



A brief report on the workshop **STI for Make in India**

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Venue: India International Centre (Annexe) CR1

Date: 10th April

The workshop on “STI for Make in India” was well attended by policy makers, members of academia, industry and its associations and other stakeholders. A welcome address was delivered by Dr. Parveen Arora, Advisor, NSTMIS, Dept. of Science and Technology, in which he laid out the expectations from the workshop and the vistas to be covered. The inaugural address was delivered by Shri Tapan Misra, Director, Space Applications Centre, ISRO, Ahmedabad in which he elaborated on the RISAT 1 programme of ISRO and how it has helped in spawning a domestic private sector space industry in the country. He laid emphasis on engaging with private sector within the existing rules and procedures of the government to complete large strategic projects of the government. This would not only reduce the cost of such projects but would also help SMEs develop skills and master technology that can then be scaled up thereby helping manufacturing growth in the country.

The first session started with a presentation by Dr. H. Purushotham, CMD, NRDC, New Delhi on “Make in India - Opportunities and Challenges for Indian Publicly Funded R&D Institutions” followed by a presentation by Mr. Amitabh Shrivastava, CEO, CSIR-Tech, Pune on “Sourcing Global Technology and R&D to Enable Make in India. Both the presentation gave a glimpse of the technology transfer regime, the environment for such technology transfer in the country and the potential to enlarge the scope of work. Both speakers also stressed on the need to develop linkages with other stakeholders and called for greater focus from the government in changing mindsets, culture and audit rules and procedures. Mr. Anjan Das, Executive Director, CII was the next speaker who gave a presentation on “Align India’s Knowledge and Economy for a Sustainable “Make in India”. Mr. Das gave a succinct presentation focusing on what industry is actually looking for in terms of policy measures to participate and contribute to ‘Make in India’. He voiced the industry view that to sustain ‘Make in India’, manufacturing has to reside in the periphery of STI, intellectual property and entrepreneurship. He also put forth an argument for tax concessions and tax structure realignment for promoting R&D in industry, the need to come up with a policy on intellectual property, and the need for creating a start-up culture in the country. He argued in favor of aligning the new STI policy with the idea of “Make in India”. Dr. Prabhat Ranjan, ED, TIFAC, DST, New Delhi was the next speaker, who presented on “TIFAC activities in promoting innovation” and explained the good work being conducted by TIFAC including the elaborate exercise to map out India’s STI goals for 2035.

Dr. N. Mrinalini, Chief Scientist, CSIR-NISTADS, New Delhi, started the second session with her presentation on “Indian Innovation Capability in the context of “Make in India”: A Global Comparative Scenario”. She presented India’s current position compared to BRICS and other countries in terms of GDP, technology and skill intensity of export, global comparison of high technology export, share in world manufacturing, research and development, R&D stake holders,



higher education investment, R&D output, global innovation index and global knowledge economy index and laid out the importance of aligning the new STI policy with 'Make in India'. This was followed by a presentation by Dr. Nirmalya Bagchi, Professor, ASCI on "Models of STI Driven Manufacturing". Dr. Bagchi presented the various mechanisms for aligning STI with manufacturing for growth in developed countries like Sweden, Finland, and France. He also presented the mechanisms that are leading to the science and technology driven business growth in Israel and argued in favor of adopting some of these mechanisms. He also laid out the contours and the industries in which STI can make a difference in 'Make in India' and gave a roadmap to show how STI interventions can lead to success of 'Make in India' in the country. Dr. G.D. Sandhya, Senior Principal Scientist, CSIR-NISTADS, New Delhi was the next speaker. She made a presentation on "Key Drivers Underlying China's Manufacturing Push: Lessons for India" and gave a comparative scenario between India and China with respect to the STI parameters that can make a difference in 'Make in India'.

Dr. Parveen Arora, Advisor, NSTMIS, DST, New Delhi started the third session with his presentation on "Innovation in Indian Industries: Evidence from the First National Innovation Survey" in which he laid out the important findings of the first national innovation survey. He clearly brought out the recommendations of the survey and laid out the role STI should play to help manufacturing growth in SMEs as well as in large firms. Dr. Arora also laid out a set of recommendations such as fostering linkages across various actors and sectoral push required for strengthening national innovation system for making STI led manufacturing successful in the country. Dr. Amitav Hazra, KnIDS, New Delhi, and Mr. Mukesh Gulati, Director FMC, New Delhi, were the next two speakers who spoke on "Make in India: The Innovation imperatives" and "STI policy and its operationalisation strategy in the MSME context" respectively. They both highlighted the need to tie up vertical and horizontal linkages in the STI-manufacturing landscape and argued for greater focus on small and micro enterprises in leading the high technology driven manufacturing growth in the country.

An intensive roundtable discussion was held after the third session and the major points which emerged out of the one-day workshop by the participants are:

- i) STI has a very important role in 'Make in India' and the new STI policy and its implementation needs to be aligned with 'Make in India'.
- ii) For the success of Make in India it is necessary to focus on the MSMEs as well as large firms. While large firms may need tax related structural interventions, MSMEs need facilitation for STI led manufacturing growth. It is important to see Make *for* India as a part of 'Make in India'. It is necessary to lift the firms of our country to a competitive mode so that they are capable of competing globally.
- iii) There is a need to strengthen the STI ecosystem to become globally competitive. A comparative analysis of the eco-system as it exists in other BRICS countries, Israel, Japan and South Korea needs to be undertaken. Effective measures in those countries can then be tailored and applied here.
- iv) Producing in India is important, but the stress should be on producing the *very best* in India. Excellence in manufacturing through STI should also be a focal area.