move it? How do you analyze it for very fragmented manufacturing operations? It's a little different on the discrete manufacturing side versus the process side.

#### ALLEN ROOT:

HOW DO YOU THINK INDUSTRIAL COMPANIES WILL MONETIZE THIS INCREDIBLE AMOUNT OF DATA THAT WILL EVENTUALLY COME OFF SHOP FLOORS?



#### **ROB OLIVER:**

There's a couple of ways we see that evolving. In ways, it's happening already. We've seen the large infrastructure of the service players. I'm thinking of Amazon Web Services, Microsoft, Azure and Google Cloud platform. They've already been engaging in what we might call machine learning as a service, which is essentially offering their machine learning expertise to anybody with their processing power. The days where you needed your own servers, your own processing power, are gone. You can just rent that from them. That's a big innovation. So, monetization is less about charging for data and more about optimizing processes around that data to save money. We also believe the question of data rights will emerge and will be a major topic going forward. Companies want to be sure the data they have is theirs.

#### JAYSON NOLAND:

There's a lot of talk in the building security space about the "winner" being the company or companies with the most data. It's a hot topic and I wouldn't say it interferes with the world of industrial, but it's important to note the data is used to power the solutions these companies are selling as a subscription. Those companies wouldn't sell the data, but they would collect it and look to mine it for predictive analysis, finding breaches and those sorts of things on the security side.

#### ROB OLIVER:

In many ways, the recurring revenue stream of a subscription is the holy grail for many companies. In the past, you'd buy a product, open the box and fill out a little card to get the warranty. That was a way for a company to track customers. Companies still want a way to have an ongoing relationship with their customers. In the software world, Salesforce is probably the greatest example of this. They converted a business that was on-premise sales and managing the sales pipeline into an ongoing customer success relationship business.

Companies increasingly see value in developing these kinds of relationships and subscriptions, too, because upfront cost is lower, you can work it through your operating expense line as opposed to your capital expense line and you get ongoing iterative value out of the subscription. I think it's a win-win. It's just a question of who is going to have the power with their customers to be able to do that as a pivot from a more traditional business model. On the industrial side, my general comment would be companies with deep relationships with the building community are probably well-positioned to move toward this kind of model because they have superior technology and the great relationships. We think these models are very attractive.



#### RICK EASTMAN:

We're seeing some movement in traditional industrial companies, but it's more around mobile (vs. fixed) assets. The shop floor data stream is incredibly proprietary. Companies are reluctant to share their own shop floor information publicly, but they will use it on a global level in their own facilities to drive efficiencies and savings. However, there are asset monitoring service models that are early efforts to monetize. Now if you move toward mobile assets – say, where companies like Trimble or Zebra have strong mobile portfolios – I think the SaaS model starts to emerge around sharing data, a customer's ability to share data, data might be stored in the cloud, or asset or device management.

In the case of Zebra's business model, the focus is on selling asset management software in the subscription format for remotely monitoring devices for uptime and downloading upgraded software. It's more about keeping assets utilized for a greater period of time, rather than capitalizing on a customer's data. I think there are opportunities and efforts to do that, but again those efforts are kind of in their early stages because in many cases the scale is not there and the technology's not in the market yet. I think the bigger opportunity is around asset or device management when it comes to driving some sort of recurring subscription management.

### This is the 'last mile' part of the business that can be lower margin, and if you don't make those partners more productive, companies can lose share. ??

#### TIM WOJS:

We've seen similar themes play out in areas like the mobile operations, lighting or helping installation and dealer customers be more productive. This is the "last mile" part of the business that can be lower margin, and if you don't make those partners more productive, companies can lose share. Some HVAC companies use mobile and predictive analytics to better utilize fleets and engineering guides.

Take Lennox, for example. They sell directly to dealers, and it costs money for those dealers to drive around calling on customers all day. If something's wrong with an HVAC unit at a residence, dealers can tap into analytics from the unit to show up with the correct part, fix the unit and spend anywhere from 50-75% less time at that customer. That creates a sort of virtuous circle for Lennox. They're manufacturing units with these capabilities and then wrapping it to the dealer to provide this service. The dealer gets more productivity and is thus better able to service the end customer. They're able to improve their business over time. It's kind of a win-win for everybody and it makes the relationship tighter. The overarching impact is that when Lennox goes to raise prices, they're able to do it with their dealers because there are other things they're doing for their customers to be able to improve their bottom line.



#### ALLEN ROOT:

ARE THERE ANY TECHNOLOGIES IN THE PIPELINE THAT HAVE THE POTENTIAL TO BE TRULY DISRUPTIVE TO THE INDUSTRIAL MARKET?

#### JAYSON NOLAND:

I think artificial intelligence (AI) and automation are real trends and going to become even more real with time. They could absolutely eliminate repetitive tasks as well as enhance a human's ability in any number of processes. It's pretty remarkable what people are thinking about regarding uses of AI. And while quantum computing (QC) isn't really here yet, that discussion trends a little more extreme because could be used to unencrypt data that is currently encrypted in the future.



#### RICK EASTMAN:

I would echo the comments on the potential impact of Al. You're seeing more and more of it. It's even present in the early stages of the robotics market – certainly with co-bots. Adding incremental intelligence to the robotics market would be significant. Right now, if three scenarios are presented to a robot, there is the real chance it may freeze (with indecision). With additional Al, robots would be able to at least sift through three scenarios in real time and arrive at a decision. That would be a major development. I would also underscore the speed of networks. I go back to the shop floor – to do anything in a deterministic way or make real-time decisions, the networks aren't there yet. In some cases the processing power is not there yet in the devices. The speed of networks is an issue and needs to continue to evolve.

#### TIM WOJS:

When you think about buildings and the products that go in the buildings, low-energy Bluetooth has had a big impact on adoption because it really helps eliminate the need for a lot of hard wiring. A good example is Allegion (ALLE). Hardwiring an interior door for wireless access is about \$3,000 an opening. Allegion incorporates lower-energy Bluetooth and this can cut the installation cost by up to two-thirds. The connectivity through low-energy Bluetooth, at least from our perspective, is probably the most immediate benefit in terms of adoption.

#### ALLEN ROOT:

TO THAT POINT, ARE THERE COMPANIES THAT ARE MORE ADEPT AT CAPITALIZING ON OPPORTUNITIES THAT ARE NEW AND POTENTIALLY GAME-CHANGING?

#### TIM WOJS:

There are varying cases. Some companies are better than others at pursuing those type of opportunities and it probably is going to be based on your competitive positioning and how focused you are. A company like Allegion, which has a really good core business and a strong market positioning and margin structure, we believe they have more of an ability to spend on newer technology development. Lennox, which is very focused on residential HVAC, owns their own distribution network and has more leeway and focus to make those 66 The business case for more intelligent assets is being made to capitalize on connectivity and the ability to move data. 99



#### ALLEN ROOT:

MANY INDUSTRIAL COMPANIES BUY SOFTWARE ASSETS-WHAT ARE THE IMPLICATIONS FOR VALUATION WHEN A COMPANY PAYS A HIGH REVENUE MULTIPLE TO ACQUIRE A BUSINESS?

#### RICK EASTMAN

There is a movement toward these kinds of deals. If you're a hardware company, you need to make your hardware smarter. A lot of the effort on the software side is to do exactly that. A benefit is a

investments, versus selling through a third-party intermediary. Acuity has used its industry leadership position to focus on developing next-generation, connected lighting systems – essentially, making a lighting fixture more of a "node" in a network, collecting consumer and employee data and offering building owners the ability to use this data to help improve their operations – from things like better deployment of employee resources, to improving merchandising, to helping customers find a product on a merchant's website on the physical store shelf.

Companies that are more focused, have better market positioning and simply better markets in general have had the benefit of making these investments ahead of time. higher gross margin but the business case on the shop floor is still being proven. That's probably one of the biggest hurdles. In a way, it's a matter of collecting the data, having the analytics to put around the data and illustrating the business case for upgrading the shop floor. To fully enable the capabilities may require accelerating the replacement cycle for existing manufacturing assets and that may take time to demonstrate the ROI.

### In a way, it's a matter of collecting the data, having the analytics to put around the data and illustrating the business case for upgrading the shop floor. ??

Given the current market for capital goods spend and the slow but progressive growth we're seeing, capital spending budgets haven't ratcheted up and they're not likely to. But I do think the business case for more intelligent assets is being made to capitalize on connectivity and the ability to move data. So I think there's a little bit of a race at this point to add application-specific software onto the shop floor that can distinguish your expertise in these verticals.

Everybody's talking about making connectivity, making their hardware assets smarter and trying to be experts in their verticals. I think it's viewed positively. Yes, it costs more but you're seeing the benefit in the gross margin. It's also elevating the entry barriers into their specific verticals. Quite frankly, it is making the business' traditional "manufacturing business" stickier. There's a subscription element to it, or at least a software element to it, and also less capital intensity. All positive things.





Baird Capital

## Technology: A Disruptive Force in Industrials

Embracing Transformational Technologies Is an Imperative and Opportunity for Global Industrial Companies

#### AUTHORS

JOEL COHEN MANAGING DIRECTOR CO-HEAD, BAIRD GLOBAL INDUSTRIAL INVESTMENT BANKING JOE PACKEE MANAGING DIRECTOR CO-HEAD, BAIRD GLOBAL INDUSTRIAL INVESTMENT BANKING Global industrial companies are being presented with enormous opportunities to embrace technology, and those that do are garnering premium valuations. With the alignment of a real need for efficiency, the accessibility of enabling technologies and existing capabilities to deploy these tools, many industrial companies are capable of tremendous growth. While embracing the digital world has its own set of challenges, there are many examples of industrial companies that are navigating these waters with great success.

#### PREMIUM VALUATIONS FOR TECHNOLOGY-RICH INDUSTRIAL COMPANIES

Valuations in both the M&A and public equity markets have materially increased in recent years. This trend is magnified for technology-rich industrial companies, which are being rewarded with substantial premiums. As an example, in the public equity market, industrial technology companies are trading at a ~600 bps EBITDA multiple premium to the broader industrial market, up from a typical premium of ~300 bps.

So why has the technology premium expanded so significantly? The fundamental factor in our view is the urgency to create or defend against the disruptive

forces of technology. Big data, artificial intelligence, software-as-a-service, collaborative robotics, 3-D printing, autonomous vehicles and the industrial internet of things are a few of the technological trends fundamentally changing the industrial landscape. But the seismic shift is that innovation is coming at an alarming rate. A recent study by global consulting firm McKinsey & Company estimates that while it took a disruptive technology five years to reach scale (defined as \$1 billion in revenue) in the recent past, such progress is now achievable in just one year. Investors are realizing that companies with a greater focus on adopting and implementing new technologies organically or through acquisitions are better equipped to realize outsized benefits and growth.

#### THE ENVIRONMENT IS RIPE FOR TECHNOLOGY ADOPTION IN INDUSTRIAL MARKETS

Most industrial companies are facing multiple challenges that can be substantially mitigated through the adoption of the appropriate technology. Wage rates have been rising throughout the globe, and labor productivity has been slowing. Globalization has led to increased supply chain complexity, logistics uncertainty and intensified competition. Furthermore, customer requirements are rapidly evolving, and global regulations are proliferating. Technologies that help manufacturers reduce labor costs, increase speed and certainty to market, improve connectivity, optimize efficiency and comply with regulations are an imperative to compete in most industrial markets today.

#### AN ALIGNMENT OF FACTORS DRIVES SIGNIFICANT OPPORTUNITY FOR INDUSTRIAL COMPANIES

The need for change certainly exists in most industrial markets. But what is really exciting is that now the low-cost enabling technologies and the resources necessary to deploy them are also readily available. Enabling technologies such as software, connected machines, sensors, machine vision and robotics have broad-based applicability and can be procured at radically lower costs than just a few years ago. The cost of a robotic spot welder, for example, has tumbled by 27% from 2015 to 2016 and will fall another 23% by 2025, according to a recent study by the Boston Consulting Group. As a result, automation systems and robotics are being heavily deployed globally in many end-market applications, including pharmaceutical manufacturing, agricultural production, food manufacturing, warehousing and logistics. The advances in software and the advent of the industrial internet of things are enabling companies to analyze, utilize and often monetize large volumes of

data in a variety of activities, including monitoring equipment, managing production, optimizing resource utilization and improving customer service.

Unlike pure technology startups, many industrial companies have a host of differentiated capabilities and resources that provide them with a tremendous advantage to deploy new technologies. The combination of deep customer relationships, application expertise, an established installed base, brand recognition, global access and financial resources are powerful tools in helping companies rapidly gain market penetration with new technologies. Many industrial companies are uniquely qualified to disrupt their markets but they need to act decisively before the benefits of their head start erode. Several high-profile industrial companies have been transforming their business models to harness disruptive technology. GE, as an example, has the ambition to more than double its software revenue to \$15 billion by 2020, making it one of the largest software companies in the world. At Honeywell, half of its 11,000 engineers are focused on software development.

#### A STEEP LEARNING CURVE IN ADAPTING TO THE NEW DIGITAL REALITY

This change is not organic or without friction for many industrial companies. Success is often dependent upon developing the expertise to evaluate technology and its trends and shifting the corporate culture to facilitate effective recruitment and the retention of scarce talent. It is also vital to understand the trade-offs between internal development and acquisition of technology, and, in the case of M&A, how to appropriately value technology targets. While not trivial to overcome these obstacles, the rewards for those industrial companies that successfully navigate this path are gigantic.





# Full Speed Ahead

Baird Capital Discusses the Impact of Technology in the Transportation & Logistics Industry Transportation & Logistics presents a universal way people might experience the impact of the transformational changes occurring at the intersection of the technology and industrial sectors. Baird Capital sees significant potential for investing in technology companies that serve Transportation & Logistics, among other end markets.

Not long ago, the transportation industry was primarily a manual operation. Over a relatively short period of time, massive change in the sector has largely been driven by the increasing need for "on-demand" service, both on the supply side via real-time automated operations and on the demand side driven by rapidly evolving consumer expectations.

#### OPTIMIZING OPERATIONS

Every day, progress is made in terms of what is possible with data. In the past, data was used in a limited fashion to monitor operations. Then, data was used to automate processes. Finally, we've reached a place where data can make predictive and prescriptive recommendations. This level of insight and intelligence has been driven by three key technology trends: data collection, computing power, and adoption of the Cloud. First, the ability to collect and access massive amounts of data, along with the availability of cheap storage, means that transportation companies can collect drastically more information today than they could have in the past. Second, because computing power is becoming more powerful while also becoming increasingly cost-effective, companies can allocate resources to analyze the collected data more efficiently. Third, the existence of the cloud, as well as mobility through smartphones, allows the information collected to be easily accessed and put into use from a variety of endpoints – a crucial factor in the Transportation & Logistics ecosystem where companies are often managing massive fleets.

Taken together, these three components open the door for transportation & logistics companies to modernize operations and build real-time businesses. For example, technology can



automate the matching process between shippers and truckers, fleets can be tracked and managed from all over the world via advanced sensors and individual contributors such as drivers can receive real-time feedback on their performance. Through monitoring and analyzing readily available data, companies are able to start predicting patterns and run businesses in a very different, operationally efficient way that meets or exceeds rapidly evolving consumer expectations.

#### CATERING TO CONSUMERS

Consumer expectations from an e-commerce standpoint have risen rapidly and show no signs of abating. For example, customers ordering products online are becoming accustomed to free shipping and delivery within 48 hours or less, whether they are buying something from a mom-and-pop shop or from a bigger player – an effect that can be attributed to the rising popularity of Amazon Prime service.

This shift in consumer expectations is grabbing the attention of large, powerful companies in a variety of industries given varied supply chain exposure. For example, Verizon bought Fleetmatics, a fleet management company, and Target recently bought Grand Junction, a delivery technology platform – two examples of non-core service acquisitions that we believe better position the buyers to meet customer and business partner expectations. Investors are also paying attention, as \$16 billion was invested globally in Transportation & Logistics deals in 2016, up 75% from 2015.

It can be difficult for smaller, privately held companies to meet rising consumer expectations. Increasingly, they are having to invest in state-of-the-art warehouse management systems (WMS) to automate the tracking of inventory levels and purchasing to ensure they can deliver to increasingly shorter lead times and integrate data with logistics providers. High-end systems may include tracking and routing technologies using voice recognition, radio frequency identification (RFID) and even collaborative robots.

We believe this creates meaningful opportunity for new technology platforms to specifically serve small and medium-sized businesses focused on more specialized audiences. Baird Capital sees significant potential for investing in Technology & Services and Industrial Solutions companies that help businesses compete and thrive in a land of giants.

## BAIRD'S Global Industrial Conference

For more than 46 years, Baird's Global Industrial Conference has provided a unique forum for company leaders to connect with current and future shareholders as well as industry decision-makers.

### Making Connections, Creating Opportunities

As one of the premier events of its kind in the United States, Baird's Global Industrial Conference attracts C-level speakers from the world's foremost industrial companies, providing a unique opportunity to connect with the "Who's Who" of the industrial and energy sectors. These leaders share their companies' stories with attending institutional and private equity investors, portfolio managers and buy-side analysts via fireside chats, formal presentations and 1–1 meetings, all of which are arranged by Baird's acclaimed conferences team.

FOR INFORMATION ON BAIRD'S Other Investor Conferences VISIT BAIRDCONFERENCES.COM.

## BACKED BY Baird's integrated Platform



billion

Baird Capital's investment and operating professionals in the United States, Europe and Asia have raised more than \$3.3 billion in private equity and venture capital and invested in more than 300 portfolio companies.

#### TO LEARN MORE ABOUT BAIRD'S ROBUST GLOBAL INDUSTRIAL PLATFORM, VISIT INDUSTRIAL.RWBAIRD.COM.

\$135 billion.

Jon Langenfeld, CFA Head of Global Equities Director of Research

Dan Renouard, CFA Co-Head of Global Equities Director of Distribution

Amy Junker Head of Global Corporate Access

Patrick Spencer Vice Chairman Institutional Equities, Europe

Steve Holt Head of International Equity Sales Joel Cohen Co-Head of Global Industrial Investment Banking

billion in transaction value and 518 financings raising more than

Joe Packee Co-Head of Global Industrial Investment Banking James Benfield Partner, Baird Capital

Andrew Brickman Partner, Baird Capital

Scott Hoffman Operating Partner, Baird Capital

Andrew Tse Partner, Baird Capital



To learn more about Baird's Global Industrial platform:

Call: 800-79-BAIRD (800-792-2473) Visit: industrial.rwbaird.com Follow:



@rwbaird @bairdconference

<sup>1</sup>Greenwich Associates U.S. Equity Investors – Small-/Mid-Cap Funds, 2004–2017. Survey conducted with 101 U.S. small-cap and mid-cap fund managers and 214 fund managers and 300 traders, respectively. Rankings for qualitative metrics are based on leading research firms in survey.

e2017 Robert W. Baird & Co. Incorporated. Member SIPC. First use: 11/2017. MC-87861.