

# 4IR from Buzzword to Reality: Smart Factory Adoption Rates - Best Practices and Leading Technologies

written by Lauri Moon | July 8, 2019

Companies are making progress in implementing new technologies, but scaling and linking investment to value remains a work in progress.

The Fourth Industrial Revolution - 4IR - has been met with both enthusiasm and fence-sitting. While sentiments and experiences have been mixed, most business leaders are now approaching 4IR with a sense of measured optimism. While they recognize the potential business value advanced manufacturing technologies can present—particularly cloud computing, advanced analytics, robotics, the industrial internet of things (IIoT), 3D printing, virtual and augmented reality—they are still deliberating how and where to invest and balancing the hype with their own level of preparedness. Meanwhile, they're also well aware of the significant changes 4IR will bring to a new manufacturing workforce—one that is increasingly becoming a hybrid of human and machine.

There is little doubt that 4IR adoption has hit the tipping point, despite the fact that today only around 20% of companies are implementing smart factory technologies at scale. Momentum is building, however, as evidenced by the fact that 73% of manufacturers are planning to increase their investment in smart factory technology over the next year and 70% citing adopting an IoT strategy as being moderately to extremely critical. IoT and robotics have made the most inroads, with 80% of manufacturers planning to deploy sensors in operations over the next three years and 65% saying they've deployed applied robotics in their operations over the past three years.

**About the 4IR survey**

PwC and The Manufacturing Institute (the workforce and thought leadership arm of the National Association of Manufacturers), surveyed approximately 100 US-based manufacturers. Looking at the results, we see a definitive—and, indeed, inevitable—shift to 4IR as companies seek to integrate new technologies into their operations, supply chain and product portfolio. However, these companies acknowledge that scaling, justifying 4IR investments and dealing with uncertainty surrounding use cases and applications present a new set of challenges.

**Join us to explore the survey findings and PwC’s recommendations. Here’s a sneak preview:**

- While the sector as a whole is making assertive forays into 4IR, many manufacturers still inhabit the awareness and pilot phase. Nearly half of manufacturers surveyed reported that they are in the early stages of a smart factory transition (awareness, experimental and early adoption phases). The majority of those that have implemented smart factory use cases consider a quarter to be a success.
- Manufacturers expect the transition to accelerate in the coming years—73% are planning to increase their investment in smart factory technology over the next year.
- While we see a number of fence-sitters, the bulk of manufacturers are indeed prioritizing 4IR, the digital ecosystem and emerging technologies. 35% of survey respondents says they have deployed advanced analytics in their operations and 34% have deployed it in their supply chain.
- About 70% of manufacturers say the biggest impacts of robotics on the workforce in the next five years will be an increased need for talent to manage the robotics workplace and the opening of new jobs to engineer robotics and their operating systems.



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# The Future of Work

written by Lauri Moon | July 8, 2019

There’s been a lot of recent media hype about robots and artificial intelligence replacing humans in the workplace. Does that mean you should be bracing yourself for widespread job losses and economic doom and gloom? Instead of panicking, it’s time to prepare your organization so it can successfully adapt to the changing technology and employment landscape and come out on top.

Join **Mollie Lombardi**, Aptitude Research Partners cofounder and CEO, and **Amanda Nichols**, Kronos® industry manager, as they discuss proven strategies for combining technology and human capital to create value and drive productivity — even as automation expands and evolves. Hosted by SHRM, this informative webinar will provide insight into:

- How the labor market has adjusted to advances in technology in the past
- Why you need to adopt a people-centered technology strategy moving forward
- What steps top companies are taking to balance people and automation today

Don’t get left behind by automation ... embrace it! Discover how to stay on the forefront of change by adopting innovative technologies that enable and empower the workforce in ways never before possible.

## Speakers

## **Mollie Lombardi, Cofounder and CEO, Aptitude Research Partners**

With nearly two decades spent advising, developing, and studying HR and business leaders, Mollie brings a wealth of knowledge and experience in human capital and workforce management to help ignite a new conversation at the intersection of HR technology, strategy, and impact. As Co-Founder and CEO of Aptitude Research Partners, she focuses on primary research covering end-to-end human capital management, to help organizations better understand their HR needs and the landscape of HCM technology solutions, and to help solution providers articulate the unique differentiators they bring to meet those needs.

She has spoken around the globe to HR audiences on topics across the HCM spectrum, and has authored hundreds of research reports and papers. Her research has been featured in the Wall Street Journal, eLearning Magazine, CIO Magazine and other trade publications. Prior to Aptitude Research Partners Mollie was Vice President, Workforce Management at Brandon Hall Group and Vice President and Principal Analyst, Human Capital Management at Aberdeen Group.

## **Amanda Nichols, Industry Manager, Kronos®**

Amanda Nichols is industry manager for the services and distribution practice group at Kronos Incorporated, a leading provider of human capital and workforce management software solutions. In this role, Amanda helps lead product direction and go-to-market strategies for several target industries, including logistics and staffing. She is also responsible for partnering across sales, services, product development, and customer support to achieve customer satisfaction goals.



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# **Webinar: Robot Ready-Adopting a New Generation of Industrial Robots**

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In industrial manufacturing, robots are shedding their cages, where they have toiled for decades, and now collaborate shoulder-to-shoulder with their human co-workers. They're working on dangerous and onerous industrial tasks, while also carrying out other tasks of great dexterity and precision such as soldering microchips. As robots take on more, and promise more - and as adoption costs continue to decline - a wealth of options for manufacturers are opening that did not exist even a few years ago.

## **A perfect storm of factors favor robot investment in 2018 and 2019**

While robots have been edging into human work at a rapid pace for some time, 2018 seems to present an inflection point on even wider adoption. A number of trends are begging the industrial sector to take a closer look at robot adoption, including greater pressures to customize products, rising global competitiveness, and a tightening industrial labor force. Another trigger is the 2017 overhaul of the US tax code, which frees up cash for manufacturers that could be earmarked for automation technology.

## **Strategies around robotics integration**

Any new manufacturing technology requires a well-informed and scalable strategy.

Industrial automation can be a considerable investment. Based on PwC's experience in working with manufacturers integrating robotics automation, there are three main areas new adopters (and those expanding their current adoption) would do well to think through before committing to investments in time and capital:

- Build a no-surprises business case. It is critical to make a clear, fact-based assessment of total costs of automating compared to not automating. Consider the increase of benefits (cost savings from higher productivity, reduced waste, etc.) net the cost of the robots. **During the webinar, we will offer some foundational questions to address to help you achieve an accurate ROI.**
- Know your automation know-how. You must assess your in-house experience with automated systems to determine what might need to be outsourced. **During the webinar, we will identify the areas of skill you should assess.**
- Choose the right robotics technology for the right job. This starts with identifying what can be automated...and why. **During the webinar, we will review the taxonomy of robotics technology: what they are, what they do, and where they work.**

## **Robotics and its role in the factory of the future**

Manufacturers are finding value not only in the instrumentation of machines on the shop floor, but also from data captured in other parts of the operations, including materials, parts, labor and workflow records. Such data, when aggregated with other data (customer, financial, environment, etc.) can serve as the basis for insights and actions.

**During the webinar, we will walk through the ways new adopters can systematically build robotics into the fabric of operations to capture valuable data, and always with an eye to the digital future.**

## **Speakers**

- ✘ **Steve Pillsbury, PwC Principal, Digital Operations Leader**

Steve is the digital operations leader at PwC, leading operations and strategy engagements for manufacturers. His team helps manufacturers define and execute strategies to modernize their operations through digital/IIoT enablement, including digital factories, connected supply chains, new manufacturing methods, connected field services, and the full digitization of product development. Steve has worked with IIoT sellers to help them develop innovations that address the outcomes manufacturers seek, and has worked with IIoT buyers to help them define the art of the possible and incorporate digital capabilities into their operations.

 **Tom Foth, Director, Emerging Technology Labs at PwC**

Emerging technologies have become a critical factor of PwC's most successful clients' strategic portfolios, providing large opportunities in business growth, performance, and game-changing disruption. Tom leads PwC's Emerging Technology Labs. He is a technologist and innovator with 46 patents.

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# Robotics & AI Summit

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The Robotics & AI Summit at LiveWorx is a two-day conference for company executives, engineers and investors from around the world seeking expert advice and new partners for developing, selling, purchasing and investing in robotics, AI and machine learning technologies.



This one-of-a-kind manufacturing business summit identifies the market forces driving change and the business strategies organizations need to adopt to sustain or regain competitiveness as digital automation revolutionizes all industry sectors of manufacturing.

The Robotics & AI Summit at LiveWorks is produced by Robotics Business Review, a market leading source for “actionable business intelligence” for the global robotics, automation and artificial intelligence market.

Price to attend varies on the package you pick once you decide to register via the link provided below.

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