

# Catalysing 'Make in India'

Manufacturing can enter the big league if India uses its talent pool to create competitive, cutting-edge designs



ANANT GUPTA

**R**epresentatives of top manufacturers from across the world flew into the capital yesterday to witness the launch of the 'Make in India' campaign by Prime Minister Narendra Modi. I believe they were here because the 'Make in India' campaign is an idea whose time has come.

Historically, India has been associated in a majority of the market segments with "low-end products, unreliable delivery and uncertain pricing." The services sector has taken great strides ahead, but manufacturing is lagging far behind. Right? Wrong! A quiet transformation has been taking place in our manufacturing sector too.

## Impressive quality

Here's a fact that might come as a surprise to you. The Deming Prize, considered one of the most reputed awards worldwide on Total Quality Management, remained elusive to India until 1996.

However, a look at the distribution of winning organisations since 2000 shows India at the top with an impressive tally of 20 prizes, followed by Japan and Thailand. This is no isolated instance.

India, infamous for low labour productivity, ranks at No.4 in the 2013 Global Manufacturing Competitiveness Index by Deloitte, higher than Japan, Singapore, Canada and even South Korea. In fact, on a five-year perspective it is perched right next to China at the No.2 spot ahead of Germany and the US too!

Cited among its significant

competitive advantages are a strong talent pool in the areas of science, technology and research, in conjunction with some of the lowest labour rates in the world that would positively impact its ability to conduct cost-efficient research and development.

This is where I'd like to clarify my interpretation of the 'Make in India' campaign. In supply chain parlance, the term 'make' comprises of two distinct elements: 'design' and 'manufacture'. It is when the two come together that they create a compelling competitive advantage; an advantage that India possesses in great measure.

## Design matters

While 'manufacture' is associated more with the infrastructure and process of conversion of raw material into finished products, most of the innovation and intellectual value addition resides in the 'design' of the product. While manufacturing gains a lot of attention and focus from policy makers, it is actually the design that can catalyse manufacturing on a large scale.

Irrespective of whether a product is a part of the most advanced next generation aerospace mission, or simply a mobile phone to be used by millions of consumers — its development needs an extensive set of activities to make it worthwhile. These include market research, conceptualisation, design, prototyping, testing, compliance and certification for new product introduction.

Further, a sophisticated product needs capabilities across industrial design, chip design, electronics design, structural and mechanical engineering, embedded and software development to deliver a breakthrough, relevant for the respective industries. Clubbed into the non-recurring engineering costs, it may be about 20-30 per cent of the initial investment, depending upon the industry.

Also, with the Brics market seg-



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ment emerging as a significant consumer of products, there is a need to engineer and reengineer products specific to these markets. For this, we will need to adopt frugal engineering and reverse innovation practices.

It is due to this fast changing market dynamic, along with the abundant availability of engineering talent in India, that we have become a global engineering and design hub.

According to Nasscom, India exported engineering and R&D services worth of \$12.4 billion in 2013-14, which is growing consistently.

Some of the world's largest technology and manufacturing companies have set up their global innovation centres in India and are playing a crucial role in this growth journey. Indian IT and engineering services companies too have been contributing in a large way to this increase in exported R&D.

This leadership in pre-manufacturing capabilities can be leveraged, if supplemented with a conducive business environment and related infrastructure, to create a complete ecosystem for manufacturing industry to India.

This will not only attract the much needed FDI in this sector, but also the latest technologies,

best global practices and employment opportunities.

In terms of impediments, there are some policy and infrastructural issues to be taken care of on priority. One issue has been around the offset policy, mandatory for foreign aerospace and defence companies, selling equipment to the Indian government.

Currently, only hardware and components can form part of the offset obligation while software and engineering services are not counted.

Engineering and R&D services procured from Indian companies can certainly offload some of the offset obligations of MNCs.

Another example is of procurement of components or services in SEZs. While SEZs have given phenomenal impetus to the growth of the software industry, there are several constraints in the current policies to carry out new product introduction (NPI) activities.

NPI activities do need flexible and fast import and export of materials and components and policies can be tuned to include these needs. With this, SEZs can go a long way in complementing manufacturing clusters in different parts of India.

Finally, we need an aggressive

push to bolster a robust ecosystem of allied infrastructure for manufacturing. There is a need to promote and incentivise tooling and production of raw materials.

## Big designs

The ability to have a quick turnaround for development of tools and cost effective, high-end electronic printed circuit boards etc. can easily jumpstart manufacturing. Additionally, since semiconductors and plastics form a significant part of the supply chain, the setup of semiconductor fabs in India can also catalyse creation of a thriving electronics value chain.

According to a World Economic Forum report titled 'The Future of Manufacturing', the three most critical factors shaping the future of competition between countries and companies are: human capital and talent development; strategic use of public policy; and innovation and technology advancement.

The first two are well in place in the 'Make in India' campaign. With R&D woven into the mix, the ecosystem will be complete to catalyse Indian manufacturing on to the global big league.

The writer is the CEO of HCL Technologies