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Strategic Investment Plan for the State of Kerala under RAMP Programme

Submitted by
Dept. of Industries & Commerce
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Table of Contents

List of Tables

List of Figures

List of Abbreviations

AGMARK	Agricultural Marketing
AASSC	Aerospace and Aviation Sector Skill Council
ACBP	Annual Capacity Building Plan
ADIO	Assistant District Information Officer
AMMOI	Ayurvedic Medicine Manufacturers of India
AOA	Articles of Association
APEDA	Agricultural and Processed Food Products Export Development Authority
ASDCs	Advanced Skill Development Centres
ASHA	Assistance Scheme for Handicrafts Artisans
ASPIRE	Scheme for Promotion of Innovation, Rural Industry, and Entrepreneurship
BDSP	Business Development Service Provider
BIS	Bureau of Indian Standards
BRAP	Business Reform Action Plan
CAF	Common Application Form
CCC	China Compulsory Certificates
CD Ratio	Credit Deposit Ratio
CDS	Centre for Development Studies
CE	Conformity European
CETP	Common Effluent Treatment Plant
CFC	Common Facility Centre
CFS	Container Freight Stations
CFSC	Common Facility Service Centre
CFTRI	Central Food Technological Research Institute
CGTMSE	Credit Guarantee Funds Trust for Micro and Small Enterprises
CIPET-IPT	Central Institute of Petrochemicals Engineering and Technology
COIRFED	Coir Cooperative Federation Ltd
CSPs	Community Skill Parks
CUSAT	Cochin University of Science and Technology
CWC	Central Warehousing Corporation
DDU GKY	Deen Dayal Upadhyaya Grameen Kaushalya Yojana
DGFT	Directorate General of Foreign Trade
DIC	District Industries Centre
DPR	Detailed Project Report
ECGC	Export Credit Guarantee Corporation of India Limited
EDP	Entrepreneurship Development Programme
EoDB	Ease of Doing Business
EPI	Export Preparedness Index
ERP	Enterprise Resource Planning
ESDM	Electronics System Design and Manufacturing

ESS	Entrepreneur Support Scheme
ETP	Effluent Treatment Plant
EXIM	Export Import
FCI	Fixed Capital Investment
FOB	Free On Board
FOMIL	Foam Mattings (India) Limited
FSC	Forest Stewardship Council
FSSAI	Food Safety and Standards Authority of India
FY	Financial Year
GDP	Gross Domestic Product
GeM	Government e-Marketplace
GFSI	Global Food Safety Initiative
GI	Geographical Indication
GIS	Geographical Information System
GMP	Good Manufacturing Practices
GoI	Government of India
GSVA	Gross State Value Added
GVA	Gross Value Added
GVC	Global Value Chain
HSIIDC	Haryana State Industrial Infrastructure Development Corporation
HT	High Tension
HW	Hazardous Waste
ICD	Inland Container Depots
ICT	Information Communication Technology
IEDC	Innovation and Entrepreneurship Development Centres
IEO	Industries Extension Officer
IICG	Innovation Centre for Graphene
ILO	International Labour Organisation
IPFCs	Intellectual Property Facilitation Centres
IPO	Initial Public Offering
ISO	International Organization for Standardization
ISRO	Indian Space Research Organisation
ITeS	IT-enabled Services
ITR	Income Tax Return
KASE	Kerala Academy for Skills Excellence
KBIP	Kerala Bureau of Industrial Promotion
KCIS	Kerala Central Inspection System
K-DISC	Kerala Development and Innovation Strategy Council
KELTEX	Kerala Hi-Tech Textile Co-operative Ltd.
KELTRON	Kerala State Electronics Development Corporation Ltd
KFC	Kerala Finance Corporation
KIED	Kerala Institute for Entrepreneurship Development

KINFRA	Kerala Industrial Infrastructure Development Corporation
KIPLICSL	Kottayam Integrated Power loom Industrial Co-operative Society Ltd,
KMTC	Kerala Medical Technology Consortium
KPIs	Key Performance Indicators
KSCC	Kerala State Coir Corporation
KSCMMC	Kerala State Coir Machinery Manufacturing Company
KSCSTE	Kerala State Council for Science Technology and Environment
KSEB	Kerala State Electricity Board
KSFE	Kerala State Financial Enterprises Limited
KSIDC	Kerala State Industrial Development Corporation
KSSIA	Kerala State Small Industries Association
KSTC	Kerala State Textile Corporation
KSUM	Kerala Start-up Mission
KSWC	Kerala State Warehousing Corporation
KSWIFT	Kerala Single Window Interface for Fast and Transparent Clearance
KTEF	Kerala Tourism Entrepreneurship Fund
KTTC	Keltron Tool Room Cum Training Centre
KVIBs	Khadi and Village Industries Board
KVIC	Khadi and Village Industries Commission
LBI	Livelihood Business Incubator
LMC	Lean Manufacturing Consultants
LSGI	Local Self Government Institutes
LT	Low Tension
M&E	Monitoring and Evaluation
MFEM	Mobile Fibre Extraction Machines
MIIUS	Modified Industrial Infrastructure Upgradation Scheme
MIS	Management Information System
MKSP	Mahila Kisan Sashakthikaran Pariyojana
MOA	Memorandum of Association
MPEDA	Marine Products Export Development Authority
MSDE	Ministry of Skill Development and Entrepreneurship
MSE- CDP	Micro and Small Enterprises – Cluster Development Programme
MSEFC	Micro, Small Enterprises Facilitation Councils
MSME	Micro, Small and Medium Enterprises
MSMED	Micro, Small, and Medium Enterprise Development
MT	Metric Ton
MTCs	Model Training Centres
NABL	National Accreditation Board for Testing and Calibration Laboratories
NBFC	Non-Banking Financial Companies
NCRMI	National Coir Research and Management Institute
NEEDS	New Entrepreneur cum Enterprise Development Scheme

NHDC	National Handloom Development Corporation
NHDP	National Handloom Development Program
NIC	National Informatics Centre
NIPCOTEX	Neyyattinkara Taluk Integrated Powerloom Village Industrial Co-operative Society Ltd
NIST	National Institute of Standards and Technology
NMIU	National Monitoring and Implementing Unit
NPA	Non-Performing Assets
NPC	National Productivity Council
NSDC	National Skill Development Corporation
NSSO	National Sample Survey Office
NTC	New to Credit
OEM	Original Equipment Manufacturer
OFOE	One Family One Enterprise
ONDC	Open Network for Digital Commerce
PMEGP	Prime Minister's Employment Generation Programme
PMFME	PM Formalisation of Micro Food Processing Enterprises Scheme
PMKK	Pradhan Mantri Kaushal Kendra
PMKVY	Pradhan Mantri Kaushal Vikas Yojana
PPEs	Personal Protection Equipment
PSU	Public Sector Unit
QCI	Quality Control of India
R&D	Research and Development
RAMP	Raising and Accelerating MSME Performance
RBI	Reserve Bank of India
RECP	Resource Efficient and Cleaner Production
RoSCTL	Rebate of State and Central Taxes and Levies Scheme
SCB	Scheduled Commercial Banks
SECI	State Energy and Climate Index
SEZ	Special Economic Zones
SFURTI	Scheme of Fund for Regeneration of Traditional Industries
SGDP	State Gross Domestic Product
SIDBI	Small Industries Development Bank of India
SIP	Strategic Investment Plan
SLBC	State Level Banking Committee
SME	Small and Medium-sized Enterprises
SPV	Special Purpose Vehicle
SSCs	Sector Skill Councils
STIC	Sophisticated Test and Instrumentation Centre
STP	Secondary Treatment Plant
TBI	Technology Business Incubator
TEE	Towns of Export Excellence
TEXFED	Kerala State Cooperative Textile Federation Limited

TIUSMP	Technology and Infrastructural Up-gradation Scheme for Marine Products
TNA	Training Need Analysis
TReDS	Trade Receivables Discounting System
VAAM	Value Added Agriculture Mission
VDP	Vendor Development Program
VSSC	Vikram Sarabhai Space Centre
WHIPCOS	Wayanad Handloom, Power loom and Multi-purpose Industrial Co-operative Society Ltd .
WHO-GMP	World Health Organization Good Manufacturing Practices
YoE	Year of Enterprises
Y-o-Y	Year on Year
ZED	Zero Effect Zero Defect

Executive Summary

The Government of India (GoI) has undertaken multitude of initiatives to help transform MSMEs. In a similar direction, the Ministry of MSME (MoMSME) has launched the MSME Competitiveness Programme - Post-COVID Resilience and Recovery Programme (MCRRP), supported by the World Bank's Raising and Accelerating MSME Performance (RAMP) program, to assist MSMEs and solve their problems. RAMP aims to foster institutional support, expand market access, raise financing availability, bolster institutions and governance, and encourage environmentally friendly behaviour. One of the important components of RAMP identifies participating states to develop a comprehensive Strategic Investment Plan (SIP), which will serve as the blueprint for MSME transformation in State.

Micro, Small, and Medium Enterprises (MSMEs) stand as a cornerstone of Kerala's economy, driving growth, generating employment, and fostering innovation. The Government of Kerala assigns priority to the sector realising its potential to generate employment, and thereby contribute to economic growth. In addition, the sector can add to export growth. The sector plays a critical role in promoting innovation and ensuring sustainable development, equitable growth, and the utilisation of natural resources.

The state of Kerala has shown a strong recovery in 2021-22, with Gross State Domestic Product (GSDP) at constant prices recording a robust growth of 12%, compared to (-)8% in 2020-21. This growth is the highest recorded since 2012-13 and is attributed to the counter-cyclical fiscal policies implemented by the State government, including two economic packages of Rs 20,000 crore announced in March 2020 and June 2021, respectively, and a supplementary package of Rs 5,650 crore announced to support small industries. These interventions played an important role in the recovery of the state's economy, particularly at a time when economic activities were severely constrained.

MSME sector is being recognized as a vital player in Kerala's economy, accounting for an impressive 4% of India's MSME enterprises according to a recent census. The sector has been particularly effective in industrializing rural and underdeveloped regions, thereby generating employment opportunities for a broad range of social groups, including minorities and the physically challenged. Financial data up to November 15, 2022, indicates a significant outlay in sectors like Small Scale Industries, Commerce, and Handicrafts, reflecting a commitment to these areas. However, it is worth noting that the actual expenditure has not consistently aligned with the allocations. For instance, in the 2022-23, Small Scale Industries had an allocated outlay of Rs 20,040 lakh but an expenditure of Rs 7,932.57 lakh. This suggests that there may be opportunities for further optimising budget allocation and improving spending efficiency in these sectors. In an ambitious move, the Government of Kerala earmarked 2022-23 as the 'Year of Enterprises' (YoE). This initiative, overseen by the Directorate of Industries and Commerce, aims to launch 1,00,000 enterprises and create 3,00,000 jobs in that year alone. The approach comprises multi-layered strategies including the establishment of grass-roots level enterprise facilitation systems, engagement of professional interns, launch of MSME Clinics at the district level, and introduction of favourable loan and land schemes. Notably, the government achieved their target of setting up 1,00,000 new enterprises remarkably quickly, in just 250 days, attracting an investment of Rs 6,274 crore and creating over 2,20,000 new jobs. Of these new enterprises, approximately a third were started by women entrepreneurs, and they were primarily in sectors like agro and food processing, textile and garments, and various service activities.

The rise of micro-enterprises within the MSME sector in Kerala has been particularly noteworthy, including a wide array of industries from handicrafts to high-tech manufacturing, collectively producing over 8,000 different types of products. In addition to the Government's role, District Industries Centres (DICs) have been crucial facilitators in fostering the growth of MSMEs in Kerala, implementing numerous schemes aimed at developing entrepreneurial skills among the youth.

The programme like RAMP will provide appropriate thrust required to transform Kerala into a major hub of the MSME sector and provide leverage to initiatives of the State Government to strengthen the MSME ecosystem. This Strategic Investment Plan provides the strategy for raising and accelerating the performances of the MSMEs in Kerala.

Approach and Methodology

The required MSME development strategy has been prepared based on the approach and methodology proposed in the execution plan comprising of four phases: Identify, Diagnose, Design and Deliver. The approach taken is characterized by its comprehensive, multifaceted, and systematic nature. This approach integrates secondary research and initial stakeholder consultations, creating a strong and reliable foundation for the study. It enables the team to gather pertinent information and establish a clear direction for subsequent activities. Here are the steps undertaken as part of the strategy for summarizing the research in the preparation of the SIP, based on empirical evidence, case studies, and use cases:

- Comprehensive Information Gathering: The process commences with a comprehensive information-gathering phase. The team conducts an extensive review of existing literature, reports, and data sources related to the subject matter. This serves as the backbone of the research, providing a solid grounding in the relevant context and insights.
- Surveys: The process commenced with a comprehensive information-gathering phase. A third-party survey agency was hired to perform the survey activity all over the state. Total of 1000 surveys were done across the state. The stratified samples taken consisted of following subgroups:
    a. Micro, small and medium enterprises
    b. Manufacturing, Services and Trading sector
    c. Socio-economic affiliation – SC, ST and General categories
    d. Gender based
    e. Location based
- Cluster Visits: The team visited more than 8 Clusters, interacted with the cluster firms and with the SPV members. This provided the team with first-hand information of the existing scenario about Common Facility Centres (CFCs) and existing linkages among the stakeholders in addition to the challenges faced by them.
- Sectors: The major sectors in the state, inclusive of the traditional, mature as well as sunrise sectors have been studied.
- Initial Stakeholder Consultations: In addition to secondary research, the team engaged in preliminary consultations with key stakeholders. These consultations allowed for the collection of first-hand insights, perspectives, and priorities from individuals and entities directly involved or impacted by the subject of the SIP. The stakeholder consultations involved:
    a. Industry Associations – Sector wise (like Plastic manufacturers association, non-woven bag manufacturers association etc.), Sector agnostic (KSSIA, FICCI, CII etc.) and Industrial Area/ Park specific (Kalamassery Industrial Area, KINFRA Industrial Estate association)
    b. TReDS Platforms – M1xchange, Invoicemart and rxil
    c. FIs – Kerala Financial Corporation, Banks like SBI, Bank of Baroda, Union Bank and Central bank of India
    d. Govt. Departments/ organisations – Dept. of Handlooms and Textiles, Dept. of Tourism, Indian Systems of Medicines, Directorate of Coir Development, HDCK, KSIDC, KINFRA etc.
- Empirical Evidence Integration: The study relies on empirical evidence gathered through systematic data collection and analysis. This empirical foundation ensures that the SIP is grounded in real-world observations and can effectively address practical challenges.
- Use Cases: Use cases are examined to understand how specific solutions or approaches have been applied in practical scenarios. This approach aids in identifying adaptable models and strategies that can be incorporated into the SIP.

- Diagnostic Study Analysis
    a. Survey Analysis
    b. FGD Analysis
    c. One to one Stakeholder Meeting Analysis
- Recommendations and Action Steps: The final step involves formulating recommendations and action steps that flow logically from the research and strategic direction. These recommendations serve as a roadmap for implementing the SIP effectively.

Snapshot of Major Interventions proposed

1. Enhancing Firm capabilities (for scaling - Mission 1000)

Problem Statement: Government of Kerala through its initiatives like YoE has been able to foster entrepreneurship in the State. Having a base of newly established enterprises, the focus is now on the sustainability and scaling up of the existing MSMEs.

>95% and of the registered enterprises in Kerala are micro. The conversion of enterprises into small and medium enterprises have been very low which suggests that they have not been able to fully capture the benefits of economies of scale, adoption of technologies and investment into fixed assets.

Proposed interventions: The successful achievement of Mission 1000 can be possible by providing:

a. Necessary fiscal incentives (assistance for DPR preparation, W.C subsidy)
b. Capacity building in terms of better technology and quality conformance
c. Assisting in improving access to market (leveraging digital marketing and platforms like ONDC, GeM and other e-commerce platforms).
d. Strengthening linkages with BDS.
e. Strengthening of the MSME Helpdesks in Directorate and DICs.
f. Facilitating convergence with CHAMPIONS schemes, on boarding on TReDS, and adoption of greening practices.

Output: 1000 enterprises scale to small and medium category with an average turnover of Rs100 crore in a period of 4 years.

2. Enhancing domestic manufacturing of import substitute products - Make in Kerala

Problem Statement: The state has been importing products worth about Rs. 1,28,000 crore, 92% of which were from other States, as per study in 2021-22. Export of the State during the same period was only Rs 74,000 crore. State government wants to promote domestic production of imported products and reduce trade deficit. Kerala's imports (nearly two-thirds of it) are composed of high and medium tech products, while its exports (almost two-thirds) are mostly low tech and in fact primary products and raw materials[1].

Proposed interventions:

a. Detailed study for identifying specific manufacturing sectors that can contribute towards import substitution (from other States)
b. Engaging Technical Support Providers (in Technology/Marketing/Sectoral etc.) for MSMEs
c. Organising MSME Clinics (Linking MSMEs with BDSPs)

[1] Study by Centre for Development Studies, Kerala

d. Workshops for interaction with technical experts and technology providers (Technology Clinics)
e. "Special orientation programmes for youth and women to promote technology-
f. centered manufacturing enterprises"
g. Strengthening of the MSME Helpdesks in Directorate and DICs
h. Assistance to MSMEs in State through MSME Insurance
i. Engaging BDSPs for facilitating Make in Kerala implementation
j. Exposure visit for MSMEs to Benchmark clusters/Industries
k. Awareness cum Facilitation programme at LSGI level

Output:

a. Identifying sectors/products to be considered that can be focused for promoting domestic manufacturing and policy level interventions
b. Sensitise MSMEs and capacity build 6476 MSMEs in technology related aspects.
c. Establishment of 1 virtual incubator.
d. 2532 youths to be trained in Technology Management
e. >8000 MSMEs to be linked with Tech. Experts and Tech. providers
f. Strengthening of 15 MSME Helpdesks/ guidance cells
g. 80000 MSMEs covered under the MSME Insurance schemes
h. 80 MSMEs are planned to be provided exposure to Best practices through exposure visits
i. 544 facilitation programmes will be conducted in 1034 LSGI level (4 programmes per LSGI) in the State.
j. 15 Helpdesks in the State shall be strengthened

3. Enhancing Firm Capabilities - Competitiveness Support

Problem Statements: MSMEs in energy intensive sectors like Spinning, Coir, Wood, Plastic and Marine products are facing rising energy cost affecting their overall input cost making it difficult to sell products at competitive price. 73% of MSMEs surveyed were unaware about green practices/ technology and their benefits. The State also has plans to promote an approach of ESG-driven responsible investments in the State to achieve its Green Vision.

There is a need felt during the diagnostic survey to improve the uptake of GoI schemes like CHAMPION schemes in the State. Only 696, 6 and 7 firms have obtained ZED Bronze, Silver and Gold certifications respectively. The number of firms enrolled for new LEAN scheme also needs improvement.

Only around 4 lakh MSMEs of the more than 20 lakh MSMEs in the State are formalised, thereby loosing upon the opportunity to reap the benefits of being in the organised sector.

Proposed interventions:

a. Awareness creation on adoption of ESG/new and green technology
b. Capacity building of MSMEs to adopt ESG/ new and green technology
c. Financial support for pilot energy audits in energy intensive industries
d. Awareness Workshop on CHAMPION scheme
e. MSME Awards/ Rewarding MSMEs for Greening initiative, adoption of best practices etc.
f. ESG campaigns for MSME in priority sectors
g. Incentives towards creation of IPR, Quality certification, Sustainability & responsible industrialisation, Ind 4.0 in manufacturing and promoting R&D

Output:

a. 3,758 MSMEs sensitised on to adopt new and green technology.

b. 500 MSMEs will be capacity build to adopt new and green technology.

c. Pilot energy audits by 300 firms.

d. Nearly 6326 MSMEs will be sensitised on the CHAMPION schemes.

e. New categories in MSME awards to recognise and felicitate MSMEs for adopting and promoting green practices, ESG, Quality certifications etc.

4. Facilitating Access to Market

Problem Statements: Limited access to markets beyond state borders is a major impediment to the growth of MSMEs. Despite having significant number of GI tagged products, finding markets for such products is currently a challenge. With initiatives like Medical Devices Park, Defence Park and Aerospace industry corridor proposed in the State, opportunity exist to uplift MSMEs in the State by linking them with major Anchor units/PSUs through Vendor development Programmes. There is also lack of awareness on the MoMSME schemes to support the MSMEs such as CHAMPION schemes. State government programmes such as Scaling of MSMEs, Made in Kerala and encouraging domestic manufacture of identified import substitution products (from other States) is essential.

Proposed interventions:

a. Workshop for Sensitising MSMEs on digital marketing & onboarding on e-commerce websites
b. Bootcamps for on boarding of MSMEs on e-commerce platforms like Amazon etc.
c. Organising MSME Expos (Sector wise and district wise)
d. Participation in national/International Expos
e. Conducting Vendor development Programmes/ Anchor units MSME connect programmes
f. Awareness on Packaging Technology / Green packaging
g. Engaging Marketing Agency for Promotion of RAMP and other MoMSMEs
h. Promotion/ Publicity cost for Mission 1000, Made in Kerala and GI Tagged products

Output:

a. More than 6000 MSMEs to be sensitised on e-commerce platforms

b. More than 3000 MSMEs to be assisted to onboard in e-commerce platforms

c. 6 State level Sector wise and 56 district level expos

d. 1,600 MSMEs linked with Anchor Units/ PSUs through VDPs

e. Creating awareness among 6700 units on packaging technologies with special emphasis on green packaging

5. Enhancing Digital Infrastructure

Problem Statement: The Dept. of Industries, Govt. of Kerala, is managing various State support schemes for MSMEs through multiple dashboards. However, as the Directorate's operations continue to expand and diversify, the complexity and volume of data are also increasing. This scenario underscores the need for a more streamlined, integrated approach to data management. Additionally, to facilitate field surveys and data upgrades, field personnel will be provided with tablets that have dashboard access. This will ensure a more streamlined and efficient data management process.

Proposed interventions:

a. **Data Integration:** Consolidate data from all existing dashboards into a centralized database. This will involve understanding the data structure of each dashboard and mapping them to a unified model.

b. **System Development:** Develop a Master MIS that fetches data from this centralized database. The system will have modules corresponding to each existing dashboard, replicating their functionalities.

c. **User Interface Design:** Design a user-friendly interface for the Master MIS. It should be intuitive and easy to navigate, allowing users to switch between different modules seamlessly.

d. **Field Enablement:** Equip field personnel with handheld devices. This will facilitate on-ground surveys and real-time data upgrades, enhancing the efficiency of data collection and management. IT infra in DICs and H.O. will be upgraded.

e. **Survey software including a mechanism to provide scheme, exhibition/fair related suggestions to MSMEs through a digital interface**

Output:

a. The implementation of the proposed interventions will result in a centralized, user friendly Master MIS with enhanced data management capabilities.

b. RAMP monitoring dashboard with backward integration to MoMSME websites and upgradation of supporting IT infrastructure.

6. Improving Access to Finance

Problem Statement: MSMEs in Kerala are facing substantial hurdles in obtaining credit due to a myriad of issues including incomplete documentation, unstable cash flows, non-compliance with regulatory guidelines, poor credit history, unstable business models, lack of clear business plans, limited understanding of market potential, and misuse of loan funds. Further, there is limited usage of TReDS platform with very low participation from State PSUs and MSMEs.

Proposed interventions:

a. **Financial Literacy Programs**: To address the issue of incomplete documentation and poor understanding of regulatory compliance, financial literacy programs can be implemented. These programs can educate MSMEs about the importance of maintaining accurate documentation, understanding regulatory compliance, managing cash flows, and repaying loans on time.

b. **Business Advisory Services**: Help MSMEs develop clear business plans and understand market potential, access to business advisory services will be provided

c. **Bankers Meet** (Awareness creation and one to one interaction with Banks and FIs to facilitate access to finance with special focus on CGTMSE)

d. **Assistance in annual guarantee fee/premium for availing CGTMSE loan**

e. **Awareness workshops and supporting with onboarding cost on TReDS**

f. **Awareness on Online Dispute Resolution**

Output:

a. 56000 MSMEs sensitised on CGTMSE scheme, financial/ digital literacy, preparation of bankable project reports and procedure for availing loans including documentation

b. Focus on 40% participants to be women entrepreneurs

c. Improved uptake of CGTMSE scheme and reduction in rejection rate of loan application

d. Participation of 22,292 MSMEs in Bankers meet who will be sensitised for better compliance

e. Improved onboarding of State PSUs and MSMEs with improved transactions through TReDS platform. Assist 1949 enterprises in on boarding on TReDS.

f. Engaging Legal experts at Regional MSE FCs thereby facilitating nearly 950 cases

7. Institutional Strengthening

Problem Statement: An assessment of the Department of Industries, Kerala, highlighted an opportunity for advanced training of officials to enhance the implementation of Centre sponsored schemes like CHAMPIONS. By addressing this skills gap among officials and field level officers, we can further improve the execution of these schemes and support MSME growth. Additionally, establishing a robust support system at the Local Self Government level will strengthen the link between policy formulation and execution.

Proposed interventions:

a. Management Development Programme for officials of the Department with exposure visits
b. Advanced capacity building training for ADIO and IEO (1 week) along with exposure visits
c. Training for BDSPs (GoI & State Govt. schemes, soft skills, field visits etc.)
d. Exposure Visit (National/International) for understanding Best Practices
e. Engaging field level support resources (BDSPs) to assist implementation of enhancing firm capability, enhancing CHAMPION scheme, CGTMSE etc.

Output:

a. 100 officials from DoI, KBIP and DICs will be trained in management
b. 276 Field level officials will be upskilled in both technical as well as soft skills
c. 1153 BDSPs shall be trained and deployed at LSGI level to mobilise MSMEs and assist in implementation of the interventions under RAMP and related programmes for MSMEs
d. Officials gaining knowledge on Best practices through Exposure visits

8. Sectoral Interventions

Problem Statement:

Kerala needs to take a sectoral approach in developing the MSME sector in the State. It is important that a congenial ecosystem is developed and strengthened. Hence, a detailed and comprehensive study is required to identify the sectors on which the State needs to focus to enable the MSMEs to develop and grow in the value chain followed by developing a strategic roadmap. The associated enabling infrastructure needs to be strengthened.

Proposed interventions:

a. Sectoral studies covering major sectors for development
b. Engaging Sectoral Experts/ BDSPs
c. Sector specific training of MSMEs
d. Facilitating adoption of QMS and standards in R&D Resource centers/ Testing facilities/CFCs
e. Sector specific Seminars and Conclaves
f. Workshop on export procedures, export opportunities

Output:

a. Identification of Sectors with potential for growth in the State
b. At least 18 Sector experts identified and engaged
c. More than 6000 trained in sector specific skills/courses
d. Quality certification adoption in at least 2 Technical organisations/ entities providing services to the MSMEs
e. National/ international Seminars and Conclaves organised for at least 5 sectors

Budget Requirement

The estimated total budget requirement for the period of four years is approximately Rs 656 crore. The requirement of assistance under RAMP will be approximately Rs 526 crores. The State contribution will be up to 20% of the total budget requirement.

(Amount in Rs. Cr.)

Sl.No	Proposed Interventions	DLI	Total Budget for 4 years	Demand from RAMP
1	Enhancing Firm capabilities (for scaling) – Mission 1000	**2,3,5**	121.12	94.78
2	Supporting Firm Capabilities – Enhancing domestic manufacturing budget – Make in Kerala	**2,3,5**	104.90	78.70
3	Improving Access to Market	**2,3**	107.16	87.37
4	Competitiveness Support	**2,3,5**	72.05	57.86
5	Improving Access to Finance	**5,6**	41.35	33.69
6	Sectoral level Interventions	**2,3**	53.83	39.27
7	Institutional Strengthening	**2,3,5**	63.73	46.20
8	Improving Digital Infrastructure	**2**	21.68	17.34
9	Monitoring and Evaluation of RAMP Implementation	**2,3**	11.24	11.24
10	Administrative cost & Contingencies @10%		59.70	59.70
	Total		**656.75**	**526.17**

**Note: ***The State contribution will be upto 20% of the total budget requirement

Kerala's Standing on RAMP Parameters

The state of Kerala has significant potential for emergence and establishment of Micro, Small and Medium Enterprises (MSMEs) due to various factors including availability of skilled workforce, a strong raw material base, and most importantly conducive Government support and policies. The recent State Government initiatives such as the Year of Enterprises, Mission 1000 as well as in Made in Kerala among others reflect Government's commitment towards encouraging, developing, and sustaining the momentum observed within MSME sector in the state.

Under the RAMP program, the states are evaluated on a set of key quantitative and qualitative evaluation criteria. Based on these parameters, an assessment of the state of Kerala is presented in the table given below.

A	Quantitative Parameters	Current Status	Ranking across States
a)	Number of MSMEs registered on UDYAM portal in proportion to total MSMEs as per the 73rd Round of National Sample Survey (NSS)	As of August 29, 2023, there are 4.4 lakh MSMEs with Udyam Registration from the state of Kerala. This is 18.07% of the total 23.79 lakh MSMEs in Kerala as per the 73rd NSS.	Among states in India, Kerala ranks 15th (23rd) in terms of absolute number (percentage) of MSMEs registered on Udyam portal vis-à-vis the total number of MSMEs.
b)	Position of State in the latest EoDB Rankings	As per the latest Business Reform Action Plan (BRAP-2020) of the Department for Promotion of Industry and Internal Trade (DPIIT), Government of India, Kerala ranks 15th among all states. To improve EoDB rankings, the state (through KSIDC) has implemented 340 out of 352 reform recommendations from the SBRAP 2022 by DPIIT. Also, Kerala has SWS (single window system) called K-SWIFT and K-CIS to support and ease business environment in the state. Further, KSIDC has a dedicated call centre for grievance redressal of entrepreneurs.	According to the data, Kerala has achieved a score of 75.49%, positioning it at the 15th rank within the country.
c)	Proportion of latest State Budget allocated to MSME	Overall budget of the Government of Kerala in 2023-24 was Rs 1,76,089 crore. Of this, the budget allocated 225.38 crore (0.12%) to small-scale industries.	
d)	Contribution of MSMEs to State GDP	MSME contribution to SGDP is taken at 37.5% based on Kerala Economic Review 2016. The SGDP for 2022-23 is 9.99, lakh cr. Given the estimation of	

A	Quantitative Parameters	Current Status	Ranking across States
		37.5%, the contribution of MSMEs to SGDP is 3.74 lakh crore	
e)	Percentage of MSMEs as per the 73rd Round of National Sample Survey onboarded on TReDS	Based on the latest available information, there are 779 MSMEs onboarded on the TReDS platforms (roughly 0.2% as per number of MSMEs in 73rd round) ▸ rxil – 209 ▸ Invoicemart – 275 ▸ M1xchange – 295	In comparison to other states, Kerala stands at 14th place from top, in terms of number of MSMEs registered with M1xchange platform.
f)	Percentage of State Public Sector Enterprises onboarded on TReDS	1 State Public Sector Undertakings has been registered across the TReDS platforms	-
g)	Persons employed in MSMEs which are registered on Udyam Portal of the Ministry (2021-22) (percentage of employees in MSMEs as per the 73rd Round of National Sample Survey (NSS))	1.86 lakh persons are employed in Kerala in the Udyam registered MSMEs (as of March 2022). 44.64 lakh persons are employed in MSMEs in Kerala as per the 73rd NSS (4.18% in Kerala's total employment generation by MSMEs).	Among states in India, Kerala ranks 26th with respect to percentage of persons employed in Udyam-registered MSMEs vis-à-vis the total employment by MSMEs in the states. Across states, on average only 9% of employees working with MSMEs are associated with Udyam registered MSMEs.
h)	Contribution of MSMEs to total tax revenue of the State	Not available with State Government	
i)	Percentage of women-led enterprises to total MSMEs on UR	Based on data shared by Minister of State for MSMEs, as on March 17, 2023, there are 87,514 women owned MSMEs registered and classified under Udyam since inception. As of August 10, 2023, 4.3 lakh MSMEs have registered under Udyam. This implies that 20.3% of Udyam registered enterprises are women owned MSMEs.	The state of Kerala ranks 10th among all the states with respect to percentage of women owned MSMEs registered and classified under Udyam since inception.
j)	Citizen Charter for DICs is notified in the State	Yes. The charter outlines the functions of the DICs, the schemes implemented, and the contact details of the General Managers of each DIC. The citizen charters are prominently displayed at each DIC.	

<table>
<tr><th>A</th><th>Quantitative Parameters</th><th>Current Status</th><th>Ranking across States</th></tr>
<tr><td>k)</td><td>Percentage of cases resolved with respect to total cases registered in MSEFCs</td><td>As of August 10, 202, based on the data collected since the inception of MSME SAMADHAAN portal:</td><td>Kerala holds the 10th position among all the states in terms of the percentage of cases disposed of by MSEFCs Councils in relation to the total number of applications filed by MSEs within the state since inception.

The state uploads all relevant cases directly on the SAMADHAAN Portal and therefore all entries are digitized.

To expedite resolution of grievances brought forth and pending with MSEFCs, three MSME Regional Facilitation Councils have been set up. The headquarters of the northern, central, and southern zones will be DICs in Kozhikode, Ernakulam, and Thiruvananthapuram.</td></tr>
<tr><td colspan="4"><table>
<tr><th>Applications filed by MSEs</th><th>Mutual settlements with buyer</th><th>Applications disposed by MSEFC Council</th><th>Applications converted into cases</th></tr>
<tr><td>1584</td><td>140</td><td>306</td><td>414</td></tr>
</table></td></tr>
<tr><td>l)</td><td>Growth in the total volume of digital payments done (Y-o-Y basis)</td><td>As per RAMP survey, over 90% of MSMEs receive digital payments from buyers.</td><td>-</td></tr>
</table>

B	Qualitative Parameter	Current Status
a)	Identification of gaps in access to Finance, Market and Technology MSME Sector of the State/ UT	As part of the formulation of the 14th Five-Year Plan, Government of Kerala established a dedicated working group. This group was specifically focused on addressing the challenges faced by the MSMEs and developing a strategic a roadmap for their future. Additionally, the MSMEs have consistently received attention across different annual Economic Reviews brought out by Kerala State Planning Board. This underscores the realisation that MSMEs constitute a major share of the industrial ecosystem in

B	Qualitative Parameter	Current Status
		the state, and the ongoing attention and support directed towards the MSMEs. As part of RAMP, survey has been conducted to cover 1,000 MSMEs spread across manufacturing, service, and trading sector to identify the challenges confronted across different verticals. As part of Year of Enterprises initiative, sustainability survey is being carried out to assess access related challenges of 1 lakh enterprises established under the programme.
b)	State/ UT Policy on MSMEs: Vision/ Roadmap for improvement in business environment for MSMEs in the State with requisite interventions and availability of Outcome – Output Framework for the schemes supported by the RAMP Programme: (Specific Schemes TReDS, MSME Champions Scheme, CGTMSE, etc) • Short Term (0-1) years • Medium Term (2-3) years • Long Term (4th year onwards)	The recent State Government initiatives such as the Year of Enterprises, Mission 1000 as well as in Made in Kerala among others reflect Government's commitment towards encouraging, developing, and sustaining the momentum observed within MSME sector in the state. The State has identified interventions aligned to RAMP objectives and is committed to monitor outcomes proposed as part of the RAMP project.
c)	Extent of participation in various Central MSME schemes	The state has been able to capitalise on and make best use of various Central Government schemes targeting MSMEs spread across diverse sectors:

Sl	Central MSME Scheme	Status
1	Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE)	CGTMSE provides credit guarantee to its Member Lending Institutions for the loans extended by them to MSEs without any collateral security or third-party guarantee. As of February 2023, based on the data collected since the inception of CGTMSE Kerala ranks 6th among states in terms of the number of guarantees approved and 14th in terms of the amount of guarantee extended.
2	Prime Minister's Employment Generation Programme (PMEGP)	Under this scheme, the GoI provides a subsidy of 15-35 % of the project cost based on various criteria. The remaining funds are provided to the entrepreneur as term loans by the participating banks. The number of beneficiary units in 2022-23 has seen a notable increase, rising from 2,780 to 3,129. Alongside this

B	Qualitative Parameter	Current Status
		growth, the margin money disbursed has also shown a positive trend, increasing from approximately Rs 6,859 Lakhs to Rs 7,329 lakhs. Furthermore, the employment generated has experienced a significant growth, climbing from 22,240 to 25,032. The state has not only met but exceeded the intended targets across all three key parameters: beneficiary units, margin money distribution, and employment generation. The targets for beneficiary units and employment generation were surpassed by more than 25%.
3	Scheme of Fund for Regeneration of Traditional Industries (SFURTI)	The intent of the scheme is to make traditional industries more productive and competitive by organizing these industries and associated artisans into clusters to provide for their long-term sustainability and economies of scale. Development of clusters under the schemes portray a strategic focus on sectoral development in agro, handicraft and coir sector. Kerala has obtained approval for a total of 10 clusters, out of which 9 are currently operational.
4	Micro and Small Enterprises Cluster Development Programme (MSE–CDP)	The scheme seeks to enhance the productivity and competitiveness of MSEs via adopting cluster approach and financial assistance for establishment of CFCs in the existing clusters and for establishment of new/up-gradation of existing Industrial Areas / Estates / Flatted Factory Complexes. Kerala stands 5th on the list for CFCs approved with 16 approved CFCs wherein currently 12 of them operational. These CFCs are spread across diverse sectors, including rubber, plastic, wood, food processing, and printing among others reflecting the diverse range of industries they serve. On the parameter of no. of Industrial Development projects, Kerala ranks at the 10th position with 12 approved Infrastructural Development projects of which 8 have been completed.
5	Scheme for Promotion of Innovation, Rural Industries and Entrepreneurship (ASPIRE)	ASPIRE scheme aimed at providing entrepreneurs in rural areas with the skills and support they need to set up their own businesses and become job creators. Kerala has 3 LBIs approved and has the highest number of micro-enterprises established (72) across the country.
6	ZED Certification	ZED scheme underscores the importance of producing high-quality products while minimizing adverse environmental impacts such that there are "Zero Defects" in their products ensuring that they meet stringent quality standards, and "Zero Effect" on the environment, signifying the reduction of carbon footprint and environmental impact. There are 709 MSMEs who have obtained ZED certifications in Kerala, of which maximum certifications have been taken in Bronze category (696) followed by Gold category (7). Kerala has scope to improve the number of

B	Qualitative Parameter	Current Status
		ZED certified MSMEs in the Sectors like Rubber and Plastic manufacturing, Food processing, Light engineering etc.
7	LEAN Scheme	LEAN scheme seeks to enhance the operational efficiency and competitiveness of MSMEs through emphasis on minimizing waste and maximizing value. In Kerala, there are total 19 lean certified units in 2 clusters – LMCS Ayurveda Cluster situated in Palakkad district with 10 units and Sulaho Mini Cluster in Kannur district with 9 units.
8	Innovative (Incubation, Design and IPR) Scheme	The scheme encourages and supports new activities and new concepts as the programme supports incubation, design by protecting intellectual property rights. Kerala has been able to make substantial stride in obtaining Geographical Indication (GI) tag registrations in priority sectors like agro based and handicrafts sector. The State has around 23 GI tags in the Agricultural sector, second only to Karnataka and Tamil Nadu. It has 15 GI registrations in the Handicrafts sector.
d)	Details of activities carried out by Development Centres & District Industries Centres/Sub District Industries Centres in the State and strategy to strengthen its eco-system	The DICs acts as a facilitator for the growth of the MSME and traditional industrial sectors in Kerala through the implementation of various schemes and policies of the State as well as Central Government. There are also 59 Taluk Industries Offices assisting the MSMEs. A network of BDSPs is provided to facilitate MSMEs at the Local self-government institution levels.

C	Distinguishing Factor	Current Status
1	Distinguishing Factor 1:	Led by the Year of Enterprises campaign in 2022-23, there was accelerated development and registration of new MSMEs in the state. Under this campaign, the state has eased legal and administrative processes allowing new ventures to begin operation and function without obtaining a license for a period of three years. The focus for this year is on identification of 1000 MSMEs that can be scaled up to become ventures with turnover of Rs 100 Cr in a period of four years. During the Year of Enterprises campaign to facilitate handholding of MSMEs, a set of institutions and frameworks were established. It includes establishment of MSME Clinics and deployment of trained Business development Service Providers (BDSPs) across individual blocks in a district. Based on findings of the survey, this support at the ground level has been one of the key highlights of the campaign. This showcases State's ability to capitalise on its decentralised structure of operations, mobilize and deploy

C	Distinguishing Factor	Current Status
		resources for MSMEs at the appropriate level as and when required.
2	Distinguishing Factor 2:	To facilitate and support market access efforts' of MSMEs the state is working on design and development of a Commerce Vision. Further, the plan is to create a set of products with a 'Made in Kerala' tag. The branding of the products is expected to help MSMEs take their products beyond their existing captive markets, explore national and international markets. Kerala has also significant number of GI tagged products

1 Understanding the MSME Landscape in Kerala

The Micro, Small, and Medium Enterprises (MSMEs) sector has played a pivotal role in the socio-economic development of Kerala, a state situated in the southwestern region of India. With its unique socio-economic fabric, Kerala's MSME sector has experienced distinct growth patterns and challenges, shaped by historical, cultural, and geographical factors. Additionally, Kerala's development model, characterized by its focus on human development indicators, social welfare, and inclusive growth, has had a significant impact on the MSMEs, shaping its growth trajectory in distinct ways.

a. **Human Development Focus:** Kerala's emphasis on education, healthcare, and social welfare has created a skilled and literate workforce, which has been a crucial asset for the MSME sector. The availability of a well-educated and skilled labour pool has enabled MSMEs to tap into local talent for various roles, from technical work to managerial positions.

b. **Social Capital and Cooperative Initiatives:** Kerala's social capital, built on a history of community engagement and cooperation, has influenced the functioning of MSMEs. Cooperatives and self-help groups have played a significant role in sectors like handloom weaving, coir production, and agricultural processing. These community-driven initiatives have not only contributed to employment generation but have also sustained traditional crafts and industries.

c. **Balancing Tradition and Modernity:** Kerala's unique model necessitates the careful balance between preserving traditional industries, which are part of the state's cultural heritage, and encouraging technological innovation. MSMEs in sectors like coir, handicrafts, and traditional textiles have been supported through modernization while retaining their authentic essence.

d. **Tech-Driven Growth and Global Reach:** Kerala's integration into the global economy, particularly through the information technology and tourism sectors, has indirectly benefitted MSMEs. The growth of the IT sector has created demand for IT-enabled services and software development, providing opportunities for technology-focused MSMEs to thrive.

1.1 Stages of Industrialization in Kerala

1.1.1 Early Stages of Industrialization

The early industrialization period in Kerala marked a crucial juncture in shaping the foundations of the Micro, Small, and Medium Enterprises (MSME) sector. This phase laid the groundwork for the diverse and resilient industrial landscape that Kerala boasts today.

The geographical location of Kerala along the Arabian Sea made it a vital hub for trade and commerce. The Portuguese, Dutch, and British established trading posts and colonies, introducing various cash crops like rubber, tea, coffee, and spices. These crops not only served as important exports but also initiated the process of agro-processing industries. Plantation agriculture, particularly rubber and tea, created opportunities for downstream processing, contributing to the nascent MSME sector. In addition to plantation-based industries, cottage industries played a significant role in Kerala's early industrialization. The state's abundant natural resources, such as coir, coconut, and timber, supported the growth of industries like coir weaving, handicrafts, and handloom textiles. Local artisans and weavers began producing intricate textiles, attracting both domestic and international markets. The establishment of traditional craft villages, where skilled artisans practiced their crafts, further bolstered these industries.

Kerala's skilled artisans played a crucial role in the growth of the MSME sector during this era. Their expertise in handloom weaving, wood carving, pottery, and metalwork created products of exceptional quality and craftsmanship. These products gained recognition not only within India but also in international markets. The interaction between local artisans and foreign traders introduced new techniques and designs, contributing to the diversity and innovation of Kerala's MSME sector. The presence of matrilineal societies empowered women to engage in economic activities, further enhancing the diversity of the sector.

The early industrialization period has left an indelible mark on Kerala's MSME sector. Many of the industries that emerged during this era, such as coir and handloom, continue to thrive, albeit with modern technological interventions. The artisanal skills passed down through generations remain relevant and sought after, contributing to the state's cultural heritage and economic growth.

1.1.2 Post-Independence Era to Present

In the post-independence era, Kerala's industrialization journey stands out as a model of sustainable and inclusive development. The state has leveraged it's educated workforce, infrastructure, and supportive government policies to attract investments and foster a diversified industrial base. What sets Kerala apart is its strong emphasis on social welfare and environmental sustainability.

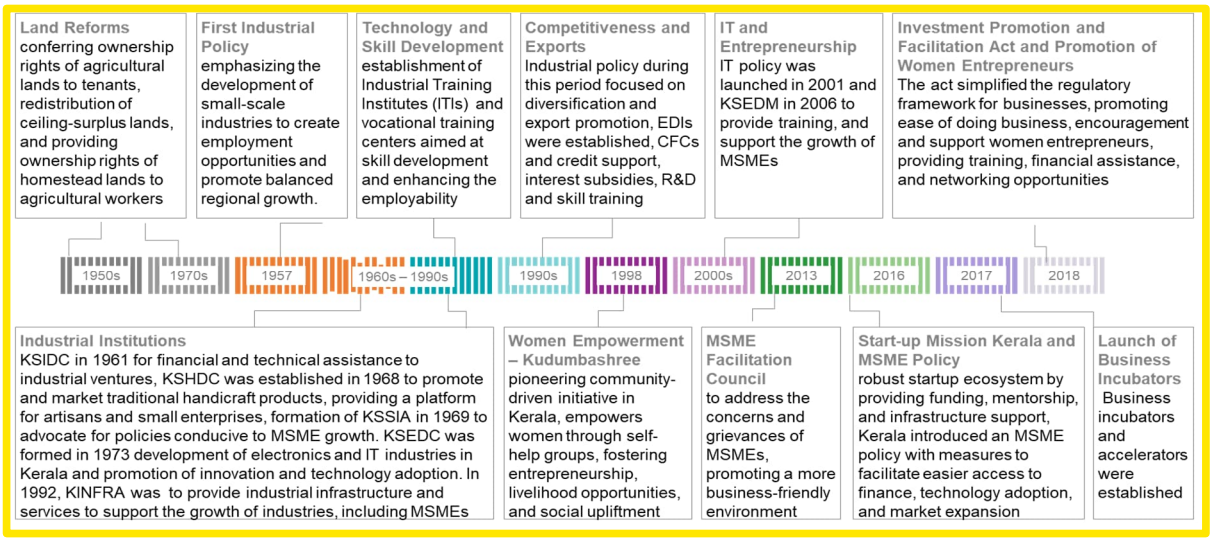


Figure 1 Industrial and Associated Social Reforms in Kerala - a Timeline

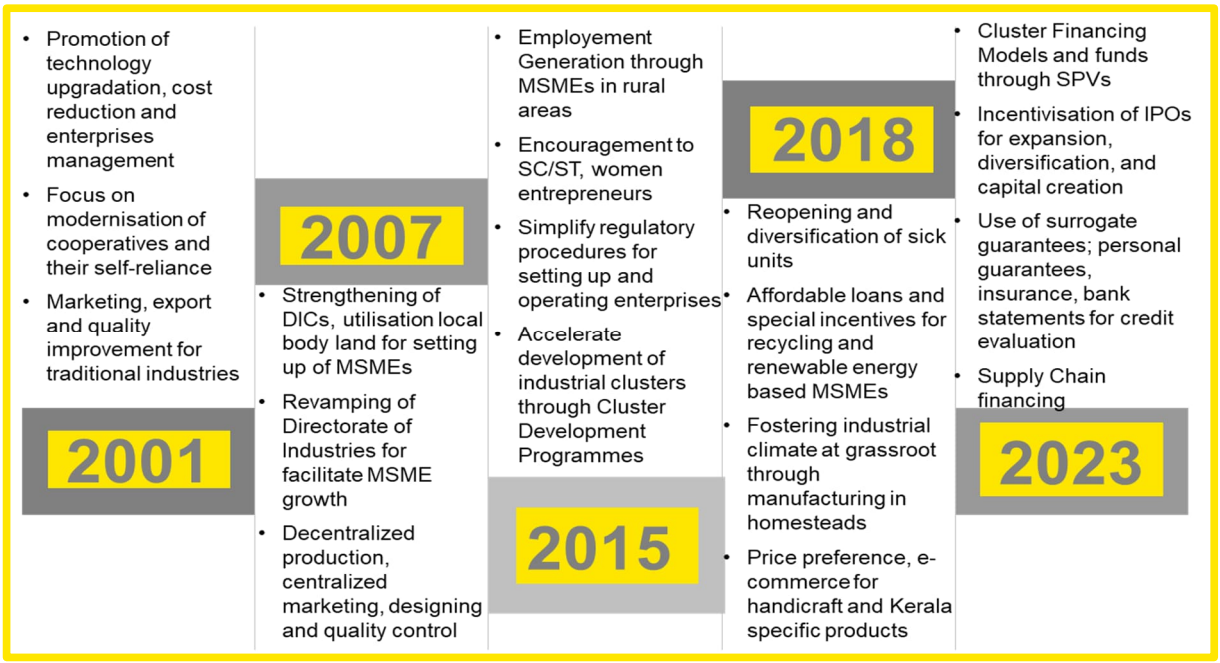


Figure 2: MSME Focus of Kerala's Industrial Policy

1.2 Overview of MSMEs in Kerala

MSMEs stand as a cornerstone of Kerala's economy, driving growth, generating employment, and fostering innovation. The Government of Kerala assigns priority to the sector realising its potential to generate employment, and thereby contribute to economic growth. In addition, the sector can add to export growth. The sector plays a critical role in promoting innovation and ensuring sustainable development, equitable growth, and the utilisation of natural resources.

MSMEs also contribute substantially to state's GDP. As per the data for MSME contribution to India's GDP, MSMEs contribute around 37.5% share[2] and this number is expected to be even higher for the state of Kerala given the understanding that MSMEs constitute a large share in overall industrial establishments in the state. As per the PRS Legislative Research, the GDP of Kerala is estimated to grow by 11.3% in 2023-24 as compared to 2022-23 and is projected to be Rs. 11.3 lakh crore. Of this MSMEs are estimated to contributed approximately Rs. 4.3 lakh crore to the state GDP.[3]

1.2.1 'Formalisation' of MSMEs and Udyam Registration

According to the data on unincorporated non-agricultural enterprises (excluding construction) in India from the 73rd round of the National Sample Survey (NSS), there were 23.8 lakh unincorporated non-agricultural enterprises (excluding construction) in Kerala in 2015-16 employing a total of 44.9 lakh workers[4]. According to the data, MSMEs in Kerala comprise 4% of total number of MSMEs in India, 12th largest number in the country.

Of these 23.8 lakh MSMEs, a total of 4,40,960 MSMEs have an Udyam registration. As on August 29, 2023, majority of these Udyam registered MSMEs (96%) are micro enterprises. Kerala has made significant strides in its Udyam registration in the last two years. The data shows a growth of 164% in number of registrations in 2021-22 and 195% in 2022-23.

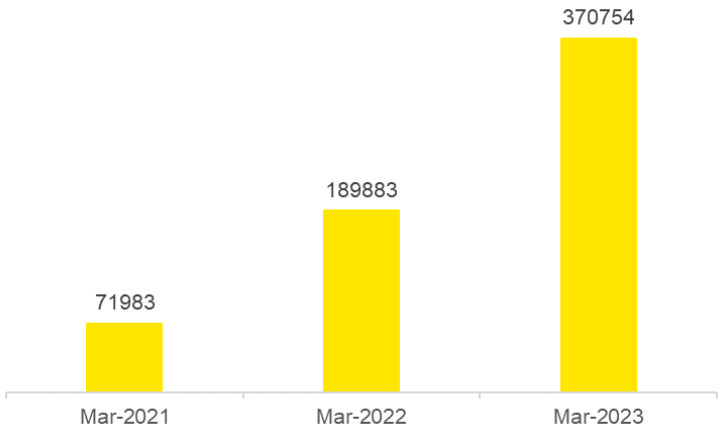


Figure 3 Trends in Udyam Registration

Based on data from Udyam dashboard, as of Aug 29, 2023, there are 1.87 crore Udyam registered MSMEs in India. It translates into approximately 28% of total MSMEs in India. The state of Kerala has nearly 4.4 lakh MSMEs registered on the portal. When compared to the 73rd round of NSS Report, i.e., a mere 18% of the total MSMEs in Kerala have onboarded on the Udyam portal.

[2] Economic Review 2016, State Planning Board (kerala.gov.in)
[3] Kerala Budget Analysis 2023-24 (prsindia.org)
[4] Untitled-1 (msme.gov.in)

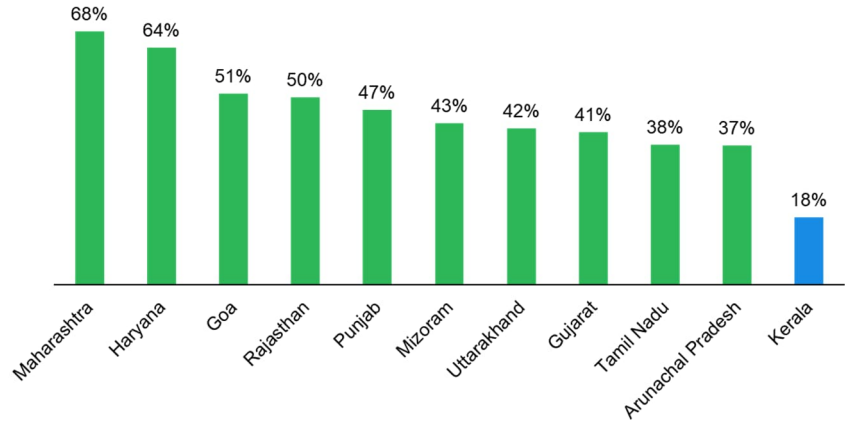


Figure 4: MSMEs Reported in States vs Registered on Udyam Platform

The numbers indicates that the rate of formalisation is yet pick up pace in the state. Among the 28 states in India, Kerala ranks 23rd with respect to the rate of formalisation. Across states like Maharashtra, Haryana, Goa, and Rajasthan, over 50% of MSMEs in the state have registered on Udyam portal when compared to the figures reported in the NSS Report of 2015-16.

It is to be noted that Kerala ranks 15th among all states in terms of Udyam registration when compared using absolute numbers, which is below comparable states such as Punjab, Haryana, and Telangana. This indicates the need for concentrated efforts to further the formalisation within the MSME sector.

1.2.2 Social Category and Gender-wise Distribution of MSMEs

According to data from MoMSME, it is encouraging to note that in Kerala, 25% of the Udyam registered MSMEs are women owned. This percentage is higher in comparison to other states, with Kerala surpassing Maharashtra (19%), Tamil Nadu (24.3%), Karnataka (9%) and Madhya Pradesh (3.5%).

Additionally, a significant portion of MSMEs registered on Udyam, specifically 55% belongs to minority groups. Among these, 51% represent the OBC category, and 4% are from the SC/ ST communities. This diversity within the MSME sector reflects the inclusive entrepreneurial landscape in the state.

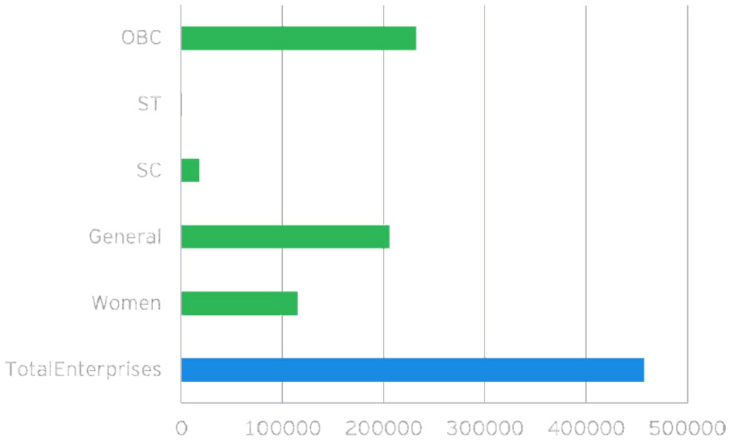


Figure 5: MSMEs (Udyam registered) based on social category and gender

1.2.3 Geographical Distribution of MSMEs

Kerala's MSMEs are distributed across different regions, industries, and sectors. In Kerala, MSMEs are not limited to urban centres; they are dispersed across both urban and rural areas. Urban areas, such as cities and towns like Kochi, Thiruvananthapuram, and Kozhikode, host a significant number of MSMEs, particularly those in technology, services, and manufacturing sectors. At the same time, rural areas are characterized by traditional industries like coir, handicrafts, and agriculture-related enterprises.

Certain regions within Kerala have witnessed a higher concentration of MSMEs due to factors such as infrastructure availability, market access, and historical industrial development. Districts like Ernakulam, Thrissur, and Kozhikode have emerged as MSME hubs due to their connectivity, proximity to ports, and commercial activities. Kerala's traditional industries, deeply rooted in its culture, are spread across different regions. The coir industry, for instance, is prominent in coastal areas like Alappuzha and Kollam, where coconut cultivation is abundant. Similarly, handloom clusters are found in regions like Balaramapuram and Kannur. With the state's focus on technology and innovation, technology driven MSMEs have emerged in cities like Thiruvananthapuram and Kochi. These areas host IT parks, start-up incubators, and research centres, fostering an ecosystem for innovation and entrepreneurship.

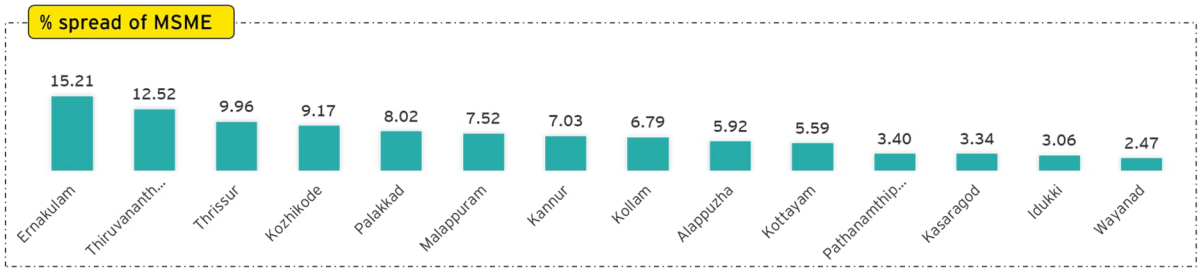


Figure 6: District-wise Spread of MSMEs (%)

1.3 MSME contribution to SGDP and GVA in Kerala

In the fiscal year of 2020-21, Kerala's SGDP experienced a contraction as it decreased from Rs 81,29,34,630 lakhs to Rs 77,10,08,660 lakhs. The economy experienced negative growth rates of approximately -5%, while the national GDP contracted by 8% due to the Covid-19 induced lockdowns. In the following fiscal year 2021-22, however, Kerala's economy witnessed a rebound and the SGDP increased to Rs 90,69,20,930 lakhs, showcasing a growth trajectory. This expansion indicated a growth rate of approximately 18%. The recovery can be attributed to various factors, including economic revival efforts, policy interventions, and the easing of pandemic-related restrictions. The state's ability to adapt and recover from the challenges of the previous year is evident in this growth.

Additionally, in the fiscal year 2022-23 Kerala's economic growth continued its upward trajectory. The SGDP further increased to Rs 99,96,43,000 lakhs, demonstrating a growth rate of approximately 10%. This sustained growth signifies the state's resilience and adaptability in navigating complex economic conditions. The growth suggests that Kerala's economy continued to recover and expand, propelled by efforts to stimulate economic activities, attract investments, and promote various sectors.

The MSME sector was a crucial catalyst for the economic revival of Kerala following the challenges posed by the COVID-19 pandemic. Its resilience, adaptability, and strategic importance have placed it at the forefront of the state's recovery efforts. As the pandemic led to job losses across various sectors, MSMEs absorbed a considerable portion of the workforce, mitigating unemployment and providing livelihood opportunities. Kerala's MSME sector has been a linchpin in the state's economic revival post-COVID-19. Its ability to adapt, innovate, create jobs, and support local communities has showcased its significance in fostering resilience and driving sustainable recovery.

Based on estimations drawn from the State's Economic Review documents, the contribution of MSMEs to SGDP is approximately 38%[5] and contribution to GVA is taken at 30%[6]. This provides a rough yet informative overview of the MSME sector's contribution to SGDP and GVA.

Table 1 MSME Contribution to SGDP and GVA (in Lakhs)

FY	SGDP	Contribution of MSMEs to SGDP	GVA	Contribution of MSMES to GVA
2018-19	7,88,28,558	2,95,60,709	6,96,18,249	2,08,85,474
2019-20	8,12,93,463	3,04,85,048	7,32,91,499	2,19,87,449
2020-21	7,71,00,866	2,89,12,824	6,84,42,541	2,05,32,762
2021-22	9,06,92,093	3,40,09,534	8,08,13,309	2,42,43,992
2022-23	9,99,64,300	3,74,86,612	8,62,27,800*	2,58,68,340

Taken from the Kerala Economic Review 2021 and 2022 at current prices

Furthermore, according to the Annual Survey of Industries Report for 2019-20, the industrial sector in Kerala generated an impressive gross output of approximately Rs. 2,14,84,484 lakh. This significant contribution represented around 2% of the national gross output during that period. Aligning this data with insights from the Prime Minister's Task on MSMEs in 2010, which emphasized that Micro, Small, and Medium Enterprises (MSMEs) contribute a substantial 45% to the manufactured output[7], an intriguing analysis emerges. Hence, it can be deduced that the cumulative influence of MSMEs on Kerala's gross output was approximately Rs. 96,68,017.8 lakh. These figures collectively underscore the crucial role played by the industrial sector, with MSMEs as an integral driver of economic growth in Kerala.

1.4 MSME Competitiveness and Determining Factors

MSME competitiveness refers to the ability of enterprises to effectively compete in their respective markets and industries. This competitiveness is vital for their long-term sustainability and growth, and it relies on a network of critical components. These components include geographical context, infrastructure, workforce skills, access to finance, market dynamics, technology, and ecological sensitivity among others.

While geographical factors such as land, mineral resources, etc play a pivotal role in determining the feasibility of various industries, ranging from agriculture and mining to manufacturing and energy production, infrastructural facilities including transportation networks, utilities, and communication systems, forms the backbone of production and market access. The composition and skill levels of the workforce are equally crucial, a skilled and adaptable labour force can propel production by enhancing productivity and fostering innovation.

Market demand, whether domestic or international, significantly shapes production strategies, steering businesses toward sectors with favourable growth prospects. Access to finance is another crucial factor which facilitates entrepreneurial activities, infrastructure development, while also influencing an enterprise's ability to tackle challenging business environments. Moreover, technological advancements and innovation drive efficiency, allowing states to harness their resources more effectively. Recognizing and understanding this complex interplay is essential for optimizing production processes and driving economic growth.

[5] Economic Review 2016, State Planning Board (kerala.gov.in)
[6] Press Information Bureau (pib.gov.in)
[7] Report of the Task Force on Micro, Small and Medium Enterprises (msme.gov.in)

1.4.1 Geographical Context and Land Availability

The state's limited land availability, coupled with its high population density, makes land a precious resource. To address the issue of limited industrial land availability, the state government has initiated various measures. One of the key strategies is the development of industrial parks, development plots across different districts in Kerala. These designated areas provide ready-to-use infrastructure and facilities, access to utilities such as power and water supply, waste management systems, research, and development facilities, testing laboratories, and other essential services. Another approach taken by the government is the redevelopment and rehabilitation of existing industrial areas to optimize land use and accommodate more industries.

The allocation of industrial land in Kerala is primarily managed by the Kerala Industrial Infrastructure Development Corporation (KINFRA) and the Kerala State Industrial Development Corporation (KSIDC). These government agencies are responsible for identifying, acquiring, and developing suitable land parcels to meet the industrial needs of the state. KINFRA has developed 16 industrial parks, spanning a total area of 1572.76 acres. These parks comprise 3 food processing parks, 8 general non-polluting industries parks, and 1 each of textile, defence equipment, electronic manufacturing, petrochemical, and Hi-tech industrial parks. These specialized parks cater to the specific requirements of different industries, providing them with dedicated spaces to flourish and grow.

KSIDC is also actively involved in the development of industrial parks in Kerala. Currently, they operate 6 out of the 9 industrial parks under their purview. These parks have the capacity to house 265 industrial units, and there are currently 164 working units within these operational parks. In addition to industrial parks, there are 25 development areas and plots under the Department of Industries, covering a total area of 1328.69 acres. These areas have the capacity to accommodate 1383 industrial units, and currently, there are 1146 working units. This highlights the high demand for industrial space and the proactive approach taken by the government to meet industry requirements. All of this signifies the successful establishment of a supportive infrastructure for industries in Kerala.

1.4.2 Industrial Infrastructure

1.4.2.1 Energy

The state government has been proactively implementing measures aimed at enhancing energy efficiency and promoting renewable energy sources such as solar and wind power. In Kerala, as of March 2022, the total installed power capacity in the state stands at 3,145.82 MW. Hydropower constitutes the lion's share at 2,136.91 MW (68%), followed by thermal projects at 529.54 MW (17%t), solar at 409.09 MW (13%), and wind power at 70.28 MW (2%t).

Kerala has achieved noteworthy recognition in its energy and climate efforts, securing the second-best position in the NITI Aayog's State Energy and Climate Index (SECI) for the year 2022. This index gauges the states' endeavours to revamp their energy sectors. A distinctive feature of Kerala's energy consumption pattern is the dominance of electricity consumption in the domestic and commercial sectors. In contrast, many other states allocate a significant portion of their energy consumption to industry and agriculture. Kerala's commendable industrial energy savings rate of 2.5 is the highest among all states, reflecting the state's dedication to energy efficiency. Additionally, Kerala scores exceptionally well in terms of access, affordability, and reliability, with a score of 67.3, surpassing all other states in these crucial aspects of energy provision.

1.4.2.2 Water

Water is a vital resource in various industrial sectors, playing a critical role in multiple sectors such as manufacturing, energy production, agriculture, and more. Its uses in industrial applications are diverse, and its significance cannot be overstated.

The estimation for domestic and industrial water supply is 1,483.16mcm and for irrigation it is 1,162.74mcm. As per the data published by the Kerala Water Development Authority, out of 41,04,857

water connection in the state, 1857 are large industrial connections and 1,63,747 are MSME connections (4%).

1.4.2.3 Transportation Network

Kerala boasts a robust transportation infrastructure with a total road length of 2,30,934.18 km, including both classified and non-classified roads. The road density stands at 548 km per 100 sq. km, which is approximately three times the national average[8]. Additionally, the state has a significant presence in the Indian Railways network with a total route length of 1,745 km, divided between Thiruvananthapuram and Palakkad divisions[9].

Kerala is also making strides in sustainable transportation with the Kochi Water Metro project, which has a total revised project cost of Rs 1,064.83 crore. It aims to induct 78 electric hybrid boats and is expected to be operational by the end of 2022[10]. Moreover, Kerala, often referred to as God's Own Country, features an extensive network of inland waterways, which include rivers, lakes and backwaters. Not only do they contribute to the state's ecological diversity but also play an essential role with respect to transportation, livelihoods, and environment [11].There are plans to develop waterways from Kovalam to Bekal to enable large scale movement of cargo through the waterways.

More infrastructural projects are actively under construction signifying a commitment to fostering economic growth and development in the region (See Annexure A3 for a detailed list of major infrastructure projects in the state). With major projects such as Vizhinjam project, seaport projects, and road connectivity initiatives taking shape there are unprecedented opportunities for MSMEs to thrive, expand their operations and contribute significantly to the state’s economic progress.

1.4.3 Skill Development and Entrepreneurship

1.4.3.1 Skill Development

Kerala boasts a well-educated and skilled workforce. The state is known for its strong labour unions and a progressive labour outlook, which has led to relatively higher wages. This can impact the cost of production but also ensures a motivated and skilled workforce. The wage rates of male and female unskilled labourers in Kerala are much higher than the national average wage as well as the minimum wage prescribed for the State. Kerala had a wage rate of about Rs. 677.6 (male, non-agriculture) in 2020-21, whereas the national average was 315.3 in that year.

As per the India Skills Report 2022[12], Kerala with a percentage of 64.2 is ranked 3rd among the states having the highest pool of employable talent in the country following Maharashtra (66%) and Uttar Pradesh (65%). Kerala is a topper among employable resources available. The state capital Thiruvananthapuram holds a 3rd position in the category of cities with the most highly employable resources. Kerala came third in terms of states with the highest youth employability with 64% of the candidates being highly employable. Featuring in the top 10 states for English language skills, Kerala is however not in the top 10 for computer skills, numerical reasoning, or critical thinking. On the plus side, numerous cities from Kerala feature in the top 10 cities for available talent in the ages of 18-21, 22-26 and 26-30, respectively.

[8] SGD PWD (R&B) PWD (NH)
[9] Kerala Rail Development Corporation Ltd. (KRDCL)
[10] Kochi Water Metro project
11 Landscape (keralaculture.org)
[12] ISR_Report_2022.pdf (wheebox.com)

Some of the major stakeholders associated with skill development in the State are as below:

Figure 7 Some of the major stakeholders in the Skill ecosystem in Kerala

a. Industrial Training Department

Industrial Training Department is the State-level nodal agency for implementing various skill development activities of Director General of Training (DGT), Ministry of Skill Development and Entrepreneurship, GoI. There are 104 Government Industrial Training Institutes functioning in the State with a total capacity of 33,582 seats (1st year + 2nd Year), out of this 30 per cent of seats are reserved for women candidates. Apart from these, 14 women ITIs are functioning in the State in Government sector. Also, the trainees from backward sections of the society are assisted to the fore of mainstream of technological advancement through training, enhancing their employability and handholding which are provided for free.

b. Kerala Academy for Skills Excellence (KASE)

KASE, under Department of Labour and Skills, is designated as the State Skill Development Mission to function as the nodal body for the convergence of all skill initiatives of the state. KASE have adopted skilling models with industry tie-ups and placement linkages to skill young workforce in the State and elevate their capabilities to meet global standards.

c. Kerala Institute for Entrepreneurship Development (KIED)

KIED was established as an autonomous body of the Government of Kerala on 9th November 1994. It aims to promote the spirit and culture of entrepreneurship among the youth of Kerala by giving them orientation in Human Resources Development and training in skill development and leadership. Over the years it has established networks with International and national bodies like United Nations Conference on Trade and Development (UNCTAD) and International Labour Organisation (ILO).

d. Kerala State Skill Development Project and Additional Skill Acquisition Programme (ASAP)

ASAP offers 150+ contemporary courses in 19 domains and is engaged in curating a ready-to-deploy workforce. It has trained more than two lakh students through its Skill Development Centres and Community Skill Parks in offline mode from 2014 till 2020. ASAP Kerala was instrumental in setting up equipment worth Rs 6.5 crore at Government polytechnic colleges which included CNC Vertical milling machine, CNC lathe, laser cutters, TIG-MIG welding stations, Robotics labs, fab

labs, etc. The staff and faculty were then trained to use the equipment and the Industry on Campus (IoC) initiative was launched through partnerships with Industry for job works to be done for them by the students using the equipment. This provide an opportunity for the students to be exposed to industry dynamics and encourage them to foster business innovation through a realistic model of industry on campus.

e. Kerala Development and Innovation Strategy Council (K-DISC)

K-DISC is an advisory body constituted by the Government of Kerala. K-DISC aims at bringing out strategic plans that reflect new directions in technology, product and process innovations, and creating a healthy and conducive ecosystem for fostering innovations in the State.

f. Directorate of Technical Education

Directorate of Technical Education is the nodal department for technical education in the State. Technical education helps in applying technology for the benefit of the society, in terms of improving the quality of life, enhancing industrial productivity and improvising technologies for the overall development of the community. There are 45 Government polytechnics, 6 Government aided polytechnics and 39 Government technical high schools functioning in the State in 2022-23. All these institutes offer courses that give importance to skill training of the students in the State. A total of 71,359 students have completed skill training in the year 2021-22 from technical institutes in the State.

g. Skill Updating Institute for industrial Training-Kerala (SUIIT-KERALA)

The institute is engaged in major activities like Training Need Analysis (TNA), course designing, preparation of course materials, research in new methods of teaching etc. The institute provides skill updating training programs, NSQF training programmes, service-related training programmes and soft skill training programmes for instructional, supervisory, and ministerial staff of the department. SUIIT also facilitates programmes under state training policy in cooperation with Institute of Management-Kerala. Two off campus training centres of SUIIT-Kerala are also functioning at Kalamassery and Kozhikode and various training programmes are conducted in these off-campus centres also.

h. Pradhan Mantri Kaushal Kendra

Ministry of Skill Development and Entrepreneurship (MSDE) has initiated establishing state-of-the-art Model Training Centres (MTCs) called Pradhan Mantri Kaushal Kendra (PMKK), with National Skill Development Corporation (NSDC) is the implementation agency for the project, in every district of the country to create benchmark institutions that demonstrate aspirational value for competency-based skill development training, focus on elements of quality, sustainability and connection with stakeholders in skills delivery process, and transform from a Mandate-driven footloose model to a sustainable institutional model. There are 16 PMKKs in Kerala as on July 21, 2022, out of the 722 established nationwide.

i. Sector Skill Councils

Sector Skill Councils (SSCs) is one of the major pillars of NSDC which play a vital role in bridging the gap between what the industry demands and relevant skilling requirements. The SSCs operate as an autonomous body and could be registered as a Section 8 Company, or a Society. NSDC is mandated to initiate and incubate SSCs with initial seed funding to facilitate their growth and enable them to achieve self-sustainability in a time bound manner. The National Policy on Skill Development and Entrepreneurship, 2015 laid out Skill India Mission, and envisaged the creation of Sector Skill Councils (SSCs) by NSDC.

1.4.3.2 Major Initiatives and Schemes for Skill development

The State has taken many progressive steps to enable the enhancement of capabilities of the future young workforce in the State. Some of them are illustrated below:

a. To expose students to the latest development in technology and to improve the teaching learning process through hands – on training, the Department of Technical Education is setting up Production and Training Centres, Material Testing Centres and Advanced Fabrication Laboratories at all Government Polytechnic Colleges in a Phased manner.

b. ASAP has set up Advanced Skill Development Centres (ASDCs) in 66 Engineering Colleges and 45 Polytechnics across Kerala offering advanced courses such as artificial intelligence and machine learning and robotic process automation, to bridge the skill gap in Engineering and Polytechnic institutions and to connect students with future technologies. SHE SKILLS 2019, a three-month-long skill development programme combining on-the-job training and internship offering 23 courses in 11 job sectors, was an exclusive training programme for women above 15 years of age to improve their standard of living and make them economically self-sufficient. The candidates were offered value addition training in Placement grooming and softs skills. The registered students were also provided collateral free loans to meet the course fees through tie up with Canara Bank and Kerala Bank.

c. The State Initiative on Internship for Employability Enhancement project has created an online web platform, State Internship Portal, to offer graduate students an opportunity to work while undergoing a conventional educational programme.

d. The Community Skill Parks (CSPs), conceived as an Industry led Public Private Partnership model of skill training, have been developed as multi skill training centres equipped with state-of-the-art training facilities in various locations across the State. CSPs operate on a hub and spoke model and connect with academic institutions, vocational training institutions and the local industry to foster a skill development ecosystem. A total of 16 CSPs are to be implemented in the State out of which 9 of them are already operational.

e. She Skills is an exclusive training programme for women above 15 years of age for a period of three months, to learn marketable skills, and promoting entrepreneurship to become economically self-sufficient. She-Skills 2019 offered 23 courses in 11 job sectors. Placement grooming, softs skills training are salient features of the programme.

f. The State currently has 101 Training centres partnered for providing training under the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is the flagship scheme of the Ministry of Skill Development and Entrepreneurship (MSDE). Nearly 2.80 lakh candidates have been trained through PMKVY till date. The State has been performing slightly below the National average in case of PMKVY, whereas it was above the National average in implementation of Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU GKY).

Table 2 Performance of Central Schemes (PMKVY and DDU GKY) in Kerala

Central Schemes	Trained/ Oriented		Assessed		Placed	
	Kerala	National Avg.	Kerala	National Avg.	Kerala	National Avg.
PMKVY 1.0	40478	55167	39835	54208	6601	7415
PMKVY 2.0	220753	305575	190483	275576	24099	59488
PMKVY 3.0	18482	20486	14829	16184	799	1194
DDUGKY (2019-20)	53195	35410	42707	30319	30265	21403

Central Schemes	Trained/ Oriented		Assessed		Placed	
	Kerala	National Avg.	Kerala	National Avg.	Kerala	National Avg.
DDUGKY (2020-21)	56248	36687	47096	32217	33196	23055
DDUGKY (2021-22)	59467	39920	50326	37160	34293	24576
DDUGKY (2022-23)	67802	47541	57160	42746	39412	29216
DDUGKY (2023-24)	69861	50230	58782	45503	40146	30175

g. Recently, the Government of India introduced the National Apprentice Promotion Scheme (NAPS) through which the Central Government will reimburse 25 per cent of stipend to the establishments. Apprenticeship schemes in the State are implemented through office of the State apprenticeship advisor, and Assistant Apprenticeship Advisor in 14 districts.

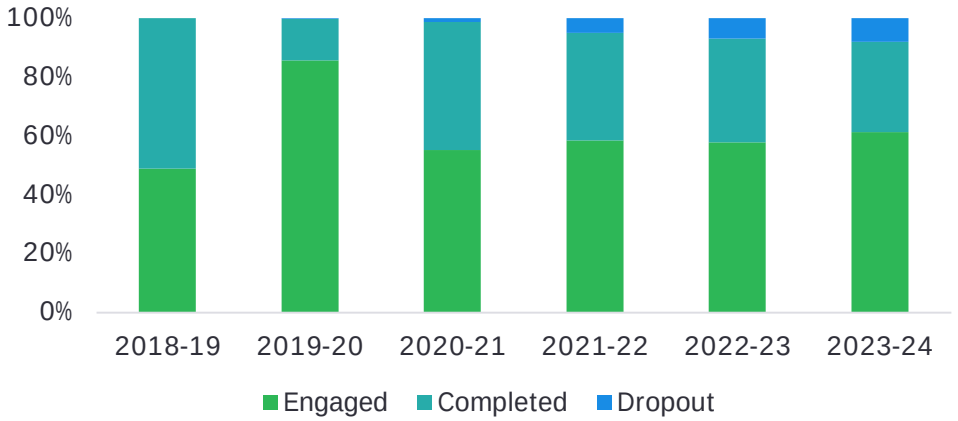


Figure 8 Apprentices Engagement Trend

1.4.3.3 Entrepreneurship

Kerala has a thriving entrepreneurial ecosystem, with a focus on small and medium-sized enterprises (SMEs). The state government supports entrepreneurship through various schemes, providing financial assistance, mentorship, and infrastructure. The entrepreneurial spirit has led to the growth of IT parks, start-up incubators, and a vibrant service sector.

There are more than 23 lakh MSMEs in Kerala as per the National Sample Survey Office (NSSO) survey 2014-15. This number is expected to be around 40 lakh in 2022-23 as per the estimates derived from the data and announcements made by Kerala government on MSME growth. To promote entrepreneurship in the state, various schemes focusing particularly on entrepreneurship have been implemented by the Directorate of Industries and commerce. These schemes include Entrepreneurship Development Clubs (EDC), Entrepreneurship Development Programme (EDP), Entrepreneur Support Scheme (ESS), MSME Clinics, Innovation and Entrepreneurship Development Centres (IEDC), etc.

Additionally, steps have been taken towards fostering the start-up ecosystem was in the state via the establishment of an incubator named Technopark Technology Business Incubator. Further, since 2015, Kerala Start-up Mission has made its mission to discover, support, nurture and establish start-ups throughout the state. The Kerala Start-up Mission (KSUM) has identified several priorities to enhance

the start-up ecosystem in Kerala including Kerala as a destination for Design & Prototyping, Global Visibility Program for Start-ups, Scale-up program for Successful Start-ups, Focus on Women in Start-up Ecosystem, etc.

Furthermore, GoI has taken several steps towards fostering entrepreneurship, particularly in rural areas. In 2015, MoMSME launched the ASPIRE scheme aimed at providing entrepreneurs in rural areas with the skills and support they need to set up their own businesses and become job creators. It was launched to set up incubation centres and network of technology centres for enhancing entrepreneurship across India. It seeks to promote start-ups for innovation in the agro industry. ASPIRE aims to impart the necessary skill set required for setting up a business enterprise and assist during their critical period to ensure self-sustainability. This scheme also facilitates the available market linkages to the entrepreneurs. The components of this scheme include LBI (Livelihood Business Incubator) which is responsible for generation employment by providing a favourable environment for entrepreneurship and local level, and TBI (Technology Business Incubator) which is responsible for increasing centres for technology networks. The state has 3 LBIs under ASPIRE, details of which are given below:

Table 3 Kerala's Performance in ASPIRE

District	Approval FY	No. of Trainees (Admitted)	Trainees (Passed Out)	Trainees (Employed in Other Units)	Trainees (Self-Employed)	Number of Micro-enterprises Established
Ernakulam	2016-17	1513	1478	647	300	0
Trivandrum	2020-21	1658	1637	314	325	47
Thrissur	2020-21	141	122	20	11	0
Total		**3312**	**3237**	**981**	**636**	**47**

1.4.4 Access to Finance

The RBI report of the Expert Committee on MSMEs estimates an overall credit gap of around Rs. 20-25 lakh crores in India. Providing financial services to MSMEs generally involve greater costs and higher risks compared with serving other types of enterprises. This problem is compounded by so-called “thin file” customers with limited to no-credit histories.

Lack of adequate and timely access to credit is one of the often-cited challenges confronting MSMEs. The credit requirements depend on the enterprises size, sector of operation, customer segment, and stage of development. MSMEs often grapple with fluctuations in cash flow, especially during seasonal variations or economic uncertainties. Access to credit helps them manage working capital requirements and ensure smooth day-to-day operations. From a growth perspective, credit allows MSMEs to invest in critical areas such as infrastructure, technology, machinery, and manpower.

The key stakeholders participating in MSME financing ecosystem may be classified into following three categories:

Formal Lending Institutions/ Financing Institutions

Government Programmes

Alternate Financing Mechanisms

1.4.4.1 Formal Lending Institutions

Formal lending institutions include a wide range of financial institutions that provide loans and credit services to enterprises, including MSMEs. These institutions play a vital role in the economy by facilitating access to capital for various purposes. Some key formal lending institutions in the context of MSMEs are:

1.4.4.1.1 Banking Financial Institutions

Banking financial institutions play a crucial role in financing entrepreneurial activities. Hence, the regional distribution of banks is of paramount importance in determining access to and availability of credit to MSMEs. Public sector commercial banks have a robust presence in regions in Kerala. They operate a substantial network of 3,305 branches and provide a strong foundation for banking accessibility and constitute for forming 43% of the state's total banking network. Following closely behind are private sector commercial banks, accounting for 31% of the total banking network. Additionally, Kerala Gramin Bank, operating as a Regional Rural Bank with 634 branches focus on serving the specific needs of local communities, providing tailored financial solutions. Furthermore, co-operative Banks collectively contribute to the state's banking network with a total of 998 branches.

Table 4 Banking Group-wise Network in Kerala as of March 2022

Sl	Banking Group	Number of Branches			
		Rural	**Semi-urban**	**Urban**	**Total**
1	Public Sector Commercial Banks	142	2331	832	3305
2	Regional Rural Bank – Kerala Gramin Bank	53	542	39	634
3	Private Sector Commercial Banks	127	1671	593	2391
4	Small Finance Banks	147	111	36	294
5	Co-Operative Banks*	456	404	138	998
	Total	925	5059	1638	7622

As per data from the SLBC, the total advances extended by financial institutions have shown a consistent upward trajectory, increasing from Rs 35,9274 crore in Mar 2020 to Rs 49,3147 crore in Mar 2023. This increase in total advances is also reflected in the increased support provided to MSMEs, with the outstanding amount to MSMEs climbing from Rs 56,894 crore to Rs 68,452 crore during this period. Advances to MSMEs have exhibited a steady growth rate of approximately 6% over the past three years, with roughly 14% of the total advances being directed towards the MSME sector.

Based on data for Tamil Nadu, it's seen that the total outstanding advances in the state have surged from Rs 9,27,982 crore to Rs 12,42,886 crore between March 2020 and December 2022. Concurrently, the outstanding amount extended to MSMEs has climbed from Rs 1,68,742 crore to Rs 2,34,563 crore during this period. The proportion of outstanding advances allocated to MSMEs as a percentage of total outstanding advances has consistently hovered around 18%. What is particularly noteworthy is that this proportion has been attained through a growth in advances to MSMEs at a rate either higher or similar to the growth rate in total advances. This reflects the potential for enhanced support and opportunities for improving MSMEs access to financial resources within Kerala.

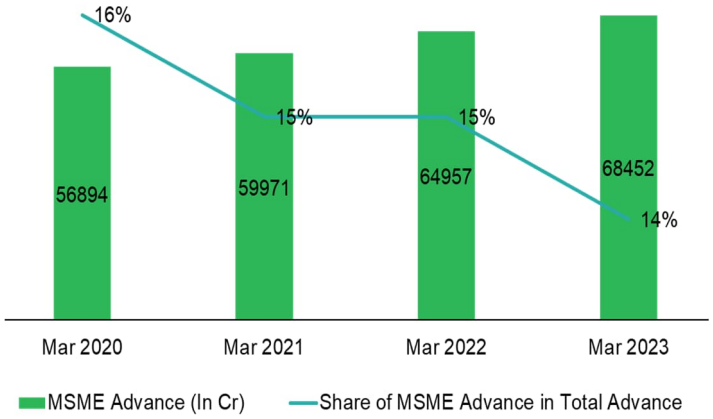


Figure 9 MSME Advances Outstanding (in Crore)

While advances have increased over time, the growth has been more modest compared to the increase observed in total advances. Consequently, there has been a slight decrease in the share of advances provided to MSMEs over the same period. This modest growth can be partially attributed to the prevalence of services sector enterprises, accounting for approximately 58% of advances and the scale of the enterprises, which often results in smaller requisite financial support.

Furthermore, the flow of credit to the MSME sector has been comparatively lower in comparison to the demand primarily due to lenders' cautious approach to commercial lending. To assess this dynamic, the credit-deposit (CD) ratio can serve as a useful proxy. The CD ratio is a gauge of the accessibility to credit within an economy and reflects the extent to which financial institutions are lending in comparison to the deposits they hold. The CD ratio reported by banks within the state remains at approximately 60%. In contrast, the national average CD ratio stands at 72%, which itself is significantly below the impressive CD ratios reported by banks in Andhra Pradesh and Tamil Nadu. As of 2022, the CD ratio reported by banks in Andhra Pradesh and Tamil Nadu exceed 100%[13]. This data underscores the potential for furthering access to credit in general and for MSMEs within the state.

Historically, the financial institutions have perceived MSME as a high-risk business. However, it is noteworthy that only 8% of the total advances to MSMEs have been classified as Gross NPAs, in the state of Kerala. As per the RBI data, the Gross NPA associated with MSMEs in Scheduled Commercial Banks reached 6% in 2022-23, up to December 31, 2022. Hence, it is on par with or slightly lower than the national Gross NPA estimate. Furthermore, this indicates a crucial point – only a relatively small portion of the MSME loan portfolio is experiencing repayment issues, and that lending to MSMEs does not inherently entail a higher level of risk if prudent lending practices and risk management are in put in place by the financial institutions.

1.4.4.1.2 Non-banking Financial Institutions (NBFCs)

Non-Banking Financial Companies (NBFCs) have emerged as crucial financial intermediaries in India's economic landscape. This significance is especially pronounced in the context of MSMEs, as these enterprises often have distinct financial requirements that do not align with the traditional banking model. NBFCs fill this gap by offering customized financial products and services.

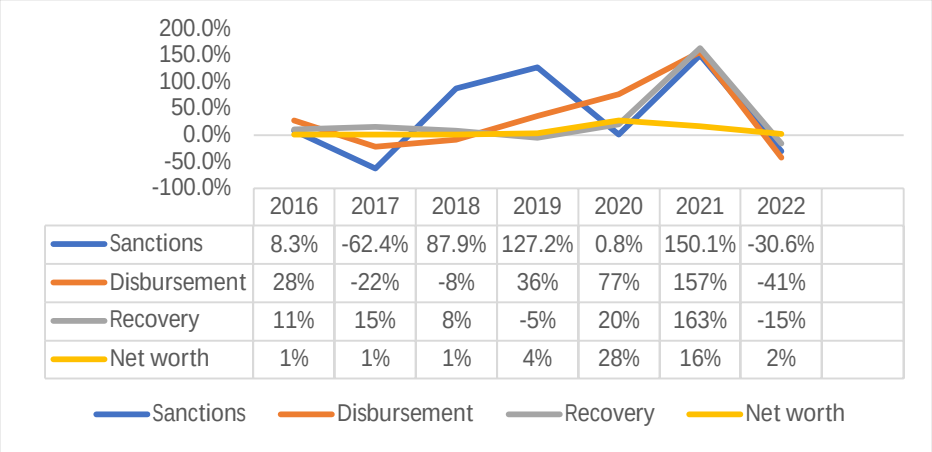
One of the standout features of NBFCs is their agility. MSMEs demand swift responses to their financial needs, and NBFCs are known for their speed in processing loan applications. Unlike traditional banks, which often involve lengthy approval processes, NBFCs can expedite access to funds. This agility allows small businesses to capitalise on growth opportunities or address pressing financial challenges promptly. Another notable advantage is their flexibility regarding collateral. Many SMEs and MSMEs struggle to provide substantial collateral, which is a common requirement in traditional bank loans.

[13] State-wise CD Ratio, State Level Bankers Committee in India

NBFCs often offer collateral-free or less collateral-intensive loans, making it easier for small businesses to secure financing based on their creditworthiness and business viability.

a. Kerala Finance Corporation (KFC)

KFC is a strategically important financial institution in Kerala, contributing towards economic, industrial, and social development of the state, by extending financial assistance to micro, small and medium enterprises in the manufacturing and service sectors. Various provisions of the SFCs Act enjoin on the KFC to undertake the stupendous task of industrial development by providing long-term credit to the MSME segment. The data on KFC's financial performance reveals positive trends in sanctions, disbursements, recovery, and net worth underscoring the corporation's growth and its dynamic operations[14][15][16].



	2016	2017	2018	2019	2020	2021	2022
Sanctions	8.3%	-62.4%	87.9%	127.2%	0.8%	150.1%	-30.6%
Disbursement	28%	-22%	-8%	36%	77%	157%	-41%
Recovery	11%	15%	8%	-5%	20%	163%	-15%
Net worth	1%	1%	1%	4%	28%	16%	2%

Figure 10 Trends in Financial Performance Parameters of KFC

The Corporation is one of the best performing State Financial Corporations in the country, particularly in terms of profitability, and notably in its management of Gross and Net NPA. A comparison with data from Andhra Pradesh Financial Corporation reveals that, while the state has achieved significantly higher net profits compared to KFC, KFC that demonstrated superior control over its Gross and Net NPA levels. This suggests that KFC has implemented effective risk management and asset quality control.

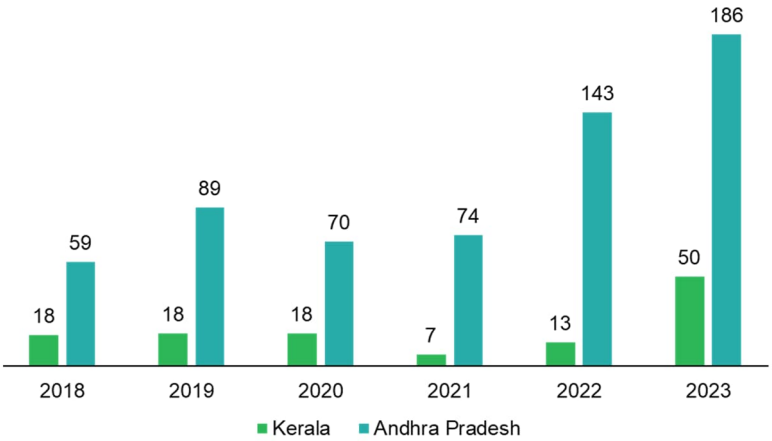


Figure 11 Net Profit across Years

[14] AnnualReport-2021-22.pdf (kfc.org)
[15] Financial Statements FY 2022-23.pdf (kfc.org)
[1616] Annual Report 20-21.indd (kfc.org)

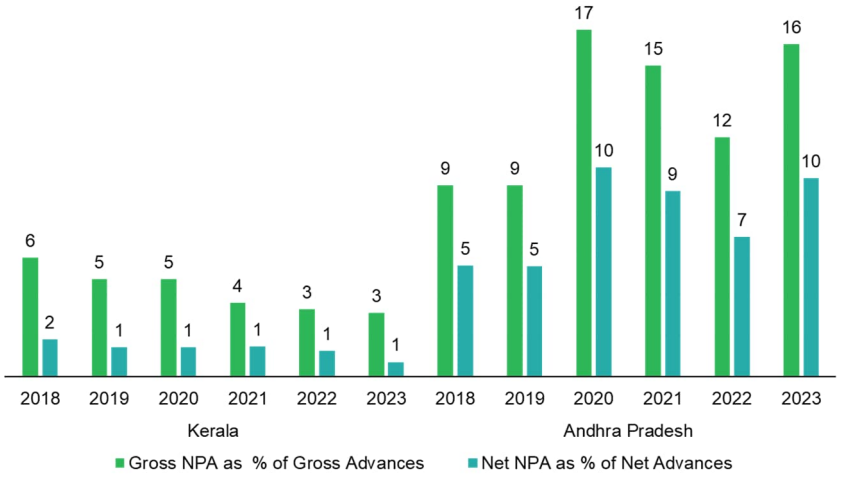


Figure 12 Trends in NPA Levels

b. Kerala State Financial Enterprises Limited (KFSE)

KSFE plays an important role in providing essential financial support to MSMEs and nurturing their growth. Through its tailored financial products, accessibility, collateral-free loans, financial literacy initiatives, and technology integration, KSFE empowers MSMEs to thrive in a competitive business environment.

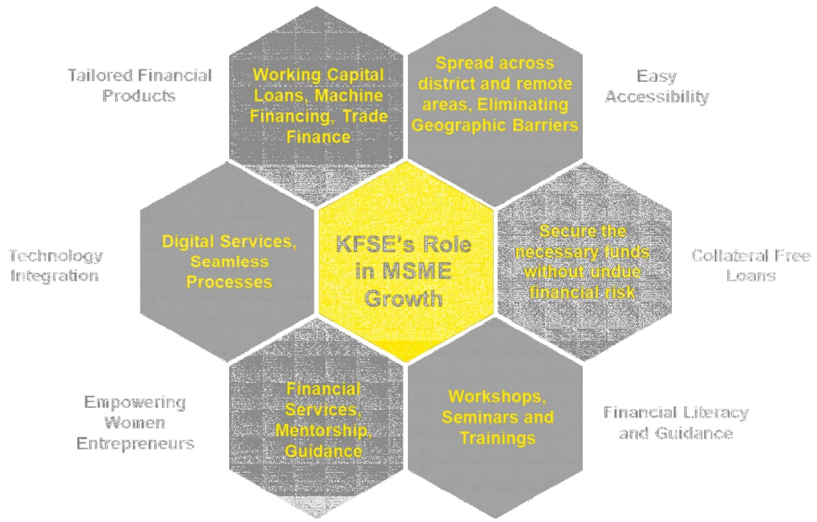


Figure 13: Functions of KSFEL

1.4.4.2 Govt Programmes

The government, being the prime mover of the economy, has the onus of complementing the steps of Financing Institutions and pitching in to fill in the gaps wherever it deems necessary. Government has been supporting entrepreneurs throughout the state to take benefits under various Central as well as State Government schemes.

1.4.4.2.1 Pradhan Mantri Employment Generation Programme (PMEGP):

The scheme aims to generate employment opportunities in rural as well as urban areas of the country through setting up of new self-employment ventures/projects/micro enterprises. The scheme also focuses to increase the wage-earning capacity of artisans and contribute to increase in the growth rate of rural and urban employment.

The Scheme is implemented by Khadi and Village Industries Commission (KVIC), as the nodal agency at the National level. At the State level, the Scheme is implemented through State KVIC Directorates, State Khadi and Village Industries Boards (KVIBs) and District Industries Centres (DICs) and banks.

The maximum cost of the project/ unit admissible under manufacturing sector is Rs.50 lakh and under business/service sector is Rs.20 Lakh.

Under this scheme, the beneficiary is only required to invest 5-10% of the project cost, while the government provides a subsidy of 15-35 % of the project cost based on various criteria. The remaining funds are provided to the entrepreneur as term loans by the participating banks.

PMEGP provides funds annually to the nodal agency, KVIC for this scheme. KVIC thereafter decides the state level targets which are notified to the SLBCs in each state. The borrowers can either apply on KVIC PMEGP Portal or directly seek bank for loans under PMEGP scheme.

Table 5 Achievement of State in implementing the PMEGP scheme in Kerala

		(Projects & Employment: in Numbers, Margin Money: Rs. in Lakh)				
	TARGET			ACHIEVEMENT		
Period	Units	Margin Money Disbursed	Estimated Employment Generated	Units	Margin Money Disbursed	Estimated Employment Generated
2020-21	1698	5094.4	13584	2389	5225.88	19112
2021-22	2165	6860.54	17320	2789	6859.29	22312
2022-23	2424	7207.21	19392	3129	7329	25032

The performance of the State in PMEGP for period from 2020-21 to 2022-23 shows that the State has been able to achieve more than the intended targets in all three parameters of Units assisted, Margin Money distributed, and estimated employment generated.

1.4.4.2.2 Credit Guarantee Funds Trust for Micro and Small Enterprises (CGTMSE)

CGTMSE is a trust established by the Government of India, under the Ministry of Micro, Small and Medium Enterprises (MoMSME) and Small Industries Development Bank of India (SIDBI), to provides Guarantees for extending collateral free lending to Micro and Small Enterprises through banks and financial institutions (including NBFCs). The Scheme covers collateral free credit facility (term loan and/ or working capital) extended by eligible lending institutions to new and existing micro and small enterprises up to Rs. 200 lakh per borrowing unit. The guarantee cover provided under this scheme varies from 75 % to 85 % depending upon the quantum of loan and type of beneficiary. A nominal amount towards an Annual Guarantee Fee for the credit facility sanctioned is charged on the outstanding loan amount. In FY 2022-23, Kerala ranks 16th among States and UTs in terms of the number of cases received and 18th in terms of the amount of Credit Guarantee extended.

Table 6 Performance of Kerala in CGTMSE scheme (from 2018-19 to 2022-23)[17]

FY	Number of Cases	Credit Guarantee Extended Amount (in Rs. Cr.)
2018-19	17189	851.75
2019-20	33629	1234.56
2020-21	26310	905.00
2021-22	18848	1091.62
2022-23	11328	875.88

1.4.4.3 Alternate Financing Mechanisms

MSMEs, by definition, have less resilience given their weak balance sheets and revenue uncertainties. This is particularly true in sectors where differentiation is low and there is no intellectual property or brand salience. The risk in lending to MSMEs is therefore skewed, particularly with respect to more toward micro enterprises This inherent risk hinders MSMEs access to adequate, affordable, and timely access to credit impacting cash flow management. This is further exacerbated due to factors such as delayed payments by buyers, including Government entities and other players in the supply chain.

To address this issue, the Trade Receivables and Discounting System (TReDS) platform has been adopted by the state of Kerala. Trade Receivables Discounting System (TReDS) is an innovative online platform seeks to provide MSMEs with the means to convert their receivables into cash, thereby unlocking working capital. TReDS has been pivotal in addressing the credit constraints faced by small businesses across the country. However, the current state of onboarding on the TReDS portal in the state of Kerala needs active efforts.

TReDS is comprised of multiple platforms, each aimed at connecting buyers, sellers, and financiers. The major platforms operating in India include M1Exchange, RXIL, and InvoiceMart. These platforms play a crucial role in bridging the gap between MSMEs and access to working capital.

a. **RXIL (Receivables Exchange of India Ltd):** RXIL was set up by the Small Industries Development Bank of India (SIDBI) & National Stock Exchange of India Limited (NSE) in December 2014

b. **M1Xchange**: M1Xchange started in 2017 and operated by Mynd Solutions Pvt Limited. M1xchange is the platform which largest value of invoices discounted with a sizeable volume of invoices discounted.

c. **InvoiceMart**: It is promoted by TReDS Ltd. (a joint venture between Axis Bank and mjunction services). Invoicemart has the largest number of invoices discounted but it is evident that the value of invoices discounted is significantly low.

[17] https://dashboard.msme.gov.in/cgtmse.aspx

Table 7 Status of TReDS in Kerala

Platform	No. of MSME Sellers	No. of PSUs	No. of Corporate Buyers	Number of Invoices Discounted	Value of Invoices Discounted (Cr)
RXIL	209	4 (Cochin Shipyard, Fertilizer and Chemical Travancore Ltd, HLL Life Care Ltd, HLL Biotech Ltd)	16	1631	202.39
Invoicemart	275	1	21	15992	345
M1xchange	295	4	31	10788	1433

1.4.4.3.1 MSME SAMADHAAN

The Micro, Small, and Medium Enterprise Development (MSMED) act 2006 provides measures to deal with delayed payments to micro and small businesses (MSEs). If the buyer fails to pay the supplier within 45 days of acceptance of the goods/services, the buyer is liable to pay compound interest to the supplier up to three times.

The state governments form a Micro and Small Enterprise Facilitation Council (MSEFC) to resolve payment issues, and any MSE unit with a valid Udyog Aadhaar Number can file a case with the MSEFC.

The Ministry of MSME launched an initiative called Samadhaan Portal that allows MSE units to file online complaints against buyers of products or services. The portal provides information on pending payments, and entrepreneurs can use it to check the status of their online applications for delayed payments. PSE, CEOs, and Secretaries of relevant Ministries are responsible for monitoring delayed payments under their authority and making necessary directions to resolve the issues. The state of Kerala ranks 10th among all the states with respect to percentage of cases resolved and registered in MSEFCs. The state uploads all relevant cases directly on the Samadhaan Portal and therefore all entries are digitized. To expedite resolution of grievances brought forth and pending with MSEFCs, three MSME Regional Facilitation Councils have been set up. The headquarters of the northern, central, and southern zones will be DICs in Kozhikode, Ernakulam, and Thiruvananthapuram.

1.4.5 Market Dynamics

1.4.5.1 Sectoral Perspective

Kerala boasts a wide range of industries from traditional crafts and handlooms to modern IT and biotechnology. The state is known for its handicrafts, cottage industries, handloom textiles, and coir products, which not only showcase the skilled craftsmanship of the local artisans but also provide employment opportunities for the marginalized communities. Additionally, Kerala excels in sectors such as agro-based and food processing, rubber, tourism and hospitality, biotechnology, engineering goods, fisheries, and healthcare services like Ayurveda and herbal products. The Government of Kerala has introduced the Industrial Policy 2023 to foster entrepreneurship, enable infrastructure, be ready for the Industrial Revolution 4.0 and upgrade skillsets of youth for futuristic jobs. To facilitate emergence and scale up of enterprises across sectors suitable for the state, the Policy document has identified a list of 22 sunrise sectors as thrust areas. Hence, the SIP report looks at the sectors using the filter of traditional, mature and sunrise sectors.

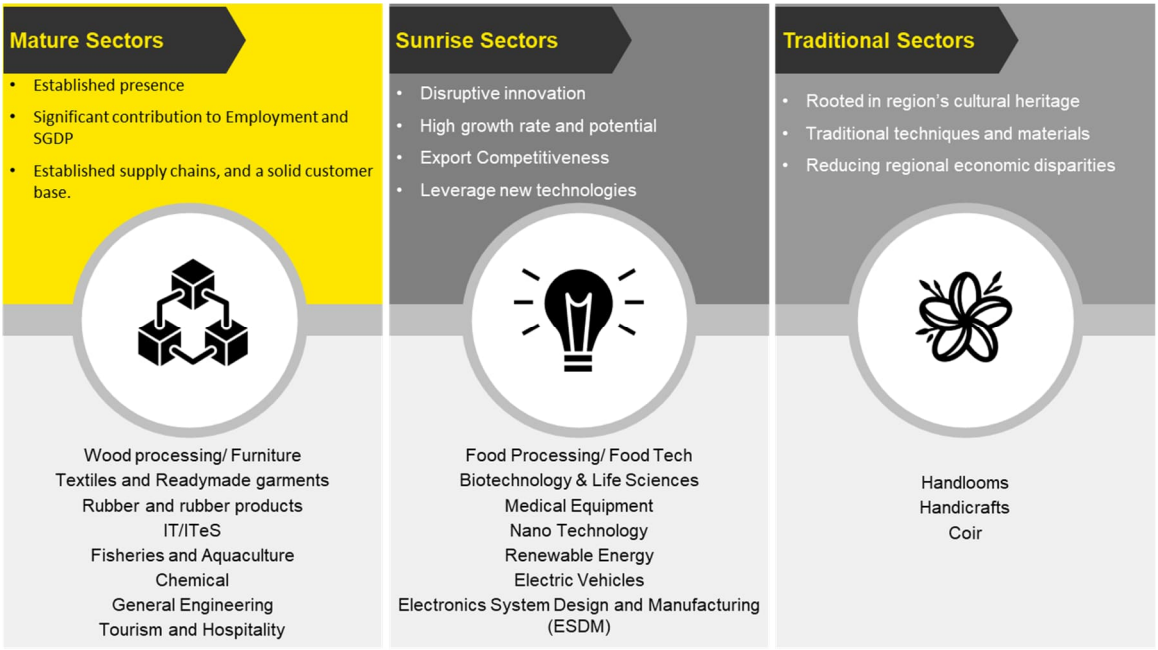


Figure 14: Sector Classification based on Stages of Industry Development

a. **Handicrafts and Cottage Industries**[18]:Kerala is known for its rich heritage of handicrafts. There are 32 different crafts in Kerala of which ivory carving, wood and horn carving, bell metal casting hand embroidery, coconut shell carving are important commercial items. The sector possesses economic importance given the low capital investment, high employment potential, high value addition, negligible import content and high potential for export earnings. In Kerala it is estimated that there are about 1.7 lakh handicrafts artisans actively engaged in the sector. Most of these artisans come from economically and socially disadvantaged backgrounds.

Cluster	Kalpetta Bamboo Cluster
Products	▸ Bell Metal Crafts ▸ Wood Crafts ▸ Coir Products ▸ Lacquer ware ▸ Murals ▸ Coconut Shell Products
MSME Presence in Value Chain	▸ Bamboo crafts unit ▸ Wood carving unit ▸ Coconut shell carving unit
Stakeholders	▸ Kerala State Handicrafts Apex Co-operative Society (SURABHI) ▸ Handicrafts Development Corporation of Kerala (HDCK) ▸ Kerala Artisans Development Corporation (KADCO)

Figure 15 Snapshot of Handicrafts Sector

[18] https://industry.kerala.gov.in/index.php/handicraft

b. Handloom Sector [19]: One of the major traditional industrial sectors of Kerala, the sector ranks second only to the coir sector among Kerala's traditional industries. Kerala's textile industry includes traditional handlooms, power looms, and spinning. It is primarily concentrated in the districts of Thiruvananthapuram and Kannur, and parts of Kozhikode, Palakkad, Thrissur, Ernakulam, Kollam, and Kasaragod.

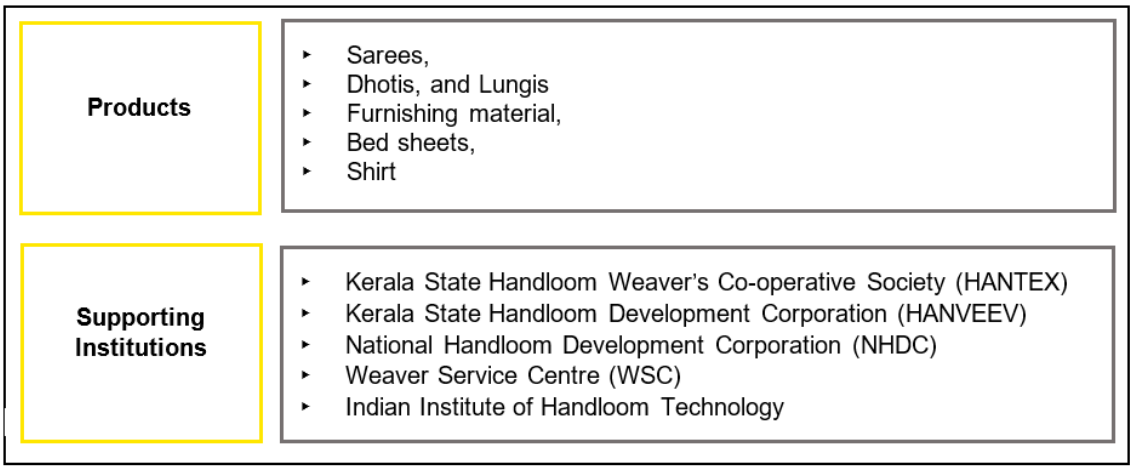


Figure 16 Snapshot of Handloom Sector

c. Coir and Coir Products[20]**:** Kerala is one of the largest producers of coir in India with districts of Alappuzha, Kollam, and Thrissur as the major coir manufacturing hubs. The industry contributes to larger rural employment and sustainability, utilizing the abundant coconut husks available in the state. Nearly 80% of the workforce engaged in the sector are women. There were 1002 Coir Co-operative Societies as on 31.03.2017 in Kerala under different operational status[21] out of which only 52% were operational, 11% were dormant and 21% were under liquidation.

[19] The Directorate of Handlooms and Textiles, Kerala
[20] https://coir.kerala.gov.in/en/about-us/
[21] https://coir.kerala.gov.in/en/2019/01/04/statistics/

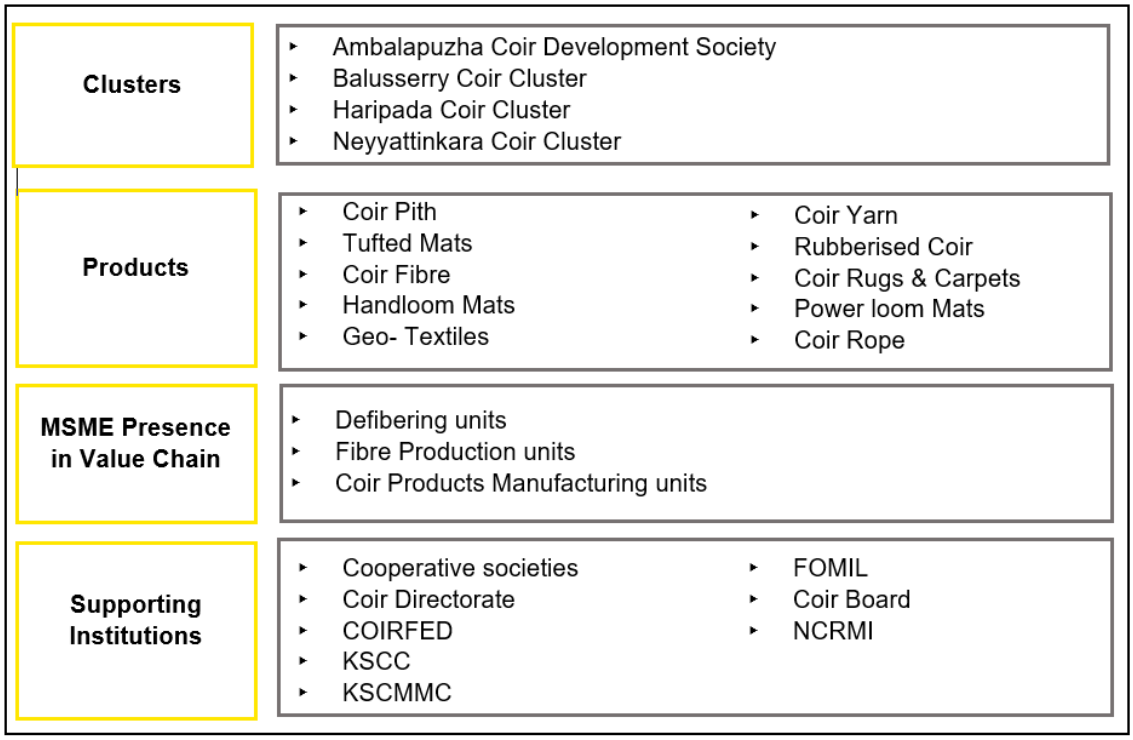


Figure 17 Snapshot of Coir Sector

d. **Textile Sector:** The sector in Kerala includes areas like spinning, and weaving. There are 47 power loom cooperative societies and 2032 looms in this sector in the state. Also, there are around 800 looms working in private sector. Additionally, there are 8 spinning mills working in the cooperative sector under the Kerala State Cooperative Textile Federation Limited (TEXFED). There are 9 spinning mills in public sector undertaking category which includes 7 Spinning Mills working under the Kerala State Textile Corporation (KSTC) along with Sitharam Textiles Ltd., Thrissur, and Trivandrum Spinning Mills Ltd., Balaramapuram. The state also has a thriving textile and garment industry, with clusters in areas like Kannur, Kozhikode, and Thrissur. The industry combines traditional craftsmanship with modern designs, attracting both domestic and international markets.

Figure 18 Snapshot of Textile Sector

e. **Rubber and Rubber Products[22]:** Kerala is a prominent rubber-producing state, and the rubber industry plays a vital role in its economy. Kerala produces 95% of the total supply of rubber wood in India. Rubber plantations are widespread, with major districts including Kottayam and Ernakulam. The industry encompasses rubber processing units, manufacturing of rubber sheets, latex products, and rubber-based industrial components. There are close to 900 Rubber products manufacturing units in Kerala.

Cluster	Rubber Cluster, Changanassery
Products	▸ Floor coverings and mats ▸ Footwear ▸ Industrial rubber parts ▸ Automotive rubber parts ▸ Rubber bands
MSME Presence in Value Chain	▸ Rubber processing units ▸ Rubber-based manufacturing units
Stakeholder Ecosystem	▸ Rubber Board ▸ Rubber Research Institute ▸ Common Facility Service Centres (Manjeri, Changanassery) ▸ Kerala Rubber Limited

Figure 19 Snapshot of Rubber Sector

f. **Wood and Wood Products:** Kerala's forests provide a resource base for the wood industry, which includes manufacturing furniture, wood carving, plywood, and other wood-based products. The state has industrial clusters in Malappuram, Kozhikode, and Thrissur. The sector produces high-quality furniture, wooden handicrafts, flooring, and architectural components. Kerala's wood products showcase traditional craftsmanship and contemporary designs.

[22] Kerala State Budget 2023-24, Invest Kerala

Clusters	▸ Plywood Cluster, Perumbavoor ▸ Kerala Furniture Cluster, Perumbavoor ▸ Wood Processing Cluster, Malappuram ▸ Wood Cluster, Kollam ▸ Wood Furniture Cluster, Kannur
Products	▸ Furniture ▸ Plywood ▸ Handicrafts ▸ Construction Materials
MSME Presence in Value Chain	▸ Furniture manufacturing ▸ Plywood production ▸ Wood packaging ▸ Sawmills
Supporting Institutions	▸ Forest Department ▸ RUBCO ▸ Forest Industries (Travancore) Ltd. ▸ Forest Research Institute

Figure 20 Snapshot of Wood and Wood Products Sector

g. **Printing and Packaging:** Kerala's printing industry offers services like offset printing, digital printing, flexography, and screen printing. The packaging sector produces materials like cartons, labels, flexible packaging, and corrugated boxes. Kerala's printing and packaging industry supports diverse sectors, including FMCG, pharmaceuticals, publishing, and advertising.

Clusters	▸ Printing Cluster, Kannur
Products aligned with Make in Kerala	▸ Articles of Paper and Paper Board ▸ Pulp, Paper, and Paper Board
MSME Presence in Value Chain	▸ DTP units ▸ Offset printers ▸ Paper mills ▸ Packaging units ▸ Paper Recycling Units
Supporting Institutions	▸ Printing Department ▸ Kerala Forest Development Corporation ▸ Central pulp and paper research institute

Figure 21 Snapshot of Printing and Packaging Sector

h. **Plastic and Plastic Products:** The plastic industry in Kerala encompasses the manufacturing of plastic products like pipes, containers, packaging materials, and household goods. Industrial areas like Kochi, Thrissur, and Kozhikode have plastic manufacturing units. The sector adheres to quality standards and focuses on product innovation and customization. Kerala's plastic products cater to diverse applications, including construction, agriculture, packaging, and consumer goods. The industry promotes responsible plastic usage, recycling initiatives, and eco-friendly alternatives, contributing to sustainable practices in the state.

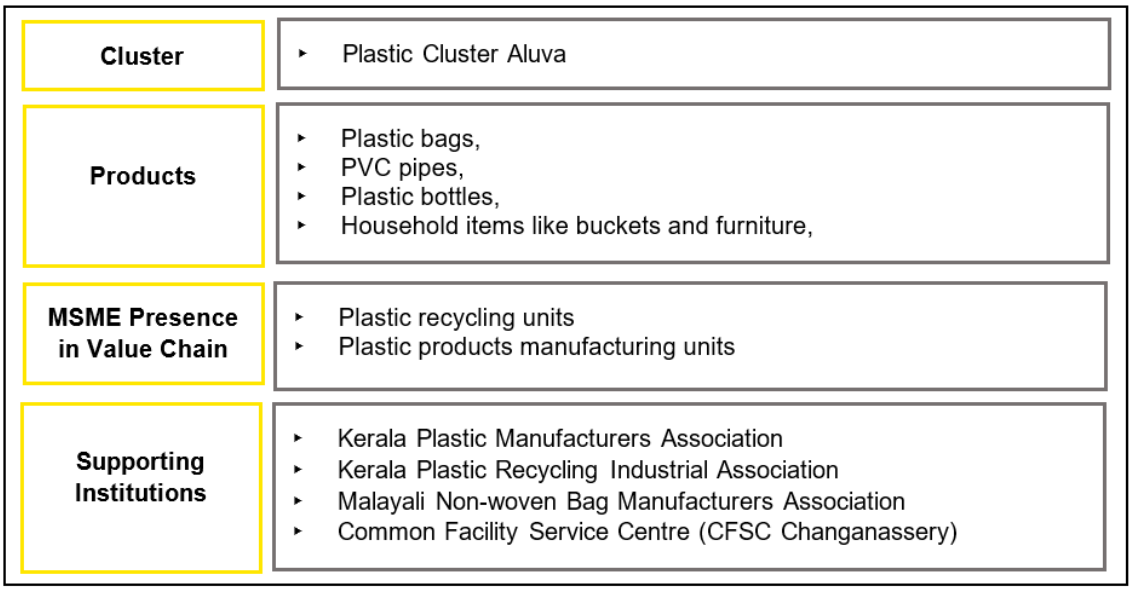


Figure 22 Snapshot of Plastic Sector

i. **Pharmaceuticals and Medical Devices Sector:** Kerala has a presence in the chemicals and pharmaceuticals industry, with manufacturing units for chemicals, pharmaceuticals, and formulations. Industrial areas like Kochi, Thrissur, and Thiruvananthapuram house companies producing chemicals, pharmaceutical intermediates, and finished dosage forms. Additionally, the medical devices sector in the state revolves around the anchor units like Terumopenpal, HLL Lifecare, Agappe etc, with the MSMEs supplying to these large units. These units provide the raw material and knowledge on the technology to these small units and the units provide them with finished products.

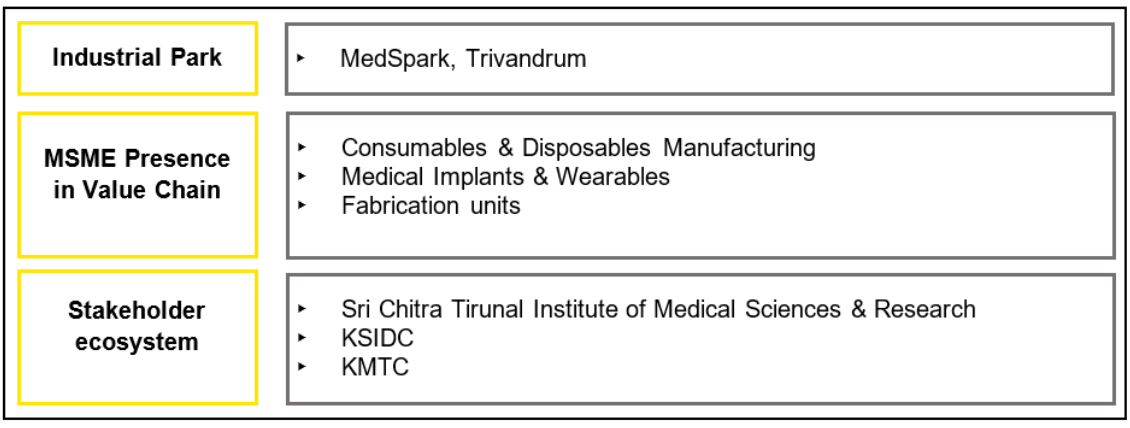


Figure 23 Snapshot of Pharmaceutical Sector

j. **Engineering Goods and Components:** Kerala has a growing engineering industry, including the manufacturing of machinery, electrical equipment, and precision components. Industrial areas like Kochi and Thrissur have a concentration of engineering units. The sector caters to

diverse industries such as automotive, electronics, construction, and renewable energy. Kerala's engineering industry emphasizes quality and precision, and the state's skilled workforce contributes to its growth. The sector plays a vital role in supporting infrastructure development and meeting the demand for engineering goods in domestic and international markets.

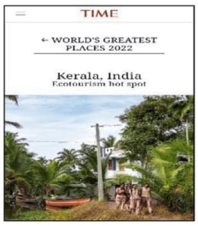
Cluster	▸ General Engineering Cluster, Malappuram
Products Aligned with Make in Kerala	▸ Ovens, Furnaces & Furnace Burners ▸ Motor Vehicles ▸ Other General-Purpose Machinery, Domestic Fans ▸ Coach Works, Trailers, Semi-Trailers, Auto Parts ▸ Electric Lighting Equipment ▸ Basic Iron & Steel
MSME Presence in Value Chain	▸ Fabrication units ▸ Metal works, bending & lathe works ▸ Precision hardware manufacturing
Supporting Institutions	▸ SPSUs, ISRO, Brahmos ▸ Kerala State Council for Science, Technology & Environment

Figure 24 Snapshot of General Engineering Sector

k. **Tourism and Hospitality Services:** Kerala is a popular tourist destination known for its backwaters, beaches, hill stations, and Ayurvedic retreats. The tourism sector provides significant opportunities for MSMEs in areas like hospitality, tour operators, and souvenir shops. Tourism cannot thrive without concurrent development in areas such as health, sanitation, urban and rural planning, transportation, connectivity, local self-government, and others. Therefore, the Tourism Policy 2017 has sought to develop tourism projects of international standards in selected destinations through PPP mode, tackle issues of connectivity to Kerala from major parts of the domestic and international markets, address key issues of the tourism industry such as waste management, prepared an action plan for sustainable tourism development, and initiated a Kerala Tourism Entrepreneurship Fund (KTEF). The State has potential for growth in wellness and medical tourism.

Tourism & Hospitality

Kerala has consistently captivated individuals from the western world due to its inherent beauty, varied landscapes, and cultural heritage. Its ability to effortlessly draw visitors can be attributed to its unique blend of rural experiences, spiritual richness, and a solid foundation in Ayurveda, making it the most enticing state in the southern part of India.



MSME Presence in Value Chain	▸ Responsible Tourism Units ▸ Home stays ▸ Tour Operators ▸ Wellness Units
Supporting Institutions	▸ Tourism Department ▸ Kerala Tourism Development Corporation ▸ Kerala Tourism Infrastructure Limited ▸ Kerala Institute of Tourism and Travel ▸ District Tourism Promotion Councils

Awards and Achievements

The sector has been able to achieve commendable success over time and confronts limited challenges across different RAMP pillars.

- The Water Street Project, executed by the RT Mission for Kerala Tourism in Maravanthuruth, Kottayam District, earned the prestigious 2022 World Travel Mart (WTM) award for its remarkable achievements in water conservation
- Time Magazine mentions the state in its list of 50 must-visit global destinations, highlighting the success of the Caravan Tourism and Caravan Parks initiative.
- The Responsible Tourism Mission in Kerala secured four Gold awards for its commitment to sustainable tourism practices in categories like reducing plastic waste, water conservation (Water Street Project), enhancing diversity in tourism, and post-COVID destination recovery.

l. **Ayurveda Sector:** The Global Ayurveda Village (GAV) project was conceived, based on and interconnecting the enormous potential in Kerala's industries and health care service sectors. The goal is to benchmark the project with Global Centres of Traditional Medicine and develop it as an Integrated Centre of Excellence in Ayurveda to overcome the challenges that this system of medicine faces on its path to Global Recognition. The project's goal is to create an enabling infrastructure that will address the current gaps in Ayurveda's growth path and expand opportunities through value-added services and an integrated approach with all other medicinal systems.

Cluster	Thrissur
Products	▸ Powders ▸ Tablets ▸ Asavas & Arishtas ▸ Proprietary Medicines
MSME Presence in Value Chain	▸ Raw Material Trading Units ▸ Drug Manufacturing Units ▸ Ayurveda Wellness centres
Stakeholder institutions	▸ Oushadhi ▸ Directorate of Indian Medicine ▸ AYUSH Department ▸ AMMOI ▸ Ayurveda Hospitals

Figure 25 Snapshot of Ayurveda Sector

m. **Food Processing Sector:** Kerala's food processing industry focuses on products such as spices, processed fruits and vegetables, coconut-based products, and traditional snacks like banana chips and jackfruit products. While districts like Wayanad and Idukki are known for their tea processing units, Kozhikode is famous for its banana chips. Though small, Kerala is a very fertile land with a diverse range of crops providing numerous opportunities for value addition. Kerala has always been a ‘Leader State’ in food processing, making major contributions to food exports from the country ever since the time of independence. It is home to 75% of India’s EU Certified Sea Food Units, 5 state-of-the-art Food Processing Parks including 2 Mega Food Parks and a new Spices Park coming up in Idukki.

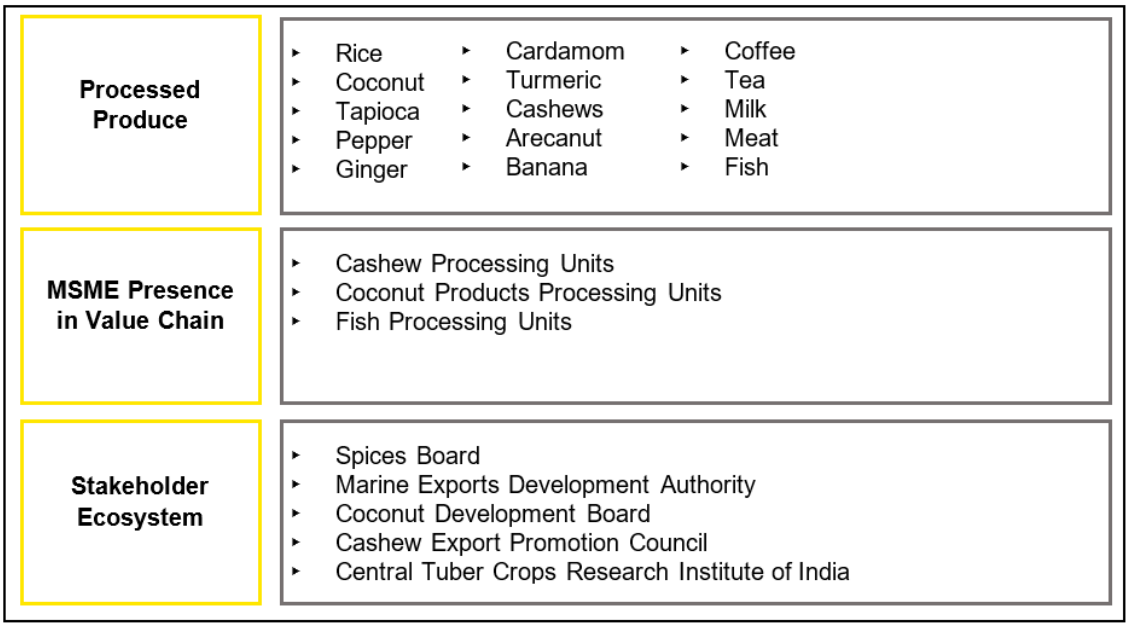


Figure 26 Snapshot of Food Processing Sector

n. **Electrical and Electronics:** Kerala has a developing electrical and electronics industry, particularly in the production of electrical equipment, electronics components, and consumer electronics. The state has industrial areas like Kochi, Kozhikode, and Thrissur where manufacturers produce a range of electrical and electronic products, including cables, switches, motors, control panels, and consumer appliances. Kerala's electrical and electronics industry follows quality standards and keeps pace with technological advancements. The sector caters to domestic demand and contributes to the growth of renewable energy, automation, and smart technologies.

o. **Biotechnology and Bioinformatics:** Kerala has made significant strides in the biotechnology sector, with specialized biotechnology parks and research institutions. Thiruvananthapuram's Biotechnology Park, Kochi's Life Science Park, and Kozhikode's Cyberpark Bio-Technology Cluster facilitate research, development, and commercialization of biotechnology products and services. The sector focuses on areas such as healthcare, agriculture, environment, and pharmaceuticals. Kerala's biotechnology industry collaborates with academic institutions and promotes entrepreneurship, fostering a culture of innovation in the state.

p. **Aerospace and Defence Sector**: The aerospace and defence sector in Kerala is in its nascent stages of growth but shows significant promise. With research institutions like the Vikram Sarabhai Space Centre (VSSC) and a skilled workforce from renowned educational institutions, Kerala is gradually positioning itself as an emerging hub for aerospace and defence activities. The state is also planning to come up with two aerospace clusters in Trivandrum location. The presence of start-up’s and MSMEs in this sector is fostering innovation and technology development. However, challenges such as limited funding, competition from other aerospace hubs in India, and the need for further infrastructure development remain.

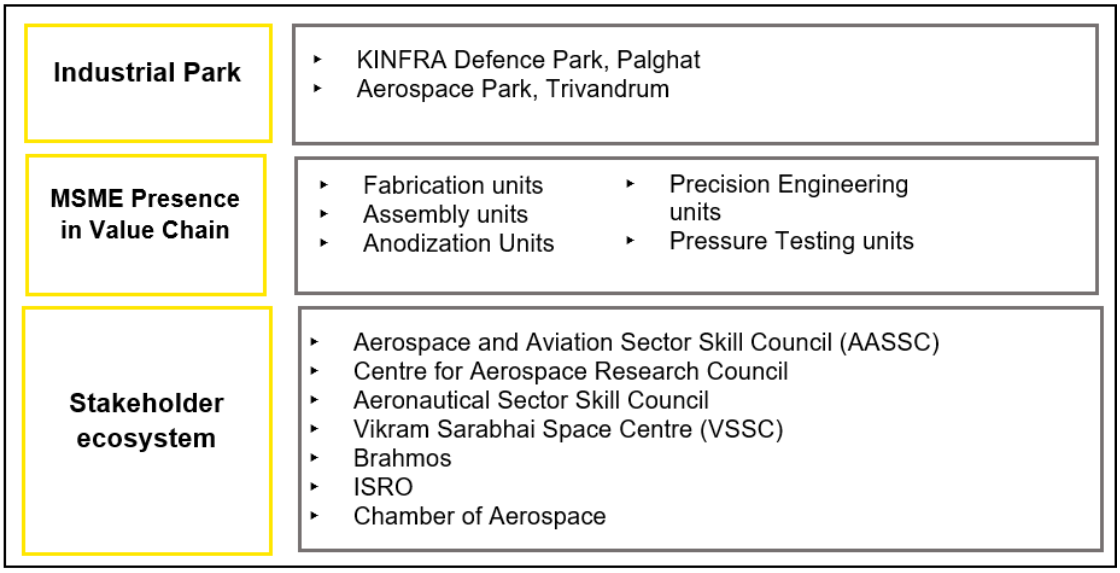


Figure 27 Snapshot of Aerospace and Defence Sector

1.4.5.2 Cluster Development

Cluster development and market dynamics are interrelated concepts that play a vital role in shaping the economic landscape of regions and industries. Clusters often exhibit higher resilience due to the nature of enterprises within the cluster, and when market dynamics change, these enterprises can collectively adapt more effectively. Furthermore, cluster development can drive innovation and respond to changes in market dynamics by aggregating complementary resource, knowledge and expertise. The Governments have taken various steps to facilitate and encourage development of clusters within the state.

a. SFURTI Scheme

The SFURTI scheme stands for the Scheme of Fund for Regeneration of Traditional Industries, which was launched in 2005 by MoMSME. Its primary objective is to promote the development of industrial clusters in India that are traditionally based.

The scheme aims to provide essential amenities and benefits to these clusters of industries spread across the country, so that they become more competitive in the industry and increase their revenue and profits. The goal is to improve the overall economic development of the traditional industries in India.

Table 8 Approved Clusters under SFURTI Scheme in Kerala

Cluster Name	District	Sector	Total Artisans	SFURTI Assistance (in lakhs)
Balusserry Coir Cluster	Kozhikode	Coir	500	109.02
Haripada Coir Cluster	Thrissur	Coir	3000	284.03
Foot & Floor-mat Cluster	Thiruvananthapuram	Handicraft	500	75.49
Guruvayoor Handicrafts Cluster*	Thrissur	Handicraft	300	206.16
Kannur Beekeeping Cluster	Kannur	Agro	400	229.67

Kasaragod Beekeeping Cluster	Kasaragod	Agro	579	177.3
Nevyyattinkara Coir Cluster	Thiruvananthapuram	Coir	2000	144.08
The Kerala cluster for flavoured coconut milk and virgin coconut oil	Malappuram	Agro	750	245.89
Ambalapuzha Coir Development Society	Alapuzha	Coir	368	159.48
Mallapally Beekeeping Cluster*	Pathanamthitta	Honey	538	308.43

*Under Implementation Clusters

b. MSE CDP Scheme

The MSE-CDP scheme, which stands for Micro and Small Enterprises – Cluster Development Programme, supports sustainability and growth of MSEs by addressing common issues such as improvement of technology, skills, quality, market access, etc., through a cluster approach. The scheme aids with hard interventions, i.e., setting up of Common Facility Centre (CFCs) with maximum eligible project cost of Rs 15 cr with GoI contribution of 70% (90% for special category States and for clusters with more than 50% women/micro/village/ SC/ST units). Additionally, infrastructure development in the new/ existing industrial estates/areas in which the maximum eligible project cost is Rs 10 cr, with GoI contribution amounting to 60% of project cost (80% for special category States and for clusters with more than 50% women/micro/SC/ST units).

A total of 222 CFCs and 335 Infrastructure Development Projects have been approved across India. In Kerala 12 projects have been completed out of 16 approved CFCs and, 8 Infrastructure Development Projects have been completed out of 12 approved. The State has been utilising the scheme better in comparison to more industrialised States like Uttar Pradesh and Haryana. They have completed only 4 out of 13 and 3 out of 11 Approved CFC Projects under the scheme[23] respectively.

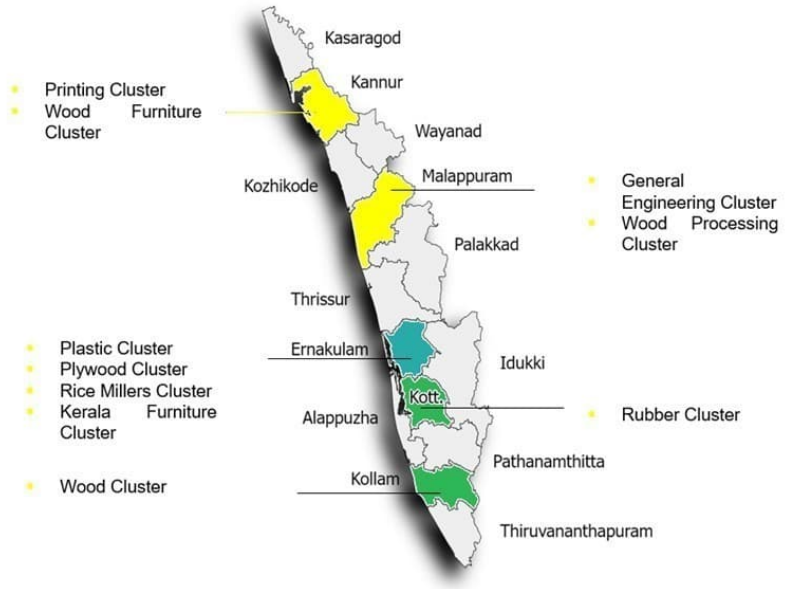


Figure 28 Clusters in Kerala under MSE-CDP

[23] https://dashboard.msme.gov.in/msme_cdp.aspx

1.4.5.3 Exports and Global Value Chain Linkages

Kerala has the potential to become a substantial contributor to India's overall export growth given its strategic location on transnational trade corridor, educated workforce, and favourable business environment. As of 2022-23, Kerala holds 16th among Indian states/UTs in terms of merchandise exports, constituting approximately 1% of India's total merchandise exports[24]. In 2022-23, the total value of merchandise exports from Kerala reached Rs 35,117.23 cr, reflecting an increase of approximately 2.8% compared to the previous year 2021-22.

To build on this export potential and in pursuit of a more ambitious export vision, the state has crafted an Export Promotion Policy 2023. The comprehensive document is poised to act as a strategic blueprint guiding efforts to promote exports while providing the necessary institutional, structural, financial and facilitation support to entities in the state focused on export-oriented activities. Within the policy document, various products and services have been identified as having substantial export potential. These include a wide spectrum of products and services, ranging from traditional with established export strengths to new focus areas that align with changing market dynamics.

Table 9 Thrust Areas Identified in Export Promotion Policy 2023

Sl	Thrust Sectors
1	Spices, Horticulture and Agriculture produce
2	Shrimp and other Marine products
3	Processed food products
4	Engineering goods
5	Petrochemical Products
6	Organic and Inorganic Chemicals
7	Textiles and Garments
8	Defence and Aerospace
9	Electronics and allied manufacturing
10	Ancillary engineering and technology
11	Ayurveda and Pharmaceuticals
12	Services including IT, Healthcare etc.

In 2022-23, Kerala's exports totalled Rs 35,117.23 Cr, constituting nearly 6% of State GDP (at constant prices)[25] making a modest 1% contribution to India's overall exports. However, the state holds significant untapped potential, commensurate with its 4% share in India's total GDP[26] . Kerala's export landscape is characterised by the prominence of a few key sectors and specific items. These major exporting sectors are marine products, petroleum products, spices, food & agriculture, plantation produce. In terms of individual items, the top 10 export items collectively contributed to nearly 30% of the state's overall merchandise exports within the same period. Notably, these exports are primarily focused on few low value-added products.

[24] State Wise Export Data 2021-22, Directorate General of Foreign Trade (DGFT)
[25] Economic Review 2022, Govt of Kerala
[26] Economic Review 2022, Govt of Kerala

Table 10 Top Ten Export Items from Kerala 2022-23

Sl	ITCHS Code	Item	Sector	Item-wise Contribution to Merchandise Exports from Kerala (%)
1	3061720	Vannamei Shrimp	Marine Products	5.03
2	27101229	Full Range Naphtha	Petroleum Products	4.36
3	3074320	Whole Squids Frozen	Marine Products	3.66
4	8013220	Cashew Kernel, Whole	Spices, Food & Agriculture, plantation Products	3.45
5	3074310	Cuttle Fish Frozen	Marine Products	2.93
6	27101953	Furnace Oil Grade MV2	Petroleum Products	2.56
7	61112000	Babies Garments etc. of Cotton	Textiles and Garments	2.12
8	27101941	Gas Oil	Petroleum Products	1.69
9	3061790	Other Shrimps and Prawns	Marine Products	1.52
10	33019022	Capsicum Oleoresines	Spices, Food & Agriculture, plantation Products	1.44

a. Marine Products

Marine products lead the list of food products exported from the state. These includes shrimps, squid, cuttle fish etc. According to a report of a Kerala State Planning Board Working Group Report, Fisheries is one of the leading sources of revenue for the state with approximately 21% of the processing units (112 numbers) and 14% of the processing capacity of India[6]. The marine products exported undergoes only minimal level of processing at present. Across the value chain there is potential scope for MSMEs, within the peeling/pre-processing as well as processing and packaging stage. In the best-case scenario, it could also be extended into value addition. Additionally, adoption of new technologies and increase in cold storage and processing facilities for value added products shall help open a new set of opportunities.

The existing PM Formalisation of Micro Food Processing Enterprises Scheme (PM FME Scheme), subsidy schemes under marine products export development authority (MPEDA) including Technology and Infrastructural Up-gradation Scheme for Marine Products (TIUSMP), Assistance for export handling units for live/chilled and dried marine products for providing financial, technical, and business support for upgradation of existing food processing enterprises reflects the potential role of MSMEs in the sector.

b. Spices, Food & Agriculture, Plantation Products

Kerala has been a major exporter of spices, accounts for about 75% of spices exports from India[27]. However, MSMEs have a limited role in the primary production of spices, food and agriculture, and plantation products. Rather there is significant potential for them to contribute to the value addition segments of these sectors.

[27] Investor Portal, Ministry of Food Processing Industries

The MSMEs have an emerging opportunity in value addition and export of processed spices, particularly in the form of spice oleoresins, presents an emerging opportunity for the MSMEs. Spice oleoresins are notable for their high potency of active components, allowing for their use in small quantities while ensuring production of standardized products with consistent taste and flavour. Notably, based on the growth rates observed between 2021-22 and 2022-23, it is evident that certain categories of spice oleoresins have experienced remarkable surges in exports, underscoring their potential as focal points for export growth. Similarly, an opportunity exists for engagement in the secondary processing of cashew kernels. Nevertheless, realizing this potential would require support aimed at improving technological capabilities, and ensuring a consistent supply of high-quality raw materials.

1.4.5.3.1 District-wise Contribution

When considering exports across Kerala's districts, Ernakulam emerges as the primary source responsible for a significant 56% of the state's total export value. This dominance reflects both the substantial production activities within the district and the presence of robust export-import infrastructure. Other districts lag considerably behind Ernakulam in export contributions. Ernakulam, Alappuzha, and Kollam districts alone account for ~79% of Kerala's merchandise exports. The bottom five districts namely Kasargod (0.1%), Pathanamthitta (0.26%), Idukki (1.08%), Kannur (1.37%), and Wayanad (1.47%) collectively contribute less than 4% to the overall state merchandise exports portfolio

Additionally, Kannur, Aroor-Ezhupunna-Kodanthuruthu and Kuthiathodu, Alappuzha and Kollam have been notified as Towns of Export Excellence (TEE) for Handlooms, Seafood products, Coir and Cashew products respectively.

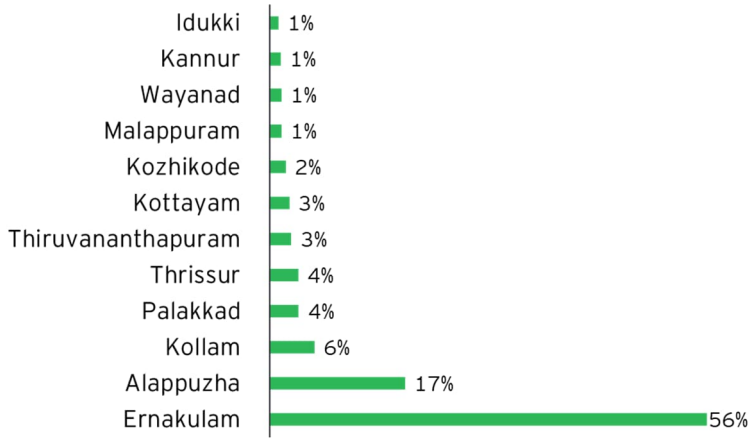


Figure 29 District-wise Exports Contribution 2022-23

1.4.5.3.2 Export Ecosystem

Export ecosystem refers to a network of factors, resources, and activities that facilitate and promote the export of goods and services from the region, it encompasses a range of elements that work together to support and enhance a state's capacity to engage in international trade. Some of the key components are explored below:

a. Quality Standards

Quality standards provide specifications, guidelines, or characteristics that can be used consistently to ensure that materials, products, services are fit for their purpose. An important requisite of international trade is compulsory quality control and inspection, and non-compliance can lead to rejection of consignment and ultimately loss to enterprises. For this, Government of India had set up the Export Inspection Council and notified commodities and their minimum standards for exports. The minimum standards are often based on international standards, and include standards such as BIS, FSSAI, AGMARK, ISO 9000 among others.

b. Infrastructure

EXIM infrastructure includes all the physical and logistical assets, facilities, and systems crucial for facilitating the export and import of goods. This essential framework includes ports, airports, transportation networks, container freight stations, and inland container depots, and logistics and warehousing facilities.

From an overview of logistics infrastructure, Kerala has 18 ports including major and minor ports and four cargo handling airports. In addition, Kerala has a total of 12 container freight stations (CFS) and 2 inland container depots[28]. The State warehousing corporation has 56 depots with nearly 100% utilization and has nearly 73000 MT of frozen storage capacity[29]. The state can utilise the support under the central government's Trade Infrastructure for Export Scheme for developing and strengthening the ICDs, CFSs, warehousing and cold storage facilities, and other essential export infrastructure in Kerala. These services would streamline the process of storage, transportation, and marketing for reducing losses and optimising the supply chain.

i. Ports

Ports hold a pivotal role in a state's industrial and commercial logistics, serving as the primary entry and exit points for international trade. Kerala has 18 ports including one major port at Kochi under the Central Government and other non-major ports under the Govt of Kerala. As of 2021-22 the Cochin port, Kerala's single major port, accounts for over 90% of cargo traffic at ports in Kerala[30] and handles 4.8% of the total cargo handled by India's 12 major ports[31]. At present, the non-major ports handle negligible cargo traffic in the state and largely focuses on domestic freight. The non-major ports could act as hubs for transportation of goods/products from hinterlands of the districts to the major ports in the state.

ii. Inland Container Depots (ICDs) and Container Freight Stations (CFS)

Container Freight Station (CFS) is an area, typically a warehouse near shipping ports or crucial railway hubs involved in the task of consolidation and de-consolidation of container load cargo. Likewise, Inland Container Depot (ICD) is a container storage facility situated in the hinterlands, away from major ports. CFSs and ICDs are also called dry ports as they handle all Custom formalities related to export and import of goods, and they act as hubs in the logistics chain. There is a total of 12 CFSs and 2 ICDs in the state of Kerala.

Table 11 Number of Container Freight Stations (CFS)/ Inland Container Depot (ICDs)

Sl	District	Number of CFSs	Number of ICDs
1	Ernakulam	11	
2	Alappuzha	1	
3	Thrissur		1
4	Kottayam		1

iii. Warehousing and Cold Storage Facilities

Storage is an important component of the overall logistic chain. As discussed in the preceding section, agro-based products such as spices, cashew, as well as marine products are some of the top export items from the state. Coupled with the thrust areas identified in the Draft Export

[28] Kerala State Logistic Action Plan 2021, KINFRA Govt of Kerala
[29] Working Group Report on Fish Processing Sector in Kerala – Constraints to Growth and Suggestions for Reform 2022, Govt of Kerala
[30] Working Group on Port and Light Houses and Shipping Report 2022, Govt of Kerala
[31] Working Group on Port and Light Houses and Shipping Report 2022, Govt of Kerala

Promotion Policy reflect the need for well-developed cold storage and warehousing facilities in the state.

As per the latest data, the total capacity of warehouses in Kerala stood at 9.12 lakh MT[32], of which 56 warehouses with a capacity of 2.6 lakh MT are managed by the Kerala State Warehousing Corporation (KSWC) across various districts[9,33]. The Central Warehousing Corporation (CWC) has capacity of 1.8 lakh MT across the state[34]. Unlike the warehousing facilities of the KSWC, the facilities provided by the CWC are majority concentrated in and around Ernakulam district.

Apart from warehousing, cold storage infrastructure is another important component in the logistics infrastructure. This is so especially given the nature of exports items from the state. It is critical for ensuring quality and maintaining shelf life of products. As per Agricultural & Processed Food Products Export Development Authority (APEDA), there are over 170 cold storage facilities in the state, and more than 95 percent of these facilities are utilized for marine products. Based on the number of cold storage facilities across districts it is seen that Ernakulam yet again ranks first in terms of infrastructural facilities. The disparity across districts is also noticeable, and some of the districts such as Wayanad, Pathanamthitta, Kasargod, and Malappuram currently do not have a cold storage facility.

Table 12: Distribution of Cold Storage Facilities across Districts

SI	Districts	Number of Cold Storage Facilities
1	Ernakulam	94
2	Alappuzha	45
3	Kollam	20
4	Trivandrum	5
5	Thrissur	4
6	Kozhikode	3
7	Palakkad	3
8	Idukki	1
9	Kannur	1
10	Kottayam	1

1.6 Technology

Kerala has been actively investing in technology and innovation. The state is home to several IT hubs, including Technopark in Thiruvananthapuram and Infopark in Kochi. These hubs have attracted IT companies and start-ups, contributing significantly to the state's economy.

a. Technology Clinics

Technology Clinics are two days programme by accommodating the entrepreneurs of the existing units. This clinic will be conducted by utilizing the faculties of reputed institutions and technocrats to equip the entrepreneurs to modernize/ upgrade the technology of existing units and to discuss their technical problems. The technology clinic will be in any one of the thrust sectors.

[32] Promoting Exports from Kerala 2020, EXIM Bank
[33] Annual Report 2018-19, Kerala State Warehousing Corporation
[34] Warehouse Locations on Map, Central Warehousing Corporation Website

b. Keltron Tool Room Cum Training Center (KTTC), Kuttippuram

KTTC has Fully equipped facility to offer training as well as to take up Production Works in Hi-tech machines such as CNC Lathes, High Precision and High-Speed Vertical Machining Centres, CNC Wire EDM, Jig Grinder, Lathe and Milling Machines; Precision Conventional and all-purpose Machines; Test and Metrology equipment including CNC 3D CMM; PCs and Software for CAD/CAM Design, Modelling, Programming, Analysis and Manufacturing. The Production/Metrology facility Capacity includes: 14 Different types of Production Equipment (05 CNC & 09 Conventional Machines) & 03 Metrology Equipment.

1.7 Adoption under CHAMPIONS Scheme

The CHAMPIONS stands here for Creation and Harmonious Application of Modern Processes for Increasing the Output and National Strength. It aims to assist Indian MSMEs march into the big league as National and Global CHAMPIONS by solving their grievances and encouraging, supporting, helping and hand holding them. Under CHAMPIONS scheme there are 5 different tools, namely Quality Estimator Tools, LEAN Manufacturing Scheme, ZEDs, Global Environment Facility (GEF-5) and MSME Innovate (Incubation, Design and IPR).

1.7.1 ZED Scheme

MSME Sustainable (ZED) Certification is an extensive drive to create awareness amongst MSMEs about Zero Defect Zero Effect (ZED) practices and motivate and incentivize them for ZED Certification while also encouraging them to become MSME Champions.[35]

The ZED certification envisages promotion of Zero Defect Zero Effect (ZEDs) practices amongst MSMEs to:

a. Encourage and enable MSMEs for manufacturing of quality products using latest technology and tools.
b. Develop an ecosystem for ZED manufacturing in MSMEs.
c. Enhancing competitiveness and enabling exports
d. Promote adoption of ZED practices

There are 3 levels of certification. The process of certification in ZED scheme is provided in following figure.

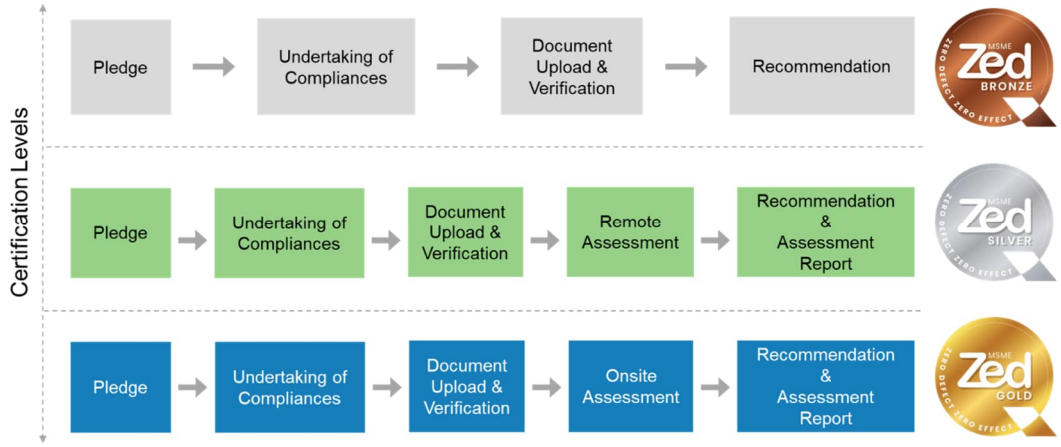


Figure 30 ZED Certification Process

The assessors are associated with an Assessment Agency (AA) that are empanelled with QCI (IA). They conduct assessment (or simply audit). They are not supposed to provide any service to the MSME when they are involved in audit activities. The assigning of audits to an AA is done by the IA; this may

[35] Guideline Cover.cdr (investindia.gov.in)

be based on the geographical location(s) of the AA (along with their branches) and relatively to cover the spread in terms of no. of audits other AAs are allocated.

There are 709 MSMEs who have obtained ZED certifications in Kerala[36]. The pace of MSMEs obtaining ZED certifications have picked up pace recently. The total ZED certifications in the State were a meagre 59 in May 2023. However, the total number has increased to 275 in September (as on 15 Sept 2023) and to 709 in October (as on 22 October 2023). This can be attributed to the push from the Ministry to drive the CHAMPION schemes, ZED in particular.

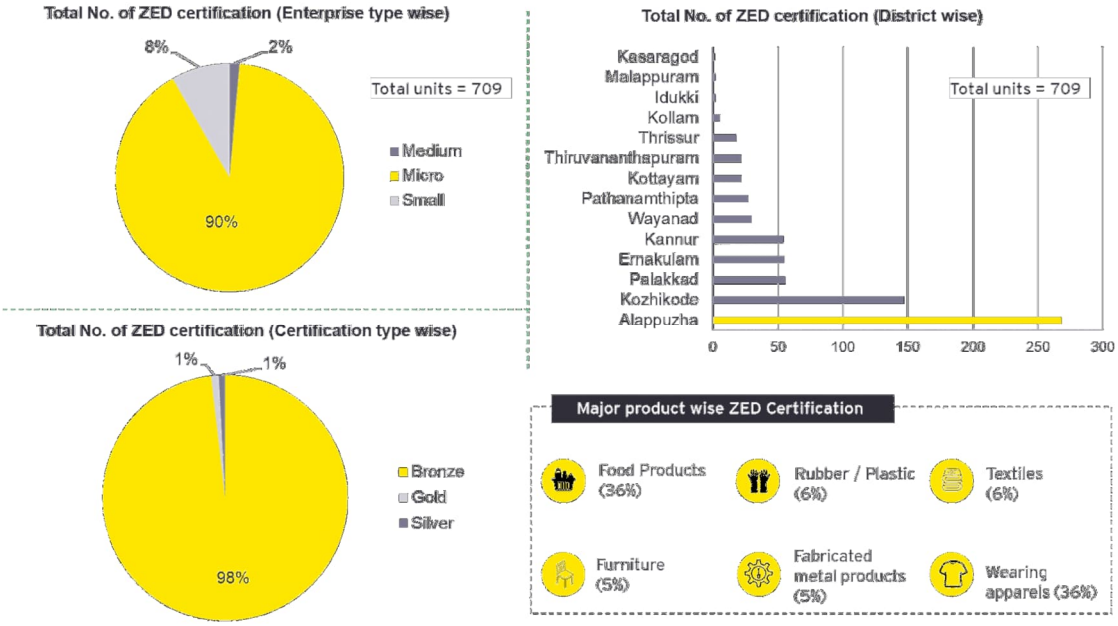


Figure 31 Analysis of ZED certifications in the State

Districts with higher number of Udyam Registrations (UR) like Thiruvananthapuram and Thrissur is lagging districts with least number of UR like Wayanad and Pathanamthitta. Food processing sector is leading in terms of number of certifications which is in line with its dominance in the UR.

1.7.2 LEAN Scheme

The LEAN Manufacturing scheme was started as a pilot phase in 2009 for 100 mini-clusters in 11th Five Year Plan. National Productivity Council (NPC) was selected as National Monitoring and Implementing Unit (NMIU) for facilitating implementation and monitoring of the Scheme. Intervention of Lean Techniques started in 89 Mini Clusters and successfully. Work completed in 59 Mini Clusters with an expenditure of Rs 16.17 Cr under the Pilot phase of LMCS.

The Scheme was up scaled in September 2013 considering the recommendations of the evaluation report conducted by Quality Council of India (QCI). The evaluation report on Implementation of pilot LMCS has recommended the continuation of the Scheme keeping in view benefits amounting to about 20% increase in productivity to the units.[37]

The Phase II of the scheme was started in 2019 after successful completion of pilot and up-scaled phase. The scheme was launched to make the MSMEs competitive with the use of LEAN Methodology under the changing global environment. The main aim was to make the MSMEs competitive and efficient to participate in the exports of the products in the globalized world.

[36] https://zed.msme.gov.in/zed-certified-msmes
[37] Lean Manufacturing | Ministry of Micro, Small & Medium Enterprises (msme.gov.in)

The Objectives of the project were –

a. Reducing Waste
b. Increasing productivity
c. Introducing innovative practices for improving overall competitiveness
d. Inculcating good management systems
e. Imbibing a culture of continuous improvement

The Scheme is aimed to help small and medium-sized businesses in selected clusters to reduce their manufacturing costs with the assistance of Lean Manufacturing Consultants (LMC), who will be financially supported by the government. The LMC will work with the MSMEs to implement various Lean Manufacturing techniques, such as optimizing personnel management, improving space utilization, managing inventory scientifically, streamlining processes, reducing engineering time, and so on, to reduce waste in manufacturing. The Scheme also encourages the promotion of Zero Defect Zero Effect manufacturing.

MSME Competitive Lean Scheme (MCLS) was launched by the Ministry of Micro, Small and Medium Enterprises (MSME) in March 2023[38] to enhance the competitiveness of Micro, Small and Medium Enterprises (MSMEs) in the country. The scheme aims to improve the productivity and profitability of MSMEs by implementing lean manufacturing tools and techniques.

The scheme also provides for capacity building and training of MSMEs in lean manufacturing techniques through a network of lean manufacturing groups and experts. The aim is to create a pool of trained professionals who can provide technical assistance to MSMEs in adopting lean manufacturing practices. MSME Competitive (LEAN) scheme can be attained in three levels namely: basic, intermediate, and advance.

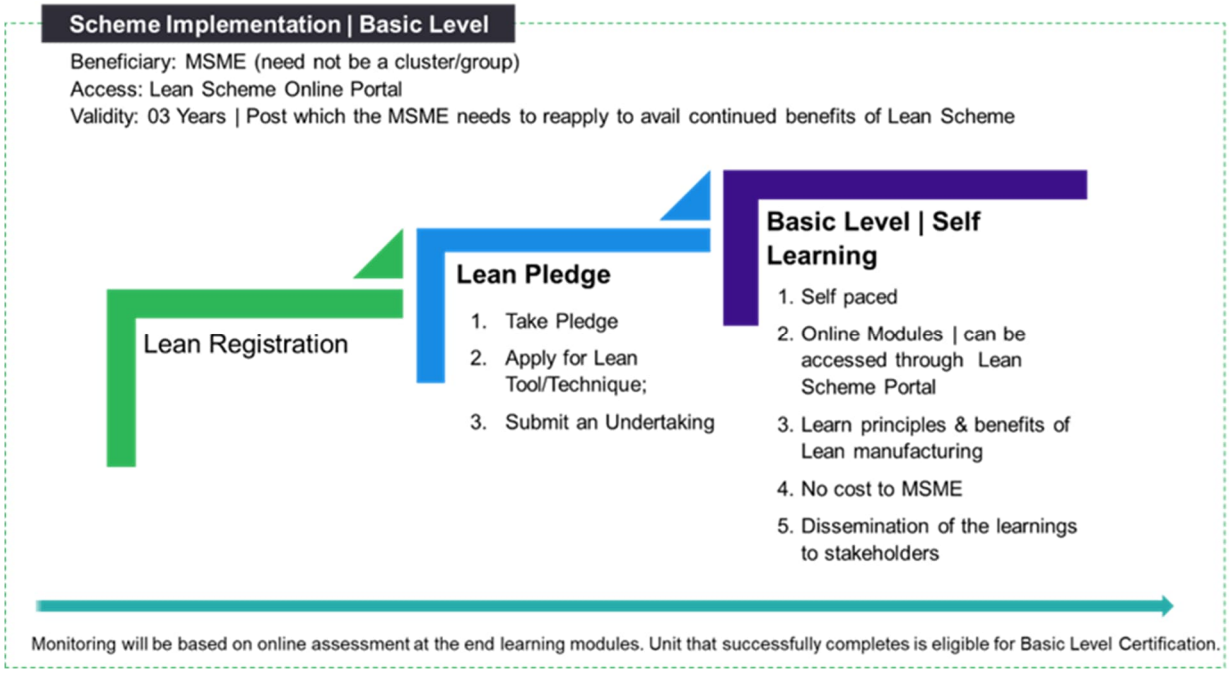


Figure 32 Process Flow of LEAN Implementation

In Kerala, there are total 19 lean certified units in 2 clusters – LMCS Ayurveda Cluster situated in Palakkad district with 10 units and Sulaho Mini Cluster in Kannur district with 9 units. 882 MSMEs were registered for the previous version of the scheme in the country with 41 MSMEs obtaining basic certification.

[38] PIB Delhi press release for MoMSME on 10 March 2023

1.7.3 Innovate (Incubation, Design and IPR)

Innovate Scheme under the MoMSME has three different verticals promoting innovation in the complete value chain from ideation to application of the ideas to solve problems commercially. The three verticals under Innovate scheme are Incubation support, Design support and IPR support.

The primary objective of the Incubation Component is to promote and support untapped creativity, and adoption of latest technologies in MSMEs that seek the validation of their ideas at the proof-of-concept level. The Incubation component consists of:

a. Recognition of eligible institutions as Host Institute (HI) to act as Business Incubator (BI)
b. Approval of Ideas of Incubatees submitted through Host Institute (HI)
c. Assistance for nurturing of Ideas to HI
d. Assistance towards Capital Support to HI for Plant and Machinery

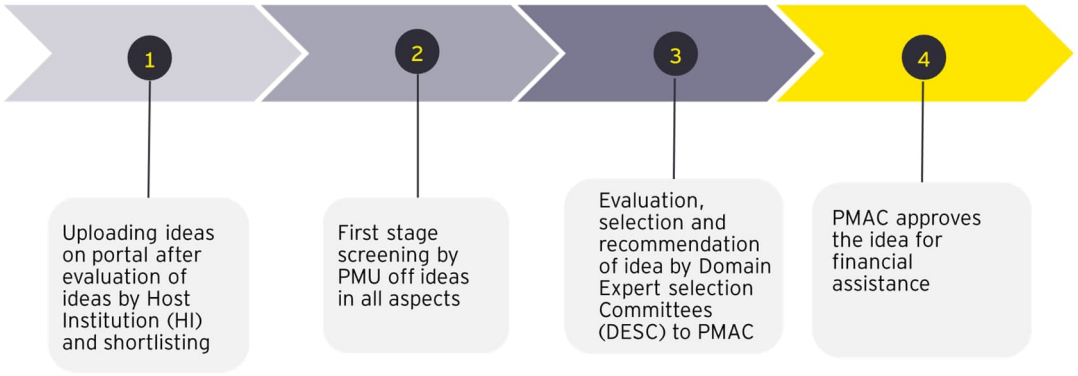


Figure 33 Process Flow of Incubation application approval for financial assistance

Kerala has 23 incubation centres setup under Host Institutions. Applications under current Design scheme are mobilised by Implementing Agencies (IAs) namely IITs, NITs, IISC based across India. There are 21 such approved IAs for the scheme.

Under the current IPR scheme, IPFCs (Intellectual Property Facilitation Centres) are the implementing agencies for the scheme that further recruits technical resources. The role of the IPFCs comprises providing IP filing services (such as filing of patents, trademarks, designs, copyrights), awareness programmes and others.

These schemes aim to provide appropriate facilities and support for the development of concept to market, design competitiveness and protection & commercialization if intellectual creations of the MSME sector.

Kerala has been able to make substantial stride in obtaining Geographical Indication (GI) tag registrations in priority sectors like agro based and handicrafts sector. The State has around 23 GI tags in the Agricultural sector, second only to Karnataka and Tamil Nadu. It has 15 GI registrations in the Handicrafts sector.

1.5 Diagnostic Assessment and MSME Field Surveys

1.5.1 Overview of Survey Findings

To develop an effective strategy and aligned set of interventions, it was envisioned that a diagnostic and stakeholder dialogue exercise will be conducted to gather data and information on the MSME sector. The survey design was primarily shaped by the MSME landscape as well as the industrial ecosystem in the state. About 1062 surveys were conducted among MSMEs across different districts of the state using stratified random sampling method.

The field survey aimed to comprehensively analyse the constraints, and opportunities for MSMEs focusing on key pillars identified by the RAMP program. As a result, the survey questionnaire focuses

on components such as basic information about the entrepreneur and the enterprise; access to credit; access to market and expansion opportunities; operational aspects like raw material procurement, infrastructure challenges, technological hurdles, and quality certifications; capacity building requirements; greening initiatives; and most importantly engagement under Mission 1 Lakh MSMEs beneficiaries.

The survey encompasses a total of 804 Udyam registered (76%) and 258 Udyam unregistered (24%) enterprises, distributed across the 14 districts within the state. Based on extensive discussions with Udyam unregistered enterprises, several prominent reasons for their reluctance to register on the Udyam platform have emerged:

a. Inadequate understanding of MSMEs and registration benefits

Many MSMEs lack a comprehensive understanding of the nature and advantages associated with MSME registration. As the enterprise do not fully grasp the potential benefits, it hinders their motivation to register.

b. Uncertainty regarding Udyam registration processing time

There is a notable lack of awareness regarding the time it takes for Udyam registration applications to be processed. MSMEs may be deterred by the uncertainty and potential delays in the registration process.

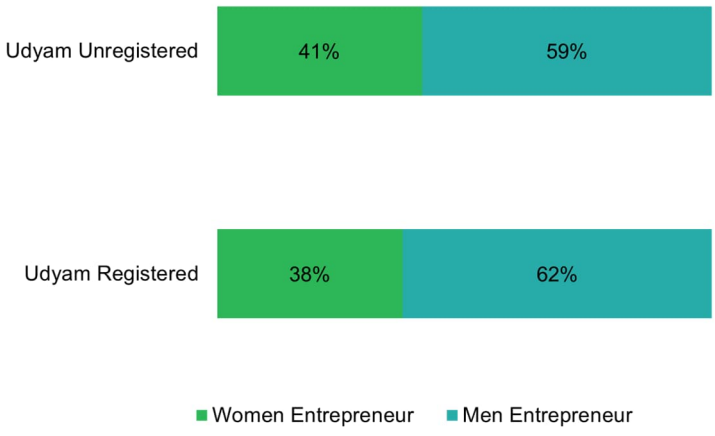
c. Concerns about taxation and post-registration implications

There is a prevailing concern among MSMEs about how registration might impact their tax obligations and financial responsibilities. This uncertainty regarding taxation post-registration also acts as a deterrent.

d. Navigational challenges with Udyam registration application

Many MSMEs face challenges in navigating and completing the Udyam registration application leading to a reluctance to engage in the registration process.

Considering the subtle nuances between the registered and unregistered enterprises, analysis of the surveyed MSME units distinguishes between Udyam registered and unregistered enterprises. Regarding demographic characteristics, it's noteworthy that approximately 60% of the entrepreneurs within the sample are male, irrespective of their Udyam registration status. Furthermore, most entrepreneurs, nearly 80%, fall into general social category and this demographic trend remains consistent across both Udyam registered and unregistered enterprises. Hence, the general characteristics of entrepreneurs do not differ across enterprises, irrespective of their registration status. This observation reflects the consistent profile of those who typically establish enterprises within the state.



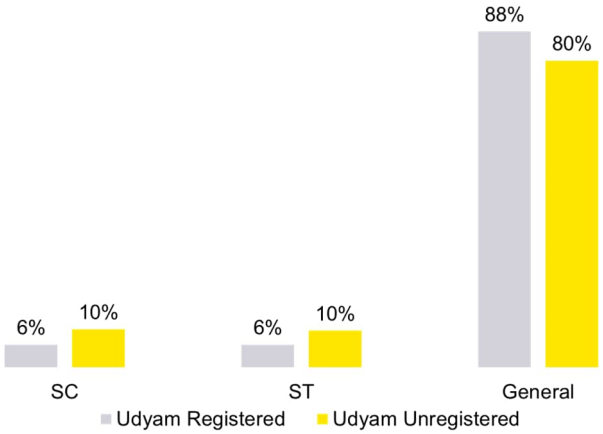


Figure 34 Demographic Characteristics of Respondents

In terms of enterprise size, it is evident that majority fall under the classification of micro enterprises. This is further emphasised when looking at the breakdown: 75% of Udyam registered enterprises and a substantial 81% of Udyam unregistered enterprises are categorised as micro enterprises. This distribution highlights the predominance of micro enterprises within the broader MSME landscape, irrespective of their registration status. Recognising this dominance is crucial when formulating policies and providing support for the sector.

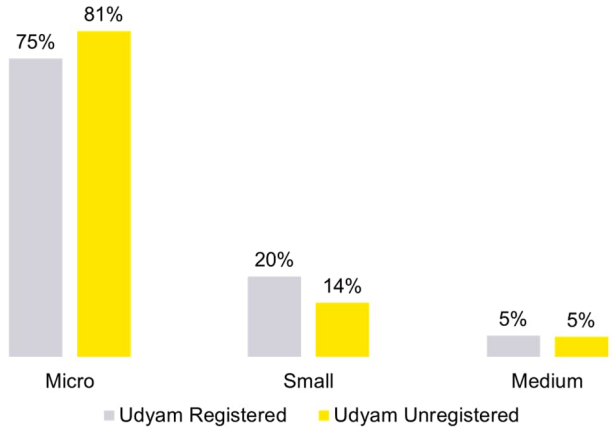


Figure 35 Category-wise Distribution of Enterprises

While examining sectors, a striking observation is that most Udyam unregistered enterprises are predominantly concentrated within the services sector, constituting a substantial 52% of the sample. This is followed by 44% of enterprises operating within the manufacturing sector, with a smaller 5% involved in trading activities. Conversely, most Udyam registered enterprises belong to the manufacturing sector. This alignment is consistent with the nature of assistance and benefits available to Udyam registered enterprises, which are often tailored to support and boost manufacturing activities. This divergence in sector distributions underscores, the influence of landscape in determining Udyam registration and the potential of customising support mechanisms to drive increased formalisation. Overall, the enterprises are diversified, encompassing sectors such as food processing, textiles, pharmaceuticals, machinery, and equipment among others.

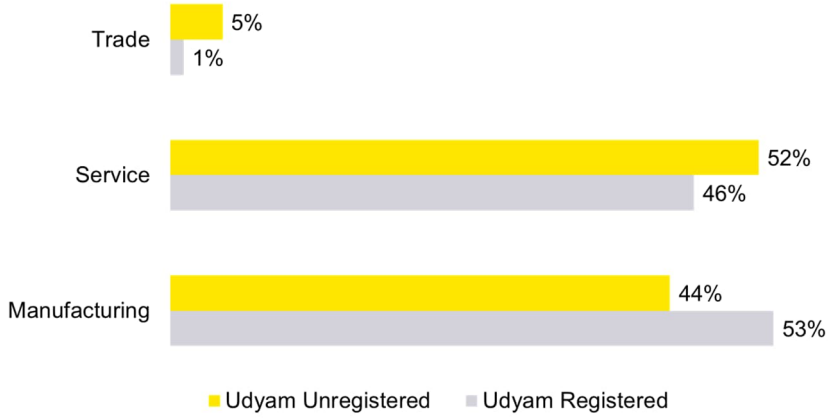


Figure 36 Sector-wise Distribution of Enterprises

A significant majority of enterprises are structured as sole-proprietorship enterprises and this prevalence can be attributed to the relatively simpler formation and management processes, and the reduced regulatory and compliance obligations compared to other forms.

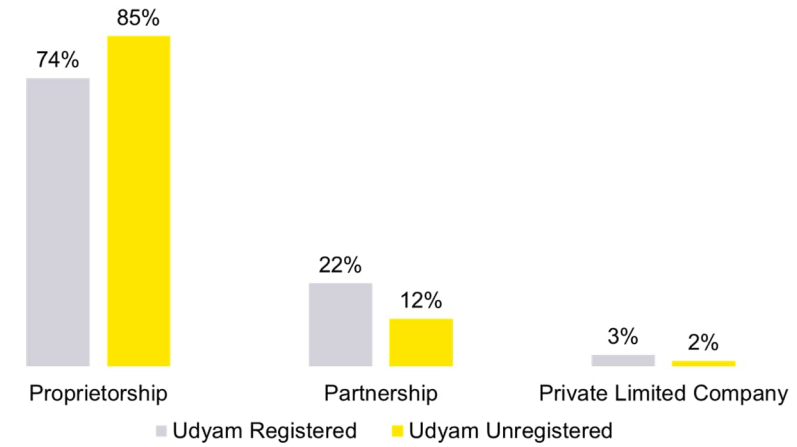


Figure 37 Legal Status of Enterprises

Within the surveyed enterprises, a significant majority fall within the category of micro enterprises. However, what stands out as particularly significant is the imbalance in the distribution of annual turnover. Notably, around 46% of Udyam registered and a more substantial 67% of unregistered enterprises report an average annual turnover of less than Rs 25 lakhs over the last 5 years. These enterprises primarily cater to hyperlocal and local demands. It's crucial to recognize that inherent vulnerability of this segment of enterprises; often they lack the financial capacity and resource to necessary required to navigate external shocks or disruptions, as has been evident in recent years.

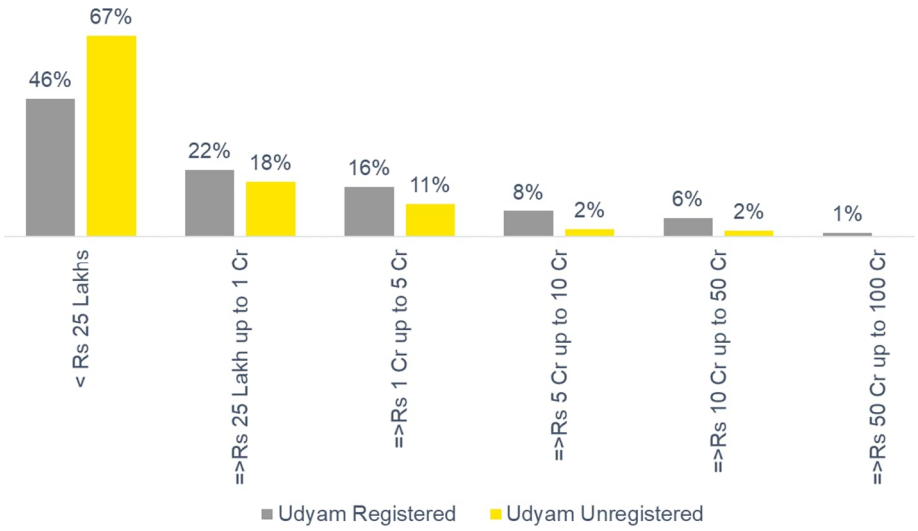


Figure 38 Annual Turnover Distribution across MSMEs

Regardless of the current financial status, the enterprises have the potential to progress from the micro category to small, and eventually to medium-sized enterprises. However, based on the retrospective data collected from MSMEs on ground, it becomes evident that the annual turnover growth appears to be caught in a low-level equilibrium. Approximately, 40% of the Udyam registered enterprises reported that their annual turnover has remained stable over the last 4 years, and this figure is slightly higher among unregistered enterprises at 49%. Moreover, another 17% and 22% reported a declining trend in annual turnover over the past years. In contrast, about 34% of the Udyam registered and 36% of unregistered enterprises reported an increasing trend in annual turnover.

Nevertheless, it's important to note that this analysis does not preclude future changes. With the State Government's dedicated efforts to support and sustain MSMEs, there could potential tailwinds in the horizon in the coming years.

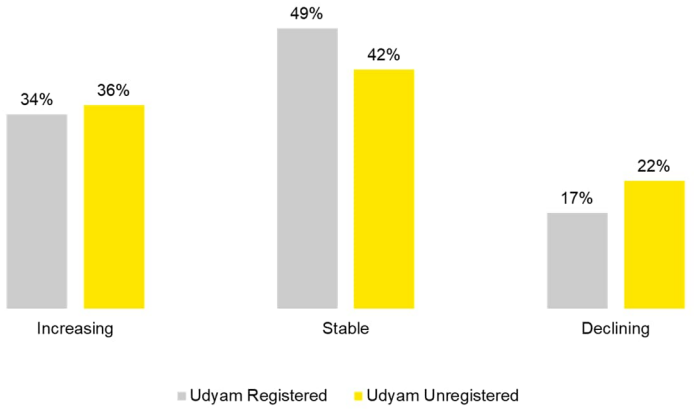


Figure 39 Growth Rate of Annual Turnover Over Time

Only small percentage of enterprises have been passed on within the family to the current proprietors, indicating that most enterprises are run by first generation entrepreneurs. This observation could be attributed to either the emergence of a vibrant entrepreneurial ecosystem within the state or the prevailing profitability trends across enterprises. With respect to majority of the first-generation entrepreneurs, the enterprises have been operational for less than 10 years of vintage.

Among these enterprises, it's worth noting that about 39% of the Udyam registered MSMEs and 22% of unregistered MSMEs were established under the Year of Enterprises initiative. Most of these

enterprises highlighted the instrumental role of on-ground interns in facilitating the establishment process, with 78% of Udyam registered and 84% of unregistered MSMEs acknowledging their assistance. Additionally, these enterprises benefitted from the ready availability of pertinent information, with 48% of Udyam registered and a slightly lower 34% of unregistered MSMEs finding access to relevant data helpful. Furthermore, 16% of Udyam registered and 11% of unregistered MSME acknowledged the positive impact of facilitatory measures, such as MSME clinics, Orientation Programs, Loan Melas, in their successful establishment.

The distinction in responses from these enterprises may be indicative of their diverse starting points in terms of sector and scale of operation, which subsequently lead to varying priorities and support needs of these two groups of enterprises. This underscores the importance of tailoring support mechanisms to accommodate the specific requirements of different segments.

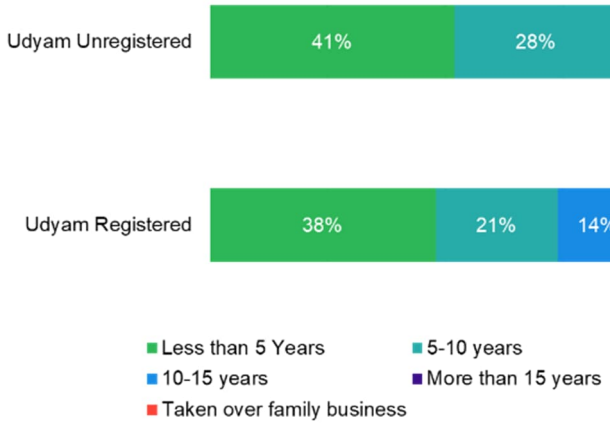


Figure 40 Vintage of Enterprises

1.5.2 Impact of COVID-19 Pandemic

Approximately 84% of Udyam registered and 81% of unregistered enterprises were operational before the advent of the COVID-19 pandemic. These enterprises had to adopt various coping mechanisms to navigate the impact of COVID-19. The coping strategies encompassed actions like reducing the number of employees, modifying the delivery of products/services, embracing digital platforms/solutions, and reconfiguring their product offerings, among other measures. These nimble adaptations reflect the resilience and resourcefulness of MSMEs in the face of an unprecedented challenge.

The initial response to the challenges posed by pandemic was a reduction in workforce, a strategy adopted by both Udyam registered and unregistered enterprises. However, the adoption of strategies diverges across the groups beyond this. Unregistered enterprises leaned towards embracing digital platforms/solutions, while registered enterprises opted for modifying product/service delivery among other strategies.

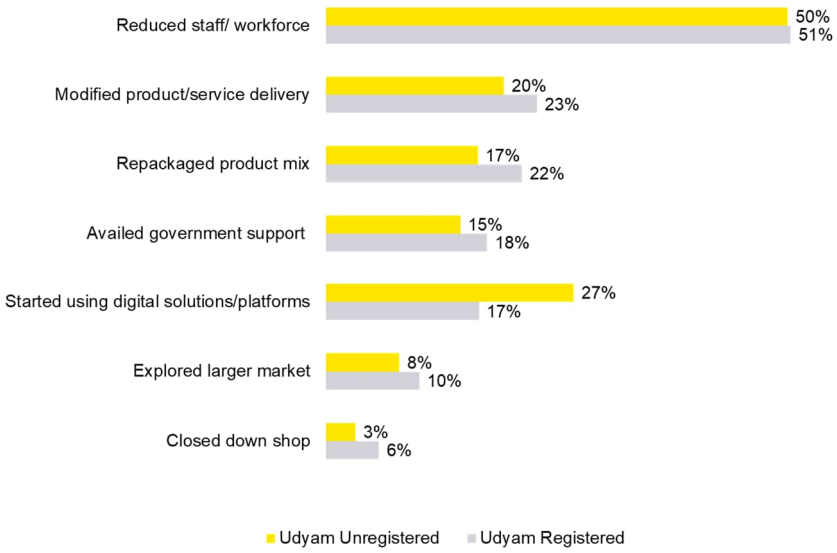


Figure 41 Coping Strategies during COVID-19 Pandemic

1.5.3 Formalisation and Documentation Trails

The survey was also done based on the availability of the current account statement, PAN Card, GST, ITR filing, among others. This reflects the financial and documentation status of MSMEs. In terms of documentation, about 81% of enterprises possess a current account (CA) statement and this trend remains consistent across both Udyam registered and unregistered enterprises. CA statements records financial transactions and is an important document for assessing financial health of an enterprise. The prevalence of CA statement indicates a focus on financial management as well as awareness about the importance of maintaining such records.

The data also reveals that a majority of MSME units, both Udyam registered and unregistered, have a PAN card, which is a unique identification number issued by the Indian government for tax purposes. A PAN card is essential for conducting financial transactions and complying with tax regulations.

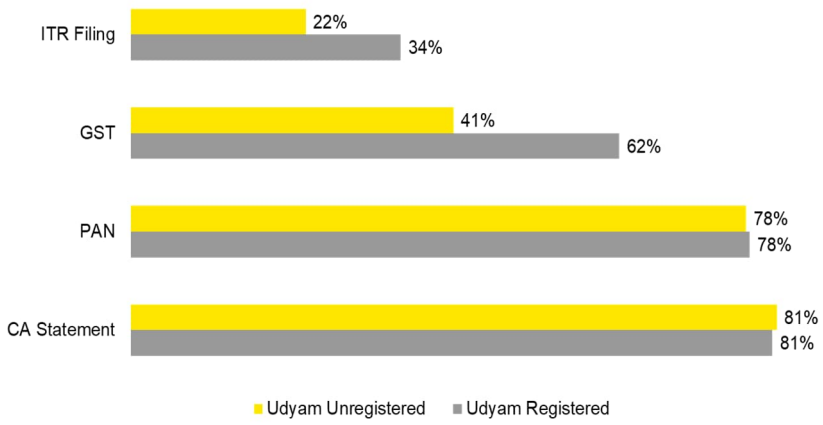


Figure 42 Documentation Trails

On the other, it's worth noting that while over 60% of Udyam registered units possess GST registration only 41% of unregistered enterprises do. The significance of this difference becomes evident when we consider that GST registration is mandatory for enterprises with an annual turnover exceeding Rs 20 lakhs. This observation aligns with earlier finding that most unregistered enterprises operate with an annual turnover below Rs 25 lakhs, and possibly falling below the Rs 20 lakhs threshold.

However, only 34% of Udyam registered enterprises and 22% of unregistered enterprises have Income Tax Return (ITR) records for any of the last 3 financial years. The ability to file ITR is contingent on having the necessary supporting documents, pointing to a potential lack of awareness or focus on compliance with income tax laws which is a cause of concern.

Udyam registered and unregistered enterprises exhibit distinct characteristics, including variations in their sectors of operation and scale of their activities. These differences lead to unique priorities and challenges, or the intensification of challenges in various areas, such as accessing finance and markets. The preceding section provides an overview of the current scenario, while subsequent chapters delve into specific challenges related to firm capabilities, technology access, and the greening of MSMEs

1.5.4 Access to Finance

Access to finance plays a pivotal role in the establishment, growth, and expansion journey of any enterprise, including MSMEs. The ground survey findings reveal some interesting insights into the preferences of Udyam registered and unregistered enterprises regarding their primary sources of financial support. Among Udyam registered enterprises, there's a near-even split: 45% prefer formal financial institutions, such as commercial banks, while an almost equal 44% opt for loans from family members, friend, peers as their first preference for financing/meeting their business requirements.

On the other hand, for unregistered enterprises, most of the enterprises (49%) lean towards loans from family members, friend, peers as their first preference for securing finances to meet their business requirements. This suggests that many MSMEs either do not approach formal financial institutions for loans, or when they do they face challenges in accessing them. The situation is further exacerbated in the case of unregistered enterprises, likely due to their smaller scale of operations vis-à-vis registered enterprises within the sample, and the inability to access support or other assistance mechanisms targeting the specific needs of this segment.

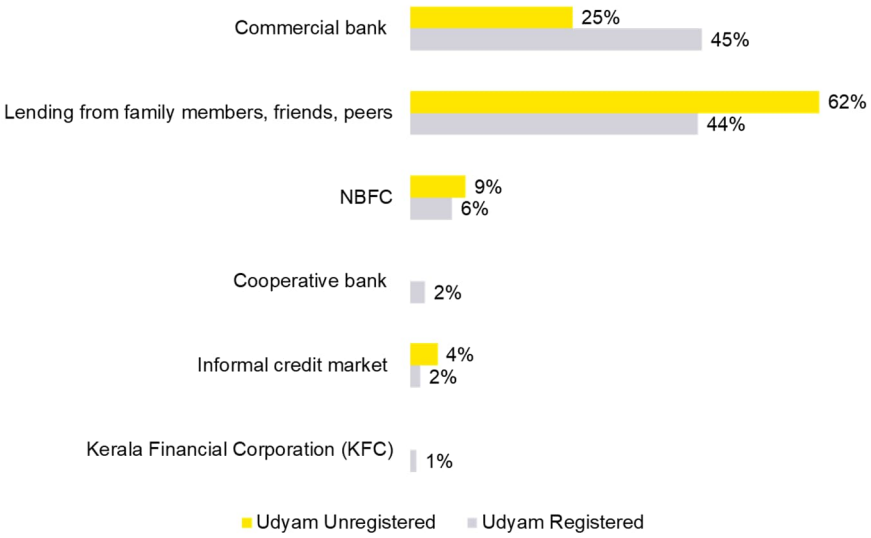


Figure 43 First Preference for Accessing Finance

1.5.5 Access to Market

The findings provide insights into the reach of MSMEs' products and their potential to access new markets. Since enterprises in services sector often cater to local or hyperlocal markets, which naturally limits expansion beyond their immediate vicinity, the analysis focuses on enterprises located within the manufacturing sector. The survey results reveal that most manufacturing MSMEs primarily sell their products within local markets and their respective districts. This data underscores the heavy reliance of MSMEs on local markets, with approximately 80% of Udyam enterprises concentrating their efforts within these boundaries.

In contrast, only a small percentage of MSMEs reported extending their reach to markets in other districts within the state. Consequently, it's evident that only a small percentage of MSMEs currently have access to the markets outside the state, whether within the country or on a global scale. This limited market reach accentuates the importance of facilitating and expanding market access for these enterprises, which is crucial for their growth and sustainability.

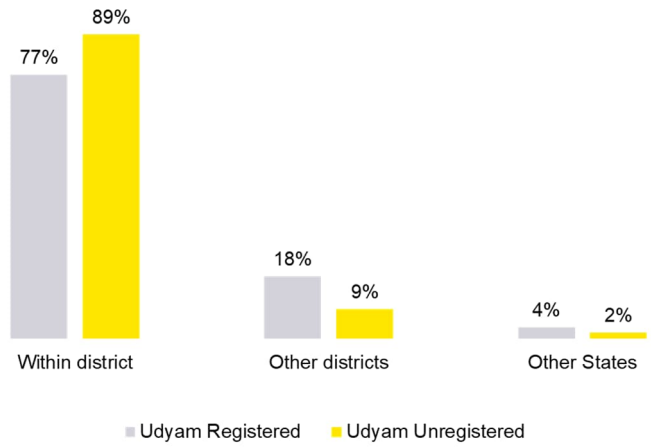


Figure 44 Major Markets for Products/ Service of surveyed MSMEs

1.5.6 Firm Capabilities

MSMEs encounter a multitude of challenges throughout their supply chain, encompassing issues like sourcing an adequate quantity as well as quality raw materials, finding skilled labour force, managing storage, and optimising logistics, and adopting environment friendly and sustainable practices. With their small scale of production and primary focus on local markets, MSMEs often lack the financial or technical capacity to address these challenges on their own.

Moreover, a paramount priority is to improve the technological capabilities of the MSMEs. Many of these MSMEs rely on outdated or semi-automatic machinery and equipment, which significantly affects the quality of their products and services. The outdated technology escalates production costs, rendering their products and services less competitive compared to counterparts within the same sector.

To effectively implement reforms in these areas, MSMEs require technical support and access to timely and pertinent information. This support is crucial for them overcome these challenges and thrive in a rapidly evolving business landscape. Each of these issues are expanded upon and probed in the subsequent chapters.

2 Challenges Confronting MSMEs

The state of Kerala has a mix of traditional and mature sectors that contribute to its economic growth. These sectors, as highlighted in earlier chapters, represent the state's historical strengths and areas of continued growth. The traditional sectors include handicrafts and handlooms, coir, and bamboo sectors, while the mature sectors include wood, IT&ITeS, general engineering, textiles, plastic sectors. Additionally, the Government of Kerala has identified a list of 22 priority sectors in its Industrial Policy 2023. The focus is on fostering entrepreneurship, enabling infrastructure, being ready for the Industrial Revolution 4.0 and upgrading skillsets of youth for futuristic jobs across these 22 sectors.

In this context, the diagnostic assessment focuses on and assesses key RAMP pillars through the perspective of sectors as well. To understand the ground realities and develop an understanding of the challenges and opportunities in these sectors, the team conducted a comprehensive series of stakeholder meetings with various key players in the individual sectors. Additionally, based on stakeholder discussions with MSMEs and analysis of key performance metrics the report has highlighted benchmark MSMEs, wherever applicable.

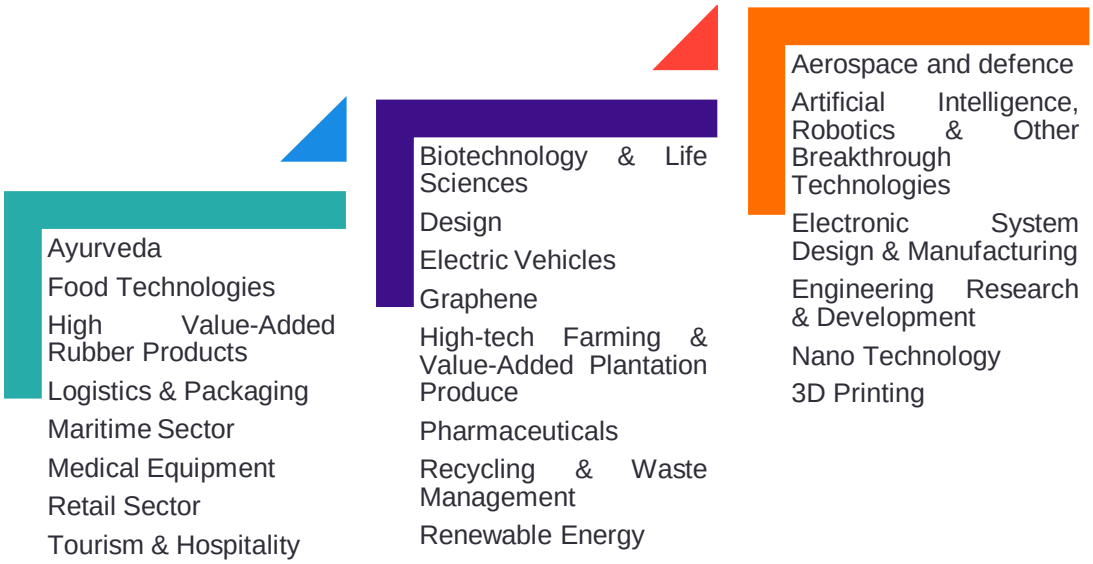


Figure 45 Priority Sectors Identified in Industrial Policy 2023

2.1 Sunrise/Priority sectors

Ayurveda, food processing, rubber products, medical equipment, **aerospace** have been identified and studied as priority sectors based on the Industrial Policy 2023.

2.1.1 Ayurveda

Kerala's Ayurveda sector is renowned globally for its traditional healing practices. It thrives on a rich heritage of over 5,000 years, offering a holistic approach to wellness. The state's lush landscapes provide abundant medicinal herbs, and Kerala's Ayurvedic centres and resorts attract health-conscious tourists seeking authentic treatments. There are around 700 ayurveda drug manufacturing units in the state. As per recent study by the Ayurvedic Medicine Manufacturers of India (AMMOI) only 300 units are operational.

Based on discussions with stakeholders in the sector, the team has identified a list of challenges which are enumerated below:

Table 13 Challenges Confronting Ayurveda Sector

Issues	Description
Raw Materials	**Availability** • Around 80% of the raw materials required for manufacturing is procured from outside the state • Climate change has played a major role in the reduction of raw materials available • As the demand exceeds supply largely, the prices of raw materials have shot up • Medicinal plants are unknowingly destroyed during the land clearance and construction activities conducted by private players and MNREGS workers **Quality** • Testing of raw materials is an important process, which is carried out only the larger firms. The micro units don't adhere to this practise • Reduced supply of raw materials, has resulted in the usage of low-quality materials available in the market • Adulteration is another major concern faced by the sector
Quality Control	• Though the certification cost of WHO-GMP is around Rs. 5000, the investment required to become complaint to the standards is higher • Incorrect labelling is prevalent among the smaller units • After providing the drug licences, there is lack of vigilance by the Drug Controller which leads to incorrupt practises in manufacturing
Reduced importance to proprietary products	• Ayurvedic drug manufacturing in Kerala majorly focuses on the development of classical drugs (those mentioned in the ancient texts). There is no importance to the development of proprietary drugs whereas the top ayurveda firms in the country rely heavily on proprietary products
Lack of collaboration between institutions	• There is a huge lacuna in collaboration between various institutions like the directorate, ayurveda hospitals, research institutions, associations etc. • This leads to missed opportunities, limited knowledge sharing, inefficiency in production, weakened research and duplication of the efforts
Brand preference	• People tend to purchase the drugs manufactured by established brands • This hinders the market penetration by the smaller units
Targeted negative publicity	• Recently, there is rise in targeted negative publicity against the ayurveda medicine system specifically to drug usage. Utilisation of traced of heavy metals in the ayurveda drugs is being questioned • The effectiveness of the medicine is questioned in the social media platforms and there is a huge rise in spreading negative comments across digital media
Export	• In foreign countries the drug control rules are quite stringent. In order to facilitate their requirements heavy investment on CGMP is required • Lack of quality control in the raw material supply chains hinders the exports greatly
Access to Technology	• Smaller units lack access to newer technologies employed in manufacturing and they adhere to traditional processes. R&D has been limited to only the major players

2.1.1.1 Incentives by other states

The following are the incentives provided by specific states for AYUSH manufacturers:

Table 14 Incentives for Ayurveda Sector across States

State	Incentives
Uttar Pradesh	• Preferential land allotment to AYUSH manufacturers • Incentives for horizontal and vertical pharma parks (interest subsidy for land purchase 50 % for 7 years, for building infrastructure and common facilities 60 % for 7 years
Himachal Pradesh	• Capital infrastructure subsidy up to 40% for Herbal Parks
Uttarakhand	• Besides the Govt. of India's subsidy of 30% with cap upto Rs. 5 Crore for each project, state's financial assistance of 10% or 1.5 crores to hill districts and Rs 1 crore for plains • Capital subsidy 15-40 % • Interest subsidy upto 10 % • Stamp duty concession 50-100 %

Being classified as a sunrise sector, the state provides 10% subsidy on capital investment and 100% reimbursement of registration and stamp duty for AYUSH infra projects. The reimbursement of duties and the associated cap aligns with the trends observed across different states. However, in case of capital investment subsidy, it is observed that subsidy rate is lower than that set by other states seeking to promote the sector.

2.1.2 Food Processing/Food Technologies

Food processing tops amongst the sectors with highest rise in number of units. Kerala has demonstrated commendable performance in the implementation of the Pradhan Mantri Formalisation of Micro Food Processing Enterprises (PMFME) Scheme demonstrating substantial outreach of the scheme within the state. Presently, Kerala ranks Fourth in the State wise ranking of number of loans sanctioned under Individual Category in FY 2023-24.

The State has five fully functional food parks exclusively for the sector currently These 5 Food Parks have been set up by Kerala Industrial Infrastructure Development Corporation (KINFRA). In addition, future projects in Kerala include Mega Food Park at Palakkad and Chertala as well as Spices Park at Thodupuzha.

Based on discussions with stakeholders in the sector, the team has identified a list of challenges:

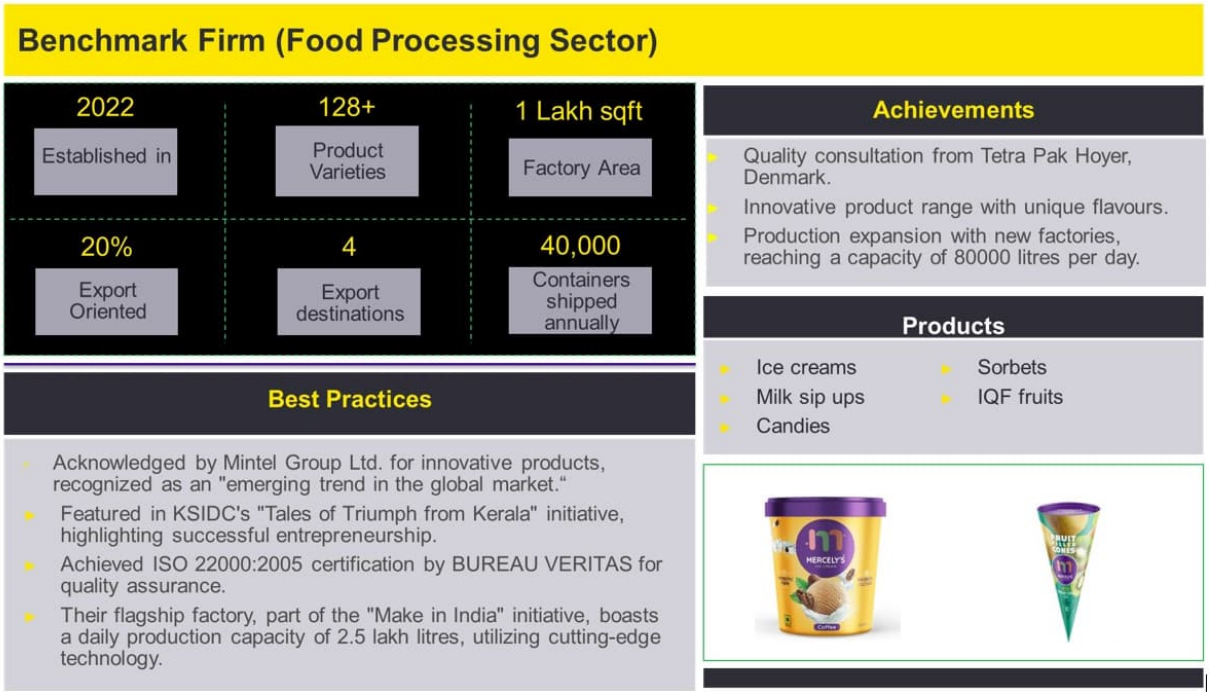
Table 15 Challenges Confronting Food Processing Sector

Issues	Description		
Raw materials	**Procurement**	**Production**	**Quality**
	• Seasonal changes and climate affect raw material supply, causing inconsistent availability. • Coordinating supplies from small-scale farmers challenges quality	• Traditional methods may still dominate in Kerala's food processing units. Adopting modern technology can improve efficiency and quality, but initial costs are a hurdle.	• Ensuring consistent raw material quality is challenging due to diverse agricultural practices and sourcing locations. • Expertise and investment are essential for selecting

Issues	Description		
	control, reliability, and traceability. • Ensuring compliance with industry standards is crucial but complex due to varying quality levels • Effective cost management strategies are needed to navigate fluctuating raw material prices for industry profitability.	• Ensuring consistent quality, particularly for widely distributed products, is vital. However, variations in raw materials and processing conditions pose challenges. • Procuring, storing, and processing raw materials is complex. A reliable supply chain is essential for uninterrupted production.	suitable packaging materials and techniques to ensure product freshness and safety. • Maintaining quality during handling, storage, and transportation is crucial, requiring factors like temperature control, proper handling, and efficient logistics
Access to Technology	• High initial investment, particularly burdensome for small-scale farmers. • Seasonal variations in rainfall due to climate change affecting water management. • Need for specialized skills in implementing food technology. • Inadequate infrastructure, including storage and processing facilities. • Balancing technological advancements with sustainability concerns.		
Insufficient R&D	• Insufficient R&D hampers the development of innovative processes, products, and technologies within the sector. • The sector may face challenges in attracting and retaining skilled researchers and professionals due to the limited R&D ecosystem.		
Access to Market	• Many consumers now seek out artisanal and locally produced food products, valuing quality and authenticity. Balancing scale and production capacity with maintaining artisanal quality can be a challenge. • Many food processing units, especially smaller ones, struggle to reach wider markets due to constraints in distribution networks and lack of market information. • Some businesses in the sector may lack the resources or expertise to effectively market and brand their products, hindering their visibility and appeal in the market. • Access to accurate and timely market information, including consumer trends and preferences, can be limited, making it difficult for businesses to tailor their products to market demands. • Limited online presence and e-commerce capabilities can restrict the sector's ability to tap into the growing trend of online food sales such as onboarding themselves into platforms like Flipkart and Amazon • Knowledge of platforms like GeM & ONDC are relatively low among the units.		

2.1.2.1 Benchmark MSME Enterprise

A snapshot of the benchmark MSME identified within the sector is presented below:



2.1.3 Rubber

Kerala leads rubber production with approximately 85% of India's natural rubber coming from the state.[39] The strong raw material base has facilitated emergence of rubber-based manufacturing units in the state. Based on the Invest Kerala portal, there are over 900 rubber-based manufacturing units in the state as of 2017. These manufacturing units are engaged in production of footwears and associated components, rubber mats, rubber bands, etc.

Based on discussions with stakeholders in the sector, the team has identified a list of challenges:

Table 16 Challenges Confronting Rubber Sector

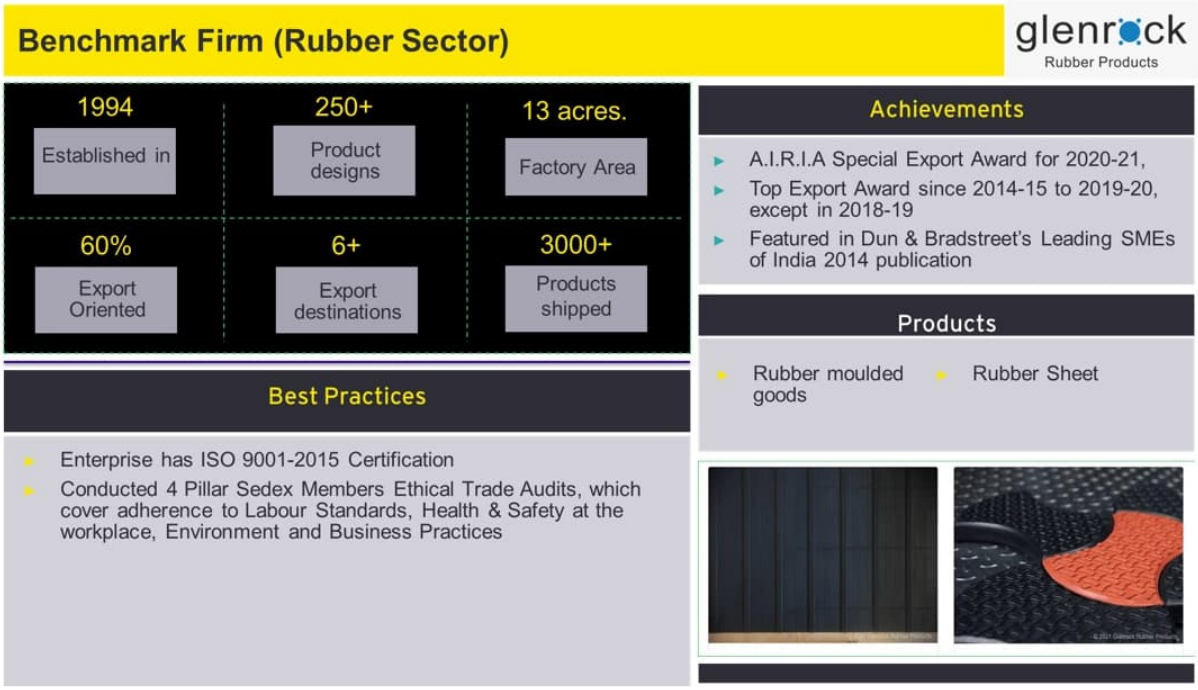
Issues	Description
Raw materials	• While raw material prices fluctuations are normal, availability of the raw materials is not a concern
Labour	• Availability of skilled and unskilled labourers is an issue. In case of unskilled labourers, who are largely migrant workers, one of the major concerns is the high attrition rate • Common Facility Service Centres (CFSC) also reported insufficient number of skilled personnel for testing and other research activities as a concern
Access to Markets	• Sales within domestic market, while relevant, is often limited by virtue of being far from major industrial/manufacturing hubs • Export is one of the major avenues of sales for many MSME units. It is done both directly and indirectly through exporters. Participation in export exhibitions is, however, limited • While CFSCs and Rubber Board have been able to cater to testing requirements of the MSMEs, the units face difficulties in availing testing

[39] Invest Kerala Portal, Government of Kerala

Issues	Description
	facilities and timely receipt of test results. While testing facilities at Rubber Board are more advanced than that at CFSC, some of the MSME units depend on testing facilities outside the state for conduct of a few of the tests for rubber products.
Product Innovation	• Diversification into high-end rubber products is limited owing to the magnitude of initial investment required to do so • CFSC Changanassery has made attempts towards identification and creation of new products based on market demand, as well as trial and error. The CFSC has applied for patents on some of these products.
Access to Finance	• Delayed payments are an issue for some of the units. Owing to low margin associated with certain products it affects cashflows of these units
Technological Requirements	• High initial investment is burdensome for the units given their size at present. Govt support under Entrepreneur Support Scheme (ESS) has been an assistance for some of the units • In addition, technological improvements are constrained by the lack of adequate supply of skilled labour • Quality testing of products is another one of the concerns reported by units, especially when the products are niche products
Environmental Issues	• Solid waste disposal is an issue confronted by some of the units in the sector • Solar energy utilisation is in the very initial stages of adoption and has been facilitated with financial support from SIDBI

2.1.3.1 Benchmark MSME Enterprise

The benchmark MSME identified within the sector is Glenrock Rubber Products. A snapshot of the characteristics of the MSME is presented below:



2.1.4 Medical Devices Sector

Currently the manufacturing in this sector revolves around the anchor units like Terumopenpal, HLL Lifecare, Agappe etc. The MSMEs in this sector supply to these large units. These units provide the raw material and knowledge on the technology to these small units and the units provide them with finished products. The state has also allocated Rs. 169 Cr for the establishment of medical devices park - MedSpark in Trivandrum.

Based on discussions with stakeholders in the sector, the team has identified a list of challenges:

Table 17 Challenges Confronting Medical Devices Sector

Issues	Description
Access to Markets	• Sales within domestic market, while relevant, is often limited by virtue of being far from major industrial/manufacturing hubs • Export is one of the major avenues of sales for many MSME units. It is done both directly and indirectly through exporters. Participation in export exhibitions is, however, limited
Product Innovation	• There is less interaction between the major stakeholders of the industry, i.e., entrepreneurs, research institutions, doctors, sectoral experts together. • Doctors don't have the necessary time and bandwidth to support this process and they lack training in design ideation
Capacity Development	• Sri Chitra Tirunal is the only medical equipment testing centre available in Kerala. • It is a capital-intensive sector requiring considerable investment in infrastructure like clean rooms, high tech machinery, maintenance of quality standards and GMP. However, the gestation period for is around 3 to 8 years, and pass-through clinical trials and ensure regulatory compliances

2.1.4.1 Incentives by other states

The following are the incentives provided by specific states for medical devices manufacturing MSMEs:

Table 18 Incentives by Other States

State	Incentives
Gujarat	• Single window portal for issuance of manufacturing license and product license implemented by FDCA • Medical devices park in Rajkot would be a geographic cluster of surgical & medical device manufacturing, R&D testing laboratories • Reimbursement of 50% of fees/costs incurred for obtaining various Quality control approvals • Also interest subsidy, net SGST reimbursement & EPF reimbursements[40]
Karnataka	• Capital Investment Subsidy of 25% of Expenditure on Land only in areas other than Bengaluru Urban and Bengaluru Rural districts up to an extent of 50 acres or 20% of Eligible Capital Expenditure on Plant & Machinery • Reimbursement of stamp duty and registration charges and land conversion fee

[40] https://cmogujarat.gov.in/wp-content/uploads/2022/10/AatmaNirbhar-Gujarat_Industrial-Policy.pdf

	• PLI of 1% of annual turnover for a period of 5 years starting from the first year of commercial operations[41] • The Karnataka government to set up a Pharma and MedTech Zone in Bengaluru
Tamil Nadu	• The state has been provided Rs. 100 Cr by the centre for the establishment of medical devices park. Additional capital subsidy upto 7.5% based on investment and employment • Land at concessional rate depending on the type of the district. The rates are at 10% & 50%

2.1.5 Aerospace Sector

The aerospace sector in Kerala is in its nascent stages of growth but shows significant promise. With research institutions like the Vikram Sarabhai Space Centre (VSSC) and a skilled workforce from renowned educational institutions, Kerala is gradually positioning itself as an emerging hub for aerospace activities. The state is also planning to come up with two aerospace clusters in Trivandrum location. However, challenges such as limited funding, competition from other aerospace hubs in India, and the need for further infrastructure development remain.

The Kerala government's Space Park, established in 2019, aims to attract global start-ups and stakeholders in the space tech sector, positioning the state as a significant hub for space-related technology, research, and development. Located in Thiruvananthapuram, the park serves as India's first-of-its-kind facility, featuring a start-up incubator, accelerators, and skill-training systems. benefits from its proximity to key space centres, including the Vikram Sarabhai Space Centre, ISRO Inertial Systems Unit (IISU), Liquid Propulsion Systems Centre, BrahMos Aerospace, and Indian Institute of Space Science and Technology.

To support emerging entrepreneurs and students entering the industry, the Kerala Space Park has introduced the Funds of Funds provision. This initiative involves the state government providing funding to start-ups and being open to venture capitalists who can invest in these start-ups to support budding entrepreneurs.

The Space Park adopts a concentric circle approach to offer support, comprising three layers. The first layer provides critical infrastructure support for managing operations, followed by infrastructure support, including testing facilities for data computation and analysis in the space sector business. The third layer involves mentors and experts who guide and nurture start-ups and small enterprises. Approximately 250 to 350 retiring scientists annually play a crucial role in mentoring young talent.

Partnerships are vital for the development of any ecosystem. The Space Park's fourth and final layer emphasizes building partnerships. It has already established collaborations with ISRO and CNES, the French Space Agency. Additionally, it has partnered with Airbus' Bizz Lab, which has extended its facilities within the institute. Similar collaborations with other accelerators are being explored, focusing on entities with significant expertise in the sector. French Space Agency.

Based on discussions with stakeholders in the sector, the team has identified a list of challenges:

Table 19 Challenges Confronting Aerospace Sector

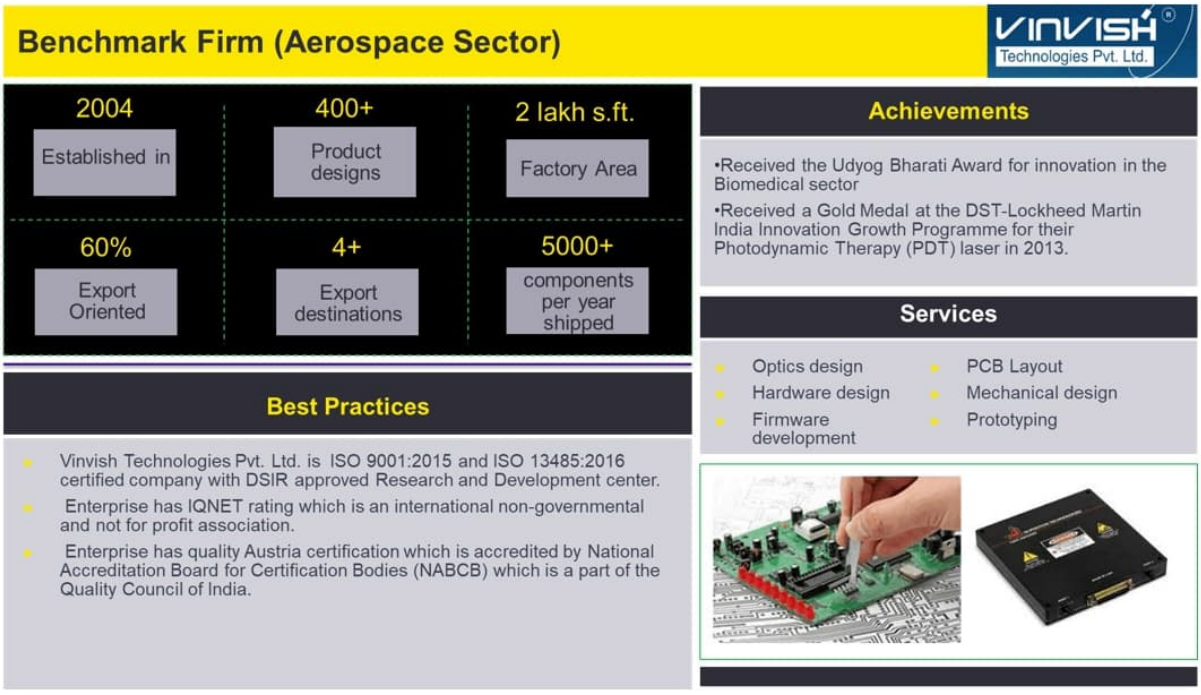
Issues	Description
Infrastructure Limitations	• Inadequate aerospace infrastructure and testing facilities such as surface treatment, nickel plating, cadmium plating, anodization, calibration facility

[41] https://industries.karnataka.gov.in/storage/pdf-files/Compendium%20of%20Government%20of%20India%20&%20Karnataka%20Schemes.pdf

Issues	Description
	needs to be brought in the state. Due to lack of infrastructural facilities 90% of the orders are going out of the state.
Skill Shortage	• A shortage of skilled aerospace professionals and technicians pose a significant challenge, impacting the sector's ability to meet its workforce needs.
Funding Constraints	• Access to funding and investments for aerospace projects, research, and development can be limited, restricting innovation and expansion.
Competition	• The aerospace sector in Kerala faces stiff competition from established aerospace hubs in India and abroad, making it challenging to attract investments and clients.
Regulatory Compliance	• Meeting stringent aerospace industry regulations and standards is demanding and requires continuous efforts to ensure adherence.
Certification cost	• The cost of aerospace Certification, such as AS 9110, AS9120, and AS60811 is very high the initial payment incurred is more than 5 lakhs and prior to the subscription cost needs to be incurred annually based on the requirements

2.1.5.1 Benchmark MSME Enterprise

The benchmark MSME identified within the sector is Glenrock Rubber Products. A snapshot of the characteristics of the MSME is presented below



2.2 Traditional Sector

Handicrafts, Handloom, Coir, etc are the traditional sectors operating in the State. Based on an exhaustive coverage of stakeholders, a detailed analysis of these sectors is presented below.

2.2.1 Handicraft Sector

The handicrafts sector plays a crucial role in the rural economy, however, challenges like low productivity, inadequate wages, and declining interest among the younger generation are causes of concern. In Kerala, there are about 1.7 lakh artisans engaged in 32 different crafts.

Based on discussions with stakeholders in the sector, the team has identified a list of challenges:

Table 20 Challenges Confronting Handicraft Sector

Issues	**Description**		
Raw materials	**Procurement** • Coir Procurement in Alappuzha District - Variations in coir fibre quality and inadequate processing infrastructure. • Wood Availability in Thrissur District - Difficulty in sourcing specific varieties like teak and rosewood due to logging restrictions. Thrissur contributes to 35% of the state's woodcraft production • Bell Metal Procurement in Pathanamthitta District - Limited availability of raw materials and intricate alloy preparation process. Pathanamthitta accounts for 40% of Kerala's bell metal craft production.	**Skilled work force** • Artisan Exodus in Malappuram District - Many skilled artisans are migrating to urban areas in search of better opportunities. Malappuram has seen a 15% decline in the number of artisans in the last five years • Aging Workforce in Palakkad District - Most artisans are elderly, and there is a lack of young successors. Over 70% of artisans in Palakkad are above the age of 50. • Skill Gap in Thiruvananthapuram District - Limited access to formal training programs for young individuals interested in handicrafts. Data: Thiruvananthapuram faces a shortage of skilled artisans, with only 30% having formal training.	**Quality** • Absence of Certification Awareness in Thrissur District - Many artisans in Thrissur are unaware of the benefits of obtaining quality certifications for their products. Only 20% of artisans in Thrissur have pursued quality certifications. • Financial Constraints in Kozhikode District - The cost associated with obtaining quality certifications is a significant hurdle for artisans in Kozhikode. Data: Approximately 60% of artisans in Kozhikode face financial constraints in pursuing quality certifications. • Limited Certification Infrastructure in Alappuzha District - Lack of accessible

Issues	Description		
			certification centres and agencies for artisans in Alappuzha. Data: Alappuzha has only two certified agencies, resulting in delays and difficulties for artisans seeking certifications
Overlapping Responsibilities between institutions	**Lack of Clarity in Roles:** • In districts like Thiruvananthapuram and Kozhikode, there is often a lack of clarity regarding which institution is responsible for specific aspects of the handicraft sector. Overlapping responsibilities can lead to duplication of efforts and misallocation of resources, impacting the overall effectiveness of programs. Decisions related to policy implementation and resource allocation may be delayed as multiple institutions try to coordinate their efforts.		
Access to Technology	• Limited access to modern technology hinders craft production processes • Many artisans lack the digital skills needed for effective online marketing of their products. • Insufficient training programs for integrating technology into traditional handicraft processes are a significant challenge.		
Customer Preference	• Competition from Mass-Produced Goods: Handicrafts face stiff competition from factory-produced items, which are often more readily available and may be priced lower. • Need for Diversification: With changing consumer demands, artisans may need to diversify their product range to meet evolving tastes and preferences. • District-wise Impact: ✓ In Ernakulam, where urbanization is high, there's a noticeable shift towards contemporary home decor items. ✓ In Thrissur, known for its rich cultural heritage, traditional crafts like mural painting and wood carving are still in demand. ✓ In Alappuzha, known for coir products, there's a need to innovate and create modern designs to appeal to a wider customer base. According to a survey conducted by the Handicrafts Department, 67% of artisans in Ernakulam have expressed the need for training in creating modern, consumer-friendly designs, while 52% in Thrissur are interested in preserving and promoting traditional crafts.		
Insufficient R&D	**Limited Research Facilities** • Many districts in Kerala, such as Kottayam and Kollam, lack advanced research centres dedicated to handicrafts, hampering innovation. **Lack of Funding** • Artisans in districts like Pathanamthitta and Idukki often struggle to secure funds for research initiatives due to limited financial resources. **Outdated Techniques**		

Issues	Description
	• In certain districts like Thrissur, artisans still rely on traditional methods, potentially missing out on more efficient and sustainable practice
Access to Market	• Artisans face hurdles in reaching broader markets, particularly in thriving districts like Palakkad and Wayanad. • Digital Divide and E-commerce Adoption: Some districts, like Malappuram and Kozhikode, struggle with online marketing due to a lack of digital literacy among artisans. • Market Research and Trend Adaptation: Adapting to changing consumer preferences and keeping up with market trends poses challenges, especially in districts like Thrissur and Alappuzha, where traditional crafts are predominant.

2.2.2 Handloom Sector

The sector is mainly concentrated in Thiruvananthapuram and Kannur District and in some parts of Kozhikode, Palakkad, Thrissur, Ernakulam, Kollam and Kasaragod districts. The handloom products are rooted in specific locales, and some of the major varieties produced are dhotis, furnishing material, bed sheets, shirt, sari and lungi. Some of these varieties also possess Geographic Indication (GI) tags such as Balaramapuram saree and fine cotton fabrics, Kasaragod saree, Kuthampully saree, Chendamangalam dhothi, and Cannannore home furnishings.

The handloom sector is a major source of employment in Kerala, with about 17070 looms in the State, i.e., approximately 0.6% of looms in India and generating about 10.36 lakh person days in FY22. As per the Fourth All India Handloom Census 2019-20, there are about 15400 weavers and 6600 allied workers in the state. While distribution of weavers is almost balanced across genders, a greater percentage of allied workers are women, i.e., approximately 77 percent of allied workers.

The sector is dominated by co-operative sector comprising 98.4 per cent of total looms, and the rest being owned by private sector firms. The total production amounts to about 62.7 lakh metres of handloom cloth with a total value of cloth amounting to Rs 107.32 crore.

Based on discussions with stakeholders in the sector, the team has identified a list of challenges:

Table 21 Challenges Confronting Handloom Sector

Issues	Description
Raw materials	• MSMEs usually procure yarn from the District Yarn Society, which is supplied by the NHDC. The NHDC supplies yarn at subsidised prices under Govt. of India Yarn Supply Scheme as well as part of its normal policy • Delay in payments by the NHDC to spinning mills has caused disruptions in the supply to some of the handloom sector units compelling them to turn to private yarn agencies/dealers.
Labour	• Attracting and retaining skilled personnel is a concern. There are Central Govt training programmes including SAMARTH, under National Handloom Development Program (NHDP), for skill development of potential labourers. However, even if skilled personnel are available the MSMEs are unable to attract and retain them because of their inability to offer lucrative wages. Currently wage rate stands at around Rs 300-350 per day. • Introduction of mechanisation in pre-loom activities such as winding, warping, dyeing, etc has helped ease this labour constraint to certain extent.
Access to Markets	• Faces stiff competition from power loom sector in the state as well as the neighbouring state of Tamil Nadu • There has been attempts to onboard artists and weavers on various e-commerce platforms such as Myntra and Amazon India. In 2017 as part of its CSR initiative, Myntra an e-commerce platform for fashion brands in association with Ministry of Textiles sought to bring handloom products online and provide weavers and artisans access to new customers and opportunities. However, the scheme was not able to gather steam. Likewise, attempts at onboarding on Amazon India platform has not been able to garner momentum. • Some of the unit's export handloom products directly as well as through merchant exporters. Exports have nonetheless declined over years. • Some of the units, even when their products are covered under GI tag, have not thought about exports or market expansion.
Product Innovation	• Limited product diversification/value addition in the form of ready-made garments and lack of unique and innovative designs form critical challenges in the sector. • Design plays a vital role in the marketing of handloom products. Though various Central Govt institutes such as Weaver Services Centres offer design support to handloom units, the initiatives have had limited reach
Access to Finance	• Given financial conditions in the sector, banks often perceive loans to handloom units as high-risk making it difficult to access finance. • Delayed payments are also concern across units in the sector

2.2.3 Coir Sector

The state contributes to 61% of the country's coconut production and holds a significant share of over 85% in the coir product market. According to the Kerala Economic Review 2022, The coir industry stands as a primary traditional trade in Kerala, offering employment to approximately 150,000 laborers, with women constituting 80% of this workforce[42].

Based on discussions with stakeholders in the sector, the team has identified a list of challenges:

Table 22 Challenges Confronting Coir Sector

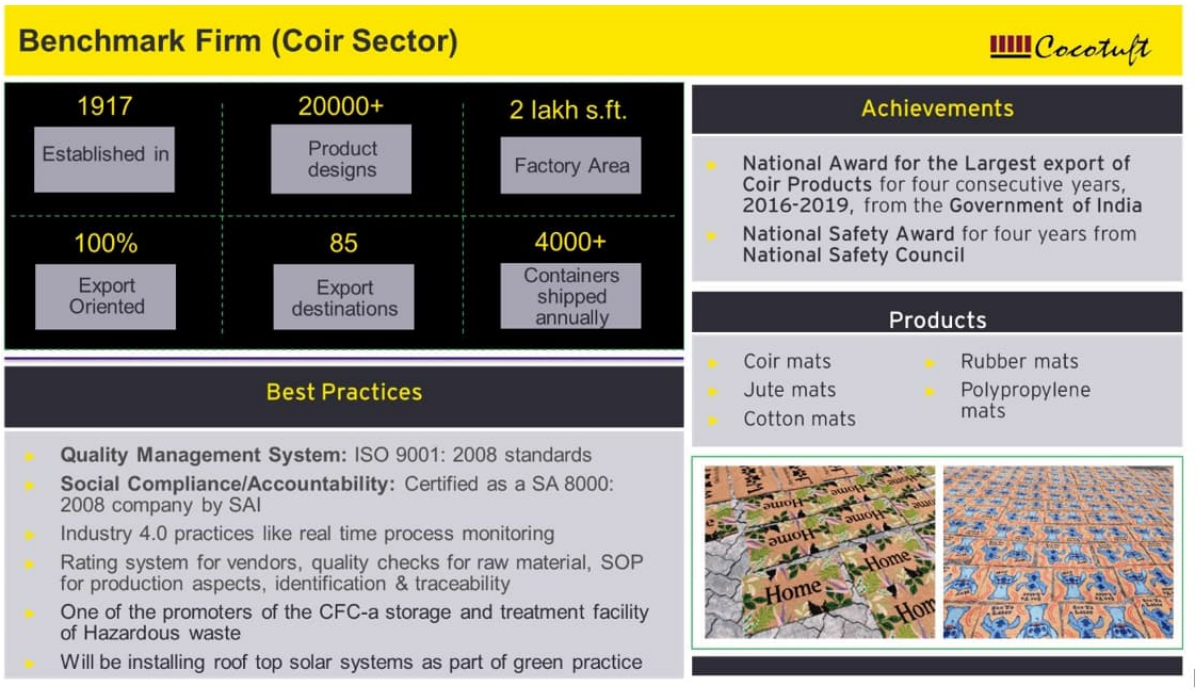
Issues	Description		
Cooperative societies	• They are plagued by misadministration, lack of quality control, lack of technological infusion etc. • In many of these societies the secretary lacks knowledge and understanding of the sector and the Presidents are politically aligned which questions their efficiency and motive in certain cases		
Raw materials	**Husk Procurement** • Inefficient and scattered coconut husk collection mechanism • Due to scattered plantations the husks are harvested at separate times • Substantial quantity of the husks is utilised by the households as fuel	**Defibering** • Mechanisation of defibering was promoted in Tamil Nadu and Karnataka before Kerala • Defibering units started to lose its importance with time • The state is forced to procure coir fibre and husks from Tamil Nadu • Nearly 90% of the coir fibre requirement is met by Tamil Nadu	**Quality** • As Mobile Fibre Extraction Machines (MFEM) are used in many places the fibre produced is inconsistent in colour and has rough texture • The fibres produced by the cooperatives in the state lack adherence to quality standards • Lack of proper quality check within the societies has resulted in the production of coir fibres of varied runnage • According to COIRFED, nearly 35% of the fibre

[42] https://spb.kerala.gov.in/sites/default/files/2023-02/ENGLISH%20FINAL%20PRESS%2004.02.2023_0.pdf

Issues	Description		
			produced in the state are subpar in quality
Overlapping Responsibilities	• COIRFED and KSCC are involved in the process of marketing and procurement of coir products. So, the same products are branded under two different names by the state machinery causes confusion		
Access to Technology	• Micro units lack access to modern methodologies utilised in the value addition process. For example, usage of latex tufting instead of PVC is done by the bigger units whereas the smaller units face hurdles in utilising this process		
Insufficient R&D	• While there have been some innovations in terms of designs, colours and the modernization of processes such as bleaching, dyeing, softening, and printing, have experienced minimal alteration. • Efforts to address gap in the utilization of natural fibres are almost nil		
Access to Market	• The private manufacturers in the sector mostly cater to the export market. Most medium units export directly to foreign customers whereas the micro and small enterprises supply to the merchant exporter. • The domestic market is unexplored by the private units, and is mostly catered by COIRFED and KSCC who have retail outlets • Knowledge of platforms like GeM, ONDC & general e-commerce platforms are relatively low among the units		

2.2.3.1 Benchmark MSME Enterprise

The benchmark MSME identified within the sector is Cocotuft, and a snapshot of the characteristics of the MSME is presented below



2.3 Mature sector

Wood, IT&ITES, General engineering, Textiles, Plastic are some of the mature sectors in Kerala. The state continues to invest in these sectors while exploring new opportunities for growth and development in other sunrise sectors identified earlier.

2.3.1 Wood and Wood products Sector

Historically known for its timber plantations, Kerala's wood industry encompasses various activities, including timber harvesting, sawmilling, plywood production, and furniture manufacturing. Efforts have been made to ensure responsible forest management, and certifications like the Forest Stewardship Council (FSC) are increasingly adopted to promote eco-friendly wood sourcing and production. Kerala's wood industry contributes significantly to employment generation, supporting livelihoods for numerous individuals. Its diverse range of products, including high-quality furniture, plywood, and wood-based handicrafts, caters to both domestic and international markets.

Based on discussions with stakeholders in the sector, the team has identified a list of challenges:

Table 23 Challenges Confronting Wood and Wood Products Sector

Issues	Description
Raw Materials	• Stricter regulations related to logging has resulted in shifting focus towards the usage of softwood by the units • Mahagony and Rubwood being the commonly used raw materials face availability challenges • Currently the rubber trees planted are hybrid varieties which have thinner barks which is a disadvantage to the industry • Illegal logging has resulted in the availability of raw materials at lower cost to unregistered units
Access to Technology	• Micro units still adhere to traditional methods for design and manufacture of furniture and construction materials • Usage of newer technologies like continuos pressing technology, sustainable adhesives & 3D laser cutters is not done by majority of the plywood units in the state. They lack knowledge on these areas
Sustainability concerns	• Treating process of wood is conducted in unsafe manners in certain units, this leads to exposure of chemicals by the labourers • Insafe disposal of the wood dust and other wastages generated from the production process • Wood treat chemicals leaches into the soil and water
Migrant Labour	• The plywood industry is concentrated in the Perumbavoor area. Migrant labourers dominate this plywood manufacturing units, insurance and other issues related to labour can be taken care of and supported

2.3.2 Paper, Printing & Allied Sector

The paper, printing, and allied sector in Kerala represents a dynamic and vital component of the state's industrial landscape, encompassing paper manufacturing and printing services to packaging production and allied services. Kerala's distinctive social, economic, and environmental context has influenced the growth and evolution of this sector. New Printing and allied sector MSME units have remained stable in the past few years. This applies the same for paper units too.

Based on discussions with stakeholders in the sector, the team has identified a list of challenges:

Table 24 Challenges Confronting Paper, Printing & Allied Sector

Issues	Description
Raw Materials	• Dependency on imported pulp & pulp from other states has comparatively increased the paper costs compared to other states • Shortage of paper mills is another huge concern. Kerala has a total of 9 paper units whereas Tamil Nadu has 70 • Specialty paper varieties like coated paper or fine art paper are reliant on imports • Inconsistent quality of the paper available is another major concern
Digital Disruption	Thrust towards digital media and advertising has seriously affected the demand for print materials
Lack of Innovation	• The industry being highly competitive needs innovation and research to keep up with the customer preferences • Especially the packaging industry in Kerala lacks access to innovation
Waste Management	• Wastepaper and boards due to inefficient handling process by the smaller units lose its value in the value chain • Paper wastes are collected from the major units and the recycling process is done in the state of Tamil Nadu
Technology	• Packaging units in the state face technological constraints while competing with the states of Maharashtra and Tamil Nadu. Practises needed for the development of packaging materials require adaptation

2.3.3 Plastic sector

There are around 1,000 plastic processing units in Kerala which manufacture plastic products such as plastic bags, PVC pipes, plastic bottles, household items like buckets and furniture, etc. These 1000 plastic processing units include those exclusively dealing with virgin plastics as well as those dealing with recycled plastics. Most of the units are based in Ernakulam, Thrissur and Kozhikode.

Based on discussions with stakeholders in the sector, the team has identified a list of challenges:

Table 25 Challenges Confronting Plastic Sector

Issues	Description
Raw materials	• The primary raw materials are derived from petrochemical feedstocks, such as crude oil and natural gas. Hence, one of the major concerns is price fluctuations. • Unlike virgin plastic processing units, it has become easier for plastic recycling units and associated manufacturing units to obtain raw materials. The Haritha Karma Sena has made raw material collection easier.
Labour	• Attracting and retaining laborers are a cause of concern. On average unskilled workers earn around Rs 500–780 per day and skilled workers around Rs 1000 per day. The wages of unskilled labourers are lower than that in plywood sector. In plywood sector wages are around Rs 700-800 per day given the nature of work involved.
Energy Source	• Availability of uninterrupted electricity is a concern • Attempts of Plastic Cluster to adopt wind energy is yet to become successful

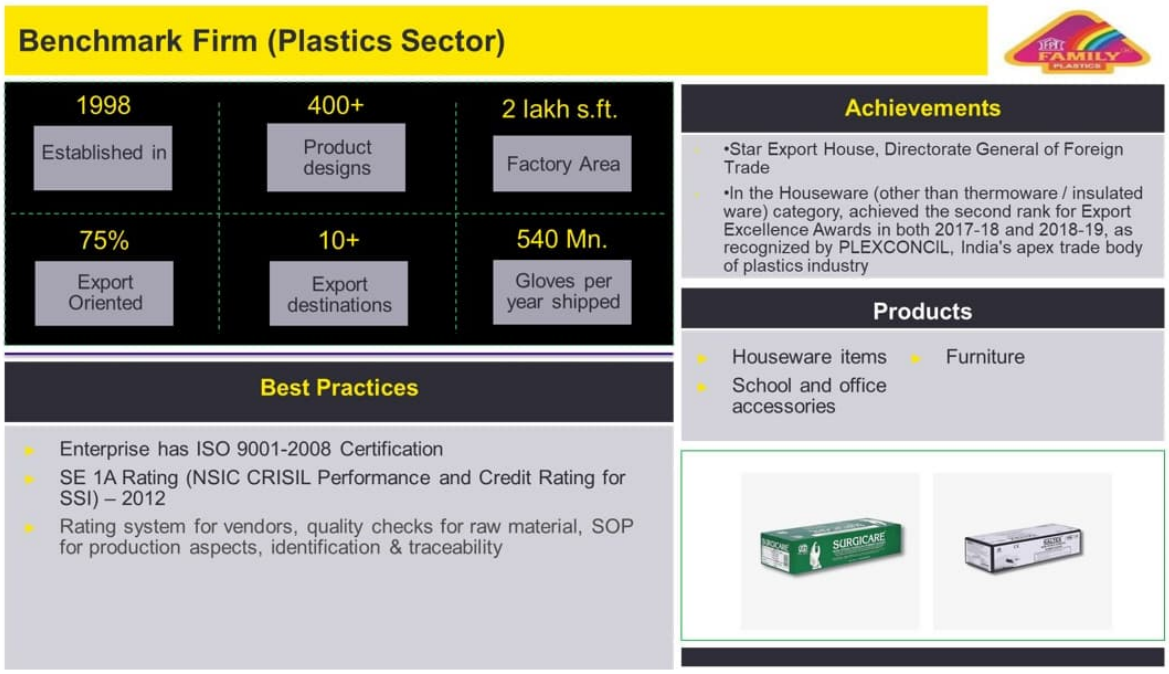
Issues	Description

Access to Markets	• The products can be classified volume centric items (tanks, pipes, etc,) and are not (packaging, etc). For volume centric items transportation cost is one of the major costs influencing market access and internal competition is more important than external competition
	  ◦ Increase in number of virgin plastic processing units within state
	  ◦ Strong competition from recycled plastic processing units, especially among segments where quality differences is not palpable.
	• For non-volume centric items, there is competition from other states such as Gujarat. Their scale of production enables them to sell at lower costs than units in the state
	• The distinction between volume-centric and other items also plays a role in their participation on e-commerce B2B platforms
	• The plastic recycling and manufacturing units mentioned that while they are present on India Mart, there has not been much sales volume since they demand full payment upfront.
	• The quality parameters relevant for exports are stringent and therefore costly to meet

Product Innovation	• Product range is limited; to withstand competition, units are planning to produce items such as toys, medical equipment's, ayurvedic bottles etc. which offer higher profit margins • It is difficult for units to switch their product lines owing to initial investment in the existing production processes
Technological Requirements	• The units largely utilise semi-automatic machinery for their production process. Some have also adopted fully automatic machinery for their processes.

2.3.3.1 Benchmark MSME Enterprise

The benchmark MSME identified within the sector is Family Plastics. A snapshot of the characteristics of the MSME is presented below



2.3.4 Textile Sector

The sector in Kerala includes areas like spinning and weaving with major units based out of public sector (both State and Central), co-operative sector and private sector. Post the COVID-19 pandemic, the Central PSUs have not been able to function in the state. While Kerala had big players within textile processing sector, these units could not sustain operations and subsequently shut down.

Based on discussions with stakeholders in the sector, the team has identified a list of challenges:

Table 26 Challenges Confronting Textile Sector

Issues	Description
Raw materials	• Owing to working capital shortages, mills usually purchase only a months' worth of raw material at a time thereby missing out on the benefits of lower cost of cotton in the post-harvest season. • Cotton is usually procured from neighbouring states including Tamil Nadu, Karnataka, and Andhra Pradesh. Being away from the raw material source, the mills must bear the transportation costs resulting in increased raw material cost. • Recently mills are purchasing cotton on their own and not at a collective level, either from Cotton Corporation of India (CCI) or private agencies. To procure from CCI, the mills had to make the full payment upfront which is not feasible given working capital shortage.
Labour	• The units find it difficult to attract and retain new employees such that the average age of workers is much higher than what is preferable. The wages are around Rs 1000- 200 per day, including all benefits, for permanent employees and Rs 500 per day for casual employees. • Absenteeism is another major issue, especially observed during night shifts
Energy Sources	• Electricity costs constitute a significant share of the production cost, at around approximately 20%. There have been instances where power supply has been cut off by Kerala State Electricity Board(KSEB) given the pending dues. • While discussions around solar energy are in place, the stakeholders are unaware about potential schemes and way forward.
Access to Finance	• Given the balance sheet position, the mills have to depend on the ODs. The variable cost components alone constitute more than 100%, making the working capital management difficult. Some of the units are currently sustaining the day-to-day operations because of the working capital assistance given by Government

Issues	Description
	• NHDC, one of the major buyers, also delays payment by about 3 to 6 months. On the other hand, while selling to private entities the mills demand full upfront payment.
Technological Requirements	• The spinning mills, while undergoing modernisation, continue to rely on outdated machinery. This impacts the productivity of spinning mills. • The Government of Kerala has made expenditure on technology upgradation of spinning mills. However, delay in disbursement of entire funds have affected the progress of modernisation impacting yarn quality, working capital and profits.
Access to Markets	Spinning Mills • Price of final output - yarn - is on average higher than that from other states including Tamil Nadu. While the prices are higher, the quality is not great because of outdated technologies. Hence, sales in domestic market are rather limited and an important market is Maharashtra. • The spinning mills cannot supply yarn to weaving sector directly, rather it is done through NHDC. Pending payments and requirement of NHDC that yarn shall be in hank form, which requires a greater number of labourers and different machines, have made it a less lucrative avenue. • On an average, there is a mismatch between supply and demand of yarn in Kerala, the production capacity of the mills is much greater than the demand for yarn from weaving sector. • The presence online, and/or in export markets is nearly nil. With working capital shortages, the mill procures cotton as and when required. This leads to differences in quality of yarn and production at a smaller scale. The exports market has hence remained distant given the mills' inability to cater sufficient quantity with required quality. Power looms • The primary focus is within state, and a major proportion is sold during occasions of celebration • There is strong competition from other states especially Tamil Nadu • There is some extent of exports via export agents, however, the scale is limited

2.3.5 General Engineering Sector

The general engineering sector in Kerala encompasses a wide range of manufacturing and engineering activities that contribute significantly to the state's industrial landscape. Kerala's engineering sector benefits from its access to a well-educated workforce, technical institutions, and research and development centres. The sectoral snapshot is as follows:

The state of Kerala has innate advantage in this sector to the presence of anchor units like ISRO, IISU, Brahmos, Cochin shipyard etc. These units are involved in the continuous production of heavy machinery, precision equipment, ESDM products etc. Currently the Class C products (products requiring minimal skill and technology incorporation) that are used by these industries are procured from the units present locally. As these units, follow a L1 procurement model, the industries in the neighbouring states owing to the low working costs quote the lowest price and get the order. There is scope for vendor development programs and collaborations where these units are promoted to source locally.

There are huge infrastructural projects planned in the state like Vizhinjam port, defense corridor, maritime cluster etc. As a result, there is huge potential for the industries in this sector to build partnerships, upskilling themselves and cater to the needs of these institutions. A need assessment is

to be conducted to map the requirements for their infrastructural developments and the firm capabilities are to be built based on this assessment.

Kerala being the leader in literacy rate and availability of skilled labour in the country must use this to its advantage. The engineering industry is constantly evolving, and it demands a workforce with updated skills. Skilling programs and vocational courses cater to industry specific needs, ensuring that workers are equipped to handle modern technologies and processes. There is huge pool of retired ISRO & DRDO officials in the state who can support in developing the skilling ecosystem of the state. The technology centre being developed in Kochi is focussed on skilling the msme units in high precision manufacturing.

There is lesser thrust to export general engineering and high precision components. This is due to the lack of awareness regarding the regulatory compliances and market potential related to exports. The units must focus on innovation and technology adoption so that its products meet international standards and are competitive in global markets. To capitalize these opportunities, entrepreneurs in the sector should focus on product quality, market research, and international collaboration, while addressing challenges to ensure sustained growth in exports.

2.4 Cluster Development Initiatives

The Government of India has launched various schemes and initiatives to promote the development of Micro, Small and Medium Enterprises (MSMEs) and enhance their competitiveness. Some of the notable schemes include Cluster Development Program (CDP), Scheme of Fund for Regeneration of Traditional Industries (SFURTI), and Scheme for Promotion of Innovation, Rural Industry, and Entrepreneurship (ASPIRE). These clusters are typically concentrated in certain geographies and consist of interconnected firms operating in similar or related industries.K-BIP is the coordinating agency of Directorate of Industries & Commerce for the implementation of Cluster Development activities in Kerala. K-BIP's efforts are aimed at addressing the unique requirements of each sector. Currently, the Ministry of MSME, Government of India, has approved 16 CFC projects[43] for the State. Among these, 12 CFC projects have already been put into operation, while the remaining 4 CFC projects are at different stages of implementation.

MSMEs face a range of financial and non-financial constraints that can impede their growth and development. The clusters are expected to tackle and resolve some of these constraints such as technological obsolescence, lack of skill training and capacity building. In addition, it could also act as a networking platform where units can exchange and access information relevant to them. Also, Government allocates resources, funding, and support to clusters. Identifying issues will allow for more targeted resource allocation and ensure that the critical needs are addressed. Further, it is expected to contribute to the long-term sustainability and competitiveness of these clusters which in turn can enhance the competitiveness and resilience of MSMEs. In this context, the assessment evaluates various aspects including infrastructure, availability of skilled labour, innovation, relevance of existing technology and need for tech upgradation among the clusters in the state.

2.4.1 Wood cluster

a. Kerala Furniture Consortium (P) Ltd.

The Kerala Furniture Consortium (P) Ltd since its inception in 2009 has been catering to the units not only in Perumbavoor but also to far districts like Kannur, Kozhikode, Malappuram etc. After the establishment of CFCs in Kannur and Malappuram the utilization rate of the unit has decreased. The SPV members diverted their focus on developing their own units and they established processing facilities in their own units.

[43] https://www.msmedithrissur.gov.in/doc/msc-cdp/CFC.pdf

Kerala Furniture Consortium — Perumbavoor, Ernakulam

Details

- Sector – Wooden Furniture
- Started in 2009
- Investment of 4.5 Cr
- No. of Units – 450
- No. of SPV members – 36
- Facilities – Seasoning, Design, Standardisation, Testing, Wood and Particle boards

Key Findings

The facility has been not utilised since June 2022. All the machinery installed were affected by the 2018 floods. No proper maintenance and repair works were done to the machinery post the floods. Internal tussle between the SPV members has resulted in underutilization and mismanagement of the facility centre. The centre has never reported profits since inception and has been majorly running in losses. This unit was started to cater the MSME units in the usage of rubber wood. Currently, the cluster units have established their own modern machinery for the process. There are no plans by the SPV members to revive the units. They are searching for avenues for the closure of the unit and return of investment

b. Valluvanand Wood Consortium Ltd.

Perinthalmanna boasts a longstanding heritage of wood craftsmanship, with highly skilled artisans and carpenters renowned for their mastery in intricately carving and creating a diverse array of wooden products. This includes furniture, sculptures, and decorative pieces. The town houses multiple furniture manufacturing facilities that offer a broad spectrum of wooden furniture, encompassing both traditional Kerala-style designs and contemporary styles. These establishments serve the needs of both local customers and those in the wider regional markets.

Wood Processing Cluster — Perinthalmanna, Malappuram

Details

- Sector – Wooden Furniture
- Started in 2006
- Investment of 2.5 Cr
- No. of Units – 100
- No. of SPV members – 38
- Facilities – Training Centre, Value addition, Processing of Wood

Key Findings

The current utilisation capacity of the unit is around 50%. Wood processing is the major activity carried in this CFC. The unit is currently operating at no profit no loss situation. Skill training under the STRIVE scheme is being provided to the selected individuals. The unit is fitted with comparatively olden machinery, there is a need to upgrade the machinery to increase the utilization rate. The waste collected is disposed off in the nearby vacant areas. Waste management is a necessity here. There is scope of green adaption practises. The CFC doesn't have ZED certification. New machinery (door clamping) is a requisite in the CFC.

c. Malabar Furniture Consortium Ltd.

The furniture industry in Kannur was characterized by small-scale, family-owned workshops and businesses, where craftsmanship was passed down through generations. This artisanal tradition contributed to the quality and uniqueness of the furniture produced. Over time, as consumer preferences evolved, the industry began incorporating modern and contemporary designs alongside traditional ones to cater to a broader range of tastes.

Wood Furniture Cluster — Taliparamba, Kannur

Details

- Sector – Wooden Furniture
- Started in 2019
- Investment of 11.6 Cr
- No. of Units – 320
- No. of SPV members – 34
- Facilities – Panel Saw Cutting Machines, Auto Copying Lathe, Belt Sanding Machines, Edge Banding Machines etc

Key Findings

The current utilisation capacity of the unit is around 70%. The CFC unit is fitted with modern machinery specifically finger jointing which is not available in other CFCs. It caters to the units around Kannur & Kasargod. The CFC has been trying to get STRIVE scheme approval but it still in progress. There is requirement for installing centralised dust collector in the facility. This has led to employees working in unsafe conditions, especially inhaling saw dust. The facility doesn't have ZED certification and there is high scope for green adaption. Basic infrastructural facilities like wall and roads are a necessity. Being a new unit, outreach activities are required to improve the utilization rate.

2.4.2 Printing Cluster

Within this cluster, a wide spectrum of printing services is offered, encompassing offset printing, digital printing, flexography, and packaging printing. It serves diverse industries, including but not limited to commercial printing, publishing, packaging, and the production of promotional materials.

Offset Printers Cluster — Thazhe Chovva, Kannur

Details

- Sector – Printing Sector
- Started in 2018
- Investment of 12 Cr
- No. of Units – 245
- No. of SPV members – 24
- Facilities – Designing facility, Training facility, Quality finishing facility

Key Findings

This centre caters to the needs of offset and DTP centres in the nearby areas. The unit is fitted with latest technology machinery. The utilization rate can be greatly improved. Printing of Indian express newspaper is carried out here. The waste generated is being collected by the agents from Tamil Nadu. They have obtained ZED bronze certification. The centre has scope for installation of machinery required in the packaging industry. This can greatly benefit the packaging units in the vicinity. Road infrastructure to the facility is poor. The centre is operating in tiny profits. Being relatively new, this unit can improve their outreach to bring in more business.

2.4.3 General Engineering Cluster

This cluster caters to the units around the Manjeri area in Malappuram district. There is lack of high precision equipment manufacturers in the surroundings.

General Engineering Cluster — Manjeri, Malappuram

Details

- Sector – Engineering Products
- Started in 2015
- Investment of 3.15 Cr
- No. of Units – 200
- No. of SPV members – 45
- Facilities – Testing facility for raw material and finished goods, Training

Key Findings

This facility currently operates at a turn over of 1lakh per month. The utilization rate is way below. The machinery needs upgradation. The powder coating machinery fitted here is the most utilized machinery. The unit is on the verge of closure. It doesn't have ZED certification and the scope for green adaption is also high. The MSME units in the cluster are mostly micro firms which employ 1 or 2 people. They are mostly focussed on welding, sheet erection, SS materials etc. Cluster units show hesitancy in improving their scope of work. Lack of industries in this region also leads to lesser demand for operation of CFC. Unless the cluster units show diversification in the products manufactured, upgrading the CFC shouldn't be in focus.

2.4.4 Plastic Cluster

The unit produces a diverse range of plastic products, including packaging materials, plastic components for industries like automotive and electronics, household plastic items etc.

Plastic Cluster — Aluva, Ernakulam

Details

- Sector – Plastic Products
- Started in 2009
- Investment of 4.9 Cr
- No. of Units – 108
- No. of SPV members – 36
- Facilities – Tool room facility for mould repairing, mould making, tools repairing, fabrication, injection moulding etc

Key Findings

With the quantum of initial investment, this unit could not adopt and implement a full-fledged CFC with all the adequate machinery. Most of the machineries here have lost their edge. Technology upgradation and proper maintenance has not been done and this has lead to the under utilization of this facility. The unit had made initial attempts to install wind mills for harnessing power, but financial constraints have stopped them. The unit doesn't have ZED certification and the scope for green adaption is moderate as the waste generated is completely recycled. This cluster has thriving units that have established their own facilities for manufacturing. There is scope for machinery upgradation.

2.4.5 Rice Millers Cluster

Ernakulam's rice mill cluster is deeply rooted in the agricultural heritage of the region, which is known for its cultivation of paddy rice in the lush fields of Kerala. The cluster comprises a diverse range of rice processing units, including traditional rice mills and modern rice processing facilities. These units play a crucial role in converting raw paddy into high-quality rice products.

Rice Millers Cluster — Kalady, Ernakulam

Details

- Sector – Food Processing
- Started in 2011
- Investment of 7.1 Cr
- No. of Units – 125
- No. of SPV members – 36
- Facilities – Rice Bran Oil Refining Unit

Key Findings

Over the last three years, this CFC has seen a persistent decline in performance and for the past 1 year this facility remains closed. Unlike other CFCs, here the consortium members join together and produced the final product i.e rice bran oil. Their main struggle lies in finding a market for their rice bran oil, which is presently confined to retail sales within Kerala. Additionally, sourcing raw materials became a challenge too. This consortium wanted to produce silicon from the waste rice brans, but unfortunately due to challenges in technology transfer and financing are unable to do so. There is scope for revamp with improvement to market access and transfer of technology

2.4.6 Rubber Cluster

Kottayam is renowned for its rubber industry and is often referred to as the “Rubber Capital of India”. Being home to numerous rubber processing, and rubber-based manufacturing units, the rubber cluster in Kottayam plays a pivotal role in the region’s economy.

Rubber Cluster — Changanassery, Kottayam

Details

- Sector – Rubber Products
- Started in 2006-07
- Investment of 57 lakhs
- No. of Units – 28
- No. of SPV members – 48 in the beginning and 23 now
- Facilities – Centralised Rubber mixing facilities

Key Findings

Across the years, this CFC has seen a persistent decline in performance owing to limited availability of facilities including machineries. The rubber processing and manufacturing units have developed own facilities at their units. Hence the capacity utilisation is around 20%. Therefore, the centre is running on a no profit no loss scenario. Given that a large number of units spread across Kottayam district focus on export oriented production, there is scope for machinery upgradation and introduction of requisite testing facilities. The unit doesn’t currently have a ZED certification and there is scope for greening of the unit.

2.4.7 Key Takeaways from Cluster Visits

During the consultations, several important points were discussed regarding infrastructure, availability of skilled labour, innovation, relevance of existing technology and need for tech upgradation. The following list presents key takeaways derived from the consultations held with clusters across the state.

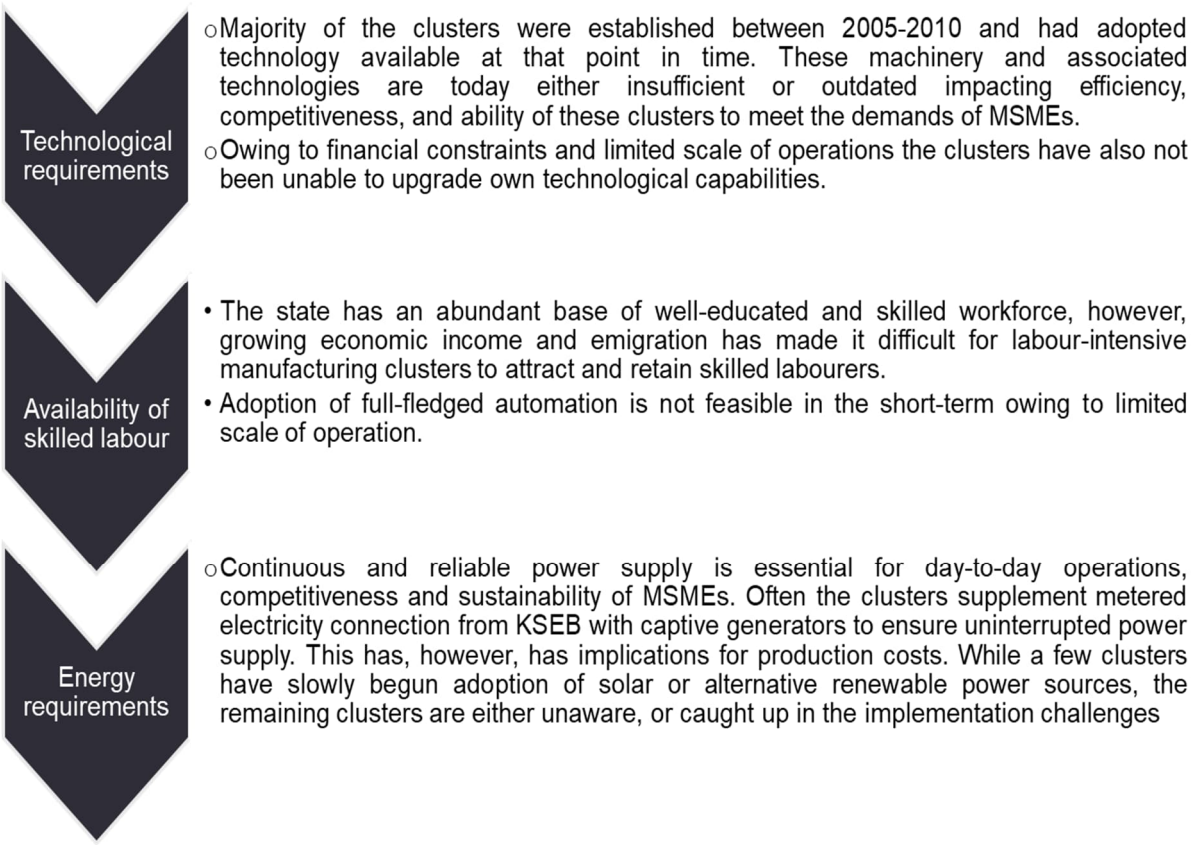


Figure 46 Common Issues Confronting Clusters under MSE CDP

2.5 Snapshot of Challenges

2.5.1 Business Environment and Industrial Ecosystem

2.5.1.1 Industrial Policy 2023

With its rich tapestry of resources, innovations, and policy frameworks, the state is redefining the business environment to attract a global audience. The state of Kerala delves deep into the multi-faceted business ecosystem, offering valuable insights for investors and entrepreneurs.

Kerala's Industrial Policy 2023 sets an ambitious roadmap to create an Industry 4.0-ready ecosystem by 2027. The policy targets seven core areas, effectively acting as pillars upon which the state aims to build its industrial future. The seven pillars of focus are[44]

a. Fostering Entrepreneurship

The state is committed to nurturing start-ups and SMEs by providing various incentives and mentorship programs. This is aimed at developing an entrepreneurial culture that can innovate and drive economic growth.

b. Enabling Infrastructure

Recognizing the need for robust infrastructure, Kerala is prioritizing investments in both digital and traditional forms. The focus here is to create an environment where businesses can thrive without logistical challenges.

c. Being Hi-Tech

With a keen eye on the future, the state aims to integrate emerging technologies like Artificial Intelligence, Internet of Things, and blockchain into its industrial fabric.

[44] Kerala Industrial Policy 2023

d. Building Futuristic Skillsets

Skilling initiatives are aligned with anticipated market demands, ensuring that the workforce is prepared for the jobs of tomorrow.

e. Supportive Business Environment

Regulatory sandboxes and simplified procedures are being put in place to make it easier for businesses to operate.

f. Enhancing 'Kerala' Brand Equity

Through strategic marketing and partnerships, the state aims to position itself as a premium investment destination.

g. Building Sectoral Ecosystems

Specialized industrial clusters and parks are in the pipeline to offer targeted growth platforms for various sectors.

Furthermore, the Industrial Policy 2023 offers various incentives each crafted to address key considerations for investors, ranging from financial viability and quality standards to social responsibility and large-scale impact. They collectively make Kerala a compelling choice for diverse investment opportunities.

a. SGST Refund

The State Goods and Services Tax (SGST) refund policy in Kerala offers 100% reimbursement on capital investment for a period of 5 years. This is aimed at reducing the initial financial burden on investors, making it more lucrative to invest in the state. By mitigating a significant portion of the tax liability, this incentive promotes long-term commitment from businesses.

b. Investment Subsidy

Kerala provides an investment subsidy of 10% on fixed capital investment, subject to a maximum cap of Rs. 10 Crore, disbursed in phases. This is designed to alleviate the upfront capital expenditure for businesses, thereby encouraging more investments into various sectors within the state.

c. Employment Enhancer Incentive

The state also offers incentives to businesses that employ more than 50% of their workforce from the local population in permanent roles. This serves dual purposes: it ensures local community development and helps businesses integrate more seamlessly into the state’s social fabric.

d. Stamp Duty Exemption

Complete exemption from stamp duty is another financial incentive aimed at reducing the initial costs associated with setting up a business. This could involve property transactions, legal documentation, and other areas where stamp duty would usually be applicable.

e. Quality Certification Incentive

Businesses can avail themselves of incentives for quality certifications like CE, FDA, ISO, BIS, etc. The state offers to cover up to 50% of the expenses for such certifications, subject to a maximum of Rs. 25 Lakh per unit per annum. This encourages businesses to adhere to international standards, thereby enhancing their competitiveness.

f. Incentives for Sustainability and Responsible Industrialization

Kerala offers a 25% reimbursement of expenses, up to a maximum of Rs. 25 Lakh, for initiatives aimed at sustainability and responsible industrialization. This could involve adopting green

technologies, waste management systems, or any other practices that contribute to sustainable development.

g. Special Project Incentives

For large, mega, and ultra-mega projects of special importance, Kerala offers incentives on a case-to-case basis. These are decided by a High-Power Committee headed by the Chief Secretary of the state. This allows for customized packages that can include a variety of benefits tailored to the unique needs and scale of the project.

2.5.1.2 Kerala Single Window Interface for Fast and Transparent Clearance (KSWIFT)

Kerala offers an efficient, streamlined process for industrial licensing through its K-SWIFT system. This fast-tracks online system provides entrepreneurs with seamless statutory clearances, enhancing the ease of doing business.

KSIDC facilitated implementation of various digital reforms to meet the fast-paced approval timelines and streamline the application process for entrepreneurs in the State through a unified e-platform, a Common Application Form and Online Clearance Mechanism K-Swift (Kerala Single Window Interface for Fast and Transparent Clearance) with Department web portals and payment gateways. KSWIFT currently provides the services of 14 Departments/Agencies.

Sl	Department	Service
1	**Factories & Boilers**	Permit for Construction
2		Factory License
3	**Fire & Rescue**	Consent to Establish
4		Fire Safety Clearance
5		Electrical Scheme Approval
6		Issue of Safety Certificates
7	**Electrical Inspectorate**	Electrical Safety Approval
8	**KSEBL**	Electricity Connection (LT/HT)
9	**T & CP**	Consent to Establish
10		Layout Approval
11	**LSGD (Urban)**	Building Permit
12		Development/Redevelopment Permit
13		Issue of Occupancy Certificate
14		Municipality License
15	**LSGD (Panchayat)**	Building Permit
16		Development/Redevelopment Permit
17		Issue of Occupancy Certificate
18		Panchayat License
19	**Kerala Water Authority**	New water connection
20	**Ground Water Department**	Groundwater investigation

Sl	Department	Service
21		Pumping Test
22	**Labor Department**	Registration of Shops and Establishments
23		Registration for Contractor
24		Registration for Building and Other Construction Workers
25		Registration for Interstate Migrant Workers
26	**Mining & Geology**	Quarrying Permit for Ordinary Earth Removal
27	**SEIAA**	Environmental Clearance
28	**Forest & Wildlife**	License for Sandal and other wood based industrial units
29		Permission for cutting and transportation of Trees

Table 27 Departments/Agencies integrated in KSWIFT

a. Operational Overview of K-SWIFT

The K-SWIFT platform, Kerala's innovative Single Window Interface for Fast & Transparent Clearances, has the following key functionalities:

- Common Application Form (CAF) across multiple departments with unique identification number.
- Online tracking of applications and approvals within fixed timelines.
- Auto identification of services based on Questionnaire.
- Real-time notification and alert via SMS, e-mail and through Dashboard.
- Auto calculation of fees based on the validity of service availed.
- Integrated Payment mechanism through e-Treasury and Bank gateway.
- Downloadable digital approvals.
- Third Party Verification of Approvals.
- Auto generation of Deemed approval based beyond set timeline.

Furthermore, as of the latest data Sept. 2023, there are over 69,000 entrepreneurs registered on the portal, indicating a strong interest and engagement with K-Swift. Out of these, about 9000 have already submitted their Common Application Form (CAF).

On the service front, a total of 5,920 services have been initiated. While a vast majority, 3,678, have been approved, there are 858 services currently under processing, and 474 yet to be initiated. K-Swift system maintains a transparent record, showcasing 910 services that have been rejected. Additionally, there has been a substantial granting of MSME clearances, numbering at 41,163.

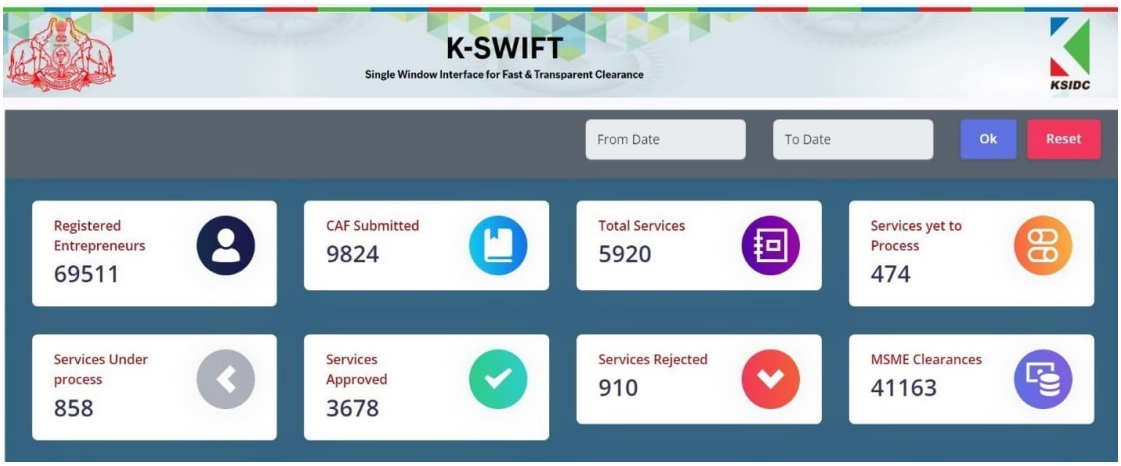


Figure 47 Screenshot of the Dashboard of K-SWIFT

b. Snapshot of MSME Clearance Data under K-SWIFT in Kerala:

Detailed district wise overview of the Micro, Small, and Medium Enterprises (MSME) clearances facilitated through the K-SWIFT platform in Kerala. It encapsulates key metrics, from total applications processed to the specifics of those still pending payment, successful certificate generation, and instances where certificates were rescinded. This comprehensive data set underpins the vitality of the MSME sector in Kerala's economy and reflects the state's commitment to transparency and efficiency in business clearances.

DISTRICT	TOTAL	WAITING FOR PAYMENT	CERTIFICATES GENERATED	CERTIFICATES REVOKED
Alappuzha	1676	94	1580	2
Ernakulam	6016	326	5554	136
Idukki	1041	110	890	41
Kannur	2016	141	1796	79
Kasaragod	1301	70	1231	-
Kollam	4209	205	3657	347
Kottayam	2135	155	1947	33
Kozhikode	3130	173	2799	158
Malappuram	5178	299	4779	100
Palakkad	2396	161	2206	29
Pathanamthitta	1786	119	1506	161
Thiruvananthapuram	4170	244	3834	92
Thrissur	5422	239	5030	153
Wayanad	687	46	626	15
Total	41163	2382	37435	1346

Table 28 District wise Status of MSME clearance facilitated

2.5.1.3 Investment Avenues & Models

Kerala presents a diverse range of investment avenues across multiple sectors, each backed by significant government support, opportunities, and incentives. From Future Skills to E-Mobility, the state is leveraging specialized parks, centres of excellence, and policy frameworks to attract investments. These initiatives are complemented by strong talent pools, world-class infrastructure, and strategic location advantages. Whether it's the high-tech aerospace & defence sector supported by ISRO or the burgeoning green energy field with plans for 3,000 MW of renewable energy generation, each sector is carefully curated to align with global market demands and future trends.

The state offers a particularly conducive environment for technology-driven sectors. With specialized infrastructure like the Integrated Centre for Innovation and Growth (GIFT city) for Financial Services and IT SEZ Parks for IT & ITES, Kerala is at the forefront of digital transformation. Coupled with sector-specific policies like the Fintech Policy of 2022 and plans for e-mobility zones, Kerala is strategically positioning itself as a hub for innovation and sustainable development. Overall, the state's multi-sectoral investment avenues make it a compelling destination for both domestic and international investors.

Furthermore, Kerala offers a variety of investment models to suit diverse business needs. Co-developers can participate in projects by providing specialized services or components. Special Purpose Vehicles (SPVs) allow for a focused, project-based approach. Direct Investment offers full control over operations, while Long-term Leases provide the benefits of asset utilization without the initial capital expenditure. Joint Ventures enable risk-sharing and resource pooling with local entities. Private Industrial Park Schemes offer the advantage of ready-to-use infrastructure, and Special Economic Zones (SEZs) provide tax and regulatory benefits. Lastly, Industrial Township Development aims to create self-contained industrial communities with comprehensive amenities. Each of these models is designed to offer flexibility, risk mitigation, and operational efficiency to investors.

The details of investment avenues are as stated below:

Sector	Government Support	Opportunities	Incentives	Additional Details
Future Skills	Centre of Excellence for Industry 4.0, Kerala Blockchain Academy, Kerala Institute of Entrepreneurship Development, Advanced Skill Development Centre (ASAP)	Industry 4.0 focus	Strong talent pool	Agri-Tech, Food Technology, Advanced Engineering, Creative industries
Aerospace & Defence	KINFRA Defence Park, Kerala Space Park	Setting up of Defence and Aerospace facilities	Park offerings such as Common facility centre, Warehouses, etc.	Technical support of ISRO, Location attractiveness like Brahmos Aerospace in Trivandrum
Financial Services	Integrated Centre for Innovation and Growth (GIFT city)	Setting up of financial complexes at Kochi GIFT City	Digital driven environment	Kerala Fintech Policy, 2022
IT & ITES	IT SEZ Parks	Setting up of IT professional Services centres	Key offerings like Equipped with IT building, SEZ Land & Non-SEZ Land	More than 800 companies, Provide employment to over one lakh IT professionals in India
Logistics	Promotion of Inland Water Cargo Transport	Setting up Inland Water Cargo Transport	Cost-efficient water transport	Urbanization rate of Kerala is expected to surge up to 90% by the mid-2030.
Food Tech	Technology Clinics, State level Value Added Agriculture Mission (VAAM)	Setting up of Technology Clinics	High-quality products, Rich raw material base	Strong MSME base, Value addition prospects like Coconut, jackfruit, etc.
Petrochemicals	Upcoming Petrochemical Park, Cochin	Setting up of manufacturing facilities	World-class infrastructure	Location advantage like Access to Cochin seaport and airport

Sector	Government Support	Opportunities	Incentives	Additional Details
Green Energy	Bio 360 Life Sciences park, Working group for Hydrogen Economy Mission	Setting up of an environmentally Sustainable Biorefinery & Renewable Packaging Biomaterial Innovation Centre	Skilled Talent, Strong research base	Green Energy Generation Plan like 3000 MW RE generation planned during 2022-27
Marine	Existing Maritime Cluster, Sustainable Maritime Hub	Create a thriving ecosystem	Export potential, Infrastructure strength	Fulfilling global demand like Diverse ethnic seafood cuisine
Graphene & Nanotechnology	Graphene R&D and incubation facility, Graphene industrial park	Huge Potential market for Sensors, solar cells, and biomedicine	R&D Institutions like STIC of CUSAT, NIST, etc.	Govt. support: India Innovation Centre for Graphene (IICG)
Medical Device	Investment Opportunity in Medical Device Manufacturing Unit	Medical Devices and technology to support Augmented Reality and Robotics	Investment Opportunity in Research & Development, Healthcare Infrastructure	Telemedicine Wireless Technology and Smart Devices
E-Mobility	Plans to create e-mobility zones, Pilots at tourist spots	Targeting to Replace existing 6000+ buses with e-buses by 2025	Heavily subsidized electricity tariffs	Ambitious target to electrify all vehicles by 2030

2.5.1.4 MSME Grievance Redressal Mechanisms

Grievance redressal mechanism serves as a structured platform to resolve conflicts and disputes. Redressing complaints from MSMEs about government policies/initiatives is not just about resolving individual issues; it's about fostering economic growth, promoting entrepreneurship, ensuring fairness, and building a more inclusive and resilient economy.

MSMEs have access to several grievance redressal mechanisms including the CHAMPIONS portal, SAMADHAAN portal, and the grievance redressal portal of the State Industries Department. The CHAMPIONS portal, established by the Ministry of Micro, Small and Medium Enterprises, serves as a dedicated platform for addressing grievances raised by MSMEs. This portal efficiently directs complaints/queries to the relevant branch/bureau/office heads within the MSME Ministry, ensuring a response within three days. Along similar lines, the State Industries Department has also established a grievance redressal platform, which is available to all enterprises including MSMEs.

The Micro, Small and Medium Enterprise Development (MSMED) Act, 2006 contains provisions for tackling delayed payments to MSEs. In line with this, the SAMADHAAN is an online portal developed by the Ministry of Micro, Small and Medium Enterprise. where MSMEs can file their applications online regarding delayed payments. The applications can also be made by the MSE unit before the concerned MSEFC of his/her state.

Upon analysing the survey findings, a trend emerges that most MSMEs remain unaware of these essential platforms. This lack of awareness places them in a vulnerable position when confronted with potential challenges. The logic behind this concern lies in the fact that these grievance redressal platforms, such SAMADHAAN, are vital tools that can protect the interests of MSMEs. By remaining unaware of these platforms, MSMEs risk missing out on opportunities to seek timely redressal of their grievances. This could lead to the adoption of more costly and resource-intensive solutions that could potentially impact their financial health, strain business relationships, and jeopardize overall stability

2.5.1.5 Industrial Infrastructure

2.5.1.5.1 Physical Infrastructure

Kerala's industrial infrastructure is designed to be a catalyst for innovation and economic growth. One of the standout initiatives in this context is the Kochi-Bengaluru Industrial Corridor, a mega project aimed at fostering industrial development and improving connectivity between key economic hubs. The state's ambitious Private Industrial Estate Scheme 2022 plans to roll out 100 new industrial parks within the next three years, adding to the existing portfolio of over 147 sector-focused industrial parks and areas. These specialized parks cater to a wide range of sector including Bio Life Science, Petrochemicals, Multisector, Food Processing, Hi-tech, and Defence, among others.

Furthermore, Kerala is in the process of developing three new industrial parks specifically focused on Medspark, Petrochemicals, and Rubber industries. These parks are expected to provide state-of-the-art facilities and a conducive environment for businesses in these sectors. Whether it's the bio-life sciences or high-tech defence applications[45], Kerala's industrial infrastructure aims to provide an ecosystem that is conducive for innovation, scalable growth, and sustainable development. This multi-pronged approach makes Kerala an attractive destination for both domestic and international investors looking for cutting-edge industrial infrastructure.

During ground level survey, the enterprises were asked about access to and/or availability of various infrastructure services in the state. Majority of the respondents were satisfied with the infrastructural facilities provided with respect to electricity, water, land and solid waste management. However, being a small state, some of the MSMEs have flagged availability of land as a crucial concern. While creation of industrial parks, and industrial estates can and has eased the concerns, it is equally important to ensure better allocation of land and utilisation of land available in the state. In addition, there is much scope for improvement in provision of facilities and support under testing laboratories, and effluent

[45] State Economic Review, 2022

treatment mechanism. These services are important in improving efficiency cost-effectiveness of their operations and ensuring standardisation as well as product quality. The challenges faced by MSMEs in disposing of their solid waste also need to be addressed for sustainable business practices.

Udyam Registered Enterprises

Parameters	Very Poor	Poor	Fair	Good	Exceptional
Electricity	5%	8%	16%	21%	49%
Water	3%	13%	21%	23%	40%
Land	7%	18%	25%	16%	33%
SWM	3%	7%	26%	33%	32%
ETP	14%	17%	25%	15%	29%
Cold Storage/Warehousing	9%	16%	30%	13%	31%
Connectivity	8%	12%	17%	19%	43%
Testing labs	8%	16%	31%	18%	24%

Udyam Unregistered Enterprises

Parameters	Very Poor	Poor	Fair	Good	Exceptional
Electricity	3%	9%	14%	20%	54%
Water	2%	7%	17%	26%	46%
Land	5%	12%	35%	16%	32%
SWM	1%	5%	32%	36%	26%
ETP	8%	24%	28%	14%	25%
Cold Storage/Warehousing	8%	14%	29%	16%	32%
Connectivity	3%	6%	19%	25%	48%
Testing labs	0%	5%	38%	14%	38%

* SWM – Solid Waste Management, ETP – Effluent Treatment Plant

2.5.1.5.2 Energy

Physical infrastructure plays a crucial role in the competitiveness of MSMEs. Reliable and uninterrupted power supply is critical for MSMEs. Based on survey results it is seen that almost all the enterprises depend on metered electricity connection for sourcing electricity. The trends are quite similar among Udyam unregistered enterprises as well. Additionally, to ensure a stable power supply 29% (17%) of the Udyam registered (unregistered) enterprises depended on generators to supplement the power supply. This difference between registered and unregistered enterprises could reflect the differences in their scale of operations. Dependence on alternate and/or additional power sources can potentially increase production costs and impact profit margins of the micro enterprises that are already struggling to stay afloat.

One notable aspect of Kerala's energy landscape is the high tariff imposed on High Tension power supplied to industries, a move aimed at conserving energy resources. For MSMEs, electricity costs are a significant component of their operational expenses. To understand how the electricity costs in the state compare to other industrialised states in India, a comparison of the electricity costs under High Tension power supply is provided in the table below. Both states exhibit distinct economic profiles, with Tamil Nadu being one of the most industrialised states. Understanding whether there are any differences is crucial to identify potential opportunities for cost savings and offer of support to MSMEs if required.

Table 29 Comparison of Electricity Charges in Kerala and Tamil Nadu

I. HT – Industry	Kerala		Tamil Nadu	
	Previous Tariff	FY 23	Previous Tariff	FY23 - FY27
• Demand Charge (Rs. /kVA of Billing Demand/Month)	340	390	350	550
• Energy Charge (Rs/unit)	5.75	6.1	6.35	6.75
II. LT				
Cottage and Tiny Industries				

(a) 0-250kWH			
• Demand Charge (Rs. /kVA of Billing Demand/Month)		20	70
• Energy Charge (Rs/unit)		4	4.5
(b) Above 250kWH			
• Demand Charge (Rs. /kVA of Billing Demand/Month)		20	70
• Energy Charge (Rs/unit)		4.6	6.5
Power Looms			
(a) 0-250kWH			
• Demand Charge (Rs. /kVA of Billing Demand/Month)		60	100
• Energy Charge (Rs/unit)		5.20	6.5

While Kerala and Tamil Nadu possess unique industrial landscapes, it is noteworthy that there is similarity in electricity rates between the two states for industrial users. This similarity in energy pricing suggests a degree of parity in the cost of electricity for enterprises operating in both regions.

2.5.1.6 Labor

The global adoption of automation, including in India, has been on the rise. Enterprises are currently at various stages of this transition, and the accessibility of both unskilled and skilled personnel has become a crucial factor in influencing enterprise performance. Kerala, recording an employability rate of 64.2%, holds the third position among the 10 states in the country, as indicated in the India Skills Report for 2022. This means that skilled personnel in the state have a plethora of employment opportunities to choose from, creating challenges for MSMEs in attracting and retaining such talent.

In this context, MSMEs have reported several challenges related to the availability of skilled personnel. These challenges are multifaceted, featuring two prominent aspects: demand for higher wages and a shortage of skilled personnel. The increasing demand for higher wages from skilled personnel can strain the budgets of MSMEs, especially micro and small enterprises, affecting their operating costs and profitability.

A critical and interrelated concern is the scarcity of adequately skilled individuals within the immediate talent pool. Despite the commendable employability levels in the state, finding individuals with the precise skills and aptitude required for the job can be formidable task. The scarcity of qualified personnel adds complexity to the talent acquisition process. A larger share of unregistered enterprises reported concerns with respect to finding local skilled workforce; given their sectoral focus and scale of operations the ability of unregistered enterprises to offer competitive wages and attract requisite talent may be limited.

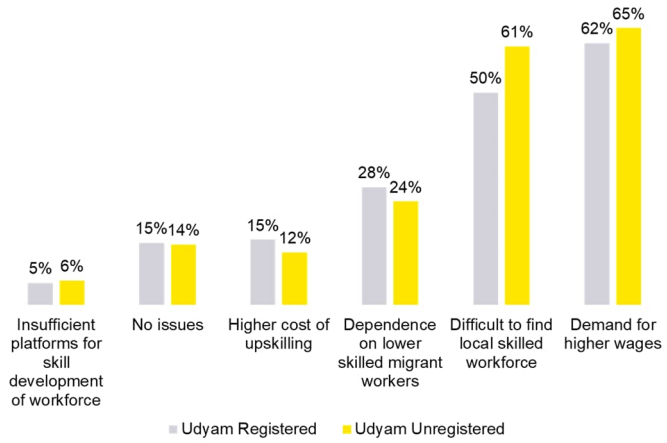


Figure 48 Challenges with respect to Skilled Labor

Additionally, some of the challenges encountered, especially with respect to availability of skilled laborers and skill development are as follows:

a. Lack of practical on job training owing to limited local apprenticeship opportunities
b. According to industry feedbacks, students from ITI require additional grooming to satisfactorily perform the duties at the workplace
c. Limited opportunities and awareness for up skilling/continuous learning for existing employees in their respective industries.
d. Limitations in the existing institutional infrastructure for continuous interaction with industry/ employers is leading to limited placement opportunities for students.
e. There is a need for assessment of extant skill development training programs offered different by different institutes. At present the courses to be offered are decided based on the enrolment data from previous years resulting in a mismatch between the requirements of the industry and skillset acquired by the employees

These challenges necessitate comprehensive measures to bridge the skill gap, foster industry partnerships, and enhance the overall effectiveness of skill development initiatives in the state.

2.5.1.7 Raw Materials

Access to an adequate quantity and quality of raw materials stands as a pivotal factor in ensuring the consistent and responsive supply of products and services. One of the major challenges that emerged was the rising cost of raw materials, a concern expressed by over 70% of the Udyam registered and unregistered enterprises. This issue is particularly pressing for MSMEs, as their capacity to absorb mounting costs is limited. They find themselves in a challenging position, unable to entirely pass on these cost increases to their customers while also lacking the financial cushion of substantial free cashflows. Consequently, this scenario squeezes their profit margins and compromised their sustainability within the competitive market landscape.

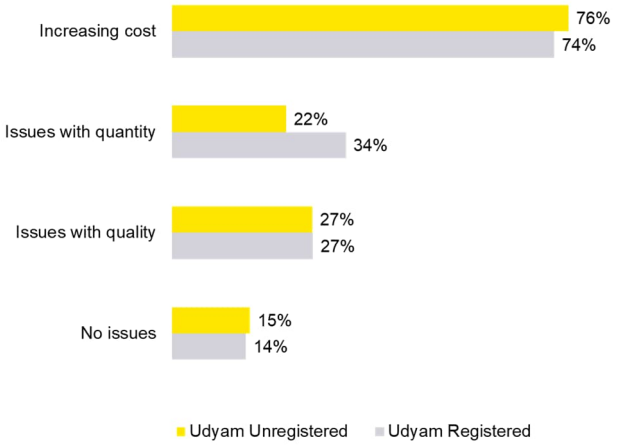


Figure 49 Challenges in Accessing Raw Materials

In addition to cost considerations, other substantial concerns revolve around the adequacy and quality of available raw materials. These concerns likely stem from the limited capacity of these enterprises to access broader supplier networks for their raw material needs. In the case of registered MSMEs, possibly due to their relatively larger scale of operation, over 30% of units encounter challenges in procuring the necessary quantity of raw materials. This underscores the importance of addressing supply chain constraints and enhancing the accessibility of quality raw materials to support the growth and efficiency of MSMEs.

2.5.1.8 Technology

For the growth and scalability of MSMEs, enhancing productivity and maintaining product quality are imperative and technology serves as the linchpin for achieving both objectives. However, a significant majority of the surveyed enterprises encountered various challenges when attempting to integrate technological improvements into their production processes. As per MSMEs, spanning the categories of Udyam registration, one of the primary challenges is a lack of awareness (61%) about relevant technologies. Even when they do become aware of these technologies, MSMEs often find obstacles to their adoption, including the associated costs, a dearth of technical guidance and support, and difficulties in securing financial backing for implementation. It's noteworthy that a nearly identical percentage of Udyam registered, and unregistered enterprises reported these same issues, underscoring that these challenges are consistent across the board and are experienced with similar intensity. This highlights the universal nature of these hurdles within the MSME sector, and the urgent need to provide MSMEs with support and resources to facilitate adoption of pertinent technologies.

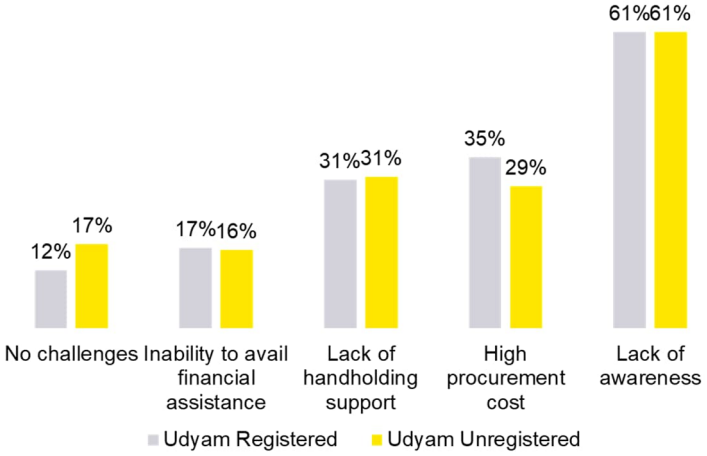


Figure 50 Challenges with respect to Technology Adoption

2.5.2 Access to Finance

2.5.2.1 Formal Financial Institutions

Based on analysis of the challenges faced by various sectors in critical areas such as access to finance, market expansion and enterprise-level capacity, it becomes evident that the state has significant stride in addressing credit constraints and streamlining credit delivery to diverse sectors. The success in mitigating credit constraints and enhancing credit delivery can be attributed to the multitude of financial incentives, schemes, and the robust presence of financial institutions within the state. Nonetheless, it is important to highlight that credit constraints continue to pose challenges to micro enterprises, who form a majority of the MSMEs in the state.

Access to finance plays a pivotal role in the establishment, growth, and expansion journey of any enterprise, including MSMEs. The ground survey findings reveal some interesting insights into the preferences of Udyam registered and unregistered enterprises regarding their primary sources of financial support. Among Udyam registered enterprises, there's a near-even split: 45% prefer formal financial institutions, such as commercial banks, while an almost equal 44% opt for loans from family members, friend, peers as their first preference for financing/meeting their business requirements.

On the other hand, for unregistered enterprises, most of the enterprises (49%) lean towards loans from family members, friend, peers as their first preference for securing finances to meet their business requirements. This suggests that many MSMEs, either do not approach formal financial institutions for loans, or when they do they face challenges in accessing them. The situation is further exacerbated in the case of unregistered enterprises, likely due to their smaller scale of operations vis-à-vis registered enterprises within the sample, and the inability to access support or other assistance mechanisms targeting the specific needs of this segment. This data underscores the need to enhance access to formal financial channels for MSMEs, as well as to simplify the lending process, ensuring that these vital enterprises can secure the necessary funding for their growth and development.

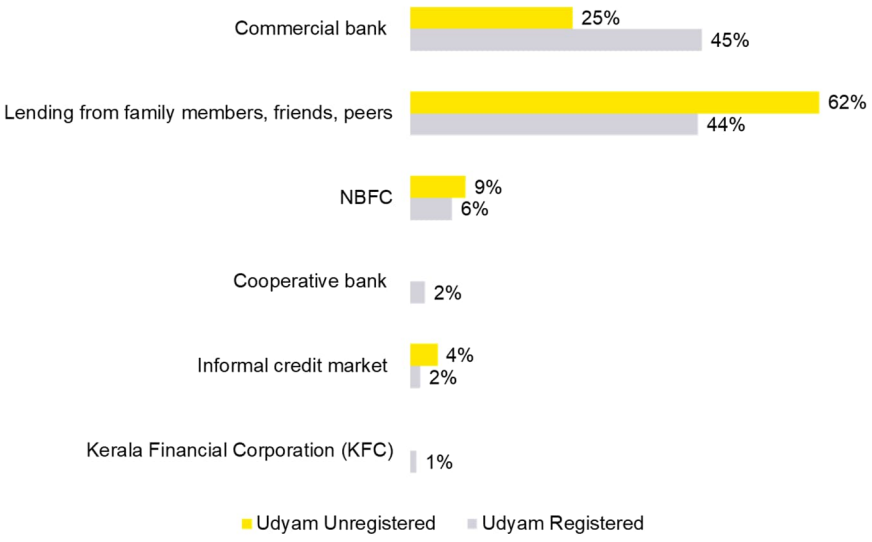


Figure 51 First Preference for Accessing Finance

Enterprises have identified several significant challenges when accessing loans from formal financial institutions, including high interest rates, stringent collateral, and documentation requirements among other hurdles. Despite the presence of various schemes like Scheme for Interest Subvention to Nano-Units, Entrepreneur Support Scheme, and CGTMSE, enterprises continue to face obstacles in accessing credit. Additionally, concerns have arisen regarding the difference between requested loan amounts and sanctioned amounts, as well as the extended turnaround time for loan applications. These challenges could be linked to the size of the enterprises considered, and in turn resulting from heightened scrutiny of their applications. The predicament becomes even more challenging for

unregistered enterprises due to their inability to access benefits under some of these schemes. Moreover, the financial information for these enterprises, at least those covered within the sample, may not be readily available because they lack essential documents such as ITR filings and GST records.

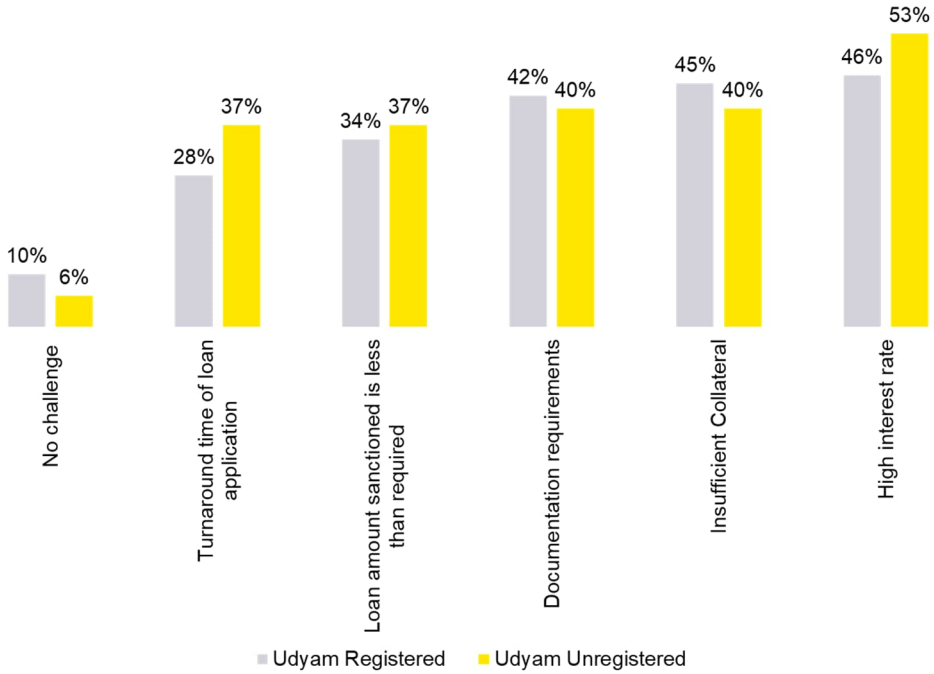


Figure 52 Challenges Encountered by MSMEs in Accessing Finance

One of the factors that could have enhanced credibility, lowered borrowing costs, and supported growth and stability is the enterprise credit rating. Maintaining a strong credit profile is an essential aspect of fiscal management for any enterprise. However, a stark reality is that close to 54% of Udyam registered MSMEs and 67% of unregistered MSMEs remain unaware of the concept of enterprise credit ratings. This lack of awareness could be potentially attributed to a variety of factors, including limited access to financial education and information channels. Even when they heard of it, many are uncertain about the procedures involved. Currently, a mere 13% of registered and 7% of unregistered enterprises have undergone the process of obtaining a credit rating. This underscores the need for greater awareness, education, and simplification of the credit rating process to empower more enterprises to harness the benefits of a strong credit profile.

To understand the roots of this issue, despite the attempts at improving financial inclusion of MSMEs, comprehensive stakeholder consultations were conducted with financial institutions to gauge the breadth and depth of challenges in the loan issuance process. By consulting with these stakeholders, the aim was to identify challenges and issues that can be addressed to facilitate a more streamlined policy interventions process. And the findings revealed that the challenges are multi-fold and complex, ranging from administrative to financial and strategic in nature for MSME.

Considering these findings, it becomes clear that tackling the challenge of credit accessibility for MSMEs is not a straightforward task and calls for a coordinated approach. This consultation is a first, essential step toward understanding the complexities involved and laying the groundwork for more targeted interventions. By bringing these issues to light, we aim to pave the way for financial products outreach, financial literacy programs, and type of loans available that can bolster the MSME sector's ability to secure the credit it so critically needs. The details are as below:

Sl	Frequent issues when issuing loans	Observations from Public and Private Bankers
1	Incomplete & Inaccurate Documents	• Many MSMEs struggle with updated KYC and lack digital literacy. • Financial statements often lack audited proof • Issues with business registration. • Frequent omissions in required documentation, unclear understanding of prerequisites. • Unable to provide documents such as MoA, AoA. The problem is more in Micro and Small Businesses
2	Inability to Repay the Loan	• High variability in cash flows in Micro and small enterprises • Revenue instability in certain sectors leading to default risk. • Small enterprises have unpredictable revenue streams. • Businesses often over-leverage, affecting repayments. • MSMEs show cyclical income patterns.
3	Unable to meet Regulatory Compliance	• Frequent failure to meet regulatory guidelines (Pre-Requisite while applying for loan). • Unable to get license from the local Panchayath. • Ignorance of the latest tax changes; low adaptation to new regulations.
4	Bad Credit History	• Limited formal credit history. • Existing debts with informal lenders. • Previous loan defaults. • Limited creditworthiness. • Heavy reliance on informal lending
5	Unstable Business	• Dependence on a narrow range of products. • Cyclical or seasonal income patterns. • High volatility in income. • Limited business history. • Uncertainty in business stability
6	No Clear Business Plan	• Lack of detailed planning and execution. • Limited access to advisory services. • Overambitious plans lacking in feasibility • Generic business plans with no USP. • Failure to align business plans with market needs.
7	No knowledge on Market Potential	• Overexposure to saturated markets. • Limited market research. • Low demand for products. • Inability to diversify into new markets • Business concentration in low growth sectors
8	Misuse of Loan Funds	• Vague purposes for loan utilization. • Diversion of funds for non-business activities, such as taking term loan and using it for personal purpose. • High operational costs consuming loan funds. • Poor fund allocation and budgeting. • Inefficient use of capital leading to poor ROI

Table 30 Observations from the Banks Stakeholder Consultations

2.5.2.2 Digital Lending

The lending landscape is undergoing rapid changes, with the emergence of digital lending set to disrupt the conventional brick and mortar frameworks of traditional financial institutions. This opportunity is driven by growing formalisation and digitisation observed within the MSME sector, as well as advent of India Stack – a comprehensive set of digital infrastructure, emergence of alternate approaches to sourcing, underwriting, and servicing credit

Access to credit is one of the critical challenges confronting MSMEs across the globe, including India. Nearly all MSME credit-related challenges can be traced to information asymmetry and issue of possessing 'thin' files. This results in stringent documentation and collateral requirements, long processing times, and yet disparity between amount requested and sanctioned. Digital lending has inherent advantages that address these pain points. By digitising the entire loan application process, the digital lending platforms have been able to utilise digital data trails, reduce turnaround time, and overall improve the operating cost efficiency. This enables easier access to credit, especially to NTC customers, and enables the enterprises to climb the credit ladder.

The FinTech digital models are building business models and capabilities to capture the market via exploration of alternate credit scoring mechanisms. The alternate credit scoring mechanism rather than relying solely on collateral or historical financial statements, focuses on borrower's ability to generate cash and meet their financial obligations. For lenders this is expected to improve their ability to make more accurate assessment of creditworthiness, and for borrowers this is expected to offer them flexible financing and enable easier access to affordable credit. Some of the emerging and prominent players in the market include Indifi, KredX, U GRO Cap, Capital Float, etc.

The mainstream market players in the digital lending landscape, however, have limited roots in the state. In this context, the longstanding players in the state could expand their existing lending capabilities into the digital realm and explore the potential of alternate credit scoring method, or explore co-lending opportunities via feasible platform partnerships, supply-chain financing options, etc. Most incumbent banks have granular data on MSMEs via access to bank statements, or previous credit histories, enabling lenders to generate detailed insights into borrower behaviour. Additionally, new information sources, such as transaction data (e.g., point-of-sale data trails) and other surrogate data (e.g., telco, utility payments) could be added to this existing information to obtain even deeper view. **Hence, there is a scope to improve capabilities of existing financial institutions in the state to facilitate digital lending capabilities. However, it is crucial to ensure that the emergence of digital lending platforms do not exacerbate the existing issues around fake loan applications, and other potentially exploitative practices, and does not compromise on data privacy and security concerns**.

2.5.2.3 Equity Financing for MSMEs

The BSE MSME Exchange, a platform for Micro, Small, and Medium Enterprises (MSMEs) in India, has been instrumental in providing these businesses with a unique opportunity to raise equity capital for growth and expansion. As of now, there are 292 companies registered on the BSE MSME Exchange, spread across various states and industries in India.

The state with the highest number of registered companies is Maharashtra with 92 companies, followed by Gujarat with 61 companies, and Delhi with 50 companies. The industry with the highest representation is Services, with 60 companies, followed by Capital Goods and Consumer Durables, with 38 and 21 companies respectively.

In Kerala, there are a total of 1162 medium enterprises, of which 548 are in manufacturing and 614 are in services. However, only two companies from Kerala are currently listed on the BSE MSME Exchange - Fone4 Communications (India) Ltd in the Consumer Services industry and Safa Systems & Technologies Ltd, they are distributors of white goods for major brands of electronic goods.

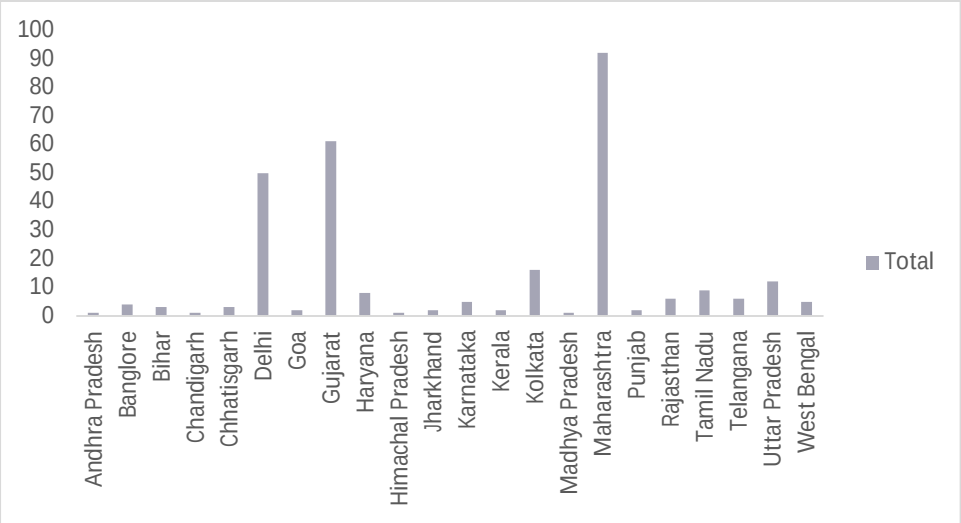


Figure 53 No. of MSME listed in BSE stock exchange State Wise

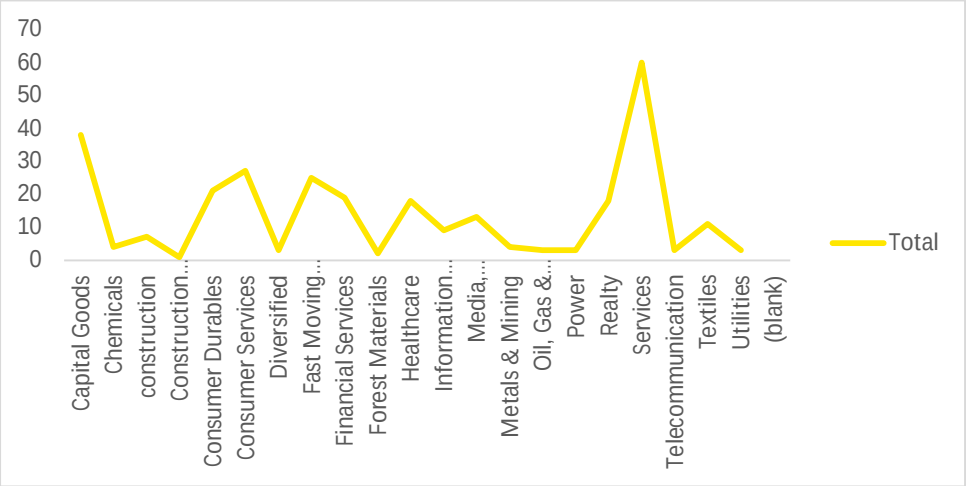


Figure 54 Industry wise number of MSMEs on Stock exchange

To gain a deeper understanding of IPO awareness among MSMEs in Kerala, particularly focusing on medium sized enterprises, we conducted interviews to identify the level of understanding, challenges, and apprehensions concerning IPOs. The findings are tabulated in the table that follows:

S.No	Factors	Description
1	Capital Requirements	Medium Industries are often prioritizing short term liquidity over long term capital needs due to immediate operational concerns.
2	Market Awareness	Medium Enterprises owners are equating IPOs with larger corporations, failing to see it as viable for their scale
3	Skill Gap	Lack of skilled professionals to guide through the listing process.

S.No	Factors	Description
4	Market Conditions	Prevailing economic uncertainties like inflation or market volatility can erode investor confidence as medium enterprises are not ready to take this risk
5	Complexity & Time	Medium Enterprises are feeling that the time and complexity involved in the IPO process discourage MSME owners.
6	Lack of Incentives	Not Aware of the State Level Incentives

Table 31 Understanding, challenges, and apprehensions of MSMEs concerning IPOs

This data underscores the importance of empowering MSMEs in Kerala and facilitating their listing on platforms like the BSE MSME Exchange. Already listed MSMEs can serve as case studies to motivate more MSMEs to take up. As per Industrial policy 2023, SMEs in Kerala shall be Reimbursed of 50% expenses subject to a maximum of Rs. 1 Cr., incurred on floating Public Issue through the SME platform of NSE & BSE, provided the funds thus raised are utilized for setting up/ expanding enterprise in the State.

2.5.2.4 Delayed Payments

In Kerala, the government has established a State Micro and Small Enterprises Facilitation Council at the Directorate of Industries and Commerce in Thiruvananthapuram. The council is headed by the Director of Industries & Commerce, Government of Kerala. Additionally, three Regional Micro and Small Enterprises Facilitation Councils have been set up at District Industries Centres in Thiruvananthapuram, Ernakulam, and Kozhikode.

Below mentioned are the details of MSME Samadhaan District Wise Report:

District Name	Applications filed by MSEs	Application Pending	Cases Pending	Total Pending (Application + Cases)
ERNAKULAM	682	83	200	283
MALAPPURAM	177	26	58	84
THIRUVANANTHAPURAM	156	18	34	52
KOLLAM	133	9	11	20
PALAKKAD	110	9	26	35
KOZHIKODE	97	10	20	30
THRISSUR	91	27	21	48
KOTTAYAM	69	8	25	33
KANNUR	33	18	1	19
ALAPPUZHA	26	1	11	12
KASARAGOD	24	9	0	9
IDUKKI	11	3	5	8
PATHANAMTHITTA	8	1	1	2
WAYANAD	2	1	0	1

a. **High Total Pending Rates**: Idukki and Kannur stand out with the highest total pending rates of 72.73% and 57.58% respectively.

b. **Imbalanced Pending**: In Ernakulam, the case pending rate is significantly higher than the application pending rate, possibly indicating a lag in the adjudication process.

c. **Low Total Pending**: Kollam has the lowest total pending rate of 15.04%, which could imply better management or a simpler caseload.

The current data for Kerala indicates that while several sellers, PSUs, and corporate buyers have been onboarded onto the TReDS platforms (RXIL, Invoicemart, M1xchange), there are still many MSMEs that have not yet been onboarded. Based on the survey findings, over 70% of MSMEs, irrespective of their registration status, are unaware of the platform. This is largely due to the challenges such as lack of awareness about the platform and its advantages, technological challenges in registering on the platform, trust issues regarding the security and confidentiality of information on the TReDS platform, and difficulties in aligning internal processes with the requirements of the TReDS platform.

To increase traction and encourage more MSMEs and Buyers to onboard onto the platform, the exchanges are taking proactive steps. They are collecting feedback from buyers and reaching out to suppliers to understand their concerns and motivate them to get onboarded. They are also willing to conduct awareness sessions with PSUs and MSME bodies to educate them about the benefits of the TReDS platform and guide them through the onboarding process. This approach aims to address the challenges faced by MSMEs and create a more conducive environment for them to leverage the benefits of the TReDS platform by fostering better understanding and trust in the system. One potential solution is to leverage the support of on-ground BDSPs who can play a pivotal role in creating awareness about these initiatives and assisting MSMEs with onboarding process onto these relevant platforms.

2.5.3 Access to Market

2.5.3.1 Key market access related issues for major sectors

Sl	Sector	Access to market related issues
1.	Ayurveda	People tend to purchase the drugs manufactured by established brands This hinders the market penetration by the smaller units. There is rise in targeted negative publicity against the ayurveda medicine system specifically to drug usage.
2.	Food Processing	Many food processing units, especially smaller ones, struggle to reach wider markets due to constraints in distribution networks and lack of market information. Many consumers now seek out artisanal and locally produced food products, valuing quality and authenticity. Balancing scale and production capacity with maintaining artisanal quality can be a challenge.
3.	Rubber	Sales within domestic market, while relevant, is often limited by virtue of being far from major industrial/manufacturing hubs. Export is one of the major avenues of sales for many MSME units. It is done both directly and indirectly through exporters. Participation in export exhibitions is, however, limited
4.	Medical Devices	Potential to scale exports
5.	Handicraft	Digital Divide and E-commerce Adoption: Some districts, like Malappuram and Kozhikode, struggle with online marketing due to a lack of digital literacy among artisans. Market Research and Trend

Sl	Sector	Access to market related issues
		Adaptation: Adapting to changing consumer preferences and keeping up with market trends poses challenges, especially in districts like Thrissur and Alappuzha, where traditional crafts are predominant.
6.	Handloom	There has been attempts to onboard artists and weavers on various e-commerce platforms such as Myntra and Amazon India. In 2017 as part of its CSR initiative, Myntra an e-commerce platform for fashion brands in association with Ministry of Textiles sought to bring handloom products online and provide weavers and artisans access to new customers and opportunities. However, the scheme was not able to gather steam. Likewise, attempts at onboarding on Amazon India platform has not been able to garner momentum.
7.	Coir	The private manufacturers in the sector mostly cater to the export market. Most medium units export directly to foreign customers whereas the micro and small enterprises supply to the merchant exporter. The domestic market is unexplored by the private units, and is mostly catered by COIRFED and KSCC who have retail outlets
8.	General Engineering	There is a small fraction of units with General Engineering who have potential to graduate to units supplying to aerospace units in the State.

2.5.3.2 Innovation and Value Addition within Clusters

One of the recurring concerns across sectors based on the discussions with stakeholder on ground is the inability to access new markets and/or expand within an existing market. Based on the survey results most manufacturing MSMEs primarily sell their products within local markets and their respective districts. This data underscores the heavy reliance of MSMEs on local markets, with approximately 80% of Udyam enterprises concentrating their efforts within these boundaries.

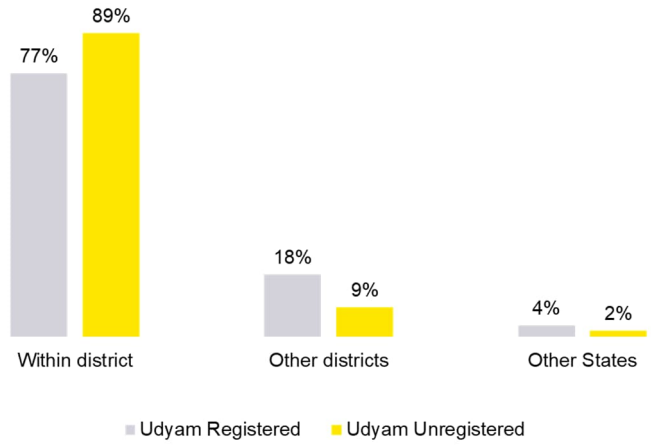


Figure 55 Major Markets for Products/ Service of surveyed MSMEs

One of the primary challenges consistently reported by the surveyed MSMEs pertains to low margin realization and the high costs associated with product promotion. While there might be minor variations in the percentage of responses, the overarching trend remains consistent regardless of the Udyam registration status. These shared challenges underscore the pressing need for comprehensive support and solutions that can benefit all MSMEs. Most importantly, they underscore the limited value addition, innovation, and product differentiation occurring within these enterprises. Consequently, the State, in

collaboration with technical institutes and mentors, has undertaken concerted efforts to foster innovation within diverse clusters spread across the state. These efforts are made with scalability as an additional point of focus.

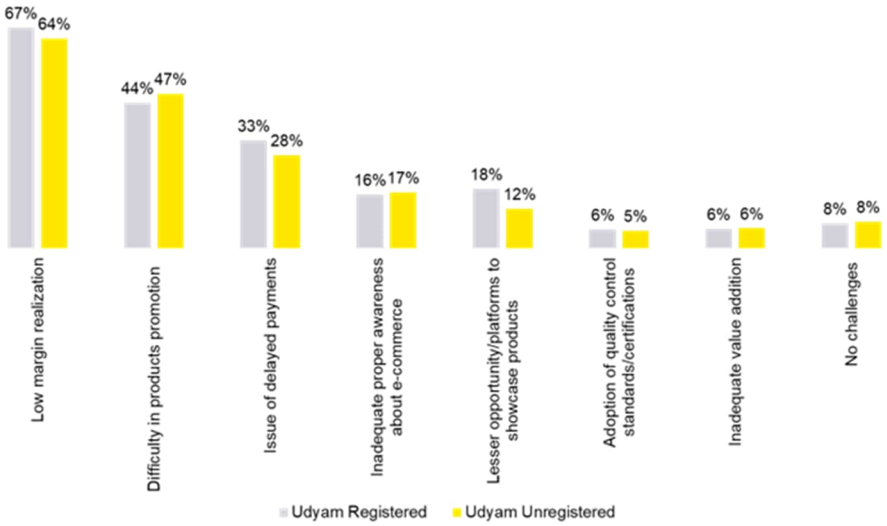


Figure 56 Challenges in Market Access

The intent of the collaborations is to lead to potential process and/or product innovations within the sectors under consideration. Process innovation is about doing things better within the production process, while product innovation is about creating something new or drastically improving what already exists. Both are important from the perspective of MSMEs, as it helps them to stay competitive and offer customers something valuable and differentiated. Some of the innovations proposed across various sectors are listed below:

Table 32 Innovations and Cluster Development under K-DISC

SI	Cluster Name	Mentor Institute/s	Innovations Proposed
1	Amrutam Nutrimix, Calicut	MDIT, Kozhikode	Innovations in product lines via new products such as Vitamom (vitamin booster for feeding mothers)
2	Kalady Rice Millers Cluster, Ernakulam	Adishankara Institute of Science & Tech., Morning Star	Product innovation via manufacturing of ash bricks using the ash of rice bran, and value added products of rice bran oil for skin and hair care.
3	Kollam Cashew Processors (DIC)	TKM College of Engineering Kollam	Product innovation to enable diversification and value addition via products such as cashew powder, milk etc
4	Bell Metal Heritage, Kannur	College of Engineering, Thalassery	Process innovation via preparation of initial pattern by using 3D printing technology and also development of permanent moulds for some of the most common products to reduce the time of production by 30%, at least.
5	Balaramapuram Cluster2 - Vanita Handloom, Trivandrum	Asian School of Management & Marian Engineering College, Trivandrum	Product innovations in baby wear and customizable designer sarees
6	Kanhirode Handlooms Cluster	Vimal Jyothi Institute of Management & Research	Process innovation via introduction of organic / eco-friendly natural dyes in Kids wear, combined with mechanisation of pre-loom

			processing and introduction of electronic jacquards etc
7	Primero Apparel Park, Kollam	College of Engineering, Pathanapuram	Product innovation where in tailoring waste will be converted to door mats, soft/stuffed toy production unit using shredded waste cloth
8	Kollayil Ecotex Handloom Consortium, Balaramapuram, Trivandrum	Asian School of Management & Marian Engineering College, Trivandrum	Process innovation via introduction of organic / eco-friendly natural dyes & herbal mix for production of 'Mundu'
9	Kuthampully Handlooms, Thrissur	Jyothi Engineering College, Thrissur	Process innovation to improve productivity. This will be done via development of semi-automated loom and electronic jacquard to produce designs in the handloom products
10	Perumbhavoor Plywood Manufactures (DIC)	TOC H, Rajagiri SS	Innovation in producing bio-resins from the oil of cashew nuts shells
11	West Malabar Plywood Cluster (DIC), Ernakulam	SCMS Polytechnic, Kochi	Production of a particle board which enhances waste recycling, provides value addition as well as generates new revenue stream.

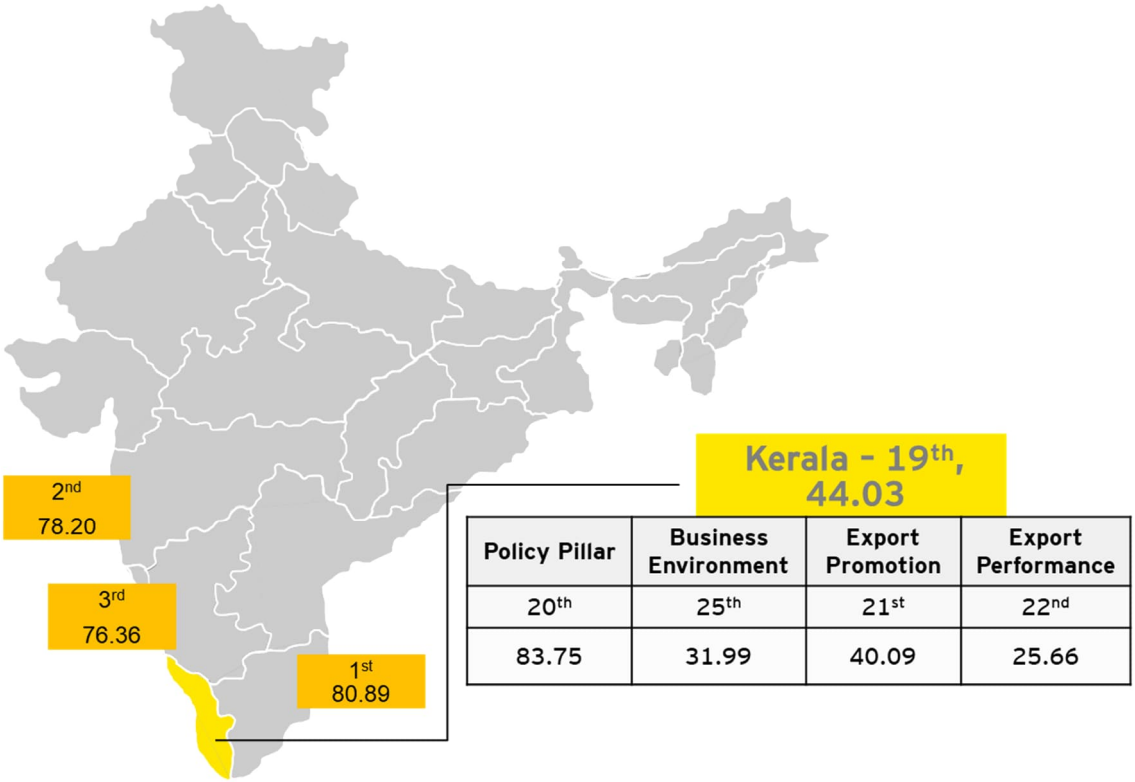
2.5.3.3 Sectors with potential export opportunities and associated challenges

In the fiscal year 2022-23, Kerala's merchandise exports amounted to ₹35,117.23 Crore, constituting approximately 6% of the state's GDP at constant prices and contributing 1% to India's overall merchandise exports during the same period.

a. Kerala's Performance on Export Preparedness Index

Kerala's performance in the Export Preparedness Index (EPI) reflects a mixed picture of strengths and areas for improvement. The lowest-performing coastal state of Kerala has an overall score of 44.03 and is placed 19th in the country. Dominant exports from the state include Gas Oil, cashews, and shrimp which along with other exports have led the state to an export value of US$ 4 Billion. Kerala's export preparedness is underscored by its robust policy framework, securing a rank of 20 in this category with a score of 83.75. However, it falls short in other pillars of the index. The state's business ecosystem ranks 25th, with a score of 31.99, while its export ecosystem's rank of 21 and score of 40.09 demonstrate room for growth. Export performance also presents a challenge, with a rank of 22 and a score of 25.66.

Kerala's strengths lie in its policy ecosystem, facilitated by strong export policies. The state possesses a decent business environment, with infrastructure advantages like reliable power supply and dedicated industrial zones. Connectivity through air cargo terminals and Free Trade Zones is another positive aspect. However, export growth remains moderate, and challenges include a lack of knowledge dissemination on global markets, absence of dedicated state-centre coordination, and a high tariff for power to industries. To enhance its export prospects, Kerala can consider measures like creating a trade guide, organizing capacity-building workshops, and establishing dedicated export promotion zones. By addressing these areas, Kerala can create an ecosystem conducive to sustainable export growth and capitalize on its regional advantages.



Policy Pillar	Business Environment	Export Promotion	Export Performance
20th	25th	21st	22nd
83.75	31.99	40.09	25.66

Figure 57 Kerala's performance in the Export Preparedness Index (EPI)

b. Benchmarking vis-à-vis Other States

Each state formulates its export promotion schemes to align with its unique economic and industrial context, ultimately aiming for more effective and personalised support for the export-oriented units including MSMEs. To identify best practices, assess its impact, and determine areas for improvement, a comparative analysis is conducted with the schemes and initiatives of similar and best-performing states in India, which include Karnataka, Tamil Nadu, Andhra Pradesh, Maharashtra, Haryana, Gujarat, and Chhattisgarh.

Component	Possible schemes/activities at State level	Best practice/provision in other states	Provisions in Kerala
Dedicated Export Facilitation Cell	NA	• Andhra Pradesh – Dedicated export promotion is set up at DICs for capacity building and export guidance. Also, notified Dedicated State Export Promotion Facilitation Cell • Haryana - Dedicated Market Development & Exports Promotion Cell within the Directorate to enhance export potential of MSMEs for entering new markets & increased global value chain participation Notified District Export Promotion Councils (DEPCs) in all districts for improving export scenario at the district level	• Export Promotion Policy 2023 intends to operationalise Export Promotion Committees (EPCs) at State and District levels to prepare district-wise export profiles, identify sector specific support, lay down key performance indicators and support measures
Investment on PP&E	Capital investment subsidy and interest subvention	• Chhattisgarh – Export-oriented units receive 5% additional subsidy on fixed capital investments of about 40-50% compared to general category entrepreneurs. Also, the upper ceiling limit is increased by 5% Export-oriented units get 5% additional incentives, and the ceiling of incentive will be increased by 5%, and in the terms of time limit- one year more, in addition to the incentives enumerated in clause 15.1 above for the general category entrepreneurs.	• Offers subsidy of 35% of capital investment costs, limited to Rs 2 crores per entity, for those procuring equipment / machinery for setting up of export-oriented units
Factor Conditions	Electricity duty/tax charges	• Karnataka - 100% Electricity tax exemption for new MSME Export Enterprises (Minimum 50% of the turnover should be in exports) for an initial period of 5 year in Zone-3.	No provisions

Component	Possible schemes/activities at State level	Best practice/provision in other states	Provisions in Kerala
		• Maharashtra – Only eligible 100% export-oriented units, in Group A & B areas, are exempted from payment of electricity duty for a period of 7 years	
	Land Allocation	• Haryana - 100% export-oriented units shall be given priority for allotment of land in the Industrial Estates developed by HSIIDC	
	Freight charges	• Chhattisgarh – Transport grants to export-oriented units, equal to actual charges from the place of manufacture of the product to the place of export. According to the Industrial Policy, the maximum limit of assistance will be Rs 30 lakh per annum • Haryana – Freight subsidy to new exporting Micro & Small Enterprises, up to Rs 10 lakhs, to defray costs from premises of the unit to the Seaport/ Air cargo/ International borders	
Quality Certifications	Charges related to certification	• Andhra Pradesh - For compulsory marking like Conformity European (CE), China Compulsory Certificates (CCC), Good Manufacturing Practices (GMP), Phytosanitary certificates, Global Food Safety Initiative (GFSI) recognised schemes etc reimbursement of 50% of certification cost subject to maximum of Rs 2 lakh per unit per annum • Karnataka - Refund of certification charges incurred for obtaining statutory certifications like CE, CCC, GMP, Phytosanitary certificates, IFS-BRC-FSSC 22000 Certification to the extent of 50% of expenses subject to maximum of Rs 1 lakh per unit	• Subsidies to the tune of 50% of expenses, subject to max Rs 2 Lakh per unit per annum for 2 years, to cover costs associated with certifications, quality testing, etc

Component	Possible schemes/activities at State level	Best practice/provision in other states	Provisions in Kerala
		• Tamil Nadu – Fee paid on testing and quality certification acquired by MSEs for exports reimbursed by 75% of the fee with a ceiling of Rs 1 lakh, or actual, whichever is lower subject to max 3 certifications in a year per MSE. • Haryana - 75% reimbursement (up to INR 10 Lakhs per certification) of the total expenditure incurred for obtaining certifications such ISO/ HACCP/ BSI/ WHO-GMP/ ZED/TS/ Hallmark certifications and other country specific certifications	
Market Development Assistance	Facilitating participation in international trade fairs/exhibitions	• Maharashtra – Subsidises 50% of actual space rent or Rs 1 lakh, whichever is low, to small scale units in a financial year. The units can participate 5 times in an international fair/exhibition, or 5 years only • Andhra Pradesh – 30% subsidy in ground rent for participation in international fair • Haryana - Financial assistance for participation in international fairs/exhibitions, including 75% of cost incurred (max up to Rs 4 lakhs) towards space charges, shipment of exhibits, cost of product literature, display material, etc. and up to Rs 1 Lakh for air fare	• Reimbursement of 75% with a ceiling of Rs 2 lakh per year for participating in national and international trade fairs, exhibitions
Export Incentive	Incentives and awards	• Karnataka - MSME Enterprises who double exports in subsequent years are paid 1% of FOB value, subject to max Rs 10 lakh per unit • Haryana - State Export Awards amounting to Rs 5 lakhs each to the Outstanding Exporting Units in the State	• Incentive of 1% of Free Onboard Value (FOB) value, limited to Rs 1 cr per annum, will be provided for a period of 3 years for units

Component	Possible schemes/activities at State level	Best practice/provision in other states	Provisions in Kerala
Export Credit Support	Assistance related to loans, and guarantees on the credit facilities	• Karnataka - Reimbursement of ECGC charges up to 100%, with upper ceiling limit of Rs 1 lakh per unit per year • Tamil Nadu - Export insurance premium paid to ECGC under the Small Exporter's Policy, max Rs 10,000 in a year or actual, whichever is lower • Haryana - Reimbursement of 50% of export insurance premium paid to ECGC, max up to Rs 1.5 lakhs per annum per unit for new MSEs for a period of 5 years having ZED certification	• Offer interest rate subsidies of up to 4% on exports related loans and credit facilities, subject to a max Rs 25 lakhs, provided by financial institutions to help exporters meet their working capital requirement
Export Infrastructure	Development of logistic facilities such as CFSs/ICDs, Cold Storage and Warehousing, etc	• Andhra Pradesh - Investment subsidy of 25% of cost of reefer vehicles limited to Rs 10 lakhs per vehicle with maximum of two vehicles per unit. An additional 5% subsidy for women, SC/ST/OBC community run MSMEs Development of ICDs in PPP mode; cold storages through private participation and under Central assistance • Gujarat - Capital subsidy on investment made in fixed assets (except land cost) to create infrastructure/logistic facilities (for new unit/ project), subject to upper ceiling limit of Rs 15 cr Interest subsidy for development of logistics facilities (for new unit/ project) at the rate of 7% for 7 years on eligible term loan (minimum 2% to be borne by unit/ project in each case). The upper ceiling is Rs 50 lakhs per annum	• One-time subsidy of 25% of infrastructure investment, subject to max Rs 50 lakhs per unit Set up ICD/Dry port facilities with the assistance of the Government of India

The comparative analysis suggests that the Export Promotion Policy 2023 generally aligns with or exceeds the quality of schemes and initiatives offered by the states under consideration. This finding highlights the favourable prospects of the policy in bolstering the assistance provided to MSMEs involved in export activities.

2.5.3.4 Challenges Identified by Exporters in Kerala

a. **Lack of Export Guidance Hub:** Entrepreneurs in Kerala encounter difficulties in finding a centralized hub that offers comprehensive guidance for exports. Moreover, user-friendly data on exports is not readily accessible on Government of India portals.

b. **Escalating Logistics Costs:** In recent months, the expenses associated with logistics for MSMEs in Kerala have seen a significant rise. This surge is primarily attributed to the increased hiring costs of shipping containers.

c. **Delays in Government Incentive Disbursements:** MSMEs in Kerala experience unwarranted delays in receiving benefits from Government of India schemes such as the Merchandise Export from India Scheme (MEIS) and Rebate of State and Central Taxes and Levies (RoSCTL) Scheme.

d. As per study conducted by EXIM bank[46], it has been observed that Kerala's export destinations do not include some primary global importers in the champion product categories, including rubber and articles thereof, as well as pharmaceutical products. Discussions with MSME exporters from these sectors have helped identify some of the challenges related to accessing market opportunities, and limited capacity to meet the quality demands of the target importing countries.

   The primary issue is the obstacles faced in capturing marketing opportunities, which includes participation in international trade fairs. **This challenge particularly affects micro MSMEs, due to the upfront financial obligations required for participation in the trade fairs**. Another concern is the restricted capacity to meet the specific quality requirements of certain target countries. **In case of pharmaceutical MSMEs, compliance with the principles and guidelines of the European Union Good Manufacturing Practice (GMP) is necessary for exporting to European Union countries**. Good manufacturing practice (GMP) outlines the minimum standard that a pharmaceutical manufacturer must meet in their production processes**. A key impediment in meeting these requirements is the financial investment required to adhere to the EU GMP**.

   Additionally, the study highlights that medical equipment and appliances are underachievers, pointing to various challenges confronting the enterprises. These challenges include a **lack of awareness and guidance, stringent regulatory landscape** which is characterised by complex, time-consuming, and expensive compliance requirements like the FDA in the US and CE Marking in the EU. Furthermore, **generating clinical evidence for the safety and efficacy of medical devices, especially for innovative products, can be a time-consuming and costly process.**

2.5.3.5 ONDC Adoption

Kerala is one of the first states in India to sign MoU with ONDC. Overall, there are 9 State PSUs onboarded (FOMIL, KADCO, KSCDC, COIRCRAFT, Capex, Kerala Soaps, Kairali, KCCP, Hantex), 289 sellers (Separate data for MSMEs is not tracked) – none of the SNPs are based out of KL. Additionally, the transaction volume is about 2,392 orders

Currently, only one seller app is operating in the system. District wise training of DIC officials on catalogue creation is underway. Groceries segment is showing higher traction currently. In terms of geography, Ernakulam is leading in adoption. A dedicated app Goshopee is being developed by KELTRON to onboard State PSUs onto the platform.

a. Roadmap to drive sustainable adoption

To ensure successful adoption of ONDC in the State, there needs to be a vibrant ecosystem of seller apps. The role of State Government should be towards incentivizing and facilitating this

[46] Kerala.pdf (eximbankindia.in)

ecosystem growth. In addition to this ecosystem of seller apps, MSMEs also need dedicated support in terms of assistance towards sustenance of online business including expenses towards end-to-end handholding, account management which includes updating catalogues, order completion, helpdesk etc for 6 months in the following scale of assistance

Given that Kerala has a vibrant IT and start-up ecosystem along with several technological institutions for higher education, hackathons around ONDC may be organized. The problem statements may be framed for different sub-components of the network such as -

- Development of buyer and seller apps
- Onboarding of sellers on the network
- Creating solutions around cataloguing (Cataloguing-as-a-Service)
- Logistic solutions
- Automating order fulfilment
- Designing the decision for the customer support flow

b. Creation and promotion of 'Made in Kerala' badge

ONDC is coming up with the concept of 'badge' which will serve as a registry of verified sellers. The creation of a 'Made in Kerala' badge/tag will help establish the authenticity of the products. The products may be marked as such by the seller apps after performing due diligence. The State government may run marketing programs targeting buyer apps for increasing the visibility of such products.

2.5.3.6 GeM Adoption and Public Procurement Policy

Amongst all States and UTs put together, Kerala ranks 25*th* in terms of Gross Merchandise Value on the GeM portal with a 470 Cr GMV in FY 22-23. The GMV received by Kerala MSEs on the platform has steadily increased over the years to 249 Cr in FY 22-23, partly attributable to this growth is the fact that through GeM portal MSEs gain access to CPSEs both inside and outside State thus opening doors to national market. GeM also offers SAHAY App through which collateral free loan is made available to MSE sellers winning orders on the platform. Through stakeholder discussions, it is understood that there is significant improvement on these aspects.

a. 19120 MSEs are registered on the platform from Kerala but only 1815 are active. This indicates handholding support required for MSEs to complete registration and catalogue creation.

b. Since inception of GeM, 2889 Cr worth of business has been captured by Kerala MSEs out of which 477 Cr has been placed by Kerala State Government Buyers. There is increased scope to monitor and place more orders by the Government to the State MSEs.

c. Around 60+ workshops have been organized by DIC and MSME-DFO in the last 3 years. Typical average turnout per session for GeM workshops has been 50 per workshop. However, many of these workshops have been online and predominantly focussed on awareness. There is scope to provide handholding and troubleshooting support in terms of actual usage of the portal

Additionally, in alignment with the new GoI guidelines regarding Public Procurement and incentives for local manufacturers in other states, the Government of Kerala introduced a policy for procurement from MSMEs within the state 2020. This new policy encompasses the following key aspects:

a. Price preference: All MSMEs in the state will be granted a price preference of up to 15% in all procurement conducted by Government Departments, Organisations, Local Self Government institutions and PSUs. In other words, if a local MSME submits a bid within a 15% price range of the lowest cost (L1) bidder, it will be eligible to receive up to 50% of the order quantity at the lowest rate quoted among the State PSUs/local MSMEs. In case there are multiple local MSMEs participating, they will be allocated equal proportions of this 50% order.

b. Purchase preference: In cases where no local MSMEs submit a bid within a 15% price range of lowest cost bidder, they will have the opportunity to supply up to 50% of the total order by adjusting their prices to match the lowest price (L1). If multiple local MSMEs are involved, this 50% order will be divided equally among them.

2.5.3.7 Made in Kerala Initiative

The Government of Kerala has introduced Made in Kerala initiative, aiming to emphasize the state's dedication to quality, ethical industrial practices, and responsible entrepreneurship, with the goal of facilitating global market access for Kerala-based enterprises. This initiative ensures consumer access to high-quality products and enhances the market appeal of manufacturers committed to maintaining these standards. In a competitive market landscape, where distinguishing superior quality can be challenging, the Kerala Brand serves as a hallmark of excellence, enabling consumers to make informed choices and granting businesses a competitive advantage in marketing and exporting their products. The current products chosen under the brand are as follows:

Figure 58 Products Identified under Make in Kerala

The State has come up with the below criteria to adhere to the brand.

Quality Practices	Ethical Practices	Responsible Industry practices
• Conducts regular quality and safety checks	• Prohibits child labor	• Emphasis on eco-friendly and renewable energy sources
• Supplies personal hygiene essentials like handwash, gloves, and mask	• Ensures fair representation of women and transgender individuals in workforce	• ZED Certification for zero defects and minimal environmental impact
	• Has strict policy against any form of employee exploitation	• Prioritizes use of recycled or recyclable packaging and consumables
	• Cultivates an inclusive environment for employees from diverse backgrounds	• Establishes designated areas for proper waste storage and disposal
	• Enforces mandatory workplace safety measures and precautions.	• Adopts water conservation practices and pollution mitigation measures.

Table 33 Selection Criteria for Brands under Make in Kerala

2.5.3.8 Intellectual Property Rights

For MSMEs, having IPRs is necessary to protect their innovative ideas or brand names from being copied or stolen by competitors. It also helps in creating a distinct identity and value for their products, which can be leveraged for competitive advantage. IPRIC-K serves as Kerala's primary agency for all Intellectual Property Rights (IPR)-related services and matters. In 2021-22, five patents were officially granted, recognizing the innovative work of local inventors and entrepreneurs. IPRIC-K actively promotes IPR awareness through collaborative efforts. During the same period, 116 IPR awareness programs were conducted in partnership with various institutions and organizations. Approximately 15,000 individuals were sensitized to the importance of IPR. The centre processed 51 Patent Facilitation applications, supporting inventors in navigating the patenting process. IPR Cells are being established in two educational institutions, strengthening the IPR ecosystem in Kerala.

2.5.3.9 Products with Geographical Indication in Kerala

A Geographical Indication (GI) is a designation provided by the government for products associated with a particular geographical area or origin. It aids in recognizing the source of the product, certifying its specific qualities, adherence to traditional production methods, or its origin. Kerala is renowned for its rich collection of unique geographical indications. In India, there are a total of 417 registered geographical indications, with Kerala accounting for 31 of them.

The state has established a specialized webpage for the promotion of GI-tagged products, which can be accessed at https://www.gikerala.in/. In addition, an online marketplace for the procurement of these products, available at https://www.keralaemarket.com/. This platform primarily operates as a Business-to-Business (B2B) marketplace. Users who register on this platform could request price quotations for various products and make purchases accordingly.

SI	Name of the product	Category	Vendor nodal contact
1	Vazhakulam Pineapple	Agricultural	The President, The Pineapple Farmers Association
2	Changalikodan Banana	Agricultural	Chengalikodan Banana Growers Association
3	Pokkali Rice	Agricultural	Kerala Agricultural University, K.A.U.
4	Edayur Chilli	Agricultural	Edayoor Chilli Grovers Association (ECGA
5	Cannanore Home Furnishings	Handicraft	Cannanore Home Furnishing Products Consortium
6	Allepey Green Cardamom	Agricultural	Spices Board, Ministry of Commerce and Industry
7	Kaipad Rice	Agricultural	Malabar Kaipad Farmers' Society,
8	Wayanad Robusta Coffee	Agricultural	Coffee Board,
9	Screw Pine Craft of Kerala	Handicraft	Development Commissioner (Handicrafts)
10	Palakkad Maddalam	Handicraft	Development Commissioner (Handicrafts),

Sl	Name of the product	Category	Vendor nodal contact
11	Brass Broidered Coconut Shell crafts of Kerala	Handicraft	Development Commisioner (Handicrafts),
12	Balaramapuram Sarees and Fine cotton fabrics	Handicraft	The Director, Directorate of Handlooms and Textiles,
13	Wayanad Gandhakasala Rice	Agricultural	Wayanad Jila Sugandha Nellulpadaka Karshaka Samithi, Rural Agricultural Wholesale Market,
14	Allepey Coir	Handicraft	Coir Board, Alappuzha Coir.,
15	Nilambur Teak	Handicraft	Nilambur Teak Heritage Society,
16	Kuthampully Dhoties & Set Mundu	Handicraft	Kuthampully Handloom Cluster Charitable Society Consortium,
17	Kasargod Saree	Handicraft	
18	Palakkadan Matta Rice	Agricultural	Palakkadam Matta Farmers Producer Company Limited,
19	Chendamangalam Dhoties & Set Mundu	Handicraft	The Director, Directorate of Handlooms and Textiles Government of Kerala
20	Kuttiattoor mango	Agricultural	Kuttiattoor Mango Producer Company Limited,
21	Central Travancore Jaggery	Agricultural	The Director of Research, Kerala Agricultural University
22	Navara Rice	Agricultural	Navara Rice Farmers Society,
23	Aranmula Kannadi	Handicraft	Viswabrahmana Aranmula Metal Mirror Nirman Society,
24	Marayoor Jaggery	Agricultural	Anchunadu Karimbu Ulpadhana Vipanana Sangham,
25	Payyanur Pavithra Ring	Handicraft	Kannur District
26	Tirur Betel Leaf	Agricultural	Tirur Vettila Ulpadaka Sangam, Chembra
27	Kuthampully Sarees	Handicraft	Kuthampully Handlom Cluster Charitable Society Consortium,
28	Wayanad Jeerakasala Rice	Agricultural	Wayanad Jila Sugandha Nellulpadaka Karshaka Samithi,Rural Agricultural

(Source: https://www.gikerala.in/about)

2.5.4 Market for Service provision to MSMEs

Business development services (BDS) refer to a wide range of non-financial services used by entrepreneurs to help them improve the performance of their businesses, access to markets, and ability to compete. The role of BDS in the development of enterprises is widely recognized throughout the world. MSME requires handholding and mentoring support for various activities.

During the survey, 73% of Udyam registered and 54% of unregistered enterprises expressed a demand for various technical tools, such as basic accounting software. Effective bookkeeping empowers entrepreneurs to measure their performance reliably, make data-driven strategic decisions**,** and establish benchmarks for revenue and income goals. This becomes more crucial as the scale of operation expands. The demand highlights the current lack of access to cost-effective and efficient tools for this crucial aspect of business management. Following this, was a distant demand from approximately 17% of Udyam registered and 19% of unregistered enterprises for tax return filing software. In line with this, majority of the MSMEs also reported that they would like to hire professional support for tax payment and return filing.

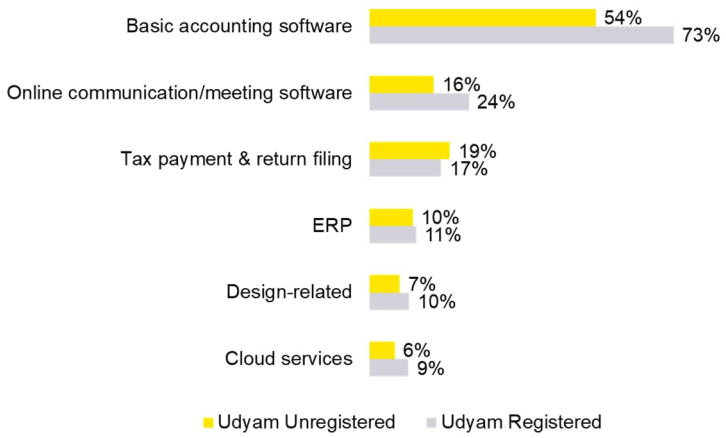


Figure 59 Demand for Technical Tools among MSMEs

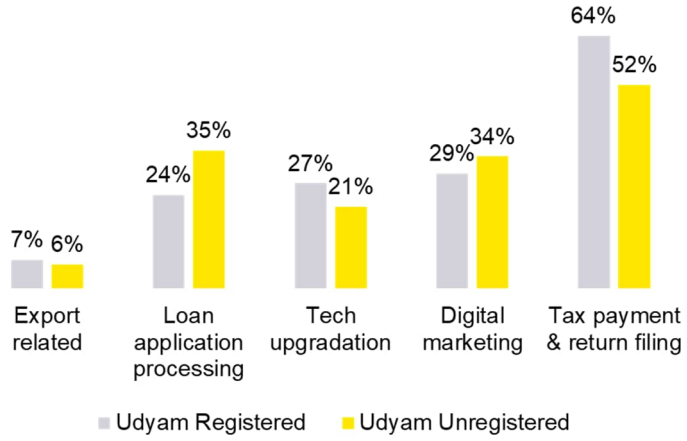


Figure 60 Demand for Technical Support among MSMEs

Further, the MSMEs, particularly unregistered units, have indicated their requirement for professional support, with 35% seeking assistance for loan application processing and 34% expressing a need for guidance in the realm of digital marketing. This highlights the growing recognition of the importance of specialized expertise in navigating critical aspects of business operations, particularly for unregistered MSMEs striving to enhance their capabilities and reach. For effective implementation of reforms across these domains, access to timely and pertinent

information is imperative for MSMEs. As per their feedback, the most sought-after information pertains to emerging technologies, Govt schemes, and regulatory and taxation policies

To ensure that MSMEs can avail mentorship at their doorstep, or nearby, The Department of Industries, as part of the Year of Enterprise initiative, has empanelled a pool of technical experts/ BDSPs in areas as illustrated below to provide guidance to the MSMEs:

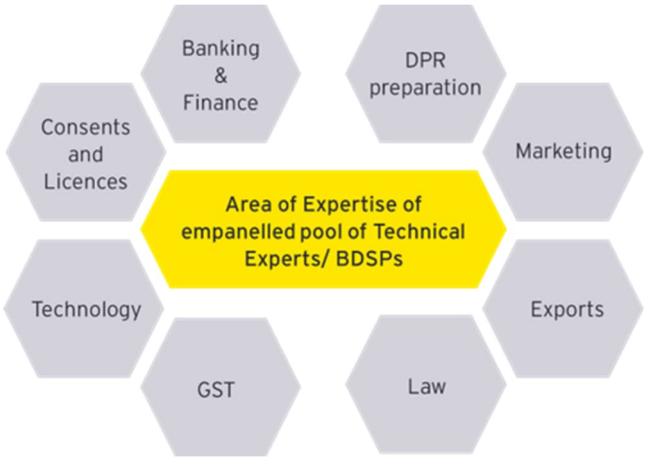


Figure 61 Area of Expertise of empaneled pool of Technical Experts/BDSPs

There are 174 experts who are empanelled by the department. Currently, these experts are engaged in providing guidance to the MSMEs seeking clarifications and guidance in MSME clinics organised by the department. However, the interactions with many micro enterprises have indicated their inability to engage BDSPs on their own in improving their business due to financial reasons.

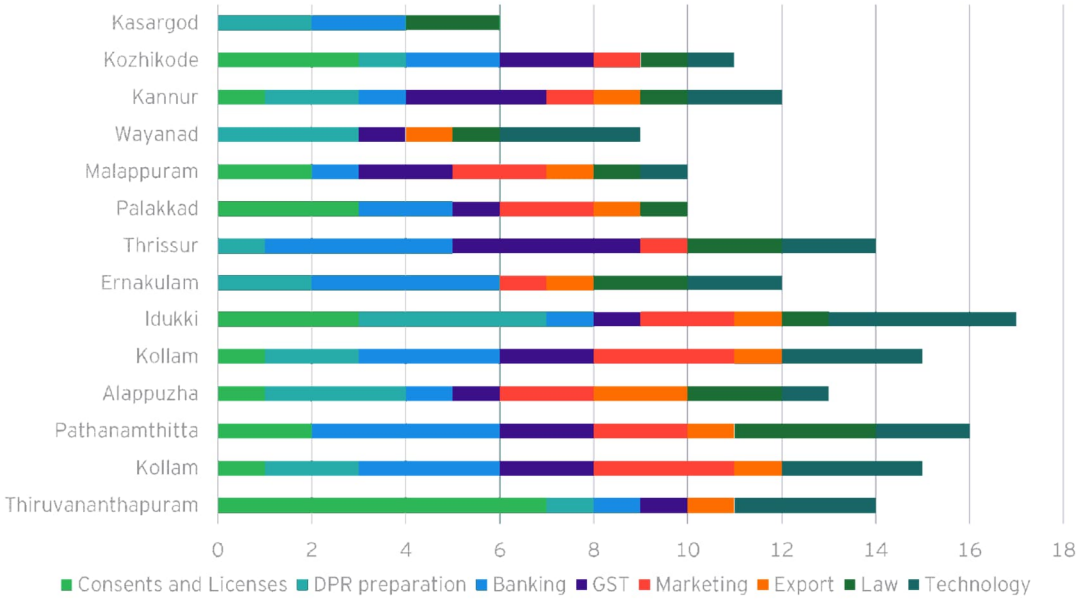


Figure 62 District wise no. of domain experts/ BDSPs empaneled with the department

Further, there are also several Technical Institutions which are in the State in relevant domains which either have linkages or can be linked for providing technical support to the MSMEs. An illustrative list of the Technical Institutions present in Kerala with the respective area of expertise are provided in Table 26.

Sl	Technical Institute	Sector of expertise	Services provided
1	Central Coir Research Institute, Alappuzha	Coir	▶ R&D – Microbiology, Chemistry, Engineering, Product diversification ▶ Technical guidance ▶ Testing ▶ Technology Transfer
2	National Coir Research & Management Institute	Coir	▶ New technology development
3	Central Institute of Petrochemicals Engineering & Technology (CIPET-IPT, Kochi)	Plastic & Allied Industries, Petro chemicals/ Chemicals	▶ Ph.D, UG, PG and Diploma courses ▶ Technical and Training services ▶ Testing and evaluation of plastics materials and products
4	National Institute for Rubber Training, (under Rubber board), Kottayam	Rubber	▶ Skill development trainings ▶ Industry development training (technology updation, quality improvement, trouble shooting, cost reduction etc.) ▶ Consultancy
5	Rubber Board, Kottayam	Rubber	▶ Technical Consultancy ▶ Engineering Consultancy ▶ Testing
6	Rubber Research Institute of India (under Rubber board), Kottayam	Rubber	▶ Consultancy ▶ Testing
7	Kerala Agriculture University, Vellayani	Agriculture, Agro processing, Food processing	▶ R&D ▶ Testing – Food Quality ▶ Technology transfer
8	ICAR - Central Tuber Crops Research Institute (ICAR-CTCRI)	Agriculture, Agro processing, Food processing	▶ Research ▶ Consultancy ▶ Techno Incubation Centre
9	Common Facility Service Centre at Changanassery and Manjeri	Plastic and Rubber	▶ Research ▶ Training ▶ Testing ▶ Consultancy (Product diversification)
10	MSME Technology Centre, Angamaly	Gen. Engg	▶ Testing Facility ▶ Training ▶ Consultancy
11	Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST)	Biomedical technology	▶ Research ▶ Training ▶ Technology transfer ▶ Medical devices incubator (TIMed)

Sl	Technical Institute	Sector of expertise	Services provided
12	Centre for Development of Advanced Computing (C-DAC)	Electronics & IT	▸ Research & Development ▸ Education & training
13	Kerala State Productivity Council (KSPC)	Various	▸ Research ▸ Services in: ▸ Industrial Engineering ▸ Energy Management ▸ Human Resource Development ▸ Quality Systems and Procedures ▸ Health, Safety & Environment Management
14	Regional Ayurveda Research Institute (RARI)	Ayurveda	▸ Clinical Research
15	CSIR- National Institute for Interdisciplinary Science and Technology, Thiruvananthapuram	Various	▸ R&D ▸ Testing ▸ Training ▸ Consultancy

Table 34 Illustrative List of Technical Institutes present in Kerala

2.5.5 Women-owned MSMEs and Gender Gaps

In recent years, Kerala has witnessed a significant upsurge in the emergence of women-led start-ups and enterprises. This promising trend can be attributed to the collective impact of strategic initiatives implemented by Kerala Start-up Mission (KSUM) and the support extended through diverse schemes under Directorate of Industries and Commerce. According to a report released by KSUM on International Women's Day, there has been an increase in the number of women-led start-ups. In the first three months of 2023, the count has surged to 233, a substantial rise from the 175 recorded during last year. Furthermore, approximately 1/3rd of the new enterprises established during the Year of Enterprises are run by women entrepreneurs.

Despite increasing participation of women in the state's economy and commendable literacy levels among women, the overall labour force participation rate remains relatively low. Based on data collected since the inception of Udyam Registration, there are a total of 87,514 women led MSMEs registered in the state of Kerala. A significant majority of these enterprises fall under the category of micro enterprises**.** This data reveals that women led MSMEs make-up 20% of the total Udyam registered enterprises in Kerala are. Additionally, a case in point is the relatively modest contribution of women-led enterprise established during the Year of Enterprises contribute. These enterprises accounted for only 30% of the newly generated employment opportunities, and their contribution to investment relatively lower, at around 20%.

Women's participation as employees across sector is also muted, with notable exceptions being traditional and service sectors. These sectors include textiles, handlooms and handicrafts, coir, bamboo, and cane industries, ayurveda, IT/ITES, tourism and hospitality, and food processing sectors. The disparity in labour force participation rate could reflect various factors including socio-cultural norms, lack of representation, limited access to formal networks and/or mentors. Concerted efforts are currently in progress, both at the Central and State Government level, to address the issue of low women's participation across sectors. These initiatives are centred around providing mentorship support, training programs, access to networks and most importantly essential financial assistance.

2.5.6 Labour Management and Safety Standards Compliance

Kerala is widely recognized for its remarkable achievements in social development, characterized by effective mobilisation and organisation of workers across diverse sectors. Economic development in Kerala is not solely about job creation but also emphasizes the creation of conducive working conditions that uphold freedom, safety, and dignity for all.

The Department of Factories and Boilers holds the statutory responsibility of safeguarding the safety, health and welfare of workers in factories. Notably, there has been a decline in both fatal and non-fatal accidents within industries under the jurisdiction of the Factories and Boilers Department. This reduction in accidents can be attributed to State Government's commendable interventions and proactive measures to improve safety and working conditions of workers in the industrial establishments.

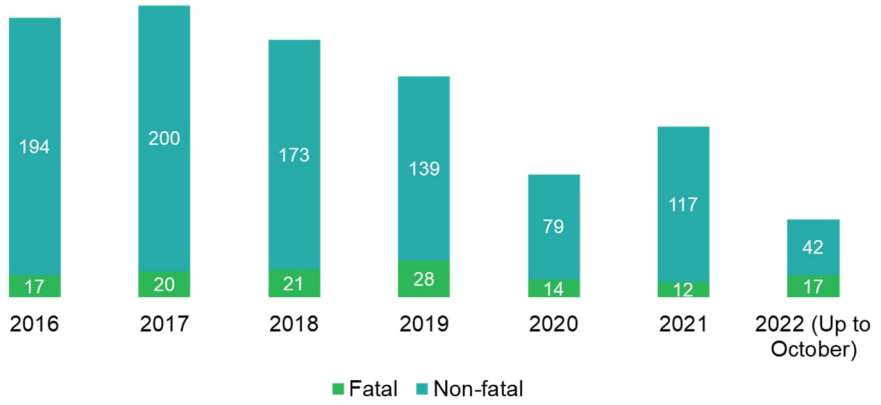


Figure 63 Industrial Accidents in Factories under Factories and Boilers Department in Kerala

According to the 2018 India Wage Report by the International Labour Organisation (ILO), Kerala stands out as one of the states with consistently high casual wages in both rural and urban areas. Several factors contribute to Kerala's higher wage levels, including its high-level of education, favourable social environment, progressive political views, and the establishment of labour welfare boards. Trade unions in Kerala are also actively involved in ensuring the enforcement of minimum wage regulations.

Notably, both male and female unskilled labourers in Kerala earn significantly more than the national average wage and the prescribed minimum wage for the State. In 2020-21, Kerala ranked at the top in terms of daily wage rates among the Indian states, with a daily wage rate of Rs 677.6[47]. Historically, migrant workers to Kerala, until 2001, primarily came from neighbouring States like Tamil Nadu, Karnataka, and Maharashtra. However, in recent years, migrants predominantly originate from West Bengal, Assam, Odisha and Bihar. The construction sector employs the largest number of migrant workers, with 17.5 lakh of migrants, followed by manufacturing with 6.3 lakh migrants. Despite various welfare activities for migrant workers in Kerala, a significant challenge is the lack of accurate data on the number of guest workers. Based on stakeholder discussions and survey findings, majority of the MSMEs in Kerala, particularly those in labour-intensive sectors, employ migrant workers, and their prevalence has led to some relaxation in working conditions, implementation of labour safety standards and provision of social security provisions such as insurance/medical benefits as well as other benefits.

2.5.7 Resource Efficient and Cleaner Production (RECP) Capacity

Resource Efficiency and Cleaner Production (RECP) is a globally recognized approach that effectively enhances productivity while minimizing the environmental footprint of the enterprises. A two-way relationship exists between environmental sustainability and MSMEs. On one hand, MSMEs contribute to environmental problems and climate change. Simultaneously, they face heightened vulnerability to the adverse effects of environmental and climate-related challenges. This stems from their reliance on outdated technologies, and processes, substantial use of fossil fuels, and unorganized nature. This is further compounded by lack of technical capacity, limited unawareness about available formal financing

[47] Economic Review 2022, Government of Kerala

mechanisms, and limited access to green financing options. The application of RECP delivers substantial benefits to enterprises, with particular focus on MSMEs, by enhancing their productivity and competitive edge. Additionally, it benefits the environment by reducing the adverse impacts of their operations and contributes to the wellbeing of individuals by decreasing the risks to workers and communities.

2.5.7.1 Waste Generation by Industries in Kerala

Industrialisation results in the generation of large quantity of wastes, both solid and liquid, in industrial sectors. According to the National Inventory on Generation and Management of Hazardous and Other Wastes (2021-22) report by the Central Pollution Control Board, Kerala generates 61,251 MT of Hazardous Waste (HW). This accounts for approximately 0.5% of the total HW generated by industries in the country. In terms of HW generation, Gujarat tops the list followed by Maharashtra and Rajasthan. Out of the 61,251 MT of generated HW, 4% is classified as utilizable HW, 12% as recyclable HW, and 84% is landfillable HW.

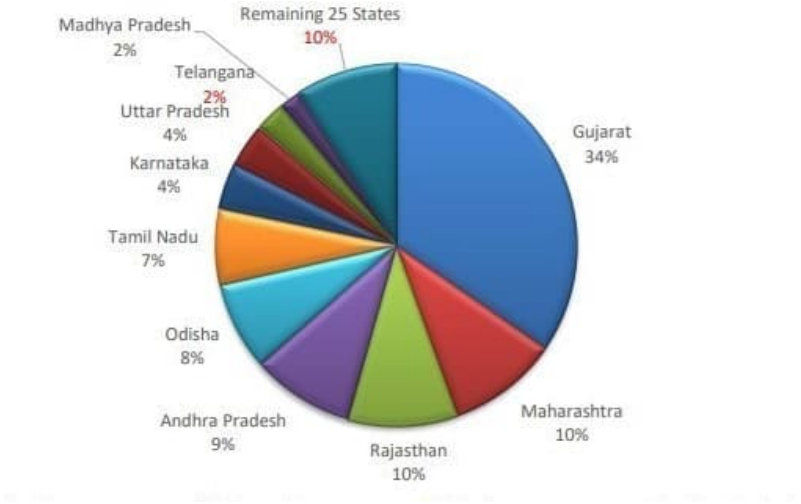


Figure 64 Contribution to HW Generation 2021-22

Kerala has consistently prioritized eco-friendly policies and sustainable programmes. A notable advantage for the state is the dominant presence of the services sector, which contributes about 61% to the state's Gross Value Added (GSVA). Notably, major subsectors such financial, real estate and professional services, or trade, repair, hotels, and restaurants maintain a more environment friendly profile compared to other sectors. When we examine the relationship between MSMEs and environmental degradation, it becomes evident that it is manufacturing sector enterprises that significantly contribute to environmental impacts. This occurs throughout various phases, including raw material procurement, manufacturing processes, and product use and disposal. In line with its environmental priorities, the Industrial Policy 2023 place a strong emphasis on sectors that align with these goals. Moreover, within each of these individual sectors, the policy framework introduces nuanced strategies to prioritize environmental and sustainability aspects.

2.5.7.2 Energy Consumption by MSMEs

The MSME sector is known for its high GHG emissions due to extensive use of fossil-based fuels. The Bureau of Energy Efficiency has recognized that MSMEs in specific subsectors such as rice milling, food processing, textiles, pulp and paper, chemicals, pharmaceuticals, rubber, and plastic, as significant energy consumers. To address this issue, MSMEs adopt measures to reduce energy consumption and enhance conservation. These measures encompass both demand-side and supply-side approaches. On the demand side, energy conservation and energy efficiency measures can reduce energy

consumption. On the supply side, MSMEs can explore adoption of renewable energy sources, including deployment of solar rooftops to generate clean energy.

To assess the MSMEs and other segments, NITI Aayog introduced the State Energy and Climate Index (SECI). This index evaluates Indian states based on six key parameters, using 27 indicators that include DISCOM's performance, Access, Affordability & Reliability, Clean Energy Initiatives, Energy Efficiency, Environmental Sustainability, and New Initiatives[48]. Among these indicators, the energy saved by industries is perhaps the most important parameter as it shows how prudent the industries, in a state, are in adopting good practices to save energy. Notably, Kerala has excelled in this aspect and is an achiever overall SECI ranking[49], demonstrating strong commitment to energy conservation and sustainable practices.

However, there's room for growth in terms of clean energy initiatives, as the state's score of 21.5 trails behind leaders like Haryana and Gujarat. Although Kerala ranks fourth in energy efficiency, the substantial gap between its score of 58 and Tamil Nadu's impressive 85.4 highlights an area that requires attention. Overall, Kerala's performance in the State Energy and Climate Index reflects a promising commitment to accessible and reliable energy, but the journey towards cleaner energy sources and enhanced energy efficiency demands intensified efforts. Balancing its strengths with improvements in clean energy initiatives could propel Kerala to greater heights in sustainable energy practices and climate resilience.

Based on stakeholder discussions, the MSMEs, particularly those in power-intensive sectors, had expressed a desire to transition to renewable energy sources like solar and wind energy. However, their ability to do so has been hampered by constraints such as limited financial resources and lack of awareness regarding available formal financing schemes. Additionally, according to survey findings, significant barriers to the adoption of energy-efficient technologies and practices among MSMEs stem from limited awareness and capability to take up energy conservation activities. An overwhelming 74% of Udyam registered MSMEs and 71% of unregistered MSMEs cited a lack of awareness as the reason for not implementing environment friendly and sustainable practices. Hence, irrespective of registration status, the MSMEs often prioritize maintaining positive cashflows, profitability as well as sustaining their presence in the market over adoption and assurance of environmentally sustainable practices. This priority is driven by the immediate need to ensure financial stability and survival in competitive markets. However, given the potential impacts of environmental crises on cash strapped MSMEs, especially micro enterprises, there is an urgent need to create awareness and improve adoption of environmentally sustainable measures.

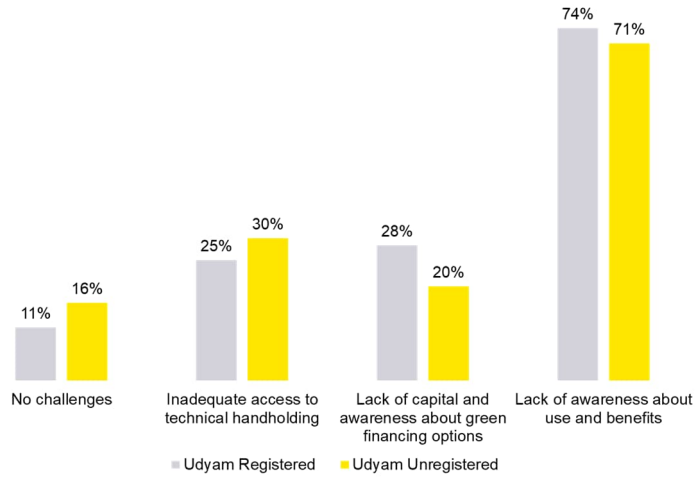


Figure 65 Challenges in Adoption of Environment-friendly and Sustainable Practices

[48] State Energy and Climate Index (SECI) 2022, NITI Aayog

[49] Kerala occupied the second position in the State Energy and Climate Index 2022 prepared by NITI Aayog

Furthermore, about 28% of Udyam registered and 20% of unregistered MSMEs highlighted limited access to various financing options and lack of awareness about green financing instruments as additional hurdle. This is crucial issue because securing adequate, low-cost funding is essential for investment in energy efficient technologies and practices. The Industrial Policy 2023 places a strong emphasis on environmental and sustainability initiatives. This includes provisions such as 25% expenses reimbursement for MSMEs investing in plant & machinery/equipment for setting up ETP, installations for substitution of power from grid, rainwater harvesting, recycling of wastewater, and purchase of material for conservation efforts. These measures are expected to provide MSMEs significant support going forward.

Moreover, over 25% of MSMEs across the two categories reported difficulties in accessing technical experts with domain knowledge as a hurdle in the process. This hinders their ability to identify appropriate energy conservation measures and seamlessly transition to them.

2.5.7.3 Green Climate Fund Programmes and Potential Convergence

The Green Climate Fund (GCF) is the world's largest climate fund established under the United Nations Framework Convention on Climate Change (UNFCC) to facilitate and expedite a shift to climate resilient development path in developing nations. It does so through a partnership approach, employing flexible financial solutions and leveraging expertise in climate investments. The GCF has several funding windows through which it extends support to climate action, this includes programs/projects related to mitigation (reducing greenhouse gas emissions) and adaptation (building resilience to climate impacts).

Industries are one of the major contributors to emissions, and therefore, are pivotal in mitigating climate change. The GCF plays a critical role in accelerating the transition of industries towards low-carbon and sustainable practices across their operations, from supply chain management to product development and marketing. Often, the impetus towards efficient use of energy in the industrial sector is lagging mostly due to inadequate financial incentives and lack of technical expertise.

In this context, a GCF in collaboration with Government of Bangladesh is supporting enterprises in textile and readymade garments (RMG) sector with financial and market resources to adopt and implement energy saving technologies. It is expected to lead to emissions reductions and significant energy savings, and help the country achieve it's Nationally Determined Contribution (NDC). Snapshot of the programme has been given below.

Adoption of Energy Saving Technologies and Equipment in Textiles Sector

Implementation Period: 12 Years

Total Financing: 340.5 million USD

Green Climate Fund (GCF) provides 75% of the total amount via two funding instruments Grants and Loans

Agencies: Infrastructure Development Company Limited (IDCOL), Local Financial Institution, Sustainable Renewable Energy Development Authority (SREDA) under Ministry of Power, Energy, and Mineral Resources

Focus on Textile Sector: The industrial sector in Bangladesh accounts for 47.8% of the commercial energy consumption

(i) Garment sector is the largest energy consuming industrial sub-sector (15.4%) followed by Textile sector (12.4%)

(ii) Usage of old machines, poor energy management are the primary reasons for the same

Concessional Finance	Technical Assistance	Policy Level Technical Assistance
▸ Total payment (equipment and financial cost) will break even with cost of acquiring conventional equipment ▸ *Concessionality in interest rates and payback period are determined based on the need to ensure breakeven* ▸ Eligibility of projects are determined based on fulfilment of certain General criteria, Technical Eligibity criteria, Financial criteria etc ▸ **Total Funding: USD 133 million**	▸ IDCOL will undertake a range of technical assistance activities, and some are as follows: ▸ *Sensitize and create awareness among stakeholders about energy efficiency equipment* ▸ *Develop standards and mechanisms for monitoring, reporting, and verification of energy savings and GHG emissions reductions* ▸ *Advisory support to borrowers on loan application process to expedite due diligence process* ▸ **Total Funding: USD 3.05 million**	▸ Technical Assistance (TA) to strengthen regulatory & institutional framework at the national level to overcome the operational constraints related to implementing Energy Efficiency & Conservation measures in the country

a. GCF Projects in India

The Green Climate Fund (GCF) has funded several projects (8) in India to support climate mitigation and adaptation efforts. These projects cover a range of sectors and activities, and they are listed below:

Sl	Program	Intend	Geography
1	Line of Credit for Solar Rooftop Segment for Commercial, Industrial, and Residential Housing sectors	Mitigation	India
2	Green Guarantee Fund	Cross-cutting across mitigation and adaptation efforts	Spread across Latin America and the Caribbean, Africa, Asia - Pacific
3	India E-Mobility Financing Program	Mitigation	India
4	Green Growth Equity Fund *[Focuses on green infrastructure project across renewable energy, transport, resource efficiency etc]*	Mitigation	India
5	Enhancing Climate Resilience of India's Costal Communities	Cross-cutting across mitigation and adaptation efforts	India
6	Ground Water Recharge and Solar Micro Irrigation to ensure food security and enhance resilience in vulnerable tribal areas of Odisha	Adaptation	India
7	Climate Investor Two [*Focuses on climate resilient infra projects in water, sanitation, and ocean sectors*]	Cross-cutting across mitigation and adaptation efforts	Spread across Latin America and the Caribbean, Africa, Asia - Pacific
8	Climate Investor One [*Focuses on renewable energy products in power-deficit regions*]	Mitigation	Spread across Latin America and the Caribbean, Africa, Asia - Pacific

Some of the major initiatives that have and could have potential linkages to industrial sector and MSMEs are:

- Line of Credit for Solar Rooftop Program: The program is designed to facilitate affordable and long-term debt financing for solar rooftop installation projects in the commercial, industrial, and residential sectors. The GCF plays a pivotal role by providing financial support to address identified barriers to low carbon investment[50].

  Further, Tata Cleantech Capital Limited (TCCL), a joint venture between Tata Capital and International Finance Corporation (IFC) and the executing entity for the program, has

[50] GCF is expected to contribute financial support to the tune of USD 100 million and the funds will be in the form of Senior Loans. GCF's financial assistance to TCCL is facilitated through NABARD, which in turn disburses the funds to TCCL in the local currency.

committed to match the funding contribution of GCF. In addition, TCCL is responsible for identifying, evaluating, and funding projects in various sectors such as renewable energy (solar, wind, small hydro, biomass), energy efficiency and water treatment.

i. The program has proposed to replace 250 MW of grid power with power generated from solar rooftop projects over a period of 20 years.
ii. The funds from GCF and TCCL will be used to provide loan assistance to cover 80% of the upfront cost of investing in solar rooftop systems, with remaining contribution of at least 20% drawn from customers' own resources.
iii. The concessions are passed on to the project developers via the rate of interest charged on the project loans
iv. The program places strong emphasis on supporting MSMEs. It has been committed that an allocation of at least USD 100 million (of total USD 200 million) will be directed towards vulnerable categories which includes MSMEs.

The collaborative approach involving GCF, NABARD, and TCCL aims to simplify the financing process for solar rooftop projects and ensure effective monitoring and evaluation, contributing to the growth of sustainable energy solutions in India.

- Green Guarantee Company (GGC) initiative: India is one of the target countries covered by the GGC initiative. It is an initiative towards helping public and private sector borrowers access long-term debt from global markets for projects with significant climate adaptation and mitigation impacts.

  The issuance of green bonds from developing countries has shown limited growth, suggesting a lack of momentum in this segment. The GGC acts as a critical bridge, connecting bond issuers and international investors. It provides guarantees to credible borrowers, enabling them to access financial support via bonds and loans with maturities of up to 20 years. Additionally, an associated technical assistance facility plays a pivotal role in addressing various technical barriers that hinder progress. This assistance facility focuses on improving market awareness, building issuer capabilities, and more etc.

b. Participation in GCF Initiatives

Following stakeholder discussions, it has become evident that the MSMEs particularly those operating in power-intensive sectors, express a strong interest in shifting towards renewable energy sources. This transition is primarily driven by their strategic goal to minimise production costs. In addition to the cost savings, this transition has the potential to yield numerous benefits including improved energy efficiency and climate resilience.

The transition to renewable energy sources by these MSMEs faces significant hurdles across different phases of the project life cycle: project development, construction, and the operational phase. Each of these stages has a unique risk-return profile, leading to differing degrees of interest from diverse financial service providers. Nonetheless, it is crucial to emphasize the importance of finding and securing financial solutions, especially when dealing with micro MSMEs which encounter multifaceted challenges throughout the project's progression.

In this context, the state can leverage existing initiatives from the GCF to facilitate the transition of MSMEs towards renewable energy sources. One of the suitable initiatives could be the *Line of Credit for Solar Rooftop Program,* which is implemented via TCCL. This concessional finance could enable an affordable transition to alternative energy sources, particularly solar energy, thereby supporting MSMEs in reducing their carbon footprint and operational costs. Recognizing that MSMEs are required to engage with TCCL through project developers for the installation of solar rooftop infrastructure, the state can take proactive steps to support this transition:

- Raise awareness: Initiate awareness campaigns to inform MSMEs about the program and its benefits, ensuring that enterprises are well-informed the initiative
- Assessment of demand: Estimate the approximate number of MSMEs interested in transitioning to solar energy and can adopt solar rooftop infrastructure and identify those with the most urgent energy. This will help prioritise support to the enterprises that need it most

  Vet project developers: Establish a process to vet and enlist a list of eligible project developers with proven track record in renewable energy installations ensuring quality and reliability in project execution
- Facilitate collaboration: Act as a facilitator to connect MSMEs with these approved project developers. The goal is to align the MSMEs with suitable project developers based on their specific energy requirements and financial capabilities. Also, the state can provide crucial support to project developers in their collaboration with TCCL ensuring they meet the necessary eligibility criteria and fulfil the requirements for participation in the solar rooftop program.

By undertaking these measures, the state can actively support the adoption of solar rooftop infrastructure among MSMEs, making the transition more accessible and efficient for MSMEs while fostering sustainability and cost savings.

3 Key gaps in MSME support, policy development and delivery

3.1 Mapping Institutions and Agencies in the State for MSME development

Directorate of Industries and Commerce falls under Department of Industries and Commerce. The line Departments/Directorates under the Department of Industries and Commerce, Kerala are:

a. Directorate of Handloom and Textiles, which aims at evolving policies for the promotion and development of handloom and textile sector in the State

b. Directorate of Coir Development is the implementing agency for all policy decisions of the Government of Kerala related to coir industry

c. Khadi and Village Industries Board is vested with the responsibility of organizing and promoting Khadi and Village Industries in the State, and

d. Directorate of Plantation, set up in 2022-23 for the development of the plantation sector in the State.

e. Department of Geology and Mining

The primary functions of the directorate of industries and commerce are as follows.

S.No	Functions	Supporting Schemes/activities of State Government
1	Entrepreneur Identification & Skill Development: Helps in identifying and training entrepreneurs.	Entrepreneur Support Scheme, Mission 1000, 1 Lakh MSME, One Family One Enterprise
2	Infrastructure Support: Provides necessary infrastructure.	Private Industrial Estate Development Scheme
3	Licenses and Clearances: Assists in acquiring licenses and clearances required for operating businesses.	Single Window Clearance, Lubricant Oil License for Processing Unit, Renewal, Trading Unit, Renewal for Trading Unit, Essentiality Certificate for Raw Materials
4	Financial Assistance: Offers various financial schemes to boost businesses.	Margin Money Grant, Interest Subvention scheme, etc.
5	Market Identification: Assists businesses in finding appropriate marketing avenues.	Kerala e- Market
6	Dispute Resolution: Helps resolve business disputes.	Through MSEFC at state capital and regional councils
7	Reviving Units: Aids in the rehabilitation of defunct or stressed business units	Kerala stressed MSME Revival and Rehabilitation scheme, Defunct MSME and Cashew Units

The District Industries Centre is the institution at the district level, which provides all the services and support facilities to the entrepreneurs for setting up Micro, Small and Medium Enterprises. This included entrepreneurial capacity building through training programmes, identification of suitable schemes, preparation of feasibility reports, arrangements for credit facilities, machinery and equipments, provision of raw materials and development of industrial clusters, organize various industry fairs to find markets etc. This Centre also caters Registration and Development of Industrial Cooperatives.

14 (fourteen) District Industries Centres (DICs) are functioning, one each in the 14 districts of the state. The district level machinery of the directorate is situated at District Industries Centres (DIC), headed by the General Manager, DIC. The post of General Manager is of Joint Director Level. The General Manager is assisted by the Manager (Credit), Manager (Economic Investigation), Manager (Development), Manager (Handloom) and an Administrative Assistant.Taluk Industries Offices headed by Assistant District Industries Officers are functioning under District Industries Centres (DIC). Industries Extension Officers are deployed in all Block Panchayaths, Municipalities and Corporations. The functioning of DICs and their achievement is monitored by the Additional Chief Secretary (Industries) and Director of Industries & Commerce. The Review of the General Managers is organized frequently to evaluate the performance and help in resolving difficulties in the implementation of different schemes. A structure of entrepreneurship development executives, helpdesks and MSME clinics equipped with subject matter experts have been established across all 1034 local bodies in the state, to handhold MSMEs on matters relating to marketing, finance, GST, export/import, banking, licenses and approvals, legal, and technical aspects of business.

3.1.1 Key roles and responsibilities (Directorate of Industries):

At the highest level is the Head of the Department, and below this position are the Additional Director Generals who are responsible for tasks like financial coordination, planning, and monitoring. Additionally, there is the Additional Director Technical who oversees the state's IT infrastructure and provides support for IT-related matters. Further down the hierarchy, there are roles such as Joint Directors (JDs), Deputy Directors (DDs), Assistant Directors (ADs)/Deputy Registrars (DRs), and at the field level, there are Assistant District Industries Officers (ADIOs)/Assistant Registrars (ARs). These roles collectively contribute to the functioning and responsibilities of the Directorate of Industries and Commerce in Kerala.

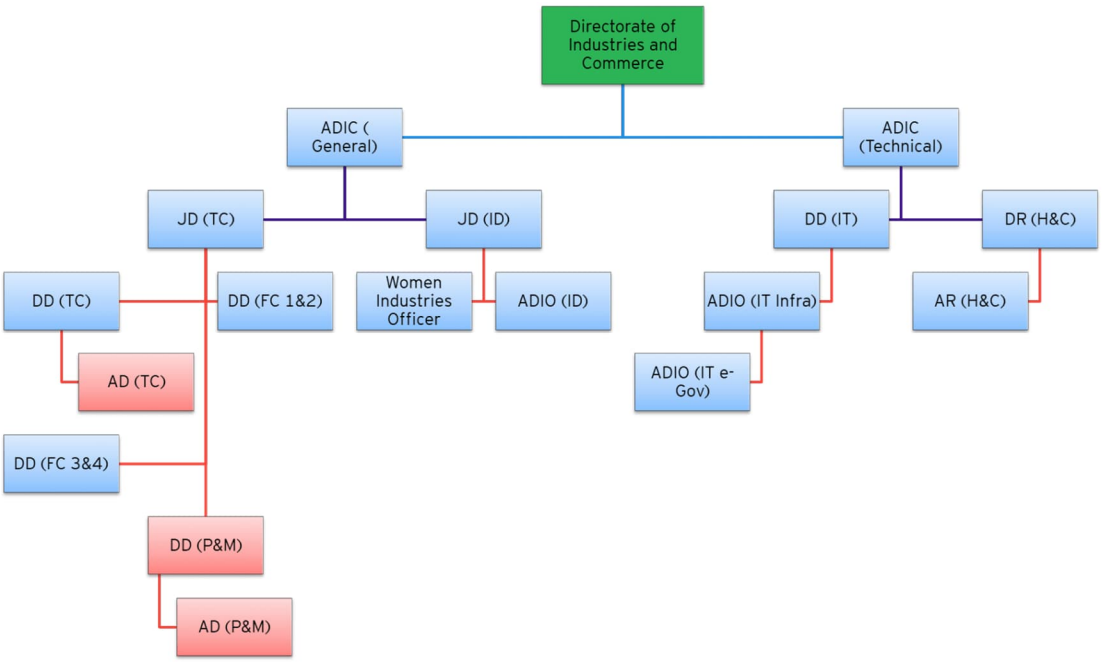


Figure 66 Organization chart – Directorate of Industries and Commerce

Table 35 Organization structure with duties and responsibilities

Organisation: Directorate of Industries									
Director (Industries & Commerce) (HOD)									
Additional Directors (ADIC) General							**Additional Directors ADIC (Technical)**		
Joint Directors (JD TC)				Joint Directors (JD ID)					
Deputy Directors DD (TC)	DD (FC1 &2)	DD (FC 3&4)	DD (P&M)			Women Industries Officer	DD(IT)		
Assistant Directors AD(TC)			AD (P&M)	AD (ID)					DR(H&C)
					Assistant District Industries Officers ADIO (ID)		ADIO (IT e-Gov)	ADIO (IT Infra)	Assistant Registrar AR (H&C)
Duties and Responsibilities									
Technical Consultancy	Financial Coordination	Financial Coordination	Planning and Monitoring	Infrastructure Development	Infrastructure Development	Matters related to Women Industries	IT e-governance (Software Support)	IT Infrastructure Support	Handicraft & Cooperation

3.1.2 Key roles and responsibilities (DIC):

The District Industries Centre (DIC) in Kerala functions as a pivotal entity for district-level industrial development. Its organizational structure comprises key roles such as the General Manager (GM) overseeing all functions, Deputy General Manager (DGM) assisting in management, Industrial Promotion Officers (IPOs) promoting industrial activities, Assistant District Industries Officers (ADIOs) facilitating policy implementation, supporting staff for administrative tasks, technical experts offering specialized guidance, and an Accountant/Finance Officer managing finances. These professionals collectively work to support entrepreneurship, implement government policies, and foster industrial growth within the district, ensuring Kerala's industrial landscape thrives in accordance with state and national objectives.

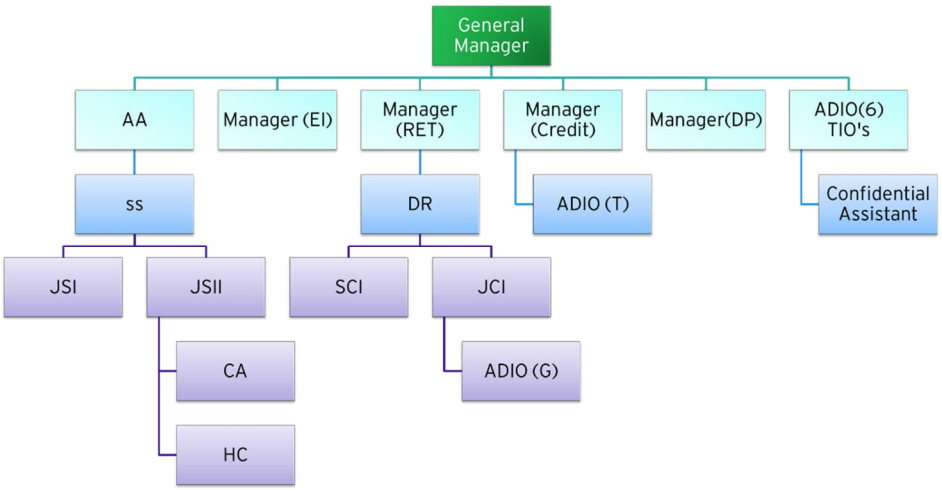


Figure 67 Organization chart – District Industries Centre

Table 36 District wise number of officials posted in DIC

District Industries Centres (DICs):							
District	**General Manager**	**Manager**	**Assistant Director (AD)**	**Deputy Registrar (DRs)**	**Assistant District Industries Officers (ADIOs)**	**Assistant Registrars (ARs)**	**Industries Extension Officers (IEOs)**
Thiruvananthapuram	1	4		1	7		17
Kollam	1	4		1	6		14
Pathanamthitta	1	3		1	4		11
Alappuzha	1	4		1	8		17
Kottayam	1	4		1	7		15
Idukki	1	3		1	6		6
Ernakulam	1	3	2	1	10		21
Thrissur	1	4	1	1	7		19
Palakkad	1	4		1	7		17
Malappuram	1	4		1	7		18
Kozhikode	1	4	1	1	5		15
Wayanad	1	2	1	1	3		4
Kannur	1	4		1	5	1	12
Kasarakode	1	1	1	1	3		5
Total	**14**	**48**	**6**	**14**	**80**	**1**	**191**

Kerala State Industrial Development Corporation (KSIDC), Kerala Industrial Infrastructure Development Corporation (Kinfra) and Kerala Bureau of Industrial Promotion (KBIP) and Board of Public Transformation are other agencies associated with the Department.

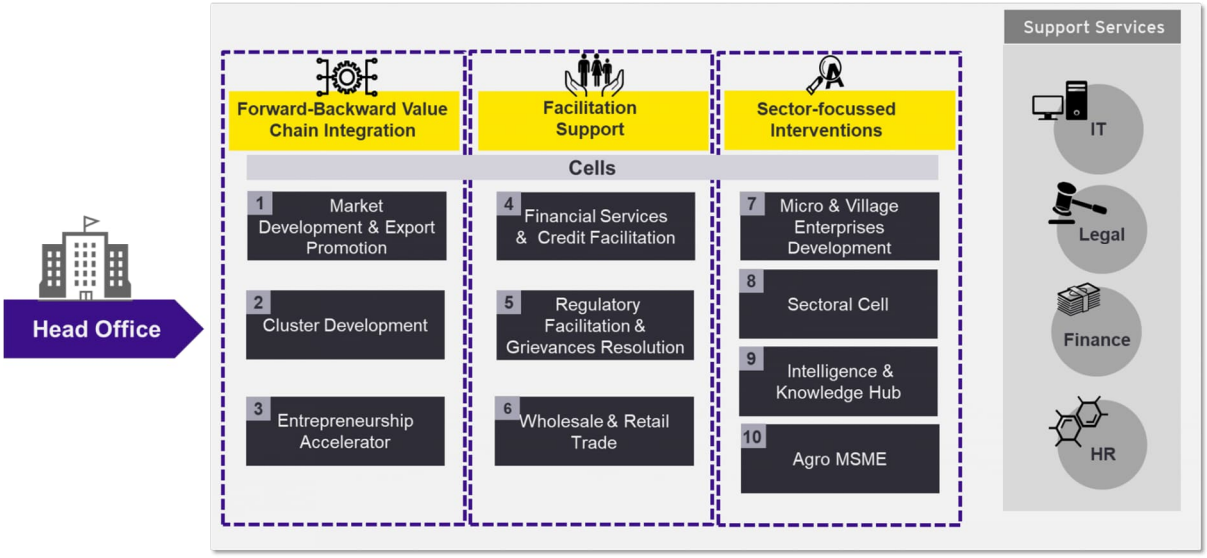
Kerala State Industrial Development Corporation Ltd. is the industrial and investment promotion agency of the Government of Kerala (India), for the promotion and development of medium and large-scale units in the State of Kerala. Kerala Industrial Infrastructure Development Corporation, KINFRA aims at bringing together all the suitable resources available in the state and developing infrastructure to woo the Industrial growth of the state. KINFRA is dedicated to catalyze Industrial growth in Kerala by providing the best industry-specific-infrastructure. KINFRA has identified over 20 core competency areas. It has 24 well-defined Industrial parks of which many are functional, and some are in the launching phase. Each of these Parks offers a comprehensive infrastructure and support services to the clients. All promotional programs and activities such as Industrial Cluster Development, HACCP (Food Safety) Certification, Kerala State Bamboo Mission, National SC/ST Hub of Government of India, PM FME Scheme of Government of India, Commerce Mission comes under the purview of KBIP.

3.2 As-is assessment of Portals in the State

Department activity	Website Link	Details
Official website of Directorate of Industries and Commerce	http://industry.kerala.gov.in/index.php	Provides details of schemes and provisions to check eligibility
SLBC	https://slbckerala.com/Industries.aspx	Provides details of meetings, credit data and lead banks
A B2C platform for entrepreneurs of Kerala	www.keralarcade.com	Set up by Kerala State Industrial Enterprises Ltd
A marketplace for produce of Kerala (B2B)	https://www.keralaemarket.com/	Provides details of verified GI sellers
KSWIFT	https://kswift.kerala.gov.in/index/	Single Window Interface for Fast & Transparent Clearance

The Directorate of Industries and Commerce, Haryana conducted a visioning exercise in 2021, MSME directorate structured envisioned as part of the exercise is shown below as part of benchmarking study.

Organisation Structure: Haryana Directorate of MSMEs



3.3 Monitoring and Evaluation Systems

Currently, each initiative operates its own dedicated MIS dashboard, created, and maintained by various governmental tech arms like Keltron, C-DIT, and NIC's Service Plus. While this decentralized approach has merits, such as specialized focus and autonomy, it also creates a fragmented data and decision-making landscape. Some of these dashboards are directly under the Directorate's purview, while others are primarily handled by District Industry Centres (DICs), further diversifying the administrative oversight. These platforms serve critical functions but exist in isolation, adding to the complexity. This segmented landscape is not static; it's in a state of continual flux with the rollout of new schemes. Each addition adds another layer to this intricate, multi-dimensional source of data.

Dashboards with the Industries Department:

S.No	Scheme/Initiative	Developed By	Remarks
1	Entrepreneur Support Scheme (ESS)	NIC	Provide financial assistance to Micro, Small and Medium Enterprises, Data Points Captured such as : Type of Service, Time limit, Total Applications, Applications Approved, Applications Rejected/Returned, Applications under process, etc.
2	Year of Enterprises (YoE)	Keltron	Data Points Captured: Basic Details (Name, Mobile, Taluk etc.), Grooming Stage (Product Identified, Training Sessions, Ward Details, etc., Pre-operational Stage (Financial Details, Other details), Commencement stage, Follow Up stage.
3	Land Management System Kerala	NIC	This Portal Needs a Revamp.

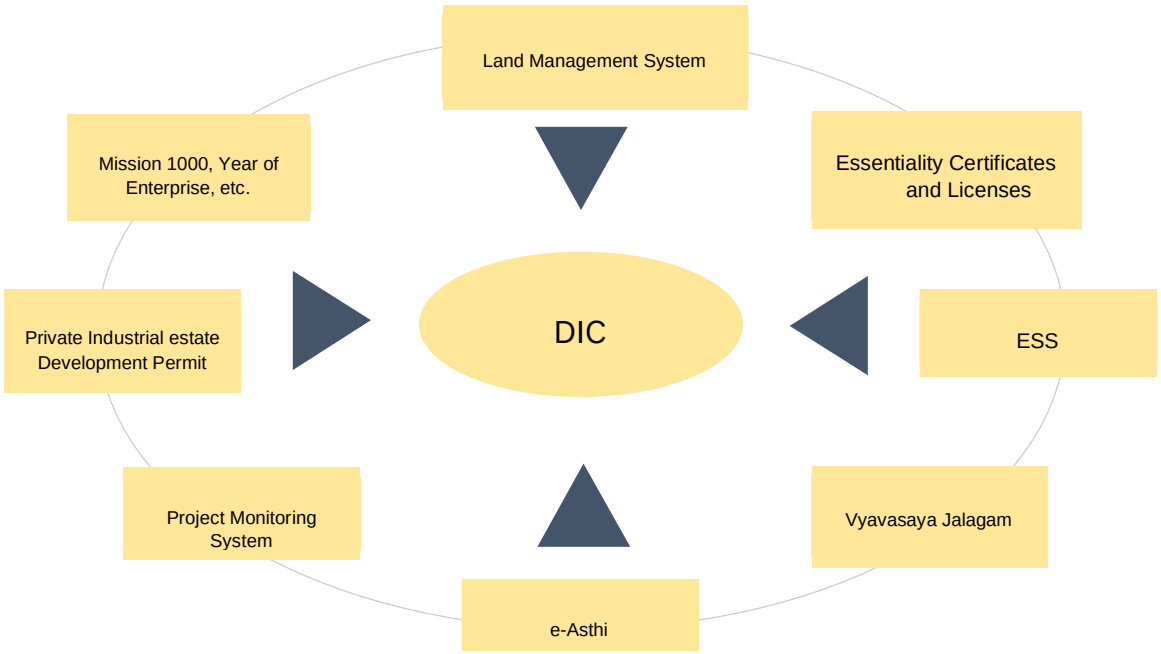
S.No	Scheme/Initiative	Developed By	Remarks
4	Lubricant Oil License for Processing Unit	Service Plus (NIC)	Data Points Captured for review at state level: District Name, Applications Approved, Processing / Pending Rejected / Returned, Disposal Applications.
5	Lubricant Oil License Renewal for Processing Unit	Service Plus (NIC)	
6	Lubricant Oil License for Trading Unit	Service Plus (NIC)	
7	Lubricant Oil License Renewal for Trading Unit	Service Plus (NIC)	
8	Essentiality Certificate for Raw Materials	Service Plus (NIC)	Portal for obtaining Essentiality Certificate for Raw Materials. Data Points Captured: District Name, Applications Approved, Processing / Pending Rejected / Returned, Disposal Applications
9	Margin Money Grant for Nano Units	Keltron	Online portal tracks and maintains the data of providing financial assistance beneficiaries to Nano units in the State, engaged in manufacturing, job work and service activity: Data Points Captured: District, Application Received, Processing, Returned, Approved, Rejected, Settled, Percentage%
10	Revival And Rehabilitation Scheme	Keltron	This Portal Needs a Revamp.
11	Interest Subvention to Nano Enterprises	Keltron	Online portal that tracks and maintains the data of financial assistance beneficiaries in the form of interest subvention to nano and household enterprises on a reimbursement basis for the term loan availed by the unit. Data Points Captured: District, Application Received, Processing, Returned, Approved, Rejected, Settled, Percentage%
12	Scheme for Skill Development Societies	Keltron	This Portal needs a Revamp: Earlier Data Points Captured: District, Application Received, Processing, Returned, Approved, Rejected, Settled, Percentage%
13	Assistance Scheme for Handicrafts Artisans (ASHA)	Keltron	Portal that onboards and financial assistance in the form of grant to the artisans in the handicrafts sector for setting up handicraft enterprises: Data Points Captured for review at state level: District Name, Applications Approved,

S.No	Scheme/Initiative	Developed By	Remarks
			Processing / Pending Rejected / Returned, Disposal Applications
14	Entrepreneurship Development Club (ED Club)	Keltron	This Portal Needs a Revamp.
15	KSSIA -Grants	Keltron	This Portal Needs a Revamp.
16	Vyavasaya Jalakam 2.0	Keltron	This Portal Needs a Revamp.
17	Sustainable Survey (in development)	Keltron	Portal In development
18	e-Asthi	Keltron	This Portal Needs a Revamp. . Repository that Manages IT and non-IT assets of all the employees in Directorate
19	Mission 1000	Keltron	Special monitoring dashboard for on-boarding, evaluating and assisting the 1000 MSME's. Data Points captured: Type of Enterprise, Sector, Turnover, Net Profit, Land Availability, etc)
20	MSME Awards Portal (in development)	Keltron	Portal for Awards (Future Plan)
21	One Family One Enterprise	Keltron	Portal for family-run enterprises where interest subvention received, No. of families, Onboarding, Active users, etc..
22	MSME Insurance (New Scheme in development)	Keltron	New Portal for Insurance of MSME disbursements. (Proposed)
23	Private Industrial Estate Development Scheme	Keltron	Portal to track current infrastructures facilities such as Water, Strom water, Electricity, No. of MSME units in the estate, extend of land used, etc..
24	KELS-	Keltron	This Portal Needs a Revamp. . Portal for financial assistance to new enterprises & monitoring loan status.
24	Grievance Redressal System	ULCCS	This Portal Needs a Revamp. Portal for No. of Grievance addressed/pending, etc
25	TRIMS- portal	C-DIT	Portal for monitoring Taluk Resource person.
26	Planspace	State Planning Board	Plan monitoring by the state planning board
27	Revenue Recovery Portal	Revenue Dept.	Recovery notices; no direct visibility for the Directorate

S.No	Scheme/Initiative	Developed By	Remarks
28	Project Management and Activity Monitoring	Kerala Digital University	Portal for Infrastructure monitoring of the important schemes under Directorate. Data Points Captured: Type of Work, % of Completion, Planned Completion Date, Progress, etc..)

Further, at the state level, where macro decisions are made, a segmented view is a significant bottleneck. It obstructs the ability to glean insights across schemes, evaluate the interdependencies between initiatives, and ultimately, impedes data driven, strategic decision making. This situation underscores the critical need for a master MIS portal a unified, integrative platform that can serve as the single source of truth for multiple stakeholders.

Every District Industries Centre (DIC) across all 14 districts is already equipped with individual login credentials, enabling each DIC to actively update field level data across multiple service offerings and dashboards. These dashboards include but are not limited to Essentiality Certificates, LOG Licenses, Land Management Systems, and various other specialized portals. This provision fortifies data integrity, security, and operational efficiency across all DICs, effectively making each centre a responsive and agile entity. The details of few dashboards where the DIC access are as follows:



To address the systemic challenges arising from fragmented MIS dashboards, a stakeholder meeting was conducted, involving key representatives from the Directorate of Industries and Keltron. The meeting aimed to scrutinize the existing software and dashboards developed by Keltron, identify inherent limitations, and assess the feasibility of a unified MIS portal. The dialogue revealed that while creating a master MIS is technically challenging, it is feasible and strategically essential. A consensus was reached on the urgent need for an integrative platform that could serve as a single source of truth, thereby enhancing data driven decision making at the state level.

3.4 Existing Interventions in the State for MSME Promotion

a. Entrepreneur Support Scheme (ESS)

The scheme aims to provide financial assistance to Micro, Small and Medium Enterprises engaged in manufacturing activities in the State, proportional to the capital investment made. Depending upon the category of the investor, sector and the district of investment, the unit can avail subsidy from 15% to 45% of the fixed capital investment. For this scheme, loan from a financial institution is not mandatory. This scheme has received an allocation of Rs.60 crore in the State budget, which is a significant proportion.

The districts of Kasaragod, Idukki, Wayanad, and Pathanamthitta lag in terms of establishment of new MSMEs, as well as formalisation of MSMEs. To overcome the underlying barriers and encourage entrepreneurship, under ESS applications from these districts are eligible for an additional support of 10% over and above, limited to Rs 10 lakh.

The districts of Kasaragod, Idukki, and Wayanad have less than the average number of applications, i.e., ~500 applications. The disposal rates in these districts, however, is over 80% except in case of Kasaragod. On the other hand, Pathanamthitta has been able to encourage applications and enable speedy disposal of applications under ESS. Districts of Idukki and Thiruvananthapuram has better performance in terms of disposal rate, with rates approximately over 90%.

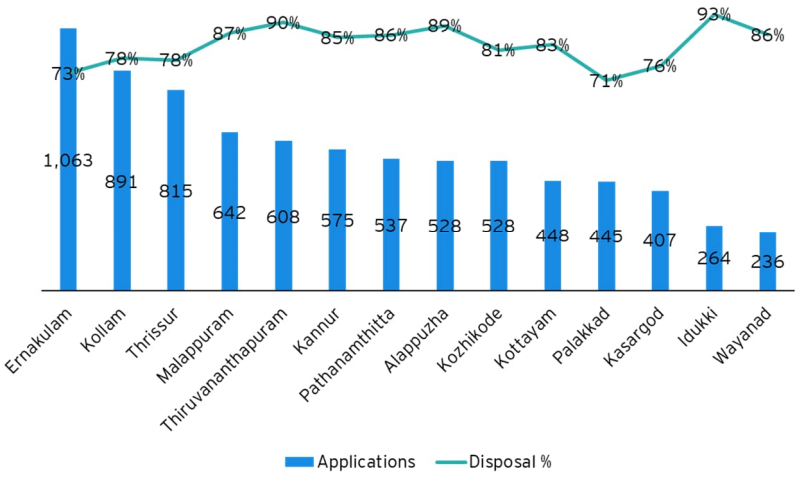


Figure 68: District-wise Applications and Disposal Rate of ESS

Across central and state-level entrepreneurship support schemes for first-generation entrepreneurs, it is seen that during 2021-22 the assistance provided under ESS exceeds that under PMEGP both in terms of the overall assistance, as well as average amount of assistance provided per enterprise. The typical loan ticket size, within the state, under PMEGP is Rs 2.37 lakh, i.e., approximately 1/3 rd of the upper credit limit of the scheme. Likewise, the typical loan ticket size, within the state, under ESS is Rs 5.23 lakh, i.e., approximately 10.57% of the upper credit limit of the scheme.

Comparing across state, the New Entrepreneur cum Enterprise Development Scheme (NEEDS)[51] by the state of Tamil Nadu it seen that the scheme offers a much higher amount of assistance, almost double the amount. The typical loan ticket size, however, is closer to that of ESS, and amounts to approximately 10.28% of the upper credit limit of the scheme.

[51] The NEEDS provide subsidy for 25% of project cost subject to a maximum of Rs 75 lakh, and interest subvention at the rate of 3%, throughout the period of repayment. It mandates that the project cost should be above Rs 10 lakh, and below Rs 5 crore.

NEEDS, unlike ESS, also has an interest subvention component. The higher upper credit limit combined with the interest subvention component may make NEEDS a better placed scheme for first-time entrepreneurs than ESS.

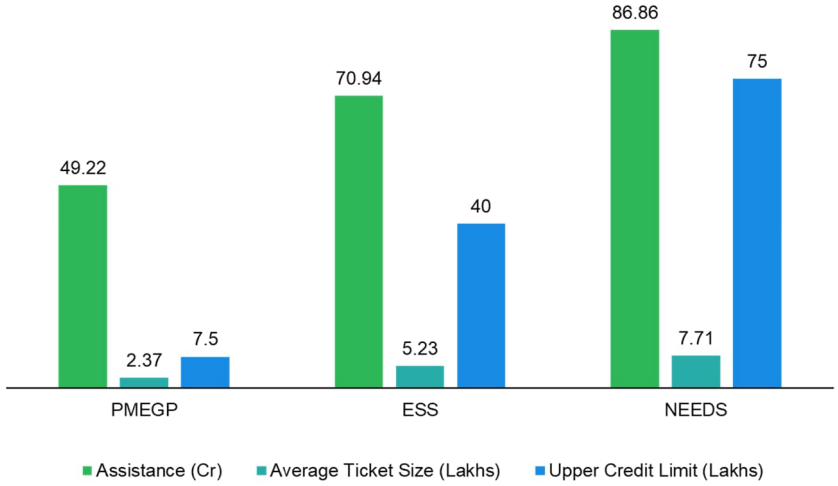


Figure 69: Assistance Provided and Upper Credit Limit under PMEGP, ESS, NEEDS

The typical loan ticket size is observed to be less than Rs 10 lakhs, irrespective of the upper credit limit of the entrepreneur support schemes. It maybe important to identify the reasons that limit credit outflow within a specific range and seek to expand the range further.

b. Assistance Scheme for Handicraft Artisans

The Scheme intends to provide financial assistance in the form of grant to the artisans in the handicrafts sector for setting up handicraft enterprises. The assistance is a one-time support to eligible artisans of the state as back-end assistance. Assistance is provided for Fixed Capital Investment, ie construction of Work shed/ Workshop, cost of tool, equipment, machinery and accessories, electrification, Technology support/ product / Design development, 40% of the fixed capital upto Rs. 2.00 lakh for general category and 50% upto Rs. 3.00 lakh for young, women and SC/ST artisans. This scheme has received an allocation of Rs 0.3 crore in the budget.

Districts of Thrissur, Palakkad, and Wayanad has better performance in terms of more applications being received and have over 90% disposal rate except the district of Palakkad. The number of applications across these districts range between 10 to 30 applications. Districts of Alappuzha and Pathanamthitta have reported zero applications so far.

c. Revival and Rehabilitation scheme for Defunct MSMEs and Cashew processing units

The scheme envisages supporting defunct MSMEs in the manufacturing sector including cashew processing units through assistance in the form of capital grants and working capital incentives. All MSMEs in manufacturing sector which are defunct for at least 6 months due to genuine issues including cashew processing enterprises that have potential to be revived and rehabilitated, are eligible for assistance under the scheme. Based on the data obtained from the Dashboard of the Directorate of Industries and Commerce, there has been very few applications under this scheme. The number of applications on average is in single digits across districts, except for Wayanad where there were 13 applications so far.

d. Scheme for Interest Subvention to Nano Household Enterprises

This scheme has been introduced to promote the Nano and household enterprises in the state. The scheme intends to provide financial assistance in the form of interest subvention to nano and household enterprises on a reimbursement basis for the term loan availed by the unit. The units engaged in the manufacturing, services as well as job work can apply under the scheme. The units are eligible for interest subvention to an extent of 6% per annum for the term loan availed by the unit on reimbursement basis for three years, 8% for women and SC/ST enterprises.

Districts of Wayanad, Kollam, and Palakkad has better performance in terms of more applications being received and have 100% disposal rate. Districts of Kannur and Kasaragod has had zero applications so far under the scheme, and districts of Pathanamthitta and Thiruvananthapuram has lower 50% disposal rate.

e. Margin Money Grant to Nano Units

The scheme aims to provide financial assistance to Nano units in the State, engaged in manufacturing, job work and service activity having any type of value addition with project cost upto Rs. 10 lakhs. Margin money grant of upto 40% of the project cost is provided, with 10% additional grant for Women, Youth, Differentially Abled Persons, Ex-Servicemen, and persons belonging to SC/ST category. 50% of the districts have received applications more than 100. Kannur has the lowest disposal rate compared to other districts.

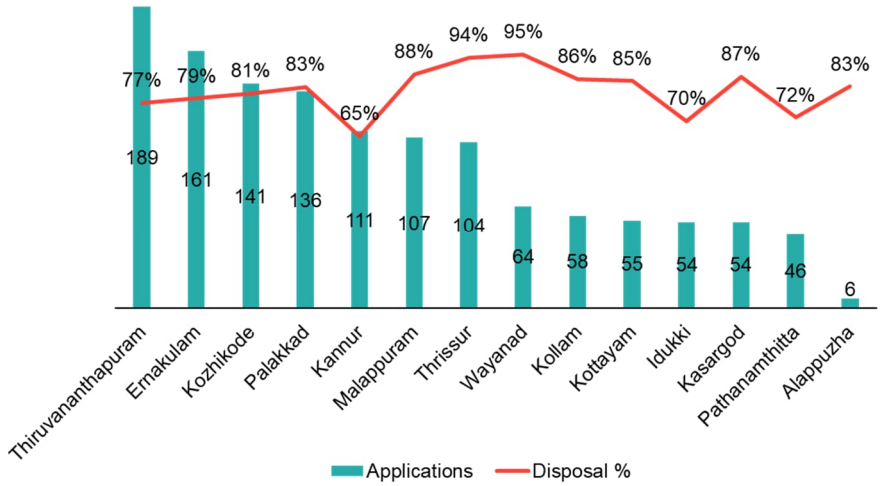


Figure 70: Figure Applications Filed and Disposal Rate under Margin Money Grant to Nano Units

f. One Family One Enterprise

The scheme intends to provide interest subvention on Term loan and/or Working capital loan availed by MSME units from financial institutions viz. Nationalised Banks, Scheduled Banks, KSIDC, KFC, and Kerala Bank. All new micro, small and medium enterprises in manufacturing, services, and trading activities, which commenced operations/ productions on or after 1/4/2023 and availed Term Loan and/or Working Capital Loan, shall be eligible for assistance under this scheme. In case where the loan amount exceeds Rs.10 Lakh, the interest subvention shall be considered for loan up to Rs.10 Lakh only. The rate of subvention will be up to a maximum of 6%. This scheme has received an allocation of Rs 40 crore in the budget, which is a significant proportion.

g. Assistance to Skilled Entrepreneurs Development Centres

The scheme aims to form one or more Industrial Co-operative Societies within the territorial boundaries of each Local Self Government Institution in the State and accordingly those working in different occupations to transform the unskilled workers into experts in the relevant field through skill development training, providing the required work tools to the workers and providing a better

work-friendly environment to the society. The maximum benefit per society under this scheme will be Rs.2 lakhs. This scheme has received an allocation of Rs 0.5 crore in the budget.

h. Economic Package by Government of Kerala to Tackle the Impact of Covid-19

The Government of Kerala announced various stimulus packages to tide over the economic crisis caused by Covid-19 pandemic. The first economic package was announced in March 2020 amounting to Rs 20,000 crore. Kerala was the first State to announce such a package, much earlier than the economic package announced by Government of India. The package included amount for the payment of seven months welfare pension, ₹500 crore for health packages, Rs 2,000 crore for loans through Kudumbasree scheme, Rs 2000 crore for village employment assurance schemes, Rs 150 crore for providing relief ₹1000 for BPL and Anthyodaya families who are not eligible for welfare pensions, Rs 14,000 crore for clearing the arrears in various sectors, ₹100 crore for providing free ration to both APL and BPL families and Rs 50 crore for provision for subsidised meals of ₹20 per meal.

In the wake of second wave, a second economic package of Rs 20,000 crore was announced in June 2021 to meet the socio economic and health challenges caused by the pandemic. The package provided Rs 2800 crore for health emergencies, ₹8,900 crore for direct disbursement to those who are in crisis due to loss of livelihood, and ₹8,300 crore towards interest subsidy for loans provided for economic rejuvenation.

A supplementary package of Rs 5,650 crore was declared in July 2021 to aid small industries through subsidised loans and interest reliefs for small traders and farmers hit hard by the Covid-19 induced economic crisis.

- **Vyavasaya Bhadhratha – a special relief package for MSMEs in the wake of Covid-19[52]**

The Covid 19 pandemic and the consequent lock down imposed by had seriously affected the functioning of the MSME sector. Many of the MSMEs have sustained loss of raw material and loss of market sales leading to financial woes. To mitigate this impact, a special relief package was ordered in the state, which included following components:

[52] book.cdr (keralaindustry.org)

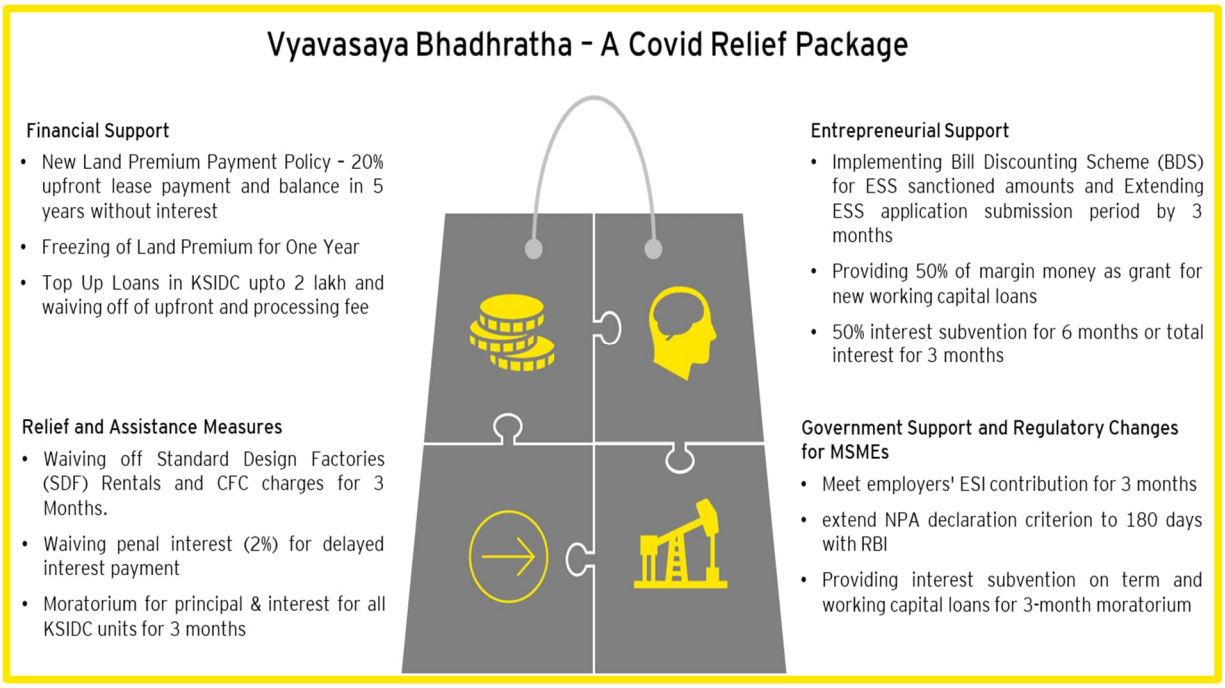
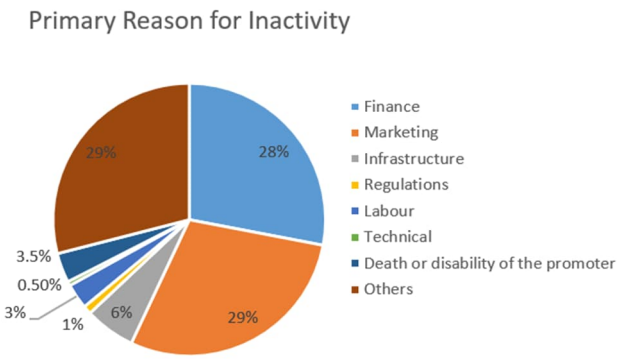


Figure 71: Vyavasaya Bhadhratha

3.5 Enterprise Sustainability under Year of Enterprises Initiative

Directorate of Industries is conducting a survey of all enterprises established under the Year of Enterprises (YoE) initiative to further understand enterprise challenges and opportunities for interventions for enabling long-term enterprise sustainability. Out of the ambitious target of setting of 1.5 lakh enterprises in 14 district, 1.39 lakh (93.2%) enterprises have been set up as on 21.09.2023, of which, 1.34 lakh (96.5%) have been surveyed. Out of these survey units, only 11% are registered on Udyam and 89% are yet to register, the Directorate is planning to take up steps to formalize these enterprises. Key findings from the survey are as follows:

20,374 MSMEs were inactive at the time of survey, indicating that 15% of the established enterprises are inactive under less than 2 years of starting operations. Ernakulam reported highest inactive units both in terms of number (2352) and percentage (18%) while all remaining districts reported 14-16% inactive units, except for Alappuzha where only 10% units were inactive.



Among reasons for inactivity of the units, issues related finance/ credit (28%) and market access (29%) were primary reason for 57% of the inactive units. This data further solidifies the well-understood and established fact that credit and market access are essential determinants of at least continuity of operations for majority of MSMEs and long-term success. 6% of the inactive units cited infrastructure constraints, which are understood as inadequate access to energy and utilities such as water, gas. Further infrastructure gaps could also be related to limited warehousing and storage facilities, leading to supply chain disruptions. All these factors can lead to increase in cost and decreased competitiveness, making it difficult for enterprises to survive in highly competitive markets.

Other reasons identified for inactivity of units were related to death/ disability of the promoter (3.5%), issues related to availability, cost and retention of labour (3%), regulatory issues for compliance and licenses (1%) and issues related to technology (.5%). 29% of the units specified 'other' as reason of inactivity. These reasons are understood to be related to inefficient enterprise management, sudden disruption in supply chain, withdrawal of support from ecosystem partners and personal reasons.

As per the district-wise analysis of reasons for inactive units, finance/ credit and marketing constituted primary reasons for 68% of units in Kozhikode and Kasaragod, while for Alappuzha, this number was only 36% as 47% of the units in the district selected 'other' as primary reason of inactivity. 93,967 (70%) of the surveyed units have a bank account in the name of the unit. While about 88-90% units situated in Malappuram, Kozhikode and Wayanad have bank accounts in their name, this number is only 44% in Thrissur. Out of these 93,967 units, 5,436 units (16.5%) have applied for interest subvention under the Scheme for Interest Subvention on Term Loan and Working Capital and 11% of these have already received the assistance.

3.6 Comparative Analysis of MSME schemes and initiatives in the state with Benchmarks

A comparative analysis of MSME schemes and initiatives serve to identify of best practices, assess their impact, and determine areas for improvement. Each state customises its MSME schemes to align with its unique economic and industrial context, ultimately aiming for more effective and personalised support for the MSMEs. The state of Tamil Nadu has allocated Rs 1,509 cr (0.41%) for the MSME Department in 2023-24 budget.

Across the 49.48 lakh MSMEs in Tamil Nadu, it implies an allocation of approximately Rs 3000 per MSME. In line with this, the MSME schemes and initiatives in the state are compared not only to similar states but also to the best-performing states in India, which include Karnataka, Tamil Nadu, Maharashtra, Haryana and Gujarat.

Policy component	Possible schemes/activities at State level	Provision in other States	Provision in Kerala
Separate MSME directorate and separate MSME policy	NA	Separate Directorate is available in states such as Haryana, Karnataka, and Tamil Nadu	KBIP has been set up to support the Directorate with designated activities to ensure MSME focus. Further, in Kerala, MSMEs constitute major proportion of the industrial ecosystem in the State.
Separate grievance cell	NA	Haryana has constituted separate Regulatory Facilitation & Grievances Resolution Cell	Provision added in amendment of the Kerala Industrial Single Window Clearance Boards Grievance Redressal - Kerala Industries & Commerce Department
Factor conditions	Exemption from tax on Electricity Tariff	• Karnataka – 100% exemption for 8 years • Haryana – 100% exemption for 7 years	100% exemption on electricity duty for MSMEs for 5 years
	Exemption from stamp Duty for MSMEs	• Karnataka – 100% exemption • Maharashtra – 100% exemption • Haryana – 100% refund in industrial estate, 75% in category C blocks and 50% in category A and B blocks	Up to 100% on lease deed/ purchase of land/ building for setting up manufacturing unit industrial Parks Up to 100% waiver for women and SC/ ST entrepreneurs anywhere in the State.
	Power Subsidy	• Haryana – Rs. 2 per unit in designated blocks • Karnataka – Rs. 1 for 3 years • Maharashtra – Rs. 0.50 and Rs. 1 for designated blocks • Tamil Nadu - 20% of the power consumption charges is reimbursed for the first three years of commercial production (LTPT subsidy)	No provision

Policy component	Possible schemes/activities at State level	Provision in other States	Provision in Kerala
Private Industrial parks	Capital Subsidy for Setting up STP	• Karnataka – Offers developer one-time capital subsidy amounting to 50% of Secondary Treatment Plant (STP) set up cost subject to an upper ceiling limit of Rs 1 cr	Government will extend an assistance of Rs. 30 lakh per acre subject to a maximum of Rs. 3 cr as reimbursement towards building infrastructure such as electricity, water, road, drainage, ETP, CETP, laboratory, testing and certification facilities etc
	Land subsidy	• Karnataka - Offers MSMEs in private industrial parks special land at the rate of 25% of guidance value limiting to maximum extent of up to 1 acre in Zones 1 & 2 only	
	Water charges	• Karnataka – Offers MSMEs subsidy on water charges for tertiary treated water for the initial 5 years of operation of the individual enterprise at the rate of Rs 15 per unit of water (KLD) used in case of establishment of tertiary treatment facilities and supplied to such enterprises by the developer	
	CETP charges	• Karnataka – Offers developer one-time capital subsidy up to 50% of Common Effluent Treatment Plant (CETP) cost subject to a ceiling of Rs 500 lakh. To enable continuous usage, offers MSMEs a subsidy on user charges at Rs15 per unit of effluent discharge treated for the initial 5 years of operation of the enterprise	
New entrepreneur promotion	Capital Subsidy and Interest Subvention on fixed capital investment	• Karnataka – Interest subvention of 5.5% • Tamil Nadu – 3% interest subvention, and 25% capital subsidy on term loan throughout the entire repayment period. Ceiling limit of capital subsidy is Rs 75 lakhs	Interest Subvention - 2% interest subvention on term loan taken by priority sector units, from Govt. financial institutions, for a period of 5 years from the date of starting commercial operations*

Policy component	Possible schemes/activities at State level	Provision in other States	Provision in Kerala
			Margin money - grant on 30-40% for projects with cost up to Rs 10 lakhs
Quality standards	Charges related to certification	• Tamil Nadu - payments made to Consultancy and certification agencies towards acquiring certification subject to maximum of Rs.2.00 lakhs for National level certification and Rs.10 lakhs for international level certification • Maharashtra – Subsidises quality certification expenses up to 75% subject to a limit of Rs 1 lakh. 25% subsidy on additional capital equipment acquired for cleaner production measures up to maximum Rs 5 lakh • Karnataka – Certification costs under ISO Series and BIS is subsidised at 75% and 50% rate with a ceiling limit of Rs 75,000 and Rs 20,000 respectively. 25% of testing equipment cost subject to max. Rs 50,000	Refund of expenses incurred for compulsory marking like CE, FDA, ISO, BIS, etc, to the extent of 50% of expenses subject to a maximum of Rs. 25 Lakh per unit per annum Reimbursement of 50% of the cost incurred in obtaining 'Made in Kerala' certification*
Subsidy for supporting R&D	Grant for R&D	• Karnataka - Industry associations supporting MSMEs eligible for a 50% subsidy on equipment/ machinery limited to INR 500 lakh • Maharashtra - 75% subsidy on expenses incurred on patent registration limited to Rs 10 Lakh for national patents and Rs 20 lakh for international patents	R&D Grant Rs 30 lakh for start-ups Reimbursement of 50% of expenditure incurred, subject to a max Rs. 30 Lakh, for patent, copyright, trademarks, GI registration, etc

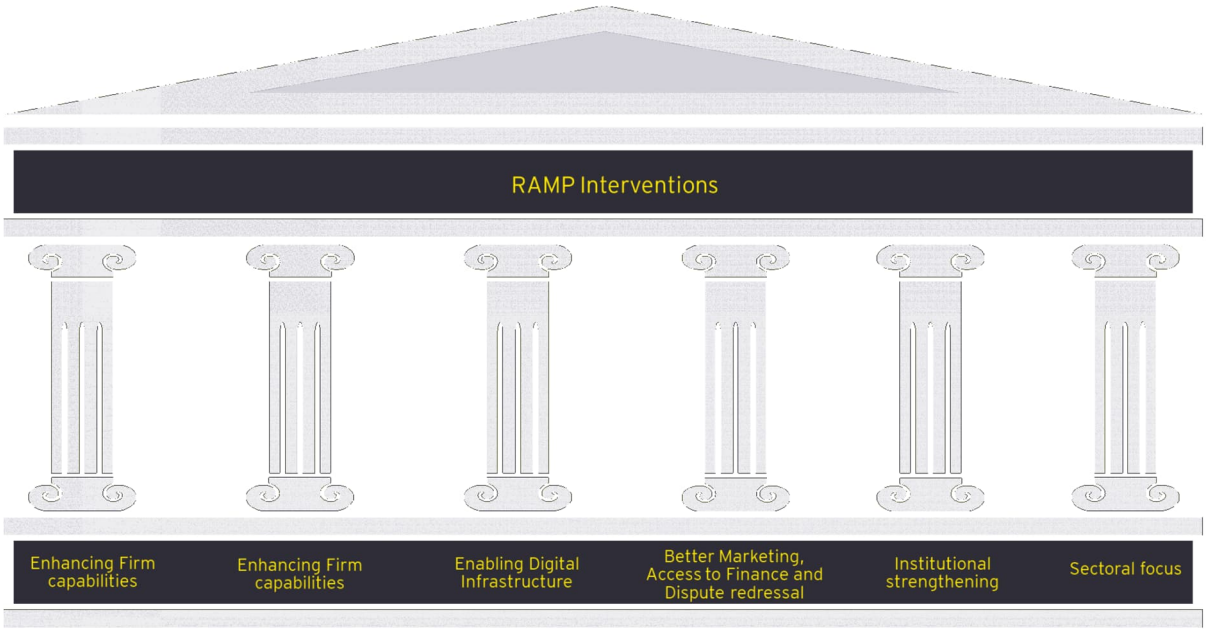
Policy component	Possible schemes/activities at State level	Provision in other States	Provision in Kerala
		• TN - Innovation Voucher Programme (IVP) is among MSMEs in sectors like fisheries, engineering, waste management, automobiles, nanotechnology, electronics etc. Grant up to Rs 2 lakh and Rs 5 lakh for converting idea into working prototype and for commercialization respectively. 75% and 50% subsidy on cost of filing applications for patent, trademarks, and GI respectively. The upper ceiling limit is Rs 3 lakhs per patent registered and Rs 25,000 per trademark and GI registered	Funding of 20% of R&D cost for units engaged in R&D with Universities in the State, subject to a maximum of Rs. 1 cr. per unit.
Employee welfare	Payroll and social security contribution subsidy	• Tamil Nadu - Reimbursement of employer's contribution to EPF for first three years subject to a maximum of Rs.24,000 per employee per annum, if employment is provided to more than 20 persons for all micro enterprises • Gujarat – Reimbursement of employer's contribution to the EPF for their new employees working in Gujarat for ten years subject to a maximum of Rs 18000 per employee per month or 12% of basic salary plus DA and retaining allowance, whichever is lower	No provision

Policy component	Possible schemes/activities at State level	Provision in other States	Provision in Kerala
Energy audit	Cost of energy audits	• Tamil Nadu - 50 % of energy audit cost including professional cost subject to a maximum of Rs.0.75 lakh per energy audit per unit. • Maharashtra - 75% of water and energy audit costs limited to Rs 1 lakh, and Rs. 2.00 lakh respectively • Karnataka – 75% of cost subject to max. Rs 1 lakh for water audit (one time) • Gujarat - 75% of cost of energy/ water audit conducted by a recognized institution/ consultant subject to maximum Rs. 50,000 for each will be reimbursed once during the operative period of the scheme	Reimbursement of 25% of expenses incurred for purchase of plant & machinery/equipment for setting up ETP, installations for substitution of power from grid, rainwater harvesting, Zero Discharge technologies, recycling of e-waste and recycling of wastewater, conducting energy and water conservation audits, & purchase of material for such conservation, excluding the expenditure incurred for civil works. The ceiling limit is Rs 25 lakh during the policy period.
Environmental Sustainability	Financial assistance for capital equipment and technology adoption	• Maharashtra - 50% of cost of capital equipment, limited to Rs 5 lakh, adopted to conserve/recycle water. 50% of the cost of additional capital equipment for improving energy efficiency, limited to Rs 5 lakh • Gujarat - 2.25% of cost of equipment recommended by auditing authority subject to maximum of Rs 20 lakh for once during operative period of the scheme • Karnataka - 50% of cost of equipment required for rainwater harvesting and wastewater recycling, max Rs 2 lakh and 7.5 lakh respectively. 50% of cost of ETP (max. Rs 50 lakh)	

Policy component	Possible schemes/activities at State level	Provision in other States	Provision in Kerala
Equity fund raising	Support for listing in stock exchange, Identification of investment bankers/financial institutions to initiate the process	• Tamil Nadu - Assistance for listing & raising money in the SME stock exchange with maximum of Rs.5 lakh subject to 20% of the total expenditure incurred on SME IPO. • Gujarat - 25% of Eligible expenditure incurred on raising of fund through SME Exchange, maximum up to Rs.5.00 Lakhs (Rupees Five Lakhs) one time after successful raising of equity& Listing on SME Exchange Platform during the operative period of the scheme.	Reimbursement of 50% expenses subject to a maximum of Rs. 1 cr., incurred on floating Public Issue through the SME platform of NSE & BSE, provided the funds thus raised are utilized for setting up/ expanding enterprise in the State.

4 SIP Projects/Proposals

The State is striving to build up its image as an industry friendly State and overcome some of the inherent disadvantages the State has such as limited availability of land for setting up industries, to improve the investments in the MSME sector. The recent initiatives taken in this direction has created a momentum which needs to be sustained. Hence, the State wishes to leverage the RAMP programme to address the core themes of RAMP in turn achieving results in some of the focus areas such as fostering entrepreneurship, sector focused growth, Skillset upgradation for futuristic jobs, ESG compliant industrial development and creating enabling infrastructure.



The proposed interventions projects under the RAMP programme are as provided below:

4.1 Enhancing Firm Capabilities (Enhancing domestic manufacturing of import substitute products - Make in Kerala)

4.1.1. Major issues/challenges of Firm capabilities

Kerala has an economy mainly dependent on agriculture, tourism, and remittances. The MSMEs in the State are predominantly, i.e., more than 71%, in the service sector owing to its high literacy rate and availability of skilled manpower. However, the state has been facing a trade deficit for many years due to lack of congenial environment and factor conditions including infrastructure to promote manufacturing sector. Kerala's imports (nearly two-thirds of it) are composed of high and medium tech products, while its exports (almost two-thirds) are mostly low tech and in fact primary products and raw materials[53].

The government has been taking steps to reduce the dependence on imports and promote domestic production. However, the Industrial investments in the MSME sector have been severely affected by several internal and external factors; some of which are as provided below:

- The perception that Kerala is not industry friendly, making investors reluctant to come to Kerala
- Limitation in availability of land for industrialisation due to the inherent geographic conditions

[53] Study by Centre for Development Studies for Industries department, Govt. of Kerala

- Stiff competition faced from the neighbouring industrialised States like Tamil Nadu and Karnataka.
- The current level of adoption of innovative technology in manufacturing industry is inadequate to cope with the demands of growing market conditions
- Limited access to timely finance, resulting in MSMEs being forced to rely on their own resources.
- No focused approaches for improvement in areas/ sectors for import substitution
- Limited marketing opportunities and exposure for products manufactured in Kerala in external markets

4.1.2. Key Findings

- As per study by CDS for Dept. of Industries, the state has been importing products worth about Rs. 1,28,000 Cr., 92% of which was from other State, as per study in 2021-22. Export of the State during the same period was only Rs.74000 Cr. Indicating a large trade deficit. Also, Kerala's imports (nearly two-thirds of it) are composed of high and medium tech products, while its exports (almost two-thirds) are mostly low tech and in fact primary products and raw materials.
- Some of the limiting factors identified which the MSMEs were facing, as per sample survey conducted for the SIP, some of the limiting factors identified which the MSMEs were facing were limited access to technology, high cost of skilled labour and access to finance
- Many MSMEs are unaware of the nuances about how certifications and compliances can be beneficial in the long run and think of them as additional costs. A striking revelation from the data is that over 80% of MSMEs, regardless of their Udyam registration status, reported possessing no certifications.
- The MSMEs on ground were probed about their uptake of insurance until now. Based on the survey among 145 MSMEs, it is indicated that less than 10% of these MSMEs (n =13) had existing insurance coverage in place. Among those MSMEs with insurance coverage, the majority (12 out of 13) had opted for coverage against fire-related risks, followed by natural disasters (7 out of 13), and thefts (5 out of 13). It's noteworthy that almost all these enterprises had chosen public sector insurance companies for their coverage, except for two instances.

  This finding underscores the limited penetration of insurance among MSMEs and reveals a substantial opportunity to raise awareness and facilitate the uptake of insurance schemes, especially via the recently introduced comprehensive insurance scheme by the Kerala Government. Additionally, the data suggests a notable preference for insurance coverage related to fire and natural disasters, potentially reflecting what these enterprises consider as the most crucial risks to mitigate. This insight can be used to inform future insurance offerings and marketing strategies, aligning them more closely with the specific needs and priorities of the MSMEs
- Advancements in technology are enabling manufacturers to streamline production processes, innovate at a faster pace, reduce costs and deliver higher quality products to meet customer demand. Because of its versatility and ease of use, there are a number of areas within manufacturing where technology is being harnessed. Limitations in adopting appropriate technology is a major reason for lower medium to high end manufacturing in the State.

  A significant majority of the surveyed enterprises encountered various challenges when attempting to integrate technological improvements into their production processes. As per MSMEs, spanning the categories of Udyam registration, one of the primary challenges is a lack of awareness (61%) about relevant technologies. Even when they do become aware of these technologies, MSMEs often find obstacles to their adoption, including the associated costs, a dearth of technical guidance and support, and difficulties in securing

financial backing for implementation. It's noteworthy that a nearly identical percentage of Udyam registered, and unregistered enterprises reported these same issues, underscoring that these challenges are consistent across the board and are experienced with similar intensity.

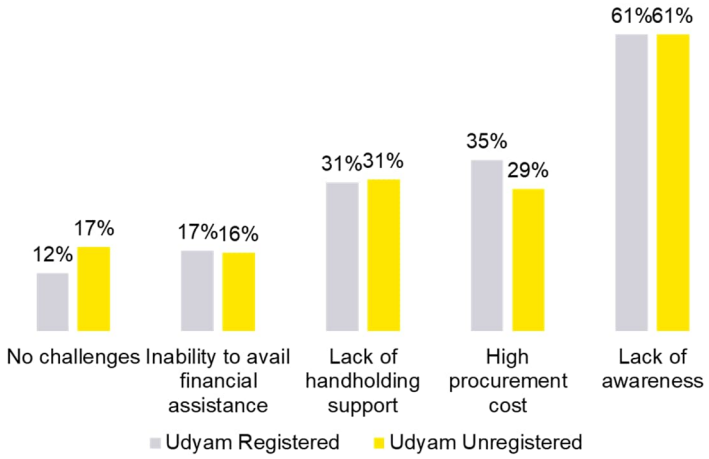


Figure 72 Challenges Encountered in Technology Adoption

- A need is felt among the surveyed MSMEs for engaging BDSPs in supporting them in the areas of tax related services, loan application, marketing (including digital marketing) and technology upgradation.

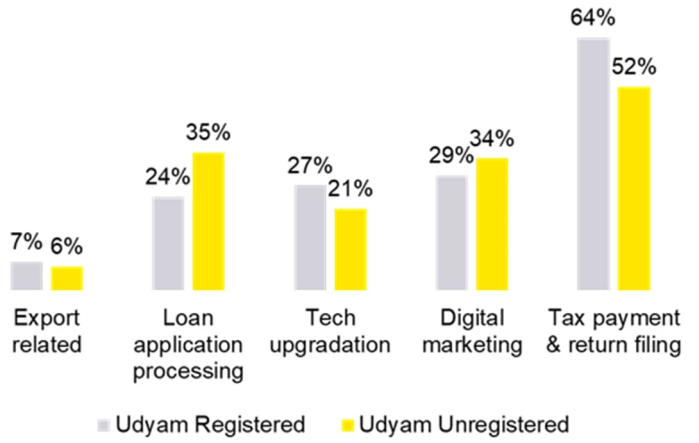


Figure 73 Demand for BDSP Services

There are currently over 170 BDSPs empanelled with the State government for providing various business development services through MSME clinics organised to facilitate the MSMEs in different domains like consents and licences, DPR preparation, Finance, Marketing, export and technology. However, considering the number of MSMEs currently established and getting registered every year, the pool of BDSPs needs to be expanded. Further, linkages Technical institutions needs to be further strengthened to enable relevant technologies and support are available to the MSMEs in developing their manufacturing bases in the identified sectors for import substitution products manufacturing.

4.1.3. Problem Statement: Enhancing domestic manufacturing of import substitute products - Make in Kerala

The Make in Kerala initiative is based on the rationale that the state's trade deficit can be reduced by promoting domestic production and increasing exports. The state has been importing a significant portion of its products from other states, which has been contributing to the trade deficit.

The initiative aims to identify the products that can be produced locally and promote their production. By promoting domestic production, the state can reduce the dependence on imports and create new employment opportunities. The initiative also aims to promote technological advancements in the production process. The state has a skilled workforce and a vibrant research and development sector. By encouraging technological advancements and conformance to quality through quality certifications, the state can improve the quality of its products and increase its competitiveness in the global market.

4.1.4. Proposed Project with respect to RAMP objectives

The following projects are proposed under this intervention:

i. Detailed study for Strategic Plan preparation for promoting local manufacturing of potential import substitution products

Initially a secondary research-based study on the E-Way bills related to the State from 2018-19 through 2021-22 revealed that a set of 22 industrial products contributed to a large share of products that were transported into the State from other States for consumption.

Sl. No.	Identified Imported Product
1	Ovens, Furnaces and Furnace Burners
2	Motor Vehicles
3	Computers And Peripheral Equipment/ Medical and Dental Instruments and Suppliers
4	Other General-Purpose Machinery, Domestic Fans
5	Coach Works, Trailers, Semi-Trailers, Auto Parts
6	Electric Lighting Equipment
7	Weaving Textiles
8	Fibre Optic Cables for Data Transmission/ Electronic and Electric Wires and Cables
9	Other Articles of Paper and Paper Board
10	Paints, Varnishes and Similar Coatings, Printing Ink and Mastics
11	Clay Building Materials
12	Cutlery, Hand Tools, And General Hardware
13	Pharmaceutical, Medicinal Chemicals and Botanical Products
14	Tobacco Products
15	Pulp, Paper and Paper Board
16	Bakery Products

17	Basic Iron and Steel
18	Plastic Products, Luggage, Sports Equipment
19	Soft Drinks, Mineral Water and Bottled Water
20	Rubber Tyres and Tubes, Retreading and Rebuilding of Rubber Tyres
21	Footwear
22	Jewellery And Related Items

However, a detailed study needs to be carried to:

- Identify the specific manufacturing sectors that needs strengthening to significantly contribute towards import substitution
- Understanding the requirements for establishing a manufacturing base for such products
- Identifying the gaps existing in the State regarding such requirements
- Interventions to be undertaken to address these gaps
- Identifying the products whose manufacturing can be promoted with the existing factor conditions in the State.

An external agency may be roped in for conducting the study.

ii. Engaging Technical Support Providers

Promoting manufacturing of medium and high-tech import substitution products in the State will require tech-based enterprises to be established. Advisory, technical and administrative support services which incubators extend play a major role in establishing such enterprises/ startups in the State. The linkage provided with Technical support providers will enable in innovation, development, deployment or commercialization of new products, processes or services driven by technology or intellectual property. The State government will contribute towards any physical infrastructure requirement while funding from RAMP will be channelised for activities related to engaging services of experts, mentorship, organising awareness campaigns and promotion activities such as hackathons. Institutions like TERI, Indian Intitute of Design, CFTRI etc. will be engaged to provide the requisite services in technology, sector specific services, marketing, etc.

They will also facilitate entrepreneurs and young minds to transform their innovative ideas into viable business propositions and a point of access to technological assistance, which will be generated through mentors with multidisciplinary expertise from the domain fields.

They will act as –

- collaborative Multi-stakeholder Forum on Science, Technology Innovations and Domain Specific Experts for the MSMEs.
- access venue to technology transfer and improve the technical literacy of the MSMEs
- platform, as a gateway for information and technical support to existing enterprises, mechanisms, and programs.

Centre will also offer market expansion opportunities to start-ups and MSMEs to help them gain insights for product development and diversification and to get access to technology and improve their technical literacy to the point of sustainability.

The Facilitation Centre will ensure end to end facilitation and support for smooth delivery of services from the technical partners and domain experts.

iii. MSME clinics

Realising the goal of making the State less dependent on imports of the identified imported products from other states will require creating a congenial manufacturing ecosystem. Existing and new enterprises will have to be promoted and supported in this direction. Capacity building will be one of the key activities to be taken up. In this regard MSME clinics will be organised based on the need assessment of the different industries. The Clinics will cover important areas of access to market, improving management skills, quality management and export facilitation. The clinics will be organised in collaborations with Industry associations, Technical Institutions and BDSPs. These will be organised at district level to enable

The clinics will provide an opportunity for the MSMEs to interact with them one on one and avail their assistance in addressing any issues that they currently face or leverage their expertise in further expansion of their business activities.

iv. Bankers Meet (Facilitate access to finance with special focus on CGTMSE)

Banker's meet will be organised to facilitate development of better linkage of MSMEs with the Banks and FIs will be organised. The programme will consist of general awareness sessions by bankers related to the different products/services offered by them for the MSMEs, the procedures involved, the key parameters they look for while sanction of loans and other related information. A one-to-one interaction session will be held for individual MSMEs facing issues with availing loans with the respective banks.

v. Technology Clinics

As many of the identified import substitute products manufacturing involve medium to high technology, it is important that the interested MSMEs are sensitised on the technologies available. Technology clinics are planned at district level to enable maximum participation. Topics related to New Packaging Technologies, Modern Technologies and Value addition, Energy Conservation Techniques, etc. based on the products will be covered in these clinics. The clinics will become a platform for interaction between the enterprises and the technology providers/ technical experts. The pool of technical experts/BDSPs empanelled by the State government for providing guidance to MSMEs through MSME clinics will be expanded.

vi. Technology Management Development Programme

For creating skilled manpower to cater to demand in manufacturing of the identified import substitution products, it is proposed to conduct Technology Management Development Programmes. Educated candidates, of age up to 45 years, in each district with at least 50% of candidates coming from SC/ST /Women categories will be selected to provide 1 month orientation. Preference will be given to youth who have undergone vocational training/ done ITI course / have diploma certificates.

vii. Strengthening of MSME Helpdesks/ Guidance cells at Head Office and DICs

The physical Helpdesks are established at the Directorate and DICs to provide guidance to the entrepreneurs on different aspects covering the MSME scenario in the State, major sectors, identifying business opportunities, approvals and clearances required, different government assistance available and other topics related to establishing of enterprises. The staffs in the guidance cells needs to be updated and trained and kept abreast with the changes.

viii. Facilitating risk cover for MSMEs in State through MSME Insurance

In alignment with the Government's vision to create a sustainable ecosystem for industries in the State, is introducing an insurance scheme for the Micro, Small and Medium Enterprises (MSMEs) in the state. This scheme aims at providing financial protection to MSMEs against unforeseen risks, which can have a detrimental impact on their businesses. The scheme intends to provide reimbursement of up to 50 percent of the annual insurance premium paid by MSMEs and shall be implemented through the District Industries Centres (DICs). The MSME

Insurance scheme shall be operated through the four leading Public Sector Insurance Companies in the State, i.e.

1. National Insurance Company Ltd.
2. United India Insurance Company Ltd.
3. Oriental Insurance Company Ltd.
4. New India Assurance Company Ltd.

Gap funding for the scheme will be provided by through the RAMP scheme.

ix. Exposure visits to Benchmark clusters/ Industries

Exposure visits enable the MSMEs to understand the relevant practices followed in other enterprises which can be taken as benchmark references. The visits provide an opportunity for them to directly interact with the different stakeholders, understand the steps involved, challenges faced and solutions to address the challenges while adopting the best practices. Some of the important aspects to be considered while selecting the Benchmark clusters or Industries include benchmarking or the relevance of the cluster/ industry selected to be visited, selection of delegates and identifying the key parameters based on which the effectiveness (both qualitative and quantitative) of the visit can be measured.

x. Awareness cum Facilitation programme at LSGI level

The MSMEs in the identified sectors for enhancing the manufacturing will be sensitised and facilitated in relevant areas of access to finance, access to technology, access to market and other competitiveness building measures including adoption of green practices.

For the effective implementation of the above interventions, LSGI level mobilisation of MSMEs will be required coupled with close coordination with the Department bodies. Hence, BDSPs shall be engaged at LSGI level to closely work with the department.

4.1.5. Proposed Project Design Concept and Feasibility & Viability of Proposal

The intervention is conceptualised to promote local manufacturing of the import substitute products as well as other products in the identified priority sectors. The government intends to reduce the existing trade deficit through enhanced exports of more value-added products to other States by strengthening the manufacturing base in the State.

Through the several initiatives planned under the Make in Kerala programme the State will try to address factors which have been acting as headwind to the development of the manufacturing sector in the State.

Interventions like promotional activities including dissemination of success stories and best practices from the industry sectors in Kerala will facilitate in changing the perception about Kerala not being an investment friendly State. The success of the Year of Enterprise initiative is a suitable example.

By providing additional collateral coverage for the CGTMSE loans in the form of State government contribution or subsidising the Annual guaranteed fee/premium paid for the CGTMSE loan is likely to benefit the enterprises and further promote the uptake of the scheme. Similar interventions are already being undertaken by other States like Tamil Nadu.

Equipping the MSMEs in areas of technology, quality, process improvement, green practices, and marketing in addition to strengthening access to finance will enable such firms to diversify into manufacturing medium to high end products.

National/ international Technical Institutions in relevant domains will be engaged as Technical Support Providers to assist the MSMEs in different areas related to Technology, Marketing, Innovations, etc. The MSME clinics will ensure that the MSMEs are linked to the BDSPs to find solutions to their challenges faced in developing their enterprises. The MSME clinics shall be organised at district level to get maximum coverage of the existing MSMEs in the State.

4.1.6. Approach and Methodology for Implementation

The viable sectors for manufacturing import substitute products and priority sectors will be identified through a detailed study. A suitable roadmap will be developed to ensure a smooth development of manufacturing sector in the State in these identified sectors. An agency having capabilities and experience in undertaking such studies will be selected and engaged.

Government will provide necessary support in accessing finance and capacity building in relevant areas. To improve the accessibility to CGTMSE loans for the MSMEs, it is proposed to subsidise the Annual guarantee fee/premium which is usually passed on to the MSMEs by the banks for loan amount upto Rs. 10 lakhs. This amount of premium to be paid by the MSME will be paid directly to the banks by the government.

It is proposed to aid the MSMEs in covering the risks faced by them due to unforeseen calamities/ damages (as per the guidelines of national insurance companies). The state government has decided for subsiding the premium paid by the MSME covered under the Laghu Udyam Suraksha Policy by the four national insurance companies. The

Technical Support Providers will assist the MSMEs in different areas related to Technology, Marketing, Innovations, etc. This will act as a source of innovative product development and a platform form linking MSMEs with Technology providers.

4.1.7. Use of ICT/Innovative Technology Towards Project Implementation

Implementation will be monitored through integrated MIS dashboard being developed as part of RAMP intervention

4.1.8. Timeline for achievement of Project Deliverables

- Detailed study for Strategic Plan preparation for promoting local manufacturing of potential import substitution products is planned to be completed in the first year.
- All the other interventions proposed will be implemented over the entire period of 4 years.

4.1.9. Estimated impact of the Project/Proposal/scheme

- Detailed study for Strategic Plan preparation for promoting local manufacturing of potential import substitution products planned the first year will identify and create a roadmap for the sectors to focus for local manufacturing to facilitate reduction in State's trade deficit.
- Over the period of 4 years at least three Technical Support Providers, i.e. National/ international institutions shall be engaged catering to different domains and will provide necessary facilitation support in the key areas. In addition, MSMEs and startups requiring technology assistance will be supported through the linkage.
- MSME clinics are planned at the district level to facilitate interaction of MSMEs with BDSPs. A total of 6476 MSMEs are expected to get benefitted from the programme.
- Nearly 8540 MSMEs will be provided one to one interaction with the Technology providers and technical experts.
- Through the Technology Management Development Programme (1-month programme) 2532 educated youths up to 45 years of age from across the State is planned to be included with at least 50% of candidates coming from SC/ST/Women categories.
- 80000 MSMEs are estimated to be covered under the MSME Insurance scheme against unforeseen calamities/ damages as per the insurance scheme guidelines in 4 years.
- 15 Helpdesks in the State, i.e. 14 in each district DICs and 1 in Head Office, will be strengthened by providing necessary capacity building training every year.

- 80 MSMEs are planned to be provided exposure to Best practices on Technology/Manufacturing processes/ Marketing etc. through exposure visit (national/ international) for MSMEs to Benchmark clusters/Industries.
- 16544 facilitation programmes will be conducted in 1034 LSGI level (4 programmes per LSGI) in the State.

4.1.10. Project costing and contribution of State towards it

The total project cost for the interventions proposed under Enhancing domestic manufacturing of import substitute products - Make in Kerala is **Rs.104.90 crores**. The interventions wise cost is as per the Table 37 provided below.

Table 37 Interventions wise cost - Enhancing domestic manufacturing of import substitute products - Make in Kerala (Amount in Rs. Cr.)

Sl.	Intervention	Total Cost for 4 years	Demand from RAMP
1	Study for Strategic Plan preparation on import substitution for potential products	3.00	2.40
2	Engaging Technical Support Providers (Technology/Marketing/Sectoral etc.) for MSMEs	15.24	12.19
3	Organising MSME Clinics (Linking MSMEs with BDSPs)	1.75	1.40
4	Workshops for interaction with technical experts and technology providers (Technology Clinics)	2.39	1.92
5	Special orientation programmes for youth and women to promote technology-centered manufacturing enterprises	3.06	2.45
6	Strengthening of the MSME Helpdesks in Directorate and DICs	0.32	0.32
7	Assistance to MSMEs in State through MSME Insurance	12.00	9.60
8	Engaging BDSPs for facilitating Make in Kerala implementation	52.80	36.96
9	Exposure visits for MSMEs to Benchmark clusters/Industries	6.05	4.84
10	Awareness cum Facilitation programme at LSGI level	8.27	6.62
	Total	**104.90**	**78.70**

4.1.11. Plan for strengthening M&E framework pertaining to Project

A robust monitoring framework will be developed to monitor the progress of the interventions. Quarterly reviews with GM DICs will be carried out regarding the progress and to understand the challenges faced during implementation of the interventions.

Feedbacks will be taken from the candidates undergoing the capacity building after the completion of the programmes. Survey of the candidates will be conducted after a period of 3 months to check if there is any tangible improvement to the MSME in terms of initiation of manufacturing identified products under Make in Kerala/ priority sectors, adoption of technology, quality certification, increase in turnover, availing GoI schemes or enhancement in customers.

4.2 Enhancing Firm Capabilities - (for scaling – Mission 1000)

The state government has taken initiatives for fostering entrepreneurship and to promote establishment of new enterprises in the State. The State has been able to facilitate establishment of close to 1.5 lakhs MSMEs in different industry sectors, both in manufacturing and service categories. In addition to this a scheme, called Scheme towards assistance for micro to small, small to medium scaling up of MSMEs, has been given administrative sanction by Government of Kerala. The scheme intends to provide extensive support to existing MSMEs (in manufacturing/ service sector) in scaling up.

The MSME Scale up Mission is aimed at identifying 1000 Micro, Small and Medium Enterprises (MSMEs) in the State and implement strategies for scaling up so that their turnover is enhanced to Rs. 100 crores over a period of four years. Thus, the Scale Up Mission project provides a unique opportunity for MSMEs in Kerala to upscale their businesses and reach new heights of success.

4.2.1 Major issues/challenges related to firm capabilities for scaling

The industrial distribution in India, like many other emerging markets, is skewed towards the micro enterprises. However, ideally like in the developed countries, there will be more balance in the distribution[54]. This gap or in other words the absence of the small and medium entities in the optics of the India distribution is referred by economists as the 'The Missing Middle'. The scenario in Kerala is also a reflection of this with more than 95% Udyam registered firms belonging to the micro category.

Some of the reasons that can be attributed for this are:

- Collateral requirement, relatively high interest rates and poor credit history of borrower – In spite of available schemes like CGTMSE, which facilitates accessing collateral free loans, MSMEs have indicated that the ticket sizes of such loans provided are lesser. The average collateral-to-loan-value ratio is higher. Limited credit history of the borrowing entrepreneur results in procedural complications, lengthy application processing time and inevitably higher interest rates.
- Lower participation of the MSMEs in Global Value Chain or engaging in providing low value-added products/services
- Lack of digitisation and technology adoption resulting in low productivity and efficiency
- Lack of obtaining internationally recognized quality certifications, which would otherwise increase the likelihood of starting exports and improve long term financial prospects
- Lack of sufficient upskilling of the workforce, as it is pivotal to leverage the full potential of digital transformation in coming years.
- Lack of awareness among MSMEs, micro firms, regarding the support being provided by governments through schemes and policies.

4.2.2 Key Findings

Since the introduction of Udyam registration in 2020, a total of 14788 small enterprises and 1162 medium enterprises have been registered out of the 4.11 lakh MSME registered under the Udyam registration. Further, the small and medium enterprises are predominant in the service sector. Hence, it indicates the requirement to assist scaling of units to improve the contribution of the MSME sector to the State GDP.

[54] D&B Study based on US Census Bureau, Statistics Canada, Australian Bureau of Statistics, 6th Economic Census, MOSPI

In the sample survey, most enterprises are led by first generation entrepreneurs, with close to 40% of the enterprises having been in operation for less than 5 years. As a result, many lack business abilities, such as marketing or financial management, that are required to take the next step and scale up.

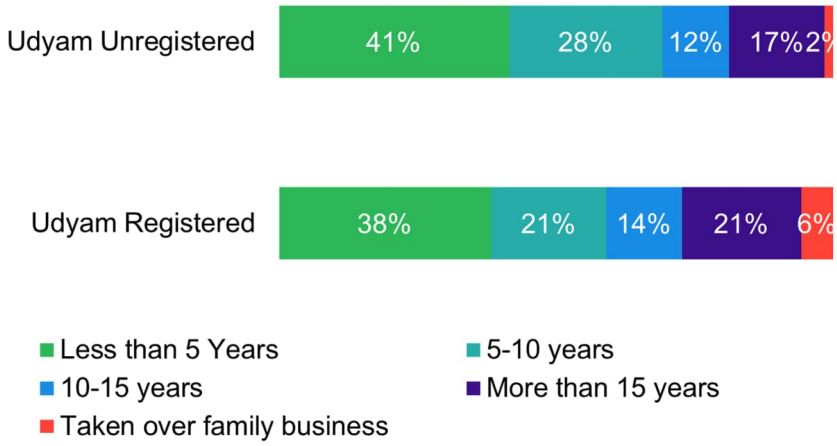


Figure 74 Distribution of Enterprises by Vintage

The sustainability survey carried out among the 1.39 lakhs of MSMEs, that were established in recent years in the State as part of Year of Entrepreneurship initiative by Government of Kerala, revealed that 15% of the surveyed units have become unsustainable and inactive. Finance, Marketing, and Infrastructure related issues were among the major reasons cited for them to become inactive.

Within the surveyed enterprises, a significant majority fall within the category of micro enterprises. However, what stands out as particularly significant is the imbalance in the distribution of annual turnover. Notably, around 46% of Udyam registered and a more substantial 67% of unregistered enterprises report an average annual turnover of less than Rs 25 lakhs over the last 5 years. These enterprises primarily cater to hyperlocal and local demands. It's crucial to recognize that inherent vulnerability of this segment of enterprises; often they lack the financial capacity and resource to necessary required to navigate external shocks or disruptions, as has been evident in recent years.

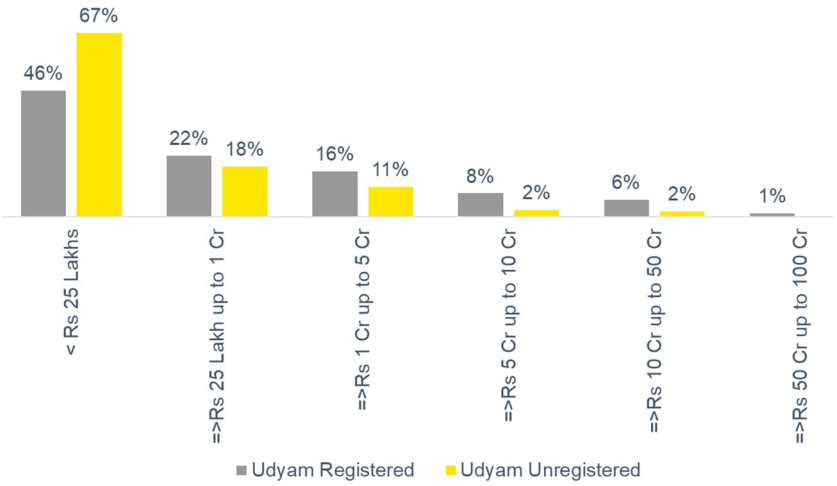


Figure 75 Annual Turnover Distribution across MSMEs

Regardless of the current financial status, the enterprises have the potential to progress from the micro category to small, and eventually to medium-sized enterprises. However, based on the retrospective data collected from MSMEs on ground, it becomes evident that the annual turnover growth appears to be caught in a low-level equilibrium. Approximately, 40% of the Udyam registered enterprises reported

that their annual turnover has remained stable over the last 4 years, and this figure is slightly higher among unregistered enterprises at 49%. Moreover, another 17% and 22% reported a declining trend in annual turnover over the past years. In contrast, about 34% of the Udyam registered and 36% of unregistered enterprises reported an increasing trend in annual turnover.

Nevertheless, it's important to note that this analysis does not preclude future changes. With the State Government's dedicated efforts to support and sustain MSMEs, there could potential tailwinds in the horizon in the coming years.

4.2.3 Problem Statement: Enhancing firm capabilities for scaling – Mission 1000

More than 95% of the registered enterprises in Kerala falls under the micro category. The conversion of enterprises into small and medium enterprises have been very low which suggests that they have not been able to fully capture the benefits of economies of scale, adoption of technologies and investment into fixed assets. Hence there is a requirement to encourage the existing enterprises to scale.

4.2.4 Proposed Project with respect to RAMP objectives

Following interventions will be undertaken under enhancing firm capabilities for scaling – Mission 1000:

i. **Preparation of DPR:** Support will be provided for the selected 1000 MSMEs for preparing Detailed project report through empanelled/ approved experts by the Directorate of Industries. The DPR will be prepared basis a detailed study on the steps required to improve the performance of the enterprise (through technology upgradation, streamlining of processes/ LEAN adoption, adoption of ICT including software solutions like accounting software, ERP etc., adoption of quality management systems, convergence of schemes by State and Centre), budget requirement and expected outcomes.

ii. **Providing financial support:** As mentioned in the previous sections, access to timely financial assistance is a critical requirement for the growth of any business. In view of this financial assistance in the form of Fixed Capital Investment (FCI) subsidy and Working capital assistance in the form of reimbursement of interest paid on working capital (W.C.) loan as per the DPR will be provided to the eligible enterprises.

   The quantum of FCI subsidy for an enterprise will be 40% of the FCI incurred for scaling up during the span of 4 years as envisaged in the DPR and approved by the district level Committee.

   The quantum of assistance under W.C. assistance will be 50% of interest paid towards working capital loan on reimbursement basis as per the DPR.

iii. **Capacity building of firms and improve competitiveness:** In addition to the above interventions, handholding will be provided to the firms in necessary capacity building identified as per the DPR in terms of technology, quality certifications, process improvements, adopting greening practices and improving market access. The firms will be encouraged to take part in the other relevant initiatives being taken up under RAMP scheme such as obtaining/graduating in ZED certification, adopting LEAN certification, exploring opportunity of IPR adoption and availing loans under CGTMSE. Relevant firms will also be assisted in market access by providing opportunity to participate in the State level Sector focused MSME Expos to be organised under the RAMP initiative.

iv. **Facilitating risk cover for MSMEs in State through MSME Insurance**

   In alignment with the Government's vision to create a sustainable ecosystem for industries in the State, is introducing an insurance scheme for the Micro, Small and Medium Enterprises (MSMEs) in the state. This scheme aims at providing financial protection to MSMEs against unforeseen risks, which can have a detrimental impact on their businesses. The scheme intends to provide reimbursement of up to 50 percent of the annual insurance premium paid by MSMEs and shall be implemented through the District Industries Centres (DICs). The

MSME Insurance scheme shall be operated through the four leading Public Sector Insurance Companies in the State, i.e.

1. National Insurance Company Ltd.
2. United India Insurance Company Ltd.
3. Oriental Insurance Company Ltd.
4. New India Assurance Company Ltd.

4.2.5 Proposed Project Design Concept, Feasibility & Viability of Proposal

The concept of the programme is to select volunteering MSMEs and provide necessary handholding to scale up. The feasibility of the programme will be ensured through the following:

- **Participation by interested MSMEs** – All interested MSMEs satisfying the pre-qualification criteria are given opportunity to apply, which will ensure that there will be proactive participation by such MSMEs in achieving the programme objectives
- **Selection criteria** – The applications of the MSMEs will be scrutinised based on qualitative and quantitative parameters to ensure that only viable MSMEs are selected. There will be multiple level of verifications starting with the screening of firms based on pre-qualification criteria, field level inspections by IEO and ADIO, detailed verification of the application based on specific screening criteria and checking the feasibility of the project (DPR).

Table 38 Scoring Parameters

Sl.No.	Parameter	Value type
A	**Quantitative Parameter**	
1	Priority Sector Industries	Yes / No
2	Annual turnover as of 31st March 2023	Numerical
3	Average YoY Increase in Turnover	Numerical
4	Average YoY Increase in Net Profit	Numerical
5	Export Turnover % of Total Turnover	Numerical
6	Average YoY Increase in Investment	Numerical
7	Utilization	Numerical
8	Availability of spare infrastructure and/ or land for future expansions	Yes / No
9	Regularity of Loan Accounts	Yes / No
10	CIBIL Score of Promoters	Numerical
11	Quality Certifications	Numerical
12	Current Ratio	Numerical
13	Salary to Turnover Ratio	Numerical
14	Average YoY Growth in total Employment	Numerical
B	**Qualitative**	
1	Vision for scaling up the business	Descriptive
2	Plans for diversification/ expansion/ modernization	Descriptive
3	Market expansion strategy	Descriptive
4	Plans for strategic tie ups/ collaborations	Descriptive
5	Plans for new technology integrations	Descriptive

- **No. of enterprises supported** – In order to ensure that the programme is viable, as a pilot mode, 1000 enterprises will be supported through the programme.
- **Support provided** – The selected enterprises will be provided an assistance for preparation of DPR. Finance is a major factor for any enterprise to operate and grow. The State government will provide financial assistance in the form of Capital investment subsidy as well as working capital assistance. In addition, one to one handholding will be provided through officials and Enterprise Development Executives during implementation phase.
- **Time bound implementation** – The programme is planned to be implemented in a period of four years.
- **Monitoring & Evaluation** – Regular monitoring of the enterprises will be ensured through field level officer assigned to each beneficiary enterprise. In addition, other Monitoring and evaluation systems will be in place, also leveraging ICT technology, to ensure that the programme objectives are met.

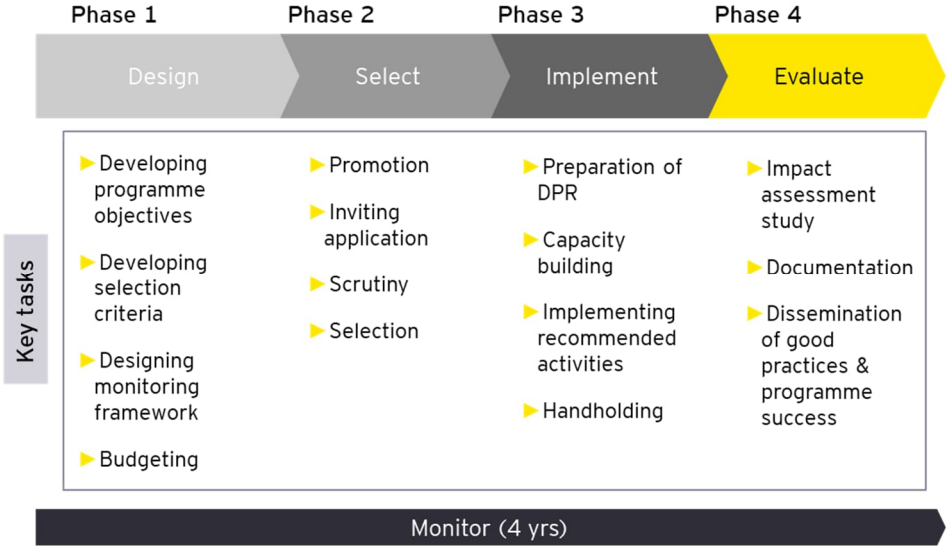
4.2.6 Approach and Methodology for Implementation

a. Design

The first step of formulating the scheme objectives has been completed which will be the guiding factor in the implementation of the scheme.

Effective monitoring framework is being designed and established to monitor the progress of the scheme and in taking necessary course corrections at appropriate times. Key Performance Indicators are also determined to ensure effective monitoring of the scheme.

Selection criteria has been developed and finalised to ensure that all relevant and genuine enterprises get an opportunity to apply for the initiative.



b. Select phase

An online portal (mission1000.industry.gov.in) is developed for MSMEs to apply for being selected under the initiative, and a scoring-criteria based on information submitted on the portal will be used to identify the top 1000 units for the project.

MSME units satisfying the pre-requisites can apply by registering in the online portal. The pre-qualifications for MSMEs to be selected for the Scale Up Mission include:

- being registered in Kerala with UDYAM registration
- being in operation for at least three years as of March 31, 2023, and
- being engaged in manufacturing or service activities.

The applications submitted would be verified at concerned IEO and ADIO level. The verification would include checking the for correctness of information and the supporting documents submitted. Applications thus verified would be forwarded by the concerned General Manager of District Industries Centres to the Director of Industries and Commerce. The forwarded applications would be scored based on pre-defined scoring criteria.

The scoring criteria includes investments, annual turnover, profit, capacity utilization, exports, number of employees, promoters' CIBIL score, and details of certifications obtained.

c. Implement Phase

The first step in the implement phase will be to undertake a detailed study and prepare a roadmap for the enterprise for scaling up. The major aspects such As-Is assessment, Benchmarking, Future State study, SWOT Analysis, Financial modelling, Value chain analysis, sensitivity analysis, identification of suitable technology to be adopted, conformance to quality standards, future market opportunities and export potential will be included.

Dedicated officers/ Enterprise Development Executives will be allotted to each enterprise for necessary handholding to be provided during the implementation.

During the implementation phase, the enterprises will be encouraged to avail the benefits of relevant Govt. of India schemes, including the CHAMPION schemes.

d. Evaluate Phase

At the end of the Scheme implementation period, a detailed impact assessment of the scheme will be carried out. This will enable to understand the impact and effectiveness the scheme has been able to create. The success stories and best practices shall be documented digitally and made available in the MSME Digital Hub being proposed as part of Marketing and promotion intervention under the RAMP programme. These will be further utilised to sensitise and disseminate information on best practices and success stories among other MSMEs for motivation.

4.2.7 Use of ICT/Innovative Technology Towards Project Implementation

A dedicated webpage has been created for the Mission 1000 scheme. This webpage will be the platform for interested MSMEs to apply. The scheme guideline is made available on the homepage. Officers are provided login facility to monitor the applications received and based on the selection criteria will be able to screen them. Thus, the dashboard will facilitate in monitoring the progress of the scheme real time. The applications received every year will be electronically processed and approved in the same year.

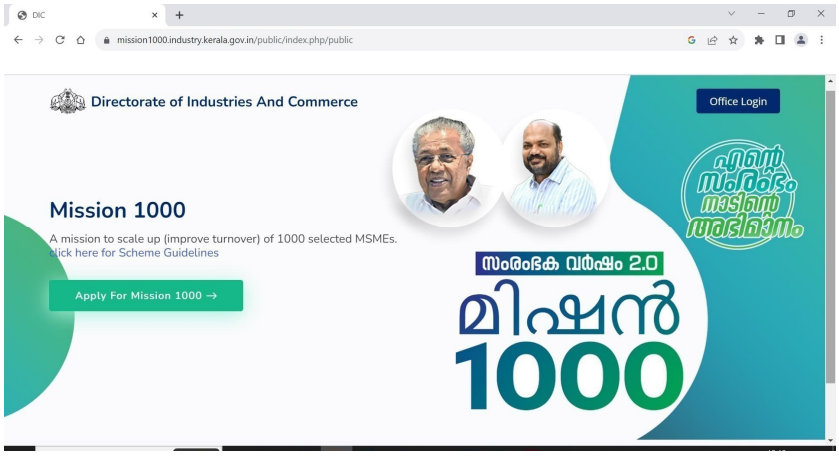


Figure 76 Dedicated webpage created for the Mission 1000

Through the planned MIS integration intervention proposed under RAMP scheme, facility for applicants to track the status of their applications will also be made available. The decision of sanctioning authority shall be intimated to the party electronically and disburse the eligible assistance via. bank account of the applicant unit on the execution of the requisite agreement.

The dedicated RAMP scheme monitoring dashboard will enable in the real time monitoring of the progress of the intervention based on which necessary course corrections can be made.

4.2.8 Timeline for achievement of Project Deliverables

The Mission 1000 initiative envisages the scaling up (increasing turnover) of 1000 selected MSMEs over a period of 4 years.

4.2.9 Estimated impact of the Project/Proposal/scheme

It is estimated that through the intervention, 1000 selected MSMEs will be facilitated to increase their total combined turnover to Rs.100000 Crores over a period of 4 years. It is also anticipated that through this scaling up will facilitate corresponding increase in:

- Employment creation
- Linkage with Technical Institutions (Testing/R&D/Technology providers)
- Quality certifications (including ZED)
- Uptake of CHAMPION schemes
- Improvement in access to finance (including CGTMSE)
- Adoption of green technology and practices

4.2.10 Project costing and contribution of State towards it

Although the beneficiaries of the Mission 1000 will be part of several interventions undertaken under the RAMP programme as mentioned in Section 4.2.4 Proposed Project with respect to RAMP objectives, the following interventions will be exclusively considered under the Mission 1000 scheme:

- Preparation of DPR for the selected 1000 MSMEs for scaling up for which up to Rs. 1 lakh will be provided as assistance on reimbursement basis.
- Providing working capital assistance through reimbursement of 40% of the total interest paid on the working capital loan, with a maximum of Rs. 10 lakhs per firm for the four-year duration. A total of Rs.5000 lakhs is estimated to be provided as subsidy for 1000 firms.

Table 39 Interventions wise Total Cost of intervention for four years (Amount in Rs. Cr.)

Sl.No.	Intervention	Total Cost for 4 years	Demand from RAMP
1	Preparation of DPR for the selected 1000 MSMEs for scaling up	50.00	40.00
2	Working Capital assistance through interest subvention	50.00	40.00
3	Engaging BDSPs for facilitation support to enterprises	21.12	14.78
	Total	**121.12**	**94.78**

The requirement of fund across the four-year period is as given in table below:

Table 40 Fund requirement for interventions over four-year period (Amount in Rs. Cr.)

Sl.No.	Intervention	Year 1	Year 2	Year 3	Year 4
1	Preparation of DPR for the selected 1000 MSMEs for scaling up	4.25	15.25	15.25	15.25
2	Working Capital assistance through interest subvention	12.50	12.50	12.50	12.50
3	Engaging BDSPs for facilitation support to enterprises	5.28	5.28	5.28	5.28

4.2.11 Plan for strengthening M&E framework pertaining to Project

A robust Monitoring and Evaluation framework is developed for the intervention. The intervention will be closely monitored by the Directorate of Industries leveraging the integrated MIS dashboard. To ensure effective implementation of the scheme a District Committee and a State Committee has been constituted. Further, a committee shall be constituted in all offices of the Recommending Authorities who shall monitor all units which avail assistance under this scheme to verify whether they satisfy the provisions of the scheme guidelines.

To ensure that the applications are processed on time, a penalty will be levied from authorised officer of the Recommending/ Sanctioning authority, if found to have delayed processing of application or disbursing of claim on approved cases deliberately.

District Committee

- The application received by the Assistance District Industries Officer will verify and inspect the unit following which the defect free application will be forwarded to the District Level Committee (DLC) within 30 days of its receipt. The DLC will consider the case and dispose the application within a period of 30 days.
- DLC is the sanctioning authority in case of assistance on FCI.
- The DLC is also authorised to condone delay made by enterprise in applying for assistance (FCI) within the stipulated time, up to a period of 2 years on merit of the case. The DLC is also authorized to condone delay up to a period of 3 months on merit in regard to the W.C assistance.

Composition of District Level Committee

Sl. No.	Committee Members
1	District Collector
2	Lead District Manager
3	Representative of Finance Department in Government
4	District Manager, KFC
5	Representative of KSSIA District Committee
6	General Manager, DIC (Member Secretary)

State Level Committee (SLC)

The SLC will be the competent authority to dispose the appeals, if any, received in prescribed format against the orders of the sanctioning authority and even competent to reconsider the decision of the DLC. The SLC is also competent to issue clarifications wherever necessary in respect of the Scheme.

Sl. No.	Committee Members
1	Director of Industries and Commerce (Chairman)
2	Representative of Finance Department in Government
3	Director (MSME-DI)
4	Convenor of State Level Bankers Committee
5	Representative of KSSIA State Committee
6	Additional Director of Industries and Commerce - General (Member Secretary)

The BDSPs will be engaged to facilitate handholding as well as monitor the progress made by the selected units. Periodic review by the SPIU in coordination with the department will also be carried out.

4.3 Enhancing Firm Capabilities - Competitiveness Support

4.3.1 Major issues/challenges of Firm capabilities.

Kerala ranks among the developed states in terms of human development indices as per global data lab and outstanding achievements have been made by the State in the fields of education, health, and social welfare. The State, through the new Industrial Policy, attempts to uphold an alternative perspective and engage realistically toward development. Given Kerala's ecological importance, a vision of Responsible Investment and Responsible Industry is proposed. Kerala will be developed as an ESG (Environment Social and Corporate Governance) investment destination in India

Some of the industries such as Textiles (spinning), Plastic products, wood products marine products and rubber products manufacturing involve processes with high energy demand. Such units are facing

high electricity cost leading to increased production cost. This is affecting the competitiveness of the units in terms of product pricing and margin realization.

The COVID pandemic has intensified the role of ICT in every aspect of human life, and IT services have become increasingly pervasive, ranging from communication to teleworking, e-commerce, digital education or entertainment. The digital gap between smaller and bigger companies remains important, particularly in developing countries like India, where many SMEs are yet to switch to digital technologies. The technologies and tools of the new industrial revolution, however, also open a range of opportunities which were previously inaccessible or very difficult to seize for MSMEs, such as instant access to international markets, low-cost service delivery, as well as affordable manufacturing solutions.

The unorganised/ unregistered MSMEs are unable to avail the support provided by the different schemes offered by the government due to lack of formalisation.

4.3.2 Key Findings

Green technology awareness:

- Greening of industries is the key to sustainability. A major chunk of the MSME units (especially manufacturing units) that we surveyed were either not aware of or did not pay attention towards incorporating green technologies.
- While government has launched initiatives to promote LEAN manufacturing and ZED certifications, it is still perceived from a lens of liability to business and are resistant to change. Awareness on aspects of cost savings, waste reduction and long-term sustainability benefits from greening needs to be fabricated. Based on the sample findings, only a small percentage of MSMEs have participated in the ZED, and/or LEAN programmes
- Over 25% of Udyam registered MSMEs and 30% of unregistered enterprises highlighted limited access to various financing options and lack of awareness about green financing instruments as additional hurdle. This is crucial issue because securing adequate, low-cost funding is essential for investment in energy efficient technologies and practices. MSMEs also reported difficulties in accessing technical experts with domain knowledge as a hurdle in the process. This hinders their ability to identify appropriate energy conservation measures and seamlessly transition to them.

4.3.3 Problem Statement

- Given Kerala's ecological importance, a vision of Responsible Investment and Responsible Industry is proposed. Kerala will be developed as an ESG (Environment Social and Corporate Governance) investment destination in India. Kerala is aiming to become a "responsible and futuristic industrial ecosystem" by 2028, and ESG is seen as an essential part of achieving this goal. ESG-compliant businesses are more likely to be innovative, sustainable, and socially responsible, which are all qualities that the state is looking for in its industries. The Government of Kerala intends to develop MSME sector that is more responsible to the environment and adopt green practices.
- There is a need felt during the diagnostic survey to improve the uptake of GoI schemes like CHAMPION schemes in the State. Only 696, 6 and 7 firms have obtained ZED Bronze, Silver and Gold certifications respectively. The rate of adoption of ZED certification among small (8%) and medium firms (~2%) is very less compared to the micro enterprises (90%).
- The number of firms enrolled for LEAN scheme also needs improvement. 63% of the MSMEs surveyed indicated that they wish to adopt basic accounting software.
- MSMEs in energy intensive sectors like Spinning, Coir, Wood, Plastic and Marine products are facing rising energy cost affecting their overall input cost resulting in high operational cost. Over 70% of MSMEs surveyed were unaware about green practices/ technology and their benefits, with 74% of Udyam registered and 71% of unregistered enterprises raising it as a concern. The

State also has plans to promote an approach of ESG-driven responsible investments in the State to achieve its Green Vision.

4.3.4 Proposed Project with Respect to RAMP

- Awareness creation on adoption of ESG/new and green technology: Necessary campaigns will be taken up for creating awareness on ESG including green practices/technologies among MSMEs in state and educate people about the importance and long benefits of following ESG norms. Industry associations and trade organizations shall be engaged to promote awareness among their members. Workshops, seminars, and conferences shall be organised. Experts and practitioners shall be invited to share their knowledge and experiences
- Capacity building of MSMEs to adopt ESG/ new and green technology: The MSMEs interested to adopt various green practices and technology need to improve their capacity first. Identification of such requirements and related implementation will be facilitated through BDSPs.
- Financial support for pilot energy audits in energy intensive industries: Selected MSMEs volunteering to conduct energy audits will be assisted and the cost incurred related
- Awareness Workshop on CHAMPION scheme: The awareness on different CHAMPION schemes shall be organised in the State in coordination with respective Nodal agencies like QCI and National Productivity Council or approved agencies designated by them.
- MSME Awards/ Rewarding MSMEs for Greening initiative, adoption of best practices etc.: The State government felicitates selected MSMEs every year recognising their efforts and achievements in different areas. It is proposed to add categories in the awards to be given to MSMEs contributing to the efforts in promoting ESG and green practices, quality certifications etc. Further, the State government is planning to introduce a regulatory framework for ESG rating, ESG rating providers and based on the rating the respected industries shall also be awarded ESG awards in different categories.
- ESG campaigns for MSME in priority sectors:
- Incentives towards creation of IPR, Quality certification, Sustainability & responsible industrialisation, Ind 4.0 in manufacturing and promoting R&D: The investment cost incurred in connection with creation of IPR, adopting Quality certifications, pollution controlling measures, green technologies as well as adopting Industry 4.0 shall be incentivised. This is expected to promote adoption of these best practices among the MSMEs.

4.3.5 Proposed Project Design Concept and Feasibility & Viability of Proposal

The proposed Enhancing Firm capabilities – Competitiveness support Proposal aims to improve all aspects of capacity building associated to MSMEs across all verticals and stakeholders. The project will focus on improving the capabilities of MSMEs including certifications such as ZED/LEAN, CHAMPIONS scheme and adoption of green practices in the state.

The interventions have been proposed considering the current traction of the CHAMPIONS schemes and the feedback received from the officials regarding the challenges faced during field level implementation in the State so that targets could be estimated more realistically. The prospective beneficiaries for ZED certifications will be identified from among the units mobilised for awareness workshops, beneficiaries of MSME Scaling up and Make in Kerala projects. Obtaining ZED certification will be stipulated as a selection criterion for MSME Scaling up Project to improve the uptake of the ZED certification. The awareness creation workshops on CHAMPION schemes will be

The energy audits will be carried out on pilot basis in volunteering MSMEs facing the issue of high energy consumption and electricity cost. The units will be encouraged to implement the interventions recommended in the Energy audit report depending upon the feasibility.

4.3.6 Approach and Methodology for Implementation

i. ZED

Workshops will be organised to ensure MSMEs understand and are able to access appropriate assistance of various sub schemes under the CHAMPIONS scheme. The approach is to identify at least 50 enterprises capable of adopting the schemes from every district. Gaps will be identified in terms of MSMEs access to various sub schemes and a roadmap will be prepared to address the issues. Based on these gaps, training will be designed in consultation with nodal team of respective schemes stationed in the State and MSME-DFO, Thrissur. Furthermore, we understand that local industry associations play an important role in collectively addressing the challenges faced by the sectors. The industry associations will also be involved in mobilising the MSMEs units and to ensure maximum participation. They also provide personalized advisory support to beneficiaries from time to time.

For ZED scheme, prospective beneficiaries for ZED certifications will be identified in three ways:

- From among the units that are mobilised and undergone awareness programme on ZED certification. A preliminary assessment of these participants will be carried out regarding their preparedness for ZED certification and the level of certification which they could opt for.
- From the beneficiaries of Mission 1000 and Make in Kerala interventions.
- For upgradation to silver and gold level, the existing Bronze and Silver certified units will be encouraged for upgrade.

ii. LEAN

There is a need for MSMEs to transition to a new business environment especially with the disruption in the global supply chains due to COVID pandemic and geopolitical scenarios and convergence of multiple sourcing as a methodology in vendor development. Today there is intensity in the competitiveness of firms both at domestic as well as global level. Hence, it becomes imperative for the MSMEs in India to become more competitive.

GoI has launched the MSME Competitive (Lean) Scheme to enhance the Domestic and Global Competitiveness of MSMEs through implementation of Lean Tools and Techniques. MSME Competitive (Lean) Scheme can be attained in following three levels after registering and taking the Lean Pledge:

- Level 1: BASIC
- Level 2: INTERMEDIATE
- Level 3: ADVANCED

The interventions under RAMP related to the LEAN scheme will be in creating awareness among the MSMEs regarding the scheme and its benefit. It is expected that the sensitised MSMEs from the awareness programme will embarks on the journey of Lean by taking the Lean Pledge and complete the Basic level in stipulated 2 months. Further interested units to go for higher levels will be supported to connect with the Implementing Agency

Figure 77: Supporting Firm Competitiveness through LEAN

iii. Energy Audits

MSMEs in the sectors like Textiles (spinning) and Rubber products facing higher energy consumption for processes will be approached to identify interested units to take up energy audits. The identified units will then be linked with certified energy auditors (Investment Grade Energy Auditor - IGEA) approved/ empanelled by State government agencies like Energy Management Centre (EMC) or agencies under Govt. of India like Bureau of Energy Efficiency. Investment Grade Energy Audit (Detailed) will be carried out in identified units and energy audit reports will be submitted.

The scope of the work includes a detailed study for energy conservation options of various energy sources including Electrical and Thermal Sources like Electricity, Furnace Oil, LSHS, HSD, LPG, Briquette etc. in the unit and recommends actions for reducing the same.

The audit shall concentrate on the review of the present energy consumption profile of Thermal and Electrical energy sources at various load centers like manufacturing units, heating units, driven equipment, lighting, ventilation etc. The study will also cover detailed review of present energy monitoring & accounting system in terms of metering / sub - metering, record keeping, data logging, periodic performance analysis etc. The audit study will identify scope for effective energy monitoring & accounting system using SCADA / DCS / Plant Manager / Remote M & V software packages which can record periodic samples and give alerts on increased consumption and demand overshoot. Potential for Renewable energy applications, such as solar thermal, Solar-PV, Biogas, Waste-to-energy, with cost-benefit analysis and savings on commercial energy will also be assessed in the audit. Potential for E-Mobility adaptation, by switching over to Electric vehicles, goods carriers, installing EV Charging stations etc. will be studied. The IGEA report will be submitted.

The Detailed Project Report will contain the following information:

- Methodology adopted for the study.
- Present Energy scenario of the unit.
- Detailed analysis of the data obtained through field visits, trial measurements by portable gadgets, discussion with concerned personnel etc.
- Recommendations for energy saving options in all possible areas with cost-benefit analysis (Simple Payback period, Internal Rate of Return, Return over Investment, all details required for an ESCO proposal etc.)
- Technical Specifications for any retrofit options,
- List of suppliers / manufacturers of energy efficient technologies.

iv. Promoting ESG and green practices

Awareness campaigns will be organised to promote adoption of ESG and green practices among MSMEs. To further motivate the MSMEs, awards will be given to MSMEs abiding by ESG frameworks and adopting the green practices. Special Tax incentives, Subsidies, Grants for businesses adopting sustainable practices and following ESG compliance with their organization will be provided. Possible avenues for collaborating with existing Kerala campaigns aimed at promoting sustainability and environmental conservation shall be leveraged.

4.3.7 Use of ICT/Innovative Technology Towards Project Implementation

Survey tools will be developed and the BDSPs will use the handheld devices provided to them for capturing the information. The Integrated dashboard will be used to monitor the progress of implementation of the interventions.

4.3.8 Timeline for achievement of Project Deliverables

The interventions proposed will be spread across the 4 years.

4.3.9 Estimated impact of the Project/Proposal/scheme

3758 MSMEs will be sensitised on the green technologies. 500 MSMEs will be linked to relevant technical experts to capacity build them for adopting green technology. 500 units shall be provided capacity building assistance. 300 units in sectors facing high energy bill issues will be assisted in implementing energy saving measures based on energy audits to identify opportunity for reducing the energy consumption. 3250 MSMEs will be mobilised and sensitised in ZED scheme and will be encouraged to initiate bronze certification. MSMEs including the existing Bronze certified units will be provided awareness to upgrade their ZED certification to Silver and Gold in collaboration with the certified consultants/experts approved by Quality Council of India. MSMEs will be sensitised on LEAN scheme and will be encouraged to adopt the LEAN practices to improve the efficiency and productivity of the units in collaboration with approved LEAN consultants/ National Productivity Council. Nearly 6326 MSMEs will be sensitised on the CHAMPION schemes. New categories of awards in State MSME Awards will be started to encourage MSMEs to adopt green technologies and quality certifications. 20 MSMEs are planned to be awarded in different categories related to adoption of best practices in green practices, ESG, quality certifications etc. in the period of 4 years.

4.3.10 Project costing and contribution of State towards it

The total budgeted cost for the interventions for the 4-year period are provided in the table below:

(Amount in Rs. Cr.)

Sl. No.	Intervention	Total Cost for 4 years	Demand from RAMP
1	Awareness creation on adoption of ESG/new and green technology	3.01	2.40
2	Capacity building of MSMEs to adopt ESG/ new and green technology	1.75	1.40
3	Financial support for pilot energy audits/ implementing energy saving measures based on such audits in energy intensive industries	1.20	0.96
4	Awareness Workshop on CHAMPION scheme	1.09	1.09
5	MSME Awards/ Rewarding MSMEs for Greening initiative, adoption of best practices etc.	0.20	0.16
6	ESG campaigns for MSME in priority sectors	8.80	7.04
7	Incentives towards creation of IPR, Quality certification, Sustainability & responsible industrialisation, Ind 4.0 in manufacturing and promoting R&D	56.00	44.80
	Total	**72.05**	**57.86**

The year wise budget requirement for interventions related to Enhancing firm capabilities for Competitiveness support is as provided in table below:

Table 41 Enhancing Firm Capabilities - Competitiveness Support Year wise budget (Amt in Rs. lakhs)

Sl.No.	Intervention	Year 1	Year 2	Year 3	Year 4
1	Awareness creation on adoption of ESG/new and green technology	56.00	67.20	80.64	96.77
2	Capacity building of MSMEs to adopt ESG/ new and green technology	17.50	35.00	52.50	70.00
3	Financial support for pilot energy audits/ implementing energy saving measures based on such audits in energy intensive industries	12.00	24.00	36.00	48.00
4	Awareness Workshop on CHAMPION scheme	24.38	26.20	28.20	30.43
5	MSME Awards/ Rewarding MSMEs for Greening initiative, adoption of best practices etc.	5.00	5.00	5.00	5.00
6	ESG campaigns for MSME in priority sectors	220.00	220.00	220.00	220.00
7	Incentives towards creation of IPR, Quality certification, Sustainability & responsible industrialisation, Ind 4.0 in manufacturing and promoting R&D	1400.00	1400.00	1400.00	1400.00

4.3.11 Plan for strengthening M&E framework pertaining to Project

A robust monitoring framework will be developed to monitor the progress of the interventions. Quarterly reviews with GM DICs will be carried out regarding the progress and to understand the challenges faced during implementation of the interventions.

Feedbacks will be taken from the candidates undergoing the capacity building after the completion of the programmes. Survey of the candidates will be conducted after a period of 3 months to check if there is any tangible improvement to the MSME in terms of initiation of manufacturing identified products under Make in Kerala/ priority sectors, adoption of technology, quality certification, increase in turnover, availing GoI schemes or enhancement in customers.

To ensure that meaningful outcome of the RAMP intervention (energy audit) is achieved, the assistance to the firms for undertaking the energy audits will be on a reimbursement basis based upon the implementation of the recommendations by the units.

4.4 Improving Digital Infrastructure

4.4.1 Major issues/challenges of Firm capabilities

A quick study of the Management Information Systems (MIS) existing for the department revealed that each initiatives operate its own dedicated MIS dashboard, leading to a fragmented data and decision-making landscape. While this decentralization offers specialized focus and autonomy, it also introduces challenges in governance and impedes strategic decision making. As operations expand and diversify, the complexity and volume of data are increasing, necessitating a more streamlined, integrated approach to data management. The current system does not provide a unified view of all initiatives, obstructing the ability to gather insights across schemes, evaluate the interdependencies between initiatives, and ultimately, impeding data driven strategic decision making. Field personnel need to

update field level data across multiple service offerings and dashboards, which can be time consuming and prone to errors. Furthermore, each addition adds another layer to this process. These challenges underscore the need for a more streamlined, integrated approach to data management that can enhance the firm's capabilities.

4.4.2 Key Findings

- Need for a Unified MIS Portal: The consultations revealed that creating a master MIS, while technically challenging, is strategically essential. A unified MIS portal would integrate all individual systems into one platform, facilitating cross-functional analytics and more streamlined decision making.
- Importance of an Intuitive User Interface: An intuitive user interface was identified as a key requirement. This would ensure that the system is user friendly and easy to navigate, enhancing the user experience and ensuring effective system adoption and utilization.
- Necessity for High Level Security Protocols: Given the sensitive nature of the data that would be handled by the MIS, implementing high level security protocols was recognized as a critical need. This would safeguard sensitive data and fortify data integrity.
- Requirement for Dedicated Hosting Servers: Given the scale of this initiative, dedicated hosting servers were identified as a necessity. This would ensure that the system has the necessary resources to operate efficiently and effectively.

4.4.3 Problem Statement:

The Department of Industries, Government of Kerala, is managing a multitude of State support schemes for Micro, Small, and Medium Enterprises (MSMEs). However, these initiatives are currently handled through multiple dashboards, leading to a fragmented and complex data management landscape. As the Directorate's operations continue to expand and diversify, the complexity and volume of data are also increasing. This scenario underscores the need for a more streamlined, integrated approach to data management. The absence of a unified Management Information System (MIS) is a significant bottleneck that obstructs strategic decision making at the state level. Furthermore, field personnel are expected to update field level data across multiple service offerings and dashboards, which can be time consuming and prone to errors. These issues highlight the critical need for a centralized, robust, and scalable MIS that can enhance the firm's capabilities by providing a consolidated view for governance across all District Industries Centres (DICs).

4.4.4 Proposed Project with Respect to RAMP

The proposed project, in alignment with the RAMP, involves the creation of a unified Master Management Information System (MIS). This system aims to integrate all individual systems into one platform, thereby facilitating cross- functional analytics and more streamlined decision making. The Master MIS will serve as a single source of truth for multiple stakeholders, providing a consolidated view for governance across all District Industries Centres (DICs). This will enhance data driven decision making at the state level and improve the management of various State support schemes for Micro, Small, and Medium Enterprises (MSMEs).

The project also proposes the use of innovative technology such as tablets for field personnel. This will ensure a more streamlined and efficient data management process, allowing field level data across multiple service offerings and dashboards to be updated in real time. Furthermore, the Master MIS will be designed to be robust and scalable, capable of accommodating future growth or the rollout of new schemes. This aligns with RAMP's objective of fostering a conducive ecosystem for MSMEs, promoting their growth and competitiveness.

Additionally, to enhance benefits of the digital infrastructure the essential digital assets of the Directorate as well as the DICs will be upgraded. The field level resources will be provided with handheld devices (Tablets or Smartphones) to enable them to effectively carry out physical verification, surveys and other relevant support to MSMEs. Thus, the interventions can be summarised as follows:

- **Data Integration:** Consolidate data from all existing dashboards into a centralized database. This will involve understanding the data structure of each dashboard and mapping them to a unified model.
- **System Development:** Develop a Master MIS that fetches data from this centralized database. The system will have modules corresponding to each existing dashboard, replicating their functionalities.
- **User Interface Design:** Design a user-friendly interface for the Master MIS. It should be intuitive and easy to navigate, allowing users to switch between different modules seamlessly.
- **Field Enablement:** Equip field personnel with handheld devices. This will facilitate on-ground surveys and real-time data upgrades, enhancing the efficiency of data collection and management. IT infra in DICs and H.O. will be upgraded.
- **Survey software** including a mechanism to provide scheme, exhibition/fair related suggestions to MSMEs through a digital interface

4.4.5 Proposed Project Design Concept: Capacity Building Proposal

The design concept for the proposed Master Management Information System (MIS) revolves around creating a robust, scalable, and user-friendly platform that can seamlessly integrate various existing and future dashboards. The system architecture will be designed to handle the complexity and volume of data associated with the various State support schemes for Micro, Small, and Medium Enterprises (MSMEs). It will provide a unified view of all initiatives, facilitating cross functional analytics and streamline decision making. The user interface will be intuitive and easy to navigate, enhancing the user experience and ensuring effective system adoption and utilization. It will be designed to cater to the needs of multiple stakeholders, providing them with a consolidated view for governance across all District Industries Centres (DICs). High-level security protocols will be implemented to safeguard sensitive data and fortify data integrity. The system will also be designed to accommodate future growth or the rollout of new schemes, ensuring scalability. Innovative technology such as tablets will be incorporated for field personnel. This will allow for real-time updates of field level data across multiple service offerings and dashboards, ensuring a more streamlined and efficient data management process.

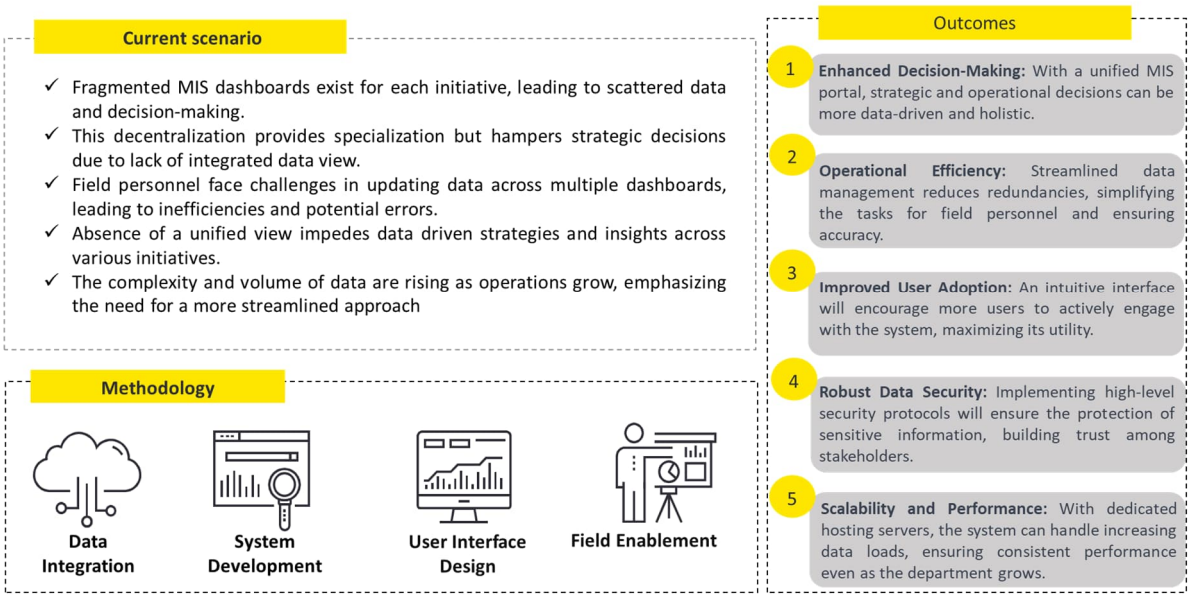
4.4.6 Feasibility & Viability of Proposal

The stakeholder meeting, involving key representatives from the Directorate of Industries and the existing dashboard developers concluded that the proposal for a unified Master Management Information System (MIS) is both feasible and viable. The technical challenges involved in creating a master MIS are outweighed by the strategic necessity of such a system. The proposed MIS would integrate all individual systems into one platform, facilitating cross functional analytics and streamlined decision making. This would significantly enhance the capabilities of the Department of Industries, Government of Kerala, aligning with its mission to support Micro, Small, and Medium Enterprises (MSMEs). The proposal's viability is further reinforced by the commitment to implement high level security protocols to safeguard sensitive data, ensuring data integrity.

4.4.7 Approach and Methodology for Implementation

- **Need Assessment**: An initial audit will be conducted to understand the specific requirements of each existing system and establish the gaps that the new system must fill.
- **System Architecture Design**: A robust and scalable architecture will be designed that can seamlessly integrate various existing and future dashboards.
- **Development**: An agile methodology will be adopted for iterative development, allowing for adaptability and continuous improvement.
- **Testing**: A comprehensive testing phase will be conducted to identify system vulnerabilities and performance bottlenecks.

- **Data Integration**: A strategic plan will be developed for data unification across multiple schemes, aiming to provide a consolidated view for governance.
- **User Interface Design**: An intuitive user interface will be designed with user experience being a priority.
- **Data Analytics Integration**: Data analytics tools will be integrated into the system to facilitate real time decision making.
- **Security Measures Implementation**: High level security protocols will be implemented to safeguard sensitive data.
- **End User Training**: A plan will be developed for end-user training to ensure effective system adoption and utilization.
- **Pilot Testing**: A pilot phase will be conducted to test the system's efficacy and make necessary adjustments.
- **Deployment**: A phased rollout strategy will be adopted to minimize operational disruptions.
- **Onsite Support Provision**: Immediate onsite support will be provided, especially during the initial phases of deployment.
- **Maintenance and Enhancements**: Resources will be allocated for ongoing system maintenance and future upgrades.



4.4.8 Use of ICT/Innovative Technology Towards Project Implementation

The proposed project will leverage Information and Communication Technology (ICT) and innovative technology to enhance its implementation. One such innovation is the use of handheld devices (tablets) for field personnel. This technology will allow field personnel to conduct field surveys and update field level data across multiple service offerings and dashboards in real time ensuring a more streamlined and efficient data management process. The tablets will be equipped with the necessary software and applications to access the Master MIS, allowing for real time data entry and updates. This use of ICT will not only improve data accuracy but also enhance operational efficiency

4.4.9 Timeline for achievement of Project Deliverables

- **Need Assessment & System Architecture Design**: This initial phase is expected to take around 1-2 months.

- **Development & Testing**: The development of the system using an agile methodology and comprehensive testing to identify system vulnerabilities and performance bottlenecks is estimated to take around 6-8 months.
- **Data Integration & User Interface Design**: The strategic plan for data unification across multiple schemes and designing an intuitive user interface is projected to take around 2-3 months.
- **Security Measures Implementation & End User Training**: Implementing high level security protocols and conducting end user training is expected to take around 2-3 months.
- **Pilot Testing & Deployment**: Conducting a pilot phase to test the system's efficacy, making necessary adjustments, and deploying the system using a phased rollout strategy is estimated to take around 2-3 months.
- **Onsite Support Provision & Maintenance**: Providing immediate onsite support, especially during the initial phases of deployment, and allocating resources for ongoing system maintenance and future upgrades is an ongoing process.

4.4.10 Estimated impact of the Project/Proposal/scheme

The proposed Master Management Information System (MIS) is expected to have a significant impact on the operations of the Department of Industries, Government of Kerala. By providing a unified view of all initiatives, it will enhance data driven decision making at the state level and improve the management of various State support schemes for Micro, Small, and Medium Enterprises (MSMEs). The use of innovative technology such as tablets for field personnel will ensure a more streamlined and efficient data management process, improving operational efficiency. The system's scalability will accommodate future growth or the rollout of new schemes, fostering a conducive ecosystem for MSMEs and promoting their growth and competitiveness. Overall, the project is expected to significantly enhance the capabilities of MSME's and Department of Industries and DICs.

4.4.11 Project costing and contribution of State towards it

The total estimated budget for improving the digital infrastructure is provided in the table below:

Table 42 Interventions wise Total Cost for four years (Amount in Rs. Cr.)

Sl. No	Intervention	Total Budget for 4 years	Demand from RAMP
1	Integration of MIS portals including O&M including dashboard for RAMP M&E	16.80	13.44
2	Upgrading IT infra in DoI, DICs and Taluk Offices	4.88	3.90
	Total	**21.68**	**17.34**

Year wise costing of the respective interventions (in Rs. lakhs) are as provided below:

Sl.No.	Intervention	Year 1	Year 2	Year 3	Year 4
1	Integration of MIS portals including O&M including dashboard for RAMP M&E	283.01	283.01	0.00	0.00
2	Upgrading IT infra in DoI, DICs and Taluk Offices	1169.00	170.33	170.33	170.33

4.4.12 Plan for strengthening M&E framework pertaining to Project

- **Specialized Administrative Teams**: Specialized administrative teams will be constituted to ensure system optimization and performance. These teams will monitor the system's performance regularly and make necessary adjustments to ensure it continues to meet its objectives effectively.
- **High Level Security Protocols**: High level security protocols will be implemented to safeguard sensitive data and fortify data integrity. Regular audits will be conducted to ensure these security measures are effective.
- **Ongoing System Maintenance**: Resources will be allocated for ongoing system maintenance. This includes regular updates to ensure the system remains current with technological advancements and can continue to meet the evolving needs of its users.
- **Future Upgrades**: A plan will be put in place for future upgrades to the system. This ensures that the system remains scalable and can accommodate future growth or the rollout of new schemes.
- **User Feedback**: Regular feedback will be sought from users to understand their experiences with the system and identify areas for improvement.

4.5 Improving Access to Finance

4.5.1 Major issues/challenges of Firm capabilities.

Access to finance remains one of the critical constraints in the growth of the MSME. Entrepreneurs face challenges to accessing the credit due to complex collateral requirements, lack of proper knowledge of the procedures, delay in fund disbursement, un-standardized project appraisal system for term loans etc. Many MSMEs lack awareness of different financial products and benefits available to them. MSMEs are unable to avail benefits of financial products and face challenges with this due to lack of understanding of the bank's financing framework, and criteria to be met including etc. From the supply side, i.e. bank/ Financial institution side, the issues are incomplete and inaccurate documentation, inability to repay the loan, inability to meet regulatory compliance, bad credit history, unstable business, no clear business plan, no knowledge on market potential, and misuse of loan funds.

CGTMSE (Credit Guarantee fund Trust for Micro and Small Enterprises) is setup by GoI, & SIDBI in Aug'2000 to make collateral free credit facilities available to MSEs (Micro & Small Enterprises). At present, the maximum extent of guaranteed cover for MSEs is 75%-85% for credit up to Rs. 500 lakhs under the scheme. However, it is noted that the scheme performance in the State is comparatively lower than other states. The reason being the banks in the State are reluctant to process loans under the scheme as they find the loan guarantee of 75%-85% inadequate. Many states like Tamil Nadu, Bihar, Assam, Manipur, etc. have overcome this challenge by increasing the total guaranteed coverage by providing a state contribution to the scheme. The extent of guarantee coverage under CGTMSE is as follows:

Category **(Including Trading activity)**	**Maximum extent of Guarantee Coverage where credit facility is**		
	Up to ₹ 5 lakh	Above ₹ 5 lakh & up to ₹ 50 lakh	Above ₹ 50 lakh & up to ₹ 500 lakh
Micro enterprises	85%	75%	75%
Women entrepreneurs / SC/ST entrepreneurs / Person with Disability (PwD)/ MSE promoted by Agniveers	85%		

/MSEs situated in Aspirational District / ZED certified MSEs	
All other category of borrowers	75%

4.5.2 Key Findings

The key findings from the stakeholder consultation with banks revealed that each bank, while operating in the same geographical and regulatory context, provided a unique perspective on the problems they encounter when dealing with loan applications from MSMEs. During stakeholder interactions to gauge the breadth and depth of challenges in the loan issuance process, it was revealed that the challenges are multi-fold and complex, ranging from administrative to financial and strategic in nature for MSME. It ranged from basic yet crucial issues like incomplete and inaccurate documentation to more intricate challenges such as instability in revenue streams, inadequate business planning, and lack of market potential. The diversity in observations reflects both the array of the MSME sector and the variances in institutional approaches to loan issuance.

4.5.3 Problem Statement:

The applications for loan are rejected by banks due to reasons ranging from basic yet crucial issues like incomplete and inaccurate documentation to more intricate challenges such as instability in revenue streams, inadequate business planning, and lack of market potential for the business proposal. Hence it is essential that the entrepreneur is sensitised on the various requirements or criteria to be met for the loan application to be approved. The problem statement is to improve access to finance for MSMEs in Kerala by addressing the challenges identified in the stakeholder consultation.

4.5.4 Proposed Project with Respect to RAMP

The proposed project aims to address the key challenges faced by MSMEs in Kerala in securing credit. The project is designed with a multi-branched approach to tackle the issues at various levels. Here are the details:

- **Bankers Meet (Facilitate access to finance with special focus on CGTMSE):** Banker's meet will be organised to facilitate development of better linkage of MSMEs with the Banks and FIs will be organised. The programme will consist of general awareness sessions by bankers related to the different products/services offered by them for the MSMEs, the procedures involved, the key parameters they look for while sanction of loans and other related information. A one-to-one interaction session will be held for individual MSMEs facing issues with availing loans with the respective banks.
- **Educational Seminars on KYC and Documentation**: One of the major challenges faced by MSMEs is incomplete and inaccurate documentation. To address this, the project proposes sensitising MSMEs on KYC and documentation. These seminars will help MSMEs understand the importance of maintaining complete and accurate documentation and guide them on how to do it effectively.
- **Providing Updates on Regulatory Changes**: Regulatory compliance is another area where MSMEs struggle. The project proposes providing real time updates on regulatory changes to help MSMEs stay compliant. This could be done through a dedicated online platform or regular email updates.
- **Guidance on Building Formal Credit History**: Many MSMEs have limited formal credit history, which affects their ability to secure loans. The project proposes offering guidance to MSMEs on how to build a robust credit history. This could involve advising MSMEs on best practices for managing their finances and meeting their credit obligations.

- **Consultative Services for Business Planning and Market Positioning**: Many MSMEs lack a clear business plan and have limited knowledge of market potential. To address this, the project proposes offering consultative services to help MSMEs in business planning and understanding market dynamics. This could involve helping MSMEs identify their unique selling proposition (USP), understand their target market, and develop effective marketing strategies.
- **Regular Business Health Checks and Market Assessments**: To ensure the ongoing success of MSMEs, the project proposes conducting regular Business Health Checks and market assessments. These checks will help identify any potential issues early on and provide MSMEs with the necessary support to address them.These will be achieved through Bankers meet and Awareness workshops.
- **Assistance in Annual guarantee fee/premium for availing CGTMSE loan:** The annual guarantee fee/ premium that is passed on to the MSME for availing the collateral fee will be subsidised. The fee/premium for loans shall be paid to the banks on behalf of the eligible MSME thereby reducing their financial burden and cost of lending.
- **Financial Literacy Programs**: To address the issue of incomplete documentation and poor understanding of regulatory compliance, financial literacy programs can be implemented. These programs can educate MSMEs about the importance of maintaining accurate documentation, understanding regulatory compliance, managing cash flows, and repaying loans on time.
- **Business Advisory Services**: Help MSMEs develop clear business plans and understand market potential, access to business advisory services will be provided
- **Supporting with onboarding cost on TReDS** – the onboarding cost incurred by the MSMEs will be reimbursed to encourage more MSMEs to be linked with the TReDS platform. The on-boarding assistance will be provided up to a maximum limit of Rs.5000 per MSME.
- **Workshop on TReDS platform (MSMEs and State PSUs), ODR and BSE Listing:** Awareness workshops will be conducted for both MSMEs and State PSUs on TReDS. The awareness programme is likely to improve the usage of the TReDS platform by the MSMEs and PSUs.
- **Engaging Legal expert for regional MSE FCs and Awareness on Online Dispute Resolution**

4.5.5 Proposed Project Design Concept and Feasibility & Viability of Proposal

The project design concept involves conducting educational seminars for MSMEs on KYC and documentation, providing real time updates on regulatory changes, guiding MSMEs in building formal credit history, offering consultative services for better business planning and market positioning, and conducting regular Business Health Checks and market assessments.

The proposed project aims to address the key challenges faced by MSMEs in Kerala in securing credit. The project is designed with a multi-branched approach to tackle the issues at various levels. Here are the details:

- **Educational Seminars on KYC and Documentation**: One of the major challenges faced by MSMEs is incomplete and inaccurate documentation. To address this, the project proposes conducting educational seminars for MSMEs on KYC and documentation. These seminars will help MSMEs understand the importance of maintaining complete and accurate documentation and guide them on how to do it effectively.
- **Real time Updates on Regulatory Changes**: Regulatory compliance is another area where MSMEs struggle. The project proposes providing real time updates on regulatory changes to help MSMEs stay compliant. This could be done through a dedicated online platform or regular email updates.
- **Guidance on Building Formal Credit History**: Many MSMEs have limited formal credit history, which affects their ability to secure loans. The project proposes offering guidance to

MSMEs on how to build a robust credit history. This could involve advising MSMEs on best practices for managing their finances and meeting their credit obligations.

- **Consultative Services for Business Planning and Market Positioning**: Many MSMEs lack a clear business plan and have limited knowledge of market potential. To address this, the project proposes offering consultative services to help MSMEs in business planning and understanding market dynamics. This could involve helping MSMEs identify their unique selling proposition (USP), understand their target market, and develop effective marketing strategies.
- **Regular Business Health Checks and Market Assessments**: To ensure the ongoing success of MSMEs, the project proposes conducting regular Business Health Checks and market assessments. These checks will help identify any potential issues early on and provide MSMEs with the necessary support to address them.

The feasibility of interventions is grounded in its practical approach to addressing the challenges faced by MSMEs in Kerala. By focusing on areas such as documentation, regulatory compliance, credit history, business planning, and market positioning, the proposal leverages existing resources and capabilities of banks and the Directorate of Industries. This makes the implementation of the proposed interventions feasible within the existing framework. The viability of the proposal lies in its potential to significantly improve access to finance for MSMEs in Kerala. By addressing the key challenges identified, the proposal can help MSMEs overcome barriers to credit, thereby supporting their growth and contributing to the overall socio-economic development of the state. The proposed interventions are designed to be adaptable and scalable, ensuring their viability even as the MSME landscape evolves. Furthermore, regular monitoring and evaluation will ensure that the interventions remain effective and continue to deliver positive outcomes.

4.5.6 Approach and Methodology for Implementation

Integrated Approach for MSME Access to Finance:

To address the myriad challenges faced by MSMEs in Kerala in securing the credit, both banks and the Directorate of Industries can implement several high impact interventions. For issues related to documentation and compliance, banks should invest in educational seminars that demystify KYC, taxation, and other regulatory requirements. The Directorate, on the other hand, could develop standardized templates and offer real time regulatory updates to ease compliance.

On aspect of financial stability, the MSMEs could be supported by offering consultation services to help MSMEs build a robust credit history and advising on restructuring options for at risk businesses. For better business planning and market positioning, consultative services from banks can help MSMEs in business planning and understanding market dynamics. The Directorate could complement this by conducting regular ‘Business Health Checks’ and market assessments.

These combined efforts can substantially alleviate the credit gap facing MSMEs in Kerala.

S. No	Issue	Banks Recommended Actions	Dept. of Industries Recommended Actions
1	Incomplete & inaccurate documents	Conduct seminars on KYC and documentation.	
2	Documentation	Hold information sessions on tax laws and other compliance prerequisites.	Provide real time updates on regulatory changes through online platforms.
3	Bad credit history	Guide MSMEs in building formal credit history.	

4	Unstable business	Provide consultative services on diversification and market penetration.	Conduct Business Health Checks to assess and guide business plans.
5	No clear Business Plan	Offer consultative services to help in business planning and USP formulation.	Provide specialized consultation services for better market alignment of business plans.
6	No knowledge on market Potential	Set up subsidized consultation services for market assessment.	Provide access to market research databases

The approach for implementing the proposed project involves a collaborative effort between banks, the Directorate of Industries, and MSMEs in Kerala. The methodology includes the following steps:

- **Step 1: Stakeholder Engagement**: Engage with all stakeholders including banks, the Directorate of Industries, and MSMEs to ensure their buy in and active participation in the project.
- **Step 2: Educational Seminars**: Conduct educational seminars on KYC and documentation for MSMEs. These seminars will be designed to be interactive and practical, enabling MSMEs to understand and apply the knowledge gained.
- **Step 3: Real time Regulatory Updates**: Develop a system for providing real time updates on regulatory changes. This could be an online platform or a regular email update service.
- **Step 4: Credit History Guidance**: Provide guidance to MSMEs on building a robust credit history. This could involve one-on-one consultations or group workshops.
- **Step 5: Business Planning and Market Positioning Services**: Offer consultative services to help MSMEs in business planning and understanding market dynamics. This could involve personalized consultations or group training sessions.
- **Step 6: Regular 'Business Health Checks' and Market Assessments**: Conduct regular 'Business Health Checks' and market assessments to monitor the progress of MSMEs and identify any potential issues early on.
- **Step 7: Monitoring and Evaluation**: Implement a robust monitoring and evaluation system to track the progress of the project and measure its impact. This will involve regular reporting and data analysis.

To increase traction and encourage more MSMEs and Buyers to onboard onto TReDS, the exchanges are taking proactive steps. They are collecting feedback from buyers and reaching out to suppliers to understand their concerns and motivate them to get onboarded. They are also willing to conduct awareness sessions with PSUs and MSME bodies to educate them about the benefits of the TreDS platform and guide them through the onboarding process.

4.5.7 Use of ICT/Innovative Technology Towards Project Implementation

ICT can be used to provide real time updates on regulatory changes, offer online consultative services, conduct virtual Business Health Checks, and facilitate access to market research databases.

4.5.8 Timeline for achievement of Project Deliverables

The interventions will be carried out over the period of four years

4.5.9 Estimated impact of the Project/Proposal/scheme

The estimated impact of the project includes improved access to finance for MSMEs in Kerala, increased stability and growth of MSMEs, and enhanced socio-economic development in Kerala. The outputs for the proposed interventions over the four-year period is as provided below:

- 56000 MSMEs sensitised on CGTMSE scheme, financial/ digital literacy, preparation of bankable project reports and procedure for availing loans including documentation
- Minimum 40% participants to be women entrepreneurs
- Improved uptake of CGTMSE scheme and reduction in rejection rate of loan application
- Improved onboarding of State PSUs and MSMEs with improved transactions through TReDS platform
- 5700 units will be provided onboarding assistance on TReDS
- Participation of 22,292 MSMEs in Bankers meet who will be sensitised for better compliance

4.5.10 Project costing and contribution of State towards it

The total estimated budget for the interventions is as provided in the table below:

Table 43 Total Costing for the interventions related to Access to Finance (Amount in Rs. Cr.)

Sl. No.	Intervention	Total Cost for 4 years	Demand from RAMP
1	Sensitisation Workshops on financial & digital literacy and accessing loans (CGTMSE)	7.56	6.05
2	Coverage of premium for guarantee approved CGTMSE cases of MSMEs (upto Rs.10 lakhs	27.17	21.74
3	Awareness Workshop on TReDS platform (MSMEs and State PSUs), ODR and BSE Listing	1.41	1.13
4	Onboarding assistance (TReDS) to MSMEs	2.89	2.89
5	Provision of Legal experts for Regional MSE FCs	0.19	0.19
6	Bankers meet	2.13	1.70
	Total	**41.35**	**33.70**

Table 44 Intervention costing over the four years (Amount in Rs. lakhs.)

Sl.No.	Intervention	Year 1	Year 2	Year 3	Year 4
1	Sensitisation Workshops on financial & digital literacy and accessing loans (CGTMSE)	189.00	189.00	189.00	189.00
2	Coverage of premium for guarantee approved CGTMSE cases of MSMEs (upto Rs.10 lakhs	679.34	679.34	679.34	679.34
3	Awareness Workshop on TReDS platform (MSMEs and State PSUs), ODR and BSE Listing	30.70	33.50	36.58	39.97
4	Onboarding assistance (TReDS) to MSMEs	70.00	71.40	72.83	74.28
5	Provision of Legal experts for Regional MSE FCs	5.96	7.84	2.60	2.60
6	Bankers meet	46.30	50.93	55.56	60.19

4.5.11 Plan for strengthening M&E framework pertaining to Project

The plan for strengthening M&E framework pertaining to the project will consist of the following:

Step 1: Develop M&E Plan: Develop a detailed M&E plan that outlines what will be monitored and evaluated, the methods to be used, and the timeline for M&E activities.

Step 2: Identify Key Performance Indicators (KPIs): Identify KPIs for each intervention that accurately measure their effectiveness. These could include number of MSMEs attending educational seminars, number of MSMEs receiving real time regulatory updates, improvements in credit history, etc.

Step 3: Regular Data Collection: Implement regular data collection processes to track progress against KPIs. This could involve surveys, interviews, or review of administrative data.

Step 4: Data Analysis: Analyse the collected data to assess the progress and effectiveness of interventions. This should be done on a regular basis (e.g., quarterly) to allow for timely adjustments if needed.

Step 5: Reporting: Prepare regular M&E reports that provide updates on progress and insights from data analysis. These reports should be shared with all stakeholders to ensure transparency and accountability.

Step 6: Review and Adjust: Use the insights from M&E activities to review and adjust interventions as needed. This ensures that the project remains responsive to changing needs and circumstances.

Step 7: Capacity Building: Invest in capacity building for M&E. This could involve training for staff on M&E methods and tools or hiring of additional M&E expertise if needed.

4.6 Access to Market and Promotion

4.6.1 Major issues/challenges of Firm capabilities.

Limited Market Access and Knowledge: Kerala's MSMEs encounter challenges when it comes to expanding into new and larger markets, largely due to a lack of market knowledge in other states and export markets. A major challenge in opening new markets through vendor development in Kerala is the limited understanding of market dynamics, preferences, and demand in those markets. MSMEs in Kerala don't have a streamlined networking opportunity from PSUs, OEMS and anchor units and understand the procurement requirements.

Limited Networking Opportunities: The challenges that the MSMEs face are they have restricted access to or engagement in professional or social networks. This can hinder their ability to build beneficial relationships, share knowledge, and access opportunities for growth and development.

Regulatory Barriers and Compliance: Another significant challenge is navigating complex regulatory barriers and ensuring compliance with diverse market requirements, both at the state and national levels, which can be daunting for vendors seeking expansion.

Some of the other challenges related to Marketing and promotion that were identified during the stakeholder discussions and survey are as follows:

- Many of the MSMEs are not connected to digital platforms and only rely on the local market to sell their product, which hinders their access to a larger market
- The transportation cost for the export of goods is high compared to neighbouring states like Tamil Nadu. Additionally, MSMEs lack the expertise to export and connect with buyers beyond the local geographies.
- There are challenges in identification of relevant products, as well as missing business opportunities to larger market.
- MSMEs struggle to compete with big market players due to lack of appropriate knowledge, missing compliances, and certifications. This hinders their chances of reaching out for exports or larger markets.
- MSMEs find it difficult to identify new buyers/customers, and find the trade fairs etc. as additional costs, due to lack of incentives or benefits.

- MSMEs also find the e marketplaces, such as GeM non transparent, and are unaware of the process and procedures for enrolment. They also feel that the public procurement doesn't follows appropriate rules, and the officials are unaware of the technicalities of manufacturing.

4.6.2 Key Findings

Accessing markets is undeniably one of the primary challenges faced by MSMEs in the state. Since enterprises in services sector often cater to local or hyperlocal markets, which naturally limits expansion beyond their immediate vicinity, the analysis focuses on enterprises located within the manufacturing sector. The survey results reveal that most manufacturing MSMEs primarily sell their products within local markets and their respective districts.

In contrast, only a small percentage of MSMEs reported extending their reach to markets in other districts within the state. Consequently, it's evident that only a small percentage of MSMEs currently have access to the markets outside the state, whether within the country or on a global scale. This limited market reach accentuates the importance of facilitating and expanding market access for these enterprises, which is crucial for their growth and sustainability.

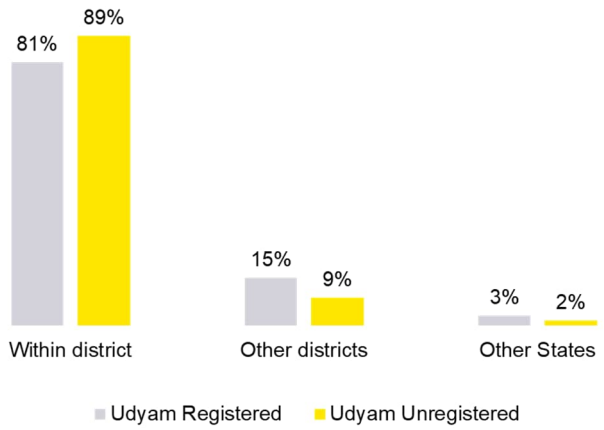


Figure 78 Major Markets for Products/ Service of surveyed MSMEs

The data highlights a critical imperative for MSMEs: the pressing need to expand their market reach and diversify their customer base. The survey results indicate a majority of MSMEs have established an online presence, with 62% among Udyam registered enterprises and 54% among unregistered enterprises embracing digital avenues. However, despite this online presence, the majority still generate less than 10% of their sales out via these online platforms. Most of these MSMEs are using social media platforms, with Whatsapp leading the way, followed by a distant presence on Instagram and Facebook. Yet, apart from these social media platforms, many MSMEs have yet to harness the potential of e-commerce platforms, both in the business-to-consumer (B2C) and business-to-business (B2B) domains. This presents an opportunity for MSMEs to explore and leverage these e-commerce platforms more effectively, enhancing their market access and potential for growth.

While awareness, in some cases, is not the primary concern, for instance, entrepreneurs are aware of avenues like Flipkart or the utilisation of their own websites, this awareness does not translate into tangible actions. Conversely, there is a compelling need to create awareness about other B2B and B2C platforms, such as Amazon, Indiamart, ONDC, GeM and the like. Educating MSMEs about the diverse range of e-commerce options available can empower them to make informed choices and leverage these platforms effectively to access wider markets and foster growth.

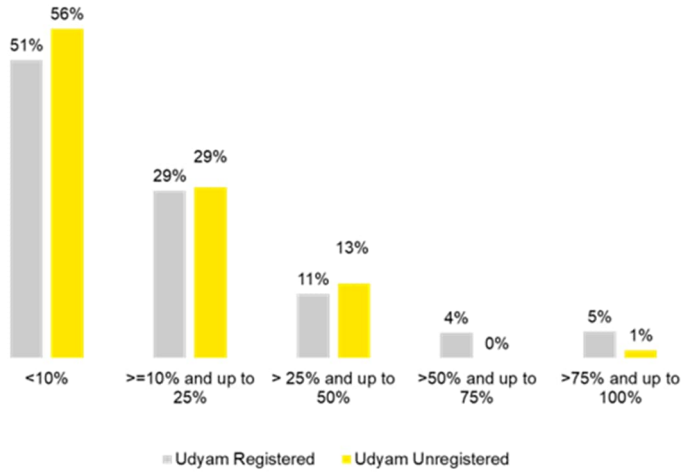


Figure 79 Magnitude of Online Sales Generated

The primary challenges reported by the surveyed MSMEs revolve around issues such as low margin realization, the high cost associated with product promotion, and payment delays. Although there may be slight variations in the percentage of responses, the overall trend remains consistent regardless of the Udyam registration status. These common challenges underscore the pressing need for comprehensive support and solutions that can benefit MSMEs across the board.

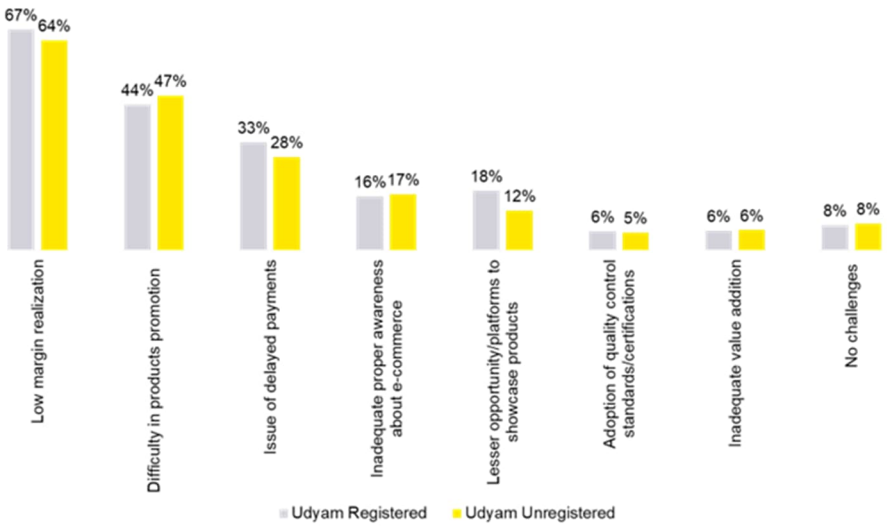


Figure 80 Challenges with respect to Market Access

During the sustainability survey carried out by the department of nearly 1.39 lakh MSMEs, nearly 15% of them were found to have become defunct. Nearly 28% of these defunct MSMEs cited inadequate marketing as a reason for their failure.

District Industries Centre of Kerala has initiated discussions with different buyers and vendors on the above, as part of the diagnostic exercise for the SIP. A snapshot of the discussions has been given below:

Brief discussion points with the Deputy General Manager of a large Chemical manufacturer with factories in India	Brief discussion points with the MD of a metal fabrication unit based in Kochuveli, Kerala
"Are the MSMEs in Kerala capable of supplying the products I require? I have doubts because they seem too small to meet my needs."	"The big private industries are of significant scale. We, on the other hand, are relatively small players. How can we expect them to engage with us?"
"I'm uncertain whether Kerala's MSMEs possess the essential quality certifications that I insist on. I prefer sourcing components from other states rather than taking the risk here."	"Indeed, we possess the most up-to-date quality certifications. However, I struggle to communicate this to private industry players, as my cold emails and persistent phone calls often go unanswered."
"Even if I do consider purchasing in Kerala, I depend on my personal network. No government department has ever approached me to discuss the MSMEs operating within the state.	

For the above reasons, there is a need to bring the MSMEs and the CPSEs/ private buyers to a common table. When this is done by a government department, especially a department dedicated to the development of MSMEs, it lends more credibility to the process. It also smoothens and facilitates the process.

4.6.3 Problem Statement:

Majority of MSMEs only sell their products locally and are not connected to digital marketplaces. They lack the support for product identification and promotion for exports and/or other markets. MSMEs (especially in sectors like Coir and Handlooms) have to bear high cost of transportation and freight to transfer the goods to other States and hence their products become less competitive in spite of having quality. Many MSMEs are unable to attend trade fairs/meets organised outside the State and view them as added costs, instead of business opportunities. There are Insufficient market linkage opportunities available for MSMEs due to limited platforms connecting authentic buyers and sellers. 45% of the MSMEs surveyed were unaware about the e-commerce platforms like ONDC, GeM, IndiaMart etc, while 17% where not utilising the e-commerce platforms inspite of having awareness.

Government entities and private buyers are often unaware of the capabilities, certifications, and quality standards of MSMEs. This knowledge gap exists because there is no central facilitator or touchpoint dedicated to providing comprehensive information about Kerala's MSMEs. In instances where such facilitators or touchpoints exist, they serve specific groups of MSMEs in isolation.

To promote products from the priority, traditional and sunrise sectors, the need to organise sector wise Expos was felt. With initiatives like Medical Devices Park, Defence Park and Aerospace industry corridor proposed in the State, opportunity exist to uplift the general engineering MSMEs in the State and link them with major Anchor units/PSUs through Vendor development Programmes. 55% of the respondents in the diagnostic survey were not aware of the various State and Centre Govt. Schemes for MSMEs.

It was evident from the stakeholder interactions that MSMEs are relying mainly on their personal contacts and repeat customers to sell their products/services. Therefore, the opportunities like participation in trade fairs, exhibitions, buyer-seller meets, and vendor development programs are crucial for acquiring new customers.

4.6.4 Proposed Project with Respect to RAMP

i. Workshop for Sensitising MSMEs on digital marketing & onboarding on e-commerce websites

The intervention is primarily aimed at creating awareness among the MSMEs regarding the opportunities and benefits of e-commerce and digital marketing.

ii. Bootcamps for on boarding of MSMEs on e-commerce platforms like Amazon etc.

Bootcamps will be organised to cater to those MSMEs who are already aware of e-commerce platforms and wishes to leverage it. Industrial associations and DICs will be leveraged to mobilise the beneficiaries. The event will be mainly held in industrial clusters, Industrial areas/ parks, Development Areas or Parks and Industrial estates. Government agencies like SIDCO, KINFRA and KSIDC which have these areas under them will also be consulted for ensuring maximum reach. Specific number of experts equipped with relevant equipment such as laptops and internet dongles will visit the specified area on specified days. Interested MSMEs will be assisted in onboarding onto the relevant e-commerce websites.

iii. MSME Expos (Sector wise and district wise)

To facilitate the MSMEs to showcase its products, to understand about other relevant products available and interact with Business development service provides (BDSP), representatives from technical institutions etc. MSME expos are proposed. Two levels of expos, i.e., State level sector focussed Expos and district level Expos, are planned. State level Expos will be conducted maximum two per year and will be Sector specific. Ayurveda, Medical equipment, Rubber based products, Defence/ Engineering, Traditional sector (Coir/Handlooms/ Handicraft), Garment and Textiles, Furniture & wood products, Food Processing and Technology driven (like ESDM) are the identified sectors.

iv. Conducting Vendor development Programmes/ Anchor units MSME connect programmes

Vendor development will be organised to facilitate interaction between the identified Anchor Units/ PSUs and MSMEs from relevant sectors. The VDPs will involve a general awareness session where the Anchor units will sensitise the participating MSMEs on the categories of products they look to procure through public procurement, what are the standards, quality parameters and other related criteria that the vendors will have to fulfil and what are the ways in which the MSMEs can participate in the procurement process. There will also be a session where interested MSMEs will be given an opportunity to interact one-on-one with the participating Anchor units/PSUs.

v. Awareness on Packaging Technology / Green packaging

Packaging is a major factor in successful marketing. Packaging ensures that the product inside is protected, differentiates a brand from the competition, creates brand recognition and can influence consumer purchasing decisions and habits. Hence, for the products from the State to capture markets outside the State and in other countries, packaging is very vital. Therefore, awareness programmes on packaging technology and green packaging will be organised to sensitise the MSMEs.

vi. Participation in National/ International Expos and Exhibitions

MSMEs will be encouraged to participate in National and International Expos to get exposure to the national and international markets, the current market trends, interact with different stakeholders to identify opportunity for business and understand best practices. MSMEs will be encouraged to avail the benefits provided for market development under the schemes by MoMSME as well as the State schemes.

vii. Engaging Marketing Agencies for Promotion of RAMP, other MoMSME & State government schemes and programmes (including Mission 1000, Make in Kerala and Made in Kerala)

A comprehensive marketing strategy will be developed as the first step. A marketing agency will also be identified and engaged which will support in the creation and managing of digital assets and marketing campaigns. It will help in creation of like icons/colours/key phrases for select products. Set up a dedicated marketing agency, conduct market research to identify target markets and consumer preferences, guiding the marketing strategies and collaborate with trade associations and chambers of commerce to organize trade fairs and marketing events to showcase MSME products. Promotion of GI Tagged products of Kerala will also be carried out.

4.6.5 Proposed Project Design Concept and Feasibility & Viability of Proposal

- Most of the MSMEs struggle with finding appropriate products, buyers, and market, specifically beyond the local geography. They lack the necessary compliances and support to export products, or attend buyer seller meets, which present market linkage opportunities. The project will support all these aspects of market linkage and facilitate access to market in various ways including Exports, marketing support, product identification and promotions, access to e-commerce etc., and will promote business beyond local boundaries.
- MSME Expos at State level will be organised every year focusing on different priority sectors of the State. It will be ensured that participation of Buyers/ Sellers from other States also participate in large numbers so that adequate linkage between buyers and sellers happen.
- To provide coverage for micro and small units from every part of the State, adequate number of district level workshops (56) will also be planned.
- Marketing agencies will be hired to promote the schemes of both Centre and State using both online and offline marketing and promotion methods. Market linkage and marketing remains one of the major challenges for MSMEs.

Kerala Brand – "Made in Kerala"

Kerala Brand envisages to ensure the quality of products manufactured within the State and to promote their marketing. It is expected that Kerala Branding will be able to significantly improve the marketing opportunities for producers/manufacturers who are willing to comply with the criteria prescribed for ensuring the quality standards of products. The scheme of "Kerala Brand" lays down that the products obtaining Kerala Brand Certification will be able to market their products under the unique brand name "Made in Kerala" at domestic and international level.

The Government via G.O.(Ms)No.37/2023/ID dated 02-06-2023 had accorded sanction Kerala Brand scheme including the constitution of the State Level Committee for approving the Kerala Brand criteria and Taluk Level Committee for awarding Kerala Brand. As per the approved scheme, any department/agency can introduce products/services pertaining to its sectors under the Kerala Brand. The products/services to be marketed under the Kerala Brand shall also conform to the existing quality standards adopted in the market. In case of products/services for which specific quality standards are not existing in the market, specific quality criteria will be prescribed by the State Level Committee, satisfying which the products will be considered for Kerala Brand.

The protocol for selection of enterprises for Kerala Brand comprises of a set of general criteria/conditions which are to be satisfied by all enterprises/products/services regardless of the sector and sector specific criteria developed based on the inputs gathered from industry stakeholder consultations.

Coconut oil has been selected for pilot implementation. The selection criteria for Coconut Oil manufacturing units given for for illustrative purposes were as follows:

The Specific Prerequisite Criteria

1. Drying unit must be in Kerala
2. Must have Agmark Certificate
3. Must be manufacturing "Expressed Raw Grade I Coconut Oil"
4. Must have BIS Certificate "IS 542:18"

General Prerequisite Criteria

1. Raw material sourcing must be from Kerala
2. Manufacturing/ Processing Unit must be in Kerala
3. Must have the FSSAI registration/ license as applicable
   a) FSSAI Basic Registration for units with annual turnover less the Rs.12 lakh
   b) FSSAI State License for units with annual turnover between Rs. 12 lakh and Rs. 20 Cr
   c) FSSAI Central License for units with annual turnover more than Rs. 20 Cr
4. Must submit a self-certification on conformance to quality, ethical and responsible industrial practices

Self-Declaration Checklist

To ensure that the enterprises selected for Kerala Brand resonates with the quality, ethical and responsible industry practices, a self-declaration checklist is developed which encompasses the USP of Kerala Brand. The enterprises applying for Kerala Brand will have to select from the following checklist at the time of application.

Quality	Ethical	Responsible
• Periodic Quality control • Regular Safety inspections • Occupational Health & Safety	No child labour Women workforce representation Zero tolerance to employee exploitation Inclusive workplace Adopted Workplace Safety	Promoting • Green/ Clean/ Renewable Energy • ZED Certification • Used recycled/ recyclable packaging/ consumables • Designated area for waste storage/ disposal • Follows water conservation measures • Takes measures to contain pollution

Made in Kerala – Conforming to quality, ethical and responsible industry practices

Highlights

- Certifying the quality of domestically manufactured products
- Aid local products in finding national and international markets
- Equipping locally manufactured products to compete in GVC
- Increasing the export capability of local businesses
- Geo-marketing portal to promote local GI tagged products
- QR codes ensuring enhanced traceability

Quality

- Periodic Quality control
- Regular Safety inspections
- Occupational Health & Safety

Ethical

- No child labour
- More women representation
- 0% Tolerance to employee exploitation
- Inclusive workplace
- Workplace Safety

Responsible

Promoting





ZED

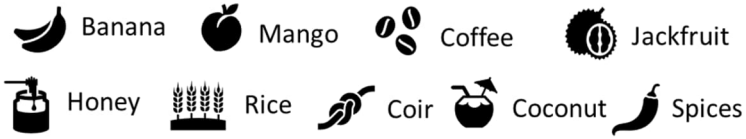
Coconut Oil is taken as a pilot product. Specific and General Pre-requisite criteria finalised.

Methodology

Ensuring Consistency

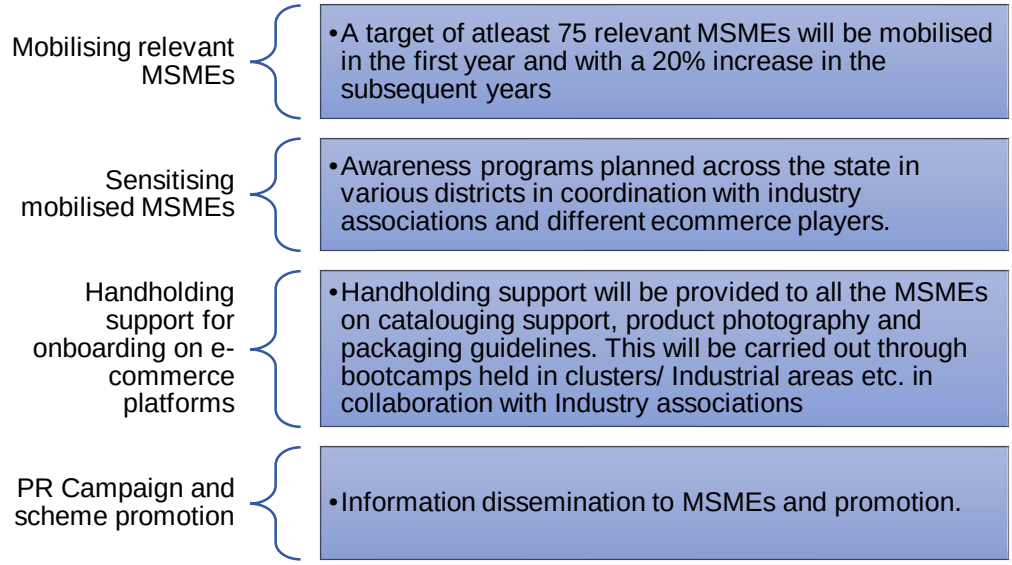
- **The protocol for selection of enterprises:**
  - General criteria/conditions – Sector/product agnostic
  - Sector specific - Inputs from industry consultations
- **Approval and award:**
  - State Level Committee approves Kerala Brand criteria
  - Taluk Level Committee awards Kerala Brand

Will cover value added Products made from



4.6.6 Approach and Methodology for Implementation

The approach to be adopted for promoting e-commerce is provided in the figure below:



The intervention related to MSME expos is proposed to be done across four focus areas as follows:

Focus Area 1: Development of an event calendar: The involvement of MSMEs in exhibitions is frequently confined to members of associations or those in proximity due to limited awareness about such events. To rectify this disparity in information, the Directorate of Industries and Commerce will create a comprehensive exhibition schedule. Extensive consultations will be conducted with Industry associations to solidify this calendar. Subsequently, this calendar will be disseminated to associations via various social media platforms such as WhatsApp, Twitter, LinkedIn, and made publicly accessible on the Directorate of Industries and Commerce website.

Focus Area 2: Ensuring coverage of major sectors: The MSME expos organised at State level will be Sector based. Priority sectors including Ayurveda, Medical devices, Aerospace/ Defence and Handloom/Textiles will be considered. Manufacturers, machinery suppliers, relevant Business Development Service Provider (BDSPs), related Technical Institutions and other major stakeholders from within and outside state will be invited to participate to facilitate better reach of the local MSMEs with outside market.

Focus Area 3: Enhancing the capacity and training of internal stakeholders within the department, including the District Industries Centres (DICs): It is essential to sensitize these stakeholders and familiarize them with the broader landscape of expos and exhibitions since the DICs serve as the initial contact point for MSMEs. To achieve this, comprehensive training programs will be organized for all DIC employees. The event calendar developed will also be distributed to the DICs. The training sessions will encompass the following key topics:

- Understanding the existing expos and exhibition ecosystems, including information on major recurring fairs and expos.
- Requirements for effective coordination to connect MSMEs with exhibitions successfully.
- Understanding the design aspects and prerequisites for participating in exhibitions, covering the “how,” “what,” and “why” of these design requirements.
- Gathering relevant information about MSMEs for future exhibition opportunities.

These training initiatives aim to equip internal stakeholders with the knowledge and skills required to facilitate MSME participation in exhibitions effectively.

Focus Area 4: Public Relations and Engagement: All events will be marketed, promoted, and branded through Directorate of industries and commerce official social media channels. Collaborative

content in partnership with event organizing associations will be created and shared. Social media platforms and WhatsApp will be utilized to achieve this outreach and impact.

The following steps will be taken related to organising the Vendor Development Programmes:

Identification of Key Sectors, Government Entities, and Their Procurement Procedures

The District Industries Centre (DIC) will utilize the existing Udyam database, which includes HSN numbers, NIC codes, and GST data, to prioritize sectors and curate a list of relevant MSMEs. This focused approach enhances the likelihood of successful engagements.

Subsequently, DIC will collaborate with government entities and private buyers to ascertain their specific requirements. These requirements will be consolidated into lists and shared with the MSMEs identified during the database curation process. This will be an ongoing and periodically updated endeavour, accommodating new and emerging sectors. The data collected will also undergo analysis, and the insights derived will inform public policy decision-making.

Organising Vendor Development programmes

Basis the identified sectors, curated MSMEs and supplier requirements, and insights from GeM workshops, the District Industries Centre (DIC) will implement Vendor Development programs covering major sectors and districts. This comprehensive effort will cover the entire state over a four-year period.

To execute this, a dedicated team will be essential, in conjunction with the industry database, and a focused approach to communications and outreach. This will involve effective communication to the concerned stakeholders at the grassroots level as well as dissemination through online channels.

Establishment of Process Repositories and Regular Updates

To ensure the longevity of the vendor development programs and to effectively address the information gap between MSME sellers and government entities/private buyers, it will be essential to compile and periodically update lists of requirements, sector priorities, and related information. These compilations will then be printed and distributed to both MSMEs and government entities/private buyers.

4.6.7 Use of ICT/Innovative Technology Towards Project Implementation

Social media platforms like WhatsApp, Twitter, LinkedIn will be leveraged for better information dissemination, communication and outreach. Youtube channels will also be leveraged in posting highlights of the workshops, Expos, VDPs and bootcamps to encourage more MSMEs to take up e-commerce and reap its benefits.

4.6.8 Timeline for achievement of Project Deliverables

The interventions are proposed to be conducted across the four-year period.

4.6.9 Estimated impact of the Project/Proposal/scheme

- 6441 enterprises will be sensitised on e-commerce platforms and benefits of e-commerce
- 3360 enterprises will be supported in onboarding e-commerce platforms through bootcamps
- A total of 6 State level Sector focussed expos are planned and 28 district level workshops will be organised.
- At least 1600 MSMEs will be provided an opportunity to interact with Anchor Units/ PSUs and convert into business opportunities
- Creating awareness among 6700 units on packaging technologies with special emphasis on green packaging.

4.6.10 Project costing and contribution of State towards it

Table 45 Total costing for Intervention related to Access to Market and Promotions (Amount in Rs. Cr.)

Sl.No.	Intervention	Total Cost for 4 years	Demand from RAMP
1	Workshop for Sensitising MSMEs on digital marketing & onboarding on e-commerce websites	0.87	0.70
2	Bootcamps for on boarding of MSMEs on e-commerce platforms like Amazon etc.	0.17	0.13
3	Organising MSME Expos (Sector wise and district wise)	40.00	32.00
4	Participation in national/International Expos	36.00	28.80
5	Conducting Vendor development Programmes/ Anchor units MSME connect programmes	0.80	0.64
6	Awareness on Packaging Technology / Green packaging	1.07	0.86
7	Engaging Marketing Agency for Promotion of RAMP and other MoMSMEs	8.25	8.25
8	Promotion/ Publicity cost for Mission 1000, Made in Kerala and GI Tagged products	20.00	16.00
	Total	**107.16**	**87.37**

Table 46 Intervention costing (year wise) related to Access to Market and Promotions (Amount in Rs. Cr.)

Sl.No.	Intervention	Year 1	Year 2	Year 3	Year 4
1	Workshop for Sensitising MSMEs on digital marketing & onboarding on e-commerce websites	18.90	20.79	22.68	24.57
2	Bootcamps for on boarding of MSMEs on e-commerce platforms like Amazon etc.	4.20	4.20	4.20	4.20
3	Organising MSME Expos (Sector wise and district wise)	900.00	1100.00	1100.00	900.00
4	Participation in national/International Expos	900.00	900.00	900.00	900.00
5	Conducting Vendor development Programmes/ Anchor units MSME connect programmes	20.00	20.00	20.00	20.00
6	Awareness on Packaging Technology / Green packaging	25.60	26.40	27.20	28.00
7	Engaging Marketing Agency for Promotion of RAMP and other MoMSMEs	206.16	206.16	206.16	206.16
8	Promotion/ Publicity cost for Mission 1000, Made in Kerala and GI Tagged products	500.00	500.00	500.00	500.00

4.6.11 Plan for strengthening M&E framework pertaining to Project

Field level officers will be responsible to coordinate with the respective Industry associations in identifying and mobilising the MSMEs. GM, DIC will periodically oversee the execution of these initiatives. DIC will also be coordinating with the Marketing agency for developing content for awareness workshops, formulating content strategies and materials for public relations and outreach, arranging activities for the Vendor Development Program, and finalizing both venue and participants.

4.7 Institutional Strengthening

4.7.1 Major issues/challenges

Strengthening capacity for development and delivery of MSME Support Programme faces challenges at 3 levels.

- At the individual level: wherein Government officials do not get opportunity to invest time in their learning and developing their competencies. This includes grassroot officials who are actually the citizen-facing division of the Department. Need assessment for the capacity building to be imparted to officials are not regularly carried out. Lack of awareness regarding some of the major GoI schemes like CHAMPION scheme makes it difficult for them to provide proper guidance to the MSMEs.
- At the organizational level: wherein systems and processes have scope for more efficiency. The existing processes and related MIS modules will be examined and areas for improvement will be identified. Currently there are more than 10 webpages which an officer has to access for getting different information.
- The officials are unaware about the best practices being implemented in other states. The exposure to technical advancements happening in the Industry sector is limited.

4.7.2 Key Findings

District Industries Centre (DIC) offices serve as a focal point for coordinating different interventions under the RAMP. While the importance of DICs is vital for a district in its growth and are yielding better results when compared to past models, there is a need to further strengthen the DICs by addressing the challenges faced by entrepreneurs and applying respective measures. The field level officers (ADIOs and IEOs) should be equipped to serve as a last mile touchpoint to support MSMEs and entrepreneurs by providing customized advisory support through handholding and mentoring. In addition to the existing field level officers, additional resources (BDSPs) at Local self-government institutions level (i.e. Panchayath, Municipality/ Corporation) have to be deployed for effective implementation of interventions. The officials need to be imparted basic knowledge on the identified priority sectors and the best practices. The district level officers have limited knowledge regarding schemes/ programs like TreDS, ONDC, CHAMPION schemes etc.

During interactions with the officials of the DICs it was understood that detailed training on bank financing is needed in districts like Malappuram, Ernakulam, and Kottayam. Additionally, there is a notable lack of awareness about TreDS in districts like Kozhikode, Alappuzha, and Thrissur. Another key challenge lies in assisting MSMEs with Single Window Portal clearances, particularly in districts like Palakkad and Pathanamthitta. Training sessions covering both back-end operations and front-end interface support needs to be provided to DIC officials.

Followings are the other key finding for Institutional strengthening:

- Other major domain areas identified for competency building, especially in the light of the priority sectors being identified to be promoted under the industrial policy, are IPR & trademarking, industry 4.0 topics, emerging technologies (both sector agnostic and sector specific) and green technology.
- Similarly, with the department focussing to roll out its commerce mission, trade facilitation, export promotion and trade agreements (multi-lateral, FTAs) are domain area expertise which the officials need to be focus.
- Integration of the training program with the department's ongoing work and projects related to MSMEs can help officials apply the learning in their actual work environment and reinforce the relevance of the training content to their job responsibilities.
- Emphasis on practical application of the training content to the department's work with MSMEs can encourage participants to apply the concepts learned in their day-to-day work, and provide opportunities for hands-on practice, problem-solving, and decision making related to real-world scenarios.
- User feedback around usefulness of trainings in day-to-day work should be evaluated from time to time.

4.7.3 Problem Statement: Institutional Strengthening

DIC play a crucial role in ensuring facilitating the industries and in effective implementation of different schemes and policies. The officials are currently unaware about many schemes by Govt. of India for MSMEs other than the ones they are currently involved in. Improvement in specific sectoral knowledge both theoretical as well as practical and keeping up to date with advancements and emerging trends in these field/areas is crucial to ensuring that the officers are abreast with the developments in the industry to effectively add value to their work responsibilities.

To ensure MSMEs understand and access appropriate assistance of various schemes of Govt. of Kerala and RAMP, the department will prepare training and capacity building architecture framework including intensive training & institutional building activities such as analysis of training needs, preparation of materials and delivery of training.

The effective implementation of programmes and schemes require grassroot level sensitization and mobilization of MSMEs including regular follow ups. The decentralized way of implementing the Year of Enterprise programmes by engaging BDSPs at Panchayat/Municipality/ Corporation level has proven to be a successful model. The survey of the beneficiaries of the Year of Enterprise

programme has indicated that more than 70% of them believed that the BDSPs has positively impacted the programme. The handholding support provided to the MSMEs were crucial in ensuring the proposed target could be achieved and also help 85% of them sustain.

4.7.4 Proposed Project with respect to RAMP objectives:

i. Capacity building training programmes will be conducted for Department and KBIP officials including field level officials to equip them to implement the RAMP programme.

   Over the period, DICs have not been able to perform to their full potential owing to constraints in technical expertise, infrastructure and institutional functioning. Thus, they have limited themselves largely to perform regulatory functions and implement central and state sponsored schemes. Facilitation of critical business development services like establishment of forward and backward linkages, access to credit, support for technical upgradation and technology adoption, support for adherence to upcoming code of compliances, waste management etc. has been limited. As a district touchpoint for the MSMEs, the DICs are suitably positioned to facilitate MSMEs by serving as a single window for facilitation and handholding of new and existing MSMEs at the district level and to derive the benefit of RAMP scheme for state. Hence, capacity building activities for strengthening of DIC officials to successfully implement RAMP scheme will be undertaken.

ii. Training for the BDSPs who will be leveraged in the outreach as well mobilising the MSMEs at LSGI level for effective implementation.

iii. For effective implementation of interventions and to enable maximum participation from relevant enterprises, Business Development Service Providers (BDSP) will be engaged at Local self-governance Institution level (Panchayat, Municipality and Corporation A training plan will

iv. Exposure visits will be part of the training to facilitate officers to observe and understand the best practices followed in identified benchmarks

4.7.5 Proposed Project Design Concept, Feasibility & Viability of Proposal

The three pillars of Individual, Organization and Institutional serve as the guiding principle while formulating the capacity need analysis. Individual capacity building refers to building attitude, skills and knowledge at individual level, organization building capacity of collective and shared aspects of an organization such as organization structure, processes, infrastructure, external partnerships and technological capabilities. Institutional refers to policy level interventions that affect Department including Directorates, District Industries Centers and other line departments.

Individual needs and organizational needs will be identified basis the feedback received from individuals including divisional heads and key staffs within the department through feedback forms and one-to-one interactions.

The annual training calendar will be developed based on the need analysis thus carried out. Achievable targets and monitoring mechanism through relevant KPIs will be established to ensure compliance. Mandatory learning hours per official in relevant areas will be determined and assigned based on the role and responsibilities. Top level monitoring at Secretary level and Director level will be established to ensure compliance.

Following factors will be considered while planning capacity building of officials:

- Self-paced learning to be encouraged, some of the standard domain modules could be digitized.
- User feedback around usefulness of trainings in day-to-day work to be evaluated periodically.
- International exposure is a major motivator.
- Key milestone trainings could be planned at designated locations
- Rewarding officers who have fulfilled mandated hours

The department is providing capacity building programmes to the officials. The field level officials were also provided training in collaboration with Kerala Institute for Kerala Institute of Entrepreneurship Development (KIED).

A list of relevant courses based on analysis of Management Development Programmes offered by IIM A, B and C that will be considered is summarised below.

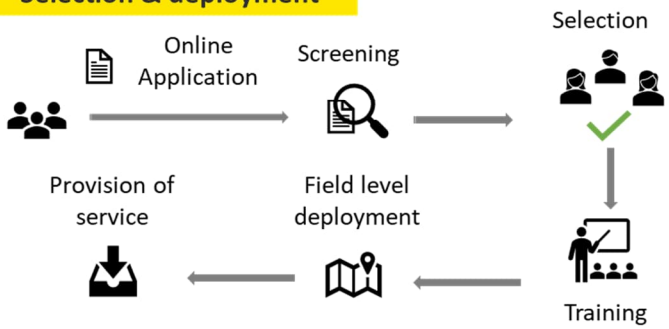
Sl. No.	Training Institute	Title of the Programme
1.	IIM, Calcutta	Leadership and Team Building
2.	IIM, Bangalore	Organizational Excellence Through Leadership
3.	IIM, Calcutta	Interpersonal Effectiveness and Leadership Excellence
4.	IIM, Ahmedabad	Transformational Leadership
5.	IIM, Bangalore	Design Thinking
6.	IIM, Ahmedabad	Fintech: Business Models, Marketing, Strategy and Tactics
7.	IIM, Calcutta	Managerial Leadership and Team Effectiveness
8.	IIM, Ahmedabad	Administrative Leadership and Good Governance
9.	IIM, Calcutta	Lean Operations
10.	IIM, Calcutta	Communication and Presentation Skills
11.	IIM, Bangalore	Strategic Perspectives on the Design of Public Private Partnerships (PPPs)
12.	IIM, Bangalore	Creating High Performance Organisations
13.	IIM, Ahmedabad	Project Management
14.	IIM, Bangalore	Challenges of Managing Inclusive Finance in India
15.	IIM, Bangalore	Organizational Excellence Through Leadership
16.	IIM, Ahmedabad	Advanced Human Resource Management
17.	IIM, Calcutta	Leadership and Team Building
18.	IIM, Calcutta	Supply Chain Management
19.	IIM, Ahmedabad	PPP Frameworks: Innovative and Technologically advanced Infrastructure Development
20.	IIM, Calcutta	Interpersonal Effectiveness and Leadership Excellence
21.	IIM, Ahmedabad	Interpersonal Effectiveness and Team Building
22.	IIM, Bangalore	Organizational Excellence Through Leadership
23.	IIM, Calcutta	Communication and Presentation Skills
24.	IIM, Calcutta	Managerial Leadership and Conflict Resolution

Engagement of BDSPs

Background

- Part of Local Economic Development and Sustainability of Enterprises scheme.
- 1153 BDSPs engaged at LSGI level
- Engaged for providing 1-to-1 handholding of entrepreneurs
- Work under the supervision of IEOs and guidance of GM, DIC
- Monthly evaluation of performance based on KPIs

Selection & deployment



Responsibilities

- Facilitating transition of ideas into viable business plans
- Create awareness on processes and procedures to set up unit
- Facilitate to obtain approvals and clearances through KSWIFT
- Facilitate bank linkages
- Enable linkage with Tech institutions for Tech transfer
- Provide guidance in marketing of products/services
- Assist department in implementing schemes/programmes

Highlights

- Facilitated in establishing >1 lakh MSME (2022-23)
- Close interaction with MSMEs enable enhancement in:

Information dissemination

Scheme/ programme implementation

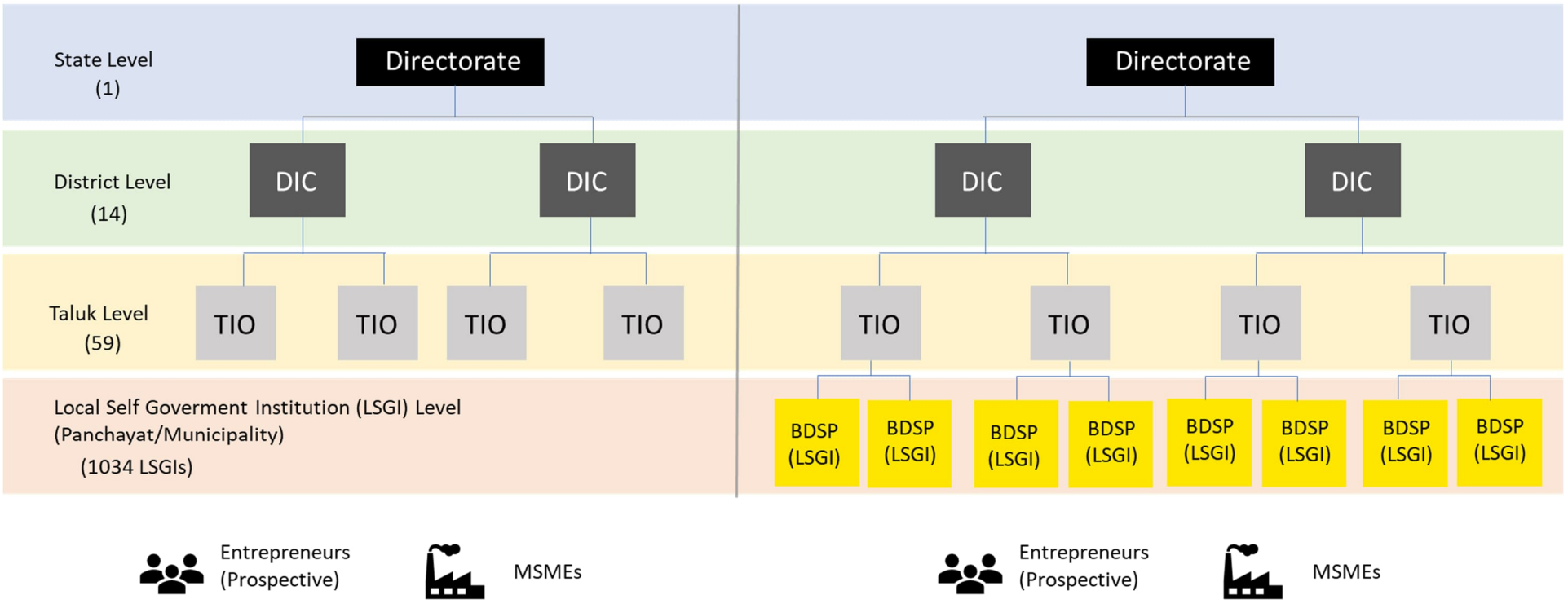
Monitoring

Networking at LSGI level

~70% of the surveyed MSMEs indicated positive impact of engaging BDSPs in establishing the enterprises

BDSP network for MSME Facilitation

~70% of the surveyed MSMEs indicated positive impact of engaging BDSPs in establishing the enterprises



Institutional capacity building will encompass the upgradation of the existing processes and systems including the MIS systems. More streamlined and integrated systems will be developed. Currently, there exists multiple websites and dashboards related to schemes, MIS, department webpages etc. This will be integrated to provide a single dashboard which will provide the necessary information at one place making the decision making easier.

4.7.6 Approach and Methodology for Implementation

One of the key requirements for effective implementation of the RAMP program is the Institutional strengthening of the department. This calls for the creation of an Annual Capacity Building Plan (ACBP) for the Department. Through the ACBP exercise, it is intended to expand the public sector capacity building by going beyond training. Thus, while the ACBP exercise identifies Department specific training interventions to build individual capacity, it also looks at organizational interventions. The ACBP is essentially expected to detail all the interventions required to develop and enhance the competencies of individual officials as well as the collective capacity of the Department. The steps in creating such a plan have been summarized in the figure below.

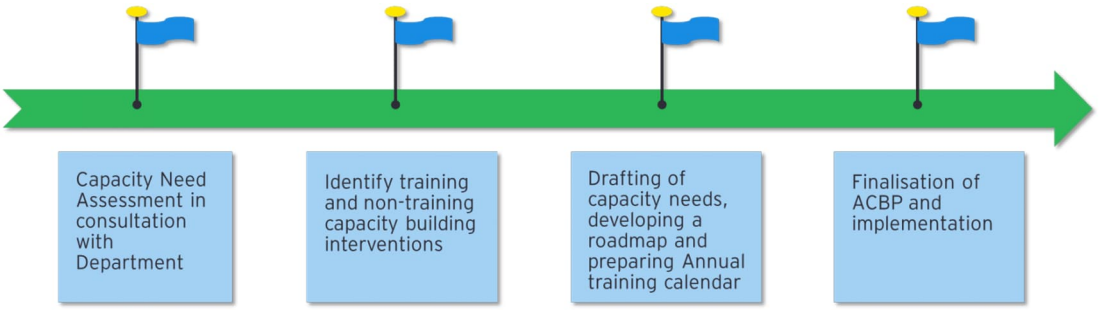


Figure 81 Steps for creating Annual Capacity Building Plan

The three pillars of the ACBP framework serve as the guiding principle while formulating the capacity need analysis. The ACBP approach essentially builds the plan across these three pillars namely individual, organizational, and institutional. The approach towards identifying individual needs would involve receiving feedback over a self-declaration assessment form while organizational and institutional level gap areas will be collated based on combination of feedback received through individual forms and one-on-one discussions with various section heads and key staff within the department.

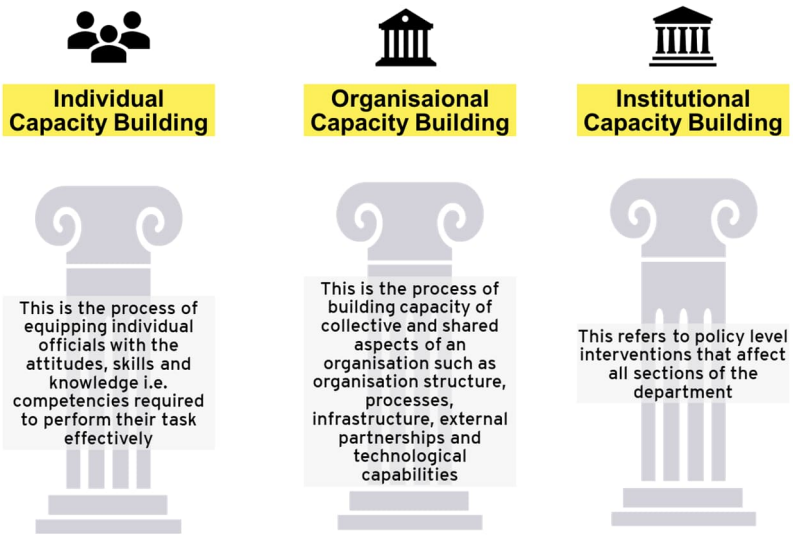


Figure 82 Pillars of Capacity Building

Pillar 1: At the Individual Level

Competencies form the basis of individual capacity building. A competency is defined as the combination of attitudes, knowledge, and skills that enable an individual to perform a job or task effectively. Capacity building at the individual level refers to the process of equipping individual government officials with the competencies required to effectively perform their assigned roles. Capacity Constituents at the individual level:

- **Behavioural competencies**: These are a set of benchmarked behaviours displayed (or observed/ felt) by individuals across a range of roles. For example, empathy and leadership
- **Domain competencies**: These competencies enable individuals to effectively perform roles within a specialized discipline or field. Domain competencies are generally applicable to the core work of the Department. For example, providing technical guidance to MSMEs.
- **Functional competencies**: These competencies help cater to the operational requirements such as administration, procurement, financial management, and so on. Functional competencies are applicable across a wide range of departments of the Government. For example, budgeting, project management, and data analysis.

Pillar 2: At the Organizational Level

This refers to the process of building the capacity of collective and shared aspects of the organization such as existing processes, digital and physical infrastructure and technological capabilities that enable the organization to achieve its goals. Capacity at the organizational level is assessed based on the collective aspects of a ministry or department. Some examples of these aspects include:

- **Technology and Data**: This dimension deals with the technology solutions employed by the Department to improve its functioning. Examples include software that enables shorter turnaround time on repetitive tasks and digital tools that increase efficiency or enable faster resolution of pain points.
- **Systems and Processes**: This dimension includes all the established systems and processes to carry out its day-to-day functions. Examples include monitoring mechanism for schemes, standard operating procedures, etc.
- **Resources and Assets**: This includes the resources and assets such as hard and soft infrastructure for day-to-day functioning. For example: the physical premises, digital infrastructure like computers, video conferencing systems etc.

- **Partnerships and Relationships**: This dimension includes all external partnerships that is part of such as those with other departments, global organisations and citizen groups.
- **Personnel Management**: This includes all the functions associated with managing human resources of such as performance appraisals, training and development, performance management, succession planning etc.

Pillar 3: At the Institutional Level

Institutional capacity building refers to changes made in the norms, policies and regulations that guide the functioning of individuals and organizations. In the context of the government, institutional capacity building refers to policy level interventions that affect all departments of the government. For example, e-Office adopted as part of Kerala state IT Mission.

At Individual level the capacity building is being proposed to be provided through the following:

- Capacity building training

  The capacity building training will be based on the curriculum developed based on the need assessment study carried out. It will consist of a mix of both classroom sessions along with exposure visits or field visits to understand the practical sides of things and understand the best practices. 100 officials from Directorate, KBIP and officers up to ADIO level from DICs will be provided customized management level training. 276 field level officials will be provided classroom as well as practical training including field visit. The training program will be residential. 1153 BDSPs will be provided

- Exposure to best practices:

  Exposure is a major motivator. Training programs which provide knowledge around governance and implementation of MSME enabling models across other states or countries will be considered. Exposure visits will also be conducted to practically understand the best practices adopted in relevant organizations.

- Self-learning leveraging platforms like YouTube channels

  Leveraging the platform via issuing an office order to all officials for self-paced learning can serve as a ready platform for training and skill development for functional and behavioral competencies, helping them to stay updated with the latest developments and best practices in their respective fields.

A total of 376 officials including Additional Directors, Joint Directors, Dy. Directors, Assistant Directors, ADIOs, IEOs and resource Persons shall be trained.

Exposure visits

Relevant National/International events shall be identified in which the officials will participate to get exposure to Best practices and also to understand from the stakeholders regarding the advancements happening in different domains like Technology, supply chain etc.

4.7.7 Use of ICT/Innovative Technology Towards Project Implementation

ICT/ Innovative technologies will be used for effective capacity building of the officials. Existing online training contents will be identified, and standard online modules will be created in knowledge management system. Platforms like YouTube channels will be leveraged for officers to share information.

4.7.8 Timeline for achievement of Project Deliverables

A total 376 officials will be capacity build and provided exposure to best practices over a period of 4 years. In addition, 1153 BDSPs will be engaged from the first year and will be trained during this timeframe.

4.7.9 Estimated impact of the Project/Proposal/scheme

A total 376 officials will be capacity build and provided exposure to best practices. In addition, 1153 will be engaged at LSGI level to enhance the implementation. They will also be trained in providing handholding support to the MSMEs. Officials shall be provided exposure through participation in national/ international expos and events.

4.7.10 Project costing and contribution of State towards it

The total project costing for the interventions for four years along with the State contributions and demand from Ramp is provided in the table below.

Table 47 Project Costing – Institutional Strengthening (Amount in Rs. Cr.)

Sl.No.	Intervention	Total Cost for 4 years	Demand from RAMP
1	Management Development Programme for officials of the Department with exposure visits	3.00	2.40
2	Advanced capacity building training for ADIO and IEO (1 week) along with exposure visits	3.92	3.13
3	Training for BDSPs (GoI & State Govt. schemes, soft skills, field visits etc.)	6.37	5.10
4	Exposure Visit (National/International) for understanding Best Practices	2.60	2.08
5	Engaging field level support resources (BDSPs) to assist implementation of enhancing firm capability, enhancing CHAMPION scheme, CGTMSE etc.	47.84	33.49
	Total	**63.73**	**46.20**

The project costing of the interventions over 4 years is provided below:

Sl.No.	Intervention	Year 1	Year 2	Year 3	Year 4
1	Management Development Programme for officials of the Department with exposure visits	75.00	75.00	75.00	75.00
2	Advanced capacity building training for ADIO and IEO (1 week) along with exposure visits	115.20	115.20	115.20	46.08
3	Training for BDSPs (GoI & State Govt. schemes, soft skills, field visits etc.)	100.00	100.00	204.00	0.00
4	Exposure Visit (National/International) for understanding Best Practices	60.00	70.00	70.00	60.00
5	Engaging field level support resources (BDSPs) to assist implementation of enhancing firm capability, enhancing CHAMPION scheme, CGTMSE etc.	1195.92	1195.92	1195.92	1195.92

4.7.11 Plan for strengthening M&E framework pertaining to Project

The standard processes shall be reviewed. Standard operating procedures shall be developed bases the effectiveness of the existing practices.

An annual training calendar will be created based on the need assessment carried out. Fulfilment of hours per officer level right from Secretary till BDSP level will be ensured through the established Monitoring and evaluation mechanism. To encourage full compliance officers completing training hours will be rewarded.

4.8 Sectoral Interventions

4.8.1 Major issues/challenges

The Make in Kerala initiative is fundamentally based on the rationale that the state's trade deficit can be reduced by promoting domestic production and increasing exports. The State has been importing a significant portion of its products from other states, which has been contributing to the trade deficit. The initiative aims to identify the sectors which have the potential to manufacture products locally and promote their production. By promoting domestic production, the state can reduce the dependence on imports and create new employment opportunities.

Key sectors that can be vital in import substitution need to be identified (both traditional and emerging) and targeted. Focused efforts for their development are to be ensured – dedicated studies to identify potential sectors and map their needs, development of model industrial production clusters with state-of-the-art facilities, sector specific R&D infrastructure to promote tech integration & innovation, production linked incentives etc.

Also there exists a perception of Kerala not being an industry friendly State which needs to be changed. It is equally important to develop and strengthen an enabling and congenial ecosystem for the MSMEs to thrive. The State government has identified nearly 22 priority sectors which could propel the growth of the MSME sector in coming years. They include sectors like Food processing, Aerospace & defence, high value-added rubber products, Ayurveda, ESDM, medical equipment, logistics & packaging, pharmaceuticals and tourism.

It is equally important that the relevant infrastructure are upgraded and made available to meet the future requirements including R&D, testing facilities, industrial parks with common facilities etc.

Medical Devices

Medical devices sector is considered a priority sector by the Government of Kerala under the new Industrial policy and a promising sunrise sector in the State owing to the robust healthcare sector here. Kerala has the potential to develop into a hub for smart manufacturing in the medical technology sector. For Kerala to become a manufacturing hub for medical devices a couple of globally recognised anchor clients need to be present. The MedSpark, a comprehensive MedTech innovation hub, is conceptualized to address the glaring void in the MedTech innovation ecosystem in India. The park is being established under the Technical Research Centre for Biomedical devices program of the DST, through a knowledge partnership with KSIDC, Government of Kerala, tapping the ecosystem that exists in the city with several research and academic institutions and health care centers.

India has several pressing needs in healthcare, including access to quality health delivery systems, affordable drugs, devices and medical technology for treating and preventing diseases, promoting health and sustaining quality of life. India has several world-class hospitals and some successful R&D in drug development, but research, development and manufacturing activities with regard to quality medical devices and technologies are limited. The country is mainly dependent on imported medical devices and technologies some of which are either not affordable or not aligned to the needs of the majority of the Indian population.

There is thus a huge clinical and commercial need for the research and development of cutting edge and affordable medical technologies. It is difficult for any one entity or organization to undertake all aspects of the technology development and commercialization. It has been shown in many parts of the world, especially in USA, that a consortium or cluster of institutions that can provide technological, research, clinical, business and other expertise can create such an environment in an efficient and cost-effective way to boost technological and economic advancements. MedSpark needs to leverage the existing advantage of the Kerala State in the high-risk medical device manufacture and develop it into the most sought-after destination for setting up medical device industry in India.

Ayurveda

More than 7000 plants species known are used as medicinal plants. In that 450 plant species native to or naturalised in Kerala are extensively used in Indian systems of medicines. Main collection is from the wild. About 22% of the production sourced through cultivation. Ayurveda, Siddha and Unani systems of medicine have more than 90% formulations which are plant based. Rural and tribal communities are using over 2,000 species of lesser-known wild plants for a range of medical purposes, many of which are not fully documented.

The World Health Organization estimates that the trade in herbal medicines will reach Rs. 245 trillion by 2050. The government of India has identified medicinal and aromatic plants as one of the sectors that can make India a global leader in the 21st century. About 1178 species of medicinal plants are estimated to be in trade, of which 242 species have annual consumption levels above 100 metric tons/year, registering a nine-fold increase during the last decade. Aside from pharmaceuticals, India owns 60% of the 13,500-tonne worldwide spice oleoresins industry. Even though we have exported many herbals, India had been importing 10%-15 % of the raw materials such as asafoetida, manjishta, and gulgul from countries such as Afghanistan.

The state can provide a wide range of consumer products with national and international demand owing to our treasure trove of 2000 medicinal and aromatic plants. In addition to the national and international market, it is estimated that there are about 800 registered Ayurvedic medicine manufacturing units in the state which use herbs worth Rs.75-80 core as raw material. The nutraceutical, cosmetic and oleoresin industries in Kerala also buy herbal raw materials worth over Rs 75 crore. The trade demand for these crops is increasing with the increased interest in western consumers towards eastern medicinal systems.

Resource available from forest is depleting faster. But at the same time the demand for Ayurvedic products is increasing at about 30% every year. The quality of raw materials used for ayurvedic medicine preparation is also not strict adhered due to lack of availability.

Further, In Kerala, there are about 760 Ayurvedic manufacturing units and the total volume for Ayurveda products in the state is pegged currently at Rs.200 crore as per Ayurvedic Medicine Manufacturers Organisation of India (AMMOI). However, the exports have not been high enough from the state. About 75 Ayurvedic units in Kerala have already complied with the Good Manufacturing Practices under the Schedule T of the Drugs and Cosmetics Act notified by the Ministry of Health in 2000. Of this, eight units are large-scale, and the remaining is in the small-scale segment. As per Ayurveda Medical Association of India (AMAI) Kerala was much behind when it comes to research institution in ayurveda and export of ayurvedic medicines, though the state is said to be hub of ayurvedic treatment.

Aerospace

There is a huge opportunity available to the MSMEs in the Aerospace and Defence sector in India. Ministry of Defence has set a target of achieving a turnover of INR 1.75 lakh crore in aerospace and defence manufacturing by 2025, which includes exports of INR 35,000 crore. The capability and viability of the defence and aerospace industry is built on the strength of supply chains, in which the MSMES are intricately intertwined.

There are about 50 units engaged in exclusively manufacturing and providing components to Aerospace sector in the State. Nearly 200 general engineering units in the State cater to the job orders received from prominent institutions in the Aerospace sector from within and outside the State. However, many MSMEs in the State are not equipped in terms of total quality management systems and adherence to best manufacturing systems. In Aerospace sector, only components with low end technology and medium end technology (Category C and Category B respectively) are procured from outside of which procurement of category B is limited.

Rubber and Rubber Products

The rubber-based manufacturing sector in Kerala is recognized as a priority sector by the Government of Kerala under its new Industrial policy 2023. Abundance of natural rubber resources and a well-established footprint in rubber-based manufacturing makes this sector an essential part of its industrial landscape. Moreover, Govt's focus on research initiatives, such as the establishment of the Rubber Park near Ernakulam and the Kerala Rubber Limited (KRL) underscores the commitment to fostering the growth of the rubber sector, particularly emphasising promotion of Micro, Small, and Medium Enterprises (MSMEs).

Despite having a significant advantage in terms of human resources, and a dominant share of natural rubber production, Kerala seems to be facing challenges in maximising the potential of its rubber resources. The state appears to be lacking in the production of high value-added rubber products. The growth of industries seems to have been primarily confined to rubber processing industries and MSMEs with limited linkage effects in terms of fostering a more diverse industrial landscape. To enhance the overall growth and development of the rubber-based manufacturing sector in Kerala, it might be imperative for to consider strategies for diversification and value addition within the rubber industry.

4.8.2 Problem Statement

Kerala needs to take a sectoral approach in developing the MSME sector in the State. As an initial step it is important that a congenial ecosystem is developed and strengthened. Hence, a detailed and comprehensive study is required to identify the sectors on which the State needs to focus to enable the MSMEs to develop and grow in the value chain. Sectoral approaches strengthen good practices in skills development by putting emphasis on the skill sets needed in different sectors, rather than taking a generic approach to skills development.

The government has been successful in fostering entrepreneurship through its initiative of 1 lakh enterprises. However, it is important that the sustainability and scaling up of the MSMEs is taken care of.

Medical Devices

To make Kerala a hub for medical devices and technology of the country it is important that a congenial ecosystem is developed. Initiatives are being taken up in this direction in the State. Some of the initiatives is the establishment of the MedsPark and formation of the Kerala Medical Technology Consortium (KMTC). However, there is absence of sufficient number of anchor firms and necessary support facilities, which will facilitate a robust network of medical devices manufacturers in the State. The absence of support facilities like R&D Support centre will hamper access of MSMEs to clinical experts and leveraging design tools from relevant Technical Institutions. Absence of a Knowledge centre will affect the human resource development (skill development) related to the medical device industry in R&D, manufacturing, GMP, regulatory affairs and medical device evaluation.

Ayurveda

Presently, about 90% of medicinal plant species are of natural origin (in that 69% of the material is collected through destructive harvesting), with the remaining 10% produced by farmers. In situ conservation of these resources alone cannot meet the ever-increasing demand of pharmaceutical and other herbal-based industries. The scarcity of some of the medicinal plants and other necessary ingredients has been expressed as a major concern for the ayurvedic medicine manufacturers in the State. Currently, the source of raw materials is primarily from forest and the percentage of raw material sourced through cultivation is very small (22%). The State Medicinal Plants Board (SMPB) in coordination with the National Medicinal Plants board is coordinating matters relating to medicinal plant cultivation, conservation, promotion, research, and development in Kerala. However, a more coordinated effort with multiple stakeholder collaborations is necessary. Hence it is necessary to bring convergence among the stakeholders and promote organic medicinal plant cultivation to address the gap of availability of quality raw materials. Further, quality, traceability, and organic certification of materials needs to be ensured for which necessary trainings must be imparted.

Aerospace

Limited units are currently supplying to the Aerospace and Defence sectors. State government has leveraged the Modified Industrial Infrastructure Upgradation Scheme (MIIUS), by DPIIT[55], to establish a defence park in Palakkad district. Further, an industrial corridor for Aerospace industry is planned in Trivandrum Kollam districts.

Most of the general engineering enterprises in the State are engaged in the manufacture of low-end components which are of low value (in terms of the value chain). For developing the aerospace sector in the State, it is critical to facilitate capacity building of the existing MSMEs in medium tech and high-tech precision manufacturing. This will also facilitate the enterprises to move up the value chain and participate more in the Global Value chain.

Rubber and Rubber Products

Kerala benefits from a skilled workforce, but the sector faces challenges due to the limited availability of semi-skilled laborers. Attracting and retaining employees is a recurring issue for many enterprises. Finding employees with the necessary technical knowledge and the right aptitude remains a concern for rubber manufacturing enterprises. Additionally, to enhance diversification and value addition, there is a need to encourage more extensive research and development initiatives, promote innovation and explore avenues for the development of high-value rubber products. Hence, it is important to focus on skill development and capacity building of the workforce within the sector.

Furthermore, the need for enhanced testing facilities and/or support in conducting required tests is a noteworthy concern. Despite the services provided by the Rubber Board and CFSCs, some of the tests, still require outsourcing to facilities outside the state. Moreover, delays are experienced in obtaining test results from government testing facilities. To address this challenge effectively, the first and crucial step is the establishment of a qualified and certified testing laboratory within the state. These initiatives while crucial, represent only the initial phase of facility improvement within the state. It is essential to

[55] https://pib.gov.in/Pressreleaseshare.aspx?PRID=1557862

take further steps, such as identifying the critical tests that are currently unavailable and investing in the purchase and upgradation of necessary machinery and equipment.

4.8.3 Proposed Project with respect to RAMP objectives:

The following sub interventions are proposed under this intervention:

i. Sectoral studies covering major sectors for development – A comprehensive study to identify suitable sectors in the State which could be promoted lead to ensure growth of MSMEs, creation of large employment and creation of products & services meeting world class standards with demands in markets outside the State.

ii. Engaging Sectoral Experts/ BDSPs – these sector experts with domain knowledge will assist the State government in preparing roadmap for the development of identified sectors in the State to enable development of the MSME sector. They will also facilitate in developing Partnerships with Technical institutions of national/ international repute to assist the government in developing the MSME ecosystem as well as in facilitation of MSMEs.

iii. Sector specific skill trainings for MSMEs – Based on the need assessment carried out, relevant sector specific skill trainings will be provided to the MSMEs as part of their capacity building. Suitable technical partners shall be identified and engaged to provide the skill trainings.

iv. Facilitating adoption of QMS and standards in R&D Resource centers/ Testing facilities/CFCs – The existing testing centres and R&D facilities shall be upgraded and suitable quality management systems/ certifications shall be obtained. This will facilitate the MSMEs in undertaking necessary quality related testing from these centres instead of relying on similar facilities outside the State incurring high expenses. They will also have access to the R&D initiatives being undertaken in the technical institutions thereby having access to technologies, designs and new products.

v. Sector specific Seminars and Conclaves – will assist MSMEs in developing deeper understanding of the Sectors and the Best practices followed in other clusters/ lcaotions which could be adopted by them.

vi. Workshop on export procedures, export opportunities – Kerala is home to MSMEs that has share in exports. However, there are a large majority of MSMEs yet to participate in exports. It is important for the MSMEs to participate in Global Value chain to upscale themselves and achieve growth in the long run.

4.8.4 Proposed Project Design Concept and Feasibility & Viability of Proposal

An analysis of the MSMEs established and operational in the State indicates that the growth is not uniform across the sectors. Also, the ecosystem and other factor conditions prevailing in the State will not suite all the sectors. Hence, it is important that the suitable sectors with high opportunity and growth potential to be targeted for MSME growth needs to be identified. A comprehensive study will enable to understand and identify such sectors. Some of the potential sectors identified as priority sectors under the Industrial policy of Kerala are:

- Aerospace and Defence
- Artificial Intelligence, Robotics and Other Breakthrough Technologies
- Ayurveda
- Biotechnology & Life Sciences
- Design
- Electric Vehicles
- Electronic System Design & Manufacturing
- Engineering Research & Development
- Food Technologies
- High Value-Added Rubber Products

- High-tech Farming and Value-Added Plantation Produce
- Logistics & Packaging
- Maritime Sector
- Medical Equipment
- Nano Technology
- Pharmaceuticals
- Recycling & Waste Management
- Renewable Energy
- Retail Sector
- Tourism & Hospitality

Sectoral approach will require development of a strategic plan for the development of the sectors for which inputs from subject matter experts with relevant domain knowledge is required. Additionally, a congenial ecosystem needs to be created to facilitate the growth of the MSMEs in these sectors. The capacities and capabilities of MSMEs needs to be developed. The skilled workforce required to meet the demand needs to be created. The MSMEs should also be encouraged to participate in global value chain to enable them achieve economies of scale.

Medical Devices

The Kerala Lifesciences Industries Parks (P) Ltd (KLIP), a subsidiary company of Kerala State Industrial Development Corporation (KSIDC), has been formed for implementing the Life Sciences Park Project at Thonnakkal, Thiruvananthapuram. The main objective of the Life Sciences Park is to establish state-of-the-art scientific infrastructure facilities such as incubators, bio processing facility, dry & wet laboratory spaces with all support industrial infrastructure within the park, so as to promote R&D, manufacturing and new entrepreneurs and industries in the Life sciences domain especially in different segments of Biotechnology and Medical Devices sectors. The MedSpark, a comprehensive MedTech innovation hub, is conceptualized in the Park to address the glaring void in the MedTech innovation ecosystem in India. Medical devices park is conceived by Sree Chitra Tirunal Institute for Science & Technology (SCTIMST), a well-known institution of national importance with excellent track record in transfer of more than 50 medical technologies. The endeavor is aimed at making rapid strides in the field of development of medical devices. MedSpark will house comprehensive infrastructure for medical devices design, prototyping, testing and validation. It will be raised as a national innovation hub for Medical Devices and *In Vitro* Diagnostics. Medspark is proposed at the Life Science Park in 9 Acres of land.

Ayurveda

The shortage in supply of the raw material (medicinal plants) is being addressed to an extent through promoting medicinal plant cultivation among the community groups such as Joint Liability Group (JLG) of women farmers leveraging schemes like Mahila Kisan Sashakthikaran Pariyojana (MKSP) of NRLM. Training workshops will be conducted for such members. Medicinal plant cultivation on 250 Ha of land by 2000 JLG for undertaking cultivation. Kudumbashree had planned for 50 ha. Each per district for such initiative, establishing 5 collection centres for supporting cultivation. This will ease the shortage of raw material faced by the ayurvedic medicine manufacturers.

The global demand of Rs.245 trillion for the herbal medicines as estimated by WHO indicates the opportunity for the ayurvedic medicine manufacturers in Kerala which has registered an export of only Rs.12 Crore in 2022-23. Small and medium scale units engaged in ayurvedic medicine manufacturing and yet to initiate exports will be sensitised on the opportunity available. They will also be sensitised on the procedures involved in exports, compliances to be fulfilled, case studies and capacity building required.

Aerospace

The presence of Institutions related to the Aerospace sector and the advancements such institutions make in the sector coupled with relaxation in private sector participation in Sectors like Aerospace and defense has opened door to huge opportunity for the MSME sector. The push for indigenization of components and systems used in these sectors has further added an impetus. There is a pool of talented retired space scientists and engineers from reputed Industries in the Aerospace sector in Kerala whose experience and knowledge can be leveraged by the MSMEs.

The existing MSMEs in Kerala related to Engineering can tap this opportunity provided the required capacity is built in form of appropriate infrastructure (plant and machinery), skilled manpower, access to finance and proper linkages with Anchor firms.

Rubber products

Assistance in the production of high value-added rubber products coupled with a significant advantage in terms of human resources, and a dominant share of natural rubber production, Kerala will be able to overcome the challenges in maximising the potential of its rubber resources. The establishment of Rubber Park and KRL will assist in this aspect. Providing necessary awareness, training and linkages with technical institutes and R&D centres will facilitate in developing value added products that will cater to new markets.

4.8.5 Approach and Methodology for Implementation

The approach will be to identify sectors with potential for growth, employment generation and sustainable. A strategic roadmap needs to be developed as an initial step for which a detailed and comprehensive study needs to be conducted.

Medical Devices

The MedsPark intends to setup the R&D Resource Centre and Knowledge Centre. The civil infrastructure necessary for establishing the facilities will be established with assistance of fund accorded for the development of the MedsPark. The necessary soft interventions required as mentioned below will be funded through the RAMP interventions:

- Training and workshop for industry -
- Skill development for resource person of the medical device park or similar parks or academic institutes – employee skill development program
- Conferences -Pan India
- Purchase of standards
- Consultation charges
- DPR preparation
- IT support for Medspark – website development, data and management, database or app development
- Business plan development and engaging marketing consultants

Ayurveda

Raw materials, medicinal plants, is a critical part of ayurvedic medicine preparation. Considering the major source of these are fast depleting, medicinal plant cultivation is the other alternative. The National Medicinal Plant Board and State Medicinal Plant Board has already initiated schemes to promote this. Kudumbasree in the State has also initiated medicinal plant cultivation as part of the Mahila Kisan Sashakthikaran Pariyojana (MKSP) of NRLM. Such initiatives are planned to be leveraged.

Aerospace

The capacity building of the MSMEs in transitioning from low-tech to medium and high-tech precision manufacturing will involve activities in as indicated below:

- Leveraging new simulation software tools: Simulation modelling tools can be a shortcut to improving operations. They allow firms to model and understand their process flows better, which can reveal bottlenecks and constraints, leading to new ways to operate.
- Developing ability to implement simple automation
- Getting up to date on advances in production tools and methods
- Leverage training programs related to the sector and acquiring related skills

Convergence among the state government, anchor units, aerospace association and individual units is crucial in the skill development area. Preliminary study on the skilling requirements of the MSME units that are involved in the aerospace industry has resulted in the identification of few courses that are beneficial for the units associated. The identified courses are as follows:

No.	Trade	Course Name
1	**Aerospace Design & Manufacturing**	3D Printing & Additive Manufacturing
		Open VSP
		Advanced Certificate Course in Inspection & Quality Control for Aerospace (ACCIQC) (NSQF-5)
		Advanced Diploma in Aerospace Structural Design and Analysis (ADSDA) (NSQF-6)
		Advanced Certificate Course in Aerospace Grade Welding Technology (ACCWT) (NSQF-5)
		Post Graduate Course in Aerospace Manufacturing
2	**Aerospace CAD/CAM**	CATIA (Ktech has 3D tech)
		CAD/CAE/ CAM/CNC ENGINEER (Full Time)
		CAD/CAE/ CAM/CNC ENGINEER (Part Time)
		CAD Modelling with different software (Full Time)
		CAD Modelling with different software (Part Time)
3	**Aerospace**	AS 9100 REV D Standard
		AS9100:2016 Internal Auditor Training (Public)
		AS 9100 REV D Standard Internal Auditor Course
		Geometric Dimensioning & Tolerancing (GD&T) (KTECH CAN HANDLE)

No.	Trade	Course Name
		Realisation of Indigenous Aircraft Subsystems & Components (subsystems & systems)
		NADCAP-Welding Process Audit
		Design Course (3DExperience)

Rubber

The approach for rubber is to identify potential value-added products which the units will be capable of manufacturing by providing necessary handholding. In this regard, linkages with Technical Institutions and R&D centres will be explored. Units will be capacity build to absorb the technologies for producing value added products. BDSPs will be leveraged wherever required.

The CFSC Changanassery will be supported in getting NABL accreditation. This will be a first step towards upgrading the facilities available in the centre for undertaking more advanced testing and research activities which would then facilitate units in the cluster which are exporting.

4.8.6 Use of ICT/Innovative Technology Towards Project Implementation

The beneficiaries will be provided access to MSME Digital Hubs to be established through the RAMP intervention consisting of digital repository of best practices and success stories.

4.8.7 Estimated impact of the Project/Proposal/scheme

Medical devices

- Around 200 companies would be directly benefited
- Around 50 employees (Master Trainers) would be trained to ensure the development of Quality medical devices in the country, which will eventually contribute in talent pool generation and upskilling
- Pan India reaches to extend the services of the park to MSME in all the states
- MSMEs and start-ups in the sector in Kerala will have access to these reference standards which will reduce the huge burden of the MSME when they individually buy the standards and also ensure compliance of the industry to adhere to the standards.

Ayurveda

- 4800 persons trained in identification and collection of medicinal plants
- 200 MSMEs benefitted in 4 years

Aerospace

- 2944 candidates will be provided training on precision component manufacturing processes, associated quality certifications, design software and opportunities available.

4.8.8 Project costing and contribution of State towards it

The total Project costing (in Rs. Cr.) for the sectoral interventions are as provided in the table below:

Table 48 Total cost of interventions related to sectoral interventions (Amount in Rs. Cr.)

S.No.	Intervention	Total Budget for 4 years	State Contribution	Demand from RAMP
1	Sectoral studies covering major sectors for development	3.30	0.99	2.31
2	Engaging Sectoral Experts/ BDSPs	21.60	6.48	17.28
3	Sector specific training of MSMEs	11.47	2.29	9.18
4	Facilitating adoption of QMS and standards in R&D Resource centers/ Testing facilities/CFCs	3.03	0.61	2.42
5	Sector specific Seminars and Conclaves	13.00	3.90	9.10
6	Workshop on export procedures, export opportunities	1.43	0.29	1.15
	Total	**53.83**	**14.55**	**39.27**

4.8.9 Plan for strengthening M&E framework pertaining to Project

The sector level interventions will be taken up in coordination with respective industry associations and major stakeholders like MedsPark and KSIDC (in case of medical devices), State Medicinal Plant Board, Forest department and Kudumbashree (Ayurveda) and Aerospace Industry association/ consortium (Aerospace). Department of Industries will coordinate with the concerned departments to ensure smooth execution, monitoring and timely course corrections. Intervention Coordination committees consisting of representatives of the concerned stakeholders will also be formed. The committee shall hold coordination meetings at stipulated intervals to ensure smooth execution.

4.9 Total Budget Estimate

The toral budget requirement of the interventions is Rs. 656 crores. The demand under RAMP scheme is Rs.526 Crores. The State contribution will be upto 20% of the total budget requirement.

(Amount in Rs. Cr.)

Sl.No	Proposed Interventions	DLI	Total Budget for 4 years	Demand from RAMP
1	Enhancing Firm capabilities (for scaling) – Mission 1000	**2,3,5**	121.12	94.78
2	Supporting Firm Capabilities – Enhancing domestic manufacturing budget	**2,3,5**	104.90	78.70
3	Improving Access to Market	**2,3**	107.16	87.37
4	Competitiveness Support	**2,3,5**	72.05	57.86
5	Improving Access to Finance	**5,6**	41.35	33.69
6	Sectoral level Interventions	**2,3**	53.83	39.27
7	Institutional Strengthening	**2,3,5**	63.73	46.20
8	Improving Digital Infrastructure	**2**	21.68	17.34
9	Monitoring and Evaluation of RAMP Implementation	**2,3**	11.24	11.24
10	Administrative cost & Contingencies @10%		59.70	59.70
	Total		**656.75**	**526.17**

- The State contribution will be upto 20%

4.10 Output Outcome of the Interventions

Sl. No.	Intervention	Total targeted in 4 yrs.	Year 1	Year 2	Year 3	Year 4
A	**Enhancing Firm capabilities (for scaling)**					
1	Preparation of DPR for the selected 1000 MSMEs for scaling up	1000	85	305	305	305
2	Working Capital assistance through interest subvention (no. of units supported)	500	500	500	500	500
3	Engagement of BDSPs to facilitate selected MSMEs (no. of BDSPs engaged)	200	200	200	200	200
B	**Enhancing domestic manufacturing of import substitute products - Make in Kerala**					
1	Study for Strategic Plan preparation on import substitution for potential products	-	-	-	-	-
2	Technical Support Providers (Technology/Marketing/Sectoral etc.) for MSMEs (Nos.)	3	3	3	3	3
3	MSME Clinics (No. of Technical BDSPs linked with MSMEs) – (MSMEs estimated)	4284	1525	1586	1649	1715
4	Workshops for interaction with technical experts and technology providers (Technology Clinics) – no. of MSME participation estimated	8540	2011	2091	2175	2262
5	Special orientation programmes for youth and women to promote technology-centered manufacturing enterprises (MSMEs supported)	2532	633	633	633	633
6	Strengthening of the MSME Helpdesks in Directorate and DICs	15	0	0	0	0
7	Facilitating risk cover MSMEs in State through MSME Insurance (No. of MSMEs)	80000	20000	20000	20000	20000
8	Engaging BDSPs for facilitating Make in Kerala implementation	500	500	500	500	500
9	Exposure visit for MSMEs to Benchmark clusters/Industries	960	240	240	240	240
10	Awareness cum Facilitation programme at LSGI level (no. of programmes) (No. of MSMEs)	16544	4136	4136	4136	4136
C	**Improving Digital Infrastructure**					
1	Upgrading IT infra in DoI, DICs and Taluk Offices	-	-	-	-	-
2	Integration of MIS portals including O&M including dashboard for RAMP M&E	-	-	-	-	-

Sl. No.	Intervention	Total no. of units targeted	Year 1	Year 2	Year 3	Year 4
D	**Competitiveness Support**					
1	Awareness generation and sensitization on adoption of new and green technology (No. of MSMEs)	3758	700	840	1008	1210
2	Capacity building of MSMEs to adopt ESG/ new and green technology (No. of MSMEs)	500	50	100	150	200
3	Financial support for pilot energy audits in energy intensive industries (No. of MSMEs)	300	30	60	90	120
4	Awareness Workshop on ZED (including channeling from Mission 1000) for bronze certification	3250	700	770	847	933
5	Workshop on Conversion of bronze/Silver certified units to Silver/Gold (No. of MSMEs)	313	69	75	81	88
6	Awareness programme on LEAN scheme (No. of MSMEs)	2800	700	700	700	700
7	MSME Awards - recognising Greening initiative, adoption of best practices etc.	20	5	5	5	5
9	ESG campaigns for MSME (no. of campaigns)	88	22	22	22	22
8	Incentives towards creation of IPR, Quality certification, Sustainability & responsible industrialisation, Ind 4.0 in manufacturing and promoting R&D (No. of MSMEs)	1120	280	280	280	280
E	**Improving Access to Finance**					
1	Sensitisation Workshops on financial & digital literacy and accessing loans (CGTMSE) (No. of MSMEs)	56000	14000	14000	14000	14000
2	Coverage of premium for guarantee approved CGTMSE cases of MSMEs	18361				
3	Workshop on TReDS platform (MSMEs and State PSUs) (No. of MSMEs)	6497	1400	1540	1694	1863
4	Onboarding assistance (TReDS) to MSMEs -inncentivising (No. of MSMEs)	5770	1400	1428	1457	1486
5	Provision of Legal experts for Regional MSE FCs	950				
6	Bankers meet (No. of MSMEs)	22292	5573	5573	5573	5573
F	**Improving Access to Market and Promotion** (No. of MSMEs)					
1	Workshop for Sensitising MSMEs on digital marketing & onboarding on e-commerce websites	6440	1400	1540	1680	1820
2	Bootcamps for on boarding of MSMEs on e-commerce platforms like Amazon etc.	3360	840	840	840	840
3	Organising MSME Expos (Sector wise and district wise) – no. of events	62	15	16	16	15
4	Participation in national/International Expos	400	100	100	100	100
5	Conducting Vendor development Programmes/ Anchor units MSME connect programmes	160	40	40	40	40
6	Awareness on Packaging Technology / Green packaging	6700	1600	1650	1700	1750
7	Engaging Marketing Agency for Promotion of RAMP and other MoMSMEs	Yes	Yes	Yes	Yes	Yes
8	Promotion/ Publicity cost for Mission 1000, Made in Kerala and GI Tagged products	-	-	-	-	-

Sl. No.	Intervention	Total no. of units targeted	Year 1	Year 2	Year 3	Year 4
G	**Institutional Strengthening**					
1	Management Development Programme for officials of the Department with exposure visits	100	100	100	100	100
2	Advanced capacity building training for ADIO and IEO (1 week) along with exposure visits	276	276	276	276	276
3	Training for BDSPs (GoI & State Govt. schemes, soft skills, field visits etc.)	1153	1153	1153	1153	1153
4	Exposure Visit (National/International) for understanding Best Practices					
5	Engaging field level support resources (BDSPs) to assist implementation of enhancing firm capability, enhancing CHAMPION scheme, CGTMSE etc.	1153	1153	1153	1153	1153
I	**Sectoral Interventions**					
1	Sectoral studies covering major sectors for development					
2	Engaging Sectoral Experts/ BDSPs	18	18	18	18	18
3	Sector specific training of MSMEs					
4	Facilitating adoption of QMS and standards in R&D Resource centers/ Testing facilities/CFCs	Yes	Yes	Yes	Yes	Yes
5	Sector specific Seminars and Conclaves	20	5	5	5	5
6	Workshop on export procedures, export opportunities	4775	600	1000	1375	1800
H	**Monitoring and Evaluation of RAMP Implementation**	0				
1	SPIU	1	1	1	1	1
2	Monitoring visit to each district (Half Yearly)	112	28	28	28	28
3	Quarterly state level reviews (virtual/physical)	16	4	4	4	4
4	Impact Assessment study (L.S. in Rs. lakhs)	1	0	0	0	1

5 Partnership & Outreach Strategy

Partnership and Outreach strategy towards achieving RAMP objectives will involve working closely with various stakeholders involved in the MSME ecosystem. Approach towards leveraging partnerships as per major RAMP themes has been summarised below.

a. Increased beneficiaries in MSME Champions Scheme

To achieve ZED, Lean, Design and Digital MSME Scheme benefits, State will identify partner institutes within the State and national level if required to ensure that technical agencies are available to support MSMEs in these domains. Sectors most likely to benefit from these schemes will be mobilized to avail benefits of these Schemes.

b. Attention to women headed MSMEs

Through convergence model and increased outreach, concerted efforts will be taken to formalize and link women owned MSMEs with formal areas of credit. Entrepreneurial base exists within the State amongst Kudumbashree units, this social capital will be leveraged to formalize ventures spearheaded by MSMEs. The state is already a front-runner in terms of formalized women owned MSMEs.

c. Improved access to finance

The State will continue to track credit outflow through periodic SLBC meetings. In addition, it will work closely with BSE and TReDS platforms to drive awareness and onboarding workshops. The outreach strategy to mobilize MSMEs for such workshops will ensure to target MSMEs who are most likely to benefit from these interventions.

d. Promotion of ONDC and GeM

The State Government will work closely with ONDC and GeM to undertake targeted onboarding of MSMEs onto these platforms. One of the outreach strategies to onboard MSMEs onto such platforms will be through bootcamps. Bootcamps will be walk-in based technical support available to MSMEs in industrial estates, offices of industry associations etc. Such an approach will ensure enough flexibility to MSMEs to participate.

e. Promotion of greening initiatives

The strategy in this regard will be 3-fold when it comes to promotion of greening initiatives. Kerala has a base of non-polluting enterprises; their operations are inherently non-polluting. The State will continue to promote such enterprises through an incentivizing policy ecosystem and explore tapping into global funds available in this space. Some of the sectors are inherently consuming more energy, energy auditors will be empanelled to map these opportunities. Mitigation technologies for sectors with greater environmental footprint will be identified through partnership with the right R&D agencies.

The table below discusses the tentative areas that need intervention and the possible partners who may be tapped to support in achievement of RAMP objectives.

Area	Partnership avenues
CHAMPIONS	Technical/implementing institutes
Access to finance	TReDS platforms and listing exchanges
Access to markets	GeM, ONDC and other b2b and b2c platforms
Greening of MSMEs	BEE, SIDBI, R&D agencies
Ayurveda	State Medicinal Plant Board,
Aerospace & Defence	Anchor units and technology centres
Medical Equipment	Sri Chitra Institute of Medical Science and Technology

Area	Partnership avenues
Food processing	Central Food Technological Research Institute (CFTRI), IIP
Incubation and Accelerator support	EDI, KSUM
Capacity building of DIC	KIED, IIM-K Technical/implementing institutes

Table 49 Partnerships and Potential Strategies

6 Strengthening Capacity for Development and Delivery of MSME Support Programme

Strengthening capacity for development and delivery of MSME Support Programme will involve assessing competencies at individual and organizational level. Competencies form the basis of individual capacity building. A competency is defined as the combination of attitudes, knowledge, and skills that enable an individual to perform a job or task effectively. Capacity building at the individual level refers to the process of equipping individual government officials with the competencies required to effectively perform their assigned roles. Capacity Constituents at the individual level

a. Domain competencies: These competencies enable individuals to effectively perform roles within a specialized discipline or field. Domain competencies are generally applicable to the core work. These will cover competencies such as knowledge of MSMED Act, Central and State Government schemes for MSMEs, know-how of key MSME facilitating digital platforms, and technology disruptions affecting the MSME sector. An equally important domain competency for MSME facing institution at the grassroots is the ability to provide facilitation support. This will involve sectoral knowledge too depending on the industrial profile of the region. **Key domain areas that emerged as a top need include training on CHAMPIONS, facilitation related to bank financing and know-how of state's single window portal.**
b. Functional competencies: These competencies help cater to the operational requirements such as budgeting, project management, monitoring and evaluation, data analysis, public procurement, e-office etc.
c. Behavioural competencies: These are a set of benchmarked behaviours displayed (or observed/ felt) by individuals across a range of roles. Typical behavioural competencies include effective communication, inter-personal, working in a team. **A critical behavioural competency especially for DIC staff would be citizen-centricity and empathy.**

Organizational competencies involve building the capacity of collective and shared aspects of the organization such as existing processes, digital and physical infrastructure and technological capabilities that enable the organization to achieve its goals. Some of the possible efficiency improvements pertaining to this area are as follows.

a. An integrated MIS dashboard has been identified as a need in this domain
b. Defining TATs for some of the standard MSME facilitation flow
c. Facilitating a structure that allows lateral hiring of talent from market especially in areas which require sectoral knowledge
d. Knowledge management systems including effective collation and dissemination of information pertaining to MSME ecosystem

Annexures

A1. Summary of discussions with Industry Associations

A1.1. KSSIA

A meeting was held with KSSIA's leadership to discuss the challenges affecting small industries in the state with focus on delayed payments, regulatory compliance, and skill development requirements.

- **Inadequate Enforcement of TReDS**: Existing government orders asking PSUs to onboard on TReDS have not been effectively implemented leading to concerns of delayed payments.
- **Financial Assistance Cap**: Representation was made that the upper credit limit of the Entrepreneur Support Scheme (ESS) be enhanced from existing Rs 40 lakhs to Rs. 2 Cr. with a year of moratorium
- **Skill Gaps in Graduates**: There is a disconnect between skills provided by the educational institutions and industry requirements calling for more on-the-job training programs.
- **CGTMSE Scheme Limitations**: Despite the upper credit limit set under the CGTMSE scheme, financial institutions often provide collateral-free loans only up to Rs. 10 lakhs.
- **One-time Settlement for MSMEs**: A proposal for a one-time settlement package for struggling MSMEs, like the one offered to the Cashew industry, was discussed.
- **ZED Scheme Awareness**: While awareness about the ZED scheme is increasing, the cost associated with its renewal needs to be subsidized. Additionally, there is a lack of assessing/certifying officers for food safety certification

A1.2. KINFRA Units Association

The engagement with KINFRA Units Association was aimed at understanding the operational efficiencies and bottlenecks in both land allotment and financial systems. The dialogue also explored the entrepreneurs' awareness level regarding existing governmental schemes, which is crucial for the success of new ventures.

- **Land Allotment Efficiency**: KINFRA has been efficient in allotting land.
- **Entrepreneurial Awareness**: There is a significant lack of awareness among entrepreneurs about existing schemes, signalling a gap in information dissemination.
- **Additional costs by commercial Banks**: Entrepreneurs face hidden costs like visitation and loan insurance charges, fee on CGTMSE which add to the hesitance of approaching commercial banks.
- Entrepreneurs, busy with their businesses, often miss out on new governmental initiatives.
- **Handholding Support**: There is a need for more robust support during the initial 2-3 years for all MSMEs.
- **Single Window Clearance**: A unified system for availing schemes can streamline processes and make them more efficient.

A1.3. Kerala Plastic Recycling Industrial Association

The meeting with the Plastic Recycling Industrial Association was specifically designed to delve into the complex landscape of the plastic recycling industry. The discussion covered a myriad of issues, from raw material collection and operational costs to labour force demographics and market constraints.

- **Raw Material Collection**: Initiatives like Haritha Karma Sena have eased the collection of raw materials for recycling.
- **Market Constraints**: High transportation costs are a barrier to entering or expanding into new markets.
- **Competition**: The industry faces minimal competition from other states
- **Financial Liquidity**: Delayed payments are a concern, leading companies to utilize Overdraft (OD) facilities to maintain liquidity.
- **Government Support**: Support is available for procuring and updating machinery, which is a positive aspect but may need more widespread awareness.

A1.4. Malayali Non-woven Bag Manufacturers Association

The discussion with the Malayali Non-woven Bag Manufacturers Association sought to gauge the industry's status in Kerala, focusing on the product offerings, market reach, labour force composition, and impact of government policies.

- **Industry Size and Market Reach**: With roughly 45 units in the state, these manufacturing units primarily serve Kerala and have started exporting safety coveralls to countries like UAE and Saudi Arabia.
- **Product Nature**: The main product is packing material, which is cost-effective but affected by inconsistent government policies on plastics.
- **Labour Composition**: The labour force is diverse, comprising migrants and women from local communities.
- **Wages**: The wage structure varies, with unskilled labourers earning around Rs 400 per day and women earning Rs 350 per day.
- **Government Support**: The units are well-equipped with the latest machinery, aided by available government support for procurement and updating.

A.1.5. Kerala Plastic Manufacturers Association

The meeting with the Kerala Plastic Manufacturers Association aimed to explore the intricate dynamics of virgin and recycled plastic manufacturing in Kerala. The dialogue covered a range of topics, from market competition and product classification to workforce issues and payment bottlenecks.

- **Industry Size**: The industry comprises around 400-500 virgin plastic processors, and this number increases to about 1000 when units utilizing recycled plastics are included.
- **Product Classification**: Products are categorized as volume-centric (e.g., tanks, pipes) and non-volume-centric (e.g., packaging), each with distinct market challenges.
- **Market Competition**: Internal competition affects volume-centric items, while external competition from states like Gujarat impacts non-volume-centric items.
- **Workforce Issues**: Attracting and retaining a workforce is challenging, particularly in comparison to other industries like plywood.
- **Payment Delays**: Payments are frequently delayed, especially from small-scale buyers, leading to legal tussles.
- **Awareness of Financial Schemes**: There's minimal or nearly no awareness about financial facilitation schemes like TReDS and SAMADHAAN among industry players.

A2. List of Stakeholders Met

Sl.no	Type of organization	Phone number / Address	Key Points
1	Kochuveli Industrial Association	9947055888	Common facility requirements in the estate and issues related to CGTMSE were discussed.
2	KVIB	0495 236 6156	Discussed about Performance of PMEGP and the issues availing it in the State .
3	Tourism sector	484 237 3587	Discussed about Sustainable and Responsible Tourism, key findings were understanding about the services provided by MSMEs like home stays, sovenier shops etc. are part of the supply chain. Key focus area of the discussion was about providing safe tourism experience to women and women friendly infrastructure.
6	MSME DFO	9447875070	Scope for increased linkage between MSME-DFO and State dept. offices (DoI and DICs) regarding implementation of a few MoMSME schemes.
7	DIC Thrissur	0487 236 0647	Discussed about the need for creating awareness and capacity building of the DIC officials on MoMSME GM suggested that there should be an Implementing SNA (State Govt.) for every MoMSME scheme for its effective implementation. Identified Industrial area wise Industrial associations such as Velakkode IA, Ayyankunnu IA and Athani
8	Laundry and Rubber Processing Units	9962638694	Discussed about need for skill development in small and micro units for book keeping, need to revisit the type of units coming under the service sector. Discussed about the need for the development of a effective method to disseminate information regarding MSME Schemes and technology upgradation.
9	Rubber Processing Units	096560 45998	The major concern highlighted for the rubber industry was that there was daily fluctuation in prices in the rubber industry. It was identified that there was considerable demand for skilled labour in the sector. It was suggested that government intervention in the form of training and skill development support for labour could be beneficial.
11	KIED	0484 255 0322	Discussed about the organizational function of KIED, courses are based on personal initiatives of the management and feedback from the sessions conducted. Discussed about empanelled sector experts are appointed for conducting sessions.

Sl.no	Type of organization	Phone number / Address	Key Points
12	KSSIA	0484 253 2120	Briefed about the objective of RAMP, discussed about the Issues currently plaguing the MSME's were discussed. Issues related to availing GoI schemes were discussed.
13	DIC Ernakulam	471-2302774	Team briefed the objective of RAMP, discussed about the Issues currently plaguing the MSME's were discussed. The organisational structure of the DIC was discussed. Year of entrepreneurs data of all the districts were collected.
14	Canara Bank	1800 425 0018	Discussed about the department's credit plan. Successful performance of PMEGP and CGTMSE schemes were discussed .Discussed about the Loan sanction periods which is for Immediate loans (< 5 lacs) in 7-10 days, (> 5 lacs) around 1 month. Explored challenges faced by banks for lending loans. Discussed bank's recommendation to simplify and expedite the loan process.
15	DIC, Trivandrum	471-2302774	Discussed about the Food processing, RMG and General Engineering are the major sectors in the district. Awareness about MoMSME schemes is low among the MSMEs.Discussed about availability of land and the identified that cost of land is expensive due to that.
16	Directorate of Coir Development	0471-2322046	Identified that fibres collected are uneven in quality and wastage is high, the coir cooperatives in the have a tight control over the sector. Discussed about registering the cooperatives as MSME units. Discussed about necessary interventions required in value addition products.
17	KFC	0483 273 4957	Schemes undertaken by KFC were discussed, the procedure to obtain the benefits were discussed.
18	Kinfra	080064 34300	Briefed the objective of RAMP, major challenges they face in terms of access to finance, market and technology were discussed. Major stakeholder challenges identified were unavailability collateral free loans, shortage of skilled labour.

Sl.no	Type of organization	Phone number / Address	Key Points
19	Allepey DIC	471-2302774	Convened RAMP discussion with Alappuzha DIC.
20	Allepey Coir Society	094461 18044	Discussion on RAMP with Ambalapuzha Coir Society.
21	Ambalapuzha KSSIA	0477 227 2090	Discussion on RAMP with Industry Association.
23	COIRFED	0484 236 7508	Discussion on RAMP with COIRFED.
24	Kerala state Coir corporation limited	0484 236 4232	Discussion on RAMP with Kerala State Coir Corporation Ltd.
25	Coir matting SME Unit	0477 224 0259	Discussion on RAMP with MSME Coir Matting Unit.
26	DIC Kannur	4972707522	The discussion emphasized the need to increase registration rates on the UR (Udyog Aadhaar Registration) platform. Entrepreneurs in the district primarily utilize major schemes such as PMEGP, PMFME, and ESS. The role of DIC officials in implementing these schemes was highlighted. The district had flourishing sectors like food processing, wood and furniture, plywood, tourism, textiles, and engineering, with proximity to key hubs contributing to the success of some sectors. However, the handloom sector is facing challenges.
27	Weaver's service Centre, Kannur	0497-2761937	Handloom and power loom units registered as MSMEs are facing a decline in production and sales due to a decrease in the number of weavers over time.
28	Kanhirode, Weaver's cooperative Society	91-497-85259/707259	Discussed about the welfare schemes in the handloom sector. The handloom sector struggled to offer competitive prices due to which the demand and the production has declined. Discussed about the product diversification which the powerloom cannot replicate and capturing niche markets
29	Paravur, Handloom Waever's Society	9746427460	Handloom sector relies on a yarn bank for raw materials and sometimes sources dyes from private agencies.Major products include double mundu, saree, set mundu, and others, with sales primarily through a sales depot within the district. The sector hasn't explored online platforms like Myntra or government platforms like ONDC and GeM for sales, the sector predominantly employs manual processes, with only the winding machine being mechanized among all processes.

Sl.no	Type of organization	Phone number / Address	Key Points
30	Edarikode, Textile Mills	98474 64865	Raw materials are sourced through the Centralized Cotton Purchase Committee, primarily from suppliers in TN (Theni), Karnataka, and Andhra (Guntur).The level of technology is primarily conventional machinery, with plans to transition to fully automated machinery. The company faces challenges in marketing and exports due to market dynamics and working capital constraints.
31	Cotton MSME Unit	9962167567	Identified that raw materials are procured through the Central Cotton Purchase Committee, but units can also buy directly from CCI or private agencies. The primary market is for the Free School Uniform scheme.
32	Textile Association	0495 272 0347	Approximately 45 manufacturing units in the state, primarily serving Kerala and also exporting safety coveralls to countries like UAE and Saudi Arabia. The main product is packing material, which is cost-effective but influenced by inconsistent government policies on plastics. These units are equipped with the latest machinery, supported by government assistance for procurement and modernization.
33	Plastic Cluster Aluva	481 2573259	Few member and non-member units make use of the cluster facilities due to limited initial investment, machinery obsolescence, and a lack of subsequent enhancements.The CFC initiated efforts to adopt wind energy, but the project has faced challenges and remains unrealized.
34	Plastic Recycling Industrial association	0471 272 4600	The industry experienced limited competition from other states but grapples with delayed payments, leading to reliance on Overdraft (OD) facilities for liquidity maintenance. Due to Initiatives such as Haritha Karma Sena have streamlined raw material collection for recycling. Support for machinery procurement and updates exists, but it may require greater awareness and outreach.
35	Carris pipes and Tubes Ltd	0484 264 9671	The industry relied on raw materials like LLDPE from suppliers like Reliance and GAIL. Fluctuations in raw material prices impact production costs and margins. Identified that the industry utilizes fully automatic technology to enhance product quality and has received subsidies under the ESS scheme. Marketing is conducted through an individual website and sales representatives. Additionally, the industry holds ISO certifications.

Sl.no	Type of organization	Phone number / Address	Key Points
36	Kurikkal Polymers	94 46 46 27 27	Identified that the industry primarily targets nearby districts and employs two sales representatives. Exporting is challenging due to high freight charges for voluminous products, making out-of-state road transport cost-prohibitive.The production process is semi-automated for tank making. Skilled laborers are employed with daily wages, and individual-level training is provided, although there is no training under the STRIVE program.
37	Kerala plastic Manufacturers Association	0484 235 4115	The industry comprised approximately 400-500 virgin plastic processors, rising to about 1000 when units utilizing recycled plastics are considered. Key challenges involved were attracting and retaining the workforce, especially compared to other industries like plywood. Identified that Industry players have minimal awareness, if any, about financial facilitation schemes such as TReDS and SAMADHAAN.
38	Rubber Cluster Changannasery		Identified that raw material availability is generally not an issue, although price fluctuations occur. Skilled labour is scarce, and the industry heavily relies on migrant laborers, leading to continuity issues. Due to poor logistic support, including inaccessible roads, hinders operations. The Solid waste disposal is problematic. Some units have started utilizing solar energy with SIDBI's financial support.
39	Powerloom Association	(471) 2303427	The association's Yarn is sourced from private dealers. The industry primarily caters to the local market, with no direct exports from Kerala. Marketing needs improvement, and value addition for the domestic market is lacking.
40	Dolphin, MSME Unit	9846888331	It has been identified that labour attrition is a concern, but the enterprise provides skilling for both migrant and Malayalee workers. The industry manufactures rubber mats and rubber mat rolls primarily for floor coverings. Delayed payments are not a significant issue due to customized policies with individual buyers. The industry uses semi-automatic machinery and has received subsidies under ESS through DIC applications. It exports products to countries like the USA, Canada, and others, with a significant portion being indirect exports.
41	GM, TC - Kochi (Virtual)	9446544454	Presently, 90% of the state's units rely on imported precision equipment, indicating substantial room for enhancement. TC in Kochi offers unit training and access to shared manufacturing facilities. CTTC can bolster Kerala's precision equipment sector by providing essential training for projects like the proposed marine cluster and defense corridor.

Sl.no	Type of organization	Phone number / Address	Key Points
42	Sector Expert, General Engineering(Virtual)		Discussed about maximizing the utilization of skilled labour in the state for the ESDM sector. Identified need for prioritizing low-volume, high-profit products. He Suggested establishing a group of retired DRDO and ISRO scientists to support skill development.
43	Fabrication Manager, IISU Trivandrum (IISU office)		Unit sources Class C components locally. Units supplying to IISU don't require significant certifications but must adhere to IISU's testing procedures.Discussed ISRO is currently privatizing launch vehicle assembly, which opens up more opportunities for local units.
44	MD, Oushadhi (Oushadhi office)	9447114053	MSME units face challenges in meeting their raw material supply commitments to SPSU.There is a necessity for ongoing testing of drug manufacturers.Raw material scarcity and subpar quality are concerns. Oushadhi encounters difficulties registering on the GeM portal.
45	CEO, CARE Keralam (CARE Keralam office, Thrissur)	9094348391	Created as part of the Ayush Ministry's Ayurveda cluster initiative, Emphasis was brought on the standardization of Ayurvedic medicines is essential. 3.facility requires expansion support, but changes in ownership patterns have hindered this. 4.Encouraging buyback schemes to enhance raw material availability is recommended.
46	Secreatary, Ayurveda Medicine Manufacturers Association of India (Sitaram Ayurveda Hospital)	7306830578	Ensured that the quality and identification of raw materials poses a significant challenge, unfavourable public perception is impeding the growth of the Ayurveda industry. There is a need for improved collaboration among academia, manufacturing units, and medical professionals. Smaller manufacturing units encountered marketing difficulties and face issues with working capital availability.
47	MD, Wood Furniture Cluster - Perumbavoor (Cluster office)		The machinery in place suffered damage during the 2018 floods, and there was a lack of adequate maintenance and repairs afterward. Identified that internal dispute among the SPV members has led to underutilization and mismanagement of the facility. Cluster units have now acquired their own advanced machinery for the process. The SPV members currently have no intentions of revitalizing the unit and are exploring options for its closure and investment return.
48	Owner, Ayurmadom Wellness Centre	9400628202	Identified that several small manufacturing units operate using the loan licensing model, compliance with Good Manufacturing Practices (GMP) is a requirement for drug license approval, shortage of drug inspectors poses a significant challenge, there is limited awareness among stakeholders regarding central schemes such as CGTMSE and various e-commerce platforms.

Sl.no	Type of organization	Phone number / Address	Key Points
	(Wellness Centre, Trivandrum)		
49	Manager, Kotakkal Arya Vaidya Sala (Kotakkal Arya Vaidya Sala factory, Kottakal)	9447554351	They identified Kotakkal primarily specializes in Ayurvedic products rather than proprietary products, which is different from other leading Ayurveda manufacturers. Discussed that the majority of raw materials are sourced from external suppliers, not within the state. Exporting medicines is challenging due to varying regulations in different countries, and currently, exports are facilitated through third-party agencies.
50	MD, Wood Processing Cluster - Perinthalmanna	9072650474	Identified that the unit is presently operating at approximately 50% of its capacity, maintaining a break-even financial status. Skill training is being imparted to selected individuals as part of the STRIVE scheme. The unit is equipped with relatively outdated machinery, and upgrading it is essential to boost utilization rates. Effective waste management practices are needed, and there is an opportunity to implement environmentally friendly initiatives.
51	Owner, Manikandan Sheet Works	9870200217	1.Needed more awareness of CGTMSE, ONDC, GeM 2.COVID has affected the business and the demand is quite low recently
52	Senior Manager, Central Bank of India	9446899885	1.Identified that there is absence of verified financial documentation. 2.MSMEs experience recurring income fluctuations. 3.Limited awareness of recent tax revisions, difficulty in adapting to new regulations; strong dependence on informal financing; 4.business stability uncertainties; misalignment of business strategies with market demands; concentration in slow-growth sectors; and ineffective capital utilization resulting in low return on investment.
53	Group Head, KELTRON	9930455123	Discussed about the current situation of all the dashboards and their backend applications, possibility of Unified MIS Dashbaord for all the schemes

Sl.no	Type of organization	Phone number / Address	Key Points
54	DRM, Bank of Baroda	94471 97470	There is difficulty in furnishing documents like MoA, AoA, and Audited Sheets, particularly among Micro and Small Businesses. Frequent over-leveraging by businesses, leading to repayment challenges. There is lack of awareness about recent tax changes, difficulties in adapting to new regulations, limited creditworthiness, business histories, generic business plans lacking unique selling points, resistance to diversify into new markets, and inefficient fund allocation and budgeting
55	DGM, Union Bank	9495891601	MSMEs are unable to provide documents such as MoA, AoA, Audited Sheet, ignorance of the latest tax changes; low adaptation to new regulations. Understood that limited creditworthiness, business history, generic business plans with no USP.
57	DGM, SBI	9846888331	MSMEs grapple with keeping KYC information current and lack digital proficiency. MSMEs encounter significant fluctuations in cash flow. Often falling short of document, limited formal credit history, reliance on a limited product range, insufficient planning and execution, overreliance on saturated markets, and unclear loan utilization purposes are common challenges.
58	MD, General Engineering Cluster - Manjeri	9446544454	Machinery requires modernization, with particular emphasis on the heavily used powder coating equipment. The unit faces imminent closure, lacking ZED certification and offering significant potential for green initiatives.The cluster comprises mostly micro-enterprises with small workforces of 1 or 2 individuals. These units are hesitant to expand their operations, and the region's limited industrial presence results in lower demand for the CFC's services.
61	MD, Wooden Furniture Cluster - Taliparamba	9447114053	The CFC is equipped with advanced machinery, including finger jointing technology not found in other CFCs. Its primary service area encompasses units in Kannur and Kasargod. The CFC is currently in the process of seeking approval under the STRIVE scheme. There is a need to install a centralized dust collector in the facility.
64	Owner, Phoenix Offset Printers - Thalassery	7306830578	The MSME handles the printing of the Indian Express newspaper. It has been observed that Waste disposal is managed by agents from Tamil Nadu. Identified that there's potential for installing packaging machinery, which could greatly benefit nearby packaging units.
65	Manager, Travancore Cocotuft Pvt. Ltd		Identified the ongoing integration of Industry 4.0 principles in the production process. Observed the mandatory adoption of ECOTEX certification in EU countries. The unit exclusively manufactures fully biodegradable products with no emphasis on the domestic market.

Sl.no	Type of organization	Phone number / Address	Key Points
	(Cocotuft Pvt. Ltd, Alappuzha)		
66	Senior Manager, MedSpark (MedSpark, Thonakkal)	9400628202	The park is observed under construction, with only four operational units at present. There are plans to set up a knowledge center and testing facility, and the CFC is currently in operation. It's essential to undertake outreach efforts for the park and provide skill training for the units.
67	Associate Head, SCTIMST (SCTIMST Biotech Wing, Trivandrum)	9447554351	SCTIMST does not impose a technology transfer fee on Medspark due to their equity-based arrangement. Medical equipment manufacturers are required to maintain rigorous quality control standards, and there is a shortage of testing facilities in the state. The majority of units focus on consumables and disposables as their primary segment, but there's a need for product diversification.
68	CEO, KINFRA Thumba (KINFRA office, Thumba)		Identified that the industrial park is fully occupied, and there are plans for its expansion. Currently, there is no centralized waste recycling or the use of green energy within the park.The units operating in the park have limited awareness of most of the center's initiatives.
69	Owner, KIAP Agnepoly (Agnepoly Unit, Vattiyookavu)		The unit receives raw materials from prominent companies such as Terumopenpal and HUL, and it supplies finished products back to them. Limited market awareness has resulted in the unit relying heavily on these major companies for its business. There is no knowledge about programs like CGTMSE or various e-commerce platforms.
71	Kinfra Trivandrum	0471-2726585	Sector lead briefed about Food Processing Sector in Kerala. Discussed about the performance of PMFME scheme in the state. Performance of Cashew sector for which the production is declining in the recent times. The Sector lead suggested on controlling the MSME market in intercropping. He suggested about the concept of using the built up space in in the food parks because of the space constraints which is existing in the state. Discussed about essentials of product diversification in the market for value added products
72	KADCO	80 4784 7705	The KADCO manager briefed about Handicraft Sector in Kerala. Discussed about the 7 trades for the promotion of artisans in the state. Discussed about the unavailability of raw materials in the state and there is need for raw materials bank. Discussed about the labour data bank of about 20,000 registered artisans.

Sl.no	Type of organization	Phone number / Address	Key Points
73	Kinfra, Ernakulam	070202 22955	Discussed about Subleasing land which is a major hurdle as units struggle to make the most of excess space for leasing to other MSMEs. BOS Naturals, with an impressive turnover of 100 crores, is a prominent manufacturer of food extracts and essential oils. They source raw materials from Karnataka and Andhra for products like chili, turmeric, and ginger.Exporting 90% of their products to over 50 countries, they face challenges such as competition in the Chinese and Taiwanese markets,
74	Kaladi Rice Mill Cluster	9746896463	The cluster faces difficulties in finding a market for Rice Bran Oil, They have availed MSE CDP once but haven't received further government benefits. Awareness programs on market segmentation is needed.

A3. Key Financial Metrics of KFC

Figures in lakhs

FY	Sanctions	Disbursement	Recovery	Net worth
2015	94,750	65,709	68,427	42,392
2016	1,02,599	83,836	75,821	42,916
2017	38,531	65,527	87,428	43,545
2018	72,400	60,000	94,500	44,100
2019	1,64,500	81,600	90,000	45,700
2020	1,65,800	1,44,600	1,08,200	58,500
2021	4,14,600	3,70,900	2,85,100	68,118
2022	2,87,679	2,17,520	2,43,047	69,403

A4. Key Upcoming Infrastructure in Kerala

District	Major Project	Potential Impact on MSMEs	Potential Opportunities for MSMEs
Alappuzha	Cochin Port-Kunnumangalam Waterway	Improved connectivity	-
	Alappuzha Seaport	Improved connectivity	Warehousing, cargo handling
	Kochi Metro Phase II	Improved connectivity	Maintenance, auxiliary services
	Munnar Master Plan	Infrastructure Improvement	Hospitality, local crafts
	Idukki Hydroelectric Project	Availability of power	Equipment supply, maintenance
Kannur	Kannur International Airport Expansion	Improved connectivity	Cargo services, in-flight services
Kasargod	Bekal Fort Tourism Project	Sustainable tourism project	Hospitality, travel services
	National Highway 66	Improved connectivity	Freight services, road maintenance
	Kollam Seaport	Improved connectivity	Warehousing, marine services
	Ashtamudi Lake Development Project	Sustainable tourism project	Sustainable tourism, environment services
	Karipur Airport Expansion	Improved connectivity	Cargo services, in-flight services
	Kannur International Airport Expansion	Improved connectivity	Cargo services, in-flight services

District	Major Project	Potential Impact on MSMEs	Potential Opportunities for MSMEs
	Kozhikode Beach Redevelopment Project	Sustainable tourism project	Hospitality, local crafts
Malappuram	Calicut International Airport Expansion	Improved connectivity	Cargo services, in-flight services
	Kondotty Industrial Park	Industrial Development	Manufacturing, logistics
	Edathala Industrial Park	Industrial Development	Manufacturing, logistics
	Palakkad-Nenmara Railway Line	Improved connectivity	Rail maintenance, logistics
Pathanamthitta	Sabarimala Master Plan	Religious Tourism	Hospitality, religious items
	National Highway 544	Transport Logistics	Road maintenance, freight services
Thrissur	Technopark Phase IV	IT & Innovation	Software development, tech support
	Guruvayur Railway Station Redevelopment Project	Transport Logistics	Rail maintenance, ticketing services
Thiruvananthapuram	Vizhinjam ICTT	Marine Trade	Warehousing, freight services
	Technocity	IT & Innovation	Software development, tech support
Wayanad	Wayanad Master Plan	Sustainable Development	Eco-friendly construction, environment services
	Vythiri Ecotourism Project	Eco-Tourism	Sustainable tourism, environment services
	Wayanad Railway Line	Transport Logistics	Rail maintenance, logistics

A5. Survey Questionnaire

A. Details of the enterprise

1	Name of Enterprise	
2	Location (District / Block)	
3	Contact Person	
4	Designation	
5	Email ID	
6	Phone number	
7	Whether owned by woman entrepreneur?	Yes/ No
8	Category	O SC O ST O OBC O General
9	Ownership Type	O Proprietorship O Partnership O Pvt. Ltd. O One Person Company O Any other (Please specify)
10	Primary Activity	O Manufacturing O Service (can include self-employed too) O Trading
11	Years of operation (multiple choice)	O Less than 5 years (1) O 5-10 years (2) O 10-15 years (3) O More than 15 years (4) O Taken over family business
12	Category of enterprise (Micro – Investment <1 Crore and Turnover<5 Crore Small – Investment <5 Crore and Turnover<50 Crore	O Micro (1) O Small (2) O Medium (3)

	Medium – Investment <10 Crore and Turnover<250 Crore)		
13	Sector to which the enterprise belongs	O Agri based activities and machinery O Apparel & Leather Products O Automotive & Auto Components O Chemicals O Construction O Education O Food Processing O IT& ITeS O Jewellery O Logistics (Transport, Warehousing, Courier) O Machinery & Equipment O Metals & Fabricated Metals O Non-Metallic Mineral Products O Paper & Paper Allied Products O Pharmaceuticals O Medical Devices O Printing O Rubber & Plastic Products O Textile O Tourism & Hospitality O Wood & Allied Products including Furniture O Others, please specify_____	
14	Number of employees: a) Permanent b) On Contract	Male a) b)	Female a) b)

15	Average Annual Turnover for last 5 years	O less than INR 25 Lakhs O = >INR 25 Lakhs upto INR 1 Crore O = > INR 1 Crore upto INR 5 Crore O = >INR 5 Crore upto INR 10 Crore O = >INR 10 Crore upto INR 50 Crore O = >INR 50 Crore upto INR 250 Crore
16	What is the trend of the Annual Turnover over the last 4 years	O Increasing O Neither increasing nor decreasing O Declining
17	Select the official documents possessed by your enterprise (more than one option can be chosen)	O GST registration O Business PAN O PAN (In case of proprietor or partner of partnership firm) O Udyog Aadhar Memorandum (UAM) / EM-II O Current Account Statement O Udyam Registration (UR) O Corporate Identification Number (CIN) O ITR for any of the last 3 FY O Audited Financial Statements for any of the last 3 FY O DPIIT recognition certificate for Start-up
18	How do you fulfil your energy requirements?	O Metered electricity connection from KSEB O Renewable (Solar panel or others) O Generator O No power requirement

19	How does the enterprise make payments to suppliers (can select multiple options)	O Cash O Cheques O Digital (UPI/NEFT/IMPS/RTGS) O Others (specify)
20	How does the enterprise receive payments from customers? (can select multiple options)	O Cash O Cheques O Digital (UPI/NEFT/IMPS/RTGS) O Others (specify)
21	Is your enterprise part of any recognized cluster/FPO/ Kudumbashree (select all relevant options)	O Membership in Industry Association (mention name of Association(s)) O Part of Cluster (Mention name) _____ O Part of Farmers Producer Organisation (FPO) O Member of Kudumbashree O Part of Co-operative Society (mention name) _ O Not part of any

22	Has your enterprise obtained any certification	O No certification obtained O ISO (specify)_____ O HACCP O ZED O BEE Star rating O BIS ISI Product certification O BIS Hallmark O AGMARK O Handloom Mark O FSSAI O Others (specify)
	What did the enterprise do in response to the COVID shock? (choose all applicable options)	O New enterprise operationalized after COVID O Started using digital solutions/platforms O Repackaged product mix O Modified product/service delivery O Explored larger market O Reduced staff/ workforce O Availed government support initiatives O Others (specify)

Market Access and Sales Related

23	Select the Primary/ target market of the enterprise	O Local area within district of the enterprise O In other districts of the State O Other States O Exports to other countries (5)			
24	Which are the digital/social media/ecommerce platforms used by you for reaching out to customers?		Aware but not used	Utilized	Not Aware
		WhatsApp			
		Instagram			
		Facebook			
		Own Website			
		IndiaMart			
		Flipkart			
		Amazon			
		ONDC			
		GeM			
25	How much of your sales is carried out through online platforms? (can skip if Q24 is not applicable – no awareness about any of the platforms)	O Not using online platforms O <10% O >=10% and upto 25% O > 25% and upto 50% O >50% and upto 75% O >75% and upto 100			

26	Pick major challenges faced in marketing/ sales of your products	O Difficulty in promotion of products due to high cost O Very low margin realized O Lack of proper awareness regarding ecommerce platforms, digital marketing etc. O Lesser opportunity/platforms to showcase the products through trade fairs, exhibitions, Vendor development programme etc. O Adoption of quality control standards and certifications O Inadequate value addition, new product development, inadequate packaging etc. O Face the issue of delayed payments O Others (specify) _____
27	What are issues faced by the enterprise related to export (if applicable)?	O High cost of credit O Lack of Export Market Information O Duties/Indirect tax related issues O Incentives related issues O Port congestion O Other, specify
28	Challenges in obtaining quality certification / product certifications (like ISO, BIS ISI, etc.) (if applicable)	O Lengthy process O High Cost O Difficulty in meeting criteria O Not aware about certification O Unable to connect with relevant agency/consultants to assist in obtaining the certification O Others, specify _____

Finance Related

29	What is your first preference to avail credit to address immediate credit needs and liquidity problems	O Lending from family members, friends, peers O Informal credit market (private money lenders) O Cooperative Bank (mention name) _____ O Commercial Bank (mention name) _____ O SIDBI/ NABARD O Kerala Financial Corporation (KFC) O Non-Banking Financial Companies
30	What are the challenges you face in accessing bank loans	O Insufficient collateral (1) O Loan amount sanctioned is less than required (2) O Interest rate offered is too high (3) O Too much paperwork (4) O Time taken to sanction loan is high (5) O No challenge in accessing bank loan (7) O Others (specify) _____
31	Are you aware of credit rating of enterprises to facilitate improved access to credit	O Not aware O Heard of it but not aware about how to avail it O Already availed

Operation and Business Support Related

32	Any challenges faced in terms of raw materials sourcing	O No issues faced O Issue with availability of sufficient quantity O Increasing cost of raw material including procurement cost O Issue with quality of raw material available O Others (specify) _____

33	Any challenges in availability of skilled workforce?	O No issues faced in availability O Difficult to find local skilled workforce due to lack of interest from younger generation O Dependence on migrant workers with lesser skill levels O Demand for higher wages O Higher cost in upskilling workforce O In sufficient platforms available for skill development of workforce O Others (specify) _____	
34	Rate on a scale of 5 the state of availability / access to infrastructure facilities (0 being Not available, 1 being Worse and 5 being very good)	Uninterrupted electricity	
		Water	
		Availability of land for industrial purposes requiring minimum clearances	
		Solid waste management	
		Effluent treatment mechanism	
		Cold storage/ ware housing	
		Road connectivity	
		Testing laboratories	
		Any Other (specify)	

35	Any challenges in adoption and use of better technology for improving productivity and quality of product/ service?	O No issues faced O Lack of awareness regarding better technologies O Limited availability/ Lack of support from related agencies to handhold in adopting such technologies O High technology procurement cost O Inability to avail financial assistance for technology procurement O Others (specify) _____
36	Which are the key services for which you typically hire/ will hire professional help	O Tax payment & return filing O Loan application processing O Process mapping O Digital Marketing O Export related O Technology Upgradation O Others (specify)
37	What are the challenges that you face in implementing environment friendly and sustainable practices?	O Lack of awareness and knowledge on use and benefits on sustainable practices O Limited access to technical experts for handholding O Lack of capital and awareness on green financing instruments O Others (specify) _____

<table>
<tr><td>38</td><td>Select top 3 areas of information which is considered most important by you</td><td colspan="4">O _____ Emerging Technologies in your sector and complete information related to cost, resources, training and ways to adopt it (1)
O _____ Government Schemes (Central and state) relevant to you (2)
O _____ The regulatory and taxation requirements (3)
O _____ Information about exhibitions and symposiums being held related to your business (4)
O _____ Proposal writing guides (5)
O _____ Trademark/IPR related (6)
O _____ Others, please specify (7)</td></tr>
<tr><td>39</td><td>Please select the Digital tool(s) you have adopted or wish to adopt?</td><td colspan="4">O Basic accounting software
O Tax payment & return filing software like clear tax
O Cloud services like Amazon Web Services, Google Cloud services
O ERP like Zoho, SAP
O Design related like Adobe, Canva, AutoCAD
O Payment software like Paytm, PhonePe, Google Pay
O Online communication/meeting like Zoom, Whatsapp
O Any other (specify) _____
O Not using any digital tool</td></tr>
<tr><td rowspan="6">40</td><td rowspan="6">Which portal/facilities among the following have you availed?</td><td></td><td>Aware (1)</td><td>Utilized (2)</td><td>Not aware (3)</td></tr>
<tr><td>psbloanin59minutes (4)</td><td></td><td></td><td></td></tr>
<tr><td>rxil.in (TReDS)</td><td></td><td></td><td></td></tr>
<tr><td>MSME CHAMPIONS grievance portal</td><td></td><td></td><td></td></tr>
<tr><td>SAMADHAN</td><td></td><td></td><td></td></tr>
<tr><td>Govt. of Kerala – Industries department grievance redressal portal</td><td></td><td></td><td></td></tr>
</table>

Q41 Please rank your experience (0 = Not availed, 1 = Good and 2= Bad experience) in regard to the relevant areas had while availing the following Central government schemes? (indicate 0 in last column if the particular scheme is not availed)

Schemes	Not availed	Documentation required	Time taken to get the benefit	Handholding support provided
CGTMSE	0	0	0	0
ZED	0	0	0	0
LEAN	0	0	0	0
PMEGP	0	0	0	0
Pradhan Mantri Mudra Yojna	0	0	0	0
MSME-Innovative (Incubation, IPR, Design and Digital MSME)	0	0	0	0
Coir Industry Technology Upgradation Scheme (CITUS) for Coir	0	0	0	0
Skill Upgradation & Mahila Coir Yojana (MCY)	0	0	0	0
Export Market Promotion	0	0	0	0
Entrepreneurship Skill Development Programme (ESDP)	0	0	0	0

Q 42 Which are the State scheme(s) you have availed?

- O Entrepreneur Support scheme
- O Margin money Grant to Nano units
- O Scheme for Interest Subvention to Nano Household Enterprises
- O Assistance Scheme for Handicraft Artisans [ASHA]
- O Other (specify) _____

Q43 Does the enterprise provide any social security or any work insurance to its employees?

a. Yes
b. No

Questions for Mission 1 lakh MSME beneficiaries

44. Rate the ease with which you were able to establish and operationalize your enterprise under the Mission 1 lakh MSMEs

- O Faced difficulty
- O Neither difficult nor Easy
- O Easy

45. Which initiatives under Mission 1 lakh MSMEs has helped you more in establishing your enterprise?

- O Introduction of Interns at Panchayat/ Municipality/ Corporation levels to handhold the entrepreneurs including prospective entrepreneurs
- O Availability of information on potential sectors, loans & subsidies, district wise incubation centres, commercialized technologies etc. through published booklets
- O MSME clinics, Orientation programmes, Loan melas held
- O Others (please specify) _____

46. According to you, improvement in which factors could facilitate establishment and operationalizing of enterprises in Kerala better- (Can select multiple choices)

- O Further simplifying regulations/ compliances
- O Providing better awareness and linkage with government schemes (State/Central)

- O Improving availability of land/ industrial plots
- O Improving access to other basic infrastructure such as water, electricity etc.
- O Imparting capacity building (Entrepreneurship development)
- O Better linkages with technical support institutions
- O Improving availability of Business Service providers
- O Improving access to finance
- O Better market development assistance
- O Any Other

47. What supports do you further require to upscale? (multiple choice)

- O Further simplifying regulations/ compliances
- O Providing better awareness and linkage with government schemes (State/Central)
- O Improving availability of other basic infrastructure such as water, electricity etc.
- O Imparting capacity building (Entrepreneurship development)
- O Better linkages with Technical support institutions
- O Improving access to finance
- O Assistance in market access
- O Support from experts/experienced entrepreneurs
- O Improving export infrastructure
- O Others (specify) _____

** End of Questionnaire **

A6. Details of web portals owned Directorate of Industries

S.No	Scheme/Initiative	Developed By	Remarks
1	Entrepreneur Support Scheme (ESS)	NIC	Provides financial assistance to Micro, Small and Medium Enterprises engaged in manufacturing activities
2	Land Management System Kerala	NIC	System for managing this land and facility for all land related matters.
3	Lubricant Oil License for Processing Unit	Service Plus (NIC)	System for applying License for Lubricant Oil and Grease Processing Units from Directorate of Industries and Commerce
4	Lubricant Oil License Renewal for Processing Unit	Service Plus (NIC)	System for applying Renewal License for Lubricant Oil and Grease Processing Units from Directorate of Industries and Commerce
5	Lubricant Oil License for Trading Unit	Service Plus (NIC)	System for applying License for Lubricant Oil and Grease Trading Units from Directorate of Industries and Commerce
6	Lubricant Oil License Renewal for Trading Unit	Service Plus (NIC)	System for applying Renewal License for Lubricant Oil and Grease Trading Units from Directorate of Industries and Commerce
7	Essentiality Certificate for Raw Materials	Service Plus (NIC)	Portal for obtaining Essentiality Certificate for Raw Materials
8	Margin Money Grant for Nano Units	Keltron	Online portal tracks and maintains the data of providing financial assistance beneficiaries to Nano units in the State, engaged in manufacturing, job work and service activity
9	Revival And Rehabilitation Scheme	Keltron	Online portal tracks and maintains the data of providing financial assistance beneficiaries to defunct MSMEs and Cashew Processing Units
10	Interest Subvention to Nano Enterprises	Keltron	Online portal that tracks and maintains the data of financial assistance beneficiaries in the form of interest subvention to nano and household enterprises on a reimbursement basis for the term loan availed by the unit
11	Scheme for Skill Development Societies	Keltron	Portal that tracks, applicants/approvals/ Disbursement, etc for Skill development society,

S.No	Scheme/Initiative	Developed By	Remarks
12	Assistance Scheme for Handicrafts Artisans (ASHA)	Keltron	Portal that onboards and financial assistance in the form of grant to the artisans in the handicrafts sector for setting up handicraft enterprises
13	Entrepreneurship Development Club (ED Club)	Keltron	Portal for Entrepreneurship Development Clubs have been formulated in schools and colleges to inculcate Entrepreneurial Culture. Onboarding of school/colleges/Grant Status, etc will be monitored
14	KSSIA -Grants	Keltron	Portal to update the disbursement of grants given to KSSIA
15	Vyavasaya Jalakam 2.0	Keltron	Portal for updating and tracking the enterprises, active, in-active, services offered by the enterprise, etc..
16	Year of Enterprises (YoE)	Keltron	dashboard for monitoring – MSME units active, inactive, loans taken from diff dept, progress of each dist. Etc.
17	Sustainable Survey (in development)	Keltron	Portal for updating the list of Enterprises that are working and active.
18	e-Asthi	Keltron	Repository that Manages IT and non-IT assets of all the employees in Directorate
19	Mission 1000	Keltron	Special monitoring dashboard for on-boarding, evaluating and assisting the 1000 msme’s.
20	MSME Awards Portal (in development)	Keltron	Portal for Awards (Future Plan)

21	One Family One Enterprise	Keltron	Portal for family-run enterprises where interest subvention received, No. of families, Onboarding, Active users,etc..
22	MSME Insurance (New Scheme in development)	Keltron	Portal for Insurance of MSME disbursements. (Proposed)
23	Private Industrial Estate Development Scheme	Keltron	Portal to track current infrastructures facilities such as Water, Strom water, Electricity, No. of MSME units in the estate, extend of land used, etc..
24	KELS-	Keltron	Portal for financial assistance to new enterprises & monitoring loan status.
24	Grievance Redressal System	ULCCS	Portal for No. of Grievance addressed/pending, etc
25	TRIMS- portal	C-DIT	Portal for monitoring Taluk Resource person such as No. of Entrepreneurs identified, working roster, etc.
26	Planspace	State Planning Board	Plan monitoring by the state planning board
27	Revenue Recovery Portal	Revenue Dept.	Recovery notices; no direct visibility for the Directorate
28	Project Management and Activity Monitoring	Kerala Digital University	Portal for Infrastructure monitoring of the important schemes under Directorate