

Riding the Industry 4.0 wave

India can fast-track its transformation as the manufacturing hub of the world by blending advanced manufacturing technologies and Industry 4.0 with low cost labour available in the country, says **Sameer Gandhi**.

Industry 4.0, also referred as fourth industrial revolution or smart manufacturing, can spearhead India's transformation as the manufacturing hub of the world by adding value to many aspects.

Industry 4.0 is an amalgamation of emerging technologies such as computational power, IoT, business analytics, advanced robotics, artificial intelligence, additive manufacturing/3D printing, augmented reality, etc. Of these, additive manufacturing, autonomous robots, digital manufacturing, industrial internet and agile product development influence manufacturing the most.

The smart factories of the future allow operations to be executed with high reliability and minimal manual intervention. Automated workflows, improved tracking and scheduling, optimised energy consumption and synchronisation of assets – integral to the smart factory – increase uptime, quality and yield as well as reduce costs and waste.

Currently, the investment for automation across many industries may not be very high because the overall level of manufacturing is not very complex as compared to other countries (the countries which have already touched high levels of manufacturing need high levels of investment to go to the next level). This indicates that the Indian industry actually has the opportunity to 'leap frog' this Automation Curve by taking full advantage of the Industry 4.0 automation technologies that are available today and to turn out world class products.

A McKinsey Global Institute report states that the country is poised to become a \$10-trillion GDP economy



which is four times bigger than its current size, by 2030. Rising consumption-led demand along with India's transformation as a low-cost manufacturing centre is expected to accelerate the growth of India's manufacturing sector six-fold by 2025.

However, to fully capitalise on the opportunity, Indian manufacturers need to improve their productivity dramatically. The government of India has launched niche initiatives such as the 'Make in India' and 'Digital India' campaigns to strengthen the ecosystem required to spur the country's transformation. However, government push alone is not sufficient to provide the necessary growth propulsion for the manufacturing sector. The makers, the automation players need to work together with the policy makers

towards the varied ambitious goals outlined by these initiatives.

Also, there is a strong divide which needs to be bridged by upgrading the skills of human resources to share the same stage with the global companies. In addition to the advantages it offers on the manufacturing front, Industry 4.0 has a lot of potential to generate employment opportunities for India's burgeoning young population. The growth in the manufacturing sector is expected to create up to 90 million domestic jobs, which can be addressed by harnessing Industry 4.0.

However, recruiting and retaining manpower with the right skills-set, could prove to be a challenge for manufacturing companies. Businesses can meet the challenge by adopting active or experiential learning methods to address their training needs.

The new technology-enabled trend in training is catching up in India, with several organisations deploying experiential training activities for their corporate learning initiatives.

The Indian manufacturing sector is at the cusp of major technological transformation. Blending advanced manufacturing technologies and Industry 4.0 with low cost labour available in the country, India can fast-track its transformation as the manufacturing hub of the world. **IPF**



About the Author:

Sameer Gandhi is the Managing Director of Omron Automation, India. As a leader in industrial automation, Omron has extensive lines of control components and equipment, ranging from image-processing sensors and

other input devices to various controllers and output devices such as servo motors, as well as a range of safety devices and industrial robots.