Automation Alley’s Technology in Industry Report reveals strengths and gaps in Industry 4.0 readiness among manufacturers, academia

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TROY, Mich., April 30, 2018 — Automation Alley, Michigan’s leading technology and manufacturing business association, unveiled the findings of its research report on Industry 4.0 (the Fourth Industrial Revolution), today at its Technology in Industry Reveal event at the Detroit Institute of Arts. More than 300 guests were in attendance to hear the key findings of the first collaborative Industry 4.0 report of its kind in Michigan.

The report, Harness the Power of Industry 4.0, is comprised of emerging trends, challenges, opportunities and implications for industry, and is designed to help manufacturers, educators and policy makers keep pace with rapid technological changes in Michigan and beyond. Research is centered on the eight core technologies of Industry 4.0: the Industrial Internet of Things, robotics, artificial intelligence, Big Data, cloud computing, cybersecurity, advanced materials and additive manufacturing, and modeling, simulation, visualization and immersion.

Key findings of Automation Alley’s 2018 Technology in Industry report, Harness the Power of Industry 4.0 include:

- **While data and information are valuable (and we have more than ever before), companies will be able to differentiate themselves by the people, tools and execution put toward utilizing that data.** The promise of Big Data is not in analyzing past trends to predict potential future trends, but in analysis of what is happening now to determine today’s next steps: real-time intelligence.

- **Industry 4.0 is bringing tremendous change in ways that can’t yet be fully comprehended, but the companies who can adopt a new mindset and new skillsets within their organizations are likely to find the greatest success.** While some jobs will be eliminated by Industry 4.0, it’s more important to note that new and different types of work will emerge. For companies, re-skilling and upskilling strategies will be critical if they are to find the talent they need to deliver the work of the future. In order to navigate the chaos and identify and capitalize on the disruptive opportunities associated with Industry 4.0, we must create a culture of dynamic thinkers across all levels of society.

- **Domestic and foreign adoption of Industry 4.0 will not be identical or on the same timeline. Companies with multinational operations should not attempt a one-size-fits-all approach.** Between 2015 and 2018, approximately 1.3 million new industrial robots will be installed in factories around the world. That growth will be led by China and Europe, with North America a distant third. Manufacturing execution systems are critical for a transformation to Industry 4.0. Industries in Germany and Japan have been very successful in implementing these systems; however, American industries are behind. While large OEMs and major Tier 1 suppliers may
accept the digital transformation, many Tier 2, Tier 3 and small manufacturing entities are struggling with the technological changes of Industry 4.0.

- **Automation will reshape the workforce and the smart factory floor but the people factor will remain the greatest asset -and greatest hindrance- to success.** In addition to technical knowhow, 21st Century skills need to leverage the disruption of Industry 4.0 and innovate in new ways. The report outlines three types of skill sets future workers must embrace.
  - Discerning Skills, meaning conceptual and futuristic thinking
  - People Skills, including teamwork and understanding others
  - Purposeful Skills, which involve self-starting and continuous learning

“Last year was the first time we tackled the topic of Industry 4.0 in our Technology Report, surveying national and regional technology and manufacturing leaders to gauge whether they were ready for the Fourth Industrial Revolution,” said Tom Kelly, Automation Alley’s executive director and CEO. “What we found from that initial survey in 2017 was that most executives either lacked awareness of Industry 4.0 altogether or were experiencing barriers to adoption. That was truly the impetus towards our own Industry 4.0 evolution and the reason the 2018 report is so robust.”

For the first time in the 11-year history of Automation Alley’s annual Technology in Industry Report, this year’s research was compiled and analyzed by a collaborative team of academic and corporate partners who embrace the dynamics of Industry 4.0: University of Detroit Mercy, with Dr. David Pistrui serving as overall academic lead researcher; Central Michigan University; Baker College; Oakland University; Lawrence Technological University; Oakland Community College; Macomb Community College; Ford Motor Company; Comau; Eaton; Fanuc; Siemens PLM; TTI Success Insights; Plante Moran; RSM and The Workforce Intelligence Network (WIN).

“It’s fitting that academia, industry and the nonprofit sector collaborated on this report, because an important take-away from the findings is that Industry 4.0 readiness will require academic institutions to collaborate with industry and policy makers to realign and reform education around the needs of the marketplace,” Kelly said. “We appreciate the combined research efforts of our academic partners and corporate leaders in creating a report we believe offers critical considerations for next steps in Industry 4.0 implementation.”

To purchase the report, visit automationalley.com/techreport.

**About Automation Alley**
Automation Alley is a nonprofit technology and manufacturing business association and Michigan’s Industry 4.0 knowledge center, with a global outlook and a regional focus. We connect industry, academia and government to fuel Michigan’s economy and accelerate innovation. We offer programs and services in business growth, entrepreneurship, talent development, defense and international business, providing resources and knowledge to help our members grow and prosper in the digital age.

**Our Mission**
The mission of Automation Alley is to position Michigan as a global leader in Industry 4.0 by helping our members increase revenue, reduce costs and think strategically during a time of rapid technological change.

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