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**Manufacturing to the Power of Digital**

# Superior Experiences:

A manufacturing executive's guide
to building best-in-class stakeholder
experiences

**Enterprise to the Power of Digital™**

# Introduction

Today's manufacturing world looks very different from what it was a decade back. The focus isn't only on efficiency and volumes – enterprises are increasingly paying attention to the quality of experience that they deliver to their customers, suppliers, and employees. Analysts at McKinsey went as far as to say that the future of manufacturing organizations majorly hinges on the industry's people assets and experiences.[1] Despite the ongoing hue and cry about possibilities of an automation take-over of human-led functions, estimates suggest that the actual impact of automation will be somewhere around 60%, in terms of man-hours given back to companies – and this too would take decades to happen.

> Human experiences continue to be central for manufacturing success. Clearly, it is time to rethink how manufacturers approach their interactions with different stakeholders, starting with in-house employees, impacting channel partners and support teams, and finally, extending to the end-customer.

# Redefining the Manufacturing "Stakeholder" for the Digital Era

Before we explore methodologies for enhancing the quality of experience, it is essential to consider what exactly is meant by a stakeholder in today's manufacturing paradigm. Success is now a cumulative outcome of innovation across the value chain, not just determined by C-level executives and senior decision-makers. In line with balanced scorecard principles, there is a wide range of performance parameters comprising today's broad definition of "success," with key stakeholders responsible for execution at micro-levels. Without convenient and enriching user experiences for every digital touchpoint, stakeholders would struggle to meet their performance goals, derailing overall success.

A variety of stakeholders, starting from the blue-collar workforce to support functions such as design, engineering, procurement, logistics, customer-service and quality maintenance integral to the manufacturing value chain. Apart from this, there are channel partners, agencies, and suppliers who play a big role in establishing market leadership for manufacturing organizations. Finally, the end-customer experience is as important as the product quality when it comes to driving differentiation.

All these elements have to be kept in mind when defining what we mean by stakeholder experiences. The onset of Industry 4.0 makes this even more critical, as we are now operating in a connected ecosystem of intelligent products and automated processes, so that talent and expertise could be best utilized for value-generating activities. From IoT-embedded transportation networks to real-time, social collaboration that streamlines product design, technology is transforming how stakeholders do their jobs. In many ways, customers will drive this pivot towards an experience-led manufacturing model, determining the directions taken at every stakeholder level and requiring the intervention of digital technology to equip stakeholders with the resources necessary for success. This is a tectonic shift from Industry 2.0 and 3.0 which were primarily geared for high volume output and operational efficiency.

Moving forward, the people assets of a manufacturing enterprise including product managers, engineers, supply chain managers, logistics partners, distributors, and on-floor workers will come together to deliver enriched customer experiences. This will be enabled by innovations such as advanced mobility for field engineers, automation in sales and marketing, digitized warranty claim management, customized CPQ solutions, and even futuristic tools like extended reality for asset maintenance.

# 5 Trends Making Stakeholder Experience a Vital Component on the Manufacturing Journey

The connected nature of the modern enterprise means that employees want immediate and convenient access to data. This, combined collaboration-ready business dashboards, will enable more informed decision making. Channel partners and support functions that were previously outside the ambit of core manufacturing assembly lines now demand centralized collaboration and visibility.  Most importantly, customers today are looking beyond functioning products and actively seeking enriched digital experiences when it comes to post-sale servicing, maintenance, query resolution, and overall customer relationship management (CRM). Enterprises unable to deliver will risk losing out to the competition, with the customer's loyalty severely denting their NPS scores. And these expectations have not come up in a vacuum. Five key trends in today's manufacturing landscape make stakeholder experiences a business imperative:

## 1. The availability of next-gen collaboration tools

Collaboration has now permeated into the field workforce as well, bringing the advantages once limited to desked employees to the global manufacturing sector. For example, using immersive technologies, mobile-first tools and ruggedized hand-held technology, field service engineers can collaborate with their more experienced peers, while still being on the move and reduce the Mean Time to Repair for customer problems. The field sales team now have access to best-in-class technologies that automate the configure-price-quote process leading to quicker quotations and accelerated pipeline.

## 2. The quest for a single source of truth

Industry 4.0 has also enabled a centralized data repository that works as a single source of truth across the manufacturing enterprise. Data from multiple sources no longer needs to be stored in independent silos, riddled with duplication, errors, and inefficiencies. This is largely thanks to the availability of big data platforms that makes it possible to collect, process, and store unstructured data with ease. For example, unstructured information extracted from customer emails can feed into the marketing campaign builds to improve re-targeting, elevate customer experiences, inspire new product ideas, and aid in query resolution, all from a single source of truth.

## 3. Demographic shifts in the manufacturing workforce

The manufacturing workforce has gone beyond the traditional distinction between on-floor employees, management, and C-level stakeholders. The industry is now attracting top-tier talent from a variety of fields and disciplines – moreover, the entry of millennial and Gen Z workers has led to a shorter average employee tenure, making tribal knowledge a thing of the past. It is no surprise that less than half of the millennial workforce, as per a US survey in 2019, feel manufacturing would be a fulfilling career.[2] By embracing digitalization, enterprises can drive better experiences and attract the biggest workforce in the world today.

## 4. The scope of automating processes

Interestingly, process automation has only intensified the focus on stakeholder experiences. As digital systems take over mundane, repeatable processes, manufacturing employees are free to devote their time to experience transformation. It is estimated that around 60% of current manufacturing jobs can be automated, indicating the possibility of radical improvements to experience quality in the near future.

## 5. The dynamic nature of customer needs

Customer needs and expectations are heavily influenced by the consumerization of services and experiences that complement the core product. Manufacturers looking to such servitization use cases must focus on aftersales for existing products, product-as-a-service models and advanced services such as pay-per-use contracts enabled via Blockchain. Whether it's B2B or B2C or a combination of both, customers are no longer satisfied with mere SLA adherence – extended value adds in the form of 24/7 support, omnichannel engagement, digital marketing, multi-lingual access, etc., are now central to any manufacturing brand's value proposition.

Faced with these trends, manufacturers are positioned at an interesting juncture. On the one hand, they are at risk of losing out to competitors if they cannot innovate – that is, mass-customize, increase service quality, and shrink lead times – in a bid to chase volumes blindly. On the other hand, manufacturers who can pivot as early movers stand to gain significantly from Industry 4.0 technologies, ensuring that their customers receive the best possible experiences, designed for sustained loyalty.

> Product innovation must be complemented by experience innovation, if manufacturers are to stand out in a complex market landscape

However, there are a number of challenges impeding this goal.

# Challenges Holding Back Experience Innovation for Manufacturing Stakeholders

The stakeholder experience blueprint in manufacturing must encompass three key elements: customers, suppliers, and the workforce. Interactions for these stakeholders, as it stands today, is replete with challenges:

## A pre-digital era customer experience

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## Fragmented supply chain with limited visibility

Due to the lack of robust manufacturing infrastructure, suppliers often struggle to meet their SLAs defined OEMs. This makes business-to-business-to-customer (B2B2C) relationships virtually impossible, preventing manufacturers from monetizing new opportunities. A common challenge for suppliers is the lack of a single source of truth, which hinders visibility – impacting common use cases like servicing warranty claims. Blockchain could help to solve this, creating a distributed ledger where information is automatically updated, validated, and stored for quick claims resolution.

## Outmoded strategies in marketing

Marketing in manufacturing was traditionally assigned an auxiliary role during Industry 2.0 and Industry 3.0, separated from the core manufacturing enterprise. Harvard Business Review called out their potential conflict in approaches, urging these marketing and manufacturing to "coexist."[3] Today, this should no longer be the case, as manufacturers are now dependent on marketing as much as any other sector. A sophisticated marketing technology stack is an absolute necessity, opening up new channels for customer outreach and engagement. For example, it is now possible to anticipate upselling opportunities among existing customers to drive revenues using Social, Mobile, Analytics, and Cloud (SMAC).

## The lack of digital experience enablers for the workforce

When it comes to the traditional manufacturing floor, manual dependencies, iterative tasks, and complex assembly lines continue to be the norm. This leads to low productivity, significantly denting the margin for manufacturers. Held back by weak profitability, decision-makers are hesitant to invest in new technology – perpetuating what the downward spiral. Frustrated by continued reliance on manual labor, the workforce is open to churn, further adding to enterprise costs. This could be alleviated by digitally driven experience innovation.

# How Digital Could Add Value and Transform Experiences for Good

If we carefully evaluate the manufacturing landscape, several areas for technology intervention are emerging. AI, machine learning, smart CRMs, IoT, immersive technologies, blockchain, mobility and RPA, could revolutionize experiences for key stakeholders on the manufacturing value chain. They will empower the workforce to perform at an optimum, help open the marketing ecosystem to more channel partners and deliver seamless omni-channel experiences to the end-customer. Some of the key use cases that should be on any decision-maker's radar include:

Digitally-enabled CRM that deploys RPA, leads/account management, and advanced analytics for a superior customer experience

Consolidation of data and integration of platforms to drive visibility and streamline B2B2C activities

Cloud-based sales to optimize the configure price quoting process and enable cross-selling/upselling.

Augmented and virtual reality to assist in workforce training, safety, and asset management

Empowering marketing function for integrated marketing campaigns, social media intelligence and customer targeting capabilities.

These use cases illustrate why and how digitalization plays a big part in transforming stakeholder experiences across manufacturing. The goal isn't just to delight the customer and gain quick wins; a truly superior experience will help to build loyalty and boost customer lifetime value, even as employees are empowered to become more productive.

| | AI/ML | Blockchain | IoT | Automation | Immersive Tech | Cloud | Mobility |
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| **Sales & Marketing** | ML modeling based on promotion plans, dealer stock movement for improved sales | Blockchain-based CRM for better lead and campaign management | IoT data usage by marketers for sharper contextual and personalized marketing | Personalized marketing campaigns through marketing automation for improved conversions | Usage of AR/VR by marketers for advertising and immersive experience | CPQ - CRM integration for shorter sales cycles | Efficient opportunity management by sales team to achieve higher conversions |
| | Advanced predictive analytics for sales to assist with product price intelligence | Sales data autonomy, control and management for enhanced data security | IoT analytics for improved billing and pricing strategies | CPQ focused automation for sales teams that leads shorter sales cycle | Usage of AR by sellers for product browsing & trials | SaaS based CRM for improved sales force efficiency | Easier access to mobile apps that propel sales enablement |
| | Market-mix and attribution modelling by marketers to optimize spends | Improved digital display advertising for better ad performance data and targeting | Customer insights analysis by sales and product teams to build new revenue streams | | Virtual visits to shop floors to influence and educate buyers | Marketing cloud allowing brands to deliver contextual, consistent and relevant experiences | Localized campaigns by marketers for improved targeting |
| **Aftersales and service** | Analytical models to assist teams with warranty claims for accelerated decision making | End-to-end warranty management for revenue leakage prevention and quicker claims processing | Predictive maintenance by field services team for improved customer experience | Automation of end to end warranty claims process leading to improved experiences | AR led remote servicing for better customer experience | Cloud based self-service portals for improved accessibility to post purchase services | Better field service management for improved stakeholder experiences |
| | Cross-selling and up-selling of services though apriori algorithms and recommendation systems | Better visibility into warranty claims leading to reduction in fraud claims | Improved facility management by shop floor teams for improved asset utilization and reduced costs | Automation of work order management for faster scheduling and deliveries | Content delivery using AR to facilitate self-service and troubleshooting | Simpler case management for clients leading to improved CX | Easier access to data required by field service agents leading to improved repair times |
| | | | Spare parts tracking and connectivity for improved repair times | Digitized dealer portal networks for collaborative networking | Custom part selection and product customization results though VR devices | | |
| **Finance, Human Resources and Legal** | Contract analytics for legal teams to improve deal making | Seamless payment management by F&A teams for improved audit trail | Access to real time data for finance teams for strategic decision making | Automation of IT service management for reduced downtime and increased productivity | Immersive training content by L&D for experiential and gamified learning | Community cloud for business partners, dealers, agents for better collaboration | Exhaustive one-stop access to payroll, employee performance levels, planning, and reporting for HR teams |
| | HR analytics for the identification and quantification of 'people' drivers of the business | Improved candidate verifications by HR teams for fraud prevention | Access to workforce productivity data for HR team to better understand productivity | APIs for internal applications and better interactions | Immersive content for HR teams to facilitate employee onboarding and campus hiring | e-finance led TCO improvements for the CFO organization | Improved employee onboarding through mobility solutions for quicker resource deployment |

# Final words

Enterprises that are able to leverage the new generation technologies will find themselves on the winning side of Industry 4.0. An experience-focused model offers several compelling benefits such as efficiency gains for customers, suppliers, and workforce. This manifests itself in the form of improvement in CSAT/ESAT scores as well as in internal/external NPS, the minimization of service backlogs, and reduced-order turnaround times. We recommend manufacturers to follow the below listed roadmap to build best-in-class experiences for customers, suppliers, and employees through digital transformation.

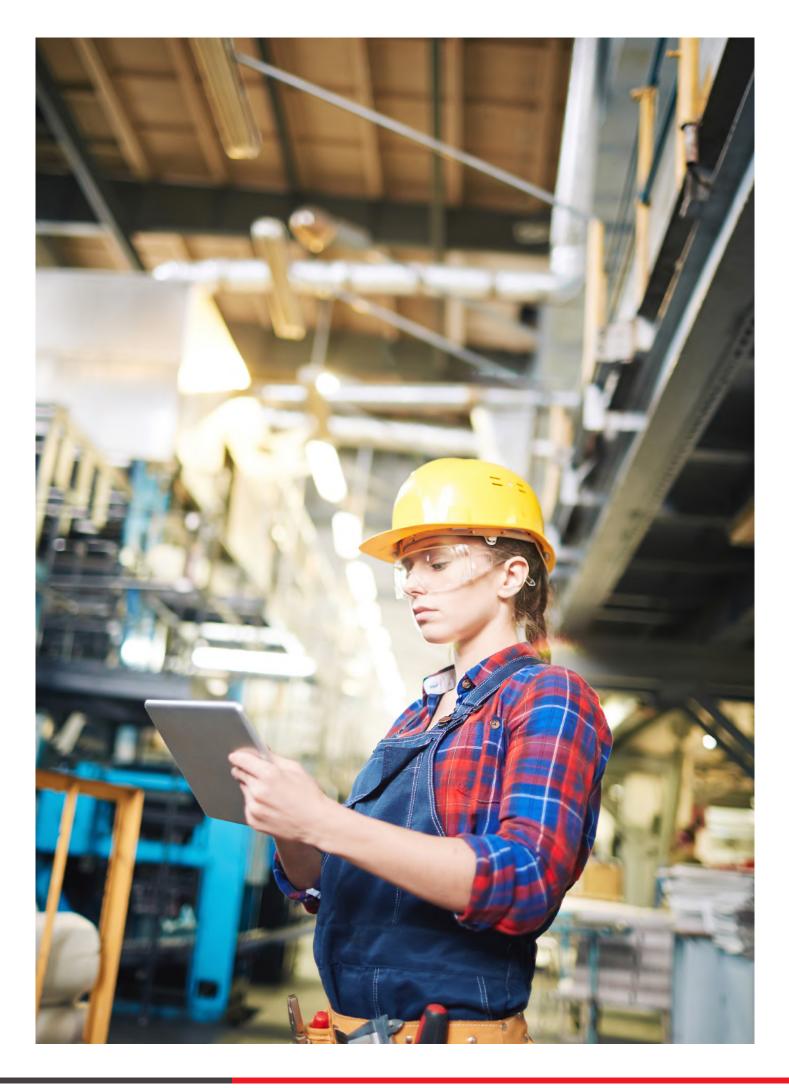| | | |
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| | **Embrace a broader definition of key stakeholders** | Every stakeholder on the manufacturing value chain must be viewed as a micro-decision maker requiring digital tools and enablers to drive success. |
| | **Honestly assess the as-is landscape** | Too often, there is a dissonance between C-level perception and on-ground realities; manufacturers must be quick to identify problem areas and be unafraid to fail fast. |
| | **Set up an experience innovation center** | Center of Excellence (CoE) - A CoE dedicated to the quality of stakeholder experiences will be integral to furthering R&D and obtaining IP leadership in this space. |
| | **Select the right transformation partner** | CXOs should spend considerable time in selecting the right set of technologies, delivery methodologies and partner ecosystem that can deliver on the required use cases with a rapid time-to-value. |
| | **Monitor constantly, and review** | While Industry 4.0 is a key milestone in the evolution of manufacturing, it is not likely to be the final frontier; using advanced customer analytics models, manufacturers can stay one step ahead of expectations and deliver impactful experiences. This will certainly warrant for getting the right set of checkpoints in place to keep your execution as per the plan. |

# References

1- "The future of manufacturing: Your people." Retrieved from https://www.mckinsey.com/business-functions/operations/our-insights/the-future-of-manufacturing-your-people

2- "Millennials skeptical about manufacturing careers." Retrieved from https://www.thefabricator.com/additivereport/blog/additive/millennials-skeptical-about-manufacturing-careers

3- "Can Marketing and Manufacturing Coexist?" Retrieved from https://hbr.org/1977/09/can-marketing-and-manufacturing-coexist

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## Enterprise to the Power of Digital™

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