55th ENGINEERS' DAY

Theme: Smart Engineering for a Better World

September 15 is celebrated every year in the country since the year 1967 as "Engineers' Day" to commemorate the birthday of the legendary engineer Sir Mokshagundam Visvesvaraya. Sir Visvesvaraya, an eminent Indian engineer and statesman was born in a remote village of Karnataka, the State that is incidentally now the Hi-tech State of the country. Due to his outstanding contribution to the society, Government of India conferred "Bharat Ratna" on this legend in the year 1955. He was also called the precursor of economic planning in India. His learned discourse on Economic Planning in India, Planned Economy for India and Reconstructing India, was the first available document on the planning effort of the country and it is still held as the parent source matter for economic planners. A theme of national importance is chosen every year by the Council of the Institution and deliberated at its various State/Local Centres to educate the engineering fraternity in general and the society in particular. This year the 55th Engineers' Day will be celebrated all over the country on the theme "Smart Engineering for a Better World".

The 55th Engineers Day celebration on the theme 'Smart Engineering for a Better World' will be celebrated by The Institution of Engineers (India) at its various State & Local Centres to take a stock of various capability and capacity building initiatives undertaken in crucial sectors like road and rail connectivity, drinking water, agriculture, healthcare and nutrition, affordable housing and better governance through induction of smart technologies to achieve Sustainable Development Goals in a phased manner. The societal engineering aspect will also be delved into as it is a deciding parameter in ascertaining the extent of for developing a smart infrastructure of inclusive nature as well as creation of newer job openings. The theme 'Smart Engineering for a Better Future' also encompasses issue of environmental sustainability. There is no well established roadmap towards building a smart infrastructure and trying to replicate a generic global template might not work. Such developments are extremely contextual and should reflect challenges, priorities and aspirations at the regional level. The solutions would require synergy between industry, academia and government and should foster an ecosystem where different players can participate and share best practices and develop action plans for switching to a smart infrastructure for a sustainable and prosperous future.

The engineers need to understand that there is tremendous pressure on the existing service infrastructures which are inadequate and not designed to sustain challenges like air pollution, waste management, traffic congestions, effective healthcare and housing for all etc. This will require finding sustainable and inclusive solutions to provide affordable housing, healthcare, nutrition, mass rapid transportation and drinking water especially to the urban populace which may later be replicated in other areas in a phase wise manner.

Bharat Ratna Sir M Visvesvaraya

An interesting commonality in the nature of these challenges is dealing with massive levels of digitization and generation of data. These perceived challenges are veiled opportunities to leverage data science and analytics and thereby induct smart engineering to deal with major global challenges, such as adverse effects of climate change, water scarcity, mixed energy usage, reducing the digital divide among others. The engineering profession is undergoing a paradigm shift with the induction of digitization and emphasis on man-machine interface with induction of logical thinking in machines. Automation and analytics has proved to be decisive and has brought about changes in conceptualization of all major verticals of engineering. Investing in capacity building of smart infrastructure ensuring smart delivery of civic services will serve the broad societal interest with ramifications leading to establishment of effective and accountable governance system congruent to our needs.

As engineers it is important that we adopt smart engineering to leapfrog into new realms in this era of smart engineering for a better tomorrow.