I. Introduction and Context

Country Context

India is one of the world’s largest and most dynamic emerging markets with vast economic potential. However GDP growth decreased from 10.5 percent in 2010 to 5 percent in 2013 (year-to-end as of March 2013). While India stands to benefit from an immense demographic dividend, with the largest youth population in the world (around 66 per cent of the total population is under the age of 35), 11% of these are unemployed, and overall labor participation is low at 56%. Looking to reverse these recent trends, the objective of the 12th Five-Year Plan (FY2013–17) is to return to GDP growth rates in excess of 8 percent.

The manufacturing sector will have to play an important role in returning India to high growth rates. Manufacturing has long been recognized as an essential driver of economic development for most developing countries (e.g. it has an important economic and employment multiplier effect). India’s manufacturing performance has not been very encouraging despite a strong potential. Its share of
GDP has stagnated at around 15 percent compared to more than 30 percent (and growing) in East Asia. India’s manufacturing remains dominated by low productivity MSMEs coexisting with a few, sometimes world class, large manufacturers. Recognizing its potential, the Government of India has set the objective of “enhancing the share of manufacturing in GDP from its current level of 15 to 25 percent within a decade and creating 100 million additional jobs” in the recently announced National Manufacturing Policy.

The main constraints to the growth and competitiveness of India’s manufacturing are well known and include: difficulties to access markets (including within India), difficulties to access finance (especially for MSMEs), infrastructure deficiencies, regulatory red tape, disincentives for MSMEs to grow and difficulties for MSMEs to access technology and skills.

Against this backdrop, the proposed national Project is aiming to develop the technological and skill base of MSMEs in selected manufacturing industries (the tooling industry in particular), via upgraded and expanded Systems of specialized Technology Centers (currently called Tool Rooms and Technology Development Centers).

The focus of the Project on the tooling industry stems from the importance of the tooling industry to key manufacturing industries such as automotive and electronics, especially with respect to the development of the technological and skill base of MSMEs. The tooling industry consists in the development and manufacturing of dies, molds and casts as well as testing and prototyping. As such it is the interface between product design and product manufacturing. The right tools help increase throughputs, reduce material waste and improve product quality. The importance of the tooling industry increases with accelerating technological developments, product sophistication/innovation/customization and decreasing time to market. Because it sits in between design and production and is highly specialized, tooling is a local industry (more than 60% of tools in the world are locally produced and consumed – including in India) dominated by SMEs (more than 80% of firms in India, Europe, US and Japan).

Like in other countries, the private tooling industry in India has grown hand in hand with the manufacturing industry. The turnover of the Indian tooling industry is $3bn with more than a thousand firms employing 120,000 workers. There is thus today no longer a market failure (in the production of tools by the private sector in India) justifying public investment in the production of tools. The constraints to the growth and competitiveness of the Indian tooling industry mirror the ones affecting manufacturing as a whole listed above - the 2011 report from the Indian tooling association (TAGMA) points out in particular inadequate capacity to meet demand, the lack of capability for high precision tools manufacturing and the scarcity of skilled people and their retention.

The global experience shows that a workforce with higher schooling and skills level lead to higher productivity and personal income. The workforce in the countries such as China and other East Asian Countries with whom India has to compete in the global market have achieved much higher level of schooling and work related skills.

India has about 470 million labor force, of which less than 10 percent have received any kind of skills training either through formal or informal means. About 13 million young people enter the labor force annually. Despite the huge expansion of skills training provision during the 11th Five Year Plan, the skills development system in the country is still underdeveloped with a capacity of
providing some kind of work-related skills to about 4 million people. This gap between skills demand and supply could become even wider in the years to come since the 12th Five Year Plan (2012-17) plans to have 50 million additional new non-farm jobs. In its 11th and 12th Five Year Plans, India recognized that skills development is critical for achieving faster, sustainable and inclusive growth on the one hand and for providing decent employment opportunities to the growing young population on the other.

The Plan clearly emphasizes upon doubling the skill training capacity and significantly enhance quality through innovative approaches, public-private partnership, expanding outreach with equity, systemic reforms, strengthening the institutional framework, scaling up the programs that have worked, creating more choices for the youth, and generating awareness among the people at large. The Tool Rooms (now called Technology Centers) have been providing vocational training targeted at MSMEs. The proposed Program in consonance with the objectives of the 12th Five Year Plan will not only increase the training capacity through establishment of new/better Technology Centers but also help improve the quality of the overall vocational training system in India, in particular by contributing to improving the curricula and by training trainers.

Public support, through the proposed Project, to the development of the technological and skill base of MSMEs can thus be justified because of the high expected economic and social returns together with pervasive market failures in the provision of technology and skills.

Sectoral and Institutional Context

The MSME Ministry, through the Office of the Development Commissioner, operates eighteen Technology Centers (thereafter referred to as TCs): ten for the tooling industry and eight for the ESDM (electronics system design and manufacturing), Fragrance and Flavor, footwear and glass industries, etc.

Several of the TCs have been set up through collaborations with German and Danish government agencies as well as with the United Nations Industrial Development Organization (UNIDO). The TC’s primary focus is on improving access to advanced technologies & providing technical advisory support for entrepreneurs and workers (by exposing and providing them access to state of the art technology), and offering opportunities for hands-on technical skill development to the youth at varying levels.

The TCs of the MSME Ministry have been evaluated several times over the last two years, the following strengths and weaknesses have been noted (further confirmed during the identification mission of the World Bank):

- **Strengths.** The provision of well received hands-on vocational training programs to more than 100,000 trainees annually has been the main achievement of these Centers. The TCs have been able to generate revenues from these training in excess of their operational costs. This activity has grown rapidly and now accounts for more than 70% of the revenues of TCs. Other noteworthy achievements include the TC in Mumbai which managed to keep ahead of private sector laboratories with respect to calibration and testing as well as the important role played by the TC in Kannauj (UP) with respect to the development of the mint oil industry. Strong incentives for senior executives of TCs to perform (term contracts with 25% variable pay) and Local Governing Councils with private sector representatives are notable governance strengths.
- **Weaknesses.** With the exception of the mint oil industry in Kannauj, it is not clear that
these TCs have had much of a catalytic and transformative impact on their local eco-systems. In most cases, TCS have fallen behind the technology frontier of the Indian private sector making the commercial production of standard tools hard to justify on its own (e.g. no demonstration effects). TCS lack specialization and linkages with national and local stakeholders. The evaluation reports have also noted Key Performance Indicators (KPIs) overly focused on financial targets (no KPI on impact).

In addition to building on these strengths and addressing these weaknesses, the proposed Project will seek to develop synergies (and avoid duplications) with a number of related public/private sector institutions and schemes in three areas:

a. First and building on the main strength of the current TCS, the proposed Project will complement and reinforce the hundreds of public and private providers of vocational training (e.g. the Industrial Training Institutes and the Polytechnics), helping them to improve their curricula and training their trainers – helping them to put more emphasis on learning and problem solving skills, be more practical and adapted to local conditions and needs. To that end the proposed program will develop linkages between the TCS and the 40 Trainer Institutes being set up by the Ministry of Labor, the Sectoral Skill Councils being created as Special Purpose Vehicles (SPVs) by the National Skill Development Council (NSDC) and the newly created NSDA (National Skill Development Agency) as the skill apex institution reporting to the Ministry of Finance. The development of such synergies and linkages will also be supported by the existing World Bank projects aimed at improving vocational training in India.

b. Second, the proposed Project will upgrade the technology capabilities of the TCS and develop linkages with the main Indian and international technology leaders (e.g. research institutes and leading manufacturers) so that they can benefit and contribute to the national and local technology and innovation systems.

c. Third and finally, the proposed Project will leverage and complement other cluster development initiatives such as the Cluster Development Project (MSCCDP) of the MSME Ministry, the industrial cluster support initiative of the Confederation of India Industry (CII) and the Electronics Manufacturing Cluster (EMC) scheme of the Ministry of Information and Telecommunications which seek to develop four electronics parks (including tool rooms as SPVs).

Relationship to the Country Partnership Strategy
The proposed Project is in line with the overarching objective of the World Bank Group’s Country Partnership Strategy (CPS) for the period FY2013–17 of supporting poverty reduction and shared prosperity in India, as well as the vision for development outlined in the country’s 12th Five-Year Plan (FY2013–17), which calls for “faster, sustainable, and more inclusive growth” focusing on poverty reduction, group equality, regional balance, empowerment, environmental management, and employment. The CPS aims to contribute to three main engagement areas: integration, transformation, and inclusion. The proposed project includes interventions that aim to strengthen market mechanisms including the development of a vibrant manufacturing sector and promote human development. It will directly contribute to the CPS outcome 1.3 (improved demand-driven skills for productive employment), with indirect contribution to outcome 1.4 (enhanced private investments in low income states).

Furthermore, the proposed Project fulfills the request from the Indian Government’s that World Bank support should be given to projects that have a systemic or transformational impact, to those that help innovate and pilot new approaches, as well as introduce innovative financing instruments and leverage resources.

Finally, the proposed Project is also in line with the CPS as it aims to have impact in India’s Low
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**II. Proposed Development Objective(s)**

**Proposed Development Objective(s) (From PCN)**
The proposed Project’s Development Objective (PDO) is to enhance the competitiveness of MSMEs and the employability of trainees in selected manufacturing industries and States through the upgrading and development of Technology Centers.

**Key Results (From PCN)**

PDO level indicators (outcomes):
- Increase in sales of MSMEs supported by the Project through the Technology Centers – in particular directly or indirectly exporting MSMEs
- Increase in labor productivity of MSMEs supported by the Project through the Technology Centers
- Increase in the workforce of MSMEs supported by the Project through Technology Centers
- Increase in the number of trainees employed six months after graduating from the Technology Centers

Output indicators for Component 1:
- Number of firms having adopted the new technologies introduced by the Technology Centers twelve months after having been exposed to it
- Number of curricula developed, put forth for National adoption
- Number of project beneficiaries (core indicator) – in particular the number of trainers trained, the number of women beneficiaries as well as the beneficiaries coming from Low Income States.

Output indicators for Component 2:
• Number of Technology Centers upgraded
• Number of new Technology Centers developed

III. Preliminary Description

Concept Description

The proposed national Project is based on a number of design principles and features aimed at building on the strengths and addressing the weaknesses of the existing MSME TC program. It also seeks to develop synergies with the other related public/private institutions and schemes. The design principles and features of the proposed Project are:

a. Technology Centers to achieve technological and pedagogical excellence for transformational impact – the Technology Centers, with the support of world class Technology Partners (discussed in more details below), will need to reach and keep in touch with the global technological frontier and rely on world class education skill development techniques and curricula.

b. Technology Centers to be demand driven – all clients of the Technology Centers will need to pay for a significant portion of the cost of the services received (some beneficiaries will benefit from support provided by other programs). The price will vary depending on the nature of the services and the beneficiary as well as on whether the service is being provided by private providers in the vicinity (see immediately below).

c. No crowding-out of the private sector – the Technology Centers will produce manufactured products only for training/demonstration purposes. The Technology Centers will support (rather than compete with) private providers of technology and skills. To ensure that, the price of their services (adjusted for quality) will be at least equal to the prices of local private providers (if any). Representatives of the private sector (including representatives of private providers of technology and skills) will sit on the Governing Councils or Boards (in the case of Special Purpose Vehicles) of the autonomous Technology Centers.

d. Good governance – each autonomous Technology Center will be governed by a Governing Council representing all main stakeholders (especially private sector) or, in the case of a Special Purpose Vehicle, by a Board (the later to be developed and tested first on a pilot basis).

e. Linked to eco-system – each Technology Center will be supported by an internationally competitively recruited Cluster Network Manager ensuring that it keeps in touch with the needs of the business and student communities and that it contributes to/benefit from the eco-system it operates in (discussed in more details below).

f. National relevance – the Project will be governed by a Project Steering Committee representing all main stakeholders ensuring that the Project keeps on track with fulfilling its main objectives and contributes to/benefits from other related national programs and initiatives.

g. Effective implementation – the design and implementation of the Project will be supported by an internationally competitively recruited firm (discussed in more details below).

h. Design inspired by good practices – the design of the Project is/will be inspired by relevant international and national good practices - e.g. Germany’s Fraunhofer Institute, the US’ National Network for Manufacturing Innovation initiative (NNMI) , China’s clusters of tool rooms and India’s most successful industrial cluster initiatives.

i. The total Program cost on the government side will be USD 400 million over a five year period split equally between State governments (mostly through the contribution of land) and the Federal Government (mostly through a USD 200 million Sector Investment Loan from the World Bank/IBRD). The private sector is also expected to contribute financing in the pilot SPVs (amount to be determined).
The proposed national Program will finance the following activities grouped into three components:

Component 1: Technical assistance to the existing and new TCs

The TCs and their main private sector clients will benefit, for the duration of the Project, from the technical assistance of world class firms with respect to their technological and business needs. These two streams of technical assistance will run in parallel and inform each other under the guidance of Industry Specific Joint Working Groups comprising the main industry leaders and representatives.

The first stream of technical assistance will consist in Technology Partners for each System of TCs specialized on specific industries/technologies. The Technology Partners will help identify the existing and expected future technologies which could have a transformational impact on the industry, in particular on MSMEs (e.g. 3D Printing) and help develop a detailed strategy/roadmap for the firms in each selected industry to take most advantage of it.

The second stream of technical assistance will consist in Cluster Network Managers for each System (or sub System) of TCs specialized on specific industries/clusters. The Cluster Network Managers will help TCs develop and implement their strategy based on the identification the main opportunities and needs of the industrial clusters it will support (in partnership with the Technology Partners).  

Component 2: Investments to upgrade and build the facilities for the existing and new TCs

The Project will finance the upgrading of the existing 18 TCs and will finance the construction of new facilities for around 15 new TCs.

Land – the Project is expected to span at least 25 States (including at least eight Low Income States). Most States have already expressed a strong interest in the Project and committed to allocate land for the new TCs. The scope for having a transformative impact together with the time it will take for the facilities to become operational will be key criteria for the site selection.

Buildings – The physical facilities of the TCs will be upgraded and developed with the following objectives in mind:

a. World class with respect to facilitating the provision of their services
b. Green to minimize their environmental impact
c. Economic to reduce costs
d. Flexibility with respect to usage and expansion/contraction

Software/Equipment – to be purchased following the advice of the Technical Partners as discussed above and following the same principles as for the buildings.

Component 3: Technical assistance to the MSME Ministry for Project implementation and Monitoring and Evaluation

Implementation Partner - The Project will be implemented with the support of an agency which will provide assistance in the following areas:

a. Day to day Project management and supervision of activities
b. Procurement (e.g. preparation of ToRs and bidding documents)
c. Financial management
d. Contract management
e. Environmental and social safeguards
f. Monitoring and Evaluation

Small dedicated team hired to act as the interface between the Implementation Partner and the Project Coordinator of the MSME Ministry (see the section on the implementation and governance framework for the Project immediately below).

Implementation and Governance Framework for the Project

The national Project will be governed by a Project Steering Committee (PSC) chaired by the Secretary of the MSME Ministry and comprising representatives of the main stakeholders including representatives from: Ministry of Science and Technology, Ministry of Communication and Information Technology, Ministry of Heavy Industry, Ministry of Labor (DGE&T), State Governments through their Principal Secretaries/Secretaries of Industry, the NSDA, Academia and Research Institutes as well as the main relevant industry associations.

The implementation of the Project will be the responsibility of an Implementation Committee (IC) under the chairmanship of the Development Commissioner (MSME).

A Project Advisory Committee (PAC) will be set up, which will comprise Thought Leaders from Industry, Academia and Industry Associations to provide strategic inputs on strengthening the Indian MSME ecosystem through this Project. This Committee will work closely with the National Project Director / Chairman, Implementation Committee through the design and execution phases of the Project and ensure continuity.

Industry-specific Joint Working Groups (JWGs) will also be constituted to provide domain expertise and advisory inputs to help ensure that the Project is as relevant and impactful to the industry at stake as possible. The JWGs will consist of industry leaders, representatives from the main relevant business associations, government institutions and academia.

Each TC will be autonomous and steered by a Governing Council representing all key stakeholders, in particular from the relevant parts of the private sector. The Project will be the opportunity to test different governance models for the TCs, including SPVs.

Safeguards
In line with Bank’s operational policies, environment and social assessments will be conducted. Based on the findings from these studies, an Environment Management Framework and a Social Management Framework for the project will be prepared. Since the specific technical features of the Technology Centres will not be known before approval of the project, a framework approach will be suitable for the project. The borrower’s organizational capacity to achieve environmental and social objectives against the range of environmental and social impacts and opportunities that may be associated with the program/project will be assessed as part of these studies. The Program offers opportunity to promote improved environmental performance of the selected
industrial sectors and safer working practices through introduction of new/appropriate technology and training – these possibilities will also be explored through safeguards and technical studies. On the social aspects, the SMF would highlight potential entry points on dimensions such as gender, equity and inclusion for the targeted interventions and up-scaling of good practices for improving over-all Program delivery.

Expected time frame for completion of this Safeguards Activity - Prior to appraisal. The safeguard-related documents will be disclosed by appraisal (expected for February 2014) at the Bank’s Infoshop and in-country in line with the requirements set forth in the Bank's Operational Policies (including the Disclosure Policy).

IV. Safeguard Policies that might apply

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V. Financing (in USD Million)

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VI. Contact point

World Bank
Contact: Vincent Palmade
Title: Lead Economist
Tel: 473-9432
Email: vpalmade@worldbank.org

Borrower/Client/Recipient
Name: Dept. of Economic Affairs, Ministry of Finance, Government of India
Contact: Mrs. Aparna Bhatia  
Title: Director  
Tel: 911123094443  
Email: aparnabhatia2002@gmail.com

**Implementing Agencies**

Name: MSME Ministry  
Contact: R.K. Rai  
Title: Director  
Tel: 9123062561  
Email: Rk.rai@nic.in

**VII. For more information contact:**

The InfoShop  
The World Bank  
1818 H Street, NW  
Washington, D.C. 20433  
Telephone: (202) 458-4500  
Fax: (202) 522-1500  
Web: http://www.worldbank.org/infoshop