



सत्यमेव जयते

**GOVERNMENT OF INDIA**



**Micro, Small & Medium Enterprises**

**सूक्ष्म, लघु एवं मध्यम उद्यम**

## **Guidelines**

**For the Implementation of  
Lean Manufacturing Competitiveness Scheme  
Under  
Credit Linked Capital Subsidy and Technology Up-gradation  
Scheme  
(CLCS-TUS)**

**Development Commissioner  
(Micro Small and Medium Enterprises)  
Ministry of Micro, Small and Medium Enterprises,  
Government of India**

*Up-scaled: Revised 2019*

# CONTENTS

<b>Sr. No.</b>	<b>Subject</b>	<b>Page No.</b>
1	Introduction	1
2	The Scheme Concept	1
3	Objectives of Lean Manufacturing Scheme	2
4	Implementation Mechanism	3
5	Implementation agencies	3
6	Coverage and Eligibility	4

## 1. INTRODUCTION

1.1 The Development Commissioner, Ministry of Micro, Small & Medium Enterprises (DC-MSME), Govt. of India, will implement up-scaled (2019) 'Lean Manufacturing Competitiveness Scheme (LMCS)', a component of CLCS-TUS for the benefit of Micro, Small & Medium Enterprises (MSMEs) till the financial year ending 2019-20.

1.2 The scheme will be implemented in 300 mini clusters with the total Project Cost of Rs. 218.60 crores (Govt. of India Contribution amounting to Rs. 197.00 cr. and beneficiaries' contribution of Rs 21.60 cr.) including expenditure on to left over activities of remaining part of the pilot phase and up-scaled (2013) of the scheme.

1.3 The basic rationale of the Government support to MSMEs for undertaking lean manufacturing (LM) is to enhance their productivity and competitiveness by reduction of wastage in manufacturing processes, inventory management, space management, energy consumption, etc. The LM techniques also result in reduction in rejection, standardization of processes, better layout of machines resulting in reduced transportation of products during manufacturing, etc. The implementation of LM techniques leads to cost reduction for MSMEs. It also has lot of social benefits in terms of training of labour, creation of knowledge, increased labour productivity, lower input costs to other industries, introduction of new production equipment/ methods in manufacturing and development of work culture in society.

1.4 The implementation of lean manufacturing technologies in the enterprises will lead to increasing return to scale, i.e. (i) economy of scale that reduce per unit production cost and (ii) increased productivity of the enterprises (iii) enhanced competitiveness in domestic and overseas markets. Simultaneously it also leads to increased expertise in the firm in respect of better work culture, managerial competencies, etc. The scheme also leads to 'demonstration effect'.

1.5 While some organizations in the country have initiated lean manufacturing practices and have started to reap the benefits, these practices have not reached many MSMEs in the country. The concept and techniques of lean manufacturing is still novel to most of the micro and small enterprises in the country.

1.6 The pilot phase of Lean Manufacturing Competitiveness Scheme (LMCS) was launched in July 2009 for implementation of Lean Manufacturing Techniques in 100 Mini Clusters and further up-scaled in 2013 for 500 Mini Clusters (consisting of 6-10 units) across the country.

1.8 Government of India has also institutionalized National award for excellence in the field of Lean Implementation from the year 2013 onwards. The MSMEs will be encouraged to come forward to participate in the National Award as well.

## 2.0 SCHEME CONCEPT

2.1 **Need for Lean Manufacturing:** Ever changing globalized environment has been posing challenges of competitiveness and survival to all the constituents of the economy. It has been more so for MSMEs in the manufacturing sector. It has been noticed that units are so engaged in their day-to-day management issues that they don't have time and resources to dedicate for a strategic understanding of the need and acquiring means of various techniques which would help them in enhancing their productivity and hence being competitive in the world markets. Lean Manufacturing is a set of techniques, which have evolved over a long period and are based on various minor to major breakthroughs that help in reducing cost and hence increase productivity and competitiveness. A list of main LM techniques with brief description of each is given below:

- i) **5S System:** The 5S systems is a workplace management which helps in getting the “junk” out of the work area and set of procedures to keep it that way. 5S stands for Sort, Set in order, Shine, Standardize & Sustain.
- ii) **Visual Control:** Visual controls such as cartoons, charts, light signals, Lane marking on floor, Safety instructions, Warning signs, Poka-Yoke instructions etc., can be displayed all over the work place.
- iii) **Standard Operating Procedures (SOPs):** All verbal instructions should be converted to SOPs to remove dependency on skilled personnel in achieving required product quality level, consistency, effectiveness and efficiency.
- iv) **Just in Time (JIT):** It’s a Japanese manufacturing philosophy to make the right product in right quantity at the right time. This almost results in zero inventory and shortest possible cycle time.
- v) **KANBAN System:** In this, components are pulled by assembly or subsequent work centers and the containers are replenished with the right quantities by the previous work center, which reduces the inventory of unwanted components.
- vi) **Cellular Layout:** In this improved manufacturing system, family wise component completion is aimed at within the smaller self contained cell, which is a part of a big factory, as compared to operation wise completion in traditional functional layout.
- vii) **Value Stream Mapping:** It covers all activities, both value added and non-value added, and helps in arriving at best layout of all resources required for making the product.
- viii) **Poka Yoke or Mistake Proofing:** It is again a Japanese technique used to prevent errors occurring at their source of origin, and it finally leads to a ‘Zero Defect’ situation.
- ix) **Single Minutes Exchange of Dies or Quick Changeover (SMED):** Applying ingenious methods, set up time is minimized and brought to less than ten minutes; thereby smaller batches as required by the customer can be taken up for manufacturing.
- x) **TPM (Total Productive Maintenance):** TPM involves operators, maintenance staff and management working together to improve overall operation of any equipment. Operators, who first identify noisy or vibrating motors, oil or air leaks, can be trained to make simple repairs to prevent major and costly break downs.
- xi) **Kaizen Blitz or Rapid Improvement Process:** It is an intense management programme, which results in immediate change and bottom line improvement. Both management staff and workers are involved in this.
- xii) Other Lean Techniques on need basis, etc.

## 2.2 OBJECTIVES OF LEAN MANUFACTURING SCHEME:

The objectives of the Scheme is to enhance the manufacturing competitiveness of MSMEs through the application of various Lean Manufacturing (LM) techniques by:-

- i) Reducing waste;
- ii) Increasing productivity;

- iii) Introducing innovative practices for improving overall competitiveness;
- iv) Inculcating good management systems; and
- v) Imbibing a culture of continuous improvement.

2.3 The scheme is demand driven. The general approach involves engagement of Lean Manufacturing Consultants (LMC) to work with selected MSMEs in the chosen clusters with financial support by the Government. Under the Scheme, MSMEs will be assisted in reducing their manufacturing costs through proper personnel management, better space utilization, scientific inventory management, improved process flows, reduced engineering time and so on with the application of LM techniques. The Scheme is basically a business initiative to reduce “waste” in manufacturing.

### **3. Scheme Components**

3.1 Awareness Programme: Awareness Programme of one day duration for mobilization of MSMEs and other stakeholders. Amount upto Rs.70,000/per programme is permissible under the scheme

3.2 National Workshop: One day National Workshop on Lean Manufacturing for all stakeholders across states. Amount upto Rs.5.00lakhs/per workshop is permissible under the scheme

3.3 Residential Training of implementing agency officials upto (3 days duration): Amount upto Rs.3.00 lakhs /per programme is permissible under the scheme

3.4 Orientation/Training Programmes for Lean consultants (2 days duration): Amount upto Rs.2.00 lakhs /per programme is permissible under the scheme.

3.5 Newsletters/Web site/publications Dissemination of Best Practices, publicity, etc.

3.6 International Collaborations with various International Institutions for Consultants specialized inputs for MSME-DOs/NMIU/Consultants/ Mini Clusters, International Training/Study of Global Best Practices, etc.

3.7 Visit to clusters by IAs/NMIU/SSC: Amount upto Rs.10.00 lakh/per visit is permissible under the scheme.

### **4. Implementation Mechanism**

A multi tier structure has been proposed in the scheme.

- (i) Implementing agencies
- (ii) National Monitoring and Implementation Unit
- (iii) Project Monitoring and Advisory Committee (PMAC)

**4.1 Implementing Agencies:** Scheme shall be implemented through MSME-DIs/TCs/Central Government/ state government & its institutions other institutions as are found relevant for the successful implementation of the scheme by the PMAC. However, present implementing agencies should be continue i.e National Productivity Council (NPC) & Quality council of India (QCI). More implementing agencies may be roped on need basis.

**4.2.1 National Monitoring and Implementing Unit (NMIU):**

A National Monitoring and Implementing Unit (NMIU) shall be set up under the scheme. To begin its role could be as planner, facilitator, implementation, monitoring etc. and same could be detailed by executive orders. A Technical Advisory Committee (TAC) would be constituted, as a subcommittee under NMIU to take care of productivity, preparation of reports and technical appraisal of clusters. NMIU may rope in Lean Manufacturing Consultant as and when required.

**4.3 Project Monitoring and Advisory Committee (PMAC):** At the highest level, PMAC will guide, review, monitor and provide overall direction for implementation of the scheme and will be headed by the Development Commissioner (MSME). PMAC will have overall responsibility for policy formulation, Scheme implementation and monitoring. It will be empowered to take all key decisions related to the Scheme and to approve minor modifications / procedural changes in the guidelines for operational expediency. PMAC would deliberate on the issues put up by NMIU. It would lay down the detailed implementation strategy for the NMIU. It would also consider the recommendations of NMIU on each application. The constitution/members of the PMAC will be:

1.	AS & DC(MSME)	Chairman
2.	Joint Secretary, O/o the DC(MSME)	Vice Chairman
3.	EA(IFW)/Representative	Member
4.	JS DIPP/Representative	Member
5.	Representatives of expert agencies like NPC and QCI	Member
6.	In-Charge, NMIUs	Member
7.	Representative of Associations	Member
8.	ADC/JDC in-charge of MSME-DIs at O/o DC(MSME)/Director of MSME-DI concerned/ invitee	Member
9.	JDC/Director/Nodal officer handling LMCS in DC, MSME	Member-Secretary
10.	Special invitees / experts/ consultants/IAs/ SPVs	

The Steering Committee will hold its meetings periodically or as and when required.

**5. Coverage and Eligibility:** All manufacturing MSMEs registered under MSMED Act, 2006 as amended from time to time and also to MSMEs which are included as per executive orders issued by AS&DC(MSME) consistent with MSMED Act from time to time.

\*\*\*\*\*