Smart Industry 2017

The 3rd Annual Gathering of Digital Innovators

—Smart Industry 2017 Conference Retrospective
THE PARTING CHALLENGE

In the final presentation of the 2017 Smart Industry conference, where hundreds of professionals from across industry gathered in Chicago to celebrate the spectrum of digital transformation in the industrial space, Glen Allmendinger issued a challenge to attendees. During his speech, the president and founder of Harbor Research implored the room to transform their approach to information technology and reimagine ways in which their machines, data, personnel and systems interact.

It was a bold call to action from Allmendinger, but the hundreds in the room had just experienced three days of deep dives into this world—dozens of breakout sessions and keynote presentations exploring these topics, complemented by tours of facilities leading the charge into Industry 4.0 and networking with fellow-thought leaders, early adopters and some just dipping their toes into smart manufacturing.

Allmendinger admitted that the roadmap to success has not yet been defined. “But it’s still early in the game,” he stressed to a room full of digital-transformation players intent on winning.
What are we talking about here?
A look at the themes of the annual Smart Industry Conference

DISCOVER TECHNOLOGY’S TRANSFORMATIVE POTENTIAL

The umbrella that is “digital transformation” is a large one, covering everything from big data to tiny sensors, virtual reality and a clearer view inside machines than ever before possible. With this in mind, the themes at play in the annual Smart Industry conference are varied.

- Additive 3D manufacturing
- Data analytics
- IT/OT convergence
- Industrial Internet of Things
- Mobile worker enablement
- Asset performance management
- Cybersecurity
- Augmented/virtual reality
- Communication protocols
- Digital twin
- Robotics
- Machine Intelligence
Transformation in Action—Facility Tours During the Smart Industry Conference

Concepts are at the core of the Smart Industry conference. But seeing the tenets of digital transformation put into practice during tours of Chicagoland facilities offers conference-goers equal parts education and inspiration. Attendees can choose the tour that most interests them; this year four options were offered.

The Honeywell UOP facility, where attendees dug into the technologies that are changing how plants operate.

Chicago’s Digital Manufacturing and Design Innovation Institute, a futuristic facility that offers a glimpse at the vast opportunities with smart manufacturing.

The Pacesetter Steel Plant—a real-world, working example of modern approaches to revolutionizing antiquated industries.

mHUB Chicago, where tour-goers accessed a working laboratory for digitally-savvy startups, with a focus on physical product development and smart manufacturing.
EXELON INNOVATING ITS WAY TO THE DIGITAL PLANT OF THE FUTURE

As the United States’ leading provider of zero-carbon nuclear energy and operator of a balanced—and growing—array of natural gas, hydro, wind and solar assets, Exelon’s 35,000 megawatts of owned capacity already comprises one of the nation’s cleanest and lowest-cost power-generation fleets. But beginning in earnest some five the years ago, Exelon set out to create a culture of innovation that would ensure the company’s continued leadership in the delivery of clean, reliable and efficient power to the customers who rely on it day in and day out across the nation. In this presentation, Joan shared how Exelon encourages and nurtures innovation throughout the company, including the work of the multi-disciplinary Digital Plant Transformation Team that helps to evaluate, pilot and implement new, digitally enabled work processes ranging from electronic work packages for mobile operators to behavioral analytics that can head off organizational issues that might lead to operational problems.

“We position innovation as a business driver.”
NAVISTAR Closes the Loop on Product Design Using Real-World Data

Dan Pikelny explored how the commercial-vehicle manufacturer helps its customers keep trucks and buses on the road by offering real-time visibility into driving conditions, then synthesizing that data to inform vehicle design. Rather than guessing how a truck might be used and testing vehicles based on those assumptions, Navistar can use telematics, GPS and other data to identify real-world usage patterns and adjust the vehicle’s future design to ensure they meet these needs. By capturing and analyzing a steady stream of data, Navistar can immediately project the lifetime impact of potential problem areas and address them before they grow larger. As a result, not only can Navistar identify issues likely to impact an entire group of vehicles six months quicker than before, but also the product-development team can ensure that problematic parts are modified immediately during production and the vehicle’s design is adjusted in future versions of the truck model.

“Data enables us to identify performance issues before they manifest themselves as problems.”
STEELCASE TRANSFORMING INTO A DATA-DRIVEN ORGANIZATION

In March 2017, Steelcase announced a strategic partnership with Microsoft to explore the future of work, jointly introducing a range of technology-enabled spaces designed to help organizations foster creative thinking and better collaboration. This market-facing digital transformation of furniture and office spaces reflects a no less wide-ranging internal initiative to digitally transform manufacturing operations at the $3 billion company’s 12 manufacturing facilities around the world. During his keynote presentation, Steve detailed his efforts, challenges and triumphs in transforming his furniture-manufacturing enterprise into a data-driven organization.

“The amount of information available now is exploding. And it is going to create a great time for manufacturing.”
FROM EQUIPMENT-MAKER TO SOLUTIONS PROVIDER: CATERPILLAR’S DIGITAL METAMORPHOSIS

“It’s not good enough to just give a piece of equipment, we want to manage uptime,” said Tom Bucklar during his keynote at the conference, where he examined how Caterpillar, the world’s leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines and diesel-electric locomotives, is merging its expertise in iron with new and evolving digital capabilities to address customer pain points. Caterpillar is making investments in analytics to not only detect failures, but predict them before they happen.

“We certainly have our version of the Industrial Internet of Things. In the 1990s, we started connecting our machines with telematics and realized how powerful that was.”
The Smart Industry conference features dozens of breakout sessions in three business case tracks—Optimize Performance, Innovate Processes, Eliminate Surprises—that enable deep dives into specific topics. Experts from the fields of valve-manufacturing, the auto industry and commercial refrigeration shared insights on their unique digital transformations. Plastics fabricators, waste-processors and steel handlers shared their stories with audiences eager to steal good ideas and avoid growing pains.

See some examples on the following pages...
Diving deep…breakout sessions enable closer looks at big topics

GEoffrey Bennett: GKn Driveline Rises to the Auto Industry’s Traceability Demands

The business analyst detailed how he brought traceability together across company functions (welding and assembly, for example), all while leveraging analytics across this newly visible data. “With just a serial number, what used to take hours to find now takes seconds,” Geoffrey said, before detailing the implementation of smart-factory technologies, such as track-and-trace, statistical process control and electronic asset management.

John brandt: Discrete Manufacturers Realizing Productivity, Profitability Gains Through IOT

Brandt, CEO and founder of The MPI Group, celebrated how, just in the past few years, manufacturers have enthusiastically implemented elements of the IoT and begun reaping immediate rewards. “We have actually had the majority of manufacturers tell us they made money using the IoT over the last year.”
Diving deep...breakout sessions enable closer looks at big topics

**JULIE LINDLEY: ECOLAB TACKLES WATER SCARCITY WITH BIG DATA**

“Digital is an enabler to help you figure out how to close the loop and drive actual value,” said Julie, marketing director with Total Water Management and Commercial Digital Solutions, Ecolab Nalco Water, as she spoke to an audience that increasingly struggles with water scarcity. “With cutting-edge technology, we are able to detect the problem, determine the solution and, most importantly, deliver the value.”

**RICK MORSE: REXNORD TAKES AIM AT MACHINE PRODUCTIVITY WITH IIOT, E-COMMERCE CAPABILITIES**

“What one person can output, GDP, today used to take more than 50 people to do at the turn of the last century,” said Rick, vice president of digital solutions at Rexnord, which has enjoyed enhanced efficiency as part of its digital transformation.
WAYNE PERRY: IIOT OFFERS NEW BUSINESS MODELS FOR KAESER COMPRESSORS

The senior technical director revealed how a digital approach can reveal the massive, hidden leaks within compressed-air systems, which are costing enterprises millions each year. "We couldn’t do what we do if we weren’t able to monitor the equipment. We know how to interpret the data. We know what’s critical and what’s not critical."

JEFF SMITH: FIND THE VALUE, BUILD THE OFFER: BEHIND PARKER HANNIFIN’S ‘VOICE OF THE MACHINE’

“We’ve been selling these products for a long time," said the business-development manager (IoT), while laying out a plan to justify the expense of digital transformation. “There’s some stranded value that we’re looking to unlock.”
"I come to Smart Industry every year because I feel like I am a part of something bigger that might not get recognized on a daily basis. Smart Industry makes the feeling resonate that I am doing something right and that I can continue doing this."
Chris Misztur, Software Architect and IIoT Evangelist, MacLean-Fogg Component Solutions

"I like the size of the event. I like the people they recruit to come and speak. I like being able to hear different perspectives on where people are at on their journey and how they’re really applying things in the real world. It’s a lot of value for me to be able to come here."
Jeff Smith, Business Development Manager, IoT Parker Hannifin
What do attendees have to say?

“At Smart Industry I get access to a network of vendors and clients who are working together to plan the future of their companies’ technological path. It’s a tight-knit group and there are elevated conversations going on.”

Andy Young, Director of Operations, Pioneer Energy

“I come to Smart Industry because it’s a confluence of different aspects—multiple industries, different technical and business personalities, and different industries, from aerospace to manufacturing to process to you name it. Everyone shows up here with ideas and open minds. People aren’t here to give pitches and tell me about their corporate background. I’m here to hear their ideas and, often, the challenges they face. Sometimes the most valuable thing is learning how someone got out of those challenges. You can apply that to your own business. It’s all about learning about business. It’s about learning about technology. And the combination of those two makes it a great place to be.”

Gabe Batstone, CEO, contextere
What do attendees have to say?

“I come to Smart Industry because I feel it’s important as we progress through Industry 4.0 that we connect with peers and connect with industry leaders who are leading the next industrial revolution.”
Kim Haggerty, Associate Director Industry 4.0 Digital Manufacturing Transformation, Pratt & Whitney

“I am here at Smart Industry for a number of reasons. I am here to share with other people our vision of how we do IoT. Beyond that, I am always interested in networking—getting to learn how other industries work. It’s really interesting...even industries that are totally different than the one we’re in still provide you with insight into approaches and challenges that we hadn’t thought about. By being here I am hoping to pick up information in those spaces and go home and provide better insight to my company and improve value and performance.”
Owen Gwynne, Senior Programmer, Teel Plastics
Mark your calendar! September 24-26, 2018 Loews Chicago O’Hare

GATHERING OF DIGITAL INNOVATORS

4TH ANNUAL Smart industry 2018

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Include the Smart industry 2018 conference in your planning!
September 24-26 at the Loews Chicago O’Hare Hotel, Rosemont IL