



# Draft Detailed Project Report

## Gurugram Plastic and Allied Products Manufacturing Cluster

### Submitted to:

Directorate of Micro, Small & Medium Enterprises  
(MSME), Government of Haryana  
(for assistance under State Mini Cluster Development Scheme)

October 2020

### Prepared by:

Ernst & Young LLP

*Under the project: MSME Ecosystem Transformation in Haryana*

October 6, 2020

Director General  
Directorate of Micro, Small and Medium Enterprises (MSME)  
Government of Haryana

Dear Sir/Madam,

As part of our engagement for providing consulting services for 'MSME Ecosystem Transformation in the State of Haryana', we hereby submit the Draft Detailed Project Report (DPR) for setting up of Injection Moulding Facility as common facility centre for Gurugram Plastic and Allied Products cluster for your kind perusal. The deliverable has been prepared in accordance with our engagement agreement with Directorate of Industries, Govt. of Haryana dated 03.01.2017, and subsequent scope expansion work order no. Cluster/RFP/Selection of PMU/Part-II/21468-A dated 18.11.2019 our procedures were limited to those described in that agreement.

This Diagnostic Project Report is based on studies of and discussions with:

- ▶ Directorate of Micro, Small and Medium Enterprises (MSME), Govt. of Haryana
- ▶ DIC Gurugram
- ▶ Plastic & Allied products units located in Gurugram
- ▶ Industry experts
- ▶ Secondary research

Our work has been limited in scope and time and we stress that more detailed procedures may reveal other issues not captured here. The procedures summarized in our Draft Detailed Project Report do not constitute an audit, a review or other form of assurance in accordance with any generally accepted auditing, review or other assurance standards, and accordingly we do not express any form of assurance. This Draft Detailed Project Report is intended solely for the information and use of the Directorate of MSME, Haryana and is not intended to be used by anyone other than specified party.

We appreciate the cooperation and assistance provided to us during the preparation of this report. If you have any questions, please contact the undersigned.

Sincerely,



Amar Shankar, Partner - Advisory Services  
Ernst & Young LLP

## **Disclaimer**

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## Abbreviations

<b>ABS</b>	Acrylonitrile Butadiene Styrene
<b>BDS</b>	Business Development Services
<b>CAGR</b>	Compound Annual Growth Rate
<b>CFC</b>	Common Facility Centre
<b>CIPET</b>	Central Institute of Plastic Engineering and Technology
<b>DIC</b>	District Industries Centre
<b>DSR</b>	Diagnostic Study Report
<b>PS</b>	Polystyrene
<b>EU</b>	European Union
<b>GDP</b>	Gross Domestic Product
<b>GSDP</b>	Gross State Domestic Product
<b>HDPE</b>	High-density Polyethylene
<b>HSIIDC</b>	Haryana State Infrastructure & Industrial Development Corporation
<b>HSVP</b>	Haryana Shahari Vikas Pradhikaran
<b>HUDA</b>	Haryana Urban Development Authority (or HSVP)
<b>IAMSME</b>	Integrated Association of Micro, Small & Medium Enterprises
<b>ISO</b>	Indian Standard Organisation
<b>IIT</b>	Indian Institute of Technology
<b>LDPE</b>	Low-density Polyethylene
<b>LLDPE</b>	Linear Low-density Polyethylene
<b>LMCS</b>	Lean Manufacturing Competitiveness Scheme
<b>MSME</b>	Micro, Small and Medium Enterprises
<b>MSME-DI</b>	MSME - Development Institute
<b>NCR</b>	National Capital Region
<b>NIFT</b>	National Institute of Fashion Technology
<b>NITRA</b>	North India Textile Research Association
<b>NSIC</b>	National Small Industries Corporation
<b>OEM</b>	Original Equipment Manufacturer
<b>PE</b>	Polyethylene (PE)
<b>PP</b>	Polypropylene
<b>PVC</b>	Polyvinyl chloride
<b>SIDBI</b>	Small Industries Development Bank of India
<b>SWOT</b>	Strength, Weaknesses, Opportunities and Threats
<b>SEZ</b>	Special Economic Zone
<b>UAM</b>	Udyog Aadhar Memorandum
<b>USA</b>	United States of America
<b>UK</b>	United Kingdom

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## Executive summary

The Government of Haryana through the Department of Industries and Commerce intends to transform the MSME sector of the state and put it on a growth path. Several incentives have been offered under the state's ambitious 'Enterprise Promotion Policy (EPP) 2015' to provide an impetus to growth of the MSME sector. Towards this, the state aims to strengthen the technology infrastructure as well as enhance productivity and competitiveness of various MSME clusters across the state by availing funding under the State Mini Cluster Development Scheme providing grant under the EPP 2015.

In the above context, this Detailed Project Report (DPR) has been prepared to seek grant-in-aid assistance under the State Mini Cluster Development Scheme to set up Center for Injection Moulding Facility through an SPV under the name and style of "Plastvision India Private Limited" for Gurugram Plastic and Allied Products cluster.

### About Gurugram Plastic and Allied Products cluster

Despite the global economic downturn, the global plastic product industry trends to grow at a healthy rate and this, coupled with the absence of switching costs for consumers and great product differentiation, means that rivalry within the industry is no more than moderate.

Plastic products permeate the entire spectrum of daily use items and cover almost every sphere of life like clothing, housing, construction, furniture, automobiles, household items, agriculture, horticulture, irrigation, packaging, medical appliances, electronics and electrical etc. These industries hence drive the demand growth of petrochemicals.

The plastics and polymers industry grew faster than the overall industry. Infrastructure investments and growth of construction and housing projects; technology evolution that allows plastics to replace wood, metal and glass; increasing penetration of organised retailing and e-commerce; increasing adoption of poly film packaging in the food and beverage industry; and increasing consumption in rural India are considered to be the key factors driving growth in this industry; Plastic for furniture, auto parts, and various other allied products as the demand is huge.

Current per capita consumption of Polymers in India is approximately 9.7 kg vis-à-vis global average of 28 kg, Singapore's 43kg, China's 45kg, Thailand's 50kg, Japan's 56kg, Malaysia's 58kg and Taiwan's 67kg. This is an indication of substantial un-tapped potential in our country. Per capita consumption of plastic in developed countries is considerably high when compared to developing countries. India has only 9.7 kg per capita consumption of plastic products and offers a huge opportunity for this sector over long term.

The growth rate of the Indian plastics industry is one of the highest in the world, with plastics consumption growing at 16% per annum (compared to 10% p.a. in China and around 2.5% p.a. in the UK). With a growing middle class (currently estimated at 50 million) and a low per capita consumption of plastics, currently 8 kg per head, this trend is likely to continue.<sup>1</sup> The government of India has ambitious plans of doubling the current per capita consumption of plastics from the present 10 kg per person to 20 kg per person by 2022<sup>2</sup>.

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<sup>1</sup> *Plastics Industry in India: British Plastics Federation*

<sup>2</sup> *Business Standard: Feb 4, 2016: Govt plans to double per capita plastics consumption, says Dharmendra Pradhan*

With the Escorts Tractor Unit in Faridabad and Maruti Udyog Limited in Gurugram, plastic and auto components OEMs started setting up in the NCR region and primarily in Gurugram and Faridabad. Easy and local availability of raw materials got Gurugram to become a hub for Auto OEMs. Setting up the cluster for Plastic and Allied products in Gurugram is a logical plan dating back to the history of this industrial region and the need for the same is established out loud.

The supply chain further strengthened in the Gurugram-Manesar has been found Hero MotoCorp and Honda Motorcycle and Scooter India (HMSI) setting up their production units in this region.

The Gurugram plastic and allied products cluster houses about 1200 units. The units generally have a secured market as being the OEM for major automobile and household goods like Maruti, Mahindra, KIA, LG and Samsung. The various Auto parts like Plastic Arm rests, ducting, windowpane controls are part of the product base. The units rely upon the procurement of quality raw materials as per the customer specification and the moulding and machining activity is got done externally. The small units are unable to meet the investment for their inhouse moulding and machining equipment. The cluster is located in Gurugram also international market in the Kingdom of Saudi Arabia. Moreover, with the Make in India and Atmanirbhar Bharat schemes and sensitization, more and more products are being looked at from Indian OEMs that's a win-win situation for this perceived cluster.

### **Diagnostic Study and Interventions**

A diagnostic study was undertaken in September 2020 to map the existing business processes in the cluster, identify the gaps, and understand the requirements of the cluster. It was observed that most units required Plastic Injection Moulding facility, as they are currently availing these services from external service providers at high prices and with production delays. Outsourcing to the service providers has been resulting in a negative impact on their cost competitiveness and a subsequent impact on their market competitiveness. In this context, the units have decided to establish a CFC with Plastic Injection Moulding facility.

Dependence on third party service providers also often enhances the production time which delays their supplies. As a result of this, the units are facing loss of orders due to their inability to price their products competitively vis-à-vis other players.

Thus, the need for setting up inhouse Moulding and Machining process to cater to the requirements of the 1200 units in the cluster, for a better and cost competitive production cost and ease of fulfilment with quality centricity, establishes a need out loud for the Gurgaon Plastic and Allied products cluster.

A DSR validation meeting was conducted with SPV and cluster members on 04<sup>th</sup> September 2020 and was put up to the Director (Industries) for approval. It was approved by the Director General, MSME, Govt. of Haryana on 14.09.2020. The SPV was granted permission to go ahead with the preparation of Detailed Project Report (DPR) for the cluster.

## **Proposed Common Facility Centre**

The proposed CFC will facilitate:

### **► Injection Moulding High End Machine**

Absence of technology for high end injection moulding facilities for production of quality products and reducing cost of production. No Individual unit has the capability to invest in this machine. The units in the micro and small sector incur almost double the cost in production of the products as compared to their large counterparts as they are dependent on the private players for the plastic moulding. This has hindered the ability of micro and small firms to obtain bulk orders from anchor units. Consequently, the units are witnessing plunging market shares and their sustainability is also in jeopardy. By establishing this facility in the CFC, the cluster units can improve the quality of the products and reduced the wastage of raw material. This facility will also help the MSE units to increase the volume of production and capture higher market share.

## **Special Purpose Vehicle for Project Implementation**

After the diagnostic study, the cluster units came together to form a special purpose vehicle (SPV) by the name and style of 'Plastvision India Private Limited' as a private limited company under section 8 of the Companies Act, 2013 and rule 7 of the Companies (Incorporation) Rules, 2014. DIC, Gurugram and MSME-DI have played an important role in SPV formation by cluster stakeholders. The SPV has been incorporated on 11<sup>th</sup> September 2020, and includes 12 members who are subscribing to the necessary equity base of the company. The proposed CFC will be implemented on public-private partnership basis through the SPV by availing support from Government of Haryana (under EPP 2015).

The SPV members have a track record of cooperative initiatives and are also members of prominent cluster associations. The members have been autonomously undertaking several soft interventions to enhance knowledge and exposure of the cluster units on new trends in the auto industry and enhancing productivity of their units. This includes exposure visits to fairs and sharing of best practices, registration under UAM, awareness programs on new trends in automotive industries, entrepreneurship development, IPR, energy efficiency, GST, barcoding, equity schemes, SME IPO process, sustainability, etc. These programs were conducted in collaboration with DIC, State Government, IAMSME of India, etc.

## **Project Parameters, Viability and Sustainability**

The cluster with support from State Government is planning to set up Common Facility Centre having state-of-the-art Injection Moulding facilities to undertake job work of cluster units with a total project cost of about INR 228.08 lakhs. The total contribution of SPV members will amount to INR 48.08 lakhs. Support from State Government is envisaged for INR 180 lakh.

The cost of the project and proposed means of finance is tabulated below:

(Rs in Lakh)

PROJECT COST				
S. No.	Particulars	Total Project Cost	Eligible Amount as per Guidelines	Remarks
1	Land & Building			Eligible (Max 25% of total of L&B, P&M, and Misc. F.A.)
	a. Land Value	0.00	0.00	
	b. Land Development	0.00		
	c. Building & Other Civil Works	0.00		
	d. Building Value	0.00		
	Sub Total (A)	0.00	0.00	
2	Plant & Machinery			Eligible
	a. Indigenous	164.71	164.71	
	b. Imports	0.00	0.00	
	c. Secondary Machines	44.45	44.45	
		Sub Total (B)	209.16	
3	Miscellaneous fixed assets (C)	1.64	0.00	Not eligible for grant
4	Preliminary & Preoperative Expenses (D)	3.37	0.00	
5	Contingency			
	a. Building @ 2%	0.00	0.00	
	b. Plant & Machinery @ 5%	10.46	0.00	
	Sub Total (E)	10.46	0.00	
6	Margin money for working capital @ 75% CU (F)	3.45	0.00	
	Grand Total (A+B+C+D+E+F)	228.08	209.16	

The total project cost is estimated to be INR 228.08 lakhs. As indicated above, assistance to the project from the Govt. of India is envisaged to the tune of INR 180.00 lakhs of the project cost, SPV contribution is to the tune of INR 48.08 lakhs of the project cost

Means of Finance		
S. No.	Source of finance	Total Amount (Rs. In Lakh)
1	Grant-in-aid under State Mini Cluster Development Scheme (Govt. of Haryana)	180.00
2	Contribution of SPV	48.08
	<b>Total</b>	<b>228.08</b>

The viability and sustainability of the project is evident from the project economics as well as the cooperative spirit and profile of the SPV. Some indicators of the viability are as follows:

**Project's financial indicators**

<b>FEASIBILITY</b>		
<b>S. No.</b>	<b>Particulars</b>	<b>Estimates</b>
1	BEP (cash BEP at initial operating capacity of 75%)	55.98%
2	Av. ROCE (PAT/CE)	33.52%
3	Internal Rate of Return (IRR)	29.41%
4	Net Present Value (at a discount rate of 10 per cent) - incorporating viability gap funding (grant) by GoH	NPV is positive and high (Rs. 232.68 lacs) at a conservative project life of 10 years
5	Payback period	4.14 years with Grant-in-aid assistance from GOH
6	DSCR	Not Applicable (non-availment of term loan in this project)

As evident from the financials above, with viability gap funding under State Mini Cluster Development Scheme of GoH, the project is highly viable and sustainable. Risk and sensitivity analysis considering a decline in user charge/ capacity utilization also validates the project sustainability.

**Project Implementation**

Project implementation is envisaged to involve a time-frame of about 7 months upon receipt of final approval of grant-in-aid assistance from the Government of Haryana under State Mini Cluster Development Scheme. The project will be implemented by the SPV in close association with DIC, Gurugram and the State government. For implementing this CFC project, a Project Management Committee (PMC) comprising of the GM, DIC Gurugram and representatives of the SPV shall be constituted to directly oversee effective monitoring and implementation. The project will be implemented through the SPV, and the PMC will report progress to State Level Steering Committee and DIC, Gurugram.

The potential for Gurugram Injection Moulding cluster to grow is enormous, owing to the growing market demand for plastic & allied products in India and globally. The strength of the cluster lies in its location (both geographically & industrially), with large industry which provides the key raw material, and its proximity to Delhi which is a key supply hub. Cluster units are unable to effectively cater to the domestic and international markets as they are lacking price competitiveness and efficiency due to lack of Injection Moulding High End facility.

This cluster has the ability to increase its output and market share by manufacturing price competitive products. The proposed facility will be open to all cluster firms to enable them to get job work done in order to cater to the requirements of Plastic and Allied Products requirements in auto and consumer industry. The facility will also provide an opportunity to MSE units to increase their capacity utilization, profitability and major technological push to the units reeling under high competition. The CFC will also enhance the co-operation and

joint action among cluster stakeholders to improve their competitiveness to meet the demands of the domestic as well as international markets.



# Introduction



## 1. Introduction

### 1.1 Overview of the Cluster

Gurugram is known significantly for auto and auto component industries. With major auto manufacturers like Maruti Udyog Limited and Hero Honda in the district, and home appliances manufacturers like LG and Samsung in close vicinity, the moulded plastic industry is well positioned and OEM (Original Equipment Manufacturers) for anchor sectors like automobiles, Home Appliances get a firm footing in Gurugram

Plastic has been the preferred material for the products manufactured for sectors such as Auto Components, Home Appliances, for its ease of cleaning and durability. The industry is driven by key factors like rising population, increase in income levels and changing lifestyles. However, the manufacturing of plastic parts for their secured markets i.e., automobile, home appliances, medical equipment industry, is highly fragmented as the segment is dominated by micro, and small firms.

The cluster comprises of about 1200 units including micro & small involved in manufacturing of plastic products and allied products such as automobile plastic products manufactured by the cluster include map pocket, ventilator grill, booster tooti, clip snapper, ducting bracket, masking cap, PVC seals, O seals, child auto parts, arm rest, sheet metal products and other plastic automotive parts. The units also undertake variety of plastic manufacturing jobs for automobile and Home Appliances



industry. The annual turnover of the cluster is approximately INR 500 crores. The cluster provides employment to about 10,000 workers directly & indirectly.

The cluster owes its origin to derived demand through proliferation and influx of production in India under the Make in India campaign of various Auto and Home Appliances and Medical Equipment industries in the region. Increased local demand of plastic industry in the region further fuelled the growth of the cluster. Many units in the cluster require quality injection moulding machine services that the existing units are unable to deploy inhouse owing to the huge investment requirement, and therefore the units are dependent on job work-based tie ups externally for moulding.

Presently, the cluster is catering the local demand of customized products and services. The cluster has also tapped the international market specifically for the Gulf nations and specifically across the Kingdom of Saudi Arabia.

## **1.2 Geographic and Economic Traits**

The state of Haryana was formed on 01 November 1966. It is situated in the northwest of India with the capital of Chandigarh as a Union Territory. The state is surrounded by Delhi, Rajasthan, & Uttar Pradesh with around 30% of the total area of the state falling under National Capital Region (NCR). The state stands 21<sup>st</sup> in terms of its area. According to the Census of India 2011, the state is 18th largest by the population. Over the last 5 decades since its formation in 1966, Haryana has transformed and matured into a diversified economy with a thriving secondary and tertiary sector. Although Haryana has an area covering just 1.3 per cent of the country, Haryana contributes nearly 3.63 percent to India's GDP. The Gross State Domestic Product of Haryana for 2018-19 (at current prices) is 13% higher than the revised estimates for 2017-18.

## **1.3 Economic Scenario of the State**

Haryana is among the northern most state in India and adjacent to Delhi, the national capital of India. It is surrounded by Uttar Pradesh in the east, Punjab in the west, Himachal Pradesh in the north, and Rajasthan in the south. The state surrounds the national capital city, New Delhi, from three sides. Historically an agrarian state, Haryana today is a well-developed industrial state.

The state is one of India's largest automobile hubs and accounts for two thirds of passenger cars, 50 percent of tractors and 60 percent of motorcycles manufactured in the country. The state has also emerged as a base for the knowledge industry, including IT and biotechnology. Haryana is the third-largest exporter of software and one of the preferred destinations for IT/ITeS facilities.

With an area covering 1.3 per cent of the country, Haryana contributed near 3.63 per cent to India's GDP in 2018-19. Between FY16-21, the state's Gross State Domestic Product (GSDP) (in Rs) grew at a CAGR of 13.65 per cent to Rs 9.40 trillion (US\$ 134.46 billion) in 2020-21. The State Government of Haryana has been committed to creating a progressive business environment.

The state offers a wide range of fiscal and policy incentives for businesses under the Enterprise Promotion Policy, 2015. Haryana ranked the third best state in the country under ease of doing business in the Business Reforms Action Plan 2017. As of November 2019, the state had seven exporting Special Economic Zones (SEZs).

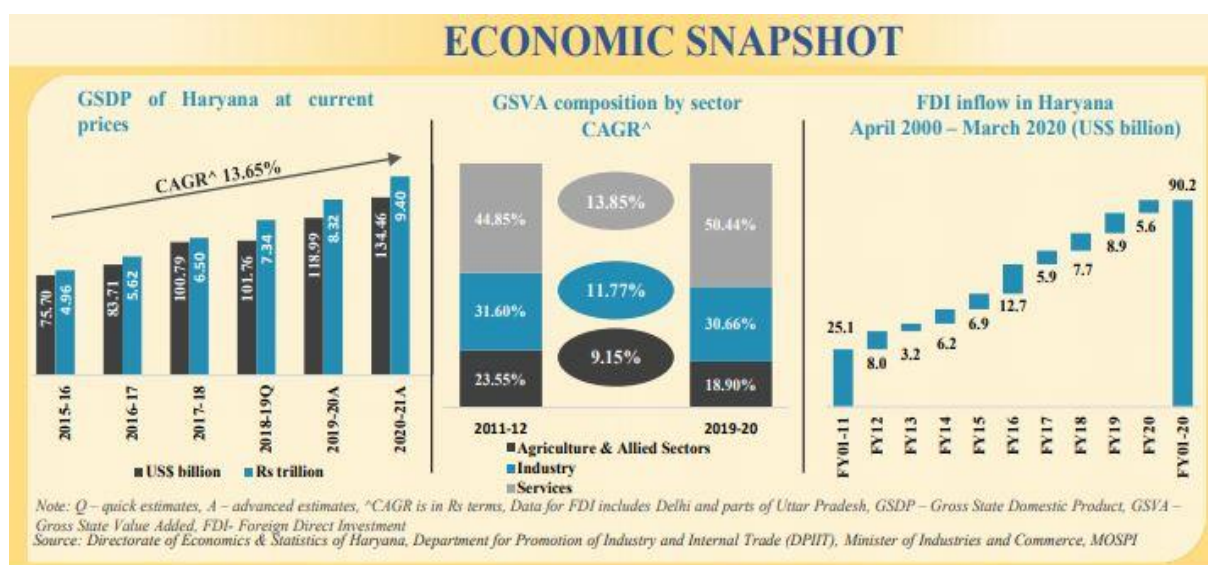


Figure 1: Economic Snapshot of Haryana

## Recent Developments:

- Merchandise export from Haryana reached US\$ 11.20 billion in FY20 (till February 2020).
- The state attracted Foreign Direct Investment (FDI) equity inflow worth US\$ 90.2 billion during April 2000 and March 2020 as per the data released by Department for Promotion of Industry and Internal Trade (DPIIT).

## Key Sectors:

- **Haryana is a preferred destination for auto majors and auto-component manufacturers. The state is host to many large automotive players. Automobiles and auto component export from Haryana was around US\$ 945 million in FY19 and reached US\$ 835.04 million between April-December 2019.**
- Gurugram has emerged as a preferred destination for the IT industry in north India with more than 400 IT and ITeS companies.
- Haryana aggressively promotes organic farming; financial assistance is provided to farmers for production and use of vermicompost. Total food grain production in Haryana in 2017-18 was 17.48 million tonnes. The state exported major agricultural products worth US\$ 1,366.95 million in 2018-19 and US\$ 807.76 million between April-December 2019.
- Districts such as Panipat, Gurugram, Faridabad, Hisar, and Sonapat have developed into robust textiles centre in Haryana. Readymade garments of cotton have been one of the major export segments for Haryana, reaching US\$ 607.52 million in FY19 and US\$ 567.37 million between April-December 2019.







## 2. Sector Overview

The long-term outlook for Plastics and polymers sector is optimistic as the Indian per capita polymer consumption is only 40% of the global average. The plastics and polymers industry grew faster than the overall industry. Infrastructure investments and growth of construction and housing projects; technology evolution that allows plastics to replace wood, metal and glass; increasing penetration of organised retailing and e-commerce; increasing adoption of poly film packaging in the food and beverage industry; and increasing consumption in rural India are considered to be the key factors driving growth in this industry; Plastic for furniture, auto parts, and various other allied products as the demand is huge. Over the next 12 months, many companies plan to expand to new export markets and raise capital. The concerns are the volatile / high prices of raw materials and increased cost pressures, especially from wages. Leading Plastic Manufactures of the region are getting together to share costs and seek subsidy to get a Common Facility Centre to benefit the 1200 units strong proposed cluster to cater to the local demand of plastic and allied products as OEM manufacturers for industries including Auto, Household goods and Medical equipment.

### 2.1 Brief Global Scenario

Plastic products permeate the entire spectrum of daily use items and cover almost every sphere of life like clothing, housing, construction, furniture, automobiles, household items, agriculture, horticulture, irrigation, packaging, medical appliances, electronics and electrical etc. These industries hence drive the demand growth of petrochemicals. Current per capita consumption of Polymers in India is approximately 9.7 kg vis-à-vis global average of 28 kg, Singapore's 43kg, China's 45kg, Thailand's 50kg, Japan's 56kg, Malaysia's 58kg and Taiwan's 67kg. This is an indication of substantial un-tapped potential in our country. Per capita consumption of plastic in developed countries is considerably high when compared to developing countries (see figure 5). India has only 9.7 kg per capita consumption of plastic products<sup>3</sup> and offers a huge opportunity for this sector over long term.

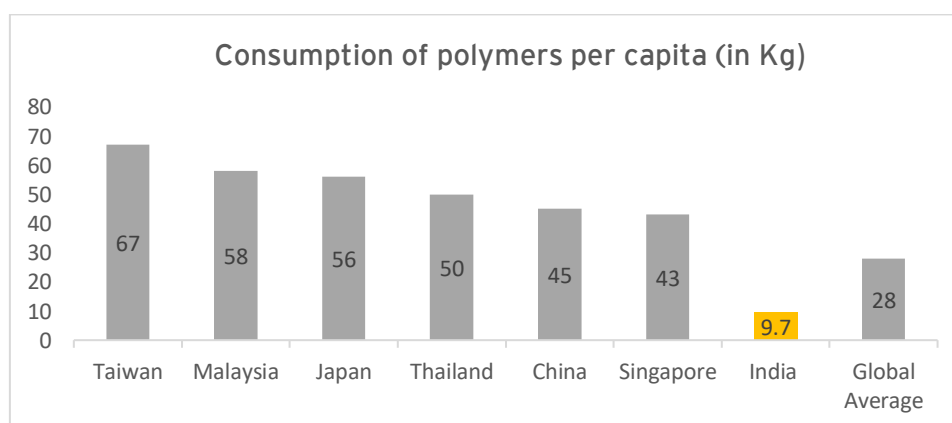


Figure 3: Global Per capita polymer consumption (Kg/person)

<sup>3</sup> The Growth Story Continues, Indian Plastic Industry 2013-2016, Plastindia Foundation, Feb 2014

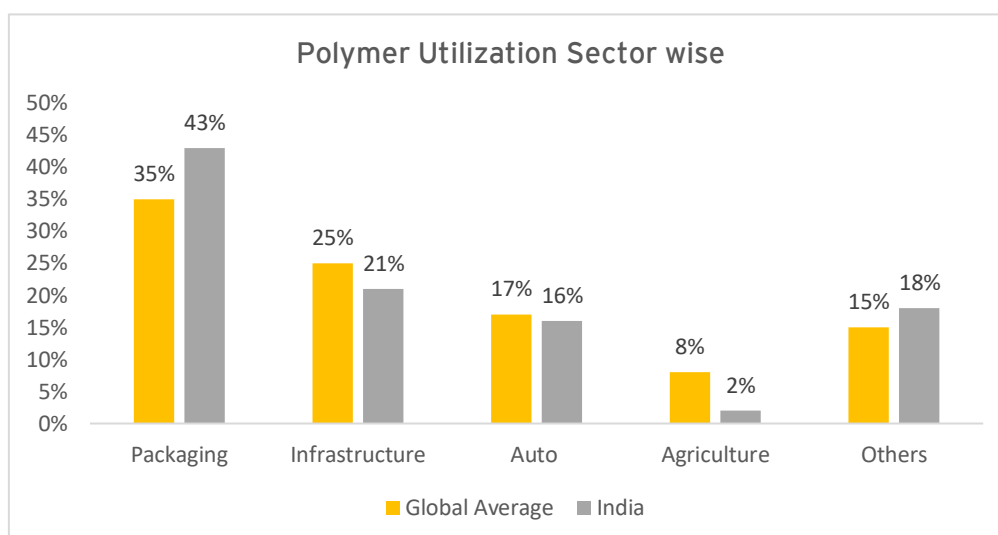


Figure 4: Polymer utilization by application, FY 13

Polymer utilization has also been increasing across the world. Developed countries have a strong penetration of plastics across sectors like packaging, infrastructure, automobile, agriculture etc.

Plastics have been the preferred choice in auto and home appliance parts globally due to the following key benefits

- Precision in Shape
- Flexibility for a neatness
- Less wear and tear
- Cost benefit
- Lesser additional weight thus helping aerodynamic nature of product
- Ease of availability of raw materials
- Ready market

## 2.2 India & State Scenario

The plastic components industry in India is an amalgamation of both organized and unorganized players. Most of the units are running on small scale and there is limited presence to big players, but they own large market share. Demand for plastic allied products segment is anticipated to grow rapidly across all the players. Also, there is an increasing focus on innovative and cost-effective materials. Thus, the industry players are keeping track of the changing trends in plastic parts and designing and making efforts to capture the market with higher technology orientation. The growth in this versatile industry has been leading to greater specialization and sophistication amongst the market players to ensure health and environment friendliness of these products.

The plastic market in India is set for the next level of growth. Its cuts across various industries like automobile, medical equipment, agricultural products, furniture and even household goods.



The growth rate of the Indian plastics industry is one of the highest in the world, with plastics consumption growing at 16% per annum (compared to 10% p.a. in China and around 2.5% p.a. in the UK). With a growing middle class (currently estimated at 50 million) and a low per capita consumption of plastics, currently 8 kg per head, this trend is likely to continue.<sup>4</sup> The government of India has ambitious plans of doubling the current per capita consumption of plastics from the present 10 kg per person to 20 kg per person by 2022<sup>5</sup>.

A wide variety of polymers are produced to meet the material needs of different sectors of the economy. These polymeric materials are broadly categorized as commodity, engineering and specialty plastics. Commodity plastics are the major products that account for bulk of the plastics. Commodity plastics comprise of Polyethylene (PE), Polypropylene (PP), Polyvinyl Chloride (PVC) and Polystyrene. There are three broad types of PE: Low-density Polyethylene (LDPE), High-density Polyethylene (HDPE) and Linear Low-density Polyethylene (LLDPE). Major plastic materials like PE and PP are derived from Ethylene and Propylene respectively, while other plastics such as PVC, PS & ABS and PC are produced from benzene, butadiene and other feedstock. Various types of plastic material along with its applications and benefits is provided in table 1.

Table 1: Applications and Benefits of different plastic products

Plastic	Applications	Benefits
PS	<ul style="list-style-type: none"> <li>▶ Protective foam packaging or furniture, electronics and other delicate items</li> <li>▶ Packing compact disc cases and aspirin bottles</li> </ul>	<ul style="list-style-type: none"> <li>▶ Low thermal conductivity and excellent insulation properties</li> <li>▶ Excellent moisture barrier for short shelf life products</li> </ul>
PET	<ul style="list-style-type: none"> <li>▶ Food jars for jelly, jam and pickles</li> <li>▶ Plastic bottles for soft drinks, water, juice</li> <li>▶ Oven able film and microwavable food trays</li> </ul>	<ul style="list-style-type: none"> <li>▶ Excellent resistance to most solvents</li> <li>▶ High impact capability and shatter resistance</li> <li>▶ Clear and optically smooth surfaces</li> </ul>
HDPE	<ul style="list-style-type: none"> <li>▶ Cereal box liners</li> <li>▶ Reusable shipping containers</li> <li>▶ Bottles for non-food items, such as shampoo, liquid laundry detergent, household cleaners, motor oil etc.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Relatively stiff material with useful temperature capabilities</li> <li>▶ Higher tensile strength</li> </ul>
PVC	<ul style="list-style-type: none"> <li>▶ Rigid packaging applications include blister packs and clamshells</li> <li>▶ Packaging, film and sheet, and loose-leaf binders</li> <li>▶ Flexible packaging uses include bags for bedding and medical</li> </ul>	<ul style="list-style-type: none"> <li>▶ High impact strength</li> <li>▶ Brilliant clarity</li> <li>▶ Excellent processing performance</li> </ul>
LDPE	<ul style="list-style-type: none"> <li>▶ Container lids</li> <li>▶ Shrink wrap and stretch film.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Excellent resistance to acids, bases and vegetable oils</li> </ul>

<sup>4</sup> Plastics Industry in India: British Plastics Federation

<sup>5</sup> Business Standard: Feb 4, 2016: Govt plans to double per capita plastics consumption, says Dharmendra Pradhan

Plastic	Applications	Benefits
	<ul style="list-style-type: none"> <li>▶ Squeezable bottles (e.g., honey and mustard)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Toughness, flexibility and relative transparency</li> </ul>
PP	<ul style="list-style-type: none"> <li>▶ Medicine bottles</li> <li>▶ Bottle caps and closures</li> <li>▶ Bottles for syrup</li> </ul>	<ul style="list-style-type: none"> <li>▶ Low moisture vapor transmission</li> <li>▶ Inertness toward acids, alkalis and most solvents</li> </ul>

Polyethylene (PE) is the most largely used plastic raw material by Indian industry. Its demand has grown at 8% per annum in last 5 years. Polyvinyl Chloride (PVC) is the second largest with the consumption growing at growth rate of 13% p.a. Polypropylene (PP) demand has grown at 3% p.a. Polystyrene (PS) has observed a growth rate of 3% p.a. while other (PC/ABS etc.) have grown at 7% p.a. A lot of polymer materials (PE, PVC etc.) are imported to cater the unmet domestic demand. The major import source countries are Kingdom of Saudi Arabia, Qatar, UAE, Korea, USA, Singapore, Thailand, Germany, Spain and Malaysia. Few Plastics materials (PP, PS) are produced in surplus and these materials are exported to international markets. Major export destinations are China, Egypt, UAE, Turkey, Vietnam, and Indonesia.

Reliance, Gujrat and IOCL Panipat (Haryana) help in raw material, which the units buy quality product to ensure the quality metrics of the customer of whom they are the suppliers/ OEM. With the molding / machining process dependency on external vendor, quality assurance has to be governed by supplying good quality raw material and supervision for ensuring usage of the provided high quality raw material.

### **2.3 Cluster Scenario**

A growing sector of the plastics industry, plastic injection moulding is the most common process used to produce plastic parts. The process of plastic injection moulding is fast, meant to produce large quantities of the same plastic product in a short time span. Nowadays, the materials used are for instance thermoplastic, thermoset, elastomer, and/or metal(s). High-performance plastics that can withstand high temperatures are replacing the metals that are traditionally used by the OEM industries.

The Gurugram plastic and allied products cluster houses about 1200 units. The units generally have a secured market as being the OEM for major automobile and household goods like Maruti, Mahindra, KIA, LG and Samsung. The various Auto parts like Plastic Arm rests, ducting, windowpane controls are part of the product base. The units rely upon the procurement of quality raw materials as per the customer specification and the moulding and machining activity is got done externally. The small units are unable to meet the investment for their inhouse moulding and machining equipment. The cluster is located in Gurugram also international market in the Kingdom of Saudi Arabia. Moreover, with the Make in India and Atmanirbhar Bharat schemes and sensitization, more and more products are being looked at from Indian OEMs that's a win-win situation for this perceived cluster.

The plastic units lack the required moulding and machining process equipment as a result of which they have to outsource these services to private players. Private players charge a higher fee, which greatly affects the MSEs. This significantly increases their costs, thereby reducing their competitiveness. It also often enhances the production time which delays their supplies. As a result of this, the units are facing loss of orders due to their inability to price their products competitively vis-à-vis other players.

Thus, the need for setting up inhouse Moulding and Machining process to cater to the requirements of the 1200 units in the cluster, for a better and cost competitive production cost and ease of fulfilment with quality centricity, establishes a need out loud for the Gurugram Plastic and Allied products cluster.

### **2.4 Products of the Cluster**

The cluster meets the requirements of the plastic products for the Automobile, Medical Equipment and Home Appliances industries. The 1200 units in the cluster are the OEM manufactures for the Automobile and Home Appliances majors, like Mahindra, Maruti, KIA, TATA, LG and also Samsung. Automobile plastic products manufactured by the cluster include map pocket, ducting bracket, child auto parts, arm rest, sheet metal products and other plastic automotive parts. The selected photographs of the products is given below:



Plate a centre cross



Pillion and Fuse Box



Stay Seat Lock/Clip Harness/Clip



Steering's Horn Spring



BKT Pillion L/R Step



Plate a centre cross

Figure 5: Products of the Cluster Units

# Diagnostic Study Findings



### **3. Diagnostic Study Findings**

A diagnostic study was undertaken by the cluster members in August 2020 to map the existing business processes in the cluster, identify the gaps, and understand the requirements of the cluster. It was observed that many units required high end Injection Moulding facilities, as they were currently availing these services from external service providers at high prices, and often with production delays. Additionally, external service providers sometimes do not accept the low volume orders from MSMEs.

The DSR was approved by the Director General, MSME, Govt. of Haryana on 14<sup>th</sup> September 2020 and the SPV was granted permission to go ahead with preparation of Detailed Project Report (DPR) for the cluster. The major findings of the DSR are presented in the following sections.

#### **3.1 Cluster Actors and their role**

The primary stakeholders in the cluster are the plastic & allied manufacturing units based in the district Gurugram. The other stakeholders include the major industry associations, government agencies (mainly DIC, regulatory bodies, raw material suppliers, and academic/training institutes). These cluster actors provide various services to the cluster units. Some of the major cluster actors located in and outside the cluster and catering to the units of the region are mentioned below:

##### **A. Industry Associations**

###### **► Gurugram Chamber of Commerce and Industry: (GCCCI)**

The chamber works towards the promotion and development of industrial commerce and trade in the Gurugram. It is well recognised by the State/Central Governments. The Chamber serves Gurugram, Udyog Vihar, Sohna, Roz Ka Meo, IMT Manesar, Pataudi and Dharuhera industrial belts and enjoys representation on various Advisory/Consultative committees. The Chamber is well equipped to take up members problems with the concerned authorities. The Chamber acts as a common point of contact with the collective strength of its members on issues of local, regional and national importance. It is responsible for organizing, from time to time, meetings with Government officials to voice trade and industry's problems/suggestions on various issues and also to seek on the spot decision. It is affiliated to apex bodies like FICCI, CII, ASSOCHAM, and PHD Chamber. Chamber is also affiliated to international Chambers namely Indo American Chamber and Indo German Chamber. It also enjoys affiliation with the Government of India to issue Certificate of Origin for Exports and its recommendations for grant of VISA are recognised by several Embassies and High Commissions in the country. Some of the cluster units are also the members of the association.

###### **► The All India Plastics Manufacturers' Association (AIPMA)**

AIPMA is the oldest apex body of the plastic industry in India. It is headquartered in Mumbai and has regional offices in Delhi, Chennai and Kolkata. AIPMA works towards promotion of plastics in compliance with national and international



standards and provides certifications like BIS, ISO, Six Sigma, lean management, National Manufacturing competitiveness, REACH etc. It also helps organize training programs for owners, executives and skilled workforce for Plastic industry. The cluster units have participated in several exhibitions organized by the AIPMA.

► **Plastics Machinery Manufacturers Association of India (PMMAI)**

PMMAI promotes the interests of the Indian plastics machinery manufacturers for technology upgradation utilizing Govt. incentives, technology knowledge sharing, skill set development, global benchmarking, market development, export marketing, industry growth, representing to Government for policy issues affecting plastics machinery manufacturers etc.

PMMAI's vision is to generate high degree of co-operation amongst members of PMMAI. This is mainly done through market intelligence, technology sharing, cluster development, export marketing with India brand etc. SPV is willing to register itself as a member of PMMAI and consult them for identification of machinery to be proposed in the CFC.

► **The Automotive Component Manufacturers Association of India (ACMA)**

ACMA is the apex body representing the interest of the Indian Auto Component Industry. Its membership of over 800 manufacturers contributes more than eighty-five per cent of the auto component industry's turnover in the organised sector. ACMA is an ISO 9001:2015 Certified Association. ACMA's charter is to develop a globally competitive Indian Auto Component Industry and strengthen its role in national economic development as also promote business through international alliances. ACMA's active involvement in trade promotion, technology up-gradation, quality enhancement and collection and dissemination of information has made it a vital catalyst for the component industry's development in India. Its other activities include participation in international trade fairs, sending trade delegations overseas and bringing out publications on various subjects related to the automotive industry. ACMA is represented on a number of panels, committees and councils of the Government of India through which it helps in the formulation of policies pertaining to the Indian automotive industry.

## **B. Government Bodies**

► **District Industries Centre (DIC)**

DIC is the most important government stakeholder for the cluster. The office of DIC comes under the Dept. Of Industries and is headed by Joint Director/ Deputy Director who is assisted functional managers and technical field officers. DIC promotes and routes subsidy to micro and small enterprises in the region. The State Mini Cluster Development Scheme under which the plastic and allied products units want to set up a CFC will also be implemented through the DIC office. The Gurugram DIC is actively promoting cluster development in the district and also helps the local units register under Haryana Udhyaam Memorandum (HUM). It would play a key role in formulation of the Plastic and allied products units SPV.

▶ **MSME-Development Institute, Delhi**

MSME - Development Institute, Delhi is a field office of the Development Commissioner (MSME), Ministry of MSME, New Delhi, which is an apex body for formulating, coordinating and monitoring the policies and programmes for promotion and development of MSMEs in the country. MSME -DI provides a wide range of extension / support services to the MSMEs.

▶ **Haryana State Infrastructure & Industrial Development Corporation (HSIIDC)**

HSIIDC is a major agency in the State to promote the setting up and promotion of small, medium and large-scale industrial units. The Corporation also acts as a State-level financial institution and provides long term loans for industrial projects. The important activities of the Corporation are:

- Development of industrial areas/ estates
- Helps entrepreneurs on matters such as securing registrations/ licences/ clearances from the statutory/other authorities.
- Provision of term-loans

▶ **Haryana Shehri Vikas Pradhikaran (HSVP)**

HSVP is the urban planning agency of the state of Haryana in India. It was established in 1967 (as Haryana Urban development Authority HUDA). It plays a key role in land development and execution of development works like roads, water supply, sewage, and drainage etc.

▶ **National Small Industries Corporation (NSIC)**

National Small Industries Corporation (NSIC) was established in the year 1955 with a view to promote, aid and foster growth of small industries in the country. Gurugram industry is served by the NSIC branch office in Gurugram. It provides diverse services to MSMEs in Gurugram such as:

- Helps entrepreneurs in purchasing machinery and equipment
- Equipment leasing and working capital finance
- Information on technological up gradation
- Composite loan scheme and export assistance

### **C. Educational Institutes**

- ▶ **CIPET - Central Institute of Plastic Engineering and Technology, Murthal, Sonapat :** CIPET was established in the year 2006. The centre is located at Murthal in Sonapat district of Haryana, 50 Kms from the National Capital New Delhi. CIPET CSTS - Murthal is an ISO 9001:2015 certified institution for providing Academic and Technical Support Services for Sustainable growth of Plastics & allied industry in the region. The institute provides Technical Support Services to the Plastics & Allied Industries in the core areas of Tooling, Design & Development of Products, Plastics Processing, Testing & Quality Control and provides Job oriented skill development training programmes in various skill trades which are aligned as



per NSQF (National Skill Qualification Framework) of NSDA. Some of the engineers and workers are trained here.

- ▶ **Centre of Polymer Science & Engineering in the Department of Material Science and Engineering, Indian Institute of Technology, New Delhi:** The Department of Materials Science and Engineering (DMSE) has been established on 1st January 2018 for developing and undertaking research on materials for specific end uses. It holds the privilege of being the only materials research and engineering department in Delhi-NCR region. The institute is conducting the graduate, post-graduate courses. Some of the owners are managers graduated from here.

#### **D. Banks / FIs**

- ▶ **Small Industries Development Bank of India (SIDBI)**

SIDBI is the apex financial institution responsible for the growth and development of the MSME sector. Almost all the government subsidy schemes, and bilateral lines of credit are implemented through SIDBI. The business strategy of SIDBI is to address the financial and non-financial gaps in MSME eco-system. Financial support to MSMEs is provided by way of (a) Indirect / refinance to banks / Financial Institutions for onward lending to MSMEs and (b) direct finance in the niche areas like risk capital, sustainable finance, receivable financing, service sector financing, etc.

- ▶ **Syndicate Bank, Gurugram**

Syndicate Bank is the lead bank of the Gurugram district, and many local plastic and allied manufacturing units have a banking relationship with the Bank.

#### **E. Leading Manufacturers**

Some of the leading plastic manufacturers in Gurugram include Vbros Autos, Machino Plastics, VL Polymers, Mechmart.

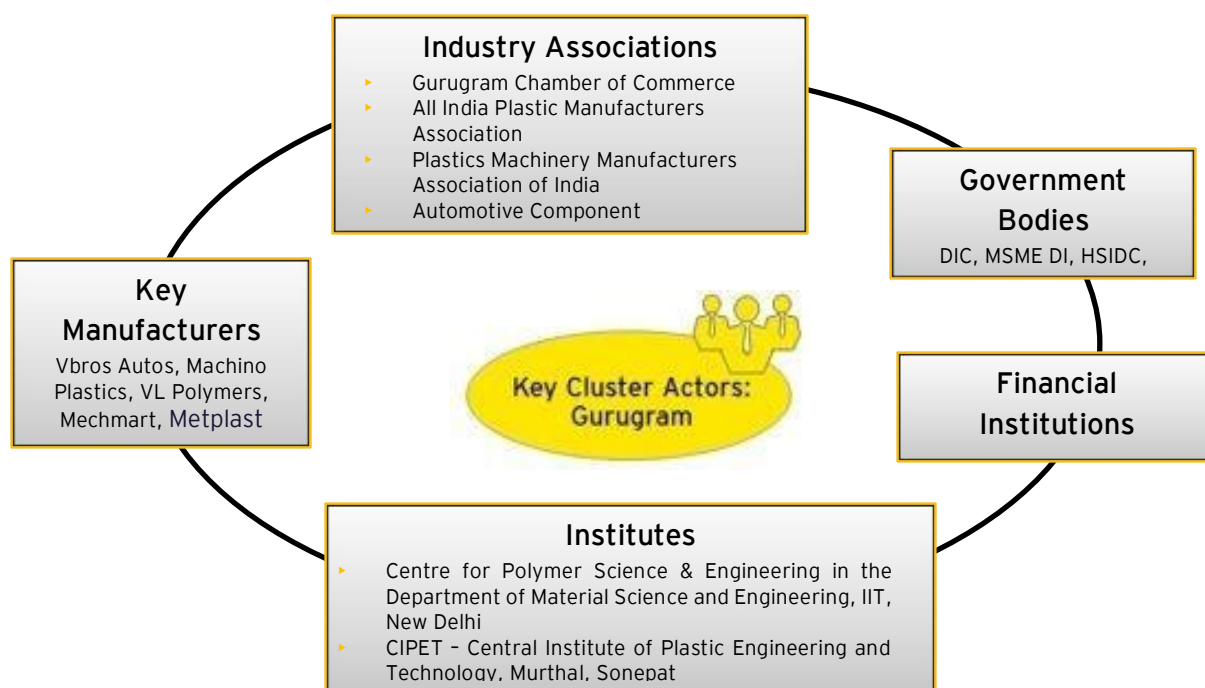


Figure 6: Key Cluster Actors

### 3.2 Raw Material Availability for the Cluster

Since the production process and end-product in case of plastic and allied products manufacturing is largely standardized, the raw material requirement is also the same. The major raw materials used in the manufacturing process are such as PP and ABS, which are largely available locally and procured from the local vendor/suppliers.



Figure 7: Raw material

Most of the secondary raw materials are available easily in and around the NCR area mainly Gurugram, Delhi and Faridabad. These are sourced from the local dealers, depending on the type of raw material and buyer specifications. However, the primary raw materials PP/ABS is procured centrally from Gurugram and Faridabad within the state of Haryana, and also from Ahmedabad (Gujarat).

The raw materials are taken from the below supplier sources:

- ▶ Plastics
- ▶ Granules (Reliance)
- ▶ Steel
- ▶ TATA
- ▶ Essar
- ▶ Vimal Machines
- ▶ Presto
- ▶ Sintex

Quality checking of the primary raw materials is undertaken at the point of delivery. It is both manual as well as automatic. While the former involves random checks of the merchandise, the latter involves the use of specialized machinery for Raw Material inspection and testing.

### 3.3 Cluster Market

The units in the cluster operate across the spectrum - from completely domestic manufacturing to entirely export oriented, catering to both domestic and international markets, in the gulf region and specifically for the Kingdom of Saudi Arabia. Manufacturing is predominantly done to order and is usually based on the buyer's specifications. The MSMEs cater to relatively smaller / niche orders, while larger players in the market cater to high volume orders. MSMEs are exporting directly gulf countries specifically to the Kingdom of Saudi Arabia.

In the domestic market, the MSMEs are catering to the domestic clientele spread across various industry segments like automobile, Home Appliances like Maruti, Mahindra, TATA, KIA, LG, and Samsung. The Markets however are spread across Pune, Gurugram, Chennai, Uttarakhand and Telangana in the Domestic sector and in the Arabian nations internationally.

### 3.4 Cluster Employment

Presently, this cluster provides employment to 10,000 people directly & indirectly. On an average micro unit employ approximately 3-6 persons, and small units in the cluster employ approximately 5-10 persons. On an average, micro and small-scale implements manufacturing units employ approximately 4-10 people. The average wages of unskilled labour in the industry are of INR 10,000 - 12,000 per month for workers operating on 8-10-hour shift. The average wages of skilled labour for precision activities



such as cutting, quality checking, storage and finishing etc. is around INR 15,000 – 20,000 per month. Cluster also provides employment to engineering graduate by offering monthly salary around INR 30,000.

### 3.5 Cluster Turnover

The annual turnover of this cluster units is estimated to be around INR 500 crore. However, there is an enormous potential of increasing the turnover (to about 600 crore) as well as production of cluster units by deploying the modern machines/equipment which will speed up and localize new product development. Also, the finished products manufactured will be of international quality which will help the units of the cluster to explore export opportunities. This would result in enhanced turnover and open vistas for innovation, which was not possible earlier due to technology constraints.

With the help of proposed CFC, plastic & allied products manufacturers will get better machining facilities and reduction in outsourced activities which will reflect in their improved work. Recommendations around these have been provided in the DSR.

### 3.6 Production & Quality Testing Process

Plastic products are manufactured through different molding techniques such as injection, blow, extrusion and roto molding. Extrusion process is the most commonly used process in India and accounts for 60% of total production by downstream plastic processing industries. Injection molding is the second widely used process accounting for ~25% of the production. Blow molding is used for ~ 5% of processes and roto molding for 1% of the processes. The remaining is processed through various niche and specialized processes. The process flow chart for ventilator grill is given below:

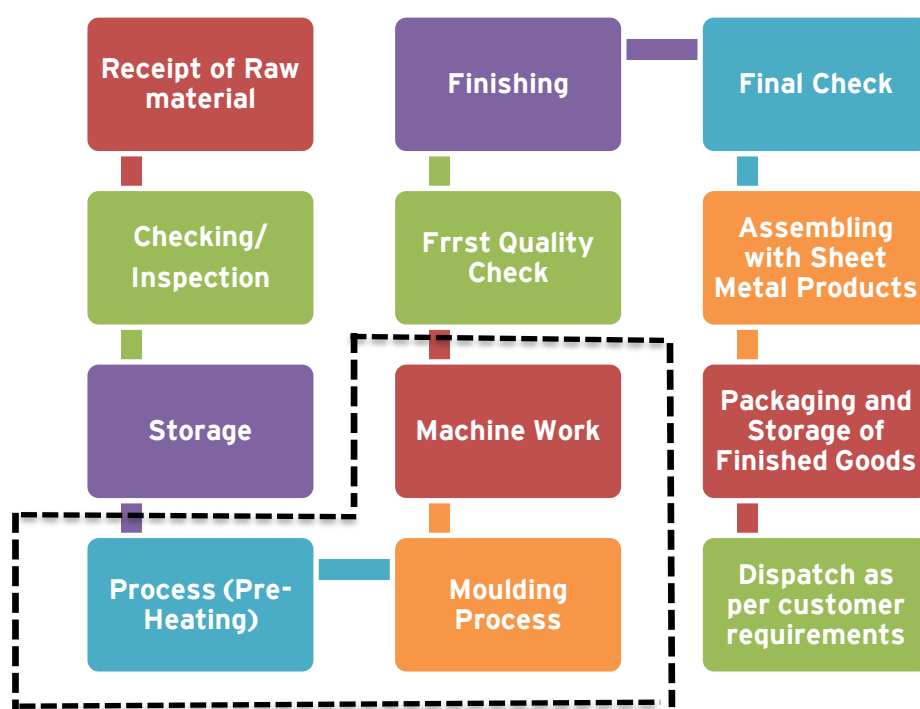


Figure 8: Production Process Flow Chart

### 3.7 Equipment Used in the Plastic and Allied Products Manufacturing Process

The major machines and equipment used in the Gurugram plastic & allied products cluster for manufacturing of in table 2:

Table 2: Equipment Used

S.N.	Name of the Machine	Application
1.	Spot Welding Machine	Welding is a fabrication process that joins materials, usually metals, by causing fusion and is different from lower temperature metal-joining techniques such as brazing and soldering which do not melt the base metal. In addition to melting the base metal, a filler material is typically added to the joint to form a pool of molten material (the weld pool) that cools to form a joint that is usually stronger than the base material.
2.	Lathe Machine	The lathe is a machine tool used principally for shaping metal pieces (and sometimes wood or other materials) by causing the workpiece to hold and rotated by the lathe causing the cutting action.
3.	Milling Machine	Milling machines are very versatile. They are usually used to flat surfaces but can also be deployed at irregular surfaces as per the requirements. They are used to drill, bore, cut gears, and produce slots.
4.	Cutter Machine	This machine is used to cut metals by means of rotating blade or saw.
5.	Bending Machine	Bending machine is a forming machine tool. It is used to assemble a bend on a workpiece. A bend is manufactured by using a bending tool during a linear or rotating move.

### 3.8 Value Chain Analysis

Value chain analysis is a strategic tool used to analyse internal firm activities. Its goal is to recognize, which activities are the most valuable to the firm and which ones could be improved to provide competitive advantage. The analysis also reveals a firm's competitive advantages and disadvantages. The units of plastic and allied products cluster, Gurugram competes through cost advantage. These units intend to perform some production activities at lower costs to enhance their competitiveness.

Value chain analysis of most commonly produced cluster product has been conducted to analyse the internal activities to propose corrective measure to increase competitiveness. The same is provided in table 3.

Table 3: Value chain analysis of plastic products

Particulars	Value Added (INR)	Total Value (INR)	% of Cost of production
Raw Material	1.25	1.25	42%
Process [Moulding + Electricity +Labour]	1	2.25	33%
Finishing and Inspection	0.5	2.75	16%
Packing and Forwarding	0.25	3.0	8%
<b>Production Cost</b>		<b>3.0</b>	<b>100%</b>
<b>Profit</b>		<b>1.05</b>	<b>35%</b>
<b>Sales Cost</b>		<b>4.05</b>	

It is evident from the above table that raw material (42%) and injection moulding (33%) contributes maximum to the cost of production. Processing includes electricity and labour. Targeting these major cost areas and providing better facilities to the units in these areas will lead to increased competitiveness of the cluster units.

Based upon the recommendation for hard intervention of modern injection moulding machines under the banner of CFC, the processing cost per product will reduce significantly. The key objective of the CFC shall be to enable the cluster units reduce their cost of production through minimizing the cost of processing raw material (moulding), which constitutes the major portion of the production costs. Further, minimizing the cost of production through increased value addition in production and finishing operations shall increase the profit margin of the cluster units.

### 3.9 Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis

A SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis of the MSME Plastic and allied products manufacturing units in the cluster has been carried out keeping in mind the technology, marketing, product quality, skills, inputs, innovation, business environment and energy/environment compliance of the units. The SWOT analysis is provided in table 4:

Table 4: SWOT Analysis of the Cluster

Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
<b>Market</b>	<ul style="list-style-type: none"> <li>▶ Steady local demand for cluster products from several automotive units in Gurugram district</li> <li>▶ Cluster located within the Gurugram Industrial area, which is well connected with all major national and international industrial hubs.</li> <li>▶ Cluster located in the proximity of NCR which is a major supply hub.</li> <li>▶ Strong natural business ecosystem in the region with presence of many buying houses.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Presence of other large players to whom bulk orders are made. These units have a well-established clientele. This makes market penetration, a challenge.</li> <li>▶ Lack of information on changing customer preference</li> <li>▶ Lack of marketing capabilities of entrepreneurs</li> <li>▶ Loss of orders occasionally due to inordinate delay in processing of orders.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Growing domestic market potential of plastic &amp; allied products</li> <li>▶ Potential to price products competitively with acquisition of technology, in order to compete effectively with countries such as China</li> <li>▶ Capacity building of entrepreneurs on export promotion &amp; documentation</li> <li>▶ Government support available for buyer-supplier contacts through fairs, meets, web portal etc.</li> <li>▶ There is huge market scope within India</li> </ul>	<ul style="list-style-type: none"> <li>▶ Intense competition from global markets.</li> <li>▶ Competition from other units based in Delhi</li> <li>▶ Squeezing margins driving many micro units out of the market</li> </ul>
<b>Technology/Product Quality</b>	<ul style="list-style-type: none"> <li>▶ High focus on product quality as raw material can be inspected upon</li> </ul>	<ul style="list-style-type: none"> <li>▶ Absence of Injection Moulding high end machines</li> </ul>	<ul style="list-style-type: none"> <li>▶ Setting up of state-of-the-art Injection Moulding Centre resulting in units</li> </ul>	<ul style="list-style-type: none"> <li>▶ Micro units unable to get orders from large anchor</li> </ul>



Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
	<p>delivery both manually and by using specialized machinery</p> <ul style="list-style-type: none"> <li>▶ Each unit undertakes inspection of pieces at each stage in their manufacturing process</li> <li>▶ Some buyers specify testing labs from which products need to be certified</li> <li>▶ Products are made as per 'tech packs' specified by buyers, and are thus made-to-order</li> </ul>	<ul style="list-style-type: none"> <li>▶ Lack of advance machining centres</li> <li>▶ Absence of Testing Labs</li> <li>▶ Most of the units are using obsolete machines leading to poor quality of products</li> <li>▶ Cluster units lack capability to install advance facilities to manufacture quality products</li> <li>▶ Inability to execute large orders at competitive prices</li> <li>▶ Lack of awareness on quality assurance measures</li> </ul>	<p>being able to obtain these services both timely and at lower costs and price their products competitively.</p> <ul style="list-style-type: none"> <li>▶ Extended support from government to improve the technology used by MSE</li> <li>▶ Aid to small units to adopt lean techniques to enhance their productivity</li> </ul>	<p>units due to their low production capacities</p> <ul style="list-style-type: none"> <li>▶ Increase in cost of production, low productivity and reduced margin leading to shutting down of units</li> <li>▶ Increase in awareness of people on quality certifications shall lead to losing out to business / requirement for more stringent testing procedures.</li> <li>▶ Rapid technology obsolescence.</li> <li>▶ Production process is increasingly mechanized to increase efficiency &amp; product quality. Might drive micro players out of the market</li> </ul>
<b>Skill/ Manpower</b>	<ul style="list-style-type: none"> <li>▶ Skills acquired on-the-job</li> <li>▶ Educated &amp; active entrepreneurs</li> </ul>	<ul style="list-style-type: none"> <li>▶ High labour costs</li> <li>▶ Shortage of skilled manpower in the cluster</li> <li>▶ Lack of interaction between SMEs and technical institutes for providing technical training</li> </ul>	<ul style="list-style-type: none"> <li>▶ Availability of government sponsored training program by CIPET for skill upgradation</li> <li>▶ Conducting on job training program on required skills</li> </ul>	<ul style="list-style-type: none"> <li>▶ Youth interested to work in other lucrative sectors and not keen on working in small units</li> <li>▶ Non availability of skilled manpower</li> </ul>



Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
		<ul style="list-style-type: none"> <li>▶ No mechanism to mobilize regional youth for training in the sector</li> <li>▶ Absence of a dedicated training centre for Automotive &amp; Allied products Industry</li> </ul>	<ul style="list-style-type: none"> <li>(operations, soft skills etc.)</li> <li>▶ Engage technical institutes for skill development programs</li> <li>▶ Bridge gap between industry and academic institutes providing specialised training programmes</li> </ul>	
<b>Inputs</b>	<ul style="list-style-type: none"> <li>▶ Availability of polymers (raw materials) in vicinity</li> <li>▶ Stable prices of raw material (polymer) due to regulation</li> <li>▶ Availability of quality power</li> </ul>	<ul style="list-style-type: none"> <li>▶ No web portal displaying prices and sources of raw materials</li> <li>▶ Fluctuation in prices of other raw material (paints, chemical etc.)</li> <li>▶ High energy cost structure because of lack of efficient processes</li> <li>▶ No energy audits practised, wastage of raw material.</li> </ul>	<ul style="list-style-type: none"> <li>▶ Potential to develop a portal displaying information (price, suppliers) of raw materials</li> <li>▶ Potential to reduce energy cost by energy auditing</li> </ul>	<ul style="list-style-type: none"> <li>▶ Cost of power in India is, on average, higher than key competing countries like China</li> <li>▶ Rise in price of raw materials and fuels</li> </ul>
<b>Business Environment</b>	<ul style="list-style-type: none"> <li>▶ Gurugram well known as a leading industrial hub of India for Automotive sector</li> <li>▶ Steady growth in domestic demand</li> <li>▶ State industry department is proactively undertaking</li> </ul>	<ul style="list-style-type: none"> <li>▶ High cost of industrial land in the cluster</li> <li>▶ Lack of common infrastructure/CFC facilities</li> <li>▶ No long-term vision of industrialists</li> <li>▶ Lack of amenities for workers</li> </ul>	<ul style="list-style-type: none"> <li>▶ Establish CFC with latest technologies for quality products and increasing efficiencies</li> <li>▶ Create better awareness of government schemes and regulations</li> </ul>	<ul style="list-style-type: none"> <li>▶ Change in policies and regulatory environment</li> <li>▶ Increase in land rates</li> <li>▶ Plastic &amp; Allied product industry is a dynamic industry and large firms with modern technologies are capturing major market share, leading to</li> </ul>

Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
	several developmental initiatives for MSMEs ► Conducive policy and regulatory initiatives ► Active State Govt. and schemes for development of the sector ► Proactive industries associations in Gurugram and cluster SPV, have good knowledge about govt. schemes	► Lack of bargaining power of units		a declining trend for micro and small industries
<b>Energy/ Environment</b>	► Increased focus on environment due to requirement from buyers	► Lack of knowledge of energy efficiency resulting in higher energy consumption ► High energy cost structure because of lack of efficient processes	► Regular checks on maintaining quality and safety standards ► Potential to reduce energy costs by energy auditing	► Increase in power tariff ► Increased focus on environment standards

### 3.10 Major Issues / Problem Areas of the Cluster

Various factors such as availability of raw materials and association with secured buyers i.e. Original Equipment Manufacturer in a highly competitive market are the two major challenges. However, the cluster units face below challenges in their backward and forward value chain;

▶ **Absence of Injection Moulding high end machines**

Absence of technology for high end injection moulding facilities for production of quality products and reducing cost of production. No Individual unit has the capability to invest in this machine. Due to the dependency of the units on third party manufacturers lead to operational delays and enhanced cost of production. The units in the micro and small sector incur almost double the cost in production of the products as compared to their large counterparts as they are dependent on the private players for job work for the moulding/machining process. This has hindered the ability of micro and small firms to obtain bulk orders from anchor units. Consequently, the units are witnessing plunging market shares and their sustainability is also in jeopardy. By establishing this facility in the CFC, the cluster units can improve the quality of the products and reduced the wastage of raw material. This facility will also help the MSE units to increase the volume of production and capture the more market share.

▶ **Lack advanced machining Centre**

Almost all the micro and small-scale units in the cluster deploy manual practices and obsolete technologies for machining work. Cluster units have presently deployed the lathe machines, manual drill machines and welding machines. Due to lack of advance machinery these units are not able to manufacture the highly finished products. The units are presently dependent on private players in Delhi NCR region to preforms the machining works. Cluster units are also unable to diversify their product line to cater to emerging demands of market and need advanced machineries to manufacture the quality of products as per the requirement of OEMs. The present machineries are obsolete and have low capacity.

▶ **Lack of skilled manpower**

Lack of skilled manpower is responsible for wastage of raw material, higher production time, low accuracy and low productivity results.

Due to inexistence of these facilities, the units face frequent production delays, cost inefficiencies, rejections, material wastages and losing market shares. These facilities if provided through CFC in the cluster with government support will help the units become more competitive and dramatically move up the value chain.

### 3.11 Key Technologies Missing

The key technologies that are required in the cluster along with the proposed intervention to be set up under the CFC are mentioned in below table 5:

Table 5: Key Technologies Missing

S. No.	Facility/Equipment	Technology Gaps Identified	Technology Interventions
1.	Injection Moulding Machines	<ul style="list-style-type: none"> <li>▶ Absence of technology for high end injection moulding facilities for production of quality products and reducing cost of production.</li> <li>▶ No Individual unit has the capability to invest in this machine.</li> <li>▶ Unable to develop new products and innovate</li> <li>▶ Special shapes cannot be made</li> <li>▶ Accuracy and consistency are the challenge</li> <li>▶ Very less productivity</li> </ul>	<ul style="list-style-type: none"> <li>▶ Advanced Injection Moulding Machines</li> </ul>

### 3.12 Cluster growth potential

The potential for the growth of plastic & allied products is enormous, owing to the growing market for these products in India and internationally. Gurugram is located in the proximity of Delhi, providing it with a strategic advantage in terms of its proximity to a key supply hub. Additionally, there is a large raw material base readily available as Haryana. Currently units are facing challenges in cost competitiveness and efficiency due to the absence of injection moulding facility. They are obtaining these services from external providers, which is increasing their costs as a result of which the units often get priced out and face loss of orders.

Against this backdrop, if these facilities are provided to the units under the CFC mode, their production costs and inefficiencies will reduce and they will be able to compete with other international players from low-cost production destinations such as China, Sri Lanka, Bangladesh, etc.

# Diagnostic Study Recommendations



## 4. Diagnostic Study Recommendations

Based upon the diagnostic study and intense discussions with various cluster stakeholders on 10<sup>th</sup> August 2020 and on-site visits to cluster units, technology and infrastructure gap has been identified. Accordingly, hard interventions (setting up of CFC) are being proposed to enhance the competitiveness of the plastic cluster units. The CFC is proposed to include **Injection molding machines**.

The cluster has presence of a couple of proactive industries associations which frequently keep organizing awareness and training programs for the plastic industry. The awareness level of the units is found to be satisfactory. Some of the units in the Gurugram cluster are members of such associations, which actively conducts trainings and workshops related to entrepreneurship development, IPR, energy efficiency, GST, Industries department incentive scheme, sustainability, etc. Hence, the cluster does not intend to obtain government funding for soft interventions.

The recommendations for hard interventions have been elaborated in subsequent sections.

### 4.1 Hard Interventions for Setting up a CFC

The cluster would require the following common infrastructure facilities on an urgent basis to improve the competitiveness of the micro and small plastic and allied products units and to enable them to move up the value chain. The potential members of the proposed SPV with support from the state government are willing to set up a dedicated Common Facility Centre which shall have state-of-the-art injection molding facilities. The cost for machinery and equipment is estimated at **INR 209.16 lakhs**. This facility shall provide a much-needed technical impetus to the cluster units and will enable them to become more competitive.

#### Injection Moulding Machine:

Injection molding is the most commonly used manufacturing process for the fabrication of plastic parts. A wide variety of products are manufactured using injection molding, which vary greatly in their size, complexity, and application. The injection molding process requires the use of an injection molding machine, raw plastic material, and a mold. The plastic is melted in the injection molding machine and then injected into the mold, where it cools and solidifies into the final part. Injection molding is used to produce thin-walled



plastic parts for a wide variety of applications, one of the most common being plastic housings. This machine is utilized at CFC to make the plastic components used in automotive



sector and home appliances sector. Units will be required to provide raw material and mold of their requirement at CFC to get their job work done. This molding facility at CFC will established the 860 kN, 1200 kN, 1600 kN, 2000 kN and 3000 kN capacity machines which are used to perform different capacity job work.

## 4.2 Expected Outcome after Intervention (Long term vision)

The cluster vision that has been progressively evolved is:

“The plastic & allied products manufacturing cluster of Gurugram would evolve into a preferred base for Indian and global customers by means of standardization, technology up-gradation through injection moulding facility and quality improvement advanced machining facilities by the year 2020. The emphasis is on tapping national and global customer base by producing internationally competitive products.”

The mission of the project is closely twinned with cluster vision:

- ▶ Enhance productivity and efficiency in the plastic & allied products manufacturing process by employing appropriate technology in the form of common facility.
- ▶ Value addition to services offered to customers by manufacturing quality products and contributing to consumer satisfaction as well as improving performance of cluster enterprises.
- ▶ Encourage cluster firms to cater the demand of large industries through integrated equipment envisaged in the CFC and benefit the firms of adjacent districts for regional development as plastic & allied products manufacturing hub.

The CFC fits into the long-term vision of the cluster in terms of enabling cluster enterprises improve quality and efficiency by means of appropriate injection moulding facilities and machining facilities. This in turn shall enable cluster firms to tap regional demand and increase export. The common facility is expected to enhance the levels of co-operation and joint action amongst cluster stakeholders and SPV members to co-operate in the areas of marketing and procurement. The skill upgradation requirement of cluster manpower shall be met conducting training with help from equipment manufacturers and suppliers as part of additional service.

In addition, mini cluster at Gurugram will complement the efforts of State Government to promote clusters in the State and serve as a model for up gradation of micro, small enterprise clusters.





## 5. SPV for Project Implementation

The micro and small units in the Gurugram Plastic and Allied Product Manufacturing Cluster came together to form a Special Purpose Vehicle (SPV) as a private limited company under section 7 of the Companies Act, 2013 and rule 8 of the Companies (Incorporation) Rules, 2014 under the name and style of '**Plastvision India Private Limited**' with CIN U25200HR2020PTC089247. The SPV was registered on 11-09-2020. The certificate of registration/ incorporation along with Memorandum of Association (MoA) and Articles of Association (AoA) and PAN card of the SPV are provided in **Annexure - 2 & 3**. The Company has an authorized paid up capital of INR 10 lakh which shall be enhanced in the near future. The members are micro and small sized firms (registered units) in Gurugram involved in manufacturing of plastic & allied products for auto & consumer sector.

DIC, Gurugram and State Government both played an important role in SPV formation. The SPV was incorporated in the month of September 2020 and already includes 12 members who are subscribing to the necessary equity base of the company. The SPV shall always be open for new members to join and for the existing members to leave while maintaining a minimum member base of at least 10. The proposed CFC will be implemented on public-private partnership basis through an SPV under the name and style of '**Plastvision India Private Limited**' by availing support from Government of Haryana's State Mini Cluster Development Scheme (under Haryana EPP-2015).

The SPV members have a track record of cooperative initiatives. SPV members are also members of prominent cluster associations. Cluster members have been autonomously undertaking several soft interventions to enhance knowledge and exposure of the cluster units on new trends in the automotive industry and enhancing productivity of their units. This includes exposure visits to fairs and sharing of best practices, registration under UAM, awareness programs on new trends in auto manufacturing, entrepreneurship development, IPR, energy efficiency, GST, barcoding, equity schemes, SME IPO process, sustainability, etc. These programs were conducted in collaboration with DIC, the State Government, and Industry Association of Gurugram district etc. Therefore, no support (in the form of grant-in aid) will be sought under this project for undertaking soft interventions.

The SPV has conducted a series of stakeholder consultations (with various members, DIC, Gurugram, and EY experts) during finalization of project components, selection of technologies and development of Detailed Project Report. The SPV has been instrumental in spreading awareness about cluster development under State Mini Cluster Development Scheme in Gurugram and has also helped in validation of DSR. It has kept the State Government and the DIC Gurugram engaged during the entire period of development of DSR and DPR.

### 5.1 Shareholder profile and Shareholding mix

**List of Directors:** The SPV has two directors. The details of the directors are furnished in Table 6. Other than these directors, the SPV will have provision of having one director each from the State Government. The SPV comprises members from micro and small plastic &

allied product manufacturing units. It is homogeneous in nature due to similar products and activities performed by the cluster units.

All the 12 SPV members will be shareholders in the '**Plastvision India Private Limited**'. Two members will be the directors in the company. Other than these directors, the SPV will have provision of having one director each from the state DIC and the State Government. The SPV comprises members from micro and small plastic & allied product manufacturing units. It is homogeneous in nature due to similar products and activities performed by the cluster units.

Table 6: List of Directors

S. No.	Directors	Name of the unit	Unit address
1	Sh. Nandan Singh	Metaplast Industries	Plot kh.no.209/2513, 260, Hayatpur, Industrial Area, Sector-94, Pataudi.
2	Sh. Mohan Chandra Paneru	Harshita Enterprises	Plot kh.no.925/734, Basal Enclave Part- II, Opp, Sector-10A Gurugram-122001

The lead promoters/shareholders have several years of successful experience in manufacturing and are also well versed with the benefits of cluster development initiatives. These units are financially viable in nature. Post the DSR validation, the DIC Gurugram also acknowledged the genuineness and enthusiasm of the SPV members to undertake project initiatives under State Mini Cluster Development Scheme and has recorded that the CFC demand is authentic. The unit verification details have been added in Annexure 4.

Members of the SPV have been engaged in manufacturing of plastic & allied products in Gurugram for several years and have considerable experience in marketing and manufacturing. Directors and SPV members have had close interactions with technical experts, government institutions and machinery suppliers.

The SPV was formed with the objective of taking up cluster level activity in a joint and coordinated manner, wherein all units have equal say. The shareholding pattern of members of the registered SPV includes the contribution from every member of SPV and no individual shareholder holds more than 10% equity stake in the capital of the company. Details of SPV members along with their contact persons, unit details, UAM numbers and products manufactured are provided in Table 7.

Table 7: Details of SPV Members

S. No.	Authorized Person	Unit Name	Unit Address	Last Year Sale	Investment in Plant & Machinery	Contact No.
1	Mr. Nandan Singh	METPLAST INDUSTRIES	Plot kh.no.209/2513, 260, Hayatpur, Industrial Area, Sector-94, Pataudi	1.75 Cr	1.25 Cr	9818424141
2	Mr. Mohan Paneru	HARSHITA ENTERPRISES	Plot kh.no.925/734, Basal Enclave Part- II, Opp, Sector-10A Gurugram-122001	0.20 Cr	0.15 Cr	9810266493
3	Mr. Shiv Kumar	S.K. ENTERPRISES	Village Khandsa, Opp. Plot No.317, Sector-37, Gurugram-122010	1.25 Cr	0.35 Cr	7042712426
4	Mr. Virender Sharma	INDO PLASTIC CO.	Plot.no.80D, HSIDC Shed, Pace City, Sector-37, Gurugram-122010	1.80 Cr	0.50 Cr	9810170871
5	Mr. Pradeep Sharma	MNP FASTNERS INDUSTRIES	Plot kh.no.737, Gali No.2, Basal Enclave Part-II, Gurugram-122001	1.50 Cr	0.45Cr	9811391084
6	Mr. Trilok	A.R. ENGG. WORKS	Plot.no.161, Firoz Gandhi Colony, Kataria Complex, Basal Road, Gurugram-122001	0.18 Cr	0.05Cr	9654602320
7	Mr. Ramesh Kumar	S.G. ENTERPRISES	Plot kh.no.927/734, Basai Enclave Part- II, Opp, Sector-10A Gurugram-122001	0.35 Cr	0.10 Cr	9718764480
8	Mr. Lalit Kukreja	NITYASUNDARA INDUSTRIES	Plotno.1367/601/3 Khandsa Road Near Hema engg, Pace City-1, Gurugram-122010	0.65 Cr	0.25 Cr	8700626229

S. No.	Authorized Person	Unit Name	Unit Address	Last Year Sale	Investment in Plant & Machinery	Contact No.
9	Mr. Laxman Singh	R.G POLYMERS	Plot No.7, Gali No.3, Basal Enclave Part-II, Opp Sector-10, Gurugram-122001	0.35 Cr	0.10 Cr	9718990778
10	Mr. Sunil Vashisht	Mr. JAY PEE AUTO COMP.	Plot kh.no.209/258, 260, Hayatpur Industrial Area, Sector-94, Pataudi road, Hayatpur, Gurugram-122505	1.45 Cr	0.45 Cr	9560890950
11	Mr. Ashraf Ali Khan	KHAN ENTERPRISES	Plot 1, Gall No.1, Near Nathu Sweets, Opp Govt. School, Pataudi Road, Gurugram-122001	0.65 Cr	0.25 Cr	9717731591
12	Mr. Naresh Yadav	BALAJI SPARK ENGG.	Plot .no.C-47/1, Basal Enclave Part-I, Industrial Area, Gurugram-122001	0.95 Cr	0.45 Cr	8800531172

## 5.2 Initiatives undertaken by the SPV

As mentioned in detail in section 4.1, the SPV members have proactively undertaken multiple capacity building initiatives to promote the cooperation among cluster units and enhance knowledge and exposure of the units. The major initiatives are:

- ▶ Regular member meetings for discussion on the CFC as well as technologies, marketing, discussion on incentives available to MSMEs, etc.
- ▶ Participation in various programs for capacity building, awareness generation and technological advancement in the cluster.
- ▶ Identification of building to be taken on lease for the SPV.
- ▶ The preparation of DSR was led by EY consultant and the validation & approval process for the DSR was also led by EY consultant.

## 5.3 SPV Roles and Responsibilities

The SPV will play a guiding role in the overall management and operations of the CFC. It will provide direction to the management of the CFC and will monitor usage and performance of the CFC. The SPV will constantly report to the state Government about the performance of the CFC. The major roles and responsibilities that are envisaged to be performed by the SPV post the submission of this DPR are mentioned below:

- ▶ Coordinating with the state industry department for DPR approvals in the SLSC.
- ▶ Accompanying EY experts to various meetings at the state government departments
- ▶ Building lease deed agreement in SPVs name.
- ▶ Garnering the equity contribution from the members.
- ▶ Formation of purchase committees for procurement of goods and services.
- ▶ Establishing, operating and maintaining all common facilities as mentioned in the DPR.
- ▶ Obtain any statutory approvals/clearances from various government departments.
- ▶ Recruit appropriate professionals to ensure smooth execution of the CFC.
- ▶ Collection of user charges from members and other users of the facilities as per the decided rates to meet the recurring expenses and future expansions of the CFC. While various estimates on user charges / service fee are presented in this DPR, all decisions including usage priority of facilities by members will be made on the basis of decision by members of SPV.
- ▶ Preparation and submission of progress reports to state industry department.

The Memorandum and Articles of Association of the cluster SPV indicates the democratic process in terms of decision making based on votes. All members of SPV will meet once every fortnight/month to discuss/resolve operational issues. The management of the CFC will be a two-tier structure for smooth and uninterrupted functioning. The executive body i.e. Board of Directors (BoD) will include office bearers elected/nominated from time to time, including one nominee of State Government (DIC).

While various estimates on user charges/service fees are presented in this DPR, all decisions including usage priority of facilities by members will be made by unanimous decision of the members. The CFC will seek direction and guidance from the main governing body, and the

day-to-day administration will be taken care of by the management that shall be appointed by the SPV board of directors. Their role is detailed below:

1. **Board of Directors:** The BoD will be the main governing body and will oversee the operations of the CFC. They will have the decision-making power in terms of fixing user fees (for members and non-members) and usage of reserves etc. for future expansion. The Chairman and Managing Director will oversee the entire operations; each Director will be entrusted with specific responsibility like marketing, technical, finance, public relations etc. based on their interests and experience.
2. **Managerial, Technical and Administrative staff:** A competent and well qualified professional with background in plastic & allied product industry will be appointed as the Cluster Development Executive (CDE) also referred to as the Cluster Executive Officer, who will look after day-to-day operations of the CFC and shall be directly reporting to the board of directors. The facility will have its own expert staff (supervisors, operations and helpers) as per the requirement. The details of manpower and other requirements are already mentioned in the DPR in the project economics section. There shall be provisions for administrative staff such as accounts personnel, marketing professional, storekeepers etc. to ensure effective functioning of the CFC. The proposed organizational structure of the CFC is given in figure below:

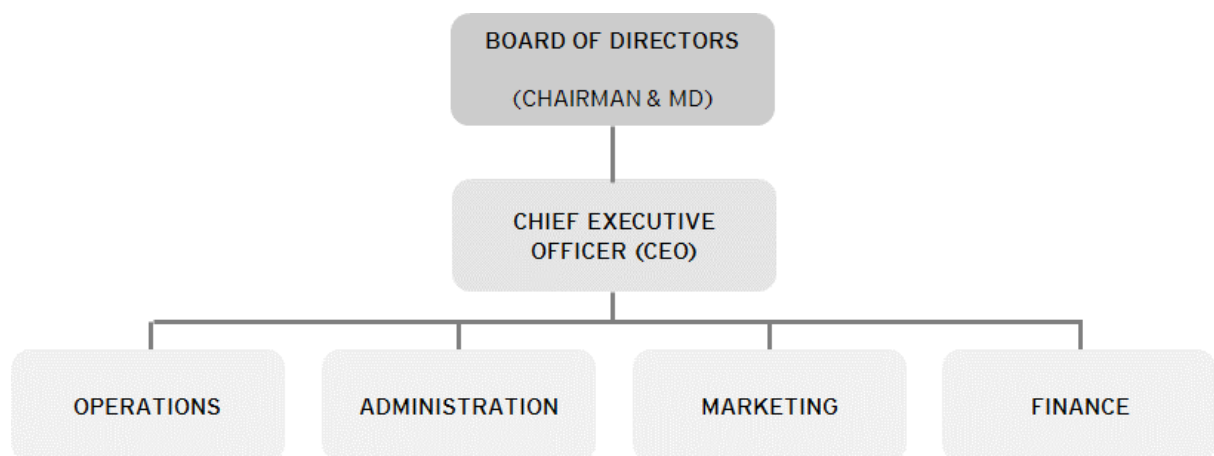


Figure 9: Organisational Structure



# Project Economics



## 6. Project Economics

### 6.1 Project Cost

The total project cost is estimated at **Rs. 228.08 lakhs**. The project cost for setting up a CFC in the Gurugram Plastic and Allied Products Manufacturing cluster includes the following:

1. Building (on lease)
2. Machinery and equipment
3. Miscellaneous fixed assets
4. Preliminary & Pre-operative expenses
5. Contingency
6. Margin money for working capital

The detail of each project component is provided below:

#### 6.1.1 Building

The SPV shall lease one floor of a building on a 10-year irrevocable lease. The SPV has identified the building and obtained a letter establishing the availability of the building. The building is located at Plot No 925/734, Gali No. 2, Basai Enclave Part-II Opposite Sector 10 Gurugram, Haryana. The available area is 2700 square feet and the monthly rent for the first year would be Rs. 0.50 lakhs, with an annual increase at the market rate (estimated at 10%).

#### 6.1.2 Plant and Machinery

As detailed in section 4.1 (hard interventions), the machines proposed in the cluster will enable cluster units enhance their competitiveness. The machines have been categorized as primary and secondary. The machines that shall be used primarily for job work have been categorized as primary, whereas, the auxiliary/supporting machines have been categorized as secondary machines. The major facilities proposed at the CFC are for high end Injection Moulding facility. The total cost of plant and machineries has been estimated at INR 209.16 lakhs including transportation charges, taxes and installation fees, and contingency works out to INR 10.46 lakhs.

The details of the proposed machinery items are presented in the table below. The detailed specifications and quotations of the machines are provided in the annexure. The SPV has considered quotations for machinery from suppliers based on the manufacturer's reputation, service support, price and quality. However, an open online tendering system shall be followed for procurement of these machines during project execution, and selected vendors will be further invited to negotiate.

Table 8: List of Proposed Plant &amp; Machinery

(Rs. In lakh)

PLANT & MACHINERY										
S. No.	Machine Name	Qty.	Basic Price	Total Basic Price	Transportation Charges*	Gst as Applicable*	Installation Charges	Total Price	Supplier Options	Model / Specifications
<b>A</b>	<b>Primary Machinery</b>									
1	Haitian make MARS G Series Injection Moulding Machine 860 kN	1	14.00	14.00	0.33	2.58	0.22	17.13	Haitian Huayuan Machinery India Pvt. Ltd	Model MA 860 Injection Unit-B 260 G
2	Haitian make MARS G Series Injection Moulding Machine 1200 kN	1	21.50	21.50	0.33	3.93	0.22	25.98	Haitian Huayuan Machinery India Pvt. Ltd	Model MA 1200 Injection Unit-B 260 G
3	Haitian make MARS G Series Injection Moulding Machine 1600 kN	1	25.50	25.50	0.33	4.65	0.22	30.70	Haitian Huayuan Machinery India Pvt. Ltd	Model MA 1600 Injection Unit-B 540 G
4	Haitian make MARS G Series Injection Moulding Machine 2000 kN	1	29.00	29.00	0.33	5.28	0.22	34.83	Haitian Huayuan Machinery India Pvt. Ltd	Model MA 2000 Injection Unit-B 770 G
5	Haitian make MARS G Series Injection Moulding Machine 3000 kN	1	47.00	47.00	0.33	8.52	0.22	56.07	Haitian Huayuan Machinery India Pvt. Ltd	Model MA 3000 Injection Unit-B 1800 G
	<b>Sub Total (A)</b>	<b>5</b>	<b>137.00</b>	<b>137.00</b>	<b>1.65</b>	<b>24.96</b>	<b>1.10</b>	<b>164.71</b>		
<b>B</b>	<b>Secondary Machinery</b>									
1	Overhead EOT Crane	1	10.00	10.00	-	1.80	-	11.80	M SUI Machines Pvt. Limited	

(Rs. In lakh)

PLANT & MACHINERY										
S. No.	Machine Name	Qty.	Basic Price	Total Basic Price	Transportation Charges*	Gst as Applicable*	Installation Charges	Total Price	Supplier Options	Model / Specifications
2	Chiller Plant with water tank, cooling tank, supply pump and water pump	1	17.37	17.37	-	3.13	-	20.50	Reynold India Pvt. Ltd.	
3	180KVA DG Set	1	10.30	10.30	-	1.85	-	12.15	Green Field Enterprises	
	<b>Sub Total (B)</b>	<b>3</b>	<b>37.67</b>	<b>37.67</b>	<b>0.00</b>	<b>6.78</b>	<b>0.00</b>	<b>44.45</b>		
	<b>Grand Total</b>	<b>8</b>	<b>174.67</b>	<b>174.67</b>	<b>1.65</b>	<b>31.74</b>	<b>1.10</b>	<b>209.16</b>		

**\*Notes:**

1. Transportation Charges, Custom Duty & GST rates are Tentative.
2. Conversion rate: NA

### 6.1.3 Miscellaneous Fixed Assets

The CFC would also require fixed assets such as furniture, fixtures, firefighting equipment, first-aid equipment etc. for smooth running of operations. The total estimated capital expenditure for purchase of miscellaneous fixed assets is estimated to be Rs. 1.64 Lakhs. Details are provided in the table 9 below.

Table 9: Miscellaneous Fixed Assets

<b>MISCELLANEOUS FIXED ASSETS</b>		
<b>S. No.</b>	<b>Particulars</b>	<b>Amount</b>
1	Office Table (1)	0.10
2	Office Chair (4)	0.12
3	Guest Chair (4)	0.20
4	Fire fighting equipment (8)	0.22
5	Miscellaneous Fixed Assets	1.00
	<b>Total</b>	<b>1.64</b>

### 6.1.4 Preliminary and Pre-operative Expenses

Another major component of the project cost is the preliminary and pre-operative expenses. The preliminary expenses are envisaged as expenses incurred for registration of SPV, legal and administrative expenses, tendering forms, tendering cost, etc.

Pre-operative expenses include expenses for electricity connection charges, refurbishment of the building, administrative establishment, travelling, bank charges, stationery, telephone, overhead expenses during machinery testing period such as salaries, machine testing cost, bank charges, travelling, etc. The total expenditure for preliminary and pre-operative expenses are estimated at Rs. 3.37 Lakhs (details provided in the table below).

Table 10: Preliminary and Pre-Operative Expenses

<b>PRELIMINARY &amp; PRE OPERATIVE EXPENSES</b>		
<b>S. No.</b>	<b>Particulars</b>	<b>Amount</b>
1	Company Registration Charges	0.50
2	Travelling Cost	0.50
3	Machine testing cost	0.35
4	Lease deed registration charges	1.43
5	Bank Appraisal Charges	0.59
	<b>Total</b>	<b>3.37</b>

### 6.1.5 Provision for Contingencies

As per the guidelines of state-mini cluster development scheme a provision for contingencies has to be made on plant/machinery and building (not applicable in this case as the building is being taken on a lease basis). Contingencies on plant and machinery have been estimated at 5% that amounts to Rs. 10.46 lakhs.

### 6.1.6 Margin Money for Working Capital

The total working capital requirement during the first year of operation at 75% capacity utilization is estimated at Rs. 15.45 Lakh. The working capital loan, if required, will be availed from a local bank and is calculated at Rs. 12 Lakh with margin money requirement of Rs. 3.45 Lakh (minimum 20% of working capital requirement as margin). The working capital requirement has been calculated based on requirement of one month of operational expenses and 1 months' debtor collection period. The calculation has been provided in the subsequent section.

### 6.1.7 Summary Project Cost

A summary of the total estimated project cost as per actual and as per State Mini Cluster Development Scheme is presented in the table below:

Table 11: Total Project Cost

<b>PROJECT COST</b>				
<b>S. No.</b>	<b>Particulars</b>	<b>Total Project Cost</b>	<b>Eligible Amount as per Guidelines</b>	<b>Remarks</b>
<b>1</b>	<b>Land &amp; Building</b>			
	a. Land Value	0.00		
	b. Land Development	0.00		
	c. Building & Other Civil Works	0.00	0.00	
	d. Building Value	0.00		
	<b>Sub Total (A)</b>	<b>0.00</b>	<b>0.00</b>	<b>Eligible (Max 25% of total of L&amp;B, P&amp;M, and Misc. F.A.)</b>
<b>2</b>	<b>Plant &amp; Machinery</b>			
	a. Indigenous	164.71	164.71	
	b. Imports	0.00	0.00	
	c. Secondary Machines	44.45	44.45	
	<b>Sub Total (B)</b>	<b>209.16</b>	<b>209.16</b>	<b>Eligible</b>
<b>3</b>	<b>Miscellaneous fixed assets (C)</b>	<b>1.64</b>	<b>0.00</b>	
<b>4</b>	<b>Preliminary &amp; Preoperative Expenses (D)</b>	<b>3.37</b>	<b>0.00</b>	
<b>5</b>	<b>Contingency</b>			
	a. Building @ 2%	0.00	0.00	
	b. Plant & Machinery @ 5%	10.46	0.00	
	<b>Sub Total (E)</b>	<b>10.46</b>	<b>0.00</b>	
<b>6</b>	<b>Margin money for working capital @ 75% CU (F)</b>	<b>3.45</b>	<b>0.00</b>	
	<b>Grand Total (A+B+C+D+E+F)</b>	<b>228.08</b>	<b>209.16</b>	<b>Not eligible for grant</b>

## 6.2 Means of Finance

The project will be financed from two sources: equity from SPV, and grant-in-aid from Govt. of Haryana (under State Mini Cluster Development Scheme, EPP-2015). Working capital loan, if required, will be secured from a local bank. The assistance to the project from Govt.

of Haryana under State Mini Cluster Development Scheme is envisaged to the tune of 90% of the project cost for project up to Rs. 200 lakhs. SPV will be required to contribute 10% of project cost for project cost up to Rs. 200 lakhs. Hence, the SPV members have proposed to contribute the entire amount beyond Rs. 180 lakhs, taking their overall contribution to about 21.08 % of the total project cost. The total contribution of SPV members will amount to Rs. 48.08 lakhs. Support from State Government is envisaged for Rs. 180.00 Lakhs. Details of the means of finance are provided in the table below:

Table 12: Means of Finance

Means of Finance		
S. No.	Source of finance	Total Amount (Rs. In Lakh)
1	Grant-in-aid under State Mini Cluster Development Scheme (Govt. of Haryana)	180.00
2	Contribution of SPV	48.08
	<b>Total</b>	<b>228.08</b>

Detailed Means Of Finance							
S. No.	Source of finance	Project cost upto eligible cost		Project cost over eligible cost			Remarks
		Percentage Contribution	Amount (INR in lakh)	Percentage Contribution	Amount (INR in lakh)	Total Amount (INR in lakh)	
1	Grant-in-aid under State Mini Cluster Development Scheme	90%	180.00	0%	0.00	180.00	As per EPP, 2015 GoH contribution is max 90%
2	Contribution of SPV	10%	20.00	100%	28.08	48.08	
	<b>Total</b>	<b>100%</b>	<b>200.00</b>	<b>100%</b>	<b>28.08</b>	<b>228.08</b>	

### 6.2.1 Share Capital

The contribution of the SPV members will be by way of subscription to shares in the SPV registered as a Private Limited Company. The extent of paid-up share capital would be Rs. 48.08 lakh contributed by the cluster SPV.

The authorized share capital of the company is INR 1 lakh at present which shall be increased in due course. The extent of equity subscription by each member will be restricted to a maximum of 10% of total share capital of the company.



### **6.2.2 Grant-in-Aid**

Grant-in-aid of Rs. 180.00 lakh is expected from Government of Haryana. The amount received by the way of grant under State Mini Cluster Development Scheme will only be utilized to procure plant and machinery for the project.

## **6.3 Expenditure Estimates**

In this section, a detailed estimate of expenditure of the CFC has been conducted on eight-hour single shift (i.e. 8 hours) operation basis. This has been estimated based upon extensive inputs by the cluster members and the prevalent rates of consumables, utilities and manpower in the cluster. This section considers annual cost of undertaking job work and expenditure estimates. The critical components related to expenditure comprise consumables, manpower, electricity and also expenditure on repair and maintenance of assets, insurance and administrative overheads.

Other elements comprise expenditures by the way of interest toward working capital loans, miscellaneous expenses and non-cash depreciation expenditure.

### **6.3.1 Consumables**

Machines installed at the CFC shall require consumables during operations and completion of the job work. Consumables are critical components of project facilities and may be understood in terms of oil, grease and chemicals, etc.

Table 13: Consumables

CONSUMABLES REQUIRED FOR MACHINES															
S. N o.	Machine Name	No. Of Machines	Particulars	Total monthly Amt (Rs.)	Consumables required annually (Rs. In Lakh)	Amount (in Rs. Lakh)									
						Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
						75%	80%	85%	90%	95%	100%	100%	100%	100%	100%
1	Haitian make MARS G Series Injection Moulding Machine Model MA 860 Injection Unit-B 260 G		Hydraulic, Oiling, Greasing, Tools												
2	Haitian make MARS G Series Injection Moulding Machine Model MA 1200 Injection Unit-B 260 G	1		5000.00	0.60	0.45	0.48	0.51	0.54	0.57	0.60	0.60	0.60	0.60	0.60
3	Haitian make MARS G Series Injection Moulding Machine Model MA 1600 Injection Unit-B 540 G	1		5000.00	0.60	0.45	0.48	0.51	0.54	0.57	0.60	0.60	0.60	0.60	0.60
4	Haitian make MARS G Series Injection Moulding Machine Model MA 2000 Injection Unit-B 770 G	1		5000.00	0.60	0.45	0.48	0.51	0.54	0.57	0.60	0.60	0.60	0.60	0.60

CONSUMABLES REQUIRED FOR MACHINES															
S. N o.	Machine Name	No. Of Machi nes	Particulars	Total monthly Amt (Rs.)	Consumables required annually (Rs. In Lakh)	Amount (in Rs. Lakh)									
						Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
						75%	80%	85%	90%	95%	100%	100%	100%	100%	100%
	Haitian make MARS G Series Injection Moulding Machine Model MA 3000 Injection Unit-B 1800 G	1		5000.00	0.60	0.45	0.48	0.51	0.54	0.57	0.60	0.60	0.60	0.60	0.60
	<b>Total</b>				<b>3.00</b>	<b>2.25</b>	<b>2.40</b>	<b>2.55</b>	<b>2.70</b>	<b>2.85</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>	<b>3.00</b>
	<b>Consumables per month</b>				<b>0.25</b>	<b>0.19</b>	<b>0.20</b>	<b>0.21</b>	<b>0.23</b>	<b>0.24</b>	<b>0.25</b>	<b>0.25</b>	<b>0.25</b>	<b>0.25</b>	<b>0.25</b>

### 6.3.2 Manpower Requirement

Another major expenditure head is the manpower. Facilities installed at CFC will require manpower to function effectively. The total manpower requirement for the project would be about 14 persons. The manpower required under project has been divided under two categories: Direct & Indirect. Direct manpower is required for operation of machines while indirect manpower is required for administrative purposes. The annual expenditure on salary component for direct manpower is estimated at Rs. 18.48 lakh and for indirect at 6.53 lakhs. The total expense on manpower is projected at Rs. 2.08 lakh per month or Rs. 25.01 lakh per annum.

The details of monthly and yearly expenses for manpower required for running the project is provided in table below:

Table 14: Expenditure related to Salary (direct manpower - machine operators and helpers)

DIRECT MANPOWER				
Category	No. of Manpower Required	Salary per month per person (INR)	Total Salary Per Month (INR)	Total salary & wages per Year (INR lakh)
Plastic & Allied Products Cluster (Operation Head)	1	35,000.00	35,000.00	4.20
Haitian make MARS G Series Injection Moulding Machine (Operator)	5	12,500.00	62,500.00	7.50
Helper	5	8,500.00	42,500.00	5.10
			-	
	<b>11</b>	<b>0.56</b>	<b>1.40</b>	<b>16.80</b>
<b>Add: Perquisites/Fringe Benefits @ 10%</b>				<b>1.68</b>
<b>Sub Total (A)</b>				<b>18.48</b>

Table 15: Expenditure Related to Salary (indirect manpower - administrative and support staff)

INDIRECT MANPOWER				
Category	No. of Manpower Required	Salary per month per person (INR)	Total Salary Per Month (INR)	Total salary & wages per Year (INR lakh)
Cluster Dev Executive (Supervisor)	1	25,000.00	25,000.00	3.00
HR	1	15,000.00	15,000.00	1.80
Peon	1	9,500.00	9,500.00	1.14
	<b>3</b>	<b>0.50</b>	<b>0.50</b>	<b>5.94</b>
<b>Add: Perquisites/Fringe Benefits @ 10%</b>				<b>0.59</b>
<b>Sub-Total (B)</b>				<b>6.53</b>
<b>Total (A) + (B)</b>	<b>14</b>			<b>25.01</b>

### 6.3.3 Utilities

The most important utilities required in the project is power supply. Proposed CFC requires power for operation of machinery as well as other supporting equipment for smooth operations. The total connected load requirement has been estimated at 236.50 kW. The table below depicts the machine and equipment wise power requirement in the CFC. The drawn power is conservatively assumed at 60% of the connected load in the case of operating facilities and shop floor.

Table 16: Machine & Equipment (facility) wise power requirement

S. No.	Machine & Equipment	Power Requirement (kW)/ Connected Load	Total power requirement (60% of drawn power) kWh
1	Haitian make MARS G Series Injection Moulding Machine Model MA 860 Injection Unit-B 260 G	30.00	18.00
2	Haitian make MARS G Series Injection Moulding Machine Model MA 1200 Injection Unit-B 260 G	35.00	21.00
3	Haitian make MARS G Series Injection Moulding Machine Model MA 1600 Injection Unit-B 540 G	40.00	24.00
4	Haitian make MARS G Series Injection Moulding Machine Model MA 2000 Injection Unit-B 770 G	50.00	30.00
5	Haitian make MARS G Series Injection Moulding Machine Model MA 3000 Injection Unit-B 1800 G	60.00	36.00
<b>Total Connected load for CFC</b>		<b>215.00</b>	<b>129.00</b>
<b>Buffer Connected Load (10% of Total Connected Load)</b>		<b>21.50</b>	
<b>Total</b>		<b>236.50</b>	

The power requirement for operation of core machinery and equipment and administrative facilities is 215. The facility is heavily based on electricity for operations and will also require additional 10% connected load as a buffer to get the electricity connection. The total connected load for the CFC is estimated to be 236.50 kW.

Fixed charges for connection of 236.50 kW @ Rs. 175 per kW equals Rs. 41,387.50/- per month and monthly consumption charge @ Rs. 9 per unit for 25,800 units amounts to Rs. 2,32,200/- per month. This has been calculated based on the prevalent rates of the power provider.

The table below presents the envisaged annual expenditure in terms of power related charges.

Table 17: Annual Expenditure Statement vis-à-vis Power Charges

In INR Lakh

Power charges at various C.U.										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	75%	80%	85%	90%	95%	100%	100%	100%	100%	100%
Fixed	4.97	4.97	4.97	4.97	4.97	4.97	4.97	4.97	4.97	4.97
Variable	20.90	22.29	23.68	25.08	26.47	27.86	27.86	27.86	27.86	27.86
Total	25.86	27.26	28.65	30.04	31.44	32.83	32.83	32.83	32.83	32.83
Per month	2.16	2.27	2.39	2.50	2.62	2.74	2.74	2.74	2.74	2.74

#### 6.3.4 Annual Repairs and Maintenance Expenses

The annual repairs and maintenance expenses have been estimated to be Rs. 6.37 lakh. The details are presented in the table below:

Table 18: Annual Repairs and Maintenance Expenditure

REPAIR & MAINTENANCE (in INR Lakh)	
ANNUAL REPAIR AND MAINTENANCE EXPENSES	
Repair & Maintenance of Building	0.10
Repair & Maintenance of Plant and Machineries @ 3%	6.27
<b>Sub Total A</b>	<b>6.37</b>

#### Insurance and miscellaneous Administrative Expenses

Insurance is a critical component of asset protection at the CFC. Insurance is computed on the basis of 0.5 percent on the fixed assets. Cost of insurance shall remain as a fixed cost. Miscellaneous administrative expenses are estimated at a lump-sum of Rs. 0.60 lakh per year. The details are presented in the table below:

Table 19: Insurance and Miscellaneous Administrative Expenses

OTHER EXPENSES	
Insurance Charges (Estimate @ 0.5% on fixed assets (such as buildings, civil works, and Plant & machinery, including related contingency expenses of approx. Rs. Lakh)	1.10
Miscellaneous Expenses (Stationery, communication, travelling, and other misc. overheads)	0.60
<b>Total</b>	<b>1.70</b>

## 6.4 Working Capital Requirements

Working capital has been calculated in terms of one month's operating expenses required for the CFC as well as one months' debtor collection period. The operating expenses includes in form of consumables, salaries, utilities and rent expenses.

The working capital requirement of the project for the one month of operation has been considered for consumables and expenses. The SPV will contribute the margin money for working capital and rest of working capital will be borrowed from local bank. While calculating the project cost, a minimum of 20% of working capital is shown as margin for working capital and the remaining will be borne by SPV as borrowings. The total working capital is estimated to be Rs. 15.45 lakh during the first year of operation (75% C.U.). Further, total working capital required at an operating capacity of 80% during the second year comes out to Rs. 16.42 lakh. The corresponding margin money for working capital requirement at 75% & 80% capacity utilization in the first 2 years amounts to Rs. 3.45 lakh and Rs. 4.42 lakh respectively, and the corresponding loan amounts to Rs. 12 lakh.

The details are presented in the table below:



Table 20 Working Capital Requirements

(Rs. In  
Lakh)

WORKING CAPITAL												
S. No	Particulars	Period	As per Capacity Utilisation									
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
			75%	80%	85%	90%	95%	100%	100%	100%	100%	100%
1	Consumables	1 month	0.19	0.20	0.21	0.23	0.24	0.25	0.25	0.25	0.25	0.25
2	Utilities (Power)	1 month	2.16	2.27	2.39	2.50	2.62	2.74	2.74	2.74	2.74	2.74
3	Working Expenses (Manpower)	1 month	1.70	1.78	1.85	1.93	2.01	2.08	2.08	2.08	2.08	2.08
4	Sundry Debtors (Sales Value)	1 month	11.41	12.17	12.93	13.69	14.45	15.21	15.21	15.21	15.21	15.21
5	Working capital (Total expenses)		15.45	16.42	17.38	18.35	19.31	20.28	20.28	20.28	20.28	20.28
6	Working Capital Margin		3.45	4.42	5.38	6.35	7.31	8.28	8.28	8.28	8.28	8.28
7	Working Capital Loan		12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
8	Interest on Working capital loan @11% p.a.		1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32
9	Working Cap Margin %age		22.33%	26.90%	30.96%	34.60%	37.87%	40.83%	40.83%	40.83%	40.83%	40.83%

## 6.5 Depreciation Estimates

Estimates of depreciation are non-cash expenditure and presented in this section on the basis of Written down Value (WDV) methods. Accounting for depreciation would facilitate sustainability of operations in terms of developing a fund for replacement of assets. The relevant fund that is accumulated could facilitate the replacement of such assets toward the end of the envisaged asset life of 10 years. Depreciation of plant and machinery is considered at 15% a year (envisaged project life of 10 years prior to replacement of assets), depreciation of computers is considered at 60% per year, depreciation of furniture at 10% per year, and depreciation of miscellaneous fixed assets at the rate of 15% a year. The computation of depreciation as per WDV method is provided in the tables below.

Table 21: Depreciation based on WDV

<b>DEPRECIATION (WRITTEN DOWN VALUE METHOD)</b>										
<b>Particulars</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>	<b>Year 9</b>	<b>Year 10</b>
<b>Land</b>										
Opening Balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Less: Depreciation	-	-	-	-	-	-	-	-	-	-
Closing Balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Building and Civilwork</b>										
Opening Balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Less: Depreciation @ 10%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Closing Balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Plant &amp; Machinery</b>										
Opening Balance	219.62	186.67	158.67	134.87	114.64	97.44	82.83	70.40	59.84	50.87
Less: Depreciation @ 15%	32.94	28.00	23.80	20.23	17.20	14.62	12.42	10.56	8.98	7.63
Closing Balance	186.67	158.67	134.87	114.64	97.44	82.83	70.40	59.84	50.87	43.24

(Rs. In lakh)

DEPRECIATION (WRITTEN DOWN VALUE METHOD)										
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<b>Furniture</b>										
Opening Balance	0.42	0.38	0.34	0.31	0.28	0.25	0.22	0.20	0.18	0.16
Less: Depreciation @ 10%	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02
Closing Balance	0.38	0.34	0.31	0.28	0.25	0.22	0.20	0.18	0.16	0.15
<b>Other Misc. Fixed Assets</b>										
Opening Balance	1.22	1.03	0.93	0.84	0.75	0.68	0.61	0.55	0.49	0.44
Less: Depreciation @ 15%	0.18	0.10	0.09	0.08	0.08	0.07	0.06	0.05	0.05	0.04
Closing Balance	1.03	0.93	0.84	0.75	0.68	0.61	0.55	0.49	0.44	0.40
<b>Total Depreciation</b>	<b>33.17</b>	<b>28.14</b>	<b>23.93</b>	<b>20.35</b>	<b>17.30</b>	<b>14.71</b>	<b>12.51</b>	<b>10.64</b>	<b>9.04</b>	<b>7.69</b>
<b>Depreciated value</b>	<b>188.08</b>	<b>159.94</b>	<b>136.01</b>	<b>115.67</b>	<b>98.37</b>	<b>83.66</b>	<b>71.15</b>	<b>60.52</b>	<b>51.47</b>	<b>43.78</b>

## 6.6 Income/Revenue estimates

The CFC is expected to generate revenue by way of user charges that shall be levied based upon the manufacturing of plastic and allied products. The user charges shall vary based upon the user i.e.- the SPV members and non SPV members. The user charges will be less for the SPV members as compared to non SPV members. Firms based outside Gurugram shall be charged a premium for availing the CFC services. The major income sources for the CFC are envisaged by the way of manufacturing different plastic and allied products through molding/machining process.

The user charges have been estimated based upon the operational expenses of the CFC and the prevalent market rates in Gurugram. User charges for secondary machines have not been considered as a part of revenue. Estimation of user charges for availing services at CFC has been done on a conservative basis. An average user charge has been used, taking into account the demand for injection molding.

The relevance and appropriateness of user charges is also evident from the fact that the rates fixed help meet operating expenditures and provide sustainable replacement of assets. It is also envisaged that the CFC will generate enough income to sustain and grow, making it a viable project.

The estimated user charges are presented in table below:

Table 22: User Charges for Machinery

In INR Lakh

REVENUE GENERATION AT CFC																	
S. No.	Machine Name	Qty	User Charge per hour (Rs.)	No. Of Working hours per day	No. Of Working days per month	Revenue per month	Annual Revenue generation	Amount									
								Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
								75%	80%	85%	90%	95%	100%	100%	100%	100%	100%
1	Haitian make MARS G Series Injection Moulding Machine Model MA 860 Injection Unit-B 260 G	1	800	9	26	1.87	22.46	16.85	17.97	19.09	20.22	21.34	22.46	22.46	22.46	22.46	22.46
2	Haitian make MARS G Series Injection Moulding Machine Model MA 1200 Injection Unit-B 260 G	1	900	9	26	2.11	25.27	18.95	20.22	21.48	22.74	24.01	25.27	25.27	25.27	25.27	25.27

In INR Lakh

REVENUE GENERATION AT CFC																	
S. No.	Machine Name	Qty	User Charge per hour (Rs.)	No. Of Working hours per day	No. Of Working days per month	Revenue per month	Annual Revenue generation	Amount									
3	Haitian make MARS G Ser. Injection Moulding M/c Model MA 1600 Injection Unit-B 540 G	1	1100	9	26	2.57	30.89	23.17	24.71	26.25	27.80	29.34	30.89	30.89	30.89	30.89	30.89
4	Haitian make MARS G Ser. Injection Moulding M/c Model MA 2000 Injection Unit-B 770 G	1	1600	9	26	3.74	44.93	33.70	35.94	38.19	40.44	42.68	44.93	44.93	44.93	44.93	44.93
5	Haitian make MARS G Ser. Injection Moulding M/c Model MA 3000 Injection Unit-B 1800 G	1	2100	9	26	4.91	58.97	44.23	47.17	50.12	53.07	56.02	58.97	58.97	58.97	58.97	58.97
Total							182.52	136.89	146.02	155.14	164.27	173.39	182.52	182.52	182.52	182.52	182.52

## 6.7 Estimation of profitability: Income and Expenditure statement

The projection for income and expenditures of the CFC has been conducted for ten years. The projections have been undertaken based upon the income and expenditure heads mentioned in previous sections. The projected statements highlight income, expenses, profits earned, income tax and net profit etc. The details are presented in the table below:

The total gross revenue is estimated to be Rs. 136.89 lakhs for the first year of operation at an operating capacity of 75%. For projection purposes, operating capacity of 75% is considered for first year, 80% for second year and 100% capacity from 6th year onwards.

The income tax rates have been considered depending upon the announcement made in the Budget 2020 and the tax applicable to a Pvt. Limited Company. Income tax has been considered at 22 per cent on taxable profit inclusive of all the tax components. The incidence of tax ranges from INR 8.96 lakhs in the first year to INR 19.90 lakhs in Year 10.

Table 23: Income and Expenditure Statement

(Rs. In Lakh)

PROFIT & LOSS ACCOUNT										
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Number of working days	300	300	300	300	300	300	300	300	300	300
Number of shifts	1	1	1	1	1	1	1	1	1	1
<b>Capacity Utilisation in %</b>	<b>75%</b>	<b>80%</b>	<b>85%</b>	<b>90%</b>	<b>95%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>A. Income</b>										
<b>(User/ Service Charge)</b>	<b>136.89</b>	<b>146.02</b>	<b>155.14</b>	<b>164.27</b>	<b>173.39</b>	<b>182.52</b>	<b>182.52</b>	<b>182.52</b>	<b>182.52</b>	<b>182.52</b>
<b>B. Cost of Production:</b>										
1. Utilities Power (Fixed + Variable)	25.86	27.26	28.65	30.04	31.44	32.83	32.83	32.83	32.83	32.83
2. Direct labour and wages	13.86	14.78	15.71	16.63	17.56	18.48	18.48	18.48	18.48	18.48
3. Consumable	2.25	2.40	2.55	2.70	2.85	3.00	3.00	3.00	3.00	3.00
4. Repair and Maintenance	4.78	5.10	5.42	5.74	6.06	6.37	6.37	6.37	6.37	6.37



(Rs. In Lakh)

PROFIT & LOSS ACCOUNT										
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
5. Depreciation	33.17	28.14	23.93	20.35	17.30	14.71	12.51	10.64	9.04	7.69
<b>Total Cost of production</b>	<b>79.92</b>	<b>77.68</b>	<b>76.26</b>	<b>75.46</b>	<b>75.20</b>	<b>75.39</b>	<b>73.19</b>	<b>71.32</b>	<b>69.73</b>	<b>68.38</b>
<b>C. Administrative expenses:</b>										
6. Manpower (Indirect)	6.53	6.53	6.53	6.53	6.53	6.53	6.53	6.53	6.53	6.53
7. Rent	6.00	6.60	7.26	7.99	8.78	9.66	10.63	11.69	12.86	14.15
8. Insurance	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
9. Misc. Expense	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
<b>Total Administrative Expenses</b>	<b>14.23</b>	<b>14.83</b>	<b>15.49</b>	<b>16.22</b>	<b>17.02</b>	<b>17.90</b>	<b>18.86</b>	<b>19.92</b>	<b>21.09</b>	<b>22.38</b>
<b>D. Financial expenses:</b>										
10. Interest on Working capital loan @ 11% per annum	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32
<b>Total Financial Expenses</b>	<b>1.32</b>	<b>1.32</b>	<b>1.32</b>	<b>1.32</b>	<b>1.32</b>	<b>1.32</b>	<b>1.32</b>	<b>1.32</b>	<b>1.32</b>	<b>1.32</b>
<b>E. Total Expenses B+C+D</b>	<b>95.47</b>	<b>93.84</b>	<b>93.07</b>	<b>93.00</b>	<b>93.53</b>	<b>94.61</b>	<b>93.37</b>	<b>92.57</b>	<b>92.14</b>	<b>92.08</b>
<b>F. Profit A - E</b>	<b>41.42</b>	<b>52.18</b>	<b>62.07</b>	<b>71.27</b>	<b>79.86</b>	<b>87.91</b>	<b>89.15</b>	<b>89.95</b>	<b>90.38</b>	<b>90.44</b>
<b>G. P&amp;P Expenses written off</b>	0.67	0.67	0.67	0.67	0.67	0.00	0.00	0.00	0.00	0.00
<b>H. Income before Tax (F-G)</b>	<b>40.74</b>	<b>51.51</b>	<b>61.40</b>	<b>70.60</b>	<b>79.18</b>	<b>87.91</b>	<b>89.15</b>	<b>89.95</b>	<b>90.38</b>	<b>90.44</b>
<b>I. Adjustment of Loss</b>	-	-	-	-	-	-	-	-	-	-
<b>J. Income Tax (@22% for company)</b>	8.96	11.33	13.51	15.53	17.42	19.34	19.61	19.79	19.88	19.90
<b>K. Net Profit /Loss for the year</b>	<b>31.78</b>	<b>40.17</b>	<b>47.89</b>	<b>55.07</b>	<b>61.76</b>	<b>68.57</b>	<b>69.53</b>	<b>70.16</b>	<b>70.49</b>	<b>70.55</b>
<b>L. Cumulative Surplus</b>	<b>31.78</b>	<b>71.95</b>	<b>119.84</b>	<b>174.91</b>	<b>236.67</b>	<b>305.24</b>	<b>374.78</b>	<b>444.94</b>	<b>515.44</b>	<b>585.98</b>

As evident from the table above, the project is financially viable. A cumulative surplus of about Rs 585.98 Lakh shall be earned by the SPV even after accounting for taxation and depreciation at the end of ten years. This surplus generated shall be used for further addition in the machinery or improvement and up-gradation of facilities. Additionally, the SPV intends to conduct a lot of other development activities in the cluster that shall be funded through the surplus earned at the CFC.

## 6.8 Cash flow statement

Cash flow statement indicates the cash balance and the liquidity position of the project over the years. The table below presents the sources and disposal/uses of funds statement of the project.

Table 24: Cash Flow Statement

(Rs in Lakh)

CASH FLOW STATEMENT											
Particulars	Construction Period	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<b>A. Source Funds :</b>											
1. Cash Accruals (Net Profit + Interest Paid)		42.74	53.50	63.39	72.59	81.18	89.23	90.47	91.27	91.70	91.76
2. Increase in capital	48.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3. Depreciation		33.17	28.14	23.93	20.35	17.30	14.71	12.51	10.64	9.04	7.69
4. Increase in WC Loan		12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Change in Expenses Payable		4.54	0.26	0.26	0.27	0.27	0.28	0.08	0.09	0.10	0.11
5. Increase in Grant-in-aid from GoH	180.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Sources of Funds</b>	<b>228.08</b>	<b>92.44</b>	<b>81.90</b>	<b>87.58</b>	<b>93.20</b>	<b>98.75</b>	<b>104.22</b>	<b>103.05</b>	<b>102.00</b>	<b>100.84</b>	<b>99.56</b>
<b>B. Use of Funds :</b>											
1. P&P Expenses	3.37	-	-	-	-	-	-	-	-	-	-
2. Increase in fixed assets	221.25	-	-	-	-	-	-	-	-	-	-
3. Increase in other Assets	3.45	1.50	1.12	1.13	1.15	1.17	1.19	0.24	0.27	0.29	0.32
4. Increase in Sundry Debtors		11.41	0.76	0.76	0.76	0.76	0.76	0.00	0.00	0.00	0.00

(Rs in Lakh)

<b>CASH FLOW STATEMENT</b>											
<b>Particulars</b>	<b>Construction Period</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>	<b>Year 9</b>	<b>Year 10</b>
5. Interest		1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32
6. Taxation		8.96	11.33	13.51	15.53	17.42	19.34	19.61	19.79	19.88	19.90
<b>Total Use of Funds</b>	<b>228.08</b>	<b>23.19</b>	<b>14.53</b>	<b>16.72</b>	<b>18.76</b>	<b>20.67</b>	<b>22.61</b>	<b>21.17</b>	<b>21.38</b>	<b>21.50</b>	<b>21.54</b>
<b>C. Net Surplus (A -B)</b>		<b>69.25</b>	<b>67.37</b>	<b>70.86</b>	<b>74.44</b>	<b>78.08</b>	<b>81.61</b>	<b>81.88</b>	<b>80.62</b>	<b>79.34</b>	<b>78.02</b>
<b>D. Cumulative Surplus</b>		<b>69.25</b>	<b>136.62</b>	<b>207.49</b>	<b>281.93</b>	<b>360.01</b>	<b>441.63</b>	<b>523.51</b>	<b>604.13</b>	<b>683.47</b>	<b>761.50</b>

The cash flow statement shows the available net surplus for 10 years of the CFC operations. As most of the capital expenditure is being supported as grant under the State Mini Cluster Development Scheme (EPP 2015), therefore it does not have any negative effect on the Cash flow, in terms of interest, etc.

## 6.8 Projected Balance Sheets

The annual balance sheets for the CFC have been projected based upon estimates in the earlier sub-sections with regard to various current and fixed liabilities and also current and fixed assets. As evident from the projections, a considerable amount of reserves and surplus gets accumulated. These shall also be utilized for expansion of the CFC and undertaking other cluster development activities. Decision on deployment of reserves and surplus accumulated will be based on the performance of the project and requirements of cluster firms and members of the SPV. The projected balance sheets are provided in the table below:

Table 25: Balance Sheet

(Rs in lakh)

PROJECTED BALANCE SHEET											
Particulars	At the end of implementation period	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<b>1. Fixed Assets:</b>											
Gross Block	221.25	221.25	188.08	159.94	136.01	115.67	98.37	83.66	71.15	60.52	51.47
Less: Depreciation (WDV)		33.17	28.14	23.93	20.35	17.30	14.71	12.51	10.64	9.04	7.69
Net Block	221.25	188.08	159.94	136.01	115.67	98.37	83.66	71.15	60.52	51.47	43.78
<b>Total Fixed Assets (A)</b>	<b>221.25</b>	<b>188.08</b>	<b>159.94</b>	<b>136.01</b>	<b>115.67</b>	<b>98.37</b>	<b>83.66</b>	<b>71.15</b>	<b>60.52</b>	<b>51.47</b>	<b>43.78</b>
<b>2. Current Assets:</b>											
Cash & Bank Surplus (B.F)		69.25	136.62	207.49	281.93	360.01	441.63	523.51	604.13	683.47	761.50
Sundry Debtors		11.41	12.17	12.93	13.69	14.45	15.21	15.21	15.21	15.21	15.21
Margin Money for WC Loan	3.45	3.45	4.42	5.38	6.35	7.31	8.28	8.28	8.28	8.28	8.28
Other Current Assets		1.50	1.65	1.82	2.00	2.20	2.42	2.66	2.92	3.22	3.54
P&P Exp	3.37	2.70	2.02	1.35	0.67	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total current Assets (B)</b>		<b>88.31</b>	<b>156.88</b>	<b>228.96</b>	<b>304.64</b>	<b>383.97</b>	<b>467.53</b>	<b>549.65</b>	<b>630.54</b>	<b>710.18</b>	<b>788.52</b>
<b>Total Assets (A+B)</b>	<b>228.08</b>	<b>276.40</b>	<b>316.83</b>	<b>364.98</b>	<b>420.31</b>	<b>482.35</b>	<b>551.19</b>	<b>620.81</b>	<b>691.06</b>	<b>761.65</b>	<b>832.31</b>
<b>3. Current Liabilities:</b>											
Working Capital Loan		12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Expenses Payable		4.54	4.80	5.06	5.32	5.60	5.88	5.96	6.04	6.14	6.25
<b>Total Current Liabilities (C)</b>		<b>16.54</b>	<b>16.80</b>	<b>17.06</b>	<b>17.32</b>	<b>17.60</b>	<b>17.88</b>	<b>17.96</b>	<b>18.04</b>	<b>18.14</b>	<b>18.25</b>
<b>4. Fixed Liabilities</b>											

(Rs in lakh)

PROJECTED BALANCE SHEET											
Particulars	At the end of implementation period	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Shareholders' Contribution	48.08	48.08	48.08	48.08	48.08	48.08	48.08	48.08	48.08	48.08	48.08
Grant from GoH	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00
Reserves and Surplus		31.78	71.95	119.84	174.91	236.67	305.24	374.78	444.94	515.44	585.98
<b>Total Fixed Liabilities (D)</b>	<b>228.08</b>	<b>259.85</b>	<b>300.03</b>	<b>347.92</b>	<b>402.98</b>	<b>464.75</b>	<b>533.32</b>	<b>602.85</b>	<b>673.02</b>	<b>743.51</b>	<b>814.06</b>
<b>Total Liabilities (C+D)</b>	<b>228.08</b>	<b>276.40</b>	<b>316.83</b>	<b>364.98</b>	<b>420.31</b>	<b>482.35</b>	<b>551.19</b>	<b>620.81</b>	<b>691.06</b>	<b>761.65</b>	<b>832.31</b>

## 6.9 Break-even analysis

The break-even (BE) estimates of the project indicate the level of activity at which the total revenues of the project equal the total costs. It also portrays whether the revenue contribution is sufficient to meet the fixed costs. From this point, the project is expected to start generating profits. As per the calculations, the CFC achieves break even in the first year itself as no major interest costs are being incurred. Hence, BE estimates at level of activity relevant to the first year and subsequent years of activity are provided in the table below:

Table 26: Break Even Estimates

(Rs. In Lakh)

BREAKEVEN POINT AT VARIOUS C.U.										
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Capacity Utilization	75%	80%	85%	90%	95%	100%	100%	100%	100%	100%
<b>A. Total Earning by way of user charges</b>	<b>136.89</b>	<b>146.02</b>	<b>155.14</b>	<b>164.27</b>	<b>173.39</b>	<b>182.52</b>	<b>182.52</b>	<b>182.52</b>	<b>182.52</b>	<b>182.52</b>
<b>B. Variable costs</b>										
Consumables	2.25	2.40	2.55	2.70	2.85	3.00	3.00	3.00	3.00	3.00
Utilities (Power- variable charge)	20.90	22.29	23.68	25.08	26.47	27.86	27.86	27.86	27.86	27.86
Interest on WC Loan	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32
Repair & Maintenance	4.78	5.10	5.42	5.74	6.06	6.37	6.37	6.37	6.37	6.37
Manpower (Direct)	13.86	14.78	15.71	16.63	17.56	18.48	18.48	18.48	18.48	18.48
Misc. Expenditure (90% variable)	0.41	0.43	0.46	0.49	0.51	0.54	0.54	0.54	0.54	0.54
<b>Total Variable Cost (B)</b>	<b>43.11</b>	<b>45.89</b>	<b>48.68</b>	<b>51.47</b>	<b>54.25</b>	<b>57.04</b>	<b>57.04</b>	<b>57.04</b>	<b>57.04</b>	<b>57.04</b>
<b>C. Contribution (A-B)</b>	<b>93.78</b>	<b>100.12</b>	<b>106.46</b>	<b>112.80</b>	<b>119.14</b>	<b>125.48</b>	<b>125.48</b>	<b>125.48</b>	<b>125.48</b>	<b>125.48</b>
<b>D. Fixed Overheads (Cash)</b>										
Manpower (Indirect)	6.53	6.53	6.53	6.53	6.53	6.53	6.53	6.53	6.53	6.53
Utilities (Power - fixed charges)	4.97	4.97	4.97	4.97	4.97	4.97	4.97	4.97	4.97	4.97
Rent	6.00	6.60	7.26	7.99	8.78	9.66	10.63	11.69	12.86	14.15

Insurance	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Misc. Expenditure (10% fixed)	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
<b>Sub-total (D)</b>	<b>18.66</b>	<b>19.26</b>	<b>19.92</b>	<b>20.64</b>	<b>21.44</b>	<b>22.32</b>	<b>23.29</b>	<b>24.35</b>	<b>25.52</b>	<b>26.81</b>
<b>E. Fixed Overheads (Non-cash)</b>										
Depreciation	33.17	28.14	23.93	20.35	17.30	14.71	12.51	10.64	9.04	7.69
Preliminary & Pre-operative expenses written off	0.67	0.67	0.67	0.67	0.67	0.00	0.00	0.00	0.00	0.00
<b>Sub-total (E)</b>	<b>33.84</b>	<b>28.82</b>	<b>24.60</b>	<b>21.02</b>	<b>17.97</b>	<b>14.71</b>	<b>12.51</b>	<b>10.64</b>	<b>9.04</b>	<b>7.69</b>
<b>F. Total Fixed Overheads (D+E)</b>	<b>52.50</b>	<b>48.08</b>	<b>44.52</b>	<b>41.66</b>	<b>39.42</b>	<b>37.03</b>	<b>35.80</b>	<b>34.99</b>	<b>34.56</b>	<b>34.50</b>
<b>Breakeven point (F/C)</b>	<b>55.98%</b>	<b>48.02%</b>	<b>41.82%</b>	<b>36.94%</b>	<b>33.08%</b>	<b>29.51%</b>	<b>28.53%</b>	<b>27.88%</b>	<b>27.55%</b>	<b>27.49%</b>

Book break-even is achieved at 55.98% (of operational capacity at 75 per cent) and at 48.02% (of operational capacity at 80 percent). The operation of the CFC is expected to break-even and realizes profit from 1<sup>st</sup> year of operations. Therefore, very low risk is involved in the project.



### 6.10 Feasibility analysis summary and sustainability indicators

A summary of the financial analysis in terms of key financial indicators such as Return on Capital Employed (ROCE), Net Present Value (NPV), Break Even Point (BEP) and the Internal Rate of Return (IRR) is presented in the table below. The indicators validate the financial viability and sustainability potential of the proposed project.

Table 27: Financial Analysis

FEASIBILITY		
S. No.	Particulars	Estimates
1	BEP (cash BEP at initial operating capacity of 75%)	55.98%
2	Av. ROCE (PAT/CE)	33.52%
3	Internal Rate of Return (IRR)	29.41%
4	Net Present Value (at a discount rate of 10 per cent) - incorporating viability gap funding (grant) by GoH	NPV is positive and high (Rs. 232.68 lacs) at a conservative project life of 10 years
5	Payback period	4.14 years with Grant-in-aid assistance from GOH
6	DSCR	Not Applicable (non-availment of term loan in this project)

The annual estimates in the context of ROCE are presented in the table below:

Table 28: Calculation of Return on Capital Employed

RETURN ON CAPITAL EMPLOYED (ROCE)											
Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Avg.
Earnings Before Interest and Tax (EBIT)	42.06	52.83	62.72	71.92	80.50	89.23	90.47	91.27	91.70	91.76	76.45
Capital Employed (with grant)	228.08	228.08	228.08	228.08	228.08	228.08	228.08	228.08	228.08	228.08	228.08
<b>ROCE = EBIT/ Capital Employed</b>											
ROCE	18.44%	23.16%	27%	31.53%	35.30%	39.12%	39.66%	40.02%	40.20%	40.23%	<b>33.52%</b>

The average value of ROCE (with grant-in-aid) is 33.52 %. This indicates high techno-economic viability of the project should the government contribute a significant portion of the project cost as grant. Capital employed considered includes the SPV contribution as well as the grant component to the project.

The Net Present Value, estimated at a discount rate of 10%, is Rs. 232.68. As reflected from the high values of NPV, it is positive at even 10%, the rate at which bank offers debt capital facility and even at higher discount rates. Project IRR is high at over 29.41% (at a conservative project life of 10 years). This substantiates the viability of the project.

### 6.11 Additional revenue sources

Additional sources of revenue shall also be explored by the SPV by offering procurement and marketing services in future to more enterprises. The SPV members are strong believers of the cluster concept and would like to explore the potential of undertaking cluster initiatives to improve the backward and forward linkages of the cluster units.

However, in order to ensure conservativeness in income estimates, in the initial years, the income earning possibilities of such revenues are not captured in this DPR.

### 6.12 Risk Analysis & Sensitivities

Risk in the project is relatively low in the context of the following:

- ▶ **Promoters are experienced:** Risk in the project is quite low given the strength and profile of the SPV members. They have considerable experience not only in the plastic packaging industry but also in undertaking cluster developmental initiatives.
- ▶ **Facility is pre-marketed:** Evidently, complete capacity of the core facility to be established in terms of various facilities may be easily availed by members of the SPV themselves, thus the facility would already have a captive market.
- ▶ **Sustainability indicators in terms of the strength of the SPV and the economics of the project:** Evidence of cooperative initiatives of SPV members as articulated in previous chapters; in terms of pursuing several joint efforts, registering the SPV and proceeding towards procurement of land, and securing commitment from members, vis-à-vis progressively mobilizing necessary paid up capital, all reflect the strength of the SPV.

High economic viability indicators upon considering the benefits of grant-in-aid under the State Mini Cluster Development Scheme and EPP 2015 also serve as evidence of techno-economic viability and sustainability of the project. A sensitivity analysis has been carried out to ascertain the impact on the project, should there be any loss of revenue. This has been calculated assuming drop in user charges. Major financial parameters are still attractive. The important parameters related to the sensitivity analysis are presented in the table below:

Table 29: Sensitivity Analysis

SENSITIVITY ANALYSIS					
S. No.	Particulars	Base case	With 5% decline in user charge	With 10% decline in user charge	With 15% decline in user charge
1	BEP (cash BEP at operating capacity of 75%)	55.98%	60.31%	65.46%	71.46%
2	Internal Rate of Return (IRR)	29.41%	26.44%	23.48%	20.30%
3	Av. ROCE (PAT/CE) (with Grant)	33.52%	29.76%	26.13%	22.39%

SENSITIVITY ANALYSIS					
S. No.	Particulars	Base case	With 5% decline in user charge	With 10% decline in user charge	With 15% decline in user charge
4	Net Present Value (at a discount rate of 10 per cent) - incorporating viability gap funding (grant) GoH	232.68	193.34	154.48	115.14

Even assuming reduction in user charges, ROCE is favourable. From the above, it is evident that the project is viable even under (unlikely) risky environment circumstances.

### 6.13 Assumptions for financial calculations:

The financial statements and project profitability estimates in this DPR are based on the following assumptions:

1. The total project cost is pegged @ Rs. 228.08 Lakh on the basis of estimates and quotations.
2. To finance the project, a total of Rs. 228.08 Lakhs is required. The financing will consist of grant from Government of Haryana and contribution by SPV.

In the financial projections and analysis, year 2020-21 is the envisaged period of project implementation also involving installation of plant, machinery and other equipment. This period will commence from the date of final approval by the State Level Steering Committee under State Mini Cluster Development Scheme. The financial projections thereafter are prepared for 10 years of operation starting 2021.

4. The registered SPV will manage the CFC, and these services are to be used by the SPV to member as well as non-member units. The common facility will benefit registered SPV as well as non-member firms who (in some cases) may not afford to contribute to necessary equity capital.

5. The CFC will operate for 25 days a month, that is, for 300 days a year on a nine-hour single shift basis. Operation on single shift basis is assumed for purposes of projecting income estimates.

6. Capacity utilization is assumed at 75% in the first year; 80% for second, 85% for third year and 100% from 6<sup>th</sup> year onwards.

7. The workings with regard to expenses related to the project have been tabulated and categorized in terms of those related to consumables, manpower, electricity, and miscellaneous administrative expenditures.

8. Repairs and maintenance is provided @ 3% of plant and machinery cost at varying capacity utilization.

9. Insurance is provided @ 0.5% on fixed assets including building & civil works, machinery, contingency as fixed cost at all capacity utilization.
10. Electricity connection will not be required as it is already present in the building.
11. Fixed charges per kW of electric connection shall be charged @ Rs. 175 and variable charges @ Rs. 9 per unit consumed.
12. Income estimates have been projected most conservatively. The prescribed user charges are competitive vis-à-vis charges for similar services in other regions.
13. Depreciation on fixed assets is calculated on Written Down Value (WDV) method for all purposes.
14. Debtors' collection period is taken at 1 months of calculation of Working Capital Limits.
15. Provision for income tax has been made @ 22% (excluding cess).
16. Profitability estimates in terms of ROCE, NPV, and IRR are computed considering operating results for first 10 years of operation.



## 7. Project Implementation and Monitoring

### 7.1 Envisaged Implementation Framework

1. **Time frame:** Project implementation is envisaged to involve a timeframe of about 7 months upon receipt of final approval of grant-in-aid assistance from the Government of Haryana under state mini cluster development scheme.
2. **User Base:** The facilities may be used by SPV members and non-members. However, the charges will vary. The SPV will also be open for new entrants subject to them subscribing to the shareholding of the SPV, and them being genuinely pro-active and interested in cluster initiatives. The board of directors of the SPV can decide on same or differential user charges for both members and non-members or based upon the volume of the output.
3. **Project implementation schedule:** The project implementation schedule envisaged over a period of 7 months involves several activities. These are elaborated upon in the table below:

Table 30: Project Implementation Schedule

Activity/Month	1	2	3	4	5	6	7
Contribution from SPV members							
Receipt of final sanction from GoH							
Lease deed agreement of building in the name of SPV							
Refurbishment of building							
Formation of purchase committee							
Inviting E-tenders for purchase of machines							
Obtaining statutory clearances and approvals							
Purchase of machinery and equipment							
Installation and trial run of machinery and equipment							
Arrangement of working capital							
Monitoring of the project by Board of Directors							
Monitoring of the project by PMC							
Commencement of operations of the facility							

4. **Contractual agreements/MoU with member units:** Agreements have been indicatively finalized in terms of utilization of assets in respect of shareholders. A total of 12 units are participating in the SPV and all these units have agreed to contribute towards the capital contribution of the SPV. The utilization of the common facility will be in line with the proposed shareholding pattern. The consent letter wherein the member units agree for payments of 10% share of cost of CFC will be submitted in due course of and as per final approval from Government of Haryana.
5. **Registration of the Private Limited Company:** Company registration is indicative of the management and decision-making structure of the SPV. All the members of SPV have paid an advance and are members of the Registered Private Entity. Few other units are also willing to be members of the SPV and once the CFC is approved and sanctioned from government of Haryana, many more members will be interested to subscribe to the shares of the SPV.
6. **Availability of Building & Status of Acquisitions:** A building will be leased by the SPV for the proposed CFC in the Gurugram district. A floor of a building of 2700 square feet has already been identified by the SPV and a letter establishing the proof of availability of the building has been acquired and attached in Annexure 4.
7. **Availability of Requisite Clearances:** A building with all required clearances will be leased by the SPV. Electricity is already available in the area and the building is connected to the grid. The other required clearances (environment, labor etc.) shall be obtained in due course.
8. **O & M Plan:** The revenue stream for O&M is dependent on realization of user charges from the SPV members and other users/MSMEs in the case of various facilities. As detailed in the financial section, the cash incomes are sufficient to meet operating expenditures, overheads as well as depreciation for sustainable replacement of assets. The SPV will also have to keep a track of maintenance of assets through collection of user charges from the members/ users.

## 7.2 Monitoring Mechanism

As mentioned in the implementation schedule, the following key activities shall be conducted during establishment of the CFC:

- ▶ Refurbishment of building
- ▶ Purchase of machinery & commissioning
- ▶ Trial production
- ▶ Commercial production

The successful implementation of above activities will depend on the following aspects:

- ▶ Implementation of above within the time frame.
- ▶ Supervising and overseeing the implementation of the proposals and fine tuning and advocating more measures if needed, depending on the building conditions.



- ▶ Project level monitoring indicators to evaluate the implementation of the CFC proposal at recommended intervals.
- ▶ Suitable purchase mechanisms for proposed plant & machinery.
- ▶ Periodical reporting of the status of implementation and monitoring of the results of key performance indicators, and
- ▶ Constant evaluation of the measures implemented based on the data available from project level monitoring, status reports and providing directions accordingly.

For implementing the CFC creation for Gurugram Plastic and Allied Products Manufacturing Cluster, a Project Management Committee (PMC) comprising the Joint Director, DIC, Gurugram and representatives of SPV, and EY experts shall be constituted to directly oversee effective monitoring and implementation.

The project will be implemented through SPV and PMC will report progress of implementation to the State Level Steering Committee and DIC Gurugram.



## **8. Conclusion**

There is a high demand for Plastic automotive plants and other OEMs manufacturing for Medical Equipment and Home Appliances, in both domestic and international markets. Gurugram, as one of the leading automotive parts hubs of the country, is a leading market for plastic components from OEMs, supplying to some of the leading players such as Maruti, Mahindra, KIA, LG & Samsung, etc.

The total project cost (including plant/machinery and building) is estimated to be INR 228.08 lakhs. The project shall be implemented by the Plastvision India Pvt. Ltd. which has been constituted by the cluster firms. The SPV has proactively undertaken a number of initiatives for capacity building and knowledge enhancement of the cluster. A number of capacity building programs and exposure visits have been organised by the SPV for the benefit for its members. The CFC will be set up with support from DIC and the state government (Department of Industries) under a PPP mode. The building for the project has already been identified by the SPV and shall be acquired on a lease basis upon in final approval by State Government. The state industry department is envisaged to provide grant for setting up of the CFC under the State Mini-Cluster Development Scheme, EPP 2015. The support from State Mini Cluster Development Scheme of the State Government of Haryana is envisaged for INR 180.00 lakh, and the SPV members will contribute INR 48.08 lakhs towards the project cost. The working capital requirement for the project, if required, will be provided by the preferred bank. The project is financially viable and is expected to generate enough revenue to ensure its sustainability.

# Annexures



## 9. Annexures

### 1. DSR Approval Letter from Department of MSME, Government of Haryana

From

The Director General, MSME, Haryana

To

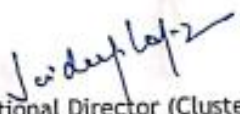
M/s Ernst & Young LLP,  
Unit 613-615, 6<sup>th</sup> Floor,  
Elante Offices, Chandigarh  
Email :- [upinder.dhingra@in.ey.com](mailto:upinder.dhingra@in.ey.com)

Memo No. Mini Cluster/Plastic & Allied Products/GGM/ 14841-B  
Dated Chandigarh, the 16/09/2020

Subject:- Regarding conducting Detailed Project Report (DPR) in case of Gurugram Plastic & Allied Products Cluster under the State Mini Cluster Development Scheme.


Kindly refer to the subject cited above.

In this connection, it is informed that the Diagnostic Study Report (DSR) in case of Gurugram Plastic & Allied Product Cluster under State Mini Cluster Development Scheme has been approved by the Director General, MSME, Haryana on 14.09.2020. You are, therefore, requested to prepare the Detailed Project Report (DPR) for the above said mini cluster.

  
Additional Director (Cluster)  
for Director General, MSME, Haryana


Endst. No. Cluster/ Plastic & Allied Product/GGM/ 16842-A Dated:- 16/09/2020

A copy of the above is forwarded to the SPV of the Gurugram Plastic & Allied Product Cluster M/s Metplast Industries, Haryana with a request to provide requisite documents and information as asked by Ernst & Young LLP immediately which are required for preparation of DPR. E-mail : [nandan.metplast@gmail.com](mailto:nandan.metplast@gmail.com)

  
Additional Director (Cluster)  
for Director General, MSME, Haryana

Endst. No. Mini Cluster/Plastic & Allied Product/GGM 14843-B Dated:- 16/09/2020

A copy of the above is forwarded to Joint Director, District Industries Centre, Gurugram for information and further necessary action.

  
Additional Director (Cluster)  
for Director General, MSME, Haryana



## 2. Certificate of Incorporation



GOVERNMENT OF INDIA  
MINISTRY OF CORPORATE AFFAIRS  
Central Registration Centre

### Certificate of Incorporation

[Pursuant to sub-section (2) of section 7 and sub-section (1) of section 8 of the Companies Act, 2013 (18 of 2013) and rule 18 of the Companies (Incorporation) Rules, 2014]

I hereby certify that PLASTVISION INDIA PRIVATE LIMITED is incorporated on this Eleventh day of September Two thousand twenty under the Companies Act, 2013 (18 of 2013) and that the company is limited by shares.

The Corporate Identity Number of the company is U25200HR2020PTC089247.

The Permanent Account Number (PAN) of the company is AALCP4143M \*

The Tax Deduction and Collection Account Number (TAN) of the company is RTKP11411B \*

Given under my hand at Manesar this Eleventh day of September Two thousand twenty .

Digital Signature Certificate  
KAMAL HARJANI

For and on behalf of the Jurisdictional Registrar of Companies  
Registrar of Companies  
Central Registration Centre

Disclaimer: This certificate only evidences incorporation of the company on the basis of documents and declarations of the applicant(s). This certificate is neither a license nor permission to conduct business or solicit deposits or funds from public. Permission of sector regulator is necessary wherever required. Registration status and other details of the company can be verified on [www.mca.gov.in](http://www.mca.gov.in)

Mailing Address as per record available in Registrar of Companies office:

PLASTVISION INDIA PRIVATE LIMITED  
Basai Enclave, Part II, Gurugram, Gurgaon, Haryana, India, 122001



\* as issued by the Income Tax Department

### **3.a Memorandum of Association (MoA)**

**THE COMPANIES ACT, 2013**  
**(COMPANY LIMITED BY SHARES)**  
**MEMORANDUM OF ASSOCIATION**  
**OF**  
**PLASTVISION INDIA PRIVATE LIMITED**

- I. The Name of the Company **PLASTVISION INDIA PRIVATE LIMITED**
- II. The registered office of the company will be situated in the **GURUGRAM**.
- III. The objects for which the Company is established are :-

**(A) THE MAIN OBJECTS TO BE PURSUED BY THE COMPANY ON ITS INCORPORATION ARE:-**

1. To carry on business of importers, exporters, manufacturers, agents and representatives and dealers in all kinds of plastic raw materials and products.
2. To carry on in India or elsewhere the business to manufacture, produce, process, convert, commercialize, design, develop, display, discover, mould, remould, blow, extrude, draw, dye, equip, fit up, fabricate, manipulate, prepare, promote, remodel, service, supervise, supply, import, export, buy, sell, turn to account and to act as agent, broker, concessionaire, consultant, collaborator, consignor, jobworker, export house or otherwise to deal in all shapes, sizes, varieties, colours, capacities, modalities, specifications, descriptions & applications of systems, novelties, substitutes, households, kitchenware, sanitaryware, toys, ropes, gift articles, building materials, cutleries, bottle, caps and seals, jars, tailoring materials, writing materials, monofilaments, pipes, furnitures, baggages, hardwares, sheets, films, laminations etc. used in industries, trade, commerce, utilities, hospitals, transport, aviation, defence, entertainment, hotels, houses, stores, agricultures, packing, other allied fields whether made of rubber and plastics, plastic scrap, polymers, co-polymers, monomers, elastomers, resins, polysters and other allied materials with or without combinations of other ferrous or non-ferrous materials and to do all incidental acts and necessary for the attainment of the above objects.
3. To carry on business of plastic recycling and as dealers in plastic raw materials, resins, goods and articles connected with the plastic manufacturing industry.



**(B) Matters which are necessary for furtherance of the objects specified in clause III (a) are:-**

1. To purchase, exchange or otherwise any movable or immovable property and any rights or privileges which the Company may deem necessary or convenient for the purpose of its main business.
2. To enter into partnership or into any arrangement for sharing profits, union of interest, joint venture, reciprocal concession or co-operation with persons or companies carrying on or engaged in the main business or transaction of this Company.
3. To import, buy, exchange, alter, improve and manipulate in all kinds of plants, machinery, apparatus, tools and things necessary or convenient for carrying on the main business of the Company.
4. To vest any movable or immovable property, rights or interests required by or received or belonging to the Company in any person or company on behalf of or for the benefit of the Company and with or without any declared trust in favour of the Company.
5. To purchase, build, carry out, equip, maintain, alter, improve, develop, manage, work, control and superintend any plants, warehouse, sheds, offices, shops, stores, buildings, machinery, apparatus, labour lines, and houses, warehouses, and such other works and conveniences necessary for carrying on the main business of the Company.
6. To undertake or promote scientific research relating to the main business or class of business of the Company.
7. To take over the whole or any part of the business, goodwill, trade-marks properties and liabilities of any person or persons, firm, companies or undertakings either existing or new, engaged in or carrying on or proposing to carry on business this Company is authorised to carry on, possession of any property or rights suitable for the purpose of the Company and to pay for the same either in cash or in shares or partly in cash and partly in shares or otherwise.
8. To negotiate and enter into agreements and contracts with Indian and foreign individuals, companies, corporations and such other organizations for technical, or any other such assistance for carrying out all or any the main objects of the Company or for the purpose of activity research and development of manufacturing projects on the basis of know-how, or technical collaboration and necessary formulas and patent rights for furthering the main objects of the Company.
9. Subject to the Provisions of the Companies Act 2013, to amalgamate with any other company of which all or any of their objects companies having similar to the objects of the Company in any manner whether with or without the liquidation.
10. Subject to any law for the time being in force, to undertake or take part in the formation, supervision or control of the business or operations of any person, firm,

body corporate, association undertaking carrying on the main business of the Company.

11. To apply for, obtain, purchase or otherwise and prolong and renew any patents, patent-rights, brevets, inventions, processes, scientific technical or other assistance, manufacturing processes know-how and other information, patterns, copyrights, trade-marks, licenses concessions and the like rights or benefits, conferring an exclusive or non-exclusive or limited or unlimited right of use thereof, which may seem capable of being used for or in connection with the main objects of the Company or the acquisition or use of which may seem calculated directly or indirectly to benefit the Company on payment of any fee royalty or other consideration and to use, exercise or develop the same under or grant licenses in respect thereof or otherwise deal with same and to spend money in experimenting upon testing or improving any such patents, inventions, right or concessions.
12. To apply for and obtain any order under any Act or Legislature, charter, privilege concession, license or authorisation of any Government, State or other Authority for enabling the Company to carry on any of its main objects into effect or for extending any of the powers of the Company or for effecting and modification of the constitution of the Company or for any other such purpose which may seem expedient and to oppose any proceedings or applications which may seem expedient or calculated directly or indirectly to prejudice the interest of the Company.
13. To enter into any arrangements with any Government or Authorities or any persons or companies that may seem conducive to the main objects of the Company or any of them and to obtain from any such Government, authority, person or company any rights, charters, contracts, licenses and concessions which the Company may think desirable to obtain and to carry out, exercise and comply therewith.
14. To procure the Company to be registered or recognised in or under the laws of any place outside India and to do all act necessary for carrying on in any foreign country for the business or profession of the Company.
15. To draw, make, accept, discount, execute and issue bills of exchange, promissory notes bills of lading, warrants, debentures and such other negotiable or transferable instruments, of all types or securities and to open Bank Accounts of any type and to operate the same in the ordinary course of the Company.
16. To advance money either with or without security, and to such persons and upon such terms and conditions as the Company may deem fit and also to deal with the money of the Company not immediately required.
17. To undertake and execute any trusts, the undertaking of which may seem to the Company desirable, either gratuitously or otherwise.

18. To establish, or promote or concur in establishing or promote any company for the purpose of dealing all or any of the properties, rights and liabilities of the Company.
19. To sell, mortgage, exchange, grant licenses and other rights improve, manage, develop and dispose of undertakings, properties, assets and effects of the company or any part thereof for such consideration as may be expedient and in particular for any shares, stocks, debentures or other securities of any other such company having main objects altogether or in part similar to those of the Company.
20. Subject to the Provisions of Companies Act 2013, to distribute among the members in specie or otherwise any property of the Company or any proceeds of sale or disposal of any property of the Company in the event of winding up.
21. To distribute as dividend or bonus among the member or to place to reserve or otherwise to apply, as the Company may, from time to time, determine any money received by way of premium on debentures issued at a premium by the Company and any money received in respect of forfeited shares, money arising from the sale by the Company of forfeited shares subject to the provisions of Sec. 52 of the Companies Act, 2013.
22. To employ agents or experts to investigate and examine into the conditions, prospects value, character and circumstances of any business concerns and undertakings and generally of any assets properties or rights which the Company purpose to acquire.
23. To create any reserve fund, sinking fund, or any other such special funds whether for depreciation, repairing, improving, research, extending or maintaining any of the properties of the Company or for any other such purpose conducive to the interest of the Company.
24. Subject to the provisions of Section 179 to 183 of Companies Act, 2013, to subscribe contribute, gift or money, rights or assets for any national educational, religious, charitable, scientific, public, general or usual objects or to make gifts or such other assets to any institutions, clubs, societies, associations, trusts, scientific research associations, funds, universities, college or any individual, body of individuals or bodies corporate.
25. To establish and maintain or procure the establishment and maintenance of any contributory or non-contributory pension or superannuation, provident or gratuity funds for the benefit of and give of procure the giving of the gratuities pensions, allowances, bonuses or emoluments of any persons who are or were at any time in the employment or service of the company or any company which is a subsidiary of the Company or is allied to or associated with the Company or with any such subsidiary company or who are or were at any time Directors or officers of the Company or any other company as aforesaid and the wives, widows, families and dependents of any such persons and also to establish and subsidies and subscribe to any institutions, associations, club or funds calculated to be for the benefit of or advance aforesaid and make payments to any such persons as

aforesaid and to do any of the matters aforesaid, either alone or in conjunction with any such other company as aforesaid.

26. To establish, for any of the main objects of the Company, branches or to establish any firm or firms at places in or outside India as the Company may deem expedient.
27. To pay for any property or rights acquired by or for any services rendered to the Company and in particular to remunerate any person, firm or company introducing business to the company either in cash or fully or partly-paid up shares with or without preferred or deferred rights in respect of dividend or repayment of capital or otherwise or by any securities which the company has power to issue or by the grant of any rights or options or partly in one mode and partly in another and generally on such terms as the company may determine.
28. To pay out of the funds of the company all costs, charges and expenses of and incidental to the formation and registration of the company and any company promoted by the company and also all costs, charges, duties, impositions and expenses of and incidental to the acquisition by the company of any property or assets.
29. To send out to foreign countries, its director, employees or any other person or persons for investigation possibilities of main business or trade procuring and buying any machinery or establishing trade and business connections or for promoting the interests of the company and to pay all expenses incurred in the connection.
30. To compensate for loss of office of any Managing Director or Directors or other officers of the Company within the limitations prescribed under the Companies Act or such other statute or rule having the force of law and to make payments to any person whose office of employment or duties may be determined by virtue of any transaction in which the Company is engaged.
31. To agree to refer to arbitration any dispute, present or future between the Company and any other company, firm, individual or any other body and to submit the same to arbitration in India or abroad either in accordance with Indian or any foreign system of law.
32. To appoint agents, sub-agents, dealers, managers canvassers, sales, representatives or salesmen for transacting all or any kind of the main business of which this Company is authorised to carry on and to constitute agencies of the Company in India or in any other country and establish depots and agencies in different parts of the world.

**IV. The Liability of the members is Limited this liability is limited to the amount unpaid, if any, on the shares held by them.**

**V. The Authorised Share Capital of the Company is Rs. 1000000/- (Rupees Ten Lacs) divided into 100,000 (One Lacs) Equity Shares of Rs. 10/- (Rupees Ten) each.**

**VI. We the several persons, whose names and addresses are subscribed, are desirous of being formed into a Company in pursuance of this Memorandum of Association, and we respectively agree to take the number of shares in the Capital of the Company set opposite our respective names.**

S. No.	Name, addresses, description and occupation of each	No. of Equity Shares taken by each Subscriber	Signature of Subscribers	Name, Addresses, description occupation and signature of witness
1.	<p>Nandan Singh</p> <p>S/o Sh. Prem Singh</p> <p>R/o Plot WZ B-13 F/F KH 2/23 BLK-B Mansa Ram Park, Najafgarh Road, Uttam Nagar, New Delhi- 110059</p> <p>Occupation: Business</p>	<p>5000</p> <p>(Five Thousand Equity Share)</p>		<p>I WITNESS TO THE SUBSCRIBERS WHO HAVE SIGNED IN MY PRESENCE ON _____ FURTHER I HAVE VERIFIED AT _____ THEIR IDENTITY DETAILS FOR THEIR IDENTIFICATION AND SATISFIED MYSELF FOR THEIR IDENTIFICATION PARTICULARS AS FILLED IN.</p>
2.	<p>Mohan Chandra Paneru</p> <p>S/o Sh. Bishnu Dutt Paneru</p> <p>R/o H.No-96, Part-6, Sector C-5, Gurugram, Haryana- 122001</p> <p>Occupation: Business</p> <p>Total</p>	<p>5000</p> <p>(Five Thousand Equity Share)</p> <p>10000</p> <p>(Ten Thousand Equity Share)</p>		

### **3.b Article of Association (AoA)**

#### **THE COMPANIES ACT, 2013**

(COMPANY LIMITED BY SHARES)

#### **ARTICLES OF ASSOCIATION**

**OF**

#### **PLASTVISION INDIA PRIVATE LIMITED**

#### **PRELIMINARY**

1. Subject as hereinafter provided the Regulations contained in Table 'F' in the First Schedule to the Companies Act, 2013 shall apply to the Company except in so far as otherwise expressly incorporated herein below.

#### **INTERPRETATION**

2. 1) In these regulations --
  - (a) "Company" means M/s **PLASTVISION INDIA PRIVATE LIMITED**
  - (b) "Office" means the Registered Office of the Company.
  - (c) "Act", means the Companies Act, 2013 and any statutory modifications thereof.
  - (d) "The Seal" means the Common Seal of The Company.
  - (e) "Directors" means the Directors of the Company and includes persons occupying the position of the directors by whatever names called.
- (2) Unless the context otherwise requires, words or expressions contained in these regulations shall bear the same meaning as in the Act or any statutory modification thereof in force at the date at which these regulations become binding on the company.

#### **PRIVATE COMPANY**

3. The Company is a Private Company within the meaning of Section 2(68) of the Companies Act, 2013 and accordingly:-
  - (i) Restricts the right to transfer its shares;
  - (ii) Limits the number of its members to two hundred:

Provide that where two or more persons hold one or more shares in a company jointly, they shall, for the purposes of this clause, be treated as a single member:

Provided further that-

- (a) persons who are in the employment of the company; and
- (b) persons who, having been formerly in the employment of the company, were members of the company while in the employment and have continued to be members after the employment ceased, shall not be included in the number of members; and

- (iii) Prohibits any invitation to the public to subscribe for any securities of the company;

#### **SHARE CAPITAL AND VARIATION OF RIGHTS**

4. Subject to the provisions of the Act and these Articles, the shares in the capital of the company shall be under the control of the Directors who may issue, allot or otherwise dispose of the same or any of them to such persons, in such proportion and on such terms and conditions and either at a premium or at par and at such time as they may from time to time think fit.
5. (i) Every person whose name is entered as a member in the register of members shall be entitled to receive within two months after incorporation, in case of subscribers to the memorandum or after allotment or within one month after the application for the registration of transfer or transmission or within such other period as the conditions of issue shall be provided, --
  - (a) One certificate for all his shares without payment of any charges; or
  - (b) Several certificates, each for one or more of his shares, upon payment of twenty rupees for each certificate after the first.
- (ii) Every certificate shall be under the seal and shall specify the shares to which it relates and the amount paid-up thereon.
- (iii) In respect of any share or shares held jointly by several persons, the company shall not be bound to issue more than one certificate, and delivery of a certificate for a share to one of several joint holders shall be sufficient delivery to all such holders
6. i) If any share certificate be worn out, defaced, mutilated or torn or if there be no further space on the back for endorsement of transfer, then upon production and surrender thereof to the company, a new certificate may be issued in lieu thereof, and if any certificate is lost or destroyed then upon proof thereof to the satisfaction of the company and on execution of such indemnity as the company deem adequate, a new certificate in lieu thereof shall be given. Every certificate under this Article shall be issued on payment of twenty rupees for each certificate.
- (ii) The provisions of Articles (2) and (3) shall mutatis mutandis apply to debentures of the company.
7. Except as required by law, no person shall be recognised by the company as holding any share upon any trust, and the company shall not be bound by, or be compelled in any way to recognise (even when having notice thereof) any equitable, contingent, future or partial interest in any share, or any interest in any fractional part of a share, or (except only as by these regulations or by law otherwise provided) any other rights in respect of any share except an absolute right to the entirety thereof in the registered holder.
8. (i) The company may exercise the powers of paying commissions conferred by sub-section (6) of section 40, provided that the rate per cent or the amount of the commission paid or agreed to be paid shall be disclosed in the manner required by that section and rules made there under.
- (ii) The rate or amount of the commission shall not exceed the rate or amount prescribed in rules made under sub-section (6) of section 40.
- (iii) The commission may be satisfied by the payment of cash or the allotment of fully or partly paid shares or partly in the one way and partly in the other.

- (i) The company may exercise the powers of paying commissions conferred by sub-section (6) of section 40, provided that the rate per cent or the amount of the commission paid or agreed to be paid shall be disclosed in the manner required by that section and rules made there under.
  - (ii) The rate or amount of the commission shall not exceed the rate or amount prescribed in rules made under sub-section (6) of section 40.
  - (iii) The commission may be satisfied by the payment of cash or the allotment of fully or partly paid shares or partly in the one way and partly in the other.
9. (i) If at any time the share capital is divided into different classes of shares, the rights attached to any class (unless otherwise provided by the terms of issue of the shares of that class) may, subject to the provisions of section 48, and whether or not the company is being wound up, be varied with the consent in writing of the holders of three-fourths of the issued shares of that class, or with the sanction of a special resolution passed at a separate meeting of the holders of the shares of that class.
- (ii) To every such separate meeting, the provisions of these regulations relating to general meetings shall mutatis mutandis apply, but so that the necessary quorum shall be at least two persons holding at least one-third of the issued shares of the class in question.
10. The rights conferred upon the holders of the shares of any class issued with preferred or other rights shall not, unless otherwise expressly provided by the terms of issue of the shares of that class, be deemed to be varied by the creation or issue of further shares ranking *pari passu* therewith.
11. Subject to the provisions of section 55, any preference shares may, with the sanction of an ordinary resolution, be issued on the terms that they are to be redeemed on such terms and in such manner as the company before the issue of the shares may, by special resolution, determine.

#### **Lien**

12. (i) The company shall have a first and paramount lien --
- (a) On every share (not being a fully paid share), for all monies (whether presently payable or not) called, or payable at a fixed time, in respect of that share; and
  - (b) on all shares (not being fully paid shares) standing registered in the name of a single person, for all monies presently payable by him or his estate to the company:
- Provided that the Board of directors may at any time declare any share to be wholly or in part exempt from the provisions of this clause.
- (ii) The company's lien, if any, on a share shall extend to all dividends payable and bonuses declared from time to time in respect of such shares.
13. The company may sell, in such manner as the Board thinks fit, any shares on which the company has a lien:
- Provided that no sale shall be made --
- (a) Unless a sum in respect of which the lien exists is presently payable; or



- (b) until the expiration of fourteen days after a notice in writing stating and demanding payment of such part of the amount in respect of which the lien exists as is presently payable, has been given to the registered holder for the time being of the share or the person entitled thereto by reason of his death or insolvency.
14. (i) To give effect to any such sale, the Board may authorise some person to transfer the shares sold to the purchaser thereof
- (ii) The purchaser shall be registered as the holder of the shares comprised in any such transfer.
  - (iii) The purchaser shall not be bound to see to the application of the purchase money, nor shall his title to the shares be affected by any irregularity or invalidity in the proceedings in reference to the sale.
15. (i) The proceeds of the sale shall be received by the company and applied in payment of such part of the amount in respect of which the lien exists as is presently payable.
- ii) The residue, if any, shall, subject to a like lien for sums not presently payable as existed upon the shares before the sale, be paid to the person entitled to the shares at the date of the sale.

#### **Calls on shares**

- 16 (i) The Board may, from time to time, make calls upon the members in respect of any monies unpaid on their shares (whether on account of the nominal value of the shares or by way of premium) and not by the conditions of allotment thereof made payable at fixed times:
- Provided that no call shall exceed one-fourth of the nominal value of the share or be payable at less than one month from the date fixed for the payment of the last preceding call.
- (ii) Each member shall, subject to receiving at least fourteen days' notice specifying the time or times and place of payment, pay to the company, at the time or times and place so specified, the amount called on his shares.
  - (iii) A call may be revoked or postponed at the discretion of the Board.
17. A call shall be deemed to have been made at the time when the resolution of the Board authorizing the call was passed and may be required to be paid by instalments.
18. The joint holders of a share shall be jointly and severally liable to pay all calls in respect thereof.
19. (i) If a sum called in respect of a share is not paid before or on the day appointed for payment thereof, the person from whom the sum is due shall pay interest thereon from the day appointed for payment thereof to the time of actual payment at ten per cent per annum or at such lower rate, if any, as the Board may determine.
- (ii) The Board shall be at liberty to waive payment of any such interest wholly or in part.
20. (i) Any sum which by the terms of issue of a share becomes payable on allotment or at any fixed date, whether on account of the nominal value of the share or by way of premium, shall, for the purposes of these regulations, be deemed to be a call duly made and payable on the date on which by the terms of issue such sum becomes payable.
- (ii) In case of non-payment of such sum, all the relevant provisions of these regulations as to payment of interest and expenses, forfeiture or otherwise shall apply as if such sum had become payable by virtue of a call duly made and notified.
21. The Board --

(a) may, if it thinks fit, receive from any member willing to advance the same, all or any part of the monies uncalled and unpaid upon any shares held by him; and

(b) upon all or any of the monies so advanced, may (until the same would, but for such advance, become presently payable) pay interest at such rate not exceeding, unless the company in general meeting shall otherwise direct, twelve per cent per annum, as may be agreed upon between the Board and the member paying the sum in advance.

### **Transfer of shares**

22. (i) The instrument of transfer of any share in the company shall be executed by or on behalf of both the transferor and transferee.

(ii) The transferor shall be deemed to remain a holder of the share until the name of the transferee is entered in the register of members in respect thereof.

23. The Board may, subject to the right of appeal conferred by section 58 decline to register --

(a) The transfer of a share, not being a fully paid share, to a person of whom they do not approve; or

(b) Any transfer of shares on which the company has a lien.

24. The Board may decline to recognise any instrument of transfer unless --

(a) The instrument of transfer is in the form as prescribed in rules made under sub-section (1) of section 56;

(b) the instrument of transfer is accompanied by the certificate of the shares to which it relates, and such other evidence as the Board may reasonably require to show the right of the transferor to make the transfer; and

(c) the instrument of transfer is in respect of only one class of shares.

25. On giving not less than seven days' previous notice in accordance with section 91 and rules made thereunder, the registration of transfers may be suspended at such times and for such periods as the Board may from time to time determine:

Provided that such registration shall not be suspended for more than thirty days at any one time or for more than forty-five days in the aggregate in any year.

### **Transmission of shares**

26. (i) On the death of a member, the survivor or survivors where the member was a joint holder, and his nominee or nominees or legal representatives where he was a sole holder, shall be the only persons recognised by the company as having any title to his interest in the shares

(ii) Nothing in clause (i) shall release the estate of a deceased joint holder from any liability in respect of any share which had been jointly held by him with other persons.

27. (i) Any person becoming entitled to a share in consequence of the death or insolvency of a member may, upon such evidence being produced as may from time to time properly be required by the Board and subject as hereinafter provided, elect, either --

(a) to be registered himself as holder of the share; or

(b) to make such transfer of the share as the deceased or insolvent member could have made.

(ii) The Board shall, in either case, have the same right to decline or suspend registration as it would have had, if the deceased or insolvent member had transferred the share before his death or insolvency.

28. (i) If the person so becoming entitled shall elect to be registered as holder of the share himself, he shall deliver or send to the company a notice in writing signed by him stating that he so elects.
- (ii) If the person aforesaid shall elect to transfer the share, he shall testify his election by executing a transfer of the share.
- (iii) All the limitations, restrictions and provisions of these regulations relating to the right to transfer and the registration of transfers of shares shall be applicable to any such notice or transfer as aforesaid as if the death or insolvency of the member had not occurred and the notice or transfer were a transfer signed by that member.
29. A person becoming entitled to a share by reason of the death or insolvency of the holder shall be entitled to the same dividends and other advantages to which he would be entitled if he were the registered holder of the share, except that he shall not, before being registered as a member in respect of the share, be entitled in respect of it to exercise any right conferred by membership in relation to meetings of the company:

Provided that the Board may, at any time, give notice requiring any such person to elect either to be registered himself or to transfer the share, and if the notice is not complied with within ninety days, the Board may thereafter withhold payment of all dividends, bonuses or other monies payable in respect of the share, until the requirements of the notice have been complied with.

#### **Forfeiture of shares**

30. If a member fails to pay any call, or installment of a call, on the day appointed for payment thereof, the Board may, at any time thereafter during such time as any part of the call or installment remains unpaid, serve a notice on him requiring payment of so much of the call or installment as is unpaid, together with any interest which may have accrued.
31. The notice aforesaid shall --
- (a) Name a further day (not being earlier than the expiry of fourteen days from the date of service of the notice) on or before which the payment required by the notice is to be made; and
- (b) State that, in the event of non-payment on or before the day so named, the shares in respect of which the call was made shall be liable to be forfeited.
32. If the requirements of any such notice as aforesaid are not complied with, any share in respect of which the notice has been given may, at any time thereafter, before the payment required by the notice has been made, be forfeited by a resolution of the Board to that effect.
33. (i) A forfeited share may be sold or otherwise disposed of on such terms and in such manner as the Board thinks fit.
- (ii) At any time before a sale or disposal as aforesaid, the Board may cancel the forfeiture on such terms as it thinks fit.
34. (i) A person whose shares have been forfeited shall cease to be a member in respect of the forfeited shares, but shall, notwithstanding the forfeiture, remain liable to pay to the company all monies which, at the date of forfeiture, were presently payable by him to the company in respect of the shares.
- (ii) The liability of such person shall cease if and when the company shall have received payment in full of all such monies in respect of the shares.
35. (i) A duly verified declaration in writing that the declarant is a director, the manager or the secretary, of the company, and that a share in the company has been duly forfeited on a date stated in the declaration, shall be conclusive evidence of the facts therein stated as against all persons claiming to be entitled to the share;
- (ii) The company may receive the consideration, if any, given for the share on any sale or disposal thereof and may execute a transfer of the share in favour of the person to whom the share is sold or disposed of;

- (iii) The transferee shall thereupon be registered as the holder of the share; and
  - (iv) The transferee shall not be bound to see to the application of the purchase money, if any, nor shall his title to the share be affected by any irregularity or invalidity in the proceedings in reference to the forfeiture, sale or disposal of the share.
36. The provisions of these regulations as to forfeiture shall apply in the case of nonpayment of any sum which, by the terms of issue of a share, becomes payable at a fixed time, whether on account of the nominal value of the share or by way of premium, as if the same had been payable by virtue of a call duly made and notified.

#### **Alteration of capital**

37. The company may, from time to time, by ordinary resolution increase the share capital by such sum, to be divided into shares of such amount, as may be specified in the resolution.

Subject to the provisions of section 61, the company may, by ordinary resolution, --

- (a) Consolidate and divide all or any of its share capital into shares of larger amount than its existing shares;
- (b) Convert all or any of its fully paid-up shares into stock, and reconvert that stock into fully paid-up shares of any denomination;
- (c) Sub-divide its existing shares or any of them into shares of smaller amount than is fixed by the memorandum;
- (d) Cancel any shares which, at the date of the passing of the resolution, have not been taken or agreed to be taken by any person.

38. Subject to the provisions of section 61, the company may, by ordinary resolution, --

- (a) Consolidate and divide all or any of its share capital into shares of larger amount than its existing shares;
- (b) Convert all or any of its fully paid-up shares into stock, and reconvert that stock into fully paid-up shares of any denomination;
- (c) Sub-divide its existing shares or any of them into shares of smaller amount than is fixed by the memorandum;
- (d) Cancel any shares which, at the date of the passing of the resolution, have not been taken or agreed to be taken by any person.

39. Where shares are converted into stock, --

- (a) the holders of stock may transfer the same or any part thereof in the same manner as, and subject to the same regulations under which, the shares from which the stock arose might before the conversion have been transferred, or as near thereto as circumstances admit:

Provided that the Board may, from time to time, fix the minimum amount of stock transferable, so, however, that such minimum shall not exceed the nominal amount of the shares from which the stock arose.

- (b) the holders of stock shall, according to the amount of stock held by them, have the same rights, privileges and advantages as regards dividends, voting at meetings of the company, and other matters, as if they held the shares from which the stock arose; but no such privilege or advantage (except participation in the dividends and profits of the company and in the assets on winding up) shall be conferred by an amount of stock which would not, if existing in shares, have conferred that privilege or advantage.
- (c) Such of the regulations of the company as are applicable to paid-up shares shall apply to stock and the words "share" and "shareholder" in those regulations shall include "stock" and "stock-holder" respectively.

40. The company may, by special resolution, reduce in any manner and with, and subject to, any incident authorised and consent required by law, --

- (a) Its share capital;

- (b) Any capital redemption reserve account; or
- (c) Any share premium account.

#### **Capitalisation of profits**

41. (i) The company in general meeting may, upon the recommendation of the Board, resolve --
- (a) that it is desirable to capitalise any part of the amount for the time being standing to the credit of any of the company's reserve accounts, or to the credit of the, profit and loss account, or otherwise available for distribution; and
  - (b) That such sum be accordingly set free for distribution in the manner specified in clause (ii) amongst the members who would have been entitled thereto, if distributed by way of dividend and in the same proportions.
- (ii) The sum aforesaid shall not be paid in cash but shall be applied, subject to the provision contained in clause (iii), either in or towards --
- (A) paying up any amounts for the time being unpaid on any shares held by such members respectively;
  - (B) paying up in full, unissued shares of the company to be allotted and distributed, credited as fully paid-up, to and amongst such members in the proportions aforesaid;
  - (C) Partly in the way specified in sub-clause (A) and partly in that specified in sub-clause (B);
  - (D) A securities premium account and a capital redemption reserve account may, for the purposes of this regulation, be applied in the paying up of unissued shares to be issued to members of the company as fully paid bonus shares;
  - (E) The Board shall give effect to the resolution passed by the company in pursuance of this regulation.
42. (i) Whenever such a resolution as aforesaid shall have been passed, the Board shall --
- (a) Make all appropriations and applications of the undivided profits resolved to be capitalised thereby, and all allotments and issues of fully paid shares if any; and
  - (b) Generally do all acts and things required to give effect thereto.
- (ii) The Board shall have power --
- (a) To make such provisions, by the issue of fractional certificates or by payment in cash or otherwise as it thinks fit, for the case of shares becoming distributable in fractions; and
  - (b) to authorise any person to enter, on behalf of all the members entitled thereto, into an agreement with the company providing for the allotment to them respectively, credited as fully paid-up, of any further shares to which they may be entitled upon such capitalisation, or as the case may require, for the payment by the company on their behalf, by the application thereto of their respective proportions of profits resolved to be capitalised, of the amount or any part of the amounts remaining unpaid on their existing shares;
- (iii) Any agreement made under such authority shall be effective and binding on such members.
- (i) Whenever such a resolution as aforesaid shall have been passed, the Board shall --
- (a) Make all appropriations and applications of the undivided profits resolved to be capitalised thereby, and all allotments and issues of fully paid shares if any; and
  - (b) Generally do all acts and things required to give effect thereto.
- (ii) The Board shall have power --

- (a) to make such provisions, by the issue of fractional certificates or by payment in cash or otherwise as it thinks fit, for the case of shares becoming distributable in fractions; and
- (b) to authorise any person to enter, on behalf of all the members entitled thereto, into an agreement with the company providing for the allotment to them respectively, credited as fully paid-up, of any further shares to which they may be entitled upon such capitalisation, or as the case may require, for the payment by the company on their behalf, by the application thereto of their respective proportions of profits resolved to be capitalised, of the amount or any part of the amounts remaining unpaid on their existing shares;
- (iii) Any agreement made under such authority shall be effective and binding on such members.

#### **Buy-back of shares**

43. Notwithstanding anything contained in these articles but subject to the provisions of sections 68 to 70 and any other applicable provision of the Act or any other law for the time being in force, the company may purchase its own shares or other specified securities.

#### **General meetings**

44. All general meetings other than annual general meeting shall be called extraordinary general meeting.
45. (i) The Board may, whenever it thinks fit, call an extraordinary general meeting.
- (ii) If at any time directors capable of acting who are sufficient in number to form a quorum are not within India, any director or any two members of the company may call an extraordinary general meeting in the same manner, as nearly as possible, as that in which such a meeting may be called by the Board.

#### **Proceedings at general meetings**

46. (i) No business shall be transacted at any general meeting unless a quorum of members is present at the time when the meeting proceeds to business.
- (ii) Save as otherwise provided herein, the quorum for the general meetings shall be as provided in section 103.
47. The chairperson, if any, of the Board shall preside as Chairperson at every general meeting of the company.
48. If there is no such Chairperson, or if he is not present within fifteen minutes after the time appointed for holding the meeting, or is unwilling to act as chairperson of the meeting, the directors present shall elect one of their members to be Chairperson of the meeting.
49. If at any meeting no director is willing to act as Chairperson or if no director is present within fifteen minutes after the time appointed for holding the meeting, the members present shall choose one of their members to be Chairperson of the meeting.

#### **Adjournment of meeting**

- (i) The Chairperson may, with the consent of any meeting at which a quorum is present, and shall, if so directed by the meeting, adjourn the meeting from time to time and from place to place.
- (ii) No business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place.
- (iii) When a meeting is adjourned for thirty days or more, notice of the adjourned meeting shall be given as in the case of an original meeting.

- (iv) Save as aforesaid, and as provided in section 103 of the Act, it shall not be necessary to give any notice of an adjournment or of the business to be transacted at an adjourned meeting.

#### **Voting rights**

50. Subject to any rights or restrictions for the time being attached to any class or classes of shares,
- (a) on a show of hands, every member present in person shall have one vote; and
- (b) on a poll, the voting rights of members shall be in proportion to his share in the paid-up equity share capital of the company.
51. A member may exercise his vote at a meeting by electronic means in accordance with section 108 and shall vote only once.
52. (i) In the case of joint holders, the vote of the senior who tenders a vote, whether in person or by proxy, shall be accepted to the exclusion of the votes of the other joint holders.
- (ii) For this purpose, seniority shall be determined by the order in which the names stand in the register of members.
53. A member of unsound mind, or in respect of whom an order has been made by any court having jurisdiction in lunacy, may vote, whether on a show of hands or on a poll, by his committee or other legal guardian, and any such committee or guardian may, on a poll, vote by proxy.
54. Any business other than that upon which a poll has been demanded may be proceeded with, pending the taking of the poll.
55. No member shall be entitled to vote at any general meeting unless all calls or other sums presently payable by him in respect of shares in the company have been paid
56. (i) No objection shall be raised to the qualification of any voter except at the meeting or adjourned meeting at which the vote objected to is given or tendered, and every vote not disallowed at such meeting shall be valid for all purposes.
- (ii) Any such objection made in due time shall be referred to the Chairperson of the meeting, whose decision shall be final and conclusive.

#### **Proxy**

57. The instrument appointing a proxy and the power-of-attorney or other authority, if any, under which it is signed or a notarised copy of that power or authority, shall be deposited at the registered office of the company not less than 48 hours before the time for holding the meeting or adjourned meeting at which the person named in the instrument proposes to vote, or, in the case of a poll, not less than 24 hours before the time appointed for the taking of the poll; and in default the instrument of proxy shall not be treated as valid.
58. An instrument appointing a proxy shall be in the form as prescribed in the rules made under section 105
59. A vote given in accordance with the terms of an instrument of proxy shall be valid, notwithstanding the previous death or insanity of the principal or the revocation of the proxy or of the authority under which the proxy was executed, or the transfer of the shares in respect of which the proxy is given:

Provided that no intimation in writing of such death, insanity, revocation or transfer shall have been received by the company at its office before the commencement of the meeting or adjourned meeting at which the proxy is used.

#### **Board of Directors**

60. The number of the directors and the names of the first directors shall be determined in writing by the subscribers of the memorandum or a majority of them.

The following shall be the First Directors of the Company.

1. Nandan Singh

2. Mohan Paneru

61. (i) The remuneration of the directors shall, in so far as it consists of a monthly payment, be deemed to accrue from day-to-day.
- (ii) In addition to the remuneration payable to them in pursuance of the Act, the directors may be paid all travelling, hotel and other expenses properly incurred by them –
- (a) in attending and returning from meetings of the Board of Directors or any committee thereof or general meetings of the company; or
- (b) in connection with the business of the company.
62. The Board may pay all expenses incurred in getting up and registering the company.
63. The company may exercise the powers conferred on it by section 88 with regard to the keeping of a foreign register; and the Board may (subject to the provisions of that section) make and vary such regulations as it may think fit respecting the keeping of any such register.
64. All cheques, promissory notes, drafts, hundis, bills of exchange and other negotiable instruments, and all receipts for monies paid to the company, shall be signed, drawn, accepted, endorsed, or otherwise executed, as the case may be, by such person and in such manner as the Board shall from time to time by resolution determine
65. Every director present at any meeting of the Board or of a committee thereof shall sign his name in a book to be kept for that purpose.
66. (i) Subject to the provisions of section 149, the Board shall have power at any time, and from time to time, to appoint a person as an additional director, provided the number of the directors and additional directors together shall not at any time exceed the maximum strength fixed for the Board by the articles.
- (ii) Such person shall hold office only up to the date of the next annual general meeting of the company but shall be eligible for appointment by the company as a director at that meeting subject to the provisions of the Act.

**Proceedings of the Board**

67. (i) The Board of Directors may meet for the conduct of business, adjourn and otherwise regulate its meetings, as it thinks fit.
- (ii) A director may, and the manager or secretary on the requisition of a director shall, at any time, summon a meeting of the Board.
- (i) The Board of Directors may meet for the conduct of business, adjourn and otherwise regulate its meetings, as it thinks fit.
- (ii) A director may, and the manager or secretary on the requisition of a director shall, at any time, summon a meeting of the Board.
68. (i) Save as otherwise expressly provided in the Act, questions arising at any meeting of the Board shall be decided by a majority of votes.
- (ii) In case of an equality of votes, the Chairperson of the Board, if any, shall have a second or casting vote.
69. The continuing directors may act notwithstanding any vacancy in the Board; but, if and so long as their number is reduced below the quorum fixed by the Act for a meeting of the Board, the continuing directors or director may act for the purpose of increasing the number of directors to that fixed for the quorum, or of summoning a general meeting of the company, but for no other purpose.
70. (i) The Board may elect a Chairperson of its meetings and determine the period for which he is to hold office.



- (ii) If no such Chairperson is elected, or if at any meeting the Chairperson is not present within five minutes after the time appointed for holding the meeting, the directors present may choose one of their number to be Chairperson of the meeting.
71. (i) The Board may, subject to the provisions of the Act, delegate any of its powers to committees consisting of such member or members of its body as it thinks fit.
- (ii) Any committee so formed shall, in the exercise of the powers so delegated, conform to any regulations that may be imposed on it by the Board.
72. (i) A committee may elect a Chairperson of its meetings.
- (ii) If no such Chairperson is elected, or if at any meeting the Chairperson is not present within five minutes after the time appointed for holding the meeting, the members present may choose one of their members to be Chairperson of the meeting.
73. (i) A committee may meet and adjourn as it thinks fit.
- (ii) Questions arising at any meeting of a committee shall be determined by a majority of votes of the members present, and in case of an equality of votes, the Chairperson shall have a second or casting vote.
74. All acts done in any meeting of the Board or of a committee thereof or by any person acting as a director, shall, notwithstanding that it may be afterwards discovered that there was some defect in the appointment of any one or more of such directors or of any person acting as aforesaid, or that they or any of them were disqualified, be as valid as if every such director or such person had been duly appointed and was qualified to be a director.
75. Save as otherwise expressly provided in the Act, a resolution in writing, signed by all the members of the Board or of a committee thereof, for the time being entitled to receive notice of a meeting of the Board or committee, shall be valid and effective as if it had been passed at a meeting of the Board or committee, duly convened and held.

#### **Chief Executive Officer, Manager, Company Secretary or Chief Financial Officer**

76. Subject to the provisions of the Act, --
- (i) A chief executive officer, manager, company secretary or chief financial officer may be appointed by the Board for such term, at such remuneration and upon such conditions as it may think fit; and any chief executive officer, manager, company secretary or chief financial officer so appointed may be removed by means of a resolution of the Board;
- (ii) A director may be appointed as chief executive officer, manager, company secretary or chief financial officer
77. A provision of the Act or these regulations requiring or authorising a thing to be done by or to a director and chief executive officer, manager, company secretary or chief financial officer shall not be satisfied by its being done by or to the same person acting both as director and as, or in place of, chief executive officer, manager, company secretary or chief financial officer.

#### **The Seal**

78. (i) The Board shall provide for the safe custody of the seal.
- (ii) The seal of the company shall not be affixed to any instrument except by the authority of a resolution of the Board or of a committee of the Board authorised by it in that behalf, and except in the presence of at least two directors and of the secretary or such other person as the Board may appoint for the purpose; and those two directors and the secretary or other person aforesaid shall sign every instrument to which the seal of the company is so affixed in their presence.

#### **Dividends and Reserve**

79. The company in general meeting may declare dividends, but no dividend shall exceed the amount recommended by the Board.

80. Subject to the provisions of section 123, the Board may from time to time pay to the members such interim dividends as appear to it to be justified by the profits of the company.
81. (i) The Board may, before recommending any dividend, set aside out of the profits of the company such sums as it thinks fit as a reserve or reserves which shall, at the discretion of the Board, be applicable for any purpose to which the profits of the company may be properly applied, including provision for meeting contingencies or for equalizing dividends; and pending such application, may, at the like discretion, either be employed in the business of the company or be invested in such investments (other than shares of the company) as the Board may, from time to time, think fit.
- (ii) The Board may also carry forward any profits which it may consider necessary not to divide, without setting them aside as a reserve
82. (i) Subject to the rights of persons, if any, entitled to shares with special rights as to dividends, all dividends shall be declared and paid according to the amounts paid or credited as paid on the shares in respect whereof the dividend is paid, but if and so long as nothing is paid upon any of the shares in the company, dividends may be declared and paid according to the amounts of the shares.
- (ii) No amount paid or credited as paid on a share in advance of calls shall be treated for the purposes of this regulation as paid on the share.
- (iii) All dividends shall be apportioned and paid proportionately to the amounts paid or credited as paid on the shares during any portion or portions of the period in respect of which the dividend is paid; but if any share is issued on terms providing that it shall rank for dividend as from a particular date such share shall rank for dividend accordingly.
83. The Board may deduct from any dividend payable to any member all sums of money, if any, presently payable by him to the company on account of calls or otherwise in relation to the shares of the company.
84. (i) Any dividend, interest or other monies payable in cash in respect of shares may be paid by cheque or warrant sent through the post directed to the registered address of the holder or, in the case of joint holders, to the registered address of that one of the joint holders who is first named on the register of members, or to such person and to such address as the holder or joint holders may in writing direct.
- (ii) Every such cheque or warrant shall be made payable to the order of the person to whom it is sent.
85. Any one of two or more joint holders of a share may give effective receipts for any dividends, bonuses or other monies payable in respect of such share.
86. Notice of any dividend that may have been declared shall be given to the persons entitled to share therein in the manner mentioned in the Act.
87. No dividend shall bear interest against the company.

### **Accounts**

88. (i) The Board shall from time to time determine whether and to what extent and at what times and places and under what conditions or regulations, the accounts and books of the company, or any of them, shall be open to the inspection of members not being directors.
- (ii) No member (not being a director) shall have any right of inspecting any account or book or document of the company except as conferred by law or authorised by the Board or by the company in general meeting.

### **Winding up**

89. Subject to the provisions of Chapter XX of the Act and rules made there under --

- (i) If the company shall be wound up, the liquidator may, with the sanction of a special resolution of the company and any other sanction required by the Act, divide amongst the members, in specie or kind, the whole or any part of the assets of the company, whether they shall consist of property of the same kind or not.
- (ii) For the purpose aforesaid, the liquidator may set such value as he deems fair upon any property to be divided as aforesaid and may determine how such division shall be carried out as between the members or different classes of members.
- (iii) The liquidator may, with the like sanction, vest the whole or any part of such assets in trustees upon such trusts for the benefit of the contributories if he considers necessary, but so that no member shall be compelled to accept any shares or other securities whereon there is any liability.

#### **Indemnity**

90. Every officer of the company shall be indemnified out of the assets of the company against any liability incurred by him in defending any proceedings, whether civil or criminal, in which judgment is given in his favour or in which he is acquitted or in which relief is granted to him by the court or the Tribunal.

#### 4. Verification of units by DIC, Gurugram

From

Joint Director  
District Industries Centre  
Gurugram

To

The Director General, Directorate of MSME, Haryana  
30 Bays Building, First Floor, Chandigarh (UT)  
Memo No. DIC/GGM/...796...  
Dated: 20/07/2020



**Subject: Recommendation Letter for Plastic & Allied Products Cluster, district Gurugram under State Mini Cluster Development Scheme, Govt. of Haryana**

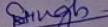
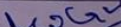
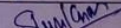

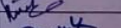
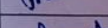
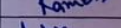

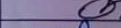
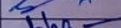
Please find herewith application for documents submitted by **Plastic & Allied Products Cluster, district Gurugram** for further action.

The following information/document attached herewith:

- (i) All the 12 units have been verified & have filled the UAM.
- (ii) All the units are in working conditions.
- (iii) The application form submitted by the SPV has been duly checked for completeness and the information contained therein has been verified.
- (iv) List of products manufactured, address, contact number, has been mentioned in the application form.

The demand of the cluster is genuine, and case may be taken up under State Mini Development Cluster Scheme, Govt. of Haryana. So, it is recommended that the cluster may be approved as per the policy guidelines.

  
Joint Director  
District Industries Centre  
Gurugram  


LIST OF SPV MEMBERS FOR PLASTIC MOULDING - CLUSTER, GURUGRAM (hr)										
S.NO.	CONTACT PERSON	FIRM NAME	CONTACT NO.	ADDRESS	GST No.	UAM No.	PRODUCTS	LAST YEAR SALE	PLANT & MACH. INVESTMENT	SIGNATURE
1	Mr. Nandan Singh	METPLAST INDUSTRIES	9818424141	GURGAON	06ANSPS9876R1ZB		Sheet Metal & Plastic Parts for Automotive Industries	1.75 Crore	1.25 Crore	
2	Mr. Mohan Paneru	HARSHITA ENTERPRISES	9810266493	GURGAON	06AKOPP4816D1Z3		Plastics Parts	20.00 lacs	15.00 lacs	
3	Mr. Shiv Kumar	S.K. ENTERPRISES	7042712426	GURGAON	06ADLFS1750R1ZF		Foam & Rubber Parts	1.25 crore	35.00 lacs	
4	Mr. Virender Sharma	INDO PLASTIC CO.	9810170871	GURGAON	06AABFI2885G1ZE		Plastic Parts	180 Lac	50.00lac	
5	Mr.Pradeep Sharma	MNP FASTNERS INDUSTRIES	9811391084	GURGAON	06APWPK2176E1ZN		Sheet Metal & Fasteners	150 Lac	45.00 Lac	
6	Mr. Trilok	A.R. ENGG. WORKS	9654602320	GURGAON	06CTKPR0952D1ZO		Machining Parts	18.00 lacs	5.00 lac	
7	Mr. Ramesh Kumar	S.G. ENTERPRISES	9718764480	GURGAON	06ECSPK293N2Z3		Plastic Parts	35.00 lacs	10.00 lac	
8	Mr. Lalit Kukreja	NITYASUNDARA INDUSTRIES	8700626229	GURGAON	06ARMPK6767F2ZD		Plastic & Engg Comp	65.00 lac	25.00 lac	
9	Mr. Laxman Singh	R.G.POLYMERS	9718990778	GURGAON	06BKCP53238P1ZO		Plastic Granuals	35.00 lacs	15.00 lacs	
10	Mr. Sunil Vashisht	Mr. JAY PEE AUTO COMP.	9560890950	GURGAON	06AAGFJ2264F1ZL		Automotive Parts	1.45 crore	45.00 lacs	
11	Mr. Ashraf Ali Khan	KHAN ENTERPRISES	9717731591	GURGAON	06AOMPA5452N1ZP		Plastic Parts	65.00 lacs	25.00 lacs	
12	Mr. Naresh Yadav	BALAJI SPARK ENGG.	8800531172	GURGAON	06ABDPY4362K3Z6		Sheet Metal Parts	95.00 Lac	45.00 Lac	

FOR HARSHITA ENTERPRISES

*[Signature]*  
PROP.

For Metplast Industries

*[Signature]*  
Proprietor

## 5. Building Availability Proof

01 September, 2020

To,  
The Director General,  
Department of Industries & Commerce  
Govt. of Haryana  
Sector 17, Chandigarh

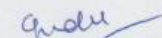
**Subject:** Regarding building lease for Set up of Injection Moulding Machines Cluster, Gurugram (HR).

**Reference:** Cluster project to establish Common Facility Centre (CFC) under State Mini Cluster development scheme of Government of Haryana

Dear Sir,

This is to confirm that I, Indu, am willing to provide my building at Plot Kh. no. 925/734, Gali No.2, Basai Enclave Part-II, Opp.Sector-10, Gurugram on a 10 year irrevocable lease to the Centre of Gurugram Plastic's Auto Components Cluster for the establishment of a Common Facility Centre, provided the cluster is approved by the Government of Haryana. The area which will be provided is 2700sq ft and shall be provided on a lease basis with rent of Rs. 50,000/- per month for the first year, with a standard annual increase as per the market norms.

Yours sincerely,



Indu  
R/o WZ-B-13, Mansa Ram Park,  
New Delhi-110059.



## 6. Machinery Quotations



**HHI/Quotation/VS/20-21/12**  
**M/s Plast Vision India Pvt Ltd**

**27 August 2020**

**M/s Plastvision India Pvt Ltd**  
**Gurgaon**

**Kind attention: Mr. Nandan Singh (09818424141)**

**Subject: Special Offer for MARS G series Injection Moulding Machines**

Dear Sir,

Referring to our discussions, we submit our special offer for MAG series injection Moulding machine.

Please note that our machines are fully microprocessor based equipped to provide excellent:

- |                            |                    |
|----------------------------|--------------------|
| * Recurrence               | * Exactness        |
| * Shot Compactness         | * Energy Competent |
| * Reliability of Operation | * Abundance        |

We hope you will find our offer matching your requirement. Should you in case need further information / clarifications regarding our proposal, please write to us or contact us anytime.

Thanking you and assuring you of our best services at all times.

Yours faithfully,

For, Haitian Huayuan Machinery (India) Pvt Limited

Vishal Sharma

Senior Engineer

Sales and Marketing

Mobile: +91- 9773720767

**Haitian Huayuan Machinery (India) Private Limited**  
Mascot Industrial Park, Plot No. C-1,  
Kadi- Detroj Road, Babaji Pura Village,  
Taluka & Dist.: Mehsana, Gujrat-382715, India.  
Website- [www.haitian.com](http://www.haitian.com)



HHI/Quotation/VS/20-21/12  
M/s Plast Vision India Pvt Ltd

27 August 2020

## FEATURES OF MARS G SERIES INJECTION MOULDING MACHINES

### Injection Unit:

- Two drive cylinder for the screw injection
- Multi-stage Injection speed, pressure and position
- Multi-stage Holding pressure, time and speed
- Multi-stage Refilling speed, time and position
- Controlled transfer position of injection to hold on
- Monitored starting and end injection position
- Suck back pre and post plasticizing
- Nozzle protecting cover
- Self-purging function
- Plasticizing by high torque hydro-motor
- Barrel temperature PID controlled
- Cold start protection

### Clamping Unit:

- 5-point double toggle with excellent kinematics to offer smooth movement platen
- Mechanical, electrical and hydraulic safety gate interlock
- Low pressure and safety
- Multi-stage control of pressure, speed, and position of mould open/close & ejection
- Cooling water manifold for mould cooling
- Hydraulic core pull

### Controller & Monitor:

- Techmation make AK 668
- A high speed 80 MHz CPU with 0.5 Ms scan cycle time for faster response in high machine performance
- 100 sets of mould data storage
- Moulding condition monitoring function
- 12" LCD display

### Haitian Huayuan Machinery (India) Private Limited

Mascot Industrial Park, Plot No. C-1,  
Kadi- Detroj Road, Babaji Pura Village,  
Taluka & Dist.: Mehsana, Gujrat-382715, India.  
Website- [www.haitian.com](http://www.haitian.com)





HHI/Quotation/VS/20-21/12  
M/s Plast Vision India Pvt Ltd

27 August 2020

### SPECIAL OFFER PRICE

Sr. No.	Machine Model	Quotation Price (INR) Ex-Works, Mehsana	Special Offer Price
A	Haitian make MARS G Series Injection Moulding Machine Model MA 1200 Injection Unit-B 260 G inclusive of following features with	23,50,000/-	21,50,000/-
B	Haitian make MARS G Series Injection Moulding Machine Model MA 1600 Injection Unit-B 540 G inclusive of following features with	27,00,000/-	25,50,000/-
C	Haitian make MARS G Series Injection Moulding Machine Model MA 2000 Injection Unit-B 770 G inclusive of following features with	32,00,000/-	29,00,000/-
D	Haitian make MARS G Series Injection Moulding Machine Model MA 3000 Injection Unit-B 1800 G inclusive of following features with	51,00,000/-	47,00,000/-
	• B Type Nitrided Screw and Barrel		
	• Single core pull		
	• Water manifold		
	• Anti-vibration pads.		
	• Mould Clamp		
	• Tool Kit (Std Machine Spare)		
	• Part Drop Sensor (Upto 250T)		

#### Haitian Huayuan Machinery (India) Private Limited

Mascot Industrial Park, Plot No. C-1,  
Kadi- Detroj Road, Babaji Pura Village,  
Taluka & Dist.: Mehsana, Gujarat-382715, India.  
Website- [www.haitian.com](http://www.haitian.com)



HHI/Quotation/VS/20-21/30  
M/s Plast Vision India Pvt Ltd

15 October 2020

#### SPECIAL OFFER PRICE

Sr. No.	Machine Model	Quotation Price (INR) Ex-Works, Mehsana	Special Offer
A	Haitian make MARS G Series Injection Moulding Machine Model MA 860 Injection Unit-B 260 G inclusive of following features with	15,30,000/-	14,00,000/-
	• B Type Nitrided Screw and Barrel		
	• Single core pull		
	• Water manifold		
	• 415V/50HZ, 3 Phase Socket		
	• T-slot platen with threaded hole		
	• Back pressure through proportional valve		
	• Anti-vibration pads.		
	• Mould Clamp		
	• Auto Oil Lubrication		
	• Tool Kit (Std Machine Spare)		
	• Part Drop Sensor		

#### Haitian Huayuan Machinery (India) Private Limited

Mascot Industrial Park, Plot No. C-1,  
Kadi- Detroj Road, Babaji Pura Village,  
Taluka & Dist.: Mehsana, Gujrat-382715, India.  
Website- [www.haitian.com](http://www.haitian.com)



HHI/Quotation/VS/20-21/12  
M/s Plast Vision India Pvt Ltd

27 August 2020

### **TERMS AND CONDITIONS**

**PAYMENT TERMS:** 30% Advance, and balance 70% including Taxes as per our Performa invoice prior to machine dispatch. Taxes as Applicable: GST& Other Taxes as Applicable.

**TRANSIT INSURANCE AND TRANSPORTATION:** Extra to be borne by you.

**DELIVERY:** Standard machine within 60 days from the date of receipt of Techno-commercial purchase order along with 30% advance. For multiple machines staggered delivery schedule shall be provided. Delivery is based on the current schedule and shall be reconfirmed at the time of order placement.

**WARRANTY:** 12 months from the date of dispatch. Haitian Huayuan Machinery India Pvt. Ltd exclusively warrants these products to be free from defects in material and workmanship under normal operating conditions for a period of (1) year from the date of despatch or testing. Buyer's exclusive remedy is limited to repair or replacement of non-conforming parts at the original point of delivery. This warranty does not cover repair or replacement due to normal wear or routine maintenance; damage to components whose fragility is determined by part design; or damage to components resulting from failure to adhere to recommended maintenance and operation procedures, unauthorised customer modifications, utilisation of parts manufactured by unauthorised suppliers, or other matters beyond Haitian Huayuan Machinery India Pvt. Ltd.'s control.

There are no warranties, which extend beyond the description on the face hereof. This disclaimer/exclusion also applies to exclude any implied warranty of merchantability or fitness for purpose. In no event shall Haitian Huayuan Machinery India Pvt. Ltd be liable for any consequential or incidental damages.

**INSTALLATION:** Customer to commission the machine and place at the location providing all electrical, water & other utilities as required. Installation will be done by your personal under supervision of our Technical Service Engineers no cost to buyer, training will be offered to your operator during commissioning free of cost.

#### **Haitian Huayuan Machinery (India) Private Limited**

Mascot Industrial Park, Plot No. C-1,  
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Website- [www.haitian.com](http://www.haitian.com)



**HHI/Quotation/VS/20-21/12**  
**M/s Plast Vision India Pvt Ltd**

**27 August 2020**

We hope you will find our above offer in line with your requirement. In case you need further details/ clarifications, please feel free to write to us.

**Validity:** - valid for 30 days from quote Date.

Thanking you and assuring you of our best services at all times.

**For, Haitian Huayuan Machinery India Pvt. Ltd**

Vishal Sharma  
Senior Engineer  
Sales and Marketing  
Mobile: +91- 9773720767  
Email: vishal.sharma@haitian.in

**Haitian Huayuan Machinery (India) Private Limited**  
Mascot Industrial Park, Plot No. C-1,  
Kadi- Detroj Road, Babaji Pura Village,  
Taluka & Dist.: Mehsana, Gujrat-382715, India.  
Website- [www.haitian.com](http://www.haitian.com)



**GREEN FIELD ENTERPRISES**  
 AN ISO 9001, 14001, 50001 & OHSAS 18001 Certified Company  
**Corporate Office:** S.C.O 36, Sector 26, Madhya Marg, Chandigarh – 160019  
 Tel: +91 172 4374444, 4374455 . Fax: +91 172 4374466  
 E – mail: iec.chandigarh@iecgensets.com . www.iecgensets.com



**Ref No.: GFE/2020-21/KGD/172**  
**Date: 25/08/2020**

**M/s. PLAST VISION INDIA PVT LTD..**  
**GURUGRAM.**

**SUB: OFFER FOR 180 & 200 KVA KIRLOSKAR (KOEL GREEN) ELECTRIC GEN SET**

Dear Sir,

We acknowledge with thanks the receipt of your valued enquiry referred to above. We are accordingly submitting our most competitive offer for your favorable consideration.

**SPECIFICATION:**

Supply of Silent Diesel Generating Set (**CPCB NORMS COMPLIANT**) comprising **KIRLOSKAR** Engine and **KIRLOSKAR GREEN** Alternator mounted and aligned on a common base frame complete with all standard accessories like Fuel tank, Manual Control Panel, AVM Pads fitted on Base Frame, 24 VDC Battery (Koel Green), Leads & Sound Proof Acoustic Enclosure.

RATING	ENGINE / MODEL	BHP @ 1500 RPM	UNIT PRICE
180 KVA	KIRLOSKAR/6SL1500TAG2	248	10,30,000.00
200 KVA	KIRLOSKAR/6SL1500TAG2	248	10,60,000.00
	With Kirloskar Remote Monitoring System		

The above offer is made subject to following:

**TERMS & CONDITIONS:**

**PRICE** : Freight Inclusive.

**GST** : Extra @ 18%..

**STATUTORY VARIATIONS:** All state taxes, duties, levies like Octroi, entry tax, WCT, VAT etc. and statutory variations or imposition of new taxes/duties shall be to purchaser's account.

A Subsidiary of  
**IEC GENSETS LIMITED**  
 Branch Offices: Chandigarh • Ludhiana • Jalandhar • Amritsar • Bathinda • Gurgaon • Ambala  
 Yamunanagar • Jammu





**GREEN FIELD ENTERPRISES**  
AN ISO 9001, 14001, 50001 & OHSAS 18001 Certified Company  
Corporate Office: S.C.O 36, Sector 26, Madhya Marg, Chandigarh – 160019  
Tel: +91 172 4374444, 4374455 . Fax: +91 172 4374466  
E – mail: [iec.chandigarh@iecgensets.com](mailto:iec.chandigarh@iecgensets.com) . [www.iecgensets.com](http://www.iecgensets.com)



**PAYMENT** : 25% advance along with confirmed order and balance against Performa Invoice prior to dispatch.

**ERECTION** : As the order is for supply of material, the Erection of the same including material like Earthing, Cable, Civil Work, Exhaust Pipe, etc is not our scope. However we will undertake **Commissioning of the set free of cost after you complete installation work.**

**WARRANTY:** The DG set warranty is given as 24 months from the date of installation or 5000 operating hours whichever is earlier if the consumable viz, the Lube (K-oil). Coolant conditioner (k-cool) & all filter and spares are sourced from Kirloskar Authorized Service outlet. The warranty on battery and other electrical components shall be one year and all rubber parts shall be subject to six month warranty. The terms of KOEL warranty will have precedence under all circumstance.

**VALIDITY** : 10 Days.

**NOTE** : Please note that the order should placed on our manufacturing unit **M/S GREEN FIELD ENTERPRISES 42A&B INDUSTRIAL EXTENSION AREA KATHUA (J&K).** However all correspondence should be addressed to our booking office.

Should you need any further clarification(s), please feel free to contact the undersigned.

We look forward for an opportunity to serve you.

Thanking you,

Yours faithfully,  
For **GREEN FIELD ENTERPRISES**

**PARDEEP KHETARPAL**  
**9312706510**

**ENCLOSED: - Technical specifications as per annexure 'A'**





**GREEN FIELD ENTERPRISES**  
AN ISO 9001, 14001, 50001 & OHSAS 18001 Certified Company  
Corporate Office: S.C.O 36, Sector 26, Madhya Marg, Chandigarh – 160019  
Tel: +91 172 4374444, 4374455 . Fax: +91 172 4374466  
E – mail: lec.chandigarh@iecgensets.com . www.iecgensets.com



#### **B. ALTERNATOR**

**KIRLOSKAR GREEN** make rated at **180 & 200 KVA**, 415 Volts, 3 Phase, 4 wire, 0.8 p.f. (lag), 50Hz, 1500 RPM, in accordance with IS 4722 as per following specifications:

- Type: Salient poles, Single bearing, Brushless type, suitable for direct coupling to engine.
- Rating: Suitable for an over-load of 10% for 1 hour in every 12 hours operation.
- Voltage Regulation: Provided with fast response thyristor type electronic automatic voltage regulator, which holds output voltage within desired limits. (+/- 1%).
- Excitation: Self excited-self regulated.
- Alternator Loading: Suitable for taking rated load immediately after machine reaches rated voltage and speed.
- Vibration: Suitable for direct coupling with Engine and mounted on common M.S. Channel base frame.
- Enclosure: Screen protected drip proof enclosure with IP – 23 degree of protection.
- Cooling: Air Cooled type with radial fan mounted on Rotor.
- Winding and Insulation: Insulation class H as defined in IS – 4722.

#### **C. ESSENTIAL ACCESSORIES**

One Following set of essential accessories are supplied with each DG set.

- One No. MS Base Frame suitable for mounting of the offered engine and alternator.
- One No. Day fuel tank of standard capacity complete fuel gauge, inlet/outlet connections, drains plug, etc.
- Two No. 12 Volts DC Battery Koel Green make of suitable capacity with leads.
- 1 Set of AVM Pads fitted in Base Frame.

#### **D. MANUAL CONTROL PANEL**

The Control Panel body will be fabricated out of 16 SWG MS sheet. Panel will be suitable for Floor mounting, Indoor Installation, dust & vermin proof, Control cable of copper size 1.5 sq. mm is used. Cables are ferruled for proper maintenance/checking/wiring of panel. Detachable cable gland plates are provided. The panel will be equipped as follows:

- One No. MCCB of 3 pole of suitable capacity.
- Aluminium Bus Bars of suitable capacity provided with termination.
- 3 Nos. Current Transformers of suitable ratio.
- One set of Indication lamps for 'Load ON', 'Set running'.
- One set of instrument MCB'S.
- Microprocessor based DG controller KG 745



Ref: MS/20-21/10114

Dated: 05-10-2020

**Plastvision India Pvt. Ltd**

Subject: Quotation for EOT

Dear Sir,

We are pleased to submit herewith our offer for "EOT" as below:-

Item	Qty.	Rate	Amount
EOT Crane 5 Ton	1	10,00,000/-	10,00,000/-

**Technical Specification**

Sr. No	Specifications	Unit	Size
1	Type of Crane	Nos	Single Girder (ISMB+ISMC Type)
2	Hoist	Ton	5
3	Main Hoist Motor	HP	5 sq. case type (54 Duty)
4	Cross Travel Hoist Motor	HP	0.5 Sq. case type
5	Long Travel Motor	HP	01Hp x 2nos with VVF Drive
6	Min Main Hoist Motor Speed	MPM	3
7	Min Cross Travel Hoist Motor Speed	MPM	15
8	Min Long Travel Motor Speed	MPM	20
9	Main Hoist Gear Box	HP	Helical Gear Box or equal
10	Cross Travel Hoist Gear Box	HP	Helical Gear Box or equal
11	Long Travel Gear Box	HP	Helical Gear Box or equal
12	Main Hoist Break		Disc Type
13	Cross Travel Hoist Break		Disc Type
14	Long Travel Break		Disc Type
15	Power Supply		415 $\pm$ 10%, 3 Phase, 60 Hz $\pm$ 1%





16	Wire Rope	mm	Main Hoist 12mm x 4 Fall (Usha Martin Make)
17	Rope drum dia	mm	27
18	Hook		C type
19	Class		Medium Duty as per IS: 3177 & 807
20	Location		Indoor/ Outdoor
21	Min Capacity	TON	5
22	Total Lift	Meter	4.0 meter clears From Floor.
23	Operation		Through Pendent push Button station.
24	Safety Mechanical	Required	Yes
25	Safety Electrical	Required	Yes
26	Limit Switch shall be provided for Hoist motions.	Required	Yes
27	Manual- Mechanical, Electrical, Etc.	Set	1
28	Warranty	Year	1

#### **Terms & Conditions**

1. **Price** : The Price is Ex-Factory
2. **Tax and Duties** : GST 18% shall be charged Extra at actual.
3. **Packing & Forwarding** : Extra @ 5% of basic Price
4. **Delivery** : 2 to 3 Months from the date of receiving your technically and Commercially clear order.
5. **Payment** : 30% advance along with Order and balance before dispatch.
6. **Warranty** : The Machine is having a warranty of 12 months from the date of Commissioning or 15 months from the date of dispatch, Whichever is earlier. The damages due to accidents/misuse/Mishandling/Wear & Tear etc. are not covered under warranty.



7. **Transit Insurance** : Transit Insurance extra @1.18%
8. **Transportation** : Extra at Actuals on "To Pay" Basis
9. **Validity** : Our offer is valid for 30 days from the date of the offer.

We hope you will find the above in line with your requirements. We now look forward to receive your most valued order at the earliest.

Thanking you

For M-Sui Machines Private Limited

Mukesh Rustagi  
Director



**Reynold India Pvt. Ltd.**

HO & Works 1  
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F +91.120.4252005  
reynold@reynoldindia.com  
www.reynoldindia.com

**Ref: REY/ PN- 6498, dated: 07.10.2020.**

**M/S. PLAST VISION INDIA PVT LTD.  
# - DELHI**

Kind Attn.: **Mr. Mohan Paneru**

Reference: Telephonic discussion with our Mr. Ankur Pachauri dated : 06.10.2020.

Dear Sir,

**Subject : Chiller Model No. RSIL0141DP-500N**

At the very outset we would like to thank you for the kind courtesy, co-operation and patient hearing extended to the undersigned during his telephonic discussions with you.

As per your requirement, we are offering you our chiller as per the following :

- |                      |   |                  |
|----------------------|---|------------------|
| 1. Chiller Model No. | : | RSIL0141DP-500N  |
| 2. Type              | : | Water-cooled     |
| 3. Cooling capacity  | : | 42 TR (21TR x 2) |
| 4. Refrigerant       | : | R-22             |

**The special features of the offered chillers are as per the following :**

1. Completely Factory Built and Tested unit complete with inbuilt stainless steel insulated chilled water tank and chilled water pump with mechanical seal.



Contd...2.

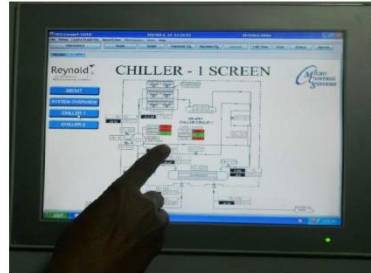
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-/ 2 /-



2. The chiller will be Microprocessor based complete with its **HMI Touch Screen** and graphical display.  
(This is an optional feature with 7" colour touch screen HMI available for specific models).



3. The refrigeration system will be with single / multiple compressor having independent refrigeration circuit, fully automatic, maintaining the temperature required as per the set point.. This not only makes inbuilt redundancy also will save power on low load , by switching off one compressor automatically at low load.

The compressor also automatically share load and have equal run time as monitored by Microprocessor, to have an efficient and equal running of the compressors



4. Evaporators and condensers are designed as per latest HTRI software standards and manufactured as per ASME Section – VIII Div.1.

This built quality design and manufacturing process is similar to the standards used in Refineries and petrochemical plants around the world and is one of the safest and best design standard.

In India we are the Second Company to follow the HTRI design standard for design and manufacturing of chillers and condensers. This is also used by EIL , L&T , BHEL etc.



Contd...3.



-/ 3 /-

5. The evaporator will be Tube in Tube type or Shell and Tube type and Condenser will be Finned Tube type (for air-cooled chiller only) or Shell & Finned Tube type (for water-cooled chiller only).



6. The equipment specially designed for high chilled water flow rate and as well as high chilled water operating pressure upto 5 bar. The pump used is of Grundfos make complete with it's mechanical seal.



7. The chilled water discharge pressure to the equipment can be controlled through a manually adjustable pressure control system built with discharge chilled water pressure gauge.



Contd...4.





-/ 4 /-

8. The chilled water refilling in the tank is automatic and which gets activated as per the demand.

9. The system is protected against dry operation using a low level water sensor in the tank coupled with audio visual alarm and tower lamp (\* in some selected models only)



**Exclusions :**

1. Cooling tower with cooling water pump.
2. All civil work.
3. Total interconnecting piping and insulation work, outside the base frames of our supplied equipment.
4. Total interconnecting power cabling and other related electrical work, outside the base frames of our supplied equipment.
5. Unloading, positioning and installation of all the equipment at their proper place, with due care.
6. Any other material / work, which is not included within our scope and may be required for the proper commissioning and operation of the system.

Accordingly, please find enclosed our offer for chiller **Model No. RSIL0141DP-500N** of **42 TR** capacity for your kind consideration.

We hope you will find our offer in line with your requirement. In case, there is any further clarification, please do not hesitate to get in touch with us.

Thanking you,

Yours faithfully,  
For **REYNOLD INDIA PVT. LTD.**

ANKUR PACHAURI  
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RISHI RAJ  
Sr. Manager - Sales  
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#### PRICE SCHEDULE

S. No.	Items	Price (INR)
1.	Our price for the supply of Water-cooled Scroll Chiller <b>Model No.RSIL0141DP-500N</b> of <b>42TR(21x2) capacity</b> with scroll type compressor from <b>DANFOSS /EMERSON</b> along with <b>pump</b> , shall be, (Rupees Thirteen lakh seventy seven thousand only)	<b>INR 13,77,000/-</b>
2.	Our Price for the supply of Duly insulated stainless steel <b>chilled water tank of 900 ltrs.</b> Capacity & <b>Supply Pump(3.7kw)</b> , shall be, (Rupees One lakh forty four thousand only)	<b>INR 1,44,000/-</b>
3.	Our price for the supply of <b>70TR</b> Cooling Tower & water pump having flow rate <b>63m<sup>3</sup>/h.</b> (Rupees Two lakh sixteen thousand only)	<b>INR 2,16,000/-</b>
4.	Our <b>Package Price</b> for <b>42TR</b> water cooled scroll chiller with pump and <b>900 Litre</b> chilled water tank & <b>Supply pump(3.7kw)</b> & <b>70TR Cooling Tower</b> & water pump having flow rate <b>63m<sup>3</sup>/h</b> , shall be (Rupees Seventeen lakh thirty seven thousand only)	<b>INR 17,37,000/-</b>

#### COMMISSIONING

1. Commissioning of the plant will be done by our engineer after the plant has been placed in position. Our charges will be Rs. 2,500/- per day per engineer
2. You will bear to and fro train fare, boarding, lodging and local transportation charges of our engineer.

#### TAXES / DUTIES / OTHER CHARGES

1. Packing charges will be applicable @ 2%.
2. GST will be applicable @ 18%.
3. Freight charges will be applicable on actuals.
4. Transit insurance charges will be applicable @ 0.5%.



#### **PAYMENT TERMS**

1. 40% payable as advance with the purchase order.
2. 60% with full taxes & duties, payable against Proforma Invoice.

#### **DESPATCH**

The equipment will be despatched within 4 to 5 (depending on model) weeks from the date of receipt of purchase order along with the advance.

#### **WARRANTY**

The equipment will carry a warranty, against any manufacturing defect, for a period of twelve months from the date of commissioning or fifteen months from the date of despatch, whichever is earlier. However, electrical fuses, lights, electrical contactors and overload relays will not be covered under any warranty. The refrigerant, oil and filters are consumable and will be provided upto first fill only.

#### **VALIDITY**

The above referred offer is valid for a period of 30 days only.

For **Reynold India Private Limited,**

ANKUR PACHAURI

RISHI RAJ





# Our offices

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Fax: + 91 33 2281 7750

## Mumbai

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Express Towers  
Nariman Point  
Mumbai - 400 021  
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+ 91 22 6665 5000 (18th floor)  
Fax: + 91 22 22876401 (6th floor)  
+ 91 22 2282 6000 (18th floor)

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Nirlon Knowledge Park,  
Off Western Express Highway,  
Goregaon (E), Mumbai - 400 063  
Tel: +91 22 6749 8000  
Fax: +91 22 6749 8200

15th Floor, The Ruby, 29,  
Senapati Bapat Marg, Dadar (W), Mumbai  
- 400 028, India  
Tel: +91 22 6192 000

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Golf View Corporate Tower - B  
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Gurgaon - 122002  
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Fax: + 91 124 464 4050

6th floor, HT House  
18-20 Kasturba Gandhi Marg  
New Delhi - 110 001  
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## Ernst & Young LLP

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