



By Diaan-Yi Lin | March 2017

Bringing Industry 4.0 to life for companies in Southeast Asia

McKinsey's survey of 300 manufacturing leaders found that nine out of ten believe Industry 4.0 will alter their operational effectiveness. Yet only 48 percent of manufacturers think they are ready for Industry 4.0.

Since the term "Industry 4.0" entered the corporate lexicon a few years ago, as shorthand for the next phase in the digitization of production activities, I've heard executives in Singapore express two attitudes about the concept. Most are enthusiastic about its potential to improve the way their companies develop and make goods. But some are also frustrated by the difficulty of envisioning how their companies can use Industry 4.0 and putting their ideas into practice.

These reactions aren't unique to Singapore. When McKinsey surveyed manufacturing experts in Germany, Japan, and the United States last year, just 16 percent said their companies had an Industry 4.0 strategy in place. Only 40 percent reported good progress adopting the technologies of Industry 4.0: big data and connectivity, analytics, artificial intelligence, advanced interactions between humans and machines, and new production methods such as 3-D printing.

Factory workers face comparable challenges when it comes to bringing Industry 4.0 technologies into their activities. This isn't surprising, because many of the relevant technologies are so new that few workers have been exposed to them.

Part of the solution, in my opinion, is to give executives and managers the chance to see Industry 4.0 technologies in action. This can help them imagine potential applications at their companies much more vividly than they can after merely reading about them. The possibilities associated with Industry 4.0 truly come to life when one stands alongside an assembly line equipped with the latest digital manufacturing gear, uses computers and tablets to view the data it generates, and adjusts production variables while witnessing the immediate effects on performance.

I've observed that such an experience is usually eye-opening and inspiring for participants, no matter what industry or business they are in.

Of course, conceiving ideas about using Industry 4.0 technologies is only the first step. Executives and employees then have to put their ideas into practice at companies and production facilities. To do so effectively, most businesses will need to train their workers in digital fields, from data analysis to robotics. This kind of training would ideally combine classroom teaching with hands-on learning, in much the same way that pilots and plumbers learn their vocations. A simulation environment can be an excellent setting for imparting skills that workers will use on the job.

With these considerations in mind, I am excited about McKinsey's new Industry 4.0 partnership with the Advanced Remanufacturing and Technology Centre in Singapore. Last week, we opened the Digital Capability Center (DCC), a facility where business leaders from Singapore and Southeast Asia can learn to transform their production operations by using advanced digital technologies. The Singapore DCC simulates a "factory of the future," modeled on an 8,000-employee gearbox manufacturer with \$2 billion in revenue. Visitors to the DCC can touch and try Industry 4.0 applications for themselves, and thereby gain a realistic understanding of how these technologies work and what they can do.

As long as Industry 4.0 remains a promising but abstract concept for companies in Singapore, they will struggle to capitalize on its true potential. But the opportunity is too important to miss out on, both for individual companies and for Singapore as a whole, where manufacturing accounts for one-fifth of economic output. By bringing advanced technology together with practical instruction in its use, the Singapore DCC offers companies in the region a place to discover possibilities for applying Industry 4.0 at their facilities, develop the faculties to realize those possibilities—and ultimately improve their competitiveness and performance.

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