

Acquia
EXPERIENCE DIGITAL FREEDOM

Technology in Manufacturing Today

***CATCHING UP
WITH CUSTOMER
EXPECTATIONS***



Introduction

Evolving technology and changing behaviors are transforming nearly every industry, and manufacturing is no exception.

In fact, the impact of technological transformation on the manufacturing sector is twofold: driving business optimization (improving productivity and customer experience) and full-blown business transformation (new business models, products and services).

While any two manufacturing organizations are likely at different points in their digital innovation journeys, all modern manufacturers understand that offering a personalized, productive digital experience is an important element of their overall technological transformation.



FACING TRENDS IN MANUFACTURING

Leaders of manufacturing companies understand the importance of transforming their digital experiences. A game-changing shift in the overall role of technology in manufacturing is impacting the form those transformations will take and the processes required to implement them.

TREND 1

Skilled Labor Shortage

Low unemployment levels are making it extremely difficult to attract and retain skilled workers. According to the cited Plex Systems report, 62% of manufacturers surveyed listed staffing as their biggest challenge to growth. To compound the problem, an estimated 25% of manufacturing employees are 55 and older, a group that is retiring at the rate of 10,000 per day. A crisis is looming, with 3.5 million manufacturing jobs needing to be filled in the next decade, two million of which will remain unfilled due to the stated skills gap.



TREND 2

The Industrial Internet of Things and Industry 4.0

The Industrial Internet of Things (IIoT), and the connected manufacturing process to which it gives rise, is here. Manufacturers who aren't already implementing the technologies it brings are falling far behind.

As Sundeep Sanghavi, CEO of DataRPM, writes in *3 Trends Changing the Customer Experience in Manufacturing*, the size of the IIoT market is estimated at \$11 trillion. While connected devices are not a completely new concept to manufacturers, the IIoT presents unique challenges in that it demands an enterprise-wide, interconnected foundation. In its report titled *State of Manufacturing Technology*, Plex Systems noted that 14% of manufacturers have already begun to implement IIoT technologies, and 34% plan to do so within the next five years.

The vision for what the connected nature of the IIoT and other tools and innovations will do to the overall manufacturing industry—commonly referred to as Industry 4.0—is widely considered the next industrial revolution. The transformation

seeks to integrate and benefit from higher levels of manufacturing intelligence, streamlined workflows and the rise of the smart factory. Every major global manufacturer is looking toward Industry 4.0 advancements to revolutionize their operations, better serve their customers, and evolve their business.

The benefits of an Industry 4.0 approach could be substantial. A PricewaterhouseCoopers (PwC) study titled *Industry 4.0: Building the Digital Enterprise* stated that 72% of manufacturers predict the combination of Industry 4.0 technologies and advanced analytics will significantly improve customer relationships and intelligence by 2020. And, those manufacturers expect to double their investments in the digitization of business models as well as the transformation of product and service portfolios within the next five years.



TREND 3

Cost and Pricing Volatility

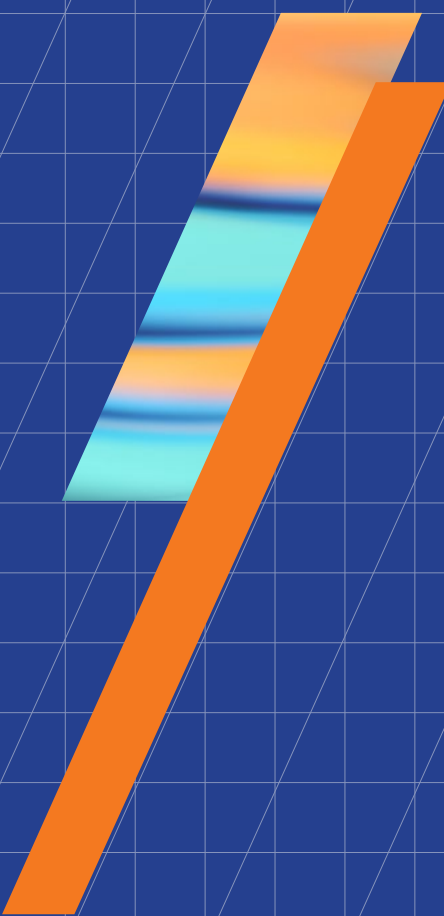
Ongoing changes in tariffs and a shifting regulatory environment make costs and pricing increasingly unpredictable. In March 2018, the U.S. government implemented new tariffs of 25% on steel and 10% on aluminum. As threats of larger and more expansive trade wars with multiple entities hover, the future looks to remain uncertain, at best.

TREND 4

Low-Cost Competitors

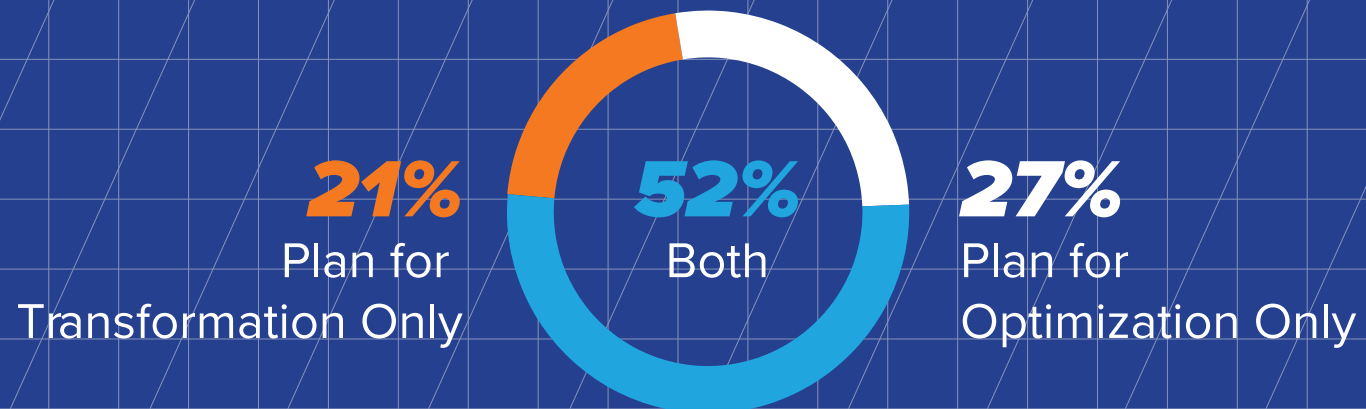
The manufacturing industry is undergoing significant disruption due to nimble competitors that differentiate themselves across the entire customer lifecycle, including the buying transaction, ownership and repurchasing phases.

Established manufacturers are realizing the vital importance of differentiating themselves from both traditional and new competitors. Only by establishing those points of difference can they hope to hold on to existing business and attract new customers.



“CIOs and their teams must be able to accelerate and support transformative business model outcomes such as product and operational excellence, customer intimacy and risk avoidance. They must also develop secure tools and infrastructure methodologies to enable them to align their businesses to new customer and market segments in high velocity.”

Gartner: Digital Business Transformation: A Manufacturing Industry Perspective for CIOs



CHALLENGES FACING MANUFACTURERS

Advances in technology and changes in behavior undoubtedly present significant potential benefits to manufacturers. But to achieve those benefits, several specific challenges must be confronted.

Business Model Shifts

While it is increasingly becoming a necessary transformation, the switch from a product-only model to a product-and-service approach is a slow one for manufacturers. In Forrester's report titled Center Your Manufacturing Digital Transformation on the Customer, it states manufacturers' "predominantly B2B nature, culture, organizational structure, and processes—designed to get ROI-based capital investments right—are slow to make that transition."

Scalability

With a robust economy generating increases in demand, and lack of open data systems and governance models, many manufacturers are having difficulty adjusting supply chains, processes and actual output to keep pace. As a result, some manufacturers are finding themselves forced to raise prices, turn away customers, or both. Accurately determining the specific technology and process upgrades that will move them to their goals most efficiently and enable them to achieve the scale needed to meet demand is vital.

Finding the Right Platform and Talent

To attract the much-needed new generation of skilled employees, manufacturers must offer on-the-job technology experiences as advanced as those a potential worker has already come to expect in their daily life. Modernized systems can also shrink the training and onboarding processes for new employees, enabling manufacturers to ramp up productivity and realize a faster return on their investment. Finally, a manufacturing organization's leadership team is a vital element to ensure a successful digital transformation.

Viewing Customers as Collaborators

Manufacturers have a valuable opportunity to approach their digital transformation efforts through engagement with their customers to help ensure their innovations will meet actual needs and expectations. According to the cited Forrester report, "Leading firms are organizing their digital efforts with customers at the center. They collect customer data, get customers actively involved in collaborating on product innovation, and embed customer insights into their internal processes."

"The biggest challenge of industrial leaders isn't technology—it is the people: how well its digital leaders like the CEO, CTO, or CIO define, lead, and communicate the transformation. It's also dependent upon the digital qualifications of the employees who need to roll out digital processes and services."

PricewaterhouseCoopers, Industry 4.0: Building the Digital Enterprise



TO GROW AND THRIVE, MANUFACTURERS MUST PRIORITIZE:

1.

Leveraging Data to Drive Efficiency and Create New Revenue Sources

It has never been more vital for manufacturers to boost efficiency and reduce costs. An investment in an optimized, customer-centric digital platform can be an effective way to reach these goals. The right online tools and processes can increase efficiency and improve revenue. Successful manufacturers have taken the effort further. Manufacturers of all types of products, from cars to chemicals to clothing, are looking to develop a start-to-finish customer experience that offers distinct differentiation from—and larger benefits than—the competition.

2.

Bringing Innovation to the Organization

Manufacturing IT professionals are closely examining customer expectations and needs to determine their paths toward digital transformation. The PwC study Industry 4.0: Building the Digital Enterprise, stated, “Inward-centric measures of manufacturing performance need to be replaced with customer-centric analytics fueled by more efficient means of capturing quantifiable insights.”

3.

Integrating the Customer Voice

A focus on analytics will enable manufacturers to integrate the customer into all aspects of the digital transformation journey. At the same time, manufacturers must be open to relinquishing some control to allow customers to help define and develop that journey.

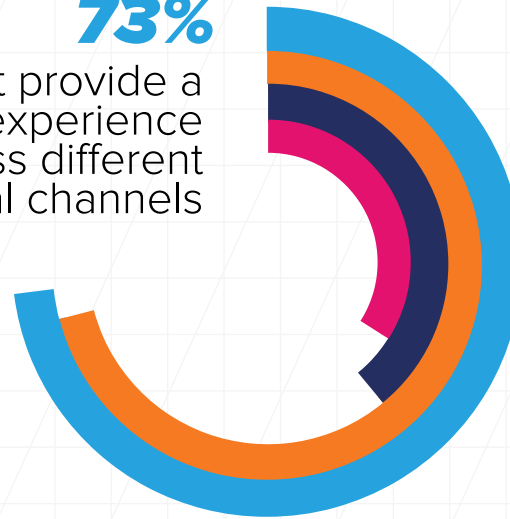
Making the transition from simply selling products to providing an end-to-end positive customer experience begins with developing a deep understanding of the customer, including their needs, roles, habits and more.

4.

Boosting Customer Acquisition and Retention Efforts

Customers are becoming more intimately involved in shaping the developments manufacturers undertake. This new, increasingly collaborative relationship makes the effort to keep customers more intense. A recent study from Gallup found that more than 70% of B2B companies are at risk of losing customers by not fully engaging them. An exceptional digital presence can be an effective bulwark against such loss.

73%
can't provide a consistent experience across different digital channels



71%
can't action customer insights in real time

39%
can't unite mobile app data with web site data

34%
can't unite web site data with mobile site data

As McKinsey principal Nicolas Maechler explained in an article on chiefexecutive.net by Craig Guillot titled Implementing the Digital Customer Experience in the Manufacturing Industry, "Much like consumers, business customers now have the same standards for fast, seamless customer experiences with mobile functionality and real-time responsiveness."

Maechler further stated in the article, "companies that have undertaken broad transformation in the customer experience process have observed higher client satisfaction scores, cost reductions, revenue growth and an increase in employee satisfaction."

FINDING THE WAY: HOW ACQUIA CAN HELP

In tandem with the integration of technological advancements in their actual manufacturing processes, forward-thinking manufacturing IT and marketing professionals are focused on transforming the online experiences they are able to offer their prospects and customers. They are seeking to determine the level of funding needed to invest in digital marketing platforms, personalization tools and better methods of engagement with customers.

Moving ahead, manufacturers must offer a more intuitive, personalized digital

experience, which can be accomplished through effective control of digital assets and use of analytics and insight to develop an efficient customer journey that builds trust and delivers satisfaction. Researching data and insights to understand the true effectiveness of each effort is critical: It is vitally important to know what's working and where the gaps lie.

Acquia is the pioneering partner that can help build those experiences and relationships—on your own terms.

“In our experience, customer-experience leaders in B2B settings have, on average, higher margins than their competitors.”

Tom Dougherty in “Implementing the Digital Customer Experience in the Manufacturing Industry”, chiefexecutive.net

Our web content management and customer journey orchestration have empowered leading brands to create the world's greatest digital experiences. We can help you establish the more intuitive, personalized digital experiences today's customers expect — all using open source technology and with the required security.

Gain control of your digital assets, deliver the right content at the right time, and tap into the data and insights you need to understand what works, what doesn't, and why. Provide customers with what they need at every step of the journey.

For more information about how we're transforming the digital experience in manufacturing, visit www.acquia.com/solutions/manufacturing.

CONTACT ACQUIA

To learn about how Acquia can help you deliver a customer-first experience, contact us at sales@acquia.com.

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