

The metaverse:

Changing industrial practices in manufacturing

The metaverse is a hot topic at the moment. Several Indian start-ups are already working on it right now. From Facebook changing its name to Meta to Microsoft's rollout of Mesh for Microsoft Teams, metaverse is an evolution today. When it comes to the manufacturing industry, from rapid production process design to increased transparency for customers, metaverse is very likely to transform the manufacturing landscape. The Viewpoint finds out if the metaverse will open new doors for talent in the manufacturing industry and how it will change industrial practices in various manufacturing sectors.



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“3D content production tools will see a rise in demand in the metaverse”

The metaverse opens doors for the youth, who is always open to new industries & adapting to new technology trends, exploring & upskilling itself. This will certainly result in new industrial needs and a total shift in the manufacturing process. Therefore, fields that bring in industrial design, 3D artists and IoT developers will see an exponential rise in talent and demand for such talent. What's more, 3D content production tools will see a rise in demand in the metaverse. This will boost the creator's economy by providing additional tools for the general public to generate and simulate 3D prototypes at their leisure.

The metaverse will also pave the way for a digital-first manufacturing model in India for start-ups. As far as India is concerned, the manufacturing industry will see a radical shift towards Augmented and Virtual Reality (AR & VR). EV start-ups, in particular, will experience a transformed product development process with the help of 3D artists in the metaverse. Plus, the metaverse will serve as a link to authenticity between virtual reality and the physical premise that can be accessed by investors, clients and customers across the globe from the comfort of their preferred location.

In the EV segment, product development will become much more collaborative & faster. Manufacturers will undoubtedly need specialised tools to harness the same power as the real-time 3D modelling tools to jointly build CAD files and offer product proposals to upstream suppliers. These developments will make requesting revisions from upstream suppliers easier and faster, as well as allow one to obtain insights into how a product is being used by consumers.



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“The metaverse transformation will initiate various progressive alterations at the operational front”

The manufacturing industry is at the forefront of the metaverse evolution, and it is making the landscape future-ready through innovation. It is striving to render flexible manufacturing by harnessing the benefits of state-of-the-art digital technologies that are aimed at enhancing the virtual world applicability. Manufacturers are intensively working to build the infrastructure for digital investment, IT/ data centres & supply chain with the help of advanced technologies. They are heavily investing in robotics backed with AI & IoT, in order to bring about the right confluence of the real and digital world that will make the process more flexible and also help in decision-making within a factory environment.

The metaverse transformation will initiate various progressive alterations at the operational front. It will play a revolutionary role in championing easy-to-use and highly accessible product configurations. By helping with the sharing of the configuration with customers via a visual platform, it will contribute to a self-interactive customer interface that will enable quick decision-making in real-time. Additionally, the metaverse will play an instrumental role in strengthening the training and service experience by supporting the workforce & customers. It will enable smoother commissioning and a faster response time, enhancing worker efficiency & customer experience.

Praveen Shetty,
Senior Director Of Engineering,
Honeywell Technology Solutions



“The talent pool in the manufacturing industry will need to upskill itself with the evolution of the metaverse ecosystem”

Today, the manufacturing industry is innovating at a rapid pace and bringing the virtual world closer to life. With the adoption of technologies, such as digital twins, AI and Big Data, the industry has brought metaverse to life. A process digital twin is a digital representation of a physical asset that is configured to respond just as a physical plant or asset would in the field. Enhanced interaction with next-generation systems through AI plays an instrumental role in connecting the virtual and physical worlds. Before building products in a virtual world, being familiar with its implications is critical to scale. While design thinking is gaining prominence and becoming a key asset, the talent pool in the manufacturing industry will need to upskill itself with the evolution of the metaverse ecosystem. As India emerges as one of the leading global start-ups hubs, the Indian start-up ecosystem is focused on developing innovative technology solutions aimed at bridging the gap between physical and virtual worlds. On the back of accurate simulations and predictive thinking, metaverse has enhanced the physical world in a more scalable, sustainable and safe way.



S Ravishankar,
Co-founder,
ToolKart

“The metaverse will take mass customisation to newer heights”

The start-ups will be the soldiers of the new-age technology that will support large industries. Therefore, it is essential that start-ups and the large industries work together to adapt to new systems. With the ongoing rapid development in the area of the metaverse, it will eventually encompass the manufacturing industry and its ongoing concept of Industry 4.0. The metaverse will also vastly change the effectivity & efficiency in utilising human resources & finances, providing real-time support for digital payments based on supplies, machine breakdowns etc. The Gen Z, born in this technology era, will easily cope up with the necessary skills required to bring in the adaption of the metaverse age of manufacturing. Mass customisation has been discussed for over two decades now, and the metaverse will take it to newer heights. At the same time, a word of caution – we know that the metaverse is also vastly used for illegal activities through the dark web. It is the government’s, industry’s and stakeholders’ collective responsibility to ensure that it is not wrongly utilised.