

Top 4 benefits of Industry 4.0

In the pre-Covid-19 world, Industry 4.0 was driving automation and data exchange trends in manufacturing technologies and processes at an exponential rate. Now, as manufacturers across the globe face the immense challenges posed by the virus, lockdowns and economic pressure, Industry 4.0 has been accelerated even more.



Mark Bannerman, managing director of Infor Services at iOCO

Many manufacturers that had embraced 4IR prior to the coronavirus pandemic have reaped the benefits, staying ahead of the economic downturn, and maintaining supply chain performance.

According to Mark Bannerman, managing director of Infor Services at iOCO, the Fourth Industrial Revolution offers incredible optimisation opportunities. He notes that top four opportunities are **workforce optimisation, process optimisation, asset optimisation** and **enhanced customer experience**.

“Manufacturers should consider these opportunities as they prepare for success in the Industry 4.0 era, during Covid-19 lockdowns and beyond,” says Bannerman.

Workforce optimisation

In terms of workforce optimisation, it's important to recognise the significant skills gap faced in manufacturing. Experienced professionals are retiring in droves, and it has been difficult for the industry to attract, develop and retain new talent. When

many of today's workers entered the job market, topics like data science and machine learning may have seemed like science fiction.

South Africa is also home to an immense unskilled workforce, which was not afforded educational opportunities. According to research conducted by the Center for Strategic and International Studies, "since the era of the industrial revolution (IR), the manufacturing sector relied heavily on low-skilled physical labour". Within these roles, the sector is responsible for large job-creation opportunities for low-skilled workers. Once employed, these workers show a thirst for development and self-improvement – if only given the opportunity.

"Enterprise-wide modernisation requires a workforce that is well-prepared, receptive to big ideas, and willing to execute new tactics. Likewise, having an open mind to change can yield organisational and personal opportunities. Building a company culture that values innovation and collaboration is a necessary first step in a successful digital transformation," says Bannerman.

“ To ensure a smooth transition to new digital concepts, the workforce needs to be educated and given opportunities to participate in decision making. ”

Process optimisation

When considering process optimisation opportunities, Artificial Intelligence can be used to identify inefficiencies and automate workflows. The root cause of almost all bad decision making and inefficiencies is bad data. "This powerful technology introduces transparency to business processes and reveals inefficiencies that may be preventing an organisation from achieving a higher level of performance and customer service," he adds.

To remain relevant businesses must choose business software systems that facilitate holistic planning. These systems empower manufacturers to connect to a commerce systems network to track materials globally. A commerce network connects businesses to their entire supply chain – from suppliers and manufacturers to brokers, third-party logistics (3PLs), and banks – paving the way for enhanced supply chain visibility, collaboration, and predictive intelligence.

Asset optimisation

Asset optimisation ensures businesses can keep pace with rapidly changing technology. "With today's high expectations for stretching resources and keeping current systems operating at their peak, manufacturers need every time-saving tool they can get. The potential gains in efficiency and productivity from various technologies can help manufacturing operations run smoothly. Affordable sensors can monitor equipment for early warning signs of downtime," Mark adds.

"Leveraging the IoT to connect data from these sensors to enterprise asset management systems enables early detection of performance issues, allowing for timely intervention before there are major repercussions. The data collected can point to opportunities for savings as well as indicators of asset health. Technology can help monitor energy usage, giving managers a valuable tool in managing this major expense," he says.

Enhanced customer experience

Lastly, enhanced customer experience becomes a prerequisite. Historically, manufacturing has been notorious for a "take-it-or-leave-it" business model. The Industry 4.0 era has rewritten the rules for customer engagement. Customers expect rich, compelling experiences and highly tailored transactions. Leading manufacturers are implementing technology that delivers a seamless experience for their customers.

"It's imperative for manufacturers to bring customers into the design process. This kind of environment gives customers the freedom to customise and submit their product ideas while giving product designers an efficient starting point to build out the technical specifications required for production," notes Mark.

Configure-price-quote (CPQ) technology is helpful at this stage. An integrated approach between the CPQ and Enterprise Resource Planning (ERP) systems ensures coordination between all disciplines and specialisations within the enterprise. Breaking down organisational silos as the quoting process crosses department boundaries allows for more timely and automated production of a quote, ultimately delivering a more seamless experience for the customer.

“When this is bolstered with a subscription-based business model, data insights generated from the IoT enable manufacturers to turn a traditional product offering into a service. This new customer-centric feature becomes a differentiator, adding value, building relationships, preventing commoditisation, and adding profits,” he concludes.

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