



## **Call for Proposal - "Industry 4.0 Baseline Survey Among MSMEs: Fostering Digital Transformation through 5G Technologies"**

TCoE India, on behalf of DoT, is seeking proposals from organizations and startups to develop a comprehensive Industry 4.0 baseline survey for the MSME sector in India, focusing Digital Transformation through 5G Technologies and its impact on the sector. The manufacturing industry is undergoing a significant transformation driven by the emergence of Industry 4.0, a concept that integrates advanced technologies such as artificial intelligence, the Internet of Things (IoT), and cloud computing to enhance efficiency, productivity, Process, Strategy and competitiveness. As the Indian manufacturing sector continues to evolve, it is essential to assess its current state of readiness for Industry 4.0 to identify areas of improvement and prioritize investments and make informed decisions about investments and strategic directions.

The survey will be targeted on understanding the challenges faced by MSMEs in adapting to Industry 4.0 and utilizing advanced technologies. The survey should aim to lay the groundwork for a robust ecosystem capable of capitalizing on the capabilities offered by 5G and 6G networks. This should include identifying sector-specific needs - in at least 10 sectors and preferences, recognizing the diverse landscape of MSMEs, and providing targeted support to foster innovation and competitiveness. The survey should not only address immediate barriers to digital transformation but also pave the way for the cyber-physical system through seamless integration of appropriate sensors using 5G /6G technologies ultimately driving sustainable growth across sectors.

### **The brief scope of work includes:**

- **Survey Design:** Design a comprehensive survey to assess Industry 4.0 adoption among MSMEs in India.
- **Data Collection:** Collect primary data through online and offline surveys, interviews, or other methods.
- **Data Analysis:** Analyze the collected data to identify trends, patterns, and insights.
- **Report Generation:** Generate a detailed report highlighting the findings, recommendations, and implications for the MSME sector.
- **Policy Recommendations:** The selected organization or startup should include policy recommendations in their survey report that support the implementation of the baseline survey findings. These recommendations should aim to enhance the overall efficiency of the MSME sector, enabling increased production at minimal or no additional cost to the businesses.
- **Initial Sectors of Focus:** The agency may choose sectors for the survey with prior information submitted to TCoE.

### **Requirements:**

#### **Technical Proposal:**

1. Prepare Survey Questions for Baseline Survey on MSMEs and Startups in Industry 4.0
2. Identify the ten or so sectors like - Leather and Leather Goods; Printing and Packaging; Furniture and Wood Products; Chemical and Petrochemical Processing; Metalworking and Fabrication; Textile and Apparel; Food Processing

- and Agribusiness; Automotive Components Manufacturing; Chemicals and Pharmaceuticals; Machinery and Equipment Manufacturing
3. Outline the tools and techniques to be used for data collection and analysis.
  4. Apart from turnover ; fix the number of employees?
  5. What technologies related to Industry 4.0 to be used?
  6. Some should be common platforms- developed by Govt - - AI and Machine Learning; Big Data Analytics; Cloud Computing.
  7. What devices IoT (Internet of Things) used; Cybersecurity Solutions; Augmented Reality (AR) / Virtual Reality (VR)/ XR ; Metaverse; Web3 etc.oT devices 5G-enabled or other technologies.
  8. What use will IoT serve in the firm - Monitoring and Maintenance; Production Efficiency; Inventory Management; Supply Chain Optimization; Employee Safety; Energy Management. Challenges in adopting Industry 4.0 technologies- High Cost of Implementation; Lack of Skilled Workforce; Insufficient Infrastructure; Cybersecurity Concerns; Resistance to Change; Regulatory and Compliance Issues etc.
  9. Short term - mid term - long term plan.
  10. Policy reforms required.
  11. Describe the methodology and approach for designing and conducting the survey. - define objectives; develop a comprehensive questionnaire; identify sectors; Sampling methods ; coefficient value defined; Data collection methodology ; any sample test cases; analysis of data ; SERPERF ?/ modelling; report generation / policy recommendations; implementation strategy ; etc .
  12. Provide a detailed timeline for the project, including milestones and deliverables.

**Financial Proposal:**

- Provide a detailed breakdown of the costs for the project, including personnel, equipment, travel arrangements, and other expenses.
- Outline the payment schedule and any applicable taxes.

Sr.No	Head	Cost	GST	Total
1	Survey Design and Planning			
2	Survey execution			
3	Data Collection			
4	Manpower			
5	Data Processing and Analysis			
6	Reporting and Dissemination			
7	Miscellaneous			
8	add any others			



**Telecom Centre of Excellence India**

A Public Private Partnership Initiative

### **Submission Guidelines & Deadline :**

Please submit your proposal in electronic format (PDF) by **11th June 24 by** e-mail to [neetu@tcoe.in](mailto:neetu@tcoe.in) cc [pankaj@tcoe.in](mailto:pankaj@tcoe.in). The proposal should include both the technical and financial proposals. Therefore, over a 90-day period, it will target to cover at least ten sectors across the country.