

Telecom's role in 5G and manufacturing in the post COVID-19 world

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Most of the technologies on which the Fourth Industrial Revolution (4IR) depends on are in place — at least in theory. Advanced robotics and 3D printing, artificial intelligence (AI) and machine learning, sophisticated sensors and the Internet of Things (IoT), cloud computing, virtual and augmented reality, advanced data analytics. Manufacturing companies understand the value of these technologies, whether they are in the supply chain, in production or incorporated into the products and services sold to customers.

Companies are making progress in implementing new technologies but scaling and linking investment to value remains a work in progress. 5G may not be the missing piece that will generate the immediate gains in productivity inherent in the promise of 4IR. But no manufacturer can ignore its potential in realising the vast technologies and processes reshaping today's factories. It also offers an opportunity for telecom operators to reimagine the growth in the 5G manufacturing in the post COVID-19 world.

5G-enabled factory in the real world

Since 2019, China has been actively implementing smart manufacturing with different telecom companies to benefit and experience the unique advantages of 5G.

- Haier, China Mobile and Huawei jointly launched the world's first AI+5G interconnected factory in Qingdao last year. This improvement refines future smart manufacturing by innovating and transforming enterprise organisations, business models, and ICT technologies, and integrating key technologies such as AI and 5G. It provides an example for future AI+5G technologies and their facilitation of an interconnected factory, transformation and upgrade. More scenario-based IoT intelligent products, smart portfolio solutions, and AI-enabled applications can be explored using data-based simulation modelling and verification, efficient production collaboration, and precise quality control. This optimises productivity with improved production efficiency, reduced manufacturing costs, and a reduced rate of storage, establishing competitive advantages in smart manufacturing.
- Shanghai opened its first 5G industrial park in March this year to promote the integrative development of 5G technology with automobile and intelligent manufacturing. More than 40 companies signed investment deals worth US\$1.86 billion at the opening ceremony. The park also attracted Huawei and China Mobile Shanghai to launch 5G innovation centres.

Meanwhile, Hong Kong is exploring how to collaborate with telecom operators to facilitate 5G application in manufacturing. For example, Hong Kong Productivity Council has partnered with China Unicom to set up a 5G demo centre in Shenzhen to build industry cases. The centre aims to serve as a technology exchange hub and R&D for Hong Kong enterprises in the Greater Bay Area.

The role of the telecom operator

Companies that are experimenting with and scaling up new technologies will find that the complex demands of a 5G implementation will require collaboration with telecom service providers. Telecom companies have the experience and wide-angle lens needed to enable a fully networked ecosystem to power digital factories. This is where telecom operators can most profitably play in the 4IR market. We recommend telecoms deliver the most business value to their manufacturing customers, whilst ensuring that their efforts are aligned with manufacturers' business strategy.

Telecom companies can no longer simply offer manufacturers the 5G network capacity and connectivity hardware they need. Instead, they should develop and offer full solutions and services across the operator's factory footprint, while managing the costs to provide the necessary infrastructure and provisioning requirements, especially for factories located far from populated centres. Such solutions must be worked out in collaboration with the manufacturer, in order to ensure business interests of each are met.

Telecom operators should also consider partnering with other service providers that already have considerable experience in factory management and automation. The virtue of a B2B2C relationship is the synergies of combining the capabilities of each player — expertise in 5G networking, and fully optimising factory operations.

Most importantly, telecom companies must develop a strong innovation mindset and the willingness to experiment, if they are to develop end-to-end solutions and ready to tackle challenges of 5G implementation. This is critical to overcome the reluctance on the part of manufacturers to adopt 5G and meet changing client demands in the post-COVID-19 world.

Contact us to explore how your business can benefit from transformative technologies and unlock significant social and economic value of 5G networks.



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