

Programme for Modernisation and Innovation Promotion in MSMEs in India Success Stories



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Registered offices
Bonn and Eschborn

Address
B5/1 Safdarjung Enclave, New Delhi
110029, India
T +49 61 96 79-0
F +49 61 96 79-11 15

E info@giz.de
I www.giz.de

Project:
Programme for Modernisation and Innovation Promotion in Micro, Small and
Medium-sized Enterprises in India (MSME INNO)

Responsible:
Chaman Lal Dhanda
Head of Project
Programme for Modernisation and Innovation Promotion in Micro Small and
Medium-sized Enterprises in India (MSME INNO), GIZ India

Author/Editor:
Victoria Hohenhausen, GIZ

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Introduction

India has emerged as one of the fastest-growing middle-income countries. As of now, the Indian MSME sector – which consists of an estimated 60 million MSMEs¹ – contributes to 29% of the country's GDP. So far, 110 million jobs were created through the sector. An estimated 250 million adolescents are expected to enter the job market in the next 15 years.

Currently, the Indian MSME ecosystem is defined by a strong disconnect between its stakeholders. This prevents MSMEs from getting access to necessary technologies and innovations to remain competitive. To sustain the country's economical growth, the **MSME ecosystem needs to be improved.**

On behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH has partnered with the Ministry of Micro, Small and Medium Enterprises (MoMSME), Government of India, to enable the development of an innovative ecosystem for the Indian MSME sector through the Programme for Modernisation and Innovation Promotion in MSMEs in India.

Programme for Modernisation and Innovation Promotion in MSMEs in India

The Programme for Modernisation and Innovation Promotion in MSMEs in India (MSME INNO) is working through four verticals; industry-academia collaboration, strengthening Business Membership Organisations (BMOs), fostering the incubation of start-ups, and anchoring innovation in policy strategies.

MSME INNO aims to **bridge the gap between industry and academia** through field projects. These projects not only improve the access to technologies for MSMEs, but also increase the demand for such services as provided by the BMOs and academic institutions. In addition, the on-field experiences increase the employability of students.

Further, MSME INNO **strengthens BMOs** to provide improved services to their member MSMEs. In order to sustain these, BMOs are encouraged to set up Innovation Facilitation Cells (IFCs) within their existing structures. As such, the project is bringing together supply side and demand.

Additionally, MSME INNO **establishes and strengthens incubators** in Technology Centres (TCs). It further improves the services of existing ones.

On a macro level, the programme advises the MoSME in **establishing strategies** for innovation promotion. The project has been involved in shaping a new funding policy for incubators (see ASPIRE), which has since been adopted by the cabinet ministers.

¹MoMSME Annual Report 2018-2019 <https://msme.gov.in/sites/default/files/Annualrprt.pdf> (04.09.2020)

MSME INNO is in line with several MoMSME schemes. Some of them are:

- **A Scheme for Promoting Innovation, Rural Industry & Entrepreneurship (ASPIRE)** for job creation, entrepreneurship promotion, economic development and innovation in the agrarian sector,
- **Technology and Quality Upgradation Support to MSMEs** for the use of energy efficient technologies (EETs) in manufacturing units to reduce the production cost and to adopt clean development mechanisms,
- **Support for Entrepreneurial and Managerial Development of SMEs Through Incubators** for early stage funding of innovative business ideas,
- **Technology Centre Systems Programme (TCSP)** for establishing new Technology Centres (TCs) and to upgrade existing TCs across the country.
- **Building Awareness on Intellectual Property Rights (IPR)** for Micro, Small & Medium Enterprises (MSMEs), seeking to upgrade technologies and thus increase MSME competitiveness,
- **Design Clinic Scheme** to solve MSME design problems and add value to existing products,
- **Cluster Development Programme (MSE-CDP)** to help address common challenges of MSMEs in a cluster-based approach.

This publication displays **some of the successes achieved by MSME INNO**. It further links the project activities to MoMSME schemes, emphasising on the shared agenda of creating a nurturing MSME ecosystem for India's economic growth.

From Industry Body to Start-up Ecosystem Builder

A BMO's Commitment to Entrepreneurship

An entrepreneurial revolution is brewing in Aurangabad. It is being led by the regional industry body, the Chamber of Marathwada Industries and Agriculture (CMIA). Its incubator, the Marathwada Accelerator for Growth and Incubation Council (MAGIC), was set up in 2016 with the support of GIZ. It has since received government support, built deep networks with industries and academic institutions and directly supported emerging start-ups of the region.

Before opening the incubator, MAGIC had already built a strong network with academic institutions. The incubator identified their role as a catalyst for student-led start-ups as job opportunities have not kept pace with the number of students graduating.

Establishing a Support System for Start-Ups

The incubator is registered as a standalone not-for-profit company with the chamber members as promoters. Each CMIA member is a mentor at MAGIC. Members also help incubatees access angel and seed funding. In addition to infrastructure provided, the incubatees receive legal and HR advice as well as support in areas as in patenting, marketing and design. Regular knowledge building sessions further encourage entrepreneurship.

Seven start-ups have already graduated from MAGIC. At present, a further seven are being incubated. The thematic areas range from agri-equipment – see chapter 2 – to 3D printing.

Women Entrepreneurship Promotion Cell

GIZ has also supported MAGIC in setting up an innovation promotion cell, targeting collaboration among women entrepreneurs. It set an initial target of helping 100 women entrepreneurs/start-ups scale up their business.

Now that CMIA has acquired the knowledge on launching and running a business incubator, the BMO intends to work as knowledge partner to institutions, academic institutions and others who want to launch similar initiatives. For MAGIC and the start-ups they are supporting, the journey has just begun.



Setting up and supporting incubators is in line with the MoMSME scheme Support for Entrepreneurial and Managerial Development of SMEs through Incubators (<https://my.msme.gov.in/inc/>)



Students Evolve Product Innovation

Spraying Fertiliser Has Never Been This Easy'

“ This incident was a turning point of my life and I was determined to build an improved fertiliser sprayer. ”

Yogesh Gawande – a graduate from Aurangabad – grew up in a farming family who used to endure the hardships that come with spraying fertilisers. That was until his cousin got hospitalized due to the frequent inhalation of toxic fumes.

Overall, agriculture plays a vital role in India's economy. The sector contributes to 16%² of the country's GDP. It is the primary source of livelihood for about 58% of India's population.³ Likewise, fertiliser consumption has increased over the years⁴.

With a vision to revolutionise fertilising throughout the country, Mr. Gawande developed his first fertiliser sprayer. Through the support received as an incubatee of MAGIC, he gained the required knowledge on IPR for patenting his product.

Encouraged by its successful launch in the market, Mr. Gawande sought to further automate the fertiliser.

Students Solve MSME Problems

In order to access the required knowledge, he engaged with Jawaharlal Nehru Engineering College. As partner of MSME INNO's industry-academia collaboration initiative, the college selected a team of students to find an innovative solution for the project.

The students eliminated the force required for pushing the tool and improved its design. Instead of handling it manually, the farmers now benefit from a battery-powered version of the Niyo Spray Pump. With the newly installed uniform spraying method, the spraying time is reduced by one third per acre.

Through the project, students worked in a cross-functional team for the first time. They got acquainted with industry culture, increasing their employability.

“ The students showcased great creativity and dedication in developing this new model. We are looking forward to working with academia in the upcoming years. ”



Niyo Innovative Solutions LLP.
Est.: 2019
<https://niyo-agrotech-pvt-ltd.business.site/>



Jawaharlal Nehru Engineering College (JNE)
Est.: 1982
<https://www.jnec.org/index.php>

Providing support in IPR is in line with the MoMSME scheme for Building Awareness on Intellectual Property Rights (IPR) (<http://www.dcmsme.gov.in/schemes/IPRDetail.html>)

Increasing MSME competitiveness through innovative design solutions is in line with the MoMSME scheme Design Clinic for Design Expertise to MSMEs (<http://www.designclinicsmsme.org/>)



130+

Product innovations through industry-academia collaboration projects

²Farmers' portal https://farmer.gov.in/M_Aboutus.aspx (04.09.2020)

³India Brand Equity Foundation <https://www.ibef.org/industry/agriculture-india.aspx> (04.09.2020)

⁴Fertiliser Use by Crop in India <http://www.fao.org/3/a0257e/A0257E01.htm> (04.09.2020)



Innovation Challenge for COVID-19 Solutions

From Lockdown to Innovation

“ I have developed the whole idea at home, working and prototyping during the lockdown in Mumbai. ”

The global COVID-19 pandemic entered Mumbai on 9th March 2020, followed by a nation-wide lockdown starting 24th March 2020. The whole country was faced with new challenges.

Seeking innovative solutions for the global pandemic, Lemon Ideas, supported by MSME INNO, organised the ‘What an Idea For COVID-19’ challenge. More than 100 entrepreneurs, students and start-ups participated in the challenge that awarded 20 winners with seed funds and mentorship support.

Sanitiser Compulsion Device

Ankush Tripathi’s sanitiser compulsion device is one of the winning ideas from the competition. The device has the potential of minimising the likelihood of getting infected through potentially contaminated door handles. The mechanism is simple and effective. Any hand pushing the door handle will automatically be sprayed with disinfectant. Accordingly, the device is in line with health recommendations: Frequent cleaning of hands is important for protecting oneself against the coronavirus. As such, it is particularly useful in public buildings and institutions.

“ The competition has taken me way ahead of what I could have accomplished alone as a designer. It has connected me to a set of mentors who have guided me towards launching multiple such ideas in the market! ”

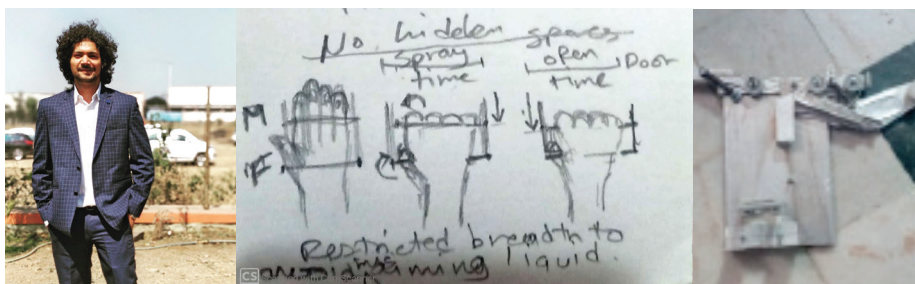
After winning the competition, Mr. Tripathi received extensive support from Lemon Ideas. Upcyclab is expecting to start introducing the product to the market soon. He will avail help from the incubation and acceleration programme implemented by Lemon Ideas and Innopreneurs.

Mr. Tripathi envisions to produce his device as a customisable DIY kit model. His innovative idea will generate income for his start-up and help to fight COVID-19.

“ As soon as the final prototype is tested and launched, we’d love to share this minimally monetised production model around the world! ”



Start-ups like Upcyclab Creators benefit from the MoMSME scheme Support for Entrepreneurial and Managerial Development of SMEs through Incubators (<https://my.msme.gov.in/inc/>)



Innovations for Local Areas

Promoting Energy Efficiency

“ On witnessing the grim situation in the village, it shuddered me to imagine the case for the rest of the country. I decided at once to create a portable solar device which would at least fulfil peoples’ basic electricity requirements. ”

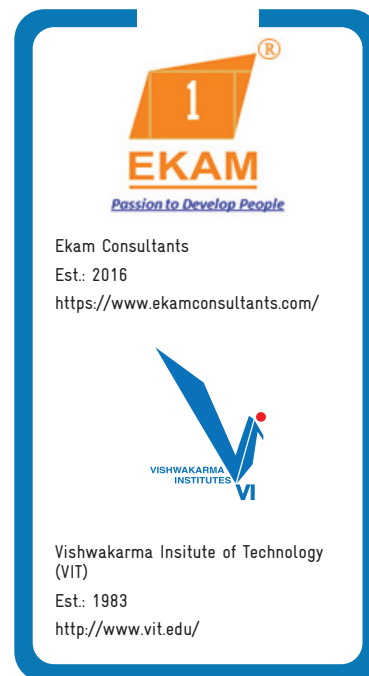
Solar power has an immense potential in tropical countries like India. Mr. Subodh Korde, Managing Director of Ekam Consultants, traces his interest in solar energy back to an incident in 2016, when he visited a village near Pune and was shocked to see how prolonged power-cuts disrupted peoples’ lives.

Within one year after the incident, Mr. Korde was able to develop a portable solar device. However, he sought support to make the equipment sleeker and more cost-effective. Hence, he connected with Vishwakarma Institute of Technology (VIT), Pune, through GIZ’s industry-academia cooperation initiative.

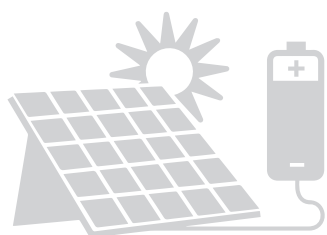
“ Owing to MSMEs limited scale of operation and fund, they cannot reach out to colleges for placement drive. In such a backdrop, it is through internships alone that MSMEs can tap local talent. Even for students, such an opportunity offers a window to learn about the local industry and not just aim for big players in the market. ”

Rushikesh Kulkarni, one of the five students working on the project, got to apply his knowledge on market research and product development. After going through what he describes as ‘a series of trial and error’, his group was able to create a lightweight flexible solar film. The product can be mounted on a jacket, a curtain or even a car top.

“ People have this mindset that solar energy is for the large scale set up and one cannot use it for day to day activities. With the flexi-film, I hope this mindset will be changed. ”



Adopting energy efficient technologies is in line with the MoMSME scheme Technology and Quality Upgradation Support to MSMEs (ESDP) (<http://www.dcmsme.gov.in/schemes/TEQUPDetail.htm>)



50+

Industry-academia collaboration projects in the area of energy



Increasing MSME Competitiveness Capacity Development in Punjab



Process innovations are vital for MSME to remain competitive in local and global markets. As such, MSME INNO is supporting its partner BMOs in organising technical trainings on various topics ranging from marketing over packing to foundry and Computerised Numerical Control (CNC) machining.

Most small and medium enterprises have upgraded their technical infrastructure with CNC machines. Compared to conventional machines, CNC machines improve the overall MSME productivity. Despite these benefits, MSMEs often lack resources and awareness of CNC optimisation and best practices. As a result, they are not able to achieve maximum capacity utilisation and its benefits.

Fostering Local Innovation

Hence, MSME INNO decided on supporting the Ludhiana-based Chamber of Industrial & Commercial Undertaking (CICU) in organising high-quality trainings in CNC optimisation.

One of the trainings' beneficiaries is CICU-member Daksh International. The MSME used to struggle with low product manufacturing productivity due to large cycle times. To find a solution to the problem, Daksh International was introduced to optimisation solutions by the experts leading the training.

Subsequently, the experts guided Daksh International through a month-long process of analysing the status quo in the industry as well as identifying possible solutions. In a trial run, the CNC machine was re-programmed and new high speed and feed tooling installed. The testing showed an overall time reduction of more than 2.5 hours, along with improved product quality and throughput.

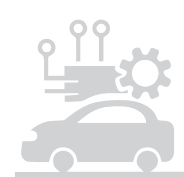
Now, the MSME can manufacture larger product volumes, adding to the operational profitability and overall competitiveness of Daksh International.



Optimising manufacturing processes is in line with the MoMSME Financial Support to MSMEs in ZED Certification Scheme (<https://zed.org.in/>)



87+
process innovation
trainings since 2018



Strengthening the Meerut Glass Beads Cluster

Empowering Women Entrepreneurs

“ I found out about the different sustainable ways of packaging and could fetch a better price for the products. ”

Since 1999, the Government of India (GoI) is implementing the Swarna Jayanti Gram Swarozgar Yojana (SJGSY) scheme. One of the more than 2.25 million Self-Help Groups (SHGs) that were formed under the programme is operating in Harra Village, Uttar Pradesh. The women entrepreneurs of the local glass beads cluster increased their bargaining power for better price realisation through forming a SHG.

“ I remember in the initial days of this work women were hesitant to leave the village to attend fairs and training. But now look at them, they are willing to travel to any part of the world. They have grown so much over the years. ”





Over the years, the glass bead sector has ensured profitability and increased freedom for Ms. Gulista, Ms. Jamshaadi and Ms. Tahira, three women entrepreneurs from the cluster.

However, the sector is facing many challenges. Limited access to finance prevents many women entrepreneurs from scaling up operations in the region. The erratic power supply affects the workflow, especially during summer months and at nights. Even changes in taste and preference of customers cause an issue. MSME INNO, in tandem with the Consortium for Women Entrepreneurs of India (CWEI), conducts several workshops to upskill the women entrepreneurs from the cluster.

Targeted trainings and knowledge for serve as a platform for further growth. Through the combined efforts of CWEI and MSME INNO, the cluster got access to process and product innovations as well as to funding mechanisms.

Finally, the trainings also boost the creativity of the participants: 'The trainings gave me ideas on new design patterns'. (Ms. Jamshaadi, woman entrepreneur)



This cluster-based approach is in line with the MoMSME Cluster Development Programme (MSE-CDP) (<http://www.dcmsme.gov.in/MSE-CDProg.htm>) as well as with the Revamped Scheme of Fund for Regeneration of Traditional Industries (SFURTI) (<https://sfurti.msme.gov.in/SFURTI/Home.aspx>)



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About GIZ

For over 60 years, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH has been working with various government and other agencies in India to promote and nurture sustainable economic, ecological, and social development.

The Ministry of Micro, Small and Medium Enterprises, Government of India and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH are jointly implementing the Programme for Modernisation and Innovation Promotion for Micro, Small and Medium-sized Enterprises (MSMEs) in India (MSME INNO). On behalf of the German Federal Ministry of Economic Cooperation and Development (BMZ), the project aims to improve the local innovation ecosystem through fostering the collaboration between different stakeholders and strengthening the innovation capacity and sustainability of MSMEs in India.

Deutsche Gesellschaft für
Internationale Zusammenarbeit GmbH

B5/1, Safdarjung Enclave
New Delhi, 110 029, India

T: +91 11 4949 5353

I: www.giz.de

I: https://twitter.com/MSME_INNO