



# Skilling India

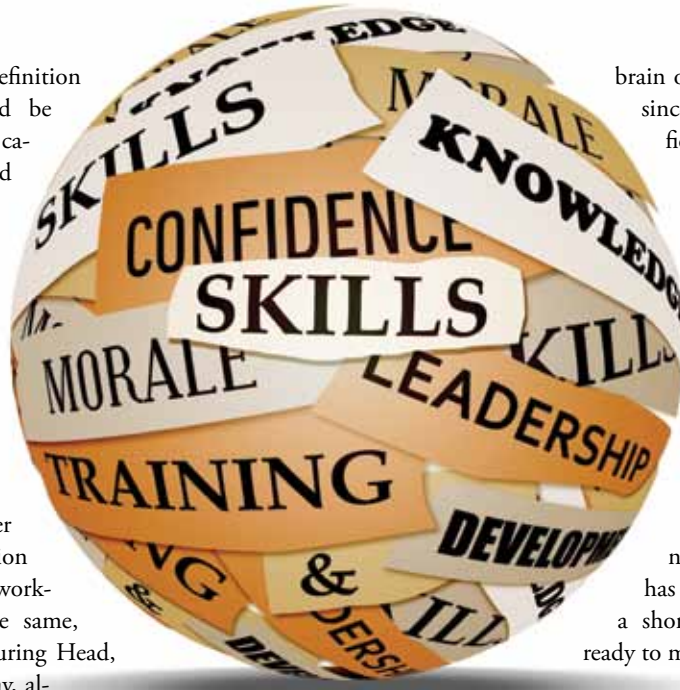
The manufacturing industry has been vocal about challenges that it faces due to skills gap. Here is an overview of the challenges, and steps that are being taken to bridge this gap.

By Swati Deshpande

**T**he general definition of skills would be an ability and capacity acquired through deliberate, systematic, and sustained effort to smoothly and adaptively carryout complex activities or job functions. However these abilities and capacities need to be upgraded time and again as the industries transform. Manufacturing is currently going under technological transformation that brings challenges at the workforce level. Speaking on the same, Hussain Shariyarr, Manufacturing Head, Godrej Appliances says “Today, almost every area of the factory floor

has transformed with addition of new technology whether it is core production, maintenance or utilities and thus skilled labour is required in every department. Additionally, technology and automation brings about the amalgamation of different skill sets. Most of the current employees are skilled in a specific function and the manufacturing vertical is not immune to the requirement of multi-skilled labour. Unless this skilled workforce is given the additional inputs to upgrade their skill, they would be equivalent to unskilled labour.”

Seconding the same, Santosh Dwivedi, Deputy General Manager – Corporate HR, Solar Industries mentions, “The unskilled labour affects areas such as quality, reliability and safety in the manufacturing industry. These areas directly affect productivity, cost, on time delivery, morale and environment.” However, the challenges of unskilled labour goes beyond these areas and is far more serious than it looks. Explaining it in detail, V. Anbu, Director General and CEO, IMTMA notes, “This challenge is not confined to certain areas or departments but to the industry as a whole and primarily for those working on shopfloors. Manufacturing industry across all levels is facing a serious crunch of skilled labour with technical knowhow. The industry specifically is facing a shortage of workforce with requisite design skills which is considered to be the heart and



brain of manufacturing. This is so since the industry finds it difficult to retrain a workforce that it has hired for a certain job. The industry also faces challenges due to budget constraints and time factor. There is also a higher attrition rate due to lucrative offers from the market. Many engineers also leave jobs quickly to augment their career graphs. However, with rapid evolution of new technologies industry has to retrain its workforce over a short period and make them ready to meet future contingencies.”

Analysing the situation, Hari Prakash M, CEO, GP Pe-

troleum says, “It is understood from various sources that only 2 percent of Indian labour force is skilled against the highest 96 percent in Korea, Japan 80 percent, Germany 75 percent and China 40 percent. Based on our observation - a) Production department & b) maintenance department faces real challenge with skilled labour requirements. India is amongst the young countries because close to 30 percent of its population is youth with literacy percentage is almost close to 75 per-



Maintaining high Toshiba quality standards, at par with Made in Japan products, across all our plants, is one of our key objectives. To achieve that, technical training is an integral part of employee development.

**Tomohiko Okada**, Managing Director, Toshiba India Pvt. Ltd.



**“Volkswagen India focuses on skilling at various levels to cope with the rapidly transforming industry.”**

**Dr. Andreas Lauermann,**  
President & Managing Director,  
Volkswagen India Pvt. Ltd.

cent. By this data, it is learnt that the progress of any country lies with skilled labour and for country like India where the skilled labour set is very low, has tremendous potential and opportunity to offer skill based trainings to make the future strong and supply skilled labour not only to Indian manufacturing industries but also overseas industries.”

Seconding the same, P. Kaniappan, Managing Director, WABCO India Ltd. mentions, “Attracting top talent to the manufacturing industry is always difficult. To overcome this challenge we have launched our specially designed PACE maker program and Great Place to Work initiatives to help us attract the best talent.”

Taking a different perspective, Shirin Salis, Vice President—Human Resources, Ingersoll Rand India believes, “The challenge that the manufacturing industry will need to overcome is the negative perception that it suffers from- that it comprises of mostly unskilled and partly skilled workforce while the actual skill demands of the industry are ever increasing in the face of digitalization. Mapping critical skill sets to roles and functions, redefining the employee value proposition and opportunities for career progression are critical to manage the sourcing and developing of critical skills required by the industry. Additionally, there is dearth of talent in the industry, which needs to be addressed on priority. However core engineering and manufacturing management skills are available in our country, but they need to be honed further to keep abreast with the changing functionality of manufacturing. Furthermore in today’s rapidly changing scenario, it is next to impossible to find the ‘right fit’ for the ‘right role’. Therefore organizations need to be ready to cultivate and nurture in-house talent to fuel their long term growth.”

**Employee training**

India’s manufacturing industry is moving towards Industry 4.0 to keep itself at par with global competition. Elaborating on the same, Salin continues, “Increasingly, new-age and futuristic technologies such as artificial intelligence, machine learning, big data analytics, artificial intelligence, internet of things, block chain, etc. are changing the talent landscape. Manufacturing processes now need employees with high-tech skill set, proficient in mathematics and possessing an analytical mind-set. In the wake of these developments, it is a significant priority for organizations to upskill their workforce at a

rapid pace and transform their workforce with the evolving manufacturing ecosystem. Organizations with a thriving talent pool will be the ones winning the manufacturing race in the near future.”

Agreeing to it, Anbu opines, “The workforce needs to be educated and trained in understanding the new technologies. The skill sets of the engineers in new technologies need to be enhanced so that they could put technologies.”

In this regard, Volkswagen India focuses on skilling at various levels to cope up with the rapidly transforming industry. “We undertake special training programs for the employees,” says Dr. Andreas Lauermann, President & Managing Director, Volkswagen India Pvt. Ltd.

Wabco India also undertakes training for their employees. In this regard, Kaniappan recited the efforts that the company takes. “We constantly anticipate and track the evolving industry trends both in India and global markets and through our structured talent management program; we are able build a strong talent pipeline with the required skill sets. Talent management is done in every function with a view to identify top talents, prepare a succession plan and formulate developmental action for the identified talent. Moreover, as a part of the talent management process we regularly implement talent and skill development actions like benchmark visits to customers, suppliers and other manufacturing organizations to learn best practices, structured job rotation, short term training programs, higher education programs, participation in industry forums conducted by industry bodies like ACMA and CII, six sigma green belt programs and short term assignments at other global WABCO locations.”

Speaking on Solar Industries’ efforts, Dwivedi notes, “As far as existing employee are concerned, we have launched Competency Mapping initiatives (through Assessment and development Centres), which leads us to the clear picture about the existing Skills & Competencies available. After Competencies are identified then comes the next phase of Coaching and mentoring through the Learning and development Models.”

Similarly, Toshiba India has its own initiatives for its employees. Explaining the same, Tomohiko Okada Managing Director, Toshiba India Pvt. Ltd. says, “Maintaining high Toshiba quality standards, at par with Made in Japan products, across all our manufacturing plants around the globe, is one of our key objectives. To achieve that, technical train-



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**P. Kaniappan,** Managing  
Director, WABCO India Ltd.



ing is an integral part of employee development at Toshiba. We have training programs for engineers wherein Indian engineers are taken to our facilities in Japan to get them acquainted with the latest technologies, manufacturing processes and skills. Engineers from Japan also regularly visit the manufacturing facilities in India to supervise, support and train the local engineers. We also send our employees to visit manufacturing plants in Japan for skill development and advanced technology training.”

“At Godrej Appliances, we indulge in a multi-pronged approach to bridge the skill gap: Investing in in-house training programs - through our technical training centres at our manufacturing locations, we upgrade the skills of our workforce for our requirements. The technicians and operators are trained on

the new technologies through class room inputs and practical training on models and simulators. This improves their knowledge and builds confidence. For skill development in software programming, both managers and operators are also sent for training to Siemens, Fanuc, etc. When new equipment with new technology are introduced, the operation and maintenance team are trained by the OEM at their factory and at our factory,” describes Shariyarr.

Kaniappan further says that to develop a competent workforce, Wabco India imparts need based trainings to the operators, with emphasis on quality for multi skills and involve all employees for the improvements through suggestions scheme and QCC projects. “Structured training on specialization & analytical skills is regularly conducted and Total Productive Maintenance (TPM) is used and leveraged as an effective tool to improve overall productivity,” he reveals.

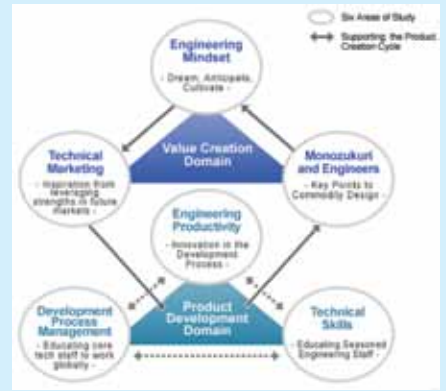
Narrating Solar Industries’ plans, Dwivedi mentions, “We have already initiated the Competency Mapping initiative (through Assessment & Development Centres). Using best

### Technical Training Program System

Toshiba India has developed a new technical training program system to equip engineers with the skills and capabilities they need for their job that focuses on value creation and product development.

- **Value Creation Domain:** To create new markets and values, we need to be in touch with the market. These courses enable us to understand how things are created by fostering the mindset of Toshiba’s engineers.
- **Product Development Domain:** Innovation is needed in the development process to compete at top levels. These courses allow us to produce personnel who have mastered the skills to be leaders in their fields.

Source: Toshiba India Pvt. Ltd.



“Technology and automation brings about the amalgamation of different skill sets. Hussain Shariyarr, Manufacturing Head, Godrej Appliances

available tools for Assessment and Development Centres we have come up with the Action plan, which will lead us to the further Areas of Development. In next phase, we will undergo the Impact assessment of the activity done. All these activities are inspired by The Deming’s principle (Plan-Do-Check-Act).”

In this efforts of skill development, creating conducive work environment is equally important. Speaking about the initiatives and processes at Toshiba India, Okada says, “In a manufacturing set up, to achieve time efficiency, entire process is divided into multiple production lines. While each engineer and employee is responsible for the quality of the product that passes through his/her production line, to assure high quality of the end product teamwork within the whole factory is paramount. We encourage our employees to effectively work together as a team. Realizing the competence and capability of our Indian engineers and technical staff, our endeavour is to constantly enhance and upgrade their skills and build quality consciousness in them and infuse the feeling of commitment and teamwork.”

### Industry Academia relation

The Government of India is also taking steps to upskill the



The skill sets of the engineers in new technologies need to be enhanced so that they could put technologies like IoT to good use on shop-floors in their day-to-day operations.

V. Anbu, Director General and CEO, IMTMA



youth and make them industry ready. Narrating the various initiatives, Anbu highlights that through the National Skill Development Corporation, Government of India has been training engineers. “The Ministry is also supporting development efforts in IoT, Industry 4.0, advanced manufacturing, etc. Industry bodies and associations such as IMTMA are creating a conducive environment to train workforce in these applications through their various training programmes conducted at their Tech Centres in Bengaluru, Pune and Gurugram. IMTMA conducts industry awareness workshops at colleges for students to make them industry ready,” he adds. However this is not possible without the industry’s help.

Toshiba India is also supporting the ‘Skill India’ initiative by imparting technical skill training to Indian engineering students. “We conduct periodic training programs for the students of ITI (Industrial Training Institute) at our Toshiba JSW factory in Chennai,” informs Okada. Similarly, there are other companies as well which work along with ITIs. Speaking about Volkswagen India’s initiatives, Dr. Lauermann says, “We are training the trainers at ITIs, introducing technical syllabus that is relevant to changing times and have even adopted one ITI in Pimpri Chinchwad to turn it into a centre of excellence.” Godrej Appliances is also on the board of four ITIs in Mumbai and in districts surrounding its manufacturing facilities in Mohali and Shirwal. The company is instrumental in developing the curriculum for refrigeration and air conditioning trade. “We also work closely with the ITIs providing them with industry insights and curricular reforms that are relevant to today’s practices,” explains Shariyarr.

Elaborating further on the company’s other initiatives, Shariyarr he asserts, “Under the vocational training program of the group’s ‘Godrej Disha’ initiative, we address this skilling gap by providing high quality vocational training in collaboration with renowned training institutes. ‘Godrej Vocation Training Schools (GVTS) initiated as far back as 2012, and

### Tips for Students’ Skill Development

Shirin Salis, Vice President—Human Resources, Ingersoll Rand India gives tips for academia for students’ skill development:




1. Help identify students’ strengths and ensure that they continue to grow them as they move through semesters.
2. Encourage students to identify 3-4 subjects that they want to excel in and ensure that their activities are consistent with strengthening them.
3. Help them work on their communication & Interpersonal skills – encourage them to take up a leadership role in the class, take up areas where they need to negotiate with others, understand larger issues, advocate for internal customers, etc and build skills in “establishing good relationships with peers”
4. Create an environment/forums where they can write technical white papers, submit stories to the local college magazine, write to local newspaper, etc. – it is very important to have the appropriate written and verbal communication skills

has successfully trained over 37,000 students.”

Wabco India has signed MOUs with leading universities and management institutes to provide various management development Programs, B.Tech programs, student orientation programs and short term courses for our employees and trainees. “In addition, we have established Centers of Excellence in partnership with Veltech University, Chennai and Chennai Institute of Technology. These facilities will impart knowledge and training, in current and advanced braking systems of commercial vehicles to the engineering students of the universities, mechanics and engineers of automotive industry and road transport authorities. The creation of such facilities will stimulate interest in students, research scholars and faculty members in their fields of research to enhance road safety,” explains Kaniappan.

Volkswagen India has the Mechatronics Apprenticeship Programme that fresh out of school (10th standard) students and takes them through the German Dual Apprenticeship style programme that focuses on theoretical and practical learning. “They start with the basics such as metal filing and go on to learn robotics and automation by the end of the course,” notes Dr. Lauermann.

In this effort of skilling India industry association such as IMTMA is also at the forefront. Highlighting the initiatives of the association, Anbu mentions “Recently, IMTMA signed MoUs with different institutions to offer internship programmes for students who are still on board. The programme helps them to develop industry skill sets even before they finish their studies.” He further adds that IMTMA-Institution Innovation Collaboration” (III-C). III-C has provided a platform for both industries and academia to collaborate and work together to bring out the best innovative products with the help of research talent pool available in institutions.

With these initiatives, India is sure to bridge this “skills” gap in the years to come. 



After competencies are identified, the next phase is coaching and mentoring through learning and development models.

**Santosh Dwivedi**, Deputy General Manager – Corporate HR, Solar Industries