

# professional

Essential reading for the Automotive industry

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**NEWS FLASH**  
**MoRTH proposes star rating norms for tyres**  
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**SOFTWARE & SIMULATION SPECIAL**



## How simulation is helping OEMs save cost and time

The demand to manufacture cleaner, safer and smarter vehicles has never been higher. Automotive engineers in India are successfully using cutting-edge software and simulation technology to optimise project development and achieve speedier time to market **Page 34**

**SAFETY CONCLAVE**

## Automakers seek affordable tech to expand safety mission

Even as made-in-India vehicles turn safer with stringent mandates, stakeholders at *Autocar Professional's* Safety Conclave are unanimous about latest tech getting localised to reach the masses **Page 22**



**INTERVIEWS**



**Nirmal K Minda**  
 Chairman and MD of the UNO Minda Group on pandemic-induced challenges, cross-functional teams to optimise inventory for OEMs **Page 16**



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 Toyota Kirloskar Motor's Senior VP on minimal impact of the semiconductor crisis, ramping up output for Innova Crysta and Fortuner **Page 10**

**GUEST COLUMN**



**Rohit Saboo**  
 President & CEO of National Engineering Industries writes on digitalisation and the future of manufacturing in India **Page 50**

haymarket

# HOW DIGITALISATION CAN SHAPE THE FUTURE OF MANUFACTURING IN INDIA

By Rohit Saboo, President & CEO, National Engineering Industries

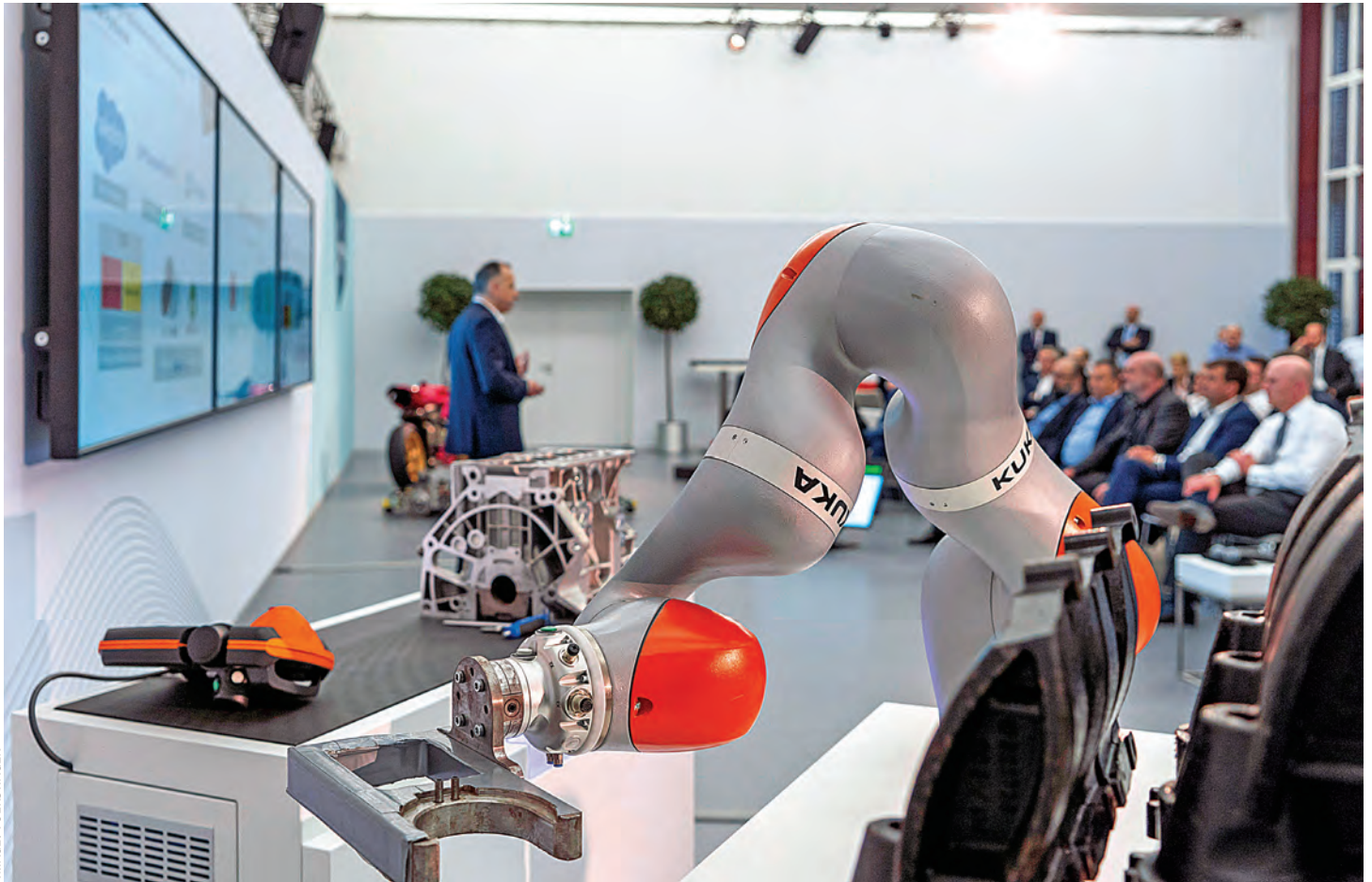


IMAGE: VOLKSWAGEN

THE TIME IS now for companies to envision a new organisation where technological transformation calls for a new state of being," says Deloitte in a recent report. Since the advent of 'Make in India' in 2014, there has been unprecedented progress in achieving the country's manufacturing agenda. India competes with other countries as the sixth-largest manufacturing nation and is the biggest recipient of FDI or foreign direct investments. However, the manufacturing sector on its own, accounts for only 27.5 percent of India's GDP, leaving plenty of room for further growth. To gain a competitive advantage in the market, companies must prepare themselves to thrive in the new ecosystem and tomorrow's world.

Driving this revolution is technology. Whether it be the supply chain, sales and marketing, customer experience or R&D, the manufacturing landscape is now equipped with

**Rohit Saboo: "For companies that are yet to join the digital bandwagon, if you do not ride the wave, the wave will ride you."**



The most familiar digitalisation topics that are making a big impact in the automotive and industrial sectors are big data, the Internet of Things, Industry 4.0, and the digital factory or 3D printing.

the latest technology. Huge efficiency and productivity gains are now being realised through the innovation of new products, research, personalisation, and quantum leaps in quality. Furthermore, increased investments in technologies such as IoT (Internet of Things), robots and cobots for automation, which is collectively referred to as Industry 4.0, is propelling traditional business across the value chain back to the top of competition.

For instance, automobile component manufacturers are now leveraging AR (Augmented Reality) and VR (Virtual Reality) and creating Phygital (Physical + Digital) systems, to train their employees before they enter the shopfloor. The sensory immersion is key to the effectiveness of such technology since it gives employees first-hand experience of the job before they even start physically engaging with precision machines on the shopfloor.



**Redefining customer experience with technology**

From my experience, I believe that there are several other advantages to implementing a digital transformation strategy, with ripple effects created across revenue, costs, and customer experience.

To elucidate, using technology to monitor and maintain processes across the value chain enables improved productivity and flexibility while reducing the costs required to maintain the same drastically. Additionally, a renewed focus on an improved customer experience as part of the transformation can contribute to achieving business goals. However, to reap the benefits of technology, companies must keep data at the heart of their decision-making.

Today, customers expect relevant content in relation to what their interests are at any time. It is their journey that dictates a company's strategy. In order to keep up with this 'always-connected' consumer, businesses must embrace technology to deliver an unmatched experience. For example, leveraging their technology stack or the platform they work on can help automobile component manufacturers to derive the insights they need to customise and personalise their customer engagement strategy accordingly.

**Leveraging technology to drive change enterprise-wide**

Many automobile component manufacturers are already leveraging Industry 4.0 technologies that streamline processes in the supply chain, logistics and production. Remote collaboration is an important prerequisite for this. As these companies continue to dip into the shared pool of resources driven by analytics, more plants will be managed online.

In today's dynamic environment, it is imperative that clients remain connected, automated, and intelligent as well. Even on the shopfloor, technology can be leveraged to connect the flow of material and information. However, technological intervention should not be limited just to manufacturing or the shopfloor. Since it can also be leveraged to ensure the seamless flow of information from order to dispatch scenario, technology plays a key role in streamlining processes enterprise-wide.

**Technological interventions in automotive**

The automotive industry is undergoing a massive transformation and I believe that this transformation is



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**Using technology to monitor and maintain processes across the value chain enables improved productivity and flexibility while reducing the costs required for it.**



By harnessing the power of combined and connected digital technologies – Artificial Intelligence, IoT, robotics and cloud computing – companies can become more flexible, responsive and efficient.

all-pervasive with much of it being driven by Industry 4.0 and the continued digitisation of the entire value chain. By harnessing the power of combined and connected digital technologies – AI, IoT, robotics, cloud computing among others – companies are set to become more flexible, responsive, and efficient. This is reshaping how they operate their businesses, engage customers, and deliver their products and services.

For instance, by implementing 3D printing technology along with digital collaboration, companies are able to change their approach to creating product prototypes and reduce time to market. High detail, smooth and accurate 3D printed models are often used to demonstrate designs and concepts of envisioned vehicles. This is because using CAD models alone is not very effective in spotting the smaller design flaws. Additionally, this reduces the amount of time taken to introduce products to the market.

**Sustainability is at the heart of everything**

Though popularly regarded as mutually exclusive, digital technology and environmental sustainability have a lot in common. I have observed many companies across sectors leveraging technology to optimise and achieve their sustainability objectives. For instance, technology such as energy meters have given companies real-time visibility into their energy consumption. This has not only allowed companies to optimise their energy consumption, but also given them the power to compare between various sources of sustainable energy so that the strain on exhaustible resources can be reduced. Therefore, bringing digitisation and sustainable thinking together, should always be at the forefront of any digital transformation strategy.

**Summary**

Uncertainties and volatility are order of the current times. For manufacturing companies to thrive and prosper, they have to commit to the unknown path making it agile and re-aligning people, prioritising capital, empowering decision-making and the new realities of the market forces. Technology is the enabler in achieving it and one of major forces to change the paradigm.

For companies that are yet to join the digital bandwagon, if you do not ride the wave, the wave will ride you. To stay relevant in this storm of events, being foresighted is the differentiator. ■