MANUFACTURING: REIMAGINING A RESILIENT AND SUTAINABLE FUTURE

Rapid digitalization, agile manufacturing, supply chain resilience and workforce transformation will be critical to address limitations and unlocking the industry's growth.

As the year comes to a close, it is time to reflect on how the months gone by brought unprecedented changes in the way we all live and work. Organizations, irrespective of their industry, learnt and unlearnt to adapt to the new normal.

The implications of Covid-19 on the manufacturing industry have been significant. The new normal highlighted critical issues for the sector such as material shortage, drop in demand, disruption in supply chains worker scarcity, cash-flow, and planning concerns. While many businesses reconfigured their production, supply chains, and services, the shift toward digitally enabled manufacturing is only going to ramp up.

Technology has enabled us to navigate the current situation, and tech intensity will play a stronger role than ever before as we rebound and shape the new normal. Organizations have realized the need to consolidate communications, collaboration and business processes in one solution, built on a foundation of security and privacy. Like other sectors, manufacturing will also see digital acceleration across all areas – whether it is keeping employees connected and productive; connecting dealer management systems; automated, robotics-driven factories; or ensuring health guidelines compliance in their facilities.

Intelligent and agile factories. Businesses who embrace agile manufacturing will achieve new levels of productivity by strengthening OT with IT innovations using IoT, cloud, AI, and mixed reality. Manufacturers will be able to monitor equipment and predict anomalies for pre-emptive upkeep which will enable them to significantly reduce downtime. AI and cloud will empower businesses to calculate overall equipment efficiency vs. capacity to optimize production which will save costs by reducing material waste & energy use. Open platform and common data framework could also be used to speed up industrial scale digitalization and breaking down data silos on factory floor, respectively.

Zeiss Group, an internationally leading technology enterprise in optics and optoelectronics, has embraced a cloud first approach and deployed Microsoft Azure compute, AI, and IoT. They are helping OEMs improve quality management, build more powerful, energy-efficient microchips, and deliver new digital healthcare solutions and device maintenance. Azure is helping manufacturers gain business insights from across domains, assets, and processes that have traditionally been managed in siloed systems.

Resilient supply chains. Supply chains efficiency will increase by reducing complexity with AI and machine learning to deliver right product to right customer at right time and drive profitability. Technology will enable manufacturers to maintain optimal inventory levels, manage costs, avoid disruption, and increase agility & responsiveness. Data and analytics will play a critical role in analyzing and mitigating supply chain risk. They will enable real time visibility and deeper insights to identifying the best approach to allocate and re-allocate inventories. Manufacturers can streamline supply chain with Microsoft Dynamics 365 Supply Chain Management and Azure IoT Central by rapidly building and deploying solutions.

Unlocking innovation and delivering new services; Companies can engineer new business value with sustainable products and digital services. All the data coming in from IoT sensors, field service, sales, factories, and the supply chain can be used to speed innovation, realize a faster speed-to-market, and improve the quality of products and services, or product-as-a-service. With connected product innovation solutions, you can get real-time insight into which products and features customers are using without waiting for customer survey results.

Customer engagement redefined. It will be essential for businesses to engage customers in new ways to deliver relevant experiences across marketing, sales, and service channels. The first step in moving toward product-as-a-service is proactively engaging with your customer throughout your product's lifecycle. With connected field service solutions, you can remotely monitor the smart products sold to customers. One can thus get the insights you need to do predictive maintenance —and minimize the customer's downtime.

Delivering your product-as-a-service also means you need to take a new, collaborative approach to the sales process to help sellers navigate your increasingly complex portfolio of products and services, and to build long-term relationships and ongoing customer loyalty Eureka Forbes has as a 6000+ strong door to door sales team – one of the largest direct sales forces in India. Their sales model needed to be modernized for an era in which customer expectations are changing and behaviors are changing, such as checking products online. Moreover, there is new friction in the buying process, such as gated communities restricting access. Eureka Forbes has consolidated seven different CRM systems onto Dynamics 365 Salespeople can access customer info directly on their smartphones, including granular insights like water quality and the right product to sell in real time.

Workforce transformation. While technology is radically changing how we innovate, make products, deliver services, and explore new business models, at the core of all of this will be people. Equipping workforce with the skills and manufacturing technology they need to keep up, as the industry shifts gears, will be vital. Advancing modern roles, re-skilling to accelerate a data-driven culture, and empowering the first-line worker will be as important as embracing technology to leapfrog into the next phase. Larsen & Toubro is empowering their global workforce and making it future-ready by adopting Microsoft Teams. They have streamlined employee communications across geographies to make faster, data-driven decisions. They also moved their training and business apps to Teams to ensure seamless business continuity while working remotely.

The business impact of the new normal is here to stay but by strengthening digital transformation strategies and adopting new technologies manufacturers can build resilience, succeed, and achieve more. Microsoft is constantly engaging with partners, customers, and industry associations to empower new, innovative ideas and enable businesses to deal with what lies ahead in the coming year. The pandemic has presented manufacturing industry with an opportunity to pivot itself up the digital transformation curve. At Microsoft, we remain committed, as ever, to support the industry and work together to shape the future of manufacturing for the time to come.

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The views expressed in this article are those of the author and may not reflect those of Microsoft.

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