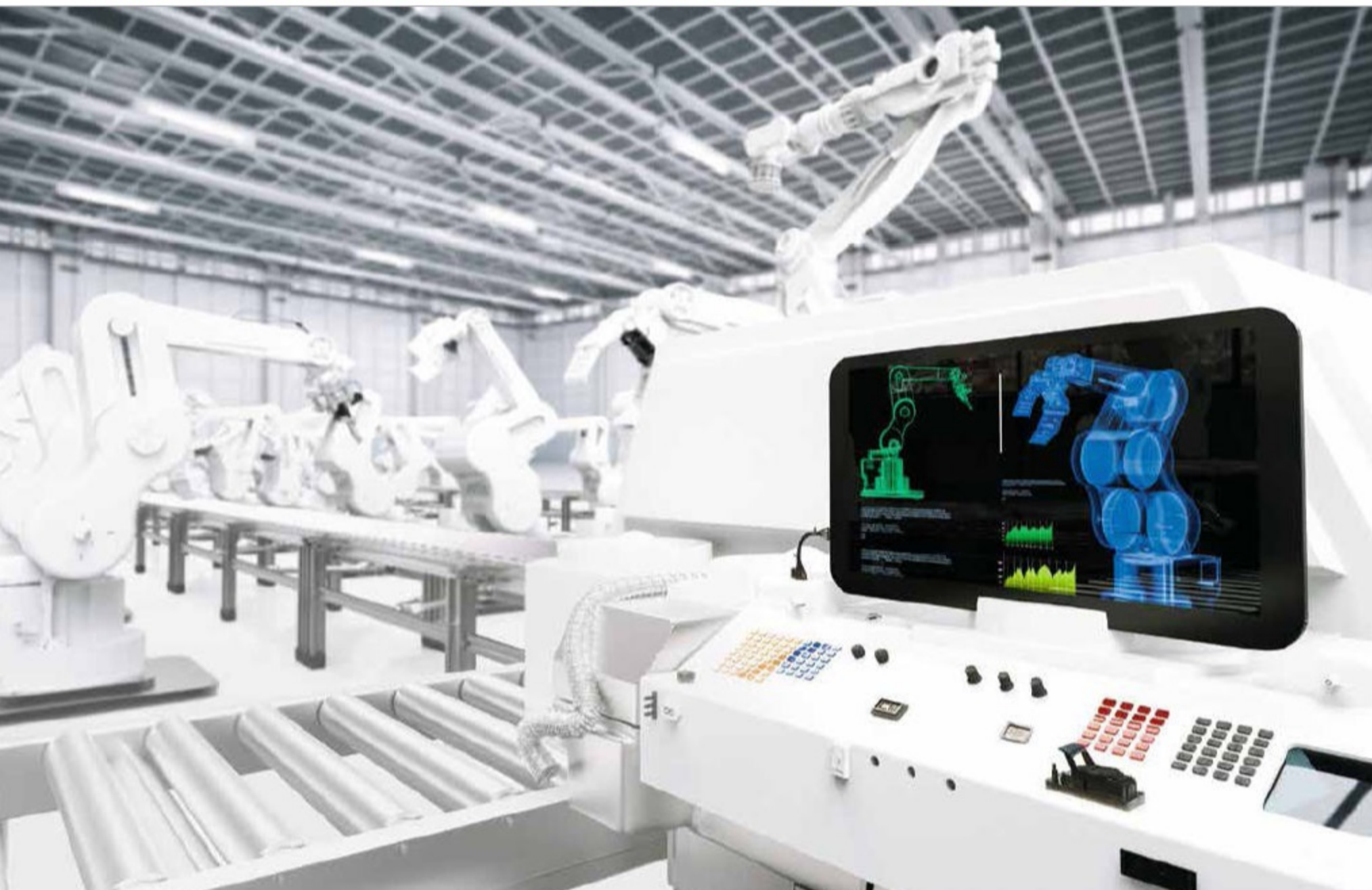


The Digital Future Of Manufacturing: ARE ASIAN MANUFACTURERS READY?



Industry 4.0 is changing the manufacturing landscape across Asia. Are Asian manufacturers ready for this transition?

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INDUSTRY 4.0 IS characterised by the interconnection of highly intelligent cyber-physical systems, to create the 'Internet of Things'. Today, it is changing the face of manufacturing globally, promising increased productivity, lower costs and greater customer satisfaction. But despite the massive shift in value chain configurations and consumer preferences reshaping the manufacturing sector in the last decade, less than half of manufacturing sector leaders in Southeast Asia believe they are

ready to take advantage of Industry 4.0. Why are manufacturers not fully embracing digital and Industry 4.0?

Traditionally, Asia has been known as a cost-effective manufacturing hub thanks to its vast labour pool. While manufacturing and design quality improvements have come a long way, next-generation smart connected products pose new challenges for the entire ecosystem. A combination of legacies in operations, information and product technologies, and manufacturing culture needs to be thoroughly re-evaluated in this changing context.

Several Asian manufacturing hubs in areas ranging from automobiles to

smartphones and consumer electronics have done well to create world-class products. As the advantage of labour arbitrage recedes, newer paradigms of productivity, operational visibility and risk management are needed for Asian manufacturers to stay competitive. Asia is well-placed to maintain its hub status if the region's manufacturers quickly move to adopt a digital mindset. By integrating the best of the physical and digital worlds, and getting rid of their traditional approaches to maintaining competitiveness, Asian manufacturers can fully capture the benefits of digital.

But first, three old ways of thinking must be rooted out. These include being

reluctant to invest strategically in digital, fearing automation, and not understanding the importance of securing data effectively.

SPEND MONEY TO MAKE MONEY

For long, Asian manufacturers have focused on maintaining cost competitiveness by using inexpensive labour and failed to recognise the numerous opportunities available to better operations in a digital economy. Elements in the manufacturing process such as design, planning and engineering were implemented in silos. Today, through digital manufacturing and forces such as 3D printing, IoT sensors and manufacturing robots, there are opportunities to seamlessly integrate these processes.

To do this, manufacturers need to double down on digital and adopt a digital manufacturing strategy. The benefits of doing so are clear. Cognizant's recent study showed that manufacturers investing in digital strategies have already seen a 5.4 percent improvement in revenue. What's more, these manufacturers expect the growth in revenue to soar to nine percent over the course of the next year.

For example, a large paint company in India has used the combination of industrialised sensors, automation and social media analytics to catalyse both internal operations and customer-driven product development and marketing outreach. By developing smarter and more agile demand-driven supply chains, manufacturers can hope to generate growth rates well above what they would have enjoyed in the pre-digital era.

HARNESSING THE POTENTIAL OF DIGITALISATION

Barely a day goes by without someone mentioning that machines will steal our jobs. But the reality is that automated tasks still require human intervention in improving quality and thus consumer experience. Today, digital tools help us work faster and as the world moves towards automation, the onus is on humans to find ways to work even smarter with the aid of technology.

Manufacturers believe that as future tasks become more automated, greater technical expertise will be required, and

the talent and skills required will undergo significant change. This means that workers will not be replaced by machines, but will simply need to develop higher-value skill sets.

Working alongside humans in modern manufacturing, new automated systems will create new and better outcomes. A great example is the Airbus factory, in which robots are strapped to the side of fuselages, drilling thousands of rivet holes, with operators 'piloting' the robots. This reduces any human intervention except when issues need to be addressed, driving down labour costs in the long run.

Increasingly, manufacturers need to turn their business inside out in order to adapt and respond to demand volatility and business pressures. Manufacturers need to become digital at their core. This will enable them to integrate and deliver better outcomes for all the key players across the manufacturing value chain.

As digital spurs the need for new skills, manufacturers in Asia should upskill their workers, focusing on developing and capitalising on the capabilities that are uniquely human and cannot be replicated by machines.

WATCH OUT FOR 'DATA SPILLS'

As manufacturers increase investment across social, mobile, analytics and cloud, and work towards upskilling their talent pool for the digital age, they need to be wary of what happens to their data.

Oil spills are considered one of the worst disasters because of the wide-reaching impact they have on countries, communities, corporations and the environment. The digital equivalent of an oil spill is a 'data spill' or any sort of cybersecurity breach. It is no surprise then that with so much data swirling around, 90 percent of manufacturers are concerned about the security and privacy risks of information getting into the wrong hands.

The recent WannaCry ransomware attack shows that even manufacturers are extremely vulnerable to hackers. For instance, one of the world's major car manufacturers, Renault-Nissan was affected by the cyber-attack causing widespread disruption at several of the auto alliance's sites.

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BY LEVERAGING DIGITAL TO IMPROVE QUALITY, PRODUCTIVITY AND DELIVERY, ASIAN MANUFACTURERS CAN FUTURE-PROOF THEIR BUSINESSES AND MAINTAIN THE REGION'S STANDING AS A LEADER IN THE SECTOR.

Regardless of the product being made, Asian manufacturers need a robust data security strategy in place to secure their systems. They also need to be resilient and should be able to quickly mitigate the damage.

Business leaders should adopt a proactive stance toward cybersecurity. When it comes to planning for digital manufacturing, security issues must be addressed upfront, rather than as follow-on tasks. Companies that do not put in place a comprehensive security strategy are putting themselves at both monetary and reputational risks.

Asian consumers are coming of age in demanding products that are world-class in design and quality, and personalised to deliver great experiences. Industry 4.0 is creating a manufacturing renaissance globally to address these aspects of consumer demand. While manufacturing is still about making things, the future of manufacturing requires analytical thinking, collaboration, communication, and creative problem-solving.

Asian manufacturers must act today or risk becoming obsolete. Leaders need to make critical choices that will quickly allow the benefits of digital to help their businesses succeed. The scale of the opportunity is massive. By leveraging digital to improve quality, productivity and delivery, Asian manufacturers can future-proof their businesses and maintain the region's standing as a leader in the sector. ☺