



TSTPC
EXPLORING NEW TRADE FRONTIERS



STUDY REPORT ON LEVERAGING CAPABILITIES OF MSMEs OF TELANGANA (UNDER RAMP PROGRAMME)



**Study Report on Leveraging Capabilities of MSMEs of Telangana
(Under RAMP Program)**

A report sanctioned by KPMG to FISME

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A Report on leveraging capabilities of MSMEs of Telangana to Make in India, products largely being imported currently

Chapter 1: Introduction

1.1 Background

India is the 5th largest economy in the world¹ and home to about 1.42 billion, overtaking China as the most populated country as of April 2023². A key tenet of this economic powerhouse is the strong incidence of the informal economy and the instrumental role of MSMEs. For developing countries, the informal sector plays a crucial role in the overall socio-economic development. This is because a majority of the workforce in developing countries are engaged in the informal sector. According to an OXFAM report, 86.8% of the Indian workforce is employed in the informal/unorganized sector³. This includes regular workers, casual laborers, migrant workers, domestic laborers, street vendors, subsistence entrepreneurs, etc. Herein, a vast majority of the marginalized sections of the society like women, SC/STs depend on their survival from this sector. Data suggests that women are more likely to be employed in the informal sector both in rural and urban areas than men. Amongst others, this underlines to the need for focused attention on the pertinent issues of this sector.

MSMEs comprise of a vast majority of this informal sector in developing countries like India. India houses a total of 622.9 lakh MSMEs that contribute to about 30% of the nation's GDP, 40% of total exports and employs about 11.10 crore people⁴. While it would be erroneous to declare that all MSMEs fall under the informal economy, data suggests that over 75% of India's MSMEs are not registered, explaining their synonymity. Although there has been a steady growth of the Indian MSME sector in the last decade, several issues characterize this economic segment. With over 95% of the MSMEs being micro, they lack the scale, resources, and the capacity to keep up with the latest of technology, manufacturing processes and business development practices. Lack of timely credit, poor awareness on new market opportunities and several systemic constraints have restrained their potential.

1.2 About RAMP

In a bid to take forward these recommendations, as well as to strengthen the overall Covid Resilience and Recovery Program of MoMSME, the Government of India has launched a World Bank supported scheme called "Raising and Accelerating MSME Performance (RAMP)". The program aims at improving market access, access to credit, strengthening institutions and governance at the Centre and State, improving Centre-State linkages and partnerships, addressing issues of delayed payments, and greening of MSMEs. The RAMP program is designed in accordance with the World Bank Program for Results (P for R) instrument. The funds for which will be provided to the Ministry on achievement of mutually agreed Disbursement Linked Indicators (DLIs).

The main objectives of RAMP are:

- i. Strengthening coordination and institutions at the National and State level
- ii. Building and integrating technology platforms

- iii. Enhancing firm capabilities and access to markets
- iv. Strengthening the receivables financing market
- v. Enhancing guarantee products towards increased greening and gender participation
- vi. Expanding access to Online Dispute Resolution Mechanism (ODR)

1.3 SIP Programme

In addition to strengthening the capacity of the MoMSMEs at the national level, participating states are required to prepare and implement a Strategic Investment Plan (SIP). The SIP will help arrive at a strategic roadmap for a four-year period (FY 2023-24- FY 26-27) that details out interventions to be implemented under various challenge-heads identified. It will not only address the traditional challenges faced by the MSME sector in the state but will also build the required systemic capacity to respond to emerging challenges.

In lieu of the above, the state government of Telangana had submitted an LoU to the GoI for participation in the RAMP program on 20.09.2022. Subsequently, on 16.03.2023 the Telangana RAMP Program Committee was constituted under the leadership of Sri Jayesh Rangan IAS, Principal Secretary, Industries & Commerce. Telangana State Trade Promotion Corporation (TSTPC) was appointed as the 'State Nodal Agency'. On 16th May 2023, KPMG Advisory Services Pvt. Ltd., was onboarded as the consulting agency responsible for the preparation of the SIP for the Telangana State. This report is a diagnostic study of the performance of the state's MSMEs across various parameters, delivery and uptake levels of state assistance, current gaps in the MSMEs support ecosystem, as well as needs and challenges of entrepreneurs operating within this ecosystem. It will serve as a futuristic document to achieve the state vision for its MSMEs. This SIP is divided into 8 chapters, in a sequentially linear order of the study.

Chapter 1 presents a comprehensive overview of Telangana's economy and its MSME sector – institutional structure, legal and regulatory framework, sector performance, export linkages, etc. Chapter 2 throws light on the study methodology that was adopted in this report and the process of data collection and analysis.

1.4 Background to Import Substitution

Economic diversification continues to pose a significant hurdle for the majority of developing nations, with the most formidable obstacles faced by countries characterized by low-income levels, small-scale economies, landlocked geographical positions, and heavy reliance on primary commodities. Hence, it is prudent to consider export promotion or import substitution models within the context of broader development strategies adopted by developing countries. Import substitution is a particular case of industrial policy aimed at the reallocation of resources towards domestic production and replacement of a number of imported goods and services with domestic ones. This means that the efficiency of the import substitution policy can be estimated from the point of view of country's industrial policy.

The principal concept of import substitution development model is rooted on the premise of reducing economic dependency on imports through local production of goods, and curb outflow of foreign exchange. Further, it was seen as a measure to create employment and broaden economic base by promoting investment in the economy be it domestic or foreign investment.

Import Substitution is envisaged to enhance domestic productive capacity and reduce dependence on import for the country's needs. Major economies, especially the United States, China, and India, have implemented policies to increase domestic investment through programmes such as "America First," "Made in China 2025," and "Make in India," respectively.

In devising the measures to promote and expand domestic economy, it will also be critical to recognize the competitiveness of the products promoted for domestic production particularly where government designs policies to support certain sectors of the economy. This assumes greater significance for small economies as the domestic market is small and successful industries, to achieve economies of scale, need to gradually target export markets where competitiveness will be a key element. Import substitution can considerably improve small businesses' ability to compete in markets and offer new products by enhancing access to information and the ability to distribute goods and services to consumers/buyers on a much larger scale.

Key elements of Import substitution could be summarized as below:

- An appropriate incentive framework through reforms to create and entrepreneurial and investment climate
- Diversification towards new uses of given product customized to the local needs
- Effective competition in product and factor markets and in key backbone services such as transportation, finance, energy and communications
- Investments and policy reforms that reduce trade barriers
- Reallocation of resources to new activities
- Government interventions that target specific market, policy and institutional failures.
- Cross cutting, sector focused and geographically targeted measures
- Regulatory framework that facilitates private sector initiative and a strong human capital base.

Diversification trajectory taken by Chile

Chile followed a two-track diversification strategy for its copper industry: (i) diversification "within" industry (increasing value added in the copper industry by improving the quality of copper extraction and exporting processed products and simultaneously developing its logistics services; and (ii) diversification "across" industries (increasing exports of high value-added agricultural goods such as fruit and vegetables and wine production). In addition, Chile invested a significant amount of savings on training in advanced skills and financing and mentoring to high growth start-up firms.

In order to develop its domestic supply chain, Chile also has a Supplier Development programme. The programme focuses on strengthening business ties between SMEs and significant overseas Programme also had component for subsidized lending, and other fiscal incentives to foster ties.

Import Substitution case study Bhutan

A study was carried out by Ministry of Economic Affairs Bhutan in 2019 titled- 'Report on Import Substitution' to assess and identify scope for enhancing domestic production where potential exists as well as to diversify activities to cater to domestic needs. The study was based on the analysis of import of various products during the preceding five-year period based on Bhutan Trade Statistics and an assessment was done of the scope for substitution in different industries.

All imported items were reviewed and products that had an import value more than a certain level were taken for further analysis. These were further assessed and ranked based on the availability of resources, capacity and infrastructure. Products that were ranked high were then examined to shortlist. Based on these analyses, a preliminary list of 56 products was prepared for import substitution. The study assessed potential for enhancing productive capacity of the economy through value addition to the resources as well as identifying inter-sector linkages to increasingly use available domestic resources that can contribute to decrease of import in selected products. The study was an attempt to identify areas where production level can be revamped or new activities initiated to cater to domestic demand

Criteria to identify priority sectors for import substitution

- *To what extent are priority sectors chosen have linkages with other domestic sectors?*
- *Whether by supporting manufacturers of the final product, demand is stimulated throughout the entire supply chain?*

Following are three steps to diversification

1. Exports of new products (goods or services)
2. Export of existing products to new markets
3. Qualitative upgrading of exported products

Economic diversification and import substitution are no longer seen as simply requiring the emergence of new industries. There is also focus on following aspects:

- Successful domestic production diversification requires resource reallocation across and within sectors from low productivity activities to higher productivity ones.
- Interventions in local value chains to capitalize on potential for final product exports as well as intermediate input manufacturing.
- Combination of horizontal policies and measures targeted at individual sectors.

Incentive framework for Import Substitution

Infrastructure development

Infrastructure needs to be developed to enable easy access to investors in setting up business ventures and commercial operations. Focus must be on expansion of processing, warehousing, storage, freight facilities to establish backward linkages. Prioritization must be on exploration of natural resources where domestic industries enjoy competitive advantage

Policy reforms

Reforms are required in access to credit market, labour, quality standards, procedures and licenses for starting new businesses. Contract enforcement, and insolvency reforms are also required to stimulate investment in new activities. Lowering entry and exit obstacles for new businesses to promote competition and encourage firms to invest and innovate should be explored.

A predictable and transparent business environment needs to be developed that reduces risks associated with testing new products and exploring new markets. Emphasis should be on ensuring that basic port, border, and linking transportation infrastructure is in place. Financial sector reforms should be implemented to encourage long-term capital financing, venture capital availability and non-bank sources of finance for new units.

Fiscal support for Import Substitution

Fiscal support must be provided for import substitution ventures. Fiscal measures in the form of tax on imports may be adopted once the domestic production reaches a certain level

Trade Policy

Tariffs on imported items as well as intermediate inputs are a means to promote import substitution. Sanitary and phytosanitary measures and technical barriers to trade for Agri based commodity market can also be explored. Product upgrading, by codifying the requirements that are necessary to export to markets where demands for quality differ from the domestic market. Geographically tailored policies such as multi-sectoral economic corridors, special economic zones, and cluster development can play an important role to boost domestic manufacturing of imported items.

Competition Policy

Competition laws play a vital role in fostering an atmosphere of innovation within industries. This competitive environment prompts businesses to invest in research and development (R&D), leading to the creation of new technologies, processes, and ideas. Moreover, fostering greater competition among service suppliers can yield significant benefits for both consumers and producers. Increased competition typically leads to lower prices for consumers as companies vie for market share. Additionally, producers may also benefit from enhanced efficiency and productivity driven by the need to stay competitive.

Competition policy as a means to Import Substitution

Kenya: The rise of mobile banking services was aided by competition policy liberalization. The entry of Mobile Virtual Network Operators into the banking industry resulted in the development of new banking products, the promotion of new small enterprises, and major advances in financial inclusion.

Philippines: In the transport sector, competition policy reform prevented established operators from blocking new companies from operating certain routes. The reform resulted in significant cost savings in logistics. Furthermore, new entrants into the shipping business enhanced service quality and encouraged diversification into new industries, such as refrigerated shipping services.

DLI Mapping: Critical projects to develop competitiveness of MSMEs.

Project 4: Import Substitution

Title- Leveraging industrial growth momentum of Telangana and capacitating its existing manufacturing base to expand MSME manufacturing through targeted import substitution.

2.1 Problem Statement

While Industrial growth in the state of Telangana has been impressive, it still lags in its share of Manufacturing in Industrial GVA from competing industrialized states. The state's industrial sector grew at an average annual rate of 9.5% in the last 5 years than the national average of 7.5%¹. However, share of Manufacturing in Industrial GVA has been 36.5% vis-à-vis of 42% in Tamil Nadu, 40.2% in Maharashtra and 38.7% in Gujarat². Keeping in view that manufacturing has considerably higher employment multiplier than industry as a whole³ and the extant need of the state is to boost employment for skilled labor force, a way needs to be found to leverage industrial growth to push manufacturing growth.

2.2 Intervention Proposed

Leveraging industrial growth momentum of Telangana and capacitating its existing manufacturing base to expand MSME manufacturing through targeted import substitution.

2.3 Objectives

- Identify 20 products across 4-5 sectors which having potential for expansion in Telangana by analysing production data and imports at the product level.
- Create a roadmap for import substitution catering to existing domestic demand being met by imports
- Building capacities of 100 MSMEs in clusters to start manufacturing the identified products.
- To study the nature of the NIC 4-digit industries based on their end use, we have also divided the industries into primary, intermediate, consumer durables/non-durables, capital and infrastructure/construction goods sectors. The information on the use-based classification has been adopted from the Index of Industrial Production (IIP) Manual with base 2011-12⁴ that provides the used-based nature of industries at NIC 5-digit level.

¹ Telangana State Industrial Infrastructure Corporation (TSIIC)

² Economic Survey of India 2022-23, Statistical Appendix, Table 1.23: State-wise Gross Value Added (GVA) by Economic Activity at Current Prices (2011-12 to 2022-23)

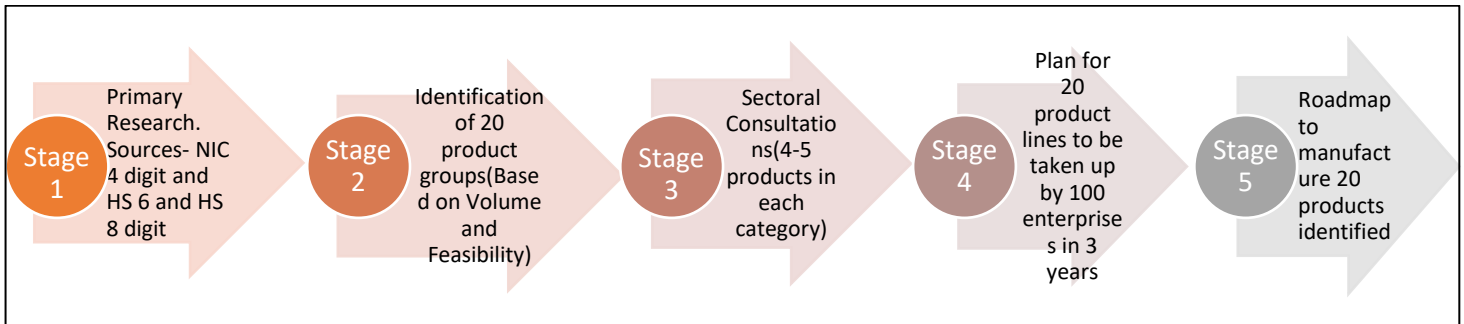
³ The Employment Multiplier of Manufacturing in India by Anup Sinha and R. Ramachandran (2018): This study found that the employment multiplier of manufacturing in India is 2.3, while the employment multiplier of industry as a whole is 1.8.

⁴ The new IIP series based on 2011-12 base compiled data at NIC 3-digit level. Weights have been provided at NIC 5-digit level and the corresponding used-based classification has also been provided. Using the list of 407 items included in the IIP, the study identified the broad use-based classification for NIC 4-digit level.

2.4 Unique Features of Proposal

- Leverages Telangana's existing industrial capabilities to replace imports and fulfill domestic demand in related sectors by scaling up of enterprises from Micro to Small to Medium
- Discovery of potential streams for import substitution through concordance of industrial activity (NIC-4) and Imports data (HS 4/ 6 digit)- a first of its kind exercise
- 100 Champion MSMEs thus identified (100 products in 5 sectors) to be capacitated in Mission Mode for 4 years using combination of International and National experts
- Governance structure designed for sustainability and scaling up of initiative by actively engaging Industry Associations (both sectoral and geographical)

2.5 Phase wise progress and Outcome



Details	Year	Year	Year	Year
	1	2	3	4
No. of MSME directly benefitting	10	20	30	40
New products identified for import substitution	20			
Sectors to be covered	5			

3.1 Data Sources

The study employed a comparative analysis for industry and trade data at NIC 4-digit level⁵. Using the concordance of NIC 4-digit with HS 6-digit level products, the matching trade data would enable comparisons and impact analyses for the import dependence. Comparable trade data would be constructed using the HS-NIC concordance from Kumar and Dhar (2023). For HS 6-digit trade data, figures from DGCIS Export Import database⁶ have been sourced. While industry level output and input has been taken from the Annual Survey of Industries pertaining to the organized manufacturing sector.

3.2 Methodology⁷

We have followed a two-pronged approach to identify sectors at NIC 4-digit level to be considered for localization:

- a. Import penetration ratio of Indian Imports: In order to measure the extent of dependence of India on imports, a comparison with domestic production of the industry, under which the tariff lines fall, has been made. The ratio of industry level imports of India to total domestic demand (output + imports – exports), called the import penetration ratio has been calculated. Higher ratio implies that India imports more than she produces domestically. Those sectors where this ratio is higher than 0.5 or 50 per cent have been chosen, which implies that imports of the sector account for half of domestic demand in the particular sector
- b. Import surge: There are no straight-forward reasons for the import surge which uniformly pertain to all sectors across time. It is important to clarify that higher imports are different from import surge. Economies that are industrializing would reveal trends of higher imports however, when such rise in imports lead to an injury to the domestic industries in the form of loss of employment, reduced local production etc., there is a need to identify such injuries and take corrective actions.

Although there is no established methodology to identify import surge, we follow the methodology given in Kumar (2023) where import surge has been identified in the following ways:

- We consider a period of five years to compare the rise in import values for all industries at NIC 4-digit level. The trigger point for import surge would be a doubling, or more than doubling of imports with a persistent rise thereafter.

⁵ To study the nature of the NIC 4-digit industries based on their end use, we have also divided the industries into primary, intermediate, consumer durables/non-durables, capital and infrastructure/construction goods sectors. The information on the use-based classification has been adopted from the Index of Industrial Production (IIP) Manual with base 2011-125 that provides the used-based nature of industries at NIC 5-digit level.

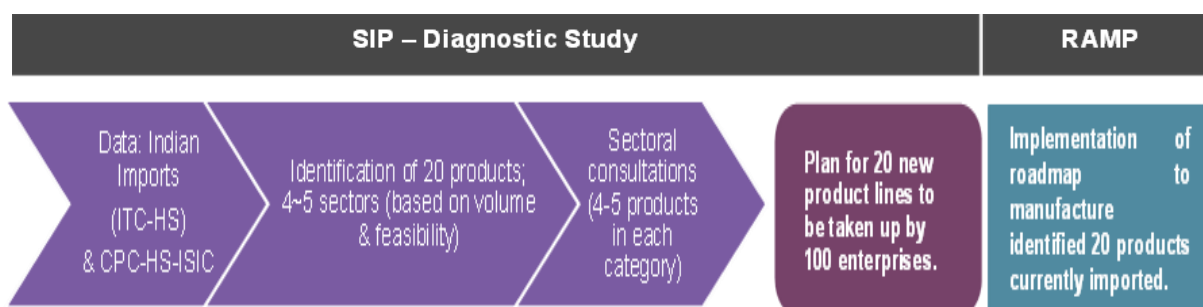
⁶ The Directorate General of Commercial Intelligence and Statistics (DGCI&S) collects import and export data for India annually and monthly at both rupees and dollars. However, production data which is constructed taking total output of NIC 4-digit level industries from ASI are given in Rupees. Thus, in order for comparing the trade-output ratios constructed have used the same unit of currency measurement (Rupees).

⁷ Methodology Research on this Study was conducted by Ms. Ramaa Arun Kumar, Assistant Professor, Institute for Studies in Industrial Development (ISID)

- Among the industries so identified, those with high imports-to-domestic production ratios have been identified that are highly import oriented in the recent years. A high import-output ratio is considered to be higher than 0.5 implying that imports are more than half of domestic production supply in that particular sector.

Exceptions: There were sectors where import penetration was high, with insignificant levels of imports, which have been excluded.

- Total product categories (subsectors) identified are 22 at NIC 4-digit from which 20 to be finalized for interventions.
- **100 enterprises within 20 clusters will be identified.** A roadmap for these enterprises will be made to adopt new locally produced alternatives for currently imported products with existing demand. The impact of the study after adding around 20 import-substitute items, will impact conserving the State forex. Recommendations from the study will be incorporated as a part of the RAMP program.
- **Implementing agency:** The Telangana State Trade Promotion Corporation Ltd (TSTPC) will engage the services of a professional organisation to implement this project through RFP process. All the 5 sectors will have a roadmap designed by a team of experts across different facets.



3.3 End project Evaluation Parameters:

- I. No of MSMEs participated in the project
- II. Services of No of international consultants provided
- III. No of import substitution prototypes developed
- IV. No of prototypes test marketed
- V. No of products taken up for commercial production
- VI. No of issues addressed to provide an even playing field.

Evaluation Milestones:

Year - 1

- 20 product groups for import substitution identified
- 100 MSMEs for import substitution development selected
- Prototype of 5 import substitution product group developed
- Marketing plan for 10 import substitution product groups prepared

Year - 2

- Prototypes of 10 import substitution product groups developed
- Commercial production of 5 prototype product groups started in 25 MSMEs
- Identification of factors towards providing 'even playing field' with imported products
- Environmental impact assessment of 10 developed product groups completed.

Year – 3

- Prototypes of 10 import substitution product groups developed
- Commercial production of 10 prototype product groups started in 50 MSMEs
- Marketing plan for 10 import substitution product groups developed
- Environmental impact assessment of 10 product groups completed

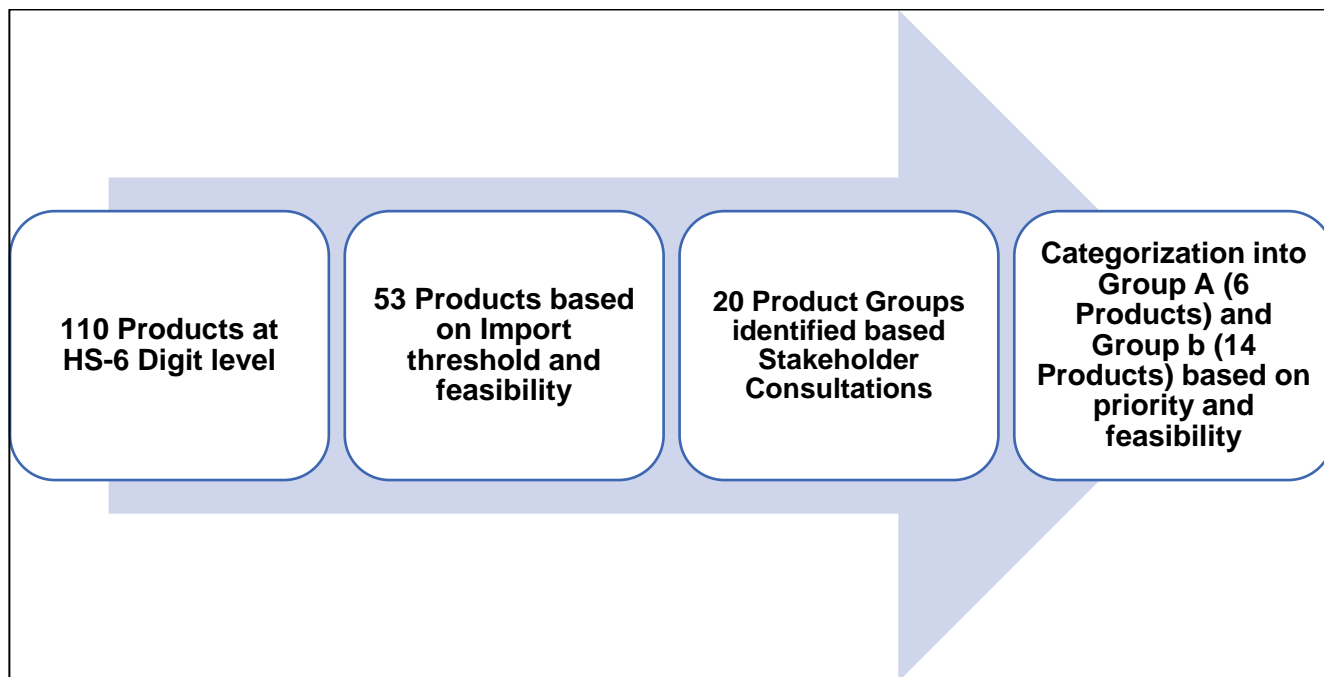
Year – 4

- Commercial production of 5 products groups started in 25 MSMEs
- Exposure visits to product group related international Fairs of 50 MSMEs
- Compulsory product standards for 5 product groups introduced.
- End of project report of PMU prepared

Timeframe																	
Sr No	Activities	Year (Quarter)															
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
1	Baseline study – Comparative study of production data with imports and exports data																
2	Stakeholder consultations to assess feasibility, challenges, and external help.																
3	Report writing for import substitution study																
4	Implementation of recommendations in RAMP																
5	20 product line development in 20 clusters																
6	Monitoring and Evaluation																

3.4 Identification of Sectors and Products

We have followed a two-pronged approach to identify sectors at NIC 4-digit level to be considered for localization:



Identification of Products at HS-6 Digit level

1. **Import penetration ratio of Indian Imports:** In order to measure the extent of dependence of India on imports, a comparison with domestic production of the industry, under which the tariff lines fall, has been made. A higher ratio implies that India imports more than she produces domestically. Those sectors where this ratio is higher than 0.5 or 50 per cent have been chosen, which implies that imports of the sector account for half of domestic demand in the particular sector.
2. **Import surge:** Economies that are industrializing would reveal trends of higher imports however, when such rise in imports lead to an injury to the domestic industries in the form of loss of employment, reduced local production etc., there is a need to identify such injuries and take corrective actions.

We follow the methodology given in Kumar (2023) where import surge has been identified in the following ways:

- We consider a period of five years to compare the rise in import values for all industries at NIC 4-digit level. The trigger point for import surge would be a doubling, or more than doubling of imports with a persistent rise thereafter.
- Among the industries so identified, those with high imports-to-domestic production ratios have been identified that are highly import oriented in the recent years. A high import-output ratio is

considered to be higher than 0.5 implying that imports are more than half of domestic production supply in that particular sector.

- There were sectors where import penetration was high, with insignificant levels of imports, which have been excluded. Using the above steps of identification, we could select 22 NIC 4-digit industries that could be the potential industries to be considered for localisation. Total sectors identified through this methodology were 22 industries at NIC 4-digit level.
- Further, these 22 industries were mapped to the 13 thrust sectors identified for Telangana state based on their share in total number of manufacturing MSMEs in the state. In order to establish production capacity, a continuing presence of industries is required. Therefore, we have considered even the least of presence of these 22 industries in Telangana (0.1 per cent share and above in total number of manufacturing MSMEs). Mapping these 22 industries on to the 13 thrust sectors, after applying the industry presence threshold, we could identify 10 thrust sectors for Telangana, namely, electronics and IT Hardware, Engineering and capital goods, FMCG and domestic appliances, health and life sciences, and plastic and polymers, auto components, bulk drugs, defense and aerospace, glass and ceramics, food processing and beverages (refer Annexure). Out of 22 industries so identified for India, 13 industries fall under the 5 thrust sectors identified for localisation in Telangana and 10 industries of significance to Telangana (therefore, total 23 industries). (*Refer Annexure 1- Thrust Sectors*)
- The application of the MSME promotion scheme has to be done for various products within these 23 NIC 4-digit industries falling under the 10 thrust sectors. For this, we consider the top five HS 6-digit products that are being imported into India under each of the 23 NIC 4-digit level industry. We arrive at 110 products (*Refer Annexure 4- HS 6-digit Products Identified to be Localised for the State of Telangana*), which then are proposed to be considered for localisation under MSMEs.

Identification of Products based on import threshold

The list of 110 potential product groups was narrowed to 53 items by going down to HS-8-digit level and using the criteria for imports for the select products > USD 100 Mn. Based on this approach, we were able to identify 53 potential products which are currently being imported above a certain import threshold and which have feasibility of domestic production. Following is the list of 53 products at HS-8-digit level.

S.No	Name of Sector	NAME OF PRODUCT	HS 8 Digit code
1	Auto Components	Parts and accessories of vehicles	87089900
2		Floating/Submersible drilling production platforms	89052000
3		Parts of semi diesel engines	84099990
4		Component parts for diesel engines for motor vehicles	84099941
5		Fuel injection equipment excluding injection pumps	84099930
6		Parts of diesel/semi diesel engines	84099949
7	Bulk Drugs	Compounds containing a pyrimidine ring or piperazine ring in structure	29335990
8		6- APA (derivative of Penicillin with a penicillanic acid structure; salts thereof)	29411050
9		Cyclic amides and their derivatives and salts	29242990

10		Penicillins and its salts	29411010
11		Other penicillin and their derivatives with a penicillanic acid structure salts thereof	29411090
12		Rifampicin and its salts	29419019
13	Defence and Aerospace	Parts of aeroplanes/helicopters	88033000
14		Parts of turbo-jets/turbo propellers	84119100
15		Parts for aircraft engines	84091000
16		Under carriages and parts thereof	88032000
17	Electronics & IT Hardware	Solar cells, assembled in modules or made up into panels	85414012
18		Printed circuits	85340000
19		Solid-state non-volatile storage devices	85235100
20		Fixed capacitors	85322990
21		Parts and accessories of motherboards	84733020
22		loud speakers, whether or not mounted in their enclosures	85182900
23		Headphones/ earphones and combined microphone/speaker sets	85183000
24		Parts and accessories of Other mounted printed circuit boards	84733030
25		Light emitting diodes (elctro luminescent)	85414020
26		Multiple loud speakers; mounted in the same enclosure	85182200
27		Electronic automatic regulators (controllers)	90328910
28	Engineering Goods	Injection/compression type moulds for rubber/plastics	84807100
29		Other moulds for rubber/plastics	84807900
30		Other sewing machines	84522900
31		Other machine-tools	84649000
32		Tools for pressing stamping or punching	82073000
33		Other fittings etc suitable for furniture	83024200
34		Parts of gas compressors of a kind used in refrigerating and air conditioning	84149011
35		Jigs and fixtures for machine-tools	84663020
36		Cotton yarn winding (including weft-winding) or reeling machines, automatic or otherwise	84454010
37		Machines for making embroidery	84479020
38		Industrial valves (excluding pressure-reducing valves, and thermostatically controlled valves)	84818030
39		Work holders	84662000
40		Tungsten carbide tips	82090010
41	FMCG and Domestic Appliances	Non-electronic toys etc.	95030020
42		Chess set, all types	95049010
43		Electronic toys etc.	95030010
44		Carom board, with or without coins and strikers	95049020

45	Food and Beverages	Meal of soyabean, solvent extracted (defatted) variety	23040030
46		Other preparations of animal feeding	23099090
47		Dry dates soft (khayzur or wet dates)	08041020
48	Health and Life Sciences	Other surgical instruments and appliances (including veterinary)	90189099
49		Oxygen therapy apparatus	90192010
50		Ophthalmic surgical instruments and appliances	90185090
51		Other surgical tools	90189029
52	Plastics and Polymers	Pearls not pigment (titanium dioxide coated micaceous and lustre pearl pigment)	32061110
53		Pearls not pigment coated with other pearl pigment	32061190

Identification of 20 Product Groups

We did stakeholder consultations with industrial stakeholders in Telangana and with industry experts who are engaged in manufacturing of some of the select products

3.5 Multi-Sector Stakeholder Consultation

A Multi-Sector Stakeholder Consultation on Opportunities in Import Substitution in Select Sectors was held on 12 January 2024 at Hyderabad, Telangana. The Consultation was chaired by Ms. Geeta Batchu from Telangana State Trade Promotion Corporation Limited (TSTPC). Objective of the consultation was:

- Seek Feedback from stakeholders to identify Potential products in which are being imported currently but can be manufactured in Telangana.
- Seek specific inputs for various support needed to capacitate existing units to manufacture those products in the area of Technology, Finance, Quality/ Testing etc. (Potential interventions)

Sector wise feedback forms were shared with stakeholders at the workshop and they were asked to identify the products in the sectors which are being currently imported but which have potential for domestic production in Telangana. *(Refer Annexure 2 for Sample Feedback Form)*. 37 Participants representing various sectoral and product-based associations participated at the Multi-Sectoral Stakeholder Consultation. *(Refer Annexure 3 for list of Participants at the Multi-Sectoral Stakeholder Consultation)*

3.6 Feedback from the Consultation

The participants shared their inputs and feedback for products that had potential for local manufacturing in Telangana. Sector wise feedback received from the Stakeholder Consultation is as follows:

I. Food and Beverages

There is potential for soyabean cultivation and production in Adilabad, Nizamabad and Karimnagar districts of Telangana. Cost of production and cultivation needs to be first assessed. While soyabean extraction is a viable option, undertaking it in Telangana poses a challenge,

given the existing production levels. If someone wants to take up soyabean extraction, the issue of availability of raw material needs to be addressed.

II.Engineering Goods

All products in the list are capable of being manufactured locally. Some components required for pharmaceutical industry are being imported. Hyderabad is the largest hub of pharma. In this regard, FISME can approach pharmaceutical associations and ask them to identify the specific items which are being imported within the engineering sector.

Moulds, Plastics related products can be manufactured. Feasibility of manufacturing Sewing machines needs to be explored further. Machine Tools manufacturing capacity exists. Already manufacturing units are located in Balanagar, Hyderabad. Pumps for agriculture could be included in the list. Seed processing machinery could be manufactured.

III.Defence and Aerospace

Parts of aeroplanes/helicopters can be manufactured with technology support.

IV.Bulk Drugs

Compounds containing pyrimidine ring or piperazine ring in structure (HS code- 29335990), derivatives of Penicillin with a penicillanic acid structure (HS code- 29411050) and Penicillins and its salts (HS Code- 29411010) are feasible for local manufacturing. Support required in area of technology, skill, quality, marketing and logistics.

V.Auto Components

Ancillary parts to ships/carriers cleaning oceans is a feasible product. Linkages are required for marketing and machinery upgradation.

VI.Plastics and Polymers

Compostable plastic should be included as Telangana MSMEs have the capacity to supply this product. Nearly, 3000 MSMEs are into production in Katedan cluster. DGFT can be advised to include a separate HS code in chapter 39 to address compostable plastic products separately from other plastic products. Plastic packaging hub can be turned into an eco-friendly compostable plastic industry. Financial support is required for scale up and marketing.

VII.Electronics & IT

Electronic automatic regulators/controllers (HS code- 90328910) can be manufactured with support in areas of quality and marketing. A team of professionals from COMSAT systems which manufactures antennae systems suggested that the parts of such communication equipment should be given thrust. The HS code suggested was 852990. Carbon fibre was also suggested as potential product group.

VIII.FMCG and Domestic Appliances

Potential products such as Safety shoes and safety products can be manufactured. Support for marketing, quality and testing is required.

General Suggestions/Feedback

Poor State of ITIs is a major constraint for MSMEs as it denies them skilled manpower. Students graduating from Government ITIs prefer to go to large industries. In Telangana, there is a prevailing inclination among youth to pursue IT-based jobs. There is need for Incubation centres to be set up at ITI level. The State Government needs to focus on vocational education.

Toyota model of vocational education could be explored. Toyota Technical Training Institute (TTTI) provides a specialized two- and three-year program focussing on development of knowledge, skill and comprehensive training in the automobile sector. Women from rural areas are also provided basic training on the shop floor.

Technical education needs a change in perception as it is viewed as left over job opportunities. Quality control centres are costly and delay in response increases transaction costs which impacts competitiveness.

Another issue is the lack of sufficient number of testing labs. Due to the shortage of labs, the product testing takes longer as existing labs are overburdened. Subsidized testing facility is required for MSMEs. MSMEs should be provided with support to achieve global compliances. Software which makes MSMEs more competitive and aligned with global standards need to be made available to MSMEs at a reasonable cost.

4.1 Selection and prioritization of 20 Product groups

Based on the stakeholder consultation held in Talnagana and discussion with industry experts (*Refer Annexure 5 for List of Industry Experts Consulted*), were able to identify the following products for which are currently being imported and have potential for domestic manufacturing. We also categorized the selected products in two groups. Group A includes those products which have higher feasibility of import substitution and can be taken up for domestic manufacturing. Group B includes those product groups which have potential but require further study and assessment before they can be considered for domestic manufacturing.

S.No	Name of Sector	Description of Products	Product Group as per priority
1.	Auto Components	Automotive Oil Pump	Group A
2.	Defense And Aerospace	Turbojet Air Filters	Group A
3.	Engineering goods	Moulding Dies for Rubber and Plastics	Group A
4.	Electronics & IT Hardware	loud speakers, whether or not mounted in their enclosures	Group A
5.	Health and Life Sciences	surgical instruments and appliances	Group A
6.	FMCG and Domestic Appliances	Non-Electronic Toys	Group A
7.	Engineering goods	Cabinet Hinges	Group B
8.	Electronics & IT Hardware	cable/wire-to-board connectors pin contacts and socket contacts	Group B
9.	Bulk Drugs	Compounds containing pyrimidine ring or piperazine ring in structure.	Group B
10.	Defense and Aerospace	Compressor for Defense and Aerospace	Group B
11.	Auto Components	Cylinder Blocks	Group B
12.	Auto Components	Flywheels for Auto Components	Group B
13.	Auto Components	Fuel injection equipment excluding injection pumps	Group B
14.	Auto Components	Gaskets	Group B
15.	Electronics & IT Hardware	Headphones/ earphones and combined microphone/speaker sets	Group B
16.	Engineering Goods	Injection/compression type moulds for rubber/plastics	Group B
17.	Engineering Goods	Jigs and fixtures for machine-tools	Group B
18.	Food and Beverages	Legumes. Miscellaneous Fodder Plants. Fruits and Vegetables. Root Crops. Cereals. Oil-Bearing Seeds and Oil Cakes	Group B
19.	Auto Components	Pistons for Auto Components	Group B
20.	Defense and Aerospace	Reduction Gearbox	Group B

4.2 Product Plans (Group A)

1. Automotive Oil Pump

Product Name	Automotive Oil Pump Related products- Oil Pump Gears, Oil Pump Cover, Oil Pump Body, Relief Valve
Controlling Standards	ISO 3104, JASO M345
Approx Import (per Annum) in Rs.	
Indigenous production (Per Annum) in Rs.	
Important Indian clusters	Chennai (Tamil Nadu), Pune (Maharashtra), Gurugram (Haryana), Bengaluru (Karnataka)
Important International Suppliers	China, Germany, Japan, South Korea, USA
Feasibility in Telangana	<p>Telangana has the potential to develop an automotive oil pump manufacturing cluster due to:</p> <ul style="list-style-type: none"> • Presence of automotive and auto component industries (potential market) • Availability of skilled workforce in precision engineering and manufacturing • Existing ecosystem of allied industries like casting, forging, and machining • Government support for the auto and auto components sectors
Major Barriers in Indigenous production	<ul style="list-style-type: none"> • Competition from established players and low-cost imports, especially from China • Limited domestic availability of high-quality raw materials like specialized alloys • Lack of advanced manufacturing technologies and automation • Stringent quality control and testing requirements for automotive components • Dependence on imported manufacturing equipment and machinery
i. Technology	<p>Current Scenario:</p> <ul style="list-style-type: none"> • Traditional manufacturing processes like casting, forging, and machining • Conventional designs with gears, rotors, and valves • Basic quality control and testing methods <p>Emerging Technologies:</p> <ul style="list-style-type: none"> • Additive manufacturing (3D printing) for complex and optimized designs • Improved materials like specialized alloys and coatings for better performance • Integrated sensors and electronics for monitoring and control • Advanced machining techniques for improved efficiency and reduced noise • Computational fluid dynamics for optimized flow and pressure management

ii. Market	<ul style="list-style-type: none"> Automotive Flywheel Market (Global): Valued at USD 7.4 billion in 2022 and projected to reach USD 10.7 billion by 2032 (CAGR of 3.8%).
iii. Cost	<ul style="list-style-type: none"> Basic Automotive Oil Pump: ₹2,000 - ₹10,000 (Depending on vehicle type and complexity) Advanced Automotive Oil Pump: ₹10,000 - ₹30,000+
iv. Investment	
Typical Investment Requirement	₹20 crores - ₹100 crores (For a medium-scale manufacturing unit)
Government support available	<ul style="list-style-type: none"> Subsidies and incentives under Automotive and Auto Components Policies Support from Telangana State Industrial Infrastructure Corporation (TSIIC) Assistance from Automotive Component Manufacturers Association (ACMA)
Facilitations Required	
i. Consultants and BDS	
ii. Low-cost funds	
iii. Tax and Tariff	

2. Turbojet Air Filters

Product Name	Turbojet Air Filters Related products- Air Filter Elements, Filter Media, Inlet/Bypass Filters, Particle Separators
Controlling Standards	ISO 16890, ISO 16890, AS9100
Approx Import (per Annum) in Rs.	
Indigenous production (Per Annum) in Rs.	
Important Indian clusters	Bengaluru (Karnataka), Hyderabad (Telangana), Pune (Maharashtra), Delhi-NCR
Important International Suppliers	USA, UK, France, Germany, Israel
Feasibility in Telangana	<p>Telangana has the potential to develop a manufacturing cluster for turbojet air filters due to:</p> <ul style="list-style-type: none"> Presence of aerospace and defense industries (potential market) Availability of skilled workforce in precision engineering and manufacturing Existing ecosystem of allied industries like textiles and filtration Government support for aerospace and defense sectors
Major Barriers in Indigenous production	<ul style="list-style-type: none"> Competition from established international players with advanced technologies Stringent quality and certification requirements for aerospace components Limited domestic availability of specialized filter media and materials Lack of advanced manufacturing capabilities and testing facilities

	<ul style="list-style-type: none"> • Dependence on imported raw materials and manufacturing equipment
Technology	<p>Current Scenario:</p> <ul style="list-style-type: none"> • Traditional filter media like fiberglass, pleated paper, and metallic mesh • Conventional manufacturing processes like weaving, pleating, and assembly • Basic quality control and testing methods <p>Emerging Technologies:</p> <ul style="list-style-type: none"> • Advanced filter media like nanofibers, ceramic fibers, and metallic foams • Additive manufacturing for complex filter geometries and customization • Computational fluid dynamics for optimized filter design • Automated inspection and testing using vision systems and AI • Self-cleaning and regenerative filter technologies
Market	Global Aerospace Filters Market was valued at USD 3.2 billion in 2022 and is projected to reach USD 4.8 billion by 2027 (CAGR of 8.4%).
Cost	Basic Turbojet Air Filters: ₹1,00,000 - ₹5,00,000 (Depending on size and complexity) Advanced Turbojet Air Filters: ₹5,00,000 - ₹20,00,000+
Investment	
Typical Investment Requirement	₹50 crores - ₹200 crores (For a medium-scale manufacturing unit)
Government support available	<ul style="list-style-type: none"> • Subsidies and incentives under Aerospace and Defense Policies • Support from Telangana State Aviation Academy and Aerospace Park • Assistance from Aerospace and Aviation Sector Skill Council (AA-SSC)
Facilitations Required	
Consultants and BDS	Product design, process optimization, quality control
Low-cost funds	
Tax and Tariff	

3. Moulding Dies for Rubber and Plastics

Product Name	Moulding Dies for Rubber and Plastics Related products Injection Molding Machines, Rubber Molding Presses, Extrusion Machines, Mold Release Agents, Cooling Systems, Mold Cleaning Equipment.
Controlling Standards	AIS- ISO: 294-3:2020
Approx Import (per Annum) in Rs.	
Indigenous production (Per Annum) in Rs.	
Important Indian clusters	Pune, Haryana, Gujarat, Faridabad
Important International Suppliers	China, Taiwan, UK, Japan, US, South Korea
Feasibility in Telangana	<p>Telangana has the potential to be a good location for moulding dies cluster due to the presence of several factors:</p> <ul style="list-style-type: none"> • Industry Presence: Telangana has a growing industrial sector, particularly in automotive and information technology. If your moulding dies cater to these industries, there could be a good demand. • Infrastructure: Manufacturing moulding dies requires a skilled workforce and access to specialized machinery. Research the availability of machine shops, tool rooms, and other relevant facilities in Telangana. • Availability of Raw Materials: Steel, aluminum, and beryllium copper are commonly used materials for moulding dies. Find out if these raw materials are easily available in Telangana and at what cost.
Major Barriers in Indigenous production	<ul style="list-style-type: none"> • Skill Gap: Moulding die production requires a skilled workforce with knowledge of die design, machining techniques, and quality control. A lack of such a workforce in Telangana could be a hurdle. • Limited Machine Shops: Manufacturing high-quality moulding dies requires access to specialized machinery like CNC machines, EDM (Electrical Discharge Machining) equipment, and grinding machines. The availability and affordability of these machines in Telangana might be a concern. • Complex Permitting Process: Obtaining necessary permits and licenses for setting up a moulding die production unit might be a bureaucratic hassle.
v. Technology	<p>Current Scenario:</p> <ul style="list-style-type: none"> • Growth in Automotive and IT: Telangana's growing industries in automotive and information technology could be pushing the demand for more advanced moulding dies. This might incentivize investment in newer technologies.

	<ul style="list-style-type: none"> • Technical Skill Development Programs: Look for government initiatives or private institutions offering training programs in advanced die design software, mold simulation techniques, and automation in die manufacturing. These programs would indicate a move towards a more technologically skilled workforce. • Industry Associations and Events: Look for participation from Telangana-based moulding die manufacturers in national or regional industry associations or trade shows focused on mouldmaking technologies. This could indicate a focus on staying updated with advancements. <p>Future Trends:</p> <ul style="list-style-type: none"> • Growing Demand: The Indian government's initiatives like "Make in India" could lead to increased demand for domestically produced moulded products, potentially boosting Telangana's moulding die industry. • Focus on Training: Government or private initiatives might offer training programs to bridge the skill gap and create a workforce familiar with advanced die design software and automation technologies. • Eco-friendly Materials: There might be a shift towards using recycled materials or biodegradable polymers in moulding processes, requiring compatible die materials and designs.
<p>vi. Market</p>	<ul style="list-style-type: none"> • The India - dies and molds market size is estimated to grow at a CAGR of 9.65% between 2022 and 2027. The market size is forecast to increase by USD 1,958.95 million. • Infrastructure Development: Telangana's focus on infrastructure development could create demand for specific moulded components, such as pipes, fittings, and electrical components. • Established Players: Existing moulding die manufacturers in other parts of India might already be supplying to Telangana, creating competition. • Sustainability Concerns: The growing focus on sustainability might lead to demand for dies compatible with recycled materials or biodegradable polymers. • Overall, the market dynamics of moulding dies in Telangana offer both opportunities and challenges.
<p>vii. Cost</p>	
<p>viii. Investment</p>	
<p>Typical Investment Requirement</p>	
<p>Government support available</p>	<p>Subsidies, Make in India, Tax Benefits</p>
<p>Facilitations Required</p>	
<p>iv. Consultants and BDS</p>	
<p>v. Low-cost funds</p>	
<p>vi. Tax and Tariff</p>	

4. Loudspeakers

Product Name	Loudspeakers Related products- Crossover networks, Speaker enclosures, Speaker grills, Speaker terminals, Damping materials, Audio amplifiers, Speaker cables, Speaker stands, Audio receivers/processors, Subwoofer cables.
Controlling Standards	Indian Standard: IS 12231: (Specification for Loudspeakers for Public Address Systems) IS 1342: (Specification for Loudspeakers (other than those for public address systems)) International Electrotechnical Commission (IEC): IEC 60065: (Audio, video and similar electronic apparatus - Safety requirements) IEC 60268: (Sound system equipment - Part 1: Loudspeakers)
Approx Import (per Annum) in Rs.	
Indigenous production (Per Annum) in Rs.	
Important Indian clusters	Maharashtra, Karnataka, Tamil Nadu
Important International Suppliers	China, South Korea, Japan
Feasibility in Telangana/India	High
Major Barriers in Indigenous production	i. Technology: Limited adoption of advanced techniques: <ul style="list-style-type: none"> • Finite Element Analysis (FEA): Software simulation for optimizing speaker design and performance is not widely used domestically. • Voice coil winding technologies: Expertise in advanced winding methods for achieving desired sound characteristics might be lacking. • Material science: Knowledge of utilizing high-performance materials for diaphragms and surrounds to improve sound quality and durability might be limited. ii. Market: <ul style="list-style-type: none"> • Competition: Established international players like those mentioned earlier dominate the market with brand recognition, economies of scale, and wider product ranges. • Brand building challenges: New entrants face difficulties in establishing brand awareness and reputation in a competitive market saturated with established brands. iii. Cost: <ul style="list-style-type: none"> • Economies of scale disadvantage: Indian manufacturers might struggle to compete with the cost advantage of international players with larger production volumes. • Initial investment: Setting up a manufacturing facility with advanced equipment and establishing a robust supply chain can involve significant upfront costs.

	<p>iv. Investment and Infrastructure:</p> <ul style="list-style-type: none"> • Data Gap: Specific details about the typical investment requirement are not readily available and require further research. • Skilled workforce: While Telangana has a growing pool of skilled professionals, training them in specialized loudspeaker manufacturing techniques might be necessary. • Infrastructure: Access to reliable power supply, industrial infrastructure with proper workspace, and testing facilities for quality control is crucial. <p>Additional Considerations:</p> <ul style="list-style-type: none"> • Intellectual Property (IP): Acquiring licenses or developing proprietary technologies for advanced designs and manufacturing processes can be challenging. • Evolving regulations: Keeping up with the latest safety and environmental standards can add complexity to the production process.
Typical Investment Requirement	
Government support available	
Facilitations Required	
vii. Consultants and BDS	
viii. Low-cost funds	
ix. Tax and Tariff	

5. Surgical instruments and appliances (including veterinary)

Product Name	Surgical instruments are tools or equipment used for purposes such as cutting, dissecting, gripping, holding, dilating or expanding, suctioning, retracting, or suturing. Products that can be considered for manufacturing under surgical instruments product group are- Scalpels, forceps, scissors, retractors, clamps, Bone Saw, Staplers
H S Code	90189099
Controlling Standards	IS 10599: Surgical Instruments - Needle Holders, Hegar's Pattern - Sizes, Shape and Dimensions IS 10637: 1992: Surgical instruments - Forceps, spinter, Arthur's pattern Shape and dimensions IS 10638: 1983: Forceps, Sponge Holding, Foerster's Pattern, Smooth or Serrated Jaws
Approx Import (per Annum) in Rs.	The import in 2022-23 was INR 2,777 crores. India imports approximately 80% of its medical devices from foreign suppliers. Between the periods of FY2016-17 to FY2021-22, India's medical device imports increased from INR 4,569 crore to INR 40,649 crore. During this period, the import figures for surgical equipment increased from INR 243 crore to INR 1,260 crore.
Indigenous production (Per Annum) in Rs.	The current market size of the medical devices industry in India is estimated at USD11 Bn. India is the fastest growing medical devices market amongst the emerging markets. The medical devices

	industry in India consists of large multinationals as well as small and medium enterprises (SMEs) growing at an unprecedented scale.
Important Indian clusters	There are about 21 medical devices clusters in the country spreading over 9 states. The highest number of 6 medical clusters are in Uttar Pradesh, followed by 4 each in Maharashtra and Haryana, 2 in Karnataka, and one each in Andhra Pradesh, Gujarat, Rajasthan, Tamil Nadu and Telangana. Majority of the large-scale medical devices industries are located in the cluster of Visakhapatnam, while some large scale industries are located in the clusters of Maharashtra.
Important International Suppliers	India depends heavily on 5 nations for import of surgical instruments – USA, China, Germany, Netherlands and Singapore.
Feasibility of Production in India/ Telangana	As part of its global expansion efforts and entry into the Indian market, the UK-based Surgical Instruments Group Holdings (SIGH) will be setting up a manufacturing facility in Hyderabad with an investment of INR 231 crore over the next two to three years. The facility will manufacture several devices that are currently not manufactured in India. Government has announced that it would open three medical devices parks. The 200-acre park is being established in Vishakhapatnam, by Government of Andhra Pradesh.
Major Barriers in Indigenous production	
ix. Technology	Industry/academia/research/medical fraternity partnerships and linkages are lacking. These linkages are imperative to increase accessibility of affordable and reliable surgical instruments and devices in India.
x. Supply Chain Management	Structural and technical inefficiencies contribute to the inadequate or low-quality supply of surgical products, preventing appropriate surgical care delivery. The procurement of high-volume consumables such as surgical sutures can lead to considerable expenditures if not purchased at a reasonable cost
xi. R&D	Boosting R&D in medical devices sector is the need of the hour and effective academia-industry partnership is indispensable for it. However, most of these innovations do not result in commercial translation. For optimal utilization of such innovations, the industry needs to join hands with the academia.
xii. Regulatory Framework	Uncertain regulatory framework and lack of compensation is also hampering growth of the market. The stringent standards and certification processes mandated by regulatory bodies impose substantial financial burdens and time constraints on manufacturers, often leading to increased product development costs and extended time-to-market for new surgical instruments. Registration and approval process for surgical instruments are arduous and time-consuming, resulting in delays in product commercialization and market entry.
Typical Investment Requirement	
Government support available	<ul style="list-style-type: none"> • The Government has launched voluntary scheme 'ICMED' or Indian Certification of Medical Devices to bring international respect to medical devices which are made in India. • Government has scrapped the requirements of obtaining a

	<ul style="list-style-type: none"> • ‘No Objection Certificate’ from the Ministry of Health for exports meant to developed countries. • 100% FDI has been allowed in order to promote local manufacturing. • National Medical Device Policy 2015 focuses on R&D, testing and quality for domestic manufacturing. • Production Linked Incentives: Government has launched Production Linked Incentive Schemes for medical devices with financial incentives worth \$400 Mn to boost domestic production • Development of Medical Devices Parks: New Medical Devices Parks upcoming in Himachal Pradesh, Uttar Pradesh, Madhya Pradesh, & Tamil Nadu to create a robust ecosystem for medical device manufacturing • Policy Support: Release of First National Medical Devices Policy, National Policy on R&D and Innovation in the Pharma-MedTech Sector in India and the Scheme for Promotion of Research and Innovation in Pharma MedTech Sector (PRIP) to boost research and innovation.
Facilitations Required	
x. Consultants and BDS	Export Promotion Council should be established which will be solely dedicated to the surgical instrument segment. It will initiate projects and studies to teach the best international skilling systems and medical device manufacturing processes.
xi. Procurement and Supply Chain	Promoting local suppliers can enable shorter and simpler supply chains, reducing the risk of stockouts, administrative costs, and time along the supply chain.
xii. Funding	A strong infrastructure is a pre-requisite for the expansion of the medical devices’ clusters. The medical devices clusters need to replace its structural backwardness and traditional technology with modern AI. For strong infrastructure, growth and expansion of medical devices clusters, a strong funding mechanism is one of the most crucial things to be considered.
xiii. Infrastructural Development	<p>There is a need to establish medical device parks, especially near Special Economic Zones. Doing so will improve connectivity as well as infrastructural capabilities, which can facilitate smooth integration with the medical device ancillary sector.</p> <p>This policy will help to establish concentrate clusters of manufacturing units, warehouses, laboratories and testing centres located nearby. It will help lower manufacturing expenses, increase affordability, enhance the quality of high-end medical devices and improve their domestic availability.</p>

6. Non-Electronic Toys

Product Name	Non-electronic toys etc (Basically the Mechanical toys are covered under this category) Other kinds of Non-Electronic Toys are- Games and Puzzles, Construction and Building Toys, Dolls, Ride-Ons, Sports and Outdoor Play Toys, Infant/Pre-school Toys, Activity Toys.
H S Code	95030020
Controlling Standards	<ol style="list-style-type: none"> 1. IS 9873 (Part 2): deals with flammability aspects 2. IS 9873 (Part 3): 2017 and IS 9873 (Part 9): 2017 prescribe safe limits for toxic elements like cadmium, mercury. 3. IS 9873 (Part 7):2017 prescribes requirements for finger paints, which are used in toy craft kits, etc., to be tested for various physical, chemical and electrical safety requirements to ensure that they are safe for children. 4. IS 15644:2006 addresses aspects related to the electrical safety of toys. 5. Toy Quality Control Order (TQCO) is a regulation under BIS for ensuring safety of non-electronic toys
Approx Import (per Annum) in Rs.	The import of non-electronic toys in 202-23 was INR 101 crores.
Indigenous production (Per Annum) in Rs.	The domestic market is estimated at Rs. 5750 Crores per annum at present (factory produced toys by MSMEs & large units plus imports).
Important Indian clusters	The toy industry in India is concentrated mainly in the small and cottage sectors, with about 4000 manufacturers in all, Ahmedabad, Bangalore, Hyderabad and Pune are fast-emerging as toy manufacturing hubs.
Important International Suppliers	The world market for toys is currently dominated by China that produces toys worth US\$ 29 billion every year (almost 36 percent share of total world market for toys)
Feasibility of Production in India/ Telangana	<p>Plastic toys market in India which constitutes a major market share in overall toys market in India is expected to grow at a CAGR rate of 20% in the next 5 years.</p> <p>Cloth & soft toys market in India is expected to grow at a CAGR rate of 18% in the next 5 years. Metal toys market in India is expected to grow at a CAGR rate of 15% in the next 5 years.</p> <p>Cardboard toys market in India controls second largest market share in entire toys market in India in terms of revenue. It is expected to grow at a CAGR rate of 22% in the next 5 years.</p>
Major Barriers in Indigenous production	About 70 per cent of the toy market in India is unorganised. small manufacturers are unable to upgrade to machinery production as taxes levy on the equipment is high.
xiii. Technology	Merely 12% of MSME Toys Manufacturers have their own full-fledged in-house Design studio & team of trained designers for product conceptualization, prototype development and R&D on design
xiv. Market	The toy industry is still highly fragmented, dominated by local producers. 90% of the market is unorganized and 4000 toy industry units being from the MSME sector.
xv. Cost	Indian manufacturers specialise in board games, soft and plastic toys and puzzles etc. Companies have to import materials from South Korea and Japan to manufacture these toys.

xvi. Certifications	Quality Certification has increased challenges for traditional craftsmen. They cannot afford to get these certifications.
xvii. Finance	Finance is a major hurdle for MSME toy manufacturers to grow, expand, modernize
Typical Investment Requirement	
Government support available	Government has called upon start-up entrepreneurs to explore the toy sector. It has increased basic customs duty from 20% to 60%. Quality Control for imported toys from September 1, 2020, to ensure that only products conforming to standards enter the country. Plan to promote traditional toys manufactured in the country by creating Toy Labs (a national toy fair for innovative Indian-themed toys).
Facilitations Required	
xiv. Consultants and BDS	
xv. Skilling	There are a very few Institutes, that are offering specialized manpower training courses related to toys manufacturing in the areas of toy design
xvi. Tax and Tariff	Tariffs to curb imports from China and make local toy manufacturers competitive
xvii. Quality	A large-scale skilling programme is key to ensuring that the toys that come out of these SEZs are of global quality for infants, children.

4.2 Way Forward

Today indigenisation of manufacturing is the most happening thing. After more than two decades of free trade and so-called WTO era, now all countries, including the developed nations, are reverting to Industrial Policies. In India also the Government is taking different measures firstly by subsidising indigenous manufacturing and, secondly, restricting import of substandard items through Quality Control Orders. Under the Production Linked Incentive Scheme (PLI) 14 industry sectors are provided incentives on enhanced production. Under Quality Control Order, already 129 products have been brought under compulsory quality control at entry point and more to come.

The MSMEs of India are not much benefitted by the above initiatives. The PLI scheme benchmarks are beyond the capacity of MSSMEs and the Quality Control Orders are feared to increase the cost of imported items, used by MSMEs to produce competitive products.

Hence, the RAMP scheme of GoI / World Bank may be an effective policy to encourage indigenous production and here the focus is on those items which are largely imported but could be manufactured by the MSMEs, once the disabling factors are addressed. So, the present intervention has been planned to identify the low hanging fruits in indigenisation and address the competency gaps of a sample group of MSMEs to be successful in making these products.

As the approach is unique, here instead of direct subsidising, which often has dubious success rates, Experts of required fields would be brought to the doorsteps of enterprises to handhold them to acquire required competencies, in technical, marketing, financial, regulatory and even in sustainability. It is proposed to take 20 selected items selected through a specialised tool which will be ultimately developed in 100 enterprises to start with.

For this experimentation, Telangana may be the best place. With its strong manufacturing base, high entrepreneurial acumen and overly supportive government policies, the proposed project may have best chance of success. While selecting the 20 items elaborate consultation was held with entrepreneurs of Telangana with the list of 62 or so products, brought out by the research as having high imports and embedded manufacturing competency in India.

While the success rate of the intervention is expected to be very good, even if some slippage happens, the experiment will generate rich data about challenges MSMEs face in developing new products, advantages or otherwise, of employing Business Development Service providers and how far industry policies can override normal market mechanisms. All these information could be used to develop industry policies for import substitutions and going to the next level, develop global value chains rooted in India. The prospect and effectiveness of this experiment should be assessed from such perspectives.

5.1 Budget

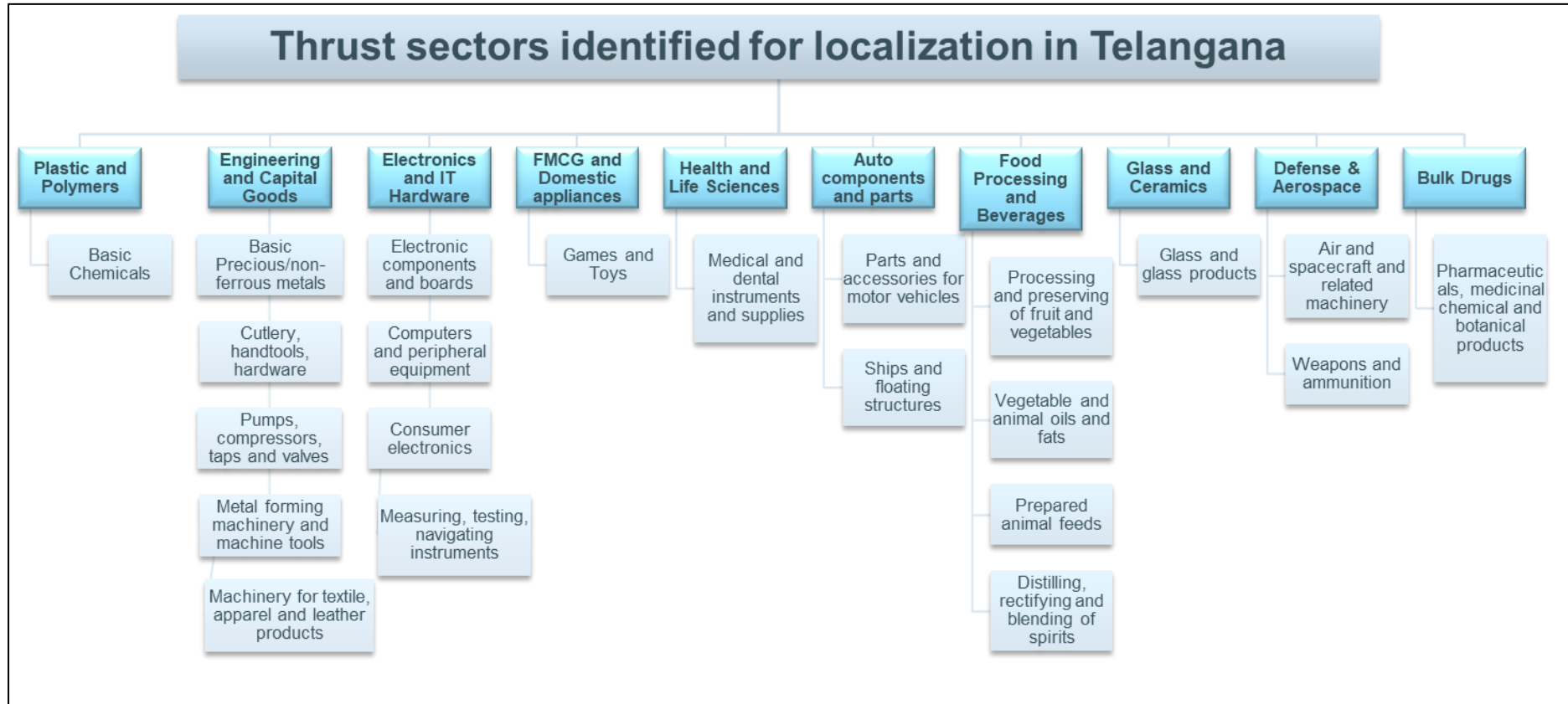
BUDGET FOR COMPONENT ON INTERVENTION FOR DEVELOPMENT OF 20 PRODUCT GROUPS FOR IMPORT SUBSTITUTION							
I. Allocation for Experts / Facilitators							
S. No	Position	No	Need	Months	Rate (Rs.)/ M/M	Cost	Remarks
1	Technical Expert	5	Services of Technical Experts are needed by Enterprises to assimilate new manufacturing technologies, standardisation of production processes, training of staff etc.	24	400000	48000000	1 Expert in each sector will be deployed for 24 months @Rs. 4,00,000 p.m.
2	International Expert	5	Experts having global exposures help in sourcing state of the art technologies and also most economic plant and machinery. They also bring in knowledge about global value chains.	5	1000000	25000000	1 Expert in each sector will be deployed for 5 months @Rs. 10,00,000 p.m.
3	Consultant on Quality	5	Quality is the most important aspect of acceptability of a product in the marketplace. Besides setting up of a quality system in the Enterprise the quality expert will also frame the requirements of a quality control order which will guard against import of sub-standard products.	24	400000	48000000	1 Expert in each sector will be deployed for 24 months @Rs. 4,00,000 p.m.
4	Consultant on Marketing	3	Handholding of an enterprise is essential to position new products in the marketplace, particularly to compete against imported items. The consultant will also help in segmentation of the market and competitive pricing.	35	500000	52500000	3 Experts will be deployed for 35 months each to cover all enterprises @Rs. 5,00,000 p.m.
5	Logistics Expert	3	Logistics is an important cost and efficiency component in the marketing. Services of an expert in supply chain management is crucial for competitiveness and cost management more so when imported components are essential for production.	35	600000	63000000	3 Experts will be deployed for 35 months each to cover all enterprises @Rs. 6,00,000 p.m.
6	Financial Consultant	5	Services of a financial expert or Chartered Accountant, in common terms, is required from the conception of any project; to study project viability, sourcing of funds, linkage with Banks and schemes of the Government.	24	300000	36000000	1 Expert in each sector will be deployed for 24 months @Rs. 3,00,000 p.m.

7	Legal and Lobbying Expert	2	The legal expert will facilitate conformity to legal environment of the state and centre. She will also have the important task of lobbying for favourable legal environment for the indigenous product.	6	600000	7200000	2 Experts will be deployed for 6 months each to cover all enterprises @Rs. 6,00,000 p.m.	
8	Environment and Sustainability Consultant	3	Today almost any product manufacturing has environmental implications and Enterprises need to take appropriate measures to minimise environmental footprints and carbon footprints. The Expert will facilitate on these issues.	24	500000	36000000	3 Experts will be deployed for 24 months each to cover all enterprises @Rs. 5,00,000 p.m.	
9	Intervention Manager	1	The Manager will be responsible for achieving project milestones / deliverables for 20 product lines in 200 enterprises	48	100000	4800000	One Intervention Manager for 48 months @ Rs. 1,00,000 p.m.	
10	Sectoral Coordinators	5	The coordinators will be located in Clusters / sectoral associations to facilitate implementation of the intervention and provide feedback to the Manager.	48	50000	12000000	5 Sectoral Coordinators for 48 months @ Rs. 50,000 per Coordinator p.m.	
II. Capacity Building, Travel & contingencies								
1	Travel- Intervention Manager	Lumpsum				480000		
2	Travel- Coordinators	Lumpsum				1200000		
3	Capacity Building, Mobilization	Knowledge sharing meetings, Focused Group Discussions will be organised in Cluster /Sectoral level				2000000	For whole project duration of 48 months	
4	Contingency Fund					17200000	at 5% of the project cost	
	Total Budget					353380000		

BUDGET FOR COMPONENT ON INTERVENTION FOR DEVELOPMENT OF 20 PRODUCT GROUPS FOR IMPORT SUBSTITUTION										
I. Allocation for Experts / Facilitators										
Sl.No	Position	No	Months	MM	Allocation MM for Gr A (6 products)	Allocation MM for Gr B (14 products)	Rate (Rs./ M/M)	Cost for Gr A	Cost for Gr B	Total Cost
1	Technical Expert	5	24	120	36	84	400000	14400000	33600000	48000000
2	International Expert	5	5	25	7	18	1000000	7000000	18000000	25000000
3	Consultant on Quality	5	24	120	40	80	400000	16000000	32000000	48000000
4	Consultant on Marketing	3	35	105	35	70	500000	17500000	35000000	52500000
5	Logistics Expert	3	35	105	35	70	600000	21000000	42000000	63000000
6	Financial Consultant	5	24	120	30	90	300000	9000000	27000000	36000000
7	Legal and Lobbying Expert	2	6	6	2	4	600000	2400000	4800000	7200000
8	Environment and Sustainability Consultant	3	24	72	25	47	500000	12500000	23500000	36000000
9	Intervention Manager	1	48	48	12	36	100000	1200000	3600000	4800000
10	Sectoral Coordinators	5	48	240	100	140	50000	5000000	7000000	12000000
								106000000	226500000	332500000
II. Travel & contingencies										
1	Travel- Intervention Manager							240000	240000	480000
2	Travel-Coordinators							200000	1000000	1200000
3	Capacity Building, Mobilization							1000000	1000000	2000000
4	Contingency Fund							5504000	11696000	17200000
	Total Budget							112944000	240436000	353380000

Annexures

Annexure 1(Thrust Sectors)



Annexure 2 (Feedback Form)

FEEDBACK FOR DEVELOPMENT OF PRODUCTS FOR IMPORT SUBSTITUTION

Name of Thrust Sector- AUTO COMPONENT

S.No	NAME OF PRODUCT	HS 8 Digit code	EXPERTISE/SUPPORT						Others(specify)
			Technology	Skill	Quality	Marketing	Legal/Compliance	Logistics	
1.	Parts and accessories of vehicles	87089900							
2.	Floating/Submersible drilling production platforms	89052000							
3.	Parts of semi diesel engines	84099990							
4.	Component parts for diesel engines for motor vehicles	84099941							
5.	Fuel injection equipment excluding injection pumps	84099930							
6.	Parts of diesel/semi diesel engines	84099949							

Annexure 3 (List of Participants for Stakeholder Consultation)

Sr. No.	Name of Department	Respective Person
1	Association of Lady Entrepreneurs (ALEAP) of India	Smt. Shravani and Smt. Ramadevi
2	Tribal Indian Chamber of Commerce and Industry (TICCI)	Sri Prasad Gangavath
3	The Federation of Telangana Chambers of Commerce and Industry (FTCCI)	Smt T Sujatha
4	Federation of Telangana Small (Msme) Industries Associations	Sri.B.Siva Sambhi Reddy
5	Confederation Of Women Entrepreneurs (COWE)	Ms.Madhu Tyagi, and Jyotsna Cheruvu
6	Telangana Industrialists Federation	Mr T Sudheer Reddy, Mr Gopala Rao
7	Geetha nagar Navajeevan nagar Industries welfare association	k. Upender reddy , Y. Madhusudan Reddy
8	Dalit Indian Chamber of Commerce & Industry (DICCI)	Rajendra kumar
9	All India forum for Small & Medium Industries, SVCIE, Balanagar Hyderabad	Shri M Prabakar Mudiraj Koli
10	Jeedimetha- Industry Association	Sai Kishore Koneru
11	Charlapally Industrial Association	Mr Chandra Shekar Reddy
12	DFO MSME	Mr. Sreedhar
13	Khadi Village Industries Commission (KVIC)	Shri. Manoj Lanka
14	Telangana Industrial Health Clinic	Shri. Venkateswarlu Sistla
15	Telangana and Andhra Plastics Manufacturers association (TAAPMA)	Sri Vimallesh Gupta
16	Confederation of All India Small & Medium Pesticides Manufacturers Association (CAPMA)	Sri M. Raja Mahender Reddy
17	Cropcare Chemicals Manufacturers Association- (CCMA)	Sri Y. Nayudamma
18	Telangana Composite Manufacturers Association	Dr K Narayanareddy, Sri BS sambireddy
19	Association of Corrugated Cases of Telangana	Shri Bharath
20	Telangana Spinning & Textile Mills Association (TSTMA)	Mr. Radha Krishna
21	Automotive Park Industries Association	Anand Reddy
22	Aerospace Defence Asso.	Sri Ram
23	Fibreglass Industries Association Administrative	Sivasambi Reddy
24	Karimnagar District Cotton Ginning Mills Association	D. Malla Reddy
25	Technocrats Industries Association	SP Jaswal
26	Saw mill Association of Telanagana	Mahilal Patel
27	Patancheru Industries Association	Janardhar Reddy
28	Telanagana Association for Pharma & Chemical Industries (TAPCI)	Narender
29	Telanagana Hydel Power Association	Keshav Reddy
30	Telanagana Steel Furniture Manufactures Association	Chandrer Patel
31	Telangana Biscuts, wafers Confectionery Manufacturers Associatio	Soma Suresh
32	Uppal Industries Association	SV Sudhir
33	Warangal District Granite Industries Association	Ch.L N Seshasai
34	Telangana Cotton Millers And Traders Welfare Assn	Ravinder Reddy
35	Small Scale Winding Wire Manufacturers Assn.	Rajendra Agarwal
36	Bulk Drug Manufacturers Assn	Shri.V.V Krishna Reddy
37	Telangana State Food Processing Society	Koganti. Dharani Kanth Koganti

Annexure 4: Table 1: HS 6-digit Products Identified to be Localised for the State of Telangana

Thrust Sectors	SUB SECTORS	Subsector Description	HS 2012 6-digit	Top Imported Products under each Sector
Electronics & IT Hardware	2610	Manufacture of electronic components and boards	854140	Photosensitive semiconductor devices, including photovoltaic cells and LEDS
			851762	Machines for the reception, conversion and transmission or regeneration of voice, images or other data, including switching and routing apparatus
			854239	OTHER: Electronic integrated circuits
			853400	Printed circuits
			853229	Other fixed capacitors
	2620	Manufacture of computers and peripheral equipment	847130	Portable automatic data processing machines, weighing not more than 10 kg. Consisting of at least a central processing unit, a keyboard and a display
			847150	Digital processing units whether/not containing one/two types of units
			847330	Parts and accessories of machines of heading no.8471
			847170	Storage units.
			852351	Solid-state non-volatile storage devices
	2640	Manufacture of consumer electronics	852580	Television cameras, digital cameras and video camera recorders
			851829	Loudspeakers, whether or not mounted in their enclosures
			851830	Headphones earphones and combined microphone/speaker sets
			851822	Multiple loud speakers; mounted in the same enclosure
			852859	MONITORS capable of directly connecting to and designed for use with an automatic data processing machine
	2651	Manufacture of measuring, testing, navigating and control equipment	903180	Other instruments, appliances and machines
			903289	Other automatic regulating or controlling instruments and apparatus
			902780	Other Instruments and Apparatus OF HDG 9027: Viscometers, Calorimeters, to measure surface tension of liquids
			852691	Other Radio Navigational Aid Apparatus: Direction measuring equipment, Instrument landing system, Direction finding equipment etc.

			902 790	Microtomes; parts and accessories of heading 9027	
Engineering and Capital Goods	2420	Manufacture of basic precious and other non-ferrous metals	710812	Other unwrought forms: gold	
			710692	Semi manufactured silver	
			740200	Unrefined copper; copper anodes for electrolytic refining	
			740311	Cathodes and sections of cathodes of refined copper	
	2593	Manufacture of cutlery, hand tools and general hardware	848071	Injection or compression type moulds for rubber or plastic	
			820900	Plates, sticks, tips and the like for tools, unmounted, of cermets	
			848079	Other Moulds for rubber or plastics	
			820730	Tools for pressing stamping or punching	
			830242	Other mountings, fittings suitable for furniture	
	2813	Manufacture of other pumps, compressors, taps and valves	848180	Other Appliances: Taps, cocks, Industrial valves	
			841480	Other Pumps, Gas Compressors Of a kind used in air-conditioning equipment; Free-piston generators for gas turbine; Turbo charger	
			841490	Parts of air or Vacuum pumps and compressors	
			848190	Parts Of the Items Under HDG 8481: Bicycles valves etc.	
			841391	Parts of pumps for liquids, whether or not fitted with a measuring device	
	2817	Manufacture of office machinery and equipment (except computers and peripheral equipment)	844399	Feeders, sorters and other parts of copying machines	
			844332	Printers Capable of Connecting to An Automatic Data Processing Machine or To A Network	
			847050	Cash registers	
			844339	Other type of printers	
			847290	Other Office Machines: Stapling machines, Digital duplicator, Automatic bank note dispensers, Coin sorting machines etc.	
	2822	Manufacture of metal-forming machinery and machine tools	845710	Machining centers	
846490			Other Machine-Tools of HD 8464: Grinding or polishing machines		
846693			Parts and accessories for HDG NOS.8456 TO 8461: Machine tools; machining centers; lathes		

			846630	Parts of dividing heads and other special attachments for machines
			846620	Parts suitable for Work Holders
	2826	Manufacture of machinery for textile, apparel and leather production	844630	Weaving machines for weaving fabrics of a width>30 cm, shuttless type
			845229	Other sewing machines
			844540	Textiles winding (including weft-winding) or reeling machines
			844790	OTHER MACHINES for making of tulle and lace; embroidery
			844520	Textile spinning machines
FMCG and Domestic appliances	3240	Manufacture of games and toys	950300	Tricycles, scooters, pedal cars and similar wheeled toys; dolls carriages; dolls; other toys; reduced-size
			950490	Other articles for casino game, parlor game etc.
Health & Life Sciences	3250	Manufacture of medical and dental instruments and supplies	901920	Apparatus for Ozone therapy, oxygen therapy, aerosol therapy, artificial respiration or other therapeutic respiration
			901890	Other instruments and appliances: for measuring blood pressure, stethoscope etc.
			901839	Catheters and the like; other needles
			901850	Other Ophthalmic Instruments and Appliances: Ophthalmoscopes, Tonometer, Ophthalmic lasers
			902139	Other artificial parts of the body
Plastic and Polymers	2011	Manufacture of basic chemicals	280920	Phosphoric acid and polyphosphoric acids
			284390	Other compounds; amalgams
			291736	Terephthalic acid and its salts
			293399	Other heterocyclic compounds with nitrogen hetro atom (s) only
			320611	Pigments and preparations based on titanium dioxide: Containing 80% or more by weight of titanium dioxide calculated on the dry matter
	2310		700719	Other toughened(tempered)safety glass

Glass and Ceramics	2310	Glass and glass products	700510	Non-wired glass having an absorbent reflecting/non-reflecting layer
	2310		701990	Other: Glass wool or glass fiber
	2310		700220	Glass Rods
	2310		701810	Glass beads, imitation pearls, imitation precious stones/ semi-precious stones
Defense and Aerospace	3030	Air and spacecraft and related machinery	880240	Aeroplanes and other aircraft, of an unladen weight exceeding 15000 kg
			841112	Turbo-jets of a thrust>25 kn
			880230	Aeroplanes and other aircraft, of an unladen weight >2000 kg but not excluding 15000 kg
			880212	Helicopters of an unladen wt> 2000 kg
			880330	*Other parts of aeroplanes or helicopters
			841191	Parts of turbo-jets/turbo propellers
			840910	Parts for aircraft engines
			840710	Air-craft engines
			841122	Turbo-propellers of a power>1100 kw
			880260	Spacecraft (incl satellites and suborbital)/spacecraft launch vehicles
			880320	*Under carriages and parts thereof
			880220	Aeroplanes and other aircraft, of an unladen weight not exceeding 2000 kg
			880211	Helicopters of an unladen wt<=2000 kg
			880390	*Other parts of goods of heading 8801 or 8802
			841111	Turbo jets of a thrust <=25 kn
			880310	*Propellers and rotors and parts thereof
			841121	Turbo- propellers of a power<=1100 kw
841210	Reaction engines other than turbo-jets			
880100	Balloons and dirigibles; gliders, hang gliders and other non-powered aircraft:			
Weapons and Ammunitions	2520	Weapons and ammunition	930690	Other (bombs, grenades etc.)
			930599	Parts of heading 9302 and 9304
			930400	Other arms (for example, spring, air or gas guns and pistols, truncheons), excluding those of heading 9307
			930621	Shotgun cartridges
			930629	Shotgun parts and air gun pellets
	2930		870899	Other parts and accessories of vehicles of heading 8701-8705

Auto components	2930	Parts and accessories for motor vehicles	870840	Gear boxes
	2930		840999	Parts of other engines (diesel/semi diesel) other than parts for aircraft engines
	3011	Ships and floating structures	890590	Other vessels, fire floats etc.
	3011		890520	Floating/submersible drilling/production platforms
Food and Beverages	1030	Processing and preserving of fruit and vegetables	80410	Dates fresh or dried
	1040	Vegetable and animal oils and fats	151110	Crude palm oil and its fractions
	1040		150710	Soya bean crude oil whether/not degummed
	1040		151211	Crude oil of sunflower and safflower seed
	1040		151190	Refined palm oil and its fractions
	1040		150790	Other soya bean oil and its fractions
	1040		230400	Oil-cake and other solid residue w/n ground/in pellets form obtained from soya-bean oil extraction
	1040		151590	Other fixed vegetable fats and oils and their fractions
	1080		Prepared animal feeds	230990
	1101	Distilling, rectifying and blending of spirits	220830	Whiskies
Bulk Drugs	2100	Pharmaceuticals, medicinal chemical and botanical products	293319	Other heterocyclic compounds containing an unfused pyrzi ring
			294190	Other: rifampicin and its salts
			294110	Penicillin and their derivatives with a penicillanic acid structure salts thereof
			293359	Other metro cyclic compounds containing a pyrimidine ring/piperazine ring in the structure
			292429	Other cyclic amides and their derivatives and salts thereof

Annexure 5: List of Industry Experts Consulted

Name	Agency	Sector
Arun Kumar	Dy Director, Chemical, Ministry of MSME (retired)	Chemical / Pharma/ Bulk Drugs
Kuldeep Singh	Dy Director, Hosiery, Ministry of MSME	Hoisery /Textile
Raj Kumar Arora	Assistant Director, Mechanical Ministry of MSME (retired)	Auto parts, Engineering,
TC Kansal	Industrialist, Crystal Pharmaceuticals, Ambala	Pharma / Bulk Drugs
S.V. Sharma,	Director, Ministry of MSME	
K.K.Roy	Industrialist, Kalison Telvent , Dwarika	Electronic/ IT
C.S.Prakash	Industrialist, Pushpak Products India Pvt Ltd, Bangalore	Defence and Aero space

Annexure 6 (Product Charts for Group B)

1. Cabinet Hinges

Product Name	Cabinet Hinges for Engineering goods Related products- Door Closers, Door Stops, Drawer Slides
Approx Import (per Annum) in Rs.	
Indigenous production (Per Annum) in Rs.	
Important Indian clusters	Jamnagar, Aligarh, Gujarat, Delhi
Important International Suppliers	China, Japan, Germany, Taiwan
Feasibility in Telangana	<ul style="list-style-type: none"> • Market Demand: India has a growing furniture industry, which translates to a strong demand for cabinet hinges. • Raw Material Availability: Steel, the primary material for cabinet hinges, is readily available in India. • Skilled Workforce: India has a large pool of skilled metalworkers who can be trained in hinge manufacturing. • Government Support: The Indian government is promoting manufacturing through initiatives like 'Make in India,' which could provide some benefits for hinge manufacturers.
Major Barriers in Indigenous production	<ul style="list-style-type: none"> • Established Players: Clusters like Jamnagar in Gujarat house well-established manufacturers with economies of scale and brand recognition, making competition tough for new entrants. • Imported Hinges: Affordable, mass-produced cabinet hinges from countries like China can be a price barrier for domestic manufacturers.
xviii. Technology	<ul style="list-style-type: none"> • Limited Automation: The industry might rely on traditional manufacturing methods, while advanced techniques like CNC machining for high-precision hinges might require investment. • Quality Control Infrastructure: Ensuring consistent quality across production batches necessitates robust quality control measures, which can involve initial investment.
xix. Raw Material and Supply Chain	<ul style="list-style-type: none"> • Fluctuations in Steel Prices: Steel is the primary material for cabinet hinges, and price fluctuations can impact production costs and profitability. • Reliance on Imported Components: Certain specialized hinge components might need to be imported, increasing dependence on external suppliers and potentially affecting cost and lead times.

2. Cable/wire-to-board connectors- pin contacts and socket contacts

Product Name	Cable/wire-to-board connectors- pin contacts and socket contacts Related products- Wire Harnesses, Crimp Tools, Terminal Blocks, Header Connectors, Jumper Wires, Cable Assemblies, Connector Housings, Pin Headers, Connector Accessories, Terminal Crimp Contacts.
Controlling Standards	ISO: 14001
Approx Import (per Annum) in Rs.	Rs 209 crores (2023 data)
Indigenous production (Per Annum) in Rs.	Rs 6.5 trillion (2022 data)
Important Indian clusters	Andhra Pradesh, Karnataka, Maharashtra, Tamil Nadu, Telangana
Important International Suppliers	Germany, UAE, United States, UK, China
Feasibility in Telangana	<ul style="list-style-type: none"> • Telangana has the potential to develop a strong electronics & IT hardware cluster due to the presence of several factors: • Government Support: The Telangana government has actively promoted the IT and electronics sector through initiatives like TS-iPASS and electronics policy. • Existing Ecosystem: Hyderabad, the capital of Telangana, already has a strong IT presence with major companies and a skilled workforce. This can provide a base for attracting electronics manufacturers who can leverage the existing talent pool. • Infrastructure: The state government is focusing on improving infrastructure like industrial parks & connectivity.
Major Barriers in Indigenous production	<ul style="list-style-type: none"> • Competition: Established players in other Indian states may pose competition. • Land Availability: Ensuring sufficient land at competitive rates for setting up manufacturing units. • Skilled Workforce: While there's a skilled IT workforce, there might be a need for additional training programs specific to electronics manufacturing.
xx. Technology	<p>Current Scenario:</p> <ul style="list-style-type: none"> • Growth and Focus: Telangana is actively working towards becoming a major electronics and IT hardware hub. The government's initiatives like TS-iPASS and Electronics Policy indicate a strong push for attracting manufacturers. • Existing Landscape: Hyderabad, the state capital, boasts a well-established IT sector with major companies and a skilled IT workforce. This existing talent pool can be a major advantage for electronics manufacturers.

	<ul style="list-style-type: none"> Emerging Infrastructure: Development of electronics parks with modern facilities is underway to provide a plug-and-play environment for companies. Improved transportation infrastructure is likely to support the movement of goods and materials. Possible Limitations: Data on the current production capacity or established electronics manufacturers in Telangana might be limited. While there's a strong IT workforce, there might be a gap in terms of manpower specifically trained for electronics manufacturing. <p>Future Trends:</p> <ul style="list-style-type: none"> Government Initiatives: Continued support from the Telangana government through policy Tailwinds to further incentivize investments and attract leading manufacturers and focusing on specific segments like AI hardware or advance components manufacturing. Leveraging Existing Strengths: Building upon Hyderabad's strong IT base to attract electronics companies seeking integration with software and services. Programs to bridge the skill gap by training existing IT professionals or fresh graduates for electronics manufacturing roles. Technological Advancements: Encouraging investments in manufacturing facilities for advanced electronics like next-generation semiconductors, 5G equipment, or wearable technology. Alignment with national initiatives like "Make in India" to promote domestic production and attract global electronics companies looking to diversify their supply chains. Possible Challenges: Competition from established electronics manufacturing hubs in other Indian states. Encouraging investments in research and development (R&D) to foster innovation and domestic design capabilities. Focus on developing eco-friendly manufacturing practices and promoting energy-efficient electronics.
xxi. Market	<p>The India IT Hardware Market size is estimated at USD 19.77 billion in 2024, and is expected to reach USD 27.86 billion by 2029, growing at a CAGR of 7.10% during the forecast period (2024-2029).</p> <ul style="list-style-type: none"> Government Push: Initiatives like TS-iPASS and Electronics Policy attract manufacturers with subsidies and infrastructure. Leveraging IT Hub: Hyderabad's strong IT base offers a skilled workforce and potential for hardware-software integration. Focus on High-Tech: Manufacturing of advanced electronics like AI hardware and 5G equipment. Collaboration: IT and hardware companies working together for integrated solutions. Overall, Telangana's market holds potential to be a major electronics and IT hardware hub in India.
Government support available	TS-iPASS and Electronics Policy
Tax and Tariff	18% CGST, Custom duty 20%

3. Compounds containing pyrimidine ring or piperazine ring in structure.

Product Name	Compounds containing pyrimidine ring or piperazine ring in structure. A Pyrimidine Ring (Hydrogenated Or Anhydrous) Or A Piperazine Ring For Carrying Out Research Works And Not Containing Narcotics Psychotropic Drugs Psychotropic Drugs (1- (3-Hydroxyphenyl) Piperazine) - Piperazine is a chemical compound characterized by a six-membered ring that incorporates two nitrogen atoms situated at opposing positions. It's often used as a starting material in the pharmaceutical industry for various drugs. These derivatives are prevalent in medicine, particularly as anthelmintics (to treat worm infections) and as agents in the treatment of certain psychological disorders.
H S Code	29335990
Controlling Standards	The primary regulatory body for pharmaceutical sector is CDSCO - Central Drugs Standard Control Organization. A pharmaceutical company in India must have DCGI approval to sell a new prescription drug.
Approx Import (per Annum) in Rs.	India Imports: USD: HS: 29335990: Other Compounds Containing a Pyrimidine Ring Whether or Not Hydrogenated or Piperazine Ring in Structure data was reported at 282.400 USD mn in 2018
Important International Suppliers	In value terms, the United States led the market, alone. The second position in the ranking was occupied by Germany. It was followed by Greece. Please mention the Source: (https://www.indexbox.io/search/compounds-containing-a-pyrimidine-ring-market/)
Feasibility of domestic production	The global demand for Piperazine Market is presumed to reach the market size of nearly USD 108.57 MN by 2030 from USD 84.91 MN in 2022 with a CAGR of 3.12% under the study period 2023 - 2030. The characteristics of the piperazine template make this molecular subunit a useful and well positioned system in the rationale design of drugs.
Technology	synthetic methods are optimized through the careful control of the reaction conditions regarding solvents, reagents, temperatures and work-up procedures.
Regulatory Control	The synthesis of chemical compounds, especially those intended for pharmaceutical use, must comply with stringent regulatory standards set by authorities like the Central Drugs Standard Control Organization (CDSCO). Meeting these standards requires substantial investment in infrastructure
IPR	Many compounds containing pyrimidine or piperazine rings may be protected by patents owned by other companies or organizations. This can restrict the ability of Indian companies to produce or commercialize these compounds without proper licensing agreements, leading to legal barriers.
Government support available	The Department of Pharmaceuticals has conveyed 'in-principle' approval to the proposals of the three States Viz, Himachal Pradesh, Gujarat and Andhra Pradesh under the Scheme for "Promotion of Bulk Drug Parks", a key initiative to support the Bulk Drugs manufacturing in the country. Production Linked Incentive (PLI) Scheme for Promotion of Domestic Manufacturing of critical Key Starting Materials (KSMs)/ Drug Intermediates and Active Pharmaceutical Ingredients (APIs) in the Country.

4. Compressor for Defense and Aerospace

Product Name	Compressor for Defense and Aerospace Related products- Axial compressors, Centrifugal compressors, Scroll compressors, Piston compressors.
Important Indian clusters	Bangalore, Karnataka, Pune, Maharashtra, Hyderabad, Telangana, Chennai, Tamil Nadu
Important International Suppliers	United States, Germany, France, Japan, Russia
Feasibility in Telangana	Telangana has the potential to develop a strong defense and aerospace compressor manufacturing sector due to several factors: <ul style="list-style-type: none"> • Existing ecosystem: The state has several DRDO (Defence Research and Development Organisation) labs and public sector undertakings (PSUs) involved in defense production like Bharat Dynamics Limited (BDL). This ecosystem can provide a market and support network for new ventures. • Government support: The Telangana government has established policies and initiatives to promote the sector. • Skilled workforce: The state has a growing pool of skilled manpower in the engineering and manufacturing sectors.
Major Barriers in Indigenous production	<ul style="list-style-type: none"> • Technology gap: India lags behind developed nations in advanced technologies for manufacturing high-performance and reliable compressors for defense and aerospace applications. • Economies of scale: Established international players benefit from economies of scale, making it challenging for domestic manufacturers to compete on price. • Quality standards: Meeting stringent quality standards required by automakers can be a hurdle for new entrants.
Technology	<p>Current Scenario:</p> <ul style="list-style-type: none"> • Indian manufacturers primarily rely on established technologies for compressor production. • Adoption of advanced technologies like: <ul style="list-style-type: none"> • Additive manufacturing for complex designs and lightweight components. • Advanced materials like titanium and Inconel for high-temperature and high-pressure applications. • Smart manufacturing for better process control and quality assurance. <p>Future Trends:</p> <ul style="list-style-type: none"> • Growing demand for high-performance and fuel-efficient aircraft and weapon systems will drive the adoption of advanced technologies and materials. • Increased focus on miniaturization and lighter weight components.
Market	The demand for bumpers is driven by: <ul style="list-style-type: none"> • Increasing defense and aerospace spending globally. • Development of new and advanced aircraft and weapon systems. • Growing demand for unmanned aerial vehicles (UAVs).

5. Cylinder Block

Product Name	Cylinder Block for Auto Component Related products- Performance Engine Blocks, Head Gaskets, Freeze Plugs
Important Indian clusters	Pune, Tamil Nadu, Haryana, Punjab, Gujarat
Important International Suppliers	Canada, Japan, Germany
Feasibility in Telangana	<p>Telangana has potential to develop a strong auto component cluster for Cylinder block manufacturing due to several factors:</p> <ul style="list-style-type: none"> • Growing Auto Industry: India has a booming auto industry, and Telangana is emerging as a significant player. This creates a potential market for locally produced cylinder blocks. • Existing Infrastructure: Telangana has industrial zones with developed infrastructure, including reliable power supply, transportation networks, and access to raw materials. • Skilled Workforce: The state has a growing pool of skilled workers in metal casting, machining, and other relevant areas. This workforce can be further trained for cylinder block manufacturing.
Major Barriers in Indigenous production	<ul style="list-style-type: none"> • Competition: Established clusters like Pimpri-Chinchwad (Maharashtra) and Hosur (Tamil Nadu) have a head start in cylinder block production with a strong supplier ecosystem. • High Investment: Setting up a cylinder block manufacturing unit requires significant capital investment for machinery, tooling, and quality control procedures. • Supplier Network: Building a reliable network of suppliers for raw materials, castings, and other components can be challenging, especially initially.
Technology	<p>Current Scenario:</p> <ul style="list-style-type: none"> • Metal Casting: Telangana has a growing metal casting industry, with foundries capable of producing cast iron and aluminum parts. However, the technological level for high-pressure die casting or lost-foam casting, often used for complex cylinder blocks, might need further development. • Machining: The state has a growing pool of machine shops with CNC machining capabilities. However, advanced techniques like 5-axis machining for intricate cylinder block features might be less prevalent. <p>Emerging Technologies:</p> <ul style="list-style-type: none"> • 3D Printing: While not yet mainstream for mass production of cylinder blocks, Telangana could explore 3D printing for prototyping or low-volume, customized cylinder block designs. • Additive Manufacturing: Similar to 3D printing, additive manufacturing techniques could be explored for creating complex cylinder block features or lightweight designs.
Market	<p>As of now, Telangana isn't a major player in cylinder block manufacturing. Established clusters like Pimpri-Chinchwad and Hosur dominate the market.</p> <p>However, Telangana's burgeoning auto industry creates a potential local market for cylinder blocks. Auto manufacturers setting up shop in the state could drive demand.</p>

6. Flywheel for Auto Components

Product Name	Flywheel for Auto Component Related products- Flywheel ring gear, Dual-mass flywheel (DMF), Flexplate
Important Indian clusters	Pune, Maharashtra, Chennai, Tamil Nadu, Gurgaon, Haryana, Bengaluru, Karnataka
Important International Suppliers	China, Japan, Germany, South Korea, Italy
Feasibility in Telangana	Telangana has potential to develop a strong auto component cluster for flywheel manufacturing due to several factors: <ul style="list-style-type: none"> • Growing Auto Industry: Telangana has a developing auto industry with a presence of major manufacturers like Hyderabad Duty Free Park (where multiple carmakers are located). This could ensure a potential market for your flywheels. • Government support: The Telangana government offers incentives for the auto industry, including tax breaks and subsidies. This could be beneficial for setting up a manufacturing unit. • Skilled workforce: The state has a growing pool of skilled workers in the mechanical and engineering sectors, which could be a good resource for your workforce.
Major Barriers in Indigenous production	<ul style="list-style-type: none"> • Established Players: India already has a well-established auto parts manufacturing industry. Existing companies might already be producing flywheels, making it difficult for new entrants to gain market share. • Advanced Flywheels: Manufacturing certain types of flywheels, like dual-mass flywheels, requires specialized machinery and technical expertise. Developing this capability domestically might involve significant investment. • Raw Materials: Sourcing high-quality raw materials like specific steel alloys or composites used in flywheel construction might be limited domestically, leading to dependence on imports and potentially higher costs.
Technology	<p>Current Scenario:</p> <ul style="list-style-type: none"> • Material Science: Traditional flywheels are constructed from high-strength steel or cast iron. Advancements include: <ul style="list-style-type: none"> • Utilizing composite materials like carbon fiber for lighter weight and higher energy density flywheels. • Research on exotic materials like advanced alloys or ceramic composites for even better performance. • Manufacturing Processes: Current methods involve machining, forging, and casting. <p>Emerging Technologies:</p> <ul style="list-style-type: none"> • Advanced Composites: Research on next-generation composite materials with even higher strength-to-weight ratios is ongoing. • Nanotechnology: Nanoparticles incorporated into materials could lead to improved strength and energy storage capacity. • Active Control Systems: Integrating sensors and control systems with flywheels could enable real-time optimization of performance and energy management.
Market	Automotive Flywheel Market (Global): Valued at USD 7.4 billion in 2022 and projected to reach USD 10.7 billion by 2032 (CAGR of 3.8%).
Cost	Standard Flywheel: These are typically the most affordable option, with costs ranging from USD 50-150 (approx. INR 4000-12000) depending on size and complexity.

7. Fuel injection equipment excluding injection pumps

Product Name	Fuel injection equipment excluding injection pumps Related products- Fuel injectors, fuel pressure regulators, fuel filter, fuel rail, fuel line, sensors.
Controlling Standards	AIS-028: Gaseous fuels in internal combustion engine vehicles. ISO: 7876-5
Important Indian clusters	Pune, Maharashtra Gurgaon, Haryana Chennai, Tamil Nadu Karnataka
Important International Suppliers	Germany, Japan, United States, Italy
Feasibility in Telangana	<p>Telangana has the potential to develop a strong Fuel injection equipment cluster due to the presence of several factors:</p> <ul style="list-style-type: none"> • Growing automotive industry: Telangana has a growing automotive industry, particularly with the presence of major manufacturers like Hyderabad-based Bharat Forge and several component makers. This growing demand for vehicles could create a market for locally produced fuel injection equipment. • Availability of skilled workforce: The state has a workforce with skills in areas like mechanical engineering and electronics, which could be beneficial for setting up a fuel injection equipment manufacturing unit. • Government support: The Telangana government has been actively promoting the development of the manufacturing sector by offering incentives and establishing industrial parks. This could provide support for setting up a new manufacturing unit.
Major Barriers in Indigenous production	<ul style="list-style-type: none"> • Competition: The market for fuel injection equipment is already established with well-known international players like Bosch and Denso. Competing with these established brands in terms of cost, technology, and brand reputation could be challenging. • High initial investment: Setting up a manufacturing unit for fuel injection equipment requires a significant initial investment in machinery, technology, and infrastructure. This could be a barrier for potential investors. • Technological advancements: The technology of fuel injection equipment is constantly evolving. Keeping up with these advancements and staying competitive requires ongoing research and development, which can be expensive.
Technology	<p>Current Scenario:</p> <p>Adoption of BS-VI emission standards: Since April 2020, India has implemented stricter BS-VI emission standards, similar to Euro 6 norms. This has driven the demand for fuel injection equipment that can meet these stringent emission regulations. This trend is likely to hold true in Telangana as well, as the state adheres to national emission standards.</p> <p>Focus on fuel efficiency: With rising fuel costs, there's an increasing focus on fuel-efficient vehicles. This is leading to the development and adoption of fuel injection systems that optimize fuel delivery and engine performance, potentially influencing the type of equipment demanded in Telangana.</p>

	<p>Shift towards electronic fuel injection (EFI) systems: Compared to mechanical fuel injection systems, EFI offers more precise control over fuel delivery, leading to better fuel efficiency and performance. The market is gradually shifting towards EFI systems, and this trend is likely to be reflected in Telangana as well. Often require significant investments in equipment and expertise.</p> <p>Future Trends:</p> <p>Greater focus on emission control: As environmental concerns escalate, stricter emission regulations are expected in the future. This will necessitate continued advancements in fuel injection technology to ensure compliance with upcoming standards. Technologies like lean burn combustion and common rail injection systems might become more prevalent.</p> <p>Smarter and more connected systems: The integration of sensors and electronics in fuel injection equipment is likely to increase. This could lead to "smart" systems that monitor engine performance, optimize fuel delivery in real-time, and even offer diagnostic capabilities.</p> <p>Alternative fuel compatibility: With the growing focus on alternative fuels like CNG and biofuels, fuel injection equipment might need to adapt to cater to these fuels efficiently. This could involve developing new injector designs and materials compatible with these alternative fuels.</p>
Market	<p>The Indian auto component market is expected to reach USD 191 billion by 2032, with a CAGR of 9.9%.</p> <p>Increased demand for aftermarket equipment: As the number of vehicles on the road grows, the demand for aftermarket fuel injection equipment for repairs and replacements is likely to rise.</p> <p>Potential for localization: If the market for fuel injection equipment in Telangana expands significantly, there might be an incentive for local manufacturing to cater to the demand. This could involve established players setting up production facilities in the state or the emergence of new domestic manufacturers.</p> <p>Increased competition: The market is likely to see continued competition from established international players and potentially new entrants, both domestic and foreign.</p> <p>Overall, the technology and market landscape for fuel injection manufacturers in India presents both challenges and opportunities. Embracing technological advancements, focusing on niche markets, and catering to evolving consumer preferences will be crucial for success in this dynamic sector.</p>
Cost	\$500 - \$2500
Investment	\$300 - \$900
Government support available	PLI scheme, FAME India II scheme
Tax and Tariff	28% GST 7.5-10% import duty 15% basic duty

8. Gaskets for Auto Components

Product Name	Gaskets for Auto Component Related products- Hydraulic Seals, Pneumatic Seals, Mechanical Seals
Important Indian clusters	Delhi-NCR, Pune, Chandigarh, Chennai
Important International Suppliers	China, Japan, Germany, US
Feasibility in Telangana	<ul style="list-style-type: none"> • Market Demand: The Indian auto industry is experiencing significant growth, creating a strong demand for auto components, including gaskets. • Availability of Raw Materials: Rubber, a common gasket material, is readily available in India, and other materials can be sourced domestically or imported. • Skilled Workforce: Telangana has a growing pool of skilled workers in the manufacturing sector. With proper training, this workforce can be adapted to gasket production. • Government Support: The Indian government's initiatives like 'Make in India' offer potential benefits like easier loan access and relaxed regulations for auto component manufacturing.
Major Barriers in Indigenous production	<ul style="list-style-type: none"> • Established Players: Existing clusters like Pune and NCR house well-established manufacturers with economies of scale, brand recognition, and strong relationships with major automakers, making it difficult for new entrants to compete. • Global Competition: Affordable, mass-produced gaskets from countries like China can be a price barrier for domestic manufacturers.
Technology	<p>Advanced Manufacturing Techniques: Manufacturing high-quality gaskets for modern vehicles often requires specialized technologies like precision cutting, mold-making, and material science expertise. Setting up such capabilities can involve significant investment.</p> <p>Quality Control Infrastructure: Ensuring consistent quality across production batches necessitates robust quality control measures, including testing equipment and trained personnel. This can be another initial investment hurdle.</p>
Market	The market is witnessing a growing demand for gaskets made from innovative materials like fluoroelastomers (FKM) and silicone rubber, offering superior properties for demanding applications.
Raw Material and Supply Chain:	<p>Fluctuations in Material Costs: Rubber, a common gasket material, and other materials can experience price fluctuations, impacting production costs and profitability.</p> <p>Reliance on Imported Materials: Certain high-performance gasket materials or specialty coatings might need to be imported, increasing dependence on external suppliers and potentially affecting cost and lead times.</p>

9. Headphones/ earphones and combined microphone/speaker sets

Product Name	Headphones/ earphones and combined microphone/speaker sets
H S Code	85183000
Controlling Standards	ISO 226:2003, which specifies a standard equal-loudness contour for pure tones and is commonly used as a reference for headphone frequency response. ISO 11904-2:2004 specifies methods for measuring the sound quality of headphones
Approx Import (per Annum) in Rs.	The import in 2022-23 was INR 5314 crores.
Indigenous production (Per Annum) in Rs.	The production of headphones in India in terms approx. 103.8 million pieces in 2023. Revenue is projected to grow annually by 3.10% (CAGR 2024-2028). India's Headphones and Earphones Market size is estimated to grow at a CAGR of around 5.8% during the forecast period, i.e., 2024-30
Important Indian clusters	Major clusters for manufacturing of Headphones and Earphones are Chennai, Bangalore, Mumbai.
Important International Suppliers	China, Germany, US, Vietnam are the major international suppliers
Feasibility of Production in India/ Telangana	The growth of the headphones and earphones market imputes to the adoption of work from home & hybrid work culture, increasing growth of E-commerce, social media, government support, etc. The global in-ear headphones market is witnessing several emerging trends. Firstly, the increasing popularity of wireless technology is leading to a rise in demand for wireless in-ear headphones, which offer convenience and freedom of movement. Secondly, the growing adoption of true wireless technology, where individual earbuds are completely untethered, is gaining momentum. Thirdly, the shift towards smart in-ear headphones, equipped with features like noise cancellation and voice assistance, is gaining traction among tech-savvy consumers.
Major Barriers in Indigenous production	About 70 per cent of the toy market in India is unorganised. small manufacturers are unable to upgrade to machinery production as taxes levy on the equipment is high.
Regulatory control	Regulations are in place to prevent interference with other wireless devices and ensure efficient spectrum utilization. Complying with these regulations could be a complex and costly process for headphone manufacturers.
Branding	The Consumer preference in the Headphones and earphones is for branded products such as Sony, Samsung, JBL and Boat. The Indian manufacturers are not able to match the sound quality and design of international brands.
Consultants and BDS	Setting up headphone and earphone manufacturing would require a significant investment in manufacturing equipment, raw materials, skilled labor, marketing, and distribution. The most important part is the sound metrics (THD, Frequency response, square wave, impulse response etc) and the signature tuning which are all done by themselves in R&D.
Skilling	Skilling is required in design, noise cancellation technology
Tax and Tariff	Tariffs to curb imports from China and make local toy manufacturers competitive
Quality	There is an increasing demand for noise-canceling headphones, as consumers seek to enhance their listening experience in noisy environments. Customizable headphones are also gaining prominence, allowing users to personalize their audio preferences. Moreover, sustainability and eco-friendly materials are becoming important factors for consumers when choosing headphones.

10. Injection/compression type moulds for rubber/plastics.

Product Name	Injection/compression type moulds for rubber/plastics. Related products- Moulding Boxes for Metal Foundry; Mould Bases; Moulding Patterns; Moulds for Metal (Other Than Ingot Moulds), Metal Carbides, Glass, Mineral Materials, Rubber Or Plastics
H S Code	84807100
Controlling Standards	Injection moulding plants in India have to file for environmental compliances under Ministry of Environment, acquire Extended Producer Responsibility (EPR) authorisation.
Approx Import (per Annum) in Rs.	India injection moulding machines industry is valued at US\$ 655.1 million. Over the forecast period from 2023 to 2033, injection moulding machine sales across India are likely to soar at a CAGR of 8.1%. Average imports in the last FYs is Rs. 2552 crores.
Important International Suppliers	The United States held 15% of the global market share in 2022. India imports most of its Injection plastic molding from China, South Korea and Japan and is the 2nd largest importer of Injection plastic
Feasibility of domestic production	India's production of rubber is steady at a rate of 6% per annum. Rubber Molding Market size is forecast to reach \$52.0 billion by 2026, after growing at a CAGR of 5.0% during 2021-2026. The demand for sustainable and customized plastic products is also growing. Increasing the adoption of lighter weight products, implementation of stringent government regulations related to vehicular emissions are driving the market demand for moulding.
Technology	Rubber is more difficult to inject into an injection mould cavity compared to plastic materials like to the differences in their physical and chemical properties. So special moulding techniques, equipment, and expertise are required when injecting rubber.
Market	The automotive sector is a key consumer of injection moulded plastic components such as dashboards, door panels, bumpers, and interior trims. Increasing demand for plastic components and products from the packaging sector is expected to boost the Europe injection moulding machines industry.
Cost	Product launches, acquisitions, and Technology launches are key strategies adopted by players in the Rubber Moulding Market. The environmental and other compliances increase the cost.
Consultants and BDS	Understanding common mould design issues and their consequences can help manufacturers avoid costly mistakes and maximize the benefits of the injection moulding process.
Technology	The latest injection moulding machines rely on the same old technique but are powered by computer software to design melds and automate the process. They also improve the quality and accuracy of the end product.
Quality Control	A well-designed mould ensures that the final product meets the required specifications consistently. If the mould design is flawed, it can lead to quality issues like dimensional inaccuracies, warping, and surface defects, leading to higher rejection rates and increased production costs.
Compliances	Indian injection molding manufacturers need to focus on adopting eco-friendly materials, recycling initiatives, and energy-efficient manufacturing processes to align with global sustainability goals.

11. Jigs and fixtures for machine-tools

Product Name	Jigs and fixtures for machine-tools Further details: The jigs are special tools particularly in drilling, reaming, tapping and boring operation. Fixtures are specific tools used particularly in milling machine, shapers and slotting machine.
H S Code	84663020
Approx Import (per Annum) in Rs.	India imports most of its Jig and fixture and HSN Code 84799090 from China, Italy and South Korea and is the largest importer of Jig and fixture.
Technology	There is no need for skillful setting of work on tool. Jigs and fixtures makes possible to employ unskilled or semi-skilled machine operator to make savings in labour cost.
Market	
Cost	Designing and fabricating jigs and fixtures can be expensive, especially for complex or specialized applications. Small businesses or those with limited budgets may find the upfront costs prohibitive.
Design Complexity	Designing effective jigs and fixtures requires specialized knowledge and engineering skills. Complex designs may be difficult and costly to develop, particularly for small manufacturers without in-house expertise.
Consultants and BDS	Initial costs and the need for specialized skills can be significant barriers. Proper planning and training help mitigate these challenges.
Low-cost funds	The initial investment costs can be significant, especially for small and medium-sized businesses.

12. Food and Beverages: Legumes. Miscellaneous Fodder Plants. Fruits and Vegetables. Root Crops. Cereals. Oil-Bearing Seeds and Oil Cakes

Product Name	Legumes. Miscellaneous Fodder Plants. Fruits and Vegetables. Root Crops. Cereals. Oil-Bearing Seeds and Oil Cakes Related products - Fruit and vegetable juices, Salad dressings and sauces, Cooking oils, Oil-based dietary supplements, cakes, cookies, pastries, Cereal bars and snacks, Cereal-based supplements.
Controlling Standards	ISO: 22000
Indigenous production (Per Annum) in Rs.	3895 crores by FY25
Important Indian clusters	Maharashtra, uttar Pradesh, west Bengal, Andhra Pradesh, telangana, gujarat
Important International Suppliers	China, United States, Brazil,
Feasibility in Telangana	<ul style="list-style-type: none"> • Telangana has the potential to be a good location for food and beverages cluster due to the presence of several factors: • Growing Market: Hyderabad, the capital city, is a major tech hub with a rising population. This translates to a growing demand for various food options, including restaurants, cafes, and cloud kitchens. • Diverse Food Culture: Telangana boasts a rich culinary heritage with unique dishes like Hyderabadi Biryani, Gongura Pachadi, and Samosa. This, along with the growing influence of global cuisines, creates a diverse market for food businesses. • Rise of Cloud Kitchens: Studies suggest cloud kitchens face lower operational costs compared to traditional restaurants. This model can be a good entry point for new ventures.
Major Barriers in Indigenous production	<ul style="list-style-type: none"> • Competition: The market is already competitive, with established players and new entrants vying for customer attention. • Profitability: Margins can be tight, especially with online food delivery platforms charging commission fees. • Logistics and Storage: Perishability of food items and maintaining proper storage infrastructure can be a concern, especially for smaller businesses.
Technology	<p>Current Scenario:</p> <ul style="list-style-type: none"> • Online Ordering and Delivery Platforms: Dominated by Swiggy, Zomato, and Uber Eats, these platforms connect customers with restaurants and facilitate online ordering and delivery. Cloud kitchens, with lower overhead costs, thrive in this ecosystem as they primarily focus on online deliveries. • Mobile Wallets and Online Payments: Cash on delivery is giving way to digital transactions with platforms like PhonePe, Google Pay, and Paytm enabling seamless online payments for food orders. • Food Tech Advancements: Kitchen Automation concepts are slowly being explored, with some restaurants adopting automated equipment for specific tasks. AI-powered Chatbots for order placement and customer service are gaining traction. Ingredient Sourcing Apps connecting restaurants directly with farmers or wholesalers for better pricing and quality control are emerging.

	<ul style="list-style-type: none"> • Social Media Marketing: Restaurants and food businesses heavily leverage platforms like Instagram and Facebook to showcase their offerings, run promotions, and engage with customers. • Delivery Optimization Tools: Companies are utilizing route optimization software to improve delivery efficiency and reduce turnaround times. • Future Trends: • Focus on Health and Wellness: Expect a rise in plant-based options, functional foods, and focus on local, sustainable ingredients. • Tech-Driven Experiences: Faster deliveries, personalized food plans, and AR menus could revolutionize dining experiences. • Redefining Convenience: Meal kits, subscription boxes, and cloud kitchen growth will cater to busy lifestyles. • Celebrating Local Flavors: Telangana cuisine will take center stage with regional specialties, fusion dishes, and upscale street food.
Market	<p>The Indian F&B industry is not only vast but also diversified. Revenue in the F&B market amounts to \$905.20bn (₹75.3 trillion) in 2023. The market is expected to grow annually by 8.40% (CAGR 2023-2028).</p> <p>Booming demand: Rising population and diverse tastes drive growth. Cloud kitchens offer entry points.</p> <p>Competition is fierce: Profitability challenged by online platforms and margins.</p> <p>Tech is king: Online ordering, digital payments, and delivery optimization are crucial.</p> <p>Future's healthy: Plant-based options and local sourcing gain traction.</p> <p>Local shines: Telangana cuisine takes center stage with modern twists.</p> <p>Overall, the market dynamics of Food & Beverages in Telangana offer both opportunities and challenges.</p>
Government support available	PMKSY, PMFME, Operation greens, PLI scheme
Tax and Tariff	18% GST, 5-10% IMPORT DUTY

13. Pistons for Auto Components

Product Name	Pistons for Auto Component Related products- Piston rings, piston pins, connecting rods
Approx Import (per Annum) in Rs.	Rs 10,000 Crore (Source: ARAI)
Indigenous production (Per Annum) in Rs.	Rs 7,000 Crore (Source: ARAI)
Important Indian clusters	Pune, Maharashtra, Chennai, Tamil Nadu, Gurgaon, Haryana, Bengaluru, Karnataka
Important International Suppliers	China, Japan, Germany, South Korea, Italy
Feasibility in Telangana	<p>Telangana has potential to develop a strong auto component cluster for pistons, crankshafts, and camshafts due to several factors:</p> <p>Existing ecosystem: Presence of major automobile manufacturers like Hyundai and component suppliers creates a market and support network.</p> <p>Government support: Initiatives like industrial parks and subsidies promote the auto industry.</p> <p>Skilled workforce: Growing pool of skilled manpower in engineering and manufacturing sectors.</p>
Major Barriers in Indigenous production	<ul style="list-style-type: none"> • Technology gap: Lag in advanced technologies for complex components compared to developed nations. • Economies of scale: Established international players have a cost advantage. • Quality standards: Meeting stringent quality standards can be challenging for new entrants.
Technology	<p>Current Scenario:</p> <p>Reliance on conventional technologies like forging, machining, and casting.</p> <p>Limited adoption of advanced technologies like:</p> <p>Near Net Shape (NNS) forging: Reduces machining waste and energy consumption.</p> <p>Enables complex designs and lightweight components.</p> <p>Improves wear resistance and fatigue strength.</p> <p>Future Trends:</p> <p>Growing demand for Aluminium alloys, composite material and pistons with low friction coatings.</p>
Market	<p>The Indian auto component market is expected to reach USD 53.4 billion by 2027 (Source: Mordor Intelligence).</p> <p>The demand for pistons is driven by: Increasing vehicle production, Stringent emission regulations, Growing demand for premium vehicles with advanced engines.</p>
Cost	Cost details vary depending on factors like technology, material, and scale.

14. Defense and Aerospace: Reduction Gearbox

Product Name	Reduction Gearbox for Defense and Aerospace Related products- Speed increaser gearboxes, helical gearboxes, worm gearboxes, planetary gearboxes, and other gearboxes used in various industries.
Controlling Standards	AIS-006: Automotive Vehicle-Bumper Fitment on M1 Vehicles – Test Methods ISO: These include ISO 9001, ISO 14001, IATF 16949, ISO 45001, ISO 50001, ISO 27001 standards.
Important Indian clusters	Gujarat, Maharashtra, Punjab
Important International Suppliers	Germany, Japan, Italy, China
Feasibility in Telangana	<ul style="list-style-type: none"> Existing engineering and automotive component industries: The presence of major companies like Lockheed Martin, Boeing, and Safran in the state suggests a supportive ecosystem for the aerospace and defense sector. Government support: The Telangana government has established attractive State Industrial Policy and package of incentives for the defence and aerospace sector. Skilled workforce: Telangana has a rich talent pool in aerospace and defense, including personnel from DRDO labs and private companies.
Major Barriers in Indigenous production	<p>High-Precision Manufacturing: Reduction gearboxes require exceptional precision and tolerances to ensure smooth operation and handle high loads. Developing this expertise domestically can be challenging.</p> <p>Testing and Simulation: These gearboxes undergo rigorous testing to ensure reliability and performance under extreme conditions. Developing or acquiring advanced testing facilities can be expensive.</p> <p>Limited Supplier Base: India might have a limited domestic supplier base for specialized components used in these gearboxes, like high-precision bearings or seals.</p>
Technology	<p>Current Technologies:</p> <ul style="list-style-type: none"> High-Strength Steel Alloys: These remain the primary material choice due to their excellent strength-to-weight ratio and affordability. Advanced alloys with improved properties are continuously being developed. Gear Hobbing and Grinding: These established techniques remain crucial for shaping and finishing gears to achieve high precision. <p>Emerging Technologies:</p> <ul style="list-style-type: none"> Advanced Coatings: Applying wear-resistant and low-friction coatings to gears can further enhance their performance and lifespan. Additive Manufacturing (3D Printing): This technology has the potential to create complex gear designs with internal features for weight reduction and improved performance.
Production Volume	Unlike commercially produced gearboxes with potentially high volumes, these gearboxes are often manufactured in smaller batches, increasing the per-unit cost due to economies of scale not being a major factor.
Testing and Certification:	Rigorous testing to ensure performance and reliability under extreme conditions adds to the overall cost.



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