Draft Detailed Project Report

Faridabad Textile Research and Processing Cluster

Submitted to,

Department of Industries and Commerce

Government of Haryana

(For assistance under State Mini Cluster Development Scheme)

Report No. 2018-Chandigarh-0011

March 2018

Prepared by,

Ernst & Young LLP

Under the project: MSME Ecosystem Transformation in Haryana

05th March 2018

Director
Department of Industries & Commerce,
Government of Haryana
1st Floor, 30 Bays Building,
Sector 17, Chandigarh

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 Centre for NABL Accredited Fabric Testing and Digital Printing Common Facility Centre for Faridabad Textile Research and Processing 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 January 2017, and our procedures were limited to those described in that agreement.

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

- Directorate of Industries, Govt. of Haryana
- DIC Faridabad
- Textile and garment units located in Faridabad
- Industry experts
- Secondary research

Our work has been limited in scope and time and we stress that procedures that are more detailed may reveal other issues not captured here. The procedures summarized in our Draft Detailed Project Report (DPR) 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 Office of Director Industries-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

Disclaimer

This Draft Detailed Project Report for development of centre for NABL accredited fabric testing and digital printing- **"Techview Research & Processing Private Limited"** for Faridabad textile research and processing cluster has been prepared by Ernst & Young LLP (hereinafter referred to as 'EY' or 'Ernst & Young' or 'Us') and delivered to the 'Office of Director of Industries & Commerce – Government of Haryana (O/o of DI-HR)' (hereinafter referred to as 'the Client').

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Acknowledgement

We would like to express our sincere gratitude to Department of Industries & Commerce - Haryana and its officials for their involvement and valuable inputs during the preparation of this DPR. We are thankful to **Sh. Sudhir Rajpal**, IAS, Principal Secretary, Industries & Commerce and **Sh. Ashok Sangwan**, IAS, Director Industries & Commerce, Government of Haryana for sharing their insights about the 'Enterprises Promotion Policy 2015' and their vision about the Mini Cluster Scheme. Special thanks to **Sh. R.C Dahra, Consultant (Clusters), Department of Industries and Commerce and Sh. Anil Chaudhary, Joint Director, DIC Faridabad** for their proactive support and guidance to the team during the entire process.

We would like to convey our sincere thanks to the proactive industry associations in Faridabad- IAMSME of India and the Faridabad Small Industries Association (FSIA) for their assistance in facilitating stakeholder discussions. Further, we would also like to thank officials of DIC, Faridabad for providing support and information related to apparel manufacturing in Faridabad.

In addition, we must extend our sincere thanks to garments and apparel manufacturing MSME entrepreneurs and other key stakeholders who gave us their valuable time and insights with respect to various dimensions of the industry and its support requirements. Without their help, capturing the industry insights would not have been possible.

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Abbreviations

AEMA	Apparel Exporters & Manufacturers Association
AEPC	Apparel Export Promotion Council
ATDC	Apparel Training & Design Centre
BDS	Business Development Services
CAGR	Compound Annual Growth Rate
CFC	Common Facility Centre
DIC	District Industries Centre
DSR	Diagnostic Study Report
EU	European Union
GDP	Gross Domestic Product
GSDP	Gross State Domestic Product
HFC	Haryana Financial Corporation
HSIIDC	Haryana State Infrastructure & Industrial Development Corporation
HUDA	Haryana Urban Development Authority
IAM	Institute of Apparel Management
IAMSME	Integrated Association of Micro, Small & Medium Enterprises
IDBI	Industrial Development Bank of India
MSME	Micro, Small and Medium Enterprises
MSME-DI	MSME – Development Institute
NCR	National Capital Region
NIFT	National Institute of Fashion Technology
NITRA	North India Textile Research Association
NSIC	National Small Industries Corporation
SBI	State Bank of India
SIDBI	Small Industries Development Bank of India
SWOT	Strength, Weaknesses, Opportunities and Threats
TIT&S	The Technological Institute of Textile & Science
UAM	Udyog Aadhar Memorandum
USA	United States of America

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Executive Summary

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 NABL Accredited Fabric Testing and Digital Printing- through an SPV under the name and style of "**Techview Research & Processing Private Limited"** for Faridabad Textile Research and Processing Cluster.

About the Faridabad Textile Research and Processing Cluster

Despite the global economic downturn, the global apparel industry continues 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.

The global apparel market is worth approximately US$ 1.7 trillion, and constitutes around 2% of the world's GDP. EU, USA and China are the world's largest apparel markets with a combined share of approximately 54%. The top 8 apparel-consuming nations form a dominating share of 70% of the global apparel market size. The global market size is expected to reach US$ 2.6 trillion in 2025, growing at a projected rate of 4%. The major growth drivers of the global apparel market will be the developing economies, mainly China and India, both growing in double digits. China will become the largest apparel market, while India will be the second most attractive apparel market adding more than US$ 121 billion by 2025.

India's textile and garment sector is one of the oldest industries in Indian economy dating back several decades. Even today, textile and garment sector is one of the largest contributors to India's exports with approximately 11 per cent of total exports. As per IBEF data, the domestic textile and garment industry in India is estimated to reach US$ 141 billion by 2021 from US$ 67 billion in 2014. Increased penetration of organised retail, favourable demographics, and rising income levels are likely to drive demand for textiles. Textile and apparel exports from India were US$ 40 billion in 2016, and expected to increase to US$ 82 billion by 2021. Readymade garments remain the largest contributor to total textile and apparel exports from India, contributing 40 per cent to total textile and apparel exports.

There are about 500apparel based units in Faridabad district, Haryana, involved in end-end garment manufacturing, fabric manufacturing, dyeing, printing, embroidery and finishing across the knitwear and woven category; catering to both domestic and international markets. The cluster units are engaged in apparel manufacturing, including knitting, cutting, stitching, washing, finishing, packing, etc. The cumulative annual turnover of the cluster is estimated to be around INR700 crores with the average annual turnover of micro units

approximately at INR 80 lakh, and small units at approximately INR 5 crore, while that of medium units varies from INR 10 – 25 crore.

Most units manufacture for other brands, while some also manufacture under their own brands in addition to manufacturing garments for other brands. They manufacture digitally printed apparels, both direct to fabric and direct to garment which has high demand. Several micro and small level entrepreneurs face challenge in getting the digital printing done due to lack of in-house digital printing facility as common infrastructure and high cost of outsourcing the same. In addition, the MSEs in the cluster lack advanced testing facility for fabric and garments and the same is being outsourced to private labs, again at a substantial cost.

Diagnostic Study and Interventions

A diagnostic study was undertaken inOctober2017 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 testing and digital printing facilities, as they were currently availing these services from external service providers at high prices and with production delays.This has resulted 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.

A DSR validation meeting was conducted with SPV and cluster members on 15th December 2017 and was put up to the Director (Industries) for approval. It was approved by the Director (Industries) on 2nd Fab. 2018. 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:

- **NABL Accredited Facility for Fabric Testing**

Presently, the units only have traditional checking and inspection, being undertaken in-house, for physical inspection of raw materials as well as finished products based on size, quality, measurements, colour and other specifications, primarily for physical defects like misprint, hole, distortion, bowing, weaving, outfitting. This is being done either manually or with basic machinery for fabric checking and colour matching (UV based). A comprehensive NABL accredited facility will replace the outsourcing need of testing to private labs, which entails a substantial cost.

- **Digital Printing Facility-**

Such a common facility will both supplement and complement the activities of firms in the cluster, and there is no similar facility available in the district for use by cluster MSEs. The proposed common facilities will be utilized by the SPV members and will also be available to non-members units within and outside the cluster. The facility will provide a much needed technology and infrastructure push to the cluster units and enable them to become more competitive.

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 **"Techview Research & Processing Private Limited"** as aprivate limited company under section 8 of the Companies Act, 2013 and rule 7 of the Companies (Incorporation) Rules, 2014. DIC, Faridabad and MSME-DI have played an important role in SPV formation by cluster stakeholders. The SPV has been incorporated in 2018, and includes 10members who are making 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 garment 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 garment manufacturing, 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 testing and digital printing facilities to undertake job work of cluster units with a total project cost of about INR 238.85 lakhs. The SPV members have proposed to contribute 25% of the project cost. The total contribution of SPV members will amount to INR 58.85 lakhs. Support from State Government is envisaged for INR 180 lakh.

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

S. No.	Particulars	Total Project Cost	Amount as per Guidelines	Remarks
1	**Land & Building**			
	a. Land Value	0.00	0.00	**Eligible for grant-in-aid (Max 25% of total of L&B, P&M, and Misc. F.A.)**
	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 for grant-in-aid**
	a. Primary-Indigenous	41.74	200.00	
	b. Primary-Imports	142.59		
	c. Secondary Machines	21.50		

	Sub Total (B)	205.83	200.00	
3	**Miscellaneous fixed assets (C)**	3.25	0.00	**Not eligible for grant-in-aid**
4	**Preliminary & Preoperative Expenses (D)**	8.05	0.00	
5	**Contingency**			
	a. Building @ 2%	0.00	0.00	
	b. Plant & Machinery @ 5%	10.29	0.00	
	Sub Total (E)	10.29	0.00	
6	**Margin money for working capital @ 75% C.U. (F)**	11.42	0.00	
	Grand Total (A+B+C+D+E+F)	238.85	200.00	

The total project cost is estimated to be INR 238.85 lakhs. As indicated above, assistance to the project from the Govt. of India is envisaged to the tune of INR 180 lakhs of the project cost, SPV contribution is to the tune of INR 58.85 lakhs of the project cost.

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	58.85
	Total	**238.85**

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

S. No.	Particulars	Estimates
1	BEP (cash BEP at initial operating capacity of 75%)	58.49%
2	Av. ROCE (PAT/CE)	30.72%
3	Internal Rate of Return (IRR)	25.02%
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. 181.51 lacs) at a conservative project life of 10 years
5	Payback period	4.79 years with Grant-in-aid assistance from GOH
6	DSCR	Not Applicable (non-availment of term loan in this project)

Asevident 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, Faridabad and the State government. For implementing this CFC project, a Project Management Committee (PMC) comprising of the GM, DICFaridabad and representatives of the SPV, lead bank, and EY experts 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, Faridabad.

The potential for Faridabad textile research and procesing cluster to grow is enormous, owing to the growing market demand for garments in India and globally. The strength of theclusterlies in its location (both geographically & industrially), with large textile industry which provides the key raw material for garments, 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 digital printing facilities on fabrics and garments as well as cost-effective accredited fabric testing facility.

This cluster has the ability to increase its output and market share by manufacturingprice 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 digital printing and advance testing requirement. 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

There are about 500 apparel based units in Faridabad district, Haryana, involved in end-end garment manufacturing, fabric manufacturing, dyeing, printing, embroidery and finishing across the knitwear and woven category; catering to both domestic and international markets. The cumulative annual turnover of the garment cluster is estimated to be around INR 700 crores with the average annual turnover of micro units approximately at INR 80 lakh, and small units at approximately INR 5 crore, while that of medium units varies from INR 10 – 25 crore. The Faridabad garment industry is quite labor intensive and generates employment for about 40,000 persons across the apparel manufacturing value chain. Most units manufacture for other brands, while some also manufacture under their own brands in addition to manufacturing garments for other brands. Manufactured apparels are being exported internationally to USA, UK, Europe, Canada, Dubai, catering to major global brands such as M&S, Zara, Chibo, Allen Solly, Mango, Forever 21. In addition the units are also catering to leading national brands such as Reliance, Tata, Pantaloons. More recently, owing to changing market trends and preference, product demand is being driven towards high design orientation both in colour and cut with higher number of units shifting towards apparels with digital garment printing and computer aided designing/manufacturing.

In the Faridabad apparel cluster, there are close to 50 units are engaged in garment printing across the rotary, sublimation, digital and screen printing category. Some of the large private vendors for digital printing are Shahi Exports, Shivalik, Dhruv Global, and Creative Impex. A sizeable chunk of digital printing demand is being outsourced to printing units in Delhi, NCR, Panjab, Rajasthan and Gujarat. At present the micro and small units in the cluster lack, required technology for digital printing and fabric /apparel testing and quality checking.

There are few large rotary based mills involved in end-end printing while larger players (30 in no.) Involved in digital printing. As a result of this, the MSEs have to outsource digital printing and testing related job-work to private players situated both within Faridabad and outside who are charging significantly high costs from these MSEs while refusing to accept low volume orders (in some cases) which greatly affects the MSEs by increasing their costs. This reduces the competitiveness vis-a vis the medium and large enterprises within the region. It also often enhances the production time, which delays their supplies. Since most of the units are export oriented, in few occasions, the units have also faced a loss of orders due to their inability to price their products competitively vis-à-vis suppliers from other countries.

In addressing this challenge and creating state of the art fabric testing and digital printing facility within the cluster, a group of 10 units have consented to join hands to form a special purpose vehicle (SPV) to set up a NABL accredited centre for fabric testing and digital printing in Faridabad textile research & processing cluster through an SPV under the name and style of **"Techview Research & Processing Private Limited"**. This proposed intervention under the Mini Cluster Development Scheme of Government of Haryana is expected to address the common infrastructure related problems of the cluster.

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. Delhi, Rajasthan, & Uttar Pradesh with around 30% of the total area of the state falling under National Capital Region (NCR) surround the state. The state stands 21st 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 per cent to India's GSDP. During 2004-16, the state's GSDP grew at a compound annual growth rate (CAGR) of 12.12 per cent.

1.3 Economic Scenario of the State

Haryana is 11th state in the country in terms of GSDP, with growth rate of around 6.5%. With just 1.3% of the total area of the country, Haryana contributes to nearly 3.4% of India's GDP. Haryana, with just 1.37% of the country's geographical area and 1.97% of country's total population, is counted among the first few states with the highest per capita income. The state economy is predominantly agricultural.

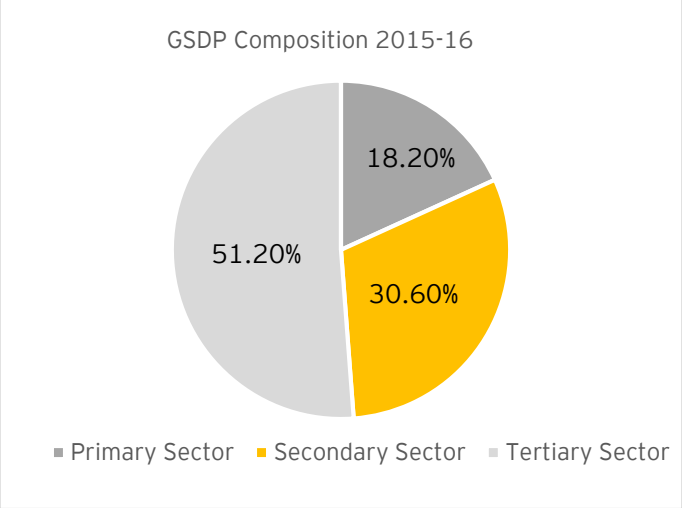


Figure 1: GSDP Composition 2015-16

The industry sector contributes about 18% of the total GSDP of the state. Haryana is fast emerging as one of the most favoured investment destinations in India. The globalization of markets and a resilient economy have given an incredible drive to the industrial sector in Haryana, which already has a competitive advantage in terms of strategic location, basic infrastructure as well as large skilled, educated and young workforce. Besides, the State has investor-friendly policies and regulatory environment as outlined in its recent EPP 2015. It is one of the leading states in terms of industrial production, especially passenger cars, mobile cranes, two-wheelers & tractors. It is the 2nd largest contributor of food grains to India's central pool, accounts for more than 60% of the export of basmati rice in the country and is 3rd largest exporter of software.

The state is in transition from agrarian to manufacturing sector. The state is gradually transforming from an agrarian economy to an industrial economy. To boost the growth rate further and make Haryana a favourable investment destination, the State has developed the Enterprise Promotion Policy in 2015. With the Enterprise Promotion Policy-2015, the state has envisaged a sustainable industrial spectrum in the state with a special focus on MSMEs in its endeavour for effecting a balanced regional and sustainable development. In order to

accelerate the industrial growth in the state, the focus of the government is on holistic development, i.e., by encompassing initiatives for resource efficiency improvement, smarter technology, and environment friendly methods which reduce resource consumption.

1.4 Demographic Trends of Faridabad

Faridabad is the largest city in the district, and one of the major industrial hubs of the state as well as North India. Large and renowned brands have their manufacturing facilities in the district. The proximity to the national capital also makes it a lucrative investment destination industrially and commercially, with a portion of the district falling in the National Capital Region. The district is well connected by road and railway. National Highway No. 2 and the prominent Mathura Road pass through the district. It is in close proximity to Delhi and thus has domestic and international airport access.

Haryana Urban Development Authority (HUDA) and Haryana State Industrial and Infrastructure Development Corporation (HSIIDC) have multiple industrial estates and areas in the district which house facilities belonging to a plethora of sectors. Also, Mathura Road has large and prominent industrial presence as well. Auto ancillary industries also form a major chunk of the industrial units present in the region.

The total population of the district as per 2011 census is 1,809,733. The district has a population density of 2,442 per square kilometre. Faridabad district comprises approximately 7% of the State's total population.

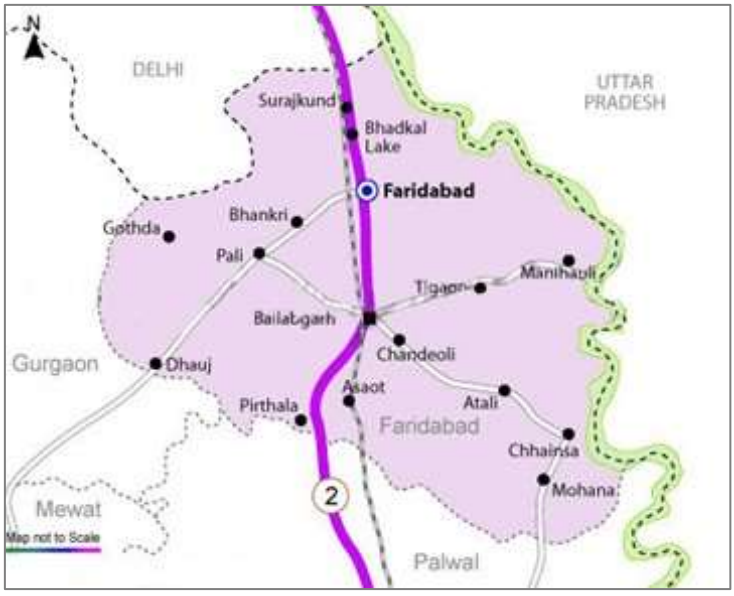


Figure 2 District Map of Faridabad

Sector Overview

2. Sector Overview

The garment & apparel manufacturing sector as a whole can be grouped into four types of establishments based on the manufacturing processes:

(1) End-end garment manufacturing: Units engaged in manufacture of garments that first knit fabric and then cut and sew the fabric into a garment.
(2) Fabric manufacturing: Units engaged in knitting and dyeing of the apparel. Knitting, when done alone, is classified in the textile mills subsector, but when knitting is combined with the production of complete garments, the activity is classified in apparel manufacturing.
(3) Cut and sew: Units engaged in purchasing fabric and then cutting and sewing to make a garment, and
(4) Units exclusively engaged in printing (sublimation, digital, screen and rotary), CAD/CAM, textile/apparel testing, embroidery and finishing.

The garment & apparel manufacturing sub-sector includes a diverse range of establishments, manufacturing full lines of ready-to-wear apparel and custom apparel: apparel contractors, performing cutting or sewing operations on materials owned by others; jobbers performing entrepreneurial functions involved in apparel manufacture; and tailors, manufacturing custom garments for individual clients are all included. Owing to changing trends, tastes and preferences, apparels with intricate designs, colour, patterns has led to sizeable job work being created in printing, embroidery, designing, and CAD/CAM space.

Digital Printing

Digital printing has emerged as a major production process in apparel manufacturing. It is being done in two ways: a) **direct to fabric (DTF)** and b) **direct to garment (DTG)**.

- **Direct to Fabric (DTF) printing**: It is performed directly on a roll of fabric mainly cotton, silk, polyester and rayon using reactive ink, acid ink and disperse ink. It is majorly used for clothing, home textiles and soft signage.

- **Direct to Garment (DTG) printing**: It is performed on textiles and garments using specialized or modified inkjet technology. It is used exclusively for apparels: shirts, t-shirts and jeans.

Fabric/Apparel Testing

It is an important production process and is being done across the following categories: a) microbial properties testing b) Fabric & apparel construction c) Fibre/chemical analysis d) flammability e) Strength & Durability and e) Moisture management

2.1 Brief Global Scenario

Despite the global economic downturn, the global apparel industry continues 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.

The apparel industry is of great importance to several economies in terms of trade, employment, investment and revenue. This particular industry has short product life cycles, vast product differentiation and is characterized by great pace of demand change coupled with rather long and inflexible supply processes.

The global apparel market is worth approximately US$ 1.7 trillion, and constitutes around 2% of the world's GDP. EU, USA and China are the world's largest apparel markets with a combined share of approximately 54%. The top 8 apparel consuming nations form a dominating share of 70% of the global apparel market size. The global market size is expected to reach US$ 2.6 trillion in 2025, growing at a projected rate of 4%. The major growth drivers of the global apparel market will be the developing economies, mainly China and India, both growing in double digits. China will become the largest apparel market adding more than US$ 378 billion in market size by 2025, while India will be the second most attractive apparel market adding more than US$ 121 billion by 2025. The global textile and apparel trade stood at US$ 820 billion in 2014, growing at a CAGR of 5.6% over the last decade. Apparel categories had a larger share of 56%, while textile categories had the remaining share of 44% in the overall trade. EU & USA are the largest markets for textile and apparel with a share of 36% and 15% respectively[1].

The largest segments of the garment industry are women's suits, dresses, skirts & shorts with a 28% share; followed by men's suits, jackets & trousers with a 17% share; Jersey pullovers & cardigans with a 14% share; T-shirts, singlets, vests with 11% share; men's shirts with a 7% share; women's blouses & shirts with a 5% share, etc. The market segmentation of the global apparel industry is provided in figure 3[2]:

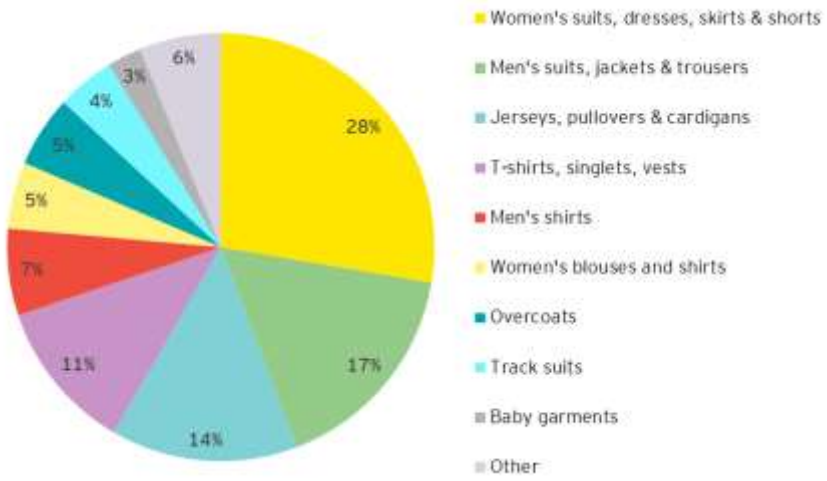


Figure 3: Global Apparel Market Segmentation (based on global export data)

[1]FICCI White Paper – Global Shifts in Textile Industry & India's Position - 2016
[2] International Apparel Federation

2.2 India Scenario

India's textile and garment industry is one of the oldest industries in Indian economy dating back several decades. Even today, the sector is one of the largest contributors to India's exports with approximately 11 per cent of total exports. The textile and garment industry is also labour intensive and is one of the largest employers. The textile and garment industry can be broadly divided into two segments - yarn and fibre, and processed fabrics and apparel. India accounts for 14 percent of the world's production of textile fibres and yarns (largest producer of jute, second largest producer of silk and cotton, and third largest in cellulosic fibre). India has the highest loom capacity (including hand looms) with 63 per cent of the world's market share.

As per IBEF data, the domestic textile and garment industry in India is estimated to reach US$ 141 billion by 2021 from US$ 67 billion in 2014. Increased penetration of organised retail, favourable demographics, and rising income levels are likely to drive demand for textiles.[3] The trend of exports of textiles and garments from India is illustrated in figure 4.

Figure 4: Textile and Garment Exports from India (US$ billion)

India was the third largest exporter of textiles in 2015, and the 8th largest exporter of clothing (behind China, European Union, Bangladesh Vietnam, and Hong Kong)[4]. Textile and apparel exports from India were US$ 40 billion in 2016, and expected to increase to US$ 82 billion by 2021. Readymade garments remain the largest contributor to total textile and apparel exports from India, contributing 40 per cent to total textile and apparel exports. Cotton and man-made textiles were the other major contributors with shares of 31 per cent and 16 per cent, respectively. A snapshot of the Indian textile and garment industry is provided in figure 5:

[3] IBEF – Textile and Apparel Industry in India
[4] WTO - World Trade Statistical Review 2016

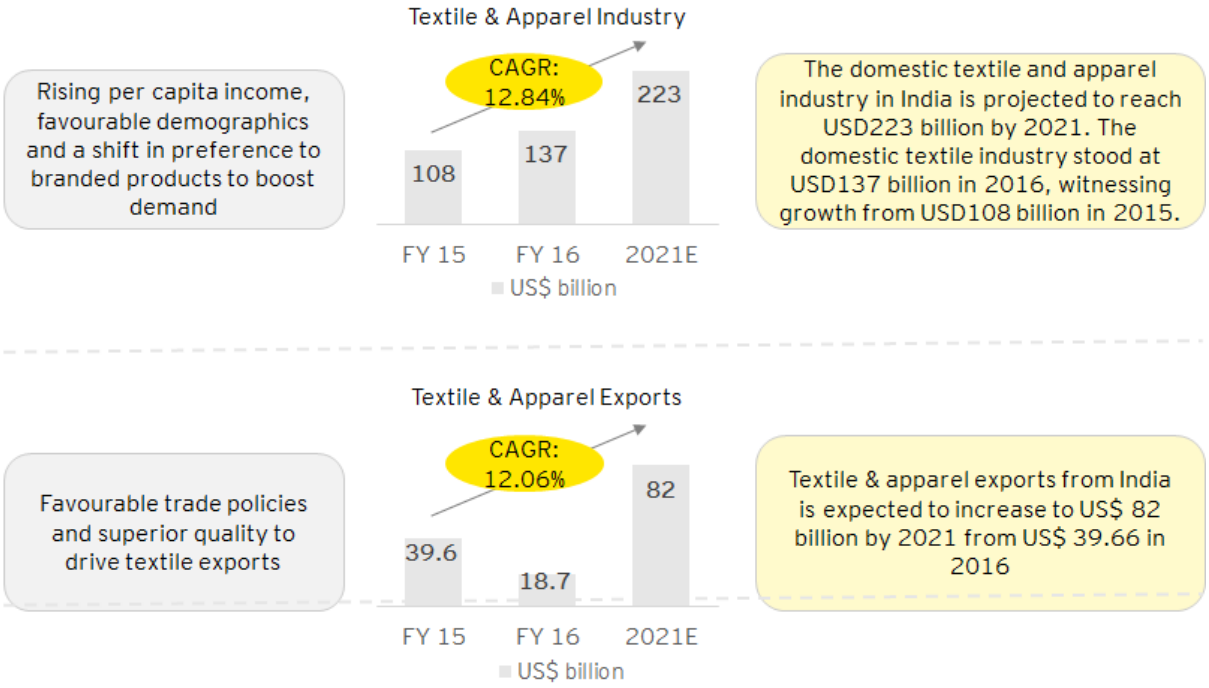


Figure 5: Indian Textile & Garment Industry Snapshot[5]

2.3 Textile and Garment Sector in Haryana

The textile and garment industry in Haryana exhibits strength across the entire value chain from fibre to fashion. The state is one of the leading cotton producers in the country with Sirsa, Fatehabad, Bhiwani, Hisar and Jind being the main cotton producing districts. This bounteous availability of raw materials gives Haryana a competitive advantage in the textile sector. The cluster based approach to industrial development has produced robust textile centres such as Panipat, Gurugram, Faridabad, Hisar and Sonipat. The sector today provides employment to approximately 1 million people with readymade garments worth USD 2 billion being exported from the state annually[6].

Blessed with a resource advantage with Haryana as one of the largest producers of cotton in Northern India. Haryana is one of the leading producer of textiles and readymade garments.

Panipat is famous for handloom products, furnishing fabrics, terry-towels and blankets. Also, Gurugram has emerged as hub for manufacturing of Readymade Garments with some of the largest manufacturers of readymade garments in Asia having their manufacturing facilities in Faridabad and Gurugram.

The numbers of industries under this sector stand at more than 4624 units. The sector employs more than 98518 people which is a share of more than 12% of the total mapped manpower in the state. The total textiles and apparels exports (handloom and readymade goods) stood at INR 88,704 million as in 2015-16. The overall exports composition of

[5] IBEF – Textile Industry in India
[6] Haryana Textile Policy 2017

textiles and readymade garments (including handlooms) as a percent of total exports from the state has averaged close to 10% from 2013-14 to 2015-16. Clearly, textiles and readymade garments is a leading export oriented sector of the state[7].

Figure 6 provides details of the net value added, gross fixed capital formation, and employment by the textiles and apparel sector in Haryana as well as the state contribution of the sector to national levels from 2011-12 to 2013-14[8]:

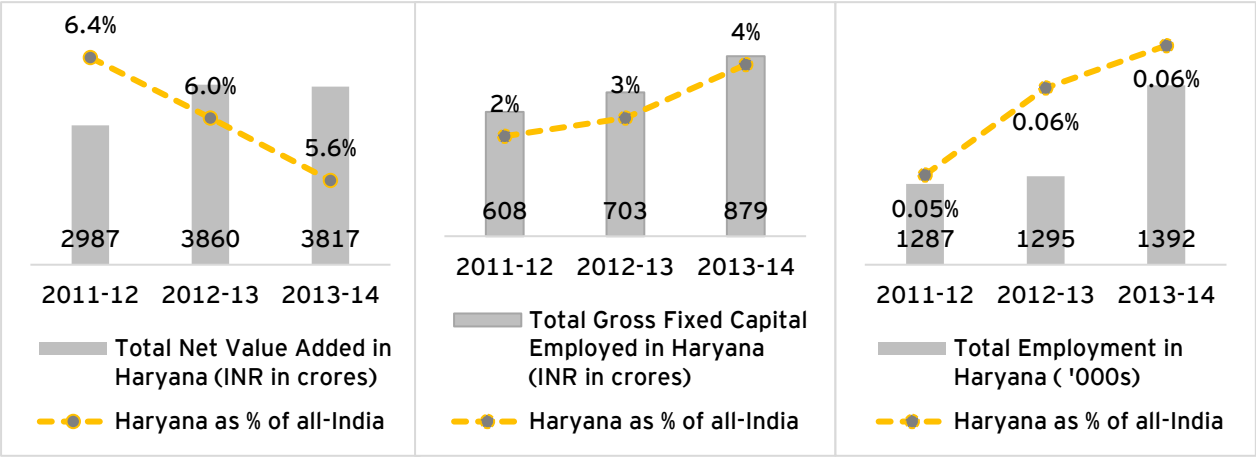


Figure 6 Textile & Garment Industry in Haryana

The Draft Textile Policy 2017 for the state is targeting an investment of INR 5000 crore in the sector, creation of 50,000 new jobs and CAGR of 20% during the policy period.

[7] Department of Industry and Commerce, Haryana
[8] Annual Survey of Industries

2.4 Cluster Scenario

The history of the evolution of Delhi and its surrounding areas into a garment hub traces back to the Mughal period. Shahjehanabad, today's old Delhi was a renowned tailoring centre during the Mughal Empire. Since the middle of the seventeenth century, the city hosted the *karkhane* (workshops) of many highly skilled artisans who catered to royal households. Toward the end of the Mughal period, many craftsmen and artisans left the city, whole those who remained gathered in *mahallas* (craft neighbourhoods) scattered across the city. Production started organizing for market-based forms of distribution, a trend that was accelerated by the arrival of the British. After independence, there was a shift from tailoring into 'modern' garment-making. By the 1960s, Okhla, Karol Bagh, Gandhinagar as low-rent commercial areas turned into an industrial area and emerged as a centre for readymade garments. In addition, unorganized and small garment manufacturing units, clustered around Naraina, Sitapuri and Janakpuri.

However by the 1980s, real estate prices and labour costs began soaring in Okhla and civic regulations tightened as a result of which industrial units were no longer allowed to do business within residential areas. As a result, garment units along with other industrial activities moved away from Delhi to newer industrial sites of Faridabad, Noida and Gurugram.

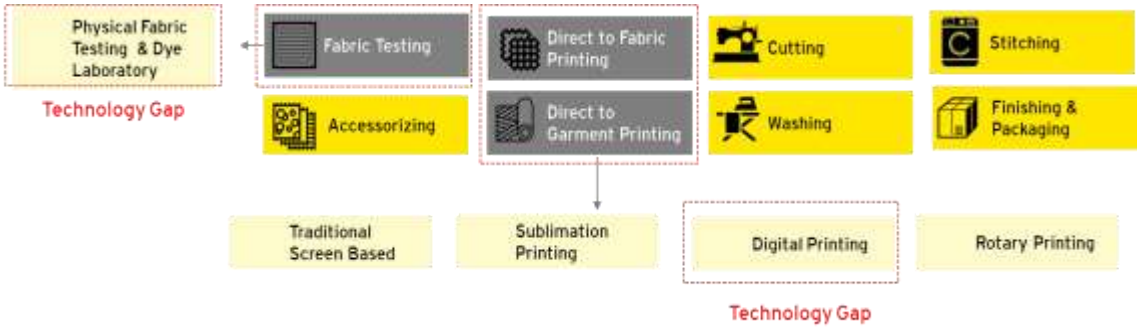
By the 1980s, real estate prices and labour costs began soaring in Okhla, and by the 1990s production started moving to surrounding areas, including Faridabad. Faridabad's proximity to Delhi, easy availability of raw materials, and lower land costs made it an attractive location for garment units to migrate. In addition, there was an influx of labour into Faridabad due to lower cost of living. The formation of the cluster was marked by the establishment of a vertical unit of knit fabric in Faridabad by S.P.L Industries, a renowned name in the apparel space. In 1995, the company set up a vertical integrated plant for apparel manufacturing, which had the facilities for knitting, dyeing, processing, cutting and stitching. Other large players also began establishing units in Faridabad, including Shahi Exports, Dhruv Global, etc.

As the retail market boomed, there was an increase in orders to large units. Large units became unable to meet this demand alone, particularly smaller and more niche orders which were not viable for them to produce. Additionally, larger units which were not vertically integrated required units for undertaking activities such as knitting, dyeing, etc. These factors gave rise to smaller units in the area. This led to the emergence of a number of micro and small garment units in Faridabad.

2.5 Nature of Cluster

The Faridabad apparel cluster houses about 500 units across the entire value chain. The cluster is located in Faridabad and manufactures apparels for the domestic and international market.

Units undertake some or all of the following activities:



Approximately 80% of the units, i.e. 400 units in the cluster are micro enterprises, and the remaining 20%, i.e. 100 units are small enterprises. Of the total units, approximately 30% are engaged in end-to-end apparel manufacturing (from stitching to packaging); 25-30% are engaged in stitching; 10% in garment washing and dyeing; 20% in embroidery; and 10% in printing. The size of units and nature of operation of cluster units are provided in figure 7:

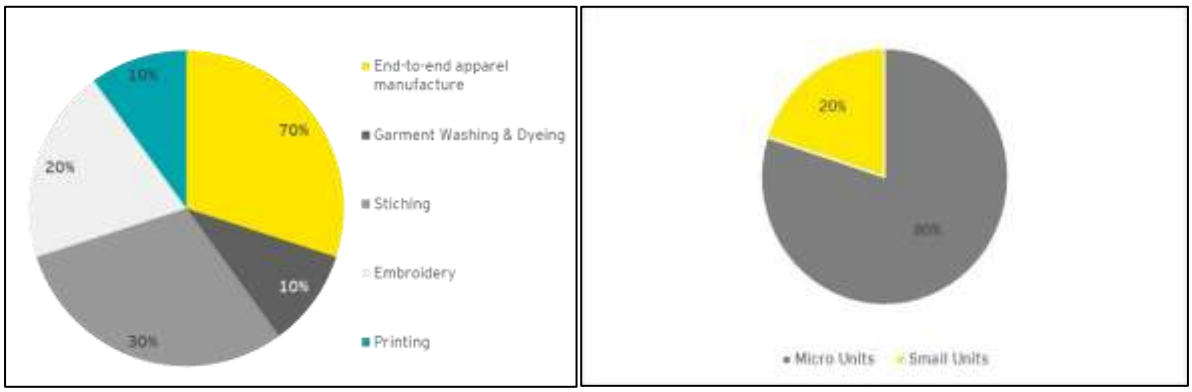


Figure 7: Size and Nature of Cluster Units

At present, micro and small units in the cluster lack required technology for digital printing, which is most in vogue. Within Faridabad, there are few large printing mills (10 in no.) involved in rotary printing while few of the other larger players (30 in no.) are involved in digital printing. Another major type of printing i.e. sublimation printing is being outsourced outside Faridabad as there are only 3-4 units with dedicated facility for sublimation printing. Since rotary, sublimation and traditional (screen based printing) are disadvantageous relative to digital printing (to be explained in the subsequent sections), the digital printing is a highly demanded service that is being outsourced at present to large private players. The large private players are charging exorbitant prices for digital printing services ranging from INR 150-600/m.

Testing and quality control for fabrics, is important for assuring fit for the purpose, conformance to international or regional compliance, retain performance specification, quality standards, meeting product liability, environmental and other current legislation, prevent recalls and promote repeat sales. In addition, quality control is required for verifying and maintaining a desired level of fabric and dye/color quality.

Presently, the units only have traditional checking and inspection, while the advanced testing requirements are being outsourced to large private labs which charge high prices for testing.

This infrastructure gap is acting as a major impediment for the competitiveness of the MSE apparel units in the cluster. Private players charge a higher fee, which greatly affects the MSEs and in some cases, they also refuse to accept low volume orders for MSEs. This reduces the competitiveness of MSE vis-a vis the medium and large enterprises within the region. It also often enhances the production time which delays their supplies. Since most of the units are export oriented, in few occasions, the units have also faced a loss of orders due to their inability to price their products competitively vis-à-vis suppliers from other countries.

2.6 Products of the Cluster

The cluster produces garments for the domestic and international market, including large retailers as well as the open market. Products include a range of garments for men and women, including T-shirts, tops, dresses, jackets, scarves, children's clothes, etc. with various types of designs, embroidery and prints.

Units undertake a range of activities; processing or producing garments at various stages including – garment dyeing / washing, cutting, stitching, printing, embroidery, and finishing.

A few of the products manufactured by the cluster are presented in figure 8:

Figure 8: Products of the Garment Units

Diagnostic Study Findings

3. Diagnostic Study Findings

A diagnostic study was undertaken by the cluster members in November2017 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 advance testing and digital printing 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 of Industries & Commerce on 2nd February 2018 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 apparel manufacturing units based in various parts of Haryana. 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

- **Apparel Export Promotion Council (AEPC)**

  Incorporated in 1978, AEPC is the official body of apparel exporters in India that provides assistance to Indian exporters as well as importers/international buyers who choose India as their preferred sourcing destination for garments. AEPC works towards integrating the entire industry - starting at the grass root level of training the workforce and supplying a steady stream of man power to the industry; identifying the best countries to source machinery and other infrastructure and brokering deals for its members and finally helping exporters to showcase their best at home fairs as well as be highly visible at international fairs the world over. Twice a year, AEPC showcases the best of India's garment export capabilities through the prestigious India International Garment Fair, playing host to over 350 exhibitors. Several cluster units are members of AEPC, which provide a platform for interaction between members and for showcasing their products to expand their market.

- **Apparel Exporters & Manufacturers Association (AEMA)**

  AEMA was set up in 1981, and has since functioned as an important think tank for the Central Government and for the AEPC in advocating policy and encouraging smooth growth of the export oriented apparel manufacturing sector. AEMA undertakes activities for its members, including holding exhibitions for domestic and international buyers and facilitating members to participate in international

garment fairs like India International Garment Fair and Vastra. AEMA is located in Gurugram, and many garment units in Faridabad are members of AEMA.

- **Integrated Association of Micro, Small & Medium Enterprises (IAMSME) of India**
  IAMSME of India, based in Faridabad is created and run by entrepreneurs to facilitate and promote the growth and development of small businesses across India through various services like Credit facilitation, technology transfer, IT Solutions (ERP, e-Commerce, CRM, Mobile Apps, and more) Skill development, Energy Efficiency, Mentoring & Advisory Services, Lean Manufacturing, International Exhibitions & Trainings, Best Practices sharing, Strategic Sourcing, Export-Import Facilitation, Cluster Development, Solar Power, Sustainability, Risk Management, Electronic Surveillance, International Trade Facilitation, etc.The focus of this Institution is not to just raise or highlight problems and issues, but to identify common problems and find collective solutions. Most of the units in the cluster are active members of IAMSME of India.

- **Faridabad Small Industries Association (FSIA)**
  FSIA is the largest association of MSMEs in Haryana, and has been representing problems of small industries and working towards their overall development. The association has MoUs with Small Industries Development Bank of India (SIDBI) and National Small Industries Corporation (NSIC) to provide various services to MSMEs. FSIA is also actively associate with various national bodies like CII, FICCI, etc.. FSIA provides free services such as filing of income tax returns, preparation of balance sheet, sales tax consultation, allotment of PAN, TAN & TDS procedures, etc. to new entrepreneurs for the first 2 years. It also regularly organizes seminars for business development for its members such as vendor buyer meets, interaction with foreign business delegations, active participation in organizing exhibitions & trade fairs at a national and state level, etc.

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 General Manager who is assisted functional managers and technical field officers. DIC promotes and routes subsidy to micro and small enterprises in the region. The Mini Custer Scheme under which the garment units want to set up a CFC will also be implemented through the DIC office. The Faridabad DIC is actively promoting cluster development in the district and also helps the local units register under Unique Aadhar Memorandum (UAM). It would play a key role in formulation of the garment 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 Urban Development Authority (HUDA)**

  HUDA is the urban planning agency of the state of Haryana in India. It was established in 1937. 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. Faridabad industry is served by the NSIC branch office in Faridabad. It provides diverse services to MSMEs in Faridabad 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

- **Apparel Training & Design Centre (ATDC), Faridabad**
  The Apparel Training & Design Centre (ATDC) is India's largest Quality Vocational Training Provider dedicated to the Apparel Sector. The ATDC was set-up as a society for training of shop-floor and supervisory workforce for the apparel export sector in 1991 under the aegis of AEPC, the largest Export Promotion Council in the country. The Institute through its 200 Pan-India centres renders service to the downstream Apparel export and domestic industries having trained over 200,000 candidates in short-term courses under Integrated Skill Development Scheme (ISDS) of Ministry of Textiles (MOT), and also about 80,000 candidates in longer duration Vocational courses, over the years[9].

[9] http://www.aepcindia.com/aepc-initiative

- **Institute of Apparel Management (IAM), Gurugram**
  Institute of Apparel Management (IAM) provides short term courses, undergraduate, postgraduate and MBA courses in various areas related to apparels, apparel manufacturing, fashion & lifestyle design, fashion communication, fashion production management, fashion retail merchandising, apparel market merchandising, apparel manufacturing & entrepreneurship, etc. The institute also conducts workshops and value added programmes for people in the apparel industry.

- **The Technological Institute of Textile & Science (TIT&S), Bhiwani**
  The Technological Institute of Textile & Science (TIT&S) provides training in textile technology, textile chemistry, fashion & apparel engineering, etc. Courses cover areas including fibre specialization, yarn specialization, fabric specialization, textile manufacturing, fashion & designing, garment & accessories, computerized designing, textile & garment surface designing, textile & garment quality assistance, etc. The institute also has a research & development wing which undertakes research on textiles and other streams.

- **National Institute of Fashion Technology (NIFT), Delhi**
  National Institute of Fashion Technology (NIFT), set up in 1986 under the aegis of Ministry of Textiles, Government of India, is a Statutory Institute Governed by the NIFT Act 2006. The institute provides a firm foundation in fashion education in the domains of Design, Management and Technology. NIFT also has a network of NIFT Resource Centres, which serve as a Fashion Information System (FIS), catering to the needs of fashion professionals, entrepreneurs and fashion educators. The integrated collections of print, digital, audio and visual creative resources are the only systematically documented learning resources available in India for the study of international and contemporary Indian fashion. FIS is a decentralized network, computerized and coordinated by the National Resource Centre at NIFT.

- **North India Textile Research Association (NITRA), Ghaziabad**
  Northern India Textile Research Association (NITRA) is one of the prime textile research institutes in the country. The textile industry and Ministry of Textiles, Govt. of India jointly established NITRA in 1974 for conducting applied scientific research and providing support services to Indian textile industry. NITRA's prime activities include R&D technical consultancy, quality evaluation of materials, manpower training and publishing technical books and papers. To meet industrial HRD needs, NITRA regularly conducts various industry-recognized job-oriented techno-management training programs across the complete textile & apparel supply chain on full-time and DLP modes. In addition to this, NITRA regularly organizes seminars, workshops and also conducts on and off-shop customized training programs.

D. Banks / FIs

- **Haryana Financial Corporation (HFC)**
  Haryana Financial Corporation, based in Chandigarh was promoted jointly by the Government of Haryana and the Industrial Development Bank of India (IDBI). HFC has been approved by SEBI as a category-I merchant banker. The corporation's activities include merchant banking, trade finance, lease finance and term lending. The corporation has diversified its range of financial services to include no-fund-based assistance in the form of guarantees, letter of credit and forex services. The DPR for the project shall be appraised by HFC.
- **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, Faridabad**
  Syndicate Bank is the lead bank of the Faridabad district and many local garment units have a banking relationship with Syndicate Bank.

E. Leading Manufacturers

Some of the leading garment manufacturers in Faridabad include Shivalik, Dhruv Global, Shahi Exports, and so on.

Key stakeholders of Faridabad cluster are presented in figure 9:

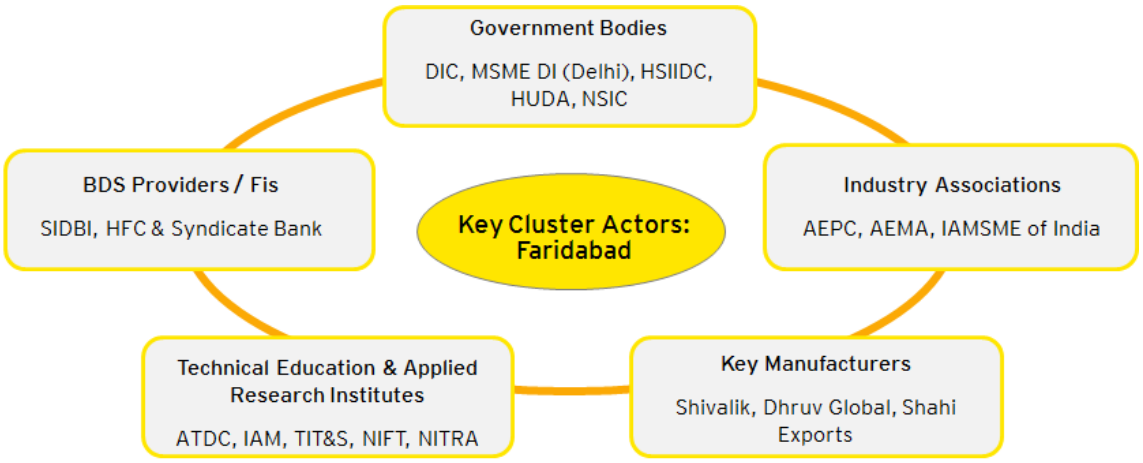


Figure 9: Key Cluster Actors

3.2 Cluster Market, Employment and Turnover

The units in the cluster cater to domestic and international markets. Units operate across the spectrum – from completely domestic manufacturing to entirely export oriented. Manufacturing is predominantly done to order, and is usually based on the buyer's specifications. The MSMEs cater to smaller / niche orders, while larger players in the market cater to high volume orders. MSME units produce for large retailers as well as the open market. Sale to large retailers takes place either directly or through garment suppliers. Some of the large retailers which the cluster caters to include Zara, M&S, Mango, White Shrub, Allen Solly, Cover Story, Forever 21, Future Group etc. Units in the cluster also export to countries including USA, UK, Europe, Dubai, etc.

The Faridabad garment industry is quite labor intensive. The cluster provides employment to about 40,000 persons for activities including designing, sewing, dying, washing, finishing, printing, embroidery, etc. On average, micro units employ approximately 50 people, and small units in the cluster employ approximately 200 people. The garment industry is an appealing industry for women, and about half of the manpower comprises of women. The garment industry workforce in the garment industry is well paid, with average salaries of INR 600 per day for workers operating on a 10 hour shift. Wages of skilled labour for activities such as cutting, sewing, etc. can be as high as INR 30,000 per month.

The cumulative annual turnover of the garment cluster is estimated to be around INR 700 crores. The average annual turnover of micro units is approximately INR 80 lakh, of small units is approximately INR 5 crore, and of medium units varies from INR 10 – 25 crore. However, there is an enormous potential of increasing the production from cluster units by reducing the outsourcing of activities by units to private players. This would also result in enhanced turnover. Currently, units are charged high prices for services such as digital printing, which affects their competitiveness.

3.3 Production Process

The units in the cluster are engaged in various activities across the value chain of apparel manufacturing. These have been represented in the table below:

Table 1 Units in apparel manufacturing

Nature of Production Process		Number of Units (approx.)	% of total units
End-end garment manufacturing		150	30
Garment washing and dyeing		50	10
Stitching		150	30
Printing	Sublimation Printing	5	10
	Digital Printing	30	
	Rotary	10	
	Traditional	5	
	Total	50	
Embroidery		100	19-20
Total (approx.)		500	

As can be seen from the table above, 30% units are engaged in end-end garment manufacturing. These units have in-house facility for fabric cutting, sewing, designing, accessorizing, washing and packaging. However embroidery and printing services are being outsourced to units which are exclusively catering to the printing needs (comprising 30% of the total units in the cluster) and charging exorbitant prices.

Out of the approx. 50 units with dedicated facility for apparel printing, more than 50% (approx. 30 units) are in the digital printing space but they are large private players, charging exorbitant prices ranging from INR 150-600/ meter and dealing primarily with large volume orders. The traditional (screen based), rotary and sublimation printing have major limitations in terms of color, finesse, quality and consistency as a result of which the demand for digital printing is non-replaceable by the other printing methods.

The flow chart of the production process followed by garment units is shown in figure 11.

Figure 12 shows images of production process in a garment unit of Faridabad.

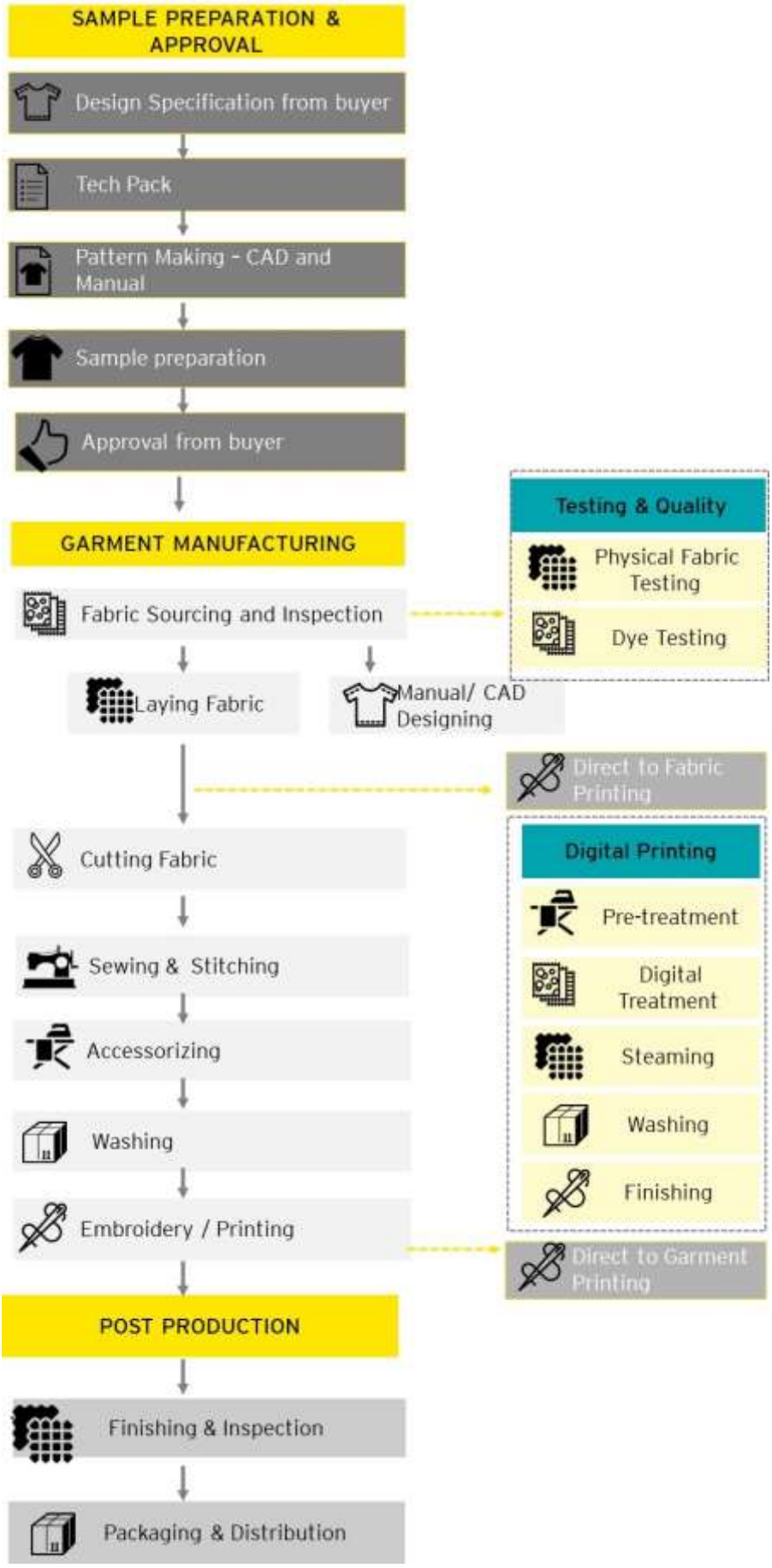

SAMPLE PREPARATION & APPROVAL
Design Specification from buyer
Tech Pack
Pattern Making - CAD and Manual
Sample preparation
Approval from buyer
GARMENT MANUFACTURING
Fabric Sourcing and Inspection
Laying Fabric
Manual/ CAD Designing
Cutting Fabric
Sewing & Stitching
Accessorizing
Washing
Embroidery / Printing
POST PRODUCTION
Finishing & Inspection
Packaging & Distribution
Testing & Quality
Physical Fabric Testing
Dye Testing
Direct to Fabric Printing
Digital Printing
Pre-treatment
Digital Treatment
Steaming
Washing
Finishing
Direct to Garment Printing

Figure 10 : Flow Chart of Production Process

As detailed infigure 11, garment manufacturing involves the following steps:

1. Sample Preparation and Approval:
   - **Receipt of Tech Pack:** Units receive a 'tech pack' detailing out the specifications of the garments from the buyers.
   - **Pattern making:** Manual paper patterns are cut based on the tech pack. Pattern process can be either manual or automated using CAD.
   - **Sample:** Based on the paper pattern, one sample garment is made and send to the buyer for approval.

2. Garment Manufacturing
   i. **Procurement:** Units order the required fabric and accessories as per the buyer's specifications.
   ii. **Testing & Quality Checking:** At this stage, an inspection and quality check of the fabric is done to check the colour consistency, texture and any visible damage. This can be done either through manual inspection or by using fabric testing and inspection machine. *Most of the units have basic facilities for examining physical defects such as misprint, hole, distortion (refer image inserted below) and the more advanced fabric& dye testing requirement, is being outsourced at present.*
   iii. **Graded paper patterns**:Paper patterns are cut based on size of garments and other specifications. The patterns can be derived either through manual cutting or based CAD designing, followed by cutting.
   iv. **Laying of fabric:** Fabric is laid on a table and the top layer is marked. This step is in preparation for the cutting stage. The fabric laying can also be done after the cutting process.
   v. **Direct to Fabric Printing***: Printing is done on the entire layered fabric roll. This is primarily an outsourced activity and a major cost area in the production process.*
   vi. **Cutting:** As per the graded patters, the fabric is cut into pieces of the garment to be sewn together. Post this, the cut pieces are bundled based on size and thaan in order to ensure that there is no variation in the same type and colour of garment (as even during dying there may be slight colour variations).
   vii. **Sewing/Stitching:** Stitching is done in an assembly line fashion, with groups of people sewing different parts of the garment and then passing it on to the next (e.g. One group may stitch the collar, another may stitch sleeves, and another may stitch all the parts together). On an average a unit in the cluster has 50-60 sewing machines.
   viii. **Accessorizing:** Once the stitching is done, the sewn pieces ate accessorized with buttons, collars, and zips as per the specification.
   ix. **Washing:** The sewn and accessorized apparel is then washed in large washing machines, well-equipped for soft wash and hard wash.
   x. **Direct to Garment Printing and/or Embroidery:** *The washed apparel is outsourced for printing (direct to garment)and embroidery as per the*

specification. Again, this is primarily an outsourced activity and a major cost area in the production process.

3. **Post Production:**
   i. **Finishing:** This involves cutting of extra threads, inspection of each unit for defects, washing and ironing of the garments.
   ii. **Packaging:** Garments are packaged in preparation for shipping.
   iii. **Shipping:** Garments are shipped to the buyers or distributors.

Fabric Inspection

CAD Designing

Fabric Laying

Sewing & Stitching

Accessorizing

Embroidery/Printing

Washing

Finishing

Packaging

Figure 11: Steps in the Production Process

3.4 Value Chain Analysis

Value chain analysis of the most commonly produced cluster products (printed women's blouse) has been conducted to ascertain the major cost areas and identify suitable interventions. The value chain analysis of a digital printed women's blouse is provided in table 2:

Table 2: Value Chain Analysis of Printed Ladies Blouse[10]

Particulars	Value Added	Total Value (INR)	% of cost of production
Fabric (approx. 1.20 metres @ INR 65 per metre)		78	12%
CAD (@100 per pattern)	100	178	15%
Lining (approx. 1.0 metres @ INR 40 per metre)	40	218	6%
Printing Cost @ INR 150/ m)	150	368	22%
Trims & Accessories (zipper, labels, elastic)	60	428	9%
Cutting	6	434	1%
Stitching (labour cost)	100	534	15%
Finishing & Packaging	30	564	4%
Overheads (~20%)	113	677	17%
Total Production Cost			677
Profit Margin (30%)			203
Selling price			**880**

(Note: CAD/CAM cost also includes the cost of preparing CAD sample design during the approval stage)*

[10] Source: Stakeholder Consultation inputs

The value chain analysis has been prepared based on the stakeholder consultation. It can be observed that CAD/CAM, which is technical process being outsourced at approx. INR 100 per pattern, constitutes 15% of the total cost of production. This cost per pattern also includes the cost of preparing CAD sample as part of the approval stage.The industry is labor intensive, with labor costs for stitching alone accounting for approximately 15% of total production cost. The competitiveness of the cluster units can be increased by targeting the major outsourced job work areas, mainly CAD/CAM and printing, and providing common facilities to the units in order to undertake these services at a lower cost.

Printing on fabric is outsourced, and currently accounts for 22% of the total cost of production. The printing of fabric entails two types of cost color/dye cost and steaming/labor cost. The total cost of printing in the value chain analysis table above is based on a conservative scenario of INR 150/mtr. As opined by multiple MSEs during the on-site visits during the preparation of the DSR, the cost of outsourced digital printing can range from INR 150/mtr. to INR 600/mtr.

3.5 Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis

A SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis of MSME garment 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 3:

Table 3: SWOT Analysis of the Cluster

Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
Market	► Steady local and international demand for cluster products. ► Cluster located within Faridabad Industrial area, which is well connected. ► Cluster located in the proximity of Delhi which is a major supply hub. ► Presence of a large number of buying houses in the region.	► Presence of other large players to whom bulk orders are made. ► Units are unable to price their garments competitively due to high cost of digital printing and advanced testing for fabrics, apparels, dyes/colours and other raw materials.	► Rising income levels and increasing urbanisation are driving growth of the domestic market. ► Potential to price products competitively with acquisition of technology, in order to compete effectively with countries such as Sri Lanka, Bangladesh & China. ► Potential for assistance under upcoming State Textile Policy.	► Intense competition from global markets. ► Competition from other major players like Shivalik, Dhruv Global, Shahi Exports.
Technology/Product Quality	► Raw Material can be inspected upon delivery. ► Each unit undertakes inspection of pieces at each stage in their	► Lack of technology for digital printing results in units having to obtain these from private service providers at higher costs.	► Setting up of CFC with equipment for digital printing, resulting in units being able to obtain these services at lower costs and price their products competitively.	► Increase in cost of production due to soaring raw material prices. ► Increase in awareness of people on quality certifications shall lead to losing out to business /

Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
	manufacturing process. ▸ Some buyers specify testing labs from which products need to be certified. ▸ Products are made as per 'tech packs' specified by buyers, and are thus made-to-order (No challenge of sale of inventory).	▸ Since products are manufactured in batches, errors in steps such as cutting result in that entire batch being rejected. ▸ For exports, there is growing importance on various ecological parameters, which makes for more stringent requirements for the units. ▸ Absence of certified testing lab facilities in the cluster for advanced fabric testing.	▸ Setting up of CFC with accredited testing lab, job work facilities	requirement for more stringent testing procedures. ▸ Competition from vendors manufacturing products at lower costs with digital printing technology machines. ▸ Faster technology obsolescence.
Skill/Manpower	▸ Skills acquired on-the-job ▸ Presence of technical institutes such as Apparel Training & Design Centre at Gurgaon.	▸ High labour costs. ▸ Lack of interaction between SMEs and technical institutes for providing technical training. ▸ No mechanism to mobilize regional youth for training in the sector.	▸ Customized training programs on required skills (operations, soft skills etc.). ▸ Engage technical institutes for skill development programs. ▸ Increased cost of labour in China provides opportunity for Indian industry.	▸ Youth interested to work in other lucrative sectors. ▸ Big companies such as Shivalik, Dhruv Global, Shahi Exports attract the labour.

Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
Inputs	▸ Availability of raw materials from local dealers ▸ Buyers sometimes specify dealers from whom they want materials	▸ No web portal displaying prices and sources of raw materials ▸ Challenge in getting quality dyed fabric, etc. as a result of which many units do dyeing in-house.	▸ Potential to develop a portal displaying information (price, suppliers) of raw materials.	▸ Cost of power in India is, on average, higher than key competing countries like China, Bangladesh, Vietnam
Innovation	▸ Ability to manufacture garments as per the manufacturers specifications ▸ Some units create their own designs and sell these	▸ Lack of a standardised ERP solution for apparel industry ▸ Low investment in development of designs ▸ Lack of process automation ▸ Lack of adoption of lean manufacturing clusters such as Six Sigma, Kaizen	▸ Development of a standard IT based ERP solution. ▸ Structured processes for information sharing among MSEs in the cluster.	▸ Could lose business to other more price competitive manufacturers from countries such as Sri Lanka, Bangladesh, China if units do not innovate
Business Environment	▸ Steady growth in domestic demand ▸ Cluster well known as a garment hub across North India ▸ Conducive policy and regulatory initiatives ▸ Active State Govt. and schemes for development of the sector	▸ Lack of knowledge of regulatory frameworks and government schemes among micro level garment units. ▸ High cost of industrial land in the cluster ▸ Lack of common infrastructure/CFC facilities. ▸ No long term vision of industrialists.	▸ Establish CFC with latest technologies for digital printing and testing facilities. ▸ Create better awareness of government schemes and regulations.	▸ Change in policies and regulatory environment. ▸ Increase in land rates. ▸ Environmental policies result in shutting down of dying houses impacting garment industry.

Area	Current situation		Future	
	Strengths	Weaknesses	Opportunities	Threats
	► Proactive industries associations in Faridabad.			
Energy/Environment	► 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. ► Dyeing and washing require environment compliances, and if units diversify into these services then these compliances and certifications would have to be met.

3.6 Major Issues / Problem Areas of the Cluster

3.6.1 Absence of Digital Printing Machinery

With growing demand for sophisticated prints and colour patterns on fabrics and apparels, both in the domestic and international market, there is a pressing need for digital printing technology. Since Faridabad is a major apparel producing hub, the need for introducing digital printing infrastructure within the Faridabad cluster is highly warranted. At present, the MSEs in the cluster do not have an in-house digital printing technology , neither at an individual unit level or as common infrastructure as they are unable to afford it; resulting in outsourcing the same to large private players (30 in no.) both within Faridabad and outside (mainly Surat and Ludhiana).

Some of the major challenges faced by the MSE apparel units as regards dearth of digital printing infrastructure in the cluster are:

- Low cost competitiveness for MSMEs due to exorbitant outsourcing price for digital printing ranging from INR 150-600/mt. In case of smaller volume orders by MSEs, price usually is around INR 500/mt. This gives a low cost advantage to international competitors (such as China and USA with a digital printing cost of no more than 1 USD) as well as domestic large players who can get the printing done at reasonable prices. As opined by stakeholders during discussions, the market price of printing is close to INR 100-150 including colour cost of around INR 40-50 and steaming/labour cost of INR 40. **This highlights a price mark-up for MSEs of more than 50-100% by private players in digital printing.**

- Due to low volume orders by MSEs, **the large players preferring bulk orders either are reluctant to accept orders or delay the order processing**. Even to prepare a buyer sample at the approval stage, there is an inordinate delay of 15 days to 1 month. There is no provision for on the spot sample preparation for buyers resulting in loss of order in some cases.
- Within Faridabad, there are few large printing mills involved in rotary printing and another major type of printing i.e. sublimation printing is being outsourced outside Faridabad as there are only 3-4 units with dedicated facility for sublimation printing. But **these alternate printing methods have significant limitations** and as such cannot substitute the growing demand for digital printing. The limitations of alternate printing methods are highlighted below:

Garment Printing Methods	Limitations
Traditional (screen based) Printing Screen printing consists of three elements: the screen which is the image carrier; the squeegee; and ink. The screen printing process uses a porous mesh stretched tightly over a frame made of wood or metal. Proper tension is essential for accurate colour registration. The mesh is made of porous fabric or stainless steel. A stencil is produced on the screen either manually or photo chemically. The stencil defines the image to be printed in other printing technologies this would be referred to as the image plate.	► Very limited color and design options which results in difficulty in using traditional screen based printing in view of complex design pallets/requirements and intricate designs. ► Screen printing is a laborious process with substantial labour requirement. This results in a major cost escalation on the labour component. ► Setting up printing screens is an elaborate process and therefore traditional screen based printers do not accept smaller volume orders (orders lesser than ~70 garments in a single batch). MSEs generally do not have such large volume orders. The production speed is in the range of 15-25 yards per minute. ► Screen printing requires separation of graphic (a process that breaks the down graphic into the different colours needed to print it) through burning of screen for each colour, which results in air pollution.
Rotary printing In rotary printing, the fabric travels at a consistent speed between the screen and a steel or rubber impression roller immediately below the screen. (The impression roller serves the same function as the press bed on a flatbed press.) As the fabric passes through the rotary unit, the screen spins at a rate that identically matches the speed of substrate movement. These machines are designed for roll-to-roll printing on fabric ranging from narrow to wide-format textiles.	► Rotary screens have design limitations, equipped with 10-12 colour pallets and design patterns (as constrained by the type/design of rotary screens). ► As in case of screen printing, rotary printing is a manual process which results n substantial labour requirement and vast scope for manual error. ► The rotary screens at set up for printing fabric/garment to the tune of 10,000 m/day making it difficult for rotary mills to accept smaller volume orders. ► Rotary screen printing results in a fabric wastage (during the color matching process). This is to the tune of 500-1000m/day. Smaller players/MSEs cannot usually afford such a substantial wastage.
Sublimation Printing Sublimation printing involves thermal transfers of dye from the carrier paper to the garment. When heated, sublimation pigments pass from a solid state to a gas state (never becoming liquid) and imbed themselves in the fibres of the garment. Unlike thermal transfers, screen-printing and direct to garment printing sublimation needs a synthetic substrate to effectively transfer the print.	► Sublimation printing is a two-step process- requiring paper pattern making (1st step) and sublimating the same of the garment (2nd step). This requires raw material usage and wastage (as part of both, sampling and the final garment printing process). ► Sublimation printing is not a cotton friendly but is preferred when decorating fabrics such polyester and poly-blends. ► Sublimation printing is slower than digital printing because of the two steps involved in the heat transfer part of dye sublimation. This further results in an escalation of labour costs.

In addition to the digital printing facility, the proposed CFC also requires setting up of an ETP, given the water guzzling nature of apparel manufacturing and importantly, printing as a sub-process which requires water consumption to the tune of 8% and cotton as a fabric with highest water consumption at 250-300 l/kg[11].

3.6.2 Absence of Facility for Fabric Testing

Testing and quality control, for fabrics and dye, is important for assuringfit for the purpose, conformance to international or regional compliance, retain performance specification, quality standards, meeting product liability, environmental and other current legislation, prevent recalls and promote repeat sales. In addition, quality control is required for verifying and maintaining a desired level of fabric and dye/color quality.

Presently, the units only have traditional checking and inspection, being undertaken in-house, for physical inspection of raw materials as well as finished products based on size, quality, measurements, colour and other specifications, primarily for physical defects like misprint, hole, distortion, bowing, weaving, outfitting. This is being done either manually or with basic machinery for fabric checking and colour matching (UV based).

[11]http://web.iitd.ac.in/~arunku/files/CVL100_Y16/Lecture%201%20ETP%20Textile_verII.pdf

A vast majority of apparel based MSE units are export oriented and large buyers do not accept the final product without adhering to quality check and requirements such as acceptable quality level (AQL), the need for advanced level of testing and quality checking for fabrics and dyes/color is required. Some of the advanced testing requirements include microbial properties testing, fabric construction, fibre/chemical analysis, strength, durability and moisture content.

Given the high cost of testing equipment, the MSE units are outsourcing the advanced testing requirement, to private accredited labs within Faridabad and outside to states like Gujarat, Panjab and Rajasthan. The lack of in-house testing labs is also resulting in production delays and waste of materials.

Current fabric testing mechanism: Manual Fabric Inspection for Physical Defects (left) and UV based testing for Color Consistency (right).

3.7 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 table 4:

Table 4: Technology Gaps Identified and Interventions

Sr. No	Technology	Technology Gap	Rationale
1.	**Ink Jet Digital Printing Facility**- MS-JP5evo Digital Printing Machine	▶ At present, the MSE units within the cluster do not have an in-house facility for digital printing. The requirement is currently outsourced to large private players within Faridabad and outside to other states. This constitutes a major component of the cost of apparel manufacturing. ▶ Private service providers often do not accept orders or charge extremely high prices due to lower volume orders of MSMEs. ▶ Also there is delay in processing of orders placed by MSEs besides refusal to accept orders which are small volumes. This leads to reduced competitiveness of the units. ▶ The alternate printing methods- screen printing (traditional), sublimation printing for	Presence of digital printing facility in the cluster shall ensure cost effective fabric and garment printing on cotton, silk, wool, flax, rayon, and cellulose fibre blends. The digital printing facility in the cluster shall run on commercial basis. Provision of digital printing machinery will address the technology gap of digitally printing on multiple fabrics, reduce the cost of outsourcing, and make the MSE units cost competitive. It will further enable cluster units to expand their market share and tie up with large buyers, both national and international.

2.	**Post Digital Printing Machinery-** It will consist of: ▸ Industrial Steamer ▸ Hydro Extractor ▸ Hot Water Generator ▸ Heated Ironer	polyesters, rotary have relative demerits. ▸ Screen printing (traditional): Time intensive, design limitations, lack requisite quality and specifications and polluting in nature. ▸ Rotary printing: Design limitations in addition to large volume friendly and a labour intensive process. ▸ Sublimation printing: Conducive for polyesters and poly-blend fabrics and cannot handle most other fabrics like cotton.	By establishing post digital printing facility in the CFC, the units will be able to undertake post digital printing within the CFC, which at present is an outsourced operation. This will enable the MSE units to reduce the lead production time, manage cost of production and meet/expand the market demand.
3.	**NABL Accredited Testing Lab Facility-**	▸ A vast majority of apparel based MSE units are export oriented and large buyers do not accept the final product without adhering to quality check and requirements such as acceptable quality level (AQL), the need for advanced level of testing and quality checking for fabrics and dyes/color is required but the same is lacking in the cluster at present. ▸ MSE units in the cluster lack access to affordable advanced testing facility. ▸ The units are outsourcing the advanced testing requirement, to private accredited labs within Faridabad and outside to states like Gujarat, Panjab and Rajasthan, incurring high costs. ▸ The lack of in-house testing labs is also resulting in production delays and waste of materials.	Presence of NABL Accredited lab will enable cluster units and SPV members to get basic as well advances fabric and apparel tests done, at a competitive price along with an NABL accreditation. It will enable units to be more export competitive and take up large export orders without the fear of rejection and delays.

4.	**Secondary Equipment**-Effluent Treatment Plant	▶ There is substantial water discharge from apparel manufacturing. Some of the post-production processes such as dyeing, bleaching, printing, washing are highly water guzzling.	Effluent Treatment Plant will be used to chemically treat the discharged water.

3.8 Cluster growth potential

The potential for the growth of apparel sector is enormous, owing to the growing market for garments in India and internationally. Faridabad 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 is a large cotton producing hub, and several textile units are present in the area. Currently units are facing challenges in cost competitiveness and efficiency due to the absence of digital printing and advanced fabric testing. 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 regarding gap identification in the cluster, hard interventions (setting up of CFC) are being proposed to enhance the competitiveness of the garment cluster units.

The cluster has presence of a couple of proactive industries associations which frequently keep organizing awareness and training programs for the garment industry. The awareness level of the units is found to be satisfactory. While some units are independently conducting training programmes, the others are members of IAMSME of India, which actively conducts trainings and workshops related to entrepreneurship development, IPR, energy efficiency, GST, barcoding, equity schemes, SME IPO process, sustainability, etc. and also sponsors members for national and international trainings. Several units currently attend domestic and international garment exhibitions. Hence, the cluster does not intend to obtain government funding for soft interventions. Details of the initiatives undertaken during the course of the DPR by the cluster, are however, mentioned in the section below.

The recommendations for hard interventions have been elaborated in subsequent sections. The recommendations were finalized in a stakeholder consultation conducted with all the members of the cluster in Faridabad in November 2017. Subsequent discussions for finalizing the technology, financial aspects, user charges/revenue with all the SPV members were held on 15th December 2017 and 8th February 2018.

4.1 Soft Interventions for Setting up a CFC

- **Member Meetings:** Cooperation and trust building among members is foremost condition for smooth functioning of the cluster and SPV. Series of meetings and on-site visits were held between the cluster members during the month of November, December 2017 and February 2018 to enhance cooperation among member units and obtain inputs for the DPR. Members of the cluster were informed about the proposed machinery, company registration and identification of building for the CFC. Members of the cluster raised their concerns during the meeting which were resolved by other members of the cluster.

- **Meetings with Vendors:** The members of the cluster have held meetings with multiple vendors for procuring digital printing machinery and the effluent treatment plant. The members has been actively working with the machinery suppliers to understand the working, specifications and are also attending training sessions for machinery operations.

- **Awareness programmes:** Awareness programmes were organized by the individual units and IAMSME of India. The IAMSME of India actively conducts trainings and workshops related to entrepreneurship development, IPR, energy efficiency, GST, barcoding, equity schemes, SME IPO process, sustainability, etc. and also sponsors members for national and international trainings. Several units are members of IAMSME of India, and regularly attend these trainings and workshops.

- **International &National Trade Fairs:** Several member units attend trade fairs abroad such as Australia, Russia, USA, Europe, and South Africa. Nationally, the members have attended Textile Fair at Gandhinagar, Garment Fair in Delhi, Mumbai etc. Units which have attended these fairs have shared their learnings and leading practices with other units of the cluster.

4.2 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 apparel manufacturing units, and to enable them to move up the value chain. The members of the proposed SPV with support from the state Government are willing to set up a Common Facility Centre with NABL accredited fabric testing and digital printing facility. This facility shall provide a much needed technical impetus to the cluster units and will enable them to become cost competitive.

The following common infrastructural facilities are being proposed for the CFC, with support from the state industry department. The proposed facility along with its description, usage are detailed below:

4.2.1 Digital Printing Facility

- **Inkjet Digital Textile Printing Machine**

Inkjet digital textile printing machine will use three styles of printing - direct printing, resist dyeing and discharge printing. The machine is equipped with multiple nozzles and vast color capability for computer based printing which recreates digital image by propelling droplets of ink onto the fabric. The print width of digital textile printers using rolled fabric typically range from 1.60 to 3.20 meters (60-126 inches). The machine uses reactive ink and requires wet post-treatment. The printed fabric needs to undergo several steaming, washing and drying steps.

Features:

- Suitable Fabrics: Cotton, Silk, Wool, flax, rayon, nylon and some cellulose fiber blends.

Post Digital Printing Equipment: This will include end-end facility to handle the post digital printing operations ranging from steam based cleaning to washing and drying of the printed fabric/garment. It will consist of:

1. **Industrial Steamer:** Used for creating thermo-dynamic temperature conditions for dye fixation, transfer and sublimation and comes with a four, six and eight rolls capacity.	
2. **Hydro Extractor:** Used for post-washing of printed fabric, for sucking water/ reducing humidity content through suction tubes. It is highly useful for synthetic fabrics and wool.	
3. **Hot Water Generator:** Used for creating thermo-dynamic temperature conditions for dye fixation, transfer and sublimation.	
4. **Heated Ironer:** Heated Ironer will be used for ironing the printed fabric with heating either in steam, electric or thermic oil.	

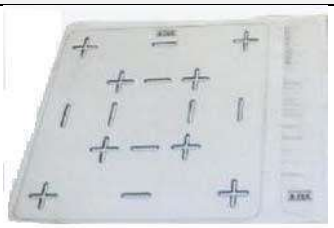
As a secondary equipment, the digital printing facility will be supported by an effluent treatment plant (ETP) for treating industrial waste water discharge during printing process for its reuse and safe disposal. The ETP will be medium sized in capacity to handle water discharge of approx. 10,000 m3/ day and for treating printing related effluents such as pastes, starch, gums, oil, mordants, acids, soaps.

4.2.2 NABL accredited fabric testing facility

The NABL accredited fabric testing facility will be equipped for conducting advanced fabric testing which will include microbial properties testing, fabric & apparel construction, fiber/chemical analysis, flammability, Oil & Water Absorbency/Repellency, dry cleaning, laundry, testing for strength, durability and moisture management. It will consist of:

1. **Washometer (for washing fastness test) ISO+ AATCC Standard:** Used for checking colour fastness of the fabric as per practical implementation of the wash care instructions used.	
2. **GSM Weighing Scale:** Used for checking the weight of the fabric per square meter.	
3. **Color Matching Cabinet:** Used for checking colour matching in different light temperatures.	

4. **GSM Smart Cutter**: Used for cutting the fabric as per the standard so that correct GSM can be derived.	
5. **Perspirometer (ISO+ AATCC Standard):** Used to check color fastness in different scenario where natural water substances are involved.	
6. **Hot air Oven:** Used for creating different temperature scenarios.	
7. **Martindel Abrasion Cum Pilling Tester** : Used to check the fibre by rubbing the instrument on surface of the fabric, if lint is formed or not.	
8. **Lab Shaker:** Used for consistently mixing the fabric into water or other chemical for long duration so that exact readings can be derived.	
9. **Beesley Balance/ Yarn count Tester:** Used to check quality of the yarn as per the standard which is approved.	

10. Crock meter Motorized Model: Used to check the colour fastness to rubbing by creating a practical scenario of pressure and consistency to find better results whether the outcome is as per standard or not.	
11. Buttonpull Tester (SS Model): Used to check the strength of button that is attached on the garment is as per the standard or not.	
12. Shrinkage Template & Scale: Used to check whether the fabric is stable or not.	
13. Hot Plate: Used to boil the specimens at certain temperatures where any particular colour standard can be checked.	
14. Pilling Assessment Viewer: Used to assess the results received from pilling tester.	
15. Projection Micro Scope (for Fibre Content): Used to identify different fibres used in the fabrics.	

16. Gray Scale: Used to assess the colour fatness results.	
17. PH Meter: Used to check the PH balance of water and the products that are processed.	
18. Tear strength: Used to check the strength of the fabric to tear pressure.	
19. Washing machine: Used to wash the fabric as per standard consumer quality level.	

The project will be beneficial both for individual units and the cluster as a whole. The setting up of the CFC is expected to generate the following benefits for the cluster units:

- Enhanced value addition for fabric and apparel produced by the cluster as the SPV members will be able to tap the expanding digitally printed fabric and apparel market space.

- Significant reduction in cost of production and higher capacity utilization by each unit, given that in the absence of in-house digital printing facilities, MSE units end up paying substantially high prices for getting the printing job work done.
- Increased productivity and reduced inefficiencies.
- Higher degree of competitiveness of cluster enterprises.
- All cluster firms shall be encouraged to use the facility since a number of micro unit entrepreneurs who could not afford to significantly contribute by way of necessary investment to the equity contribution of the project, have not been able to join the project as an SPV member but have a genuine need for using the CFC.
- The CFC will generate more job opportunities both at the cluster and individual unit level due to enhanced capacity utilization.
- The CFC is also expected to enhance the levels of cooperation and joint-action amongst cluster stakeholders and SPV members to cooperate in other areas such as joint marketing initiatives, raw material procurement and so on.
- It will also complement the efforts of state government in promoting clusters in the state and serve as a model for upgrading MSME clusters.

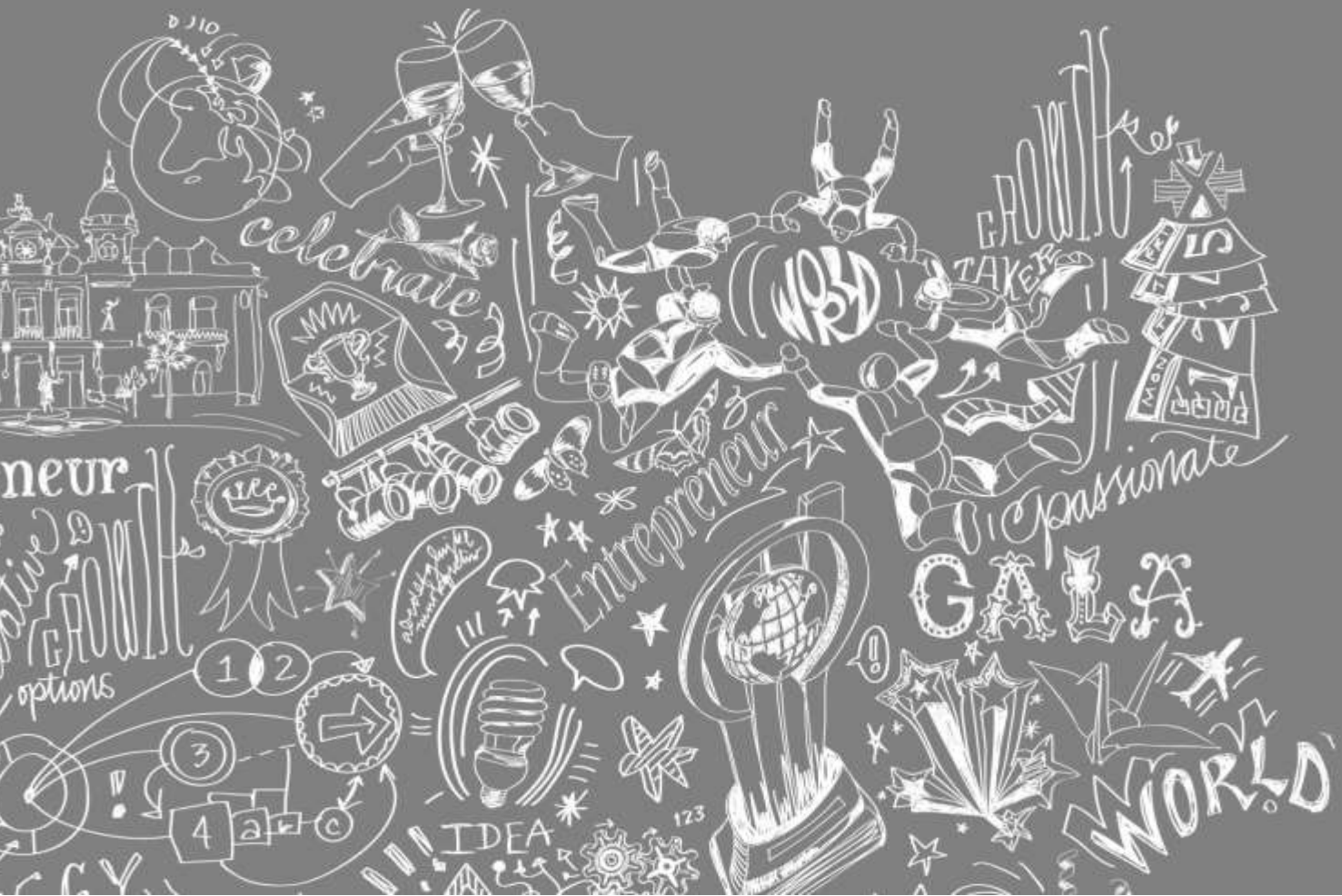
The expected outcome across areas has been detailed in Table 5:

Table 5: Expected Outcome of CFC

Area	Current Scenario	Expected Outcomes
Production Units	About 500MSEs	About 550MSEs
Competitiveness	Most of the units are unable to price their products competitively, and are priced out by other countries.	• Through efficient pricing resulting from lower cost of production, units will be able to realize higher profit margins and gain market competitiveness. • Better export competitiveness.
Employment	About 40,000	About 44,000
Technology	• Lack of in-house digital printing facility across variety of fabrics- cotton, viscose, polyester and blends, all of which are highly demanded. The existing rotary, sublimation and traditional printing facilities have challenges owing to color, design limitations, huge wastages and constrained to accept low volume orders by MSEs. Additionally, the traditional	• Digital printing facility centre (printing machinery and post printing infrastructure) with effluent treatment plant for units to use at a nominal fee. • NABL accredited fabric testing facility for conducting advanced fabric testing which will include microbial properties testing, fabric & apparel

	screen based printing, is outdated, time intensive and polluting means of printing. • Absence of in-house advanced fabric testing lab. • Outsourcing of digital printing and testing requirement for which exorbitant price is being charged by private players/labs.	construction, fibre/chemical analysis, flammability, oil & water absorbency/repellence, dry cleaning, laundry, testing for strength, durability and moisture management
Production	• Delays • High costs	• Quick Production • Lowered production costs • Competitive prices
Turn Over	About INR 700 crores (MSEs)	Will increase to about INR 770 crores in the first year, expected to subsequently increase by 10% each year

Special Purpose Vehicle (SPV) for Project Implementation



5. SPV for Project Implementation

The micro and small units in the Faridabad Research & Processing 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 **'Techview Research and Processing Private Limited'** with CINU73100HR2018PTC072740. The SPV was registered on 24-02-2018.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 1 lakh which shall be enhanced in the near future. The members are micro and small sized firms (registered units) in Faridabad involved in apparel manufacturing activities.

DIC, Faridabad and State Government both played an important role in SPV formation. The SPV was incorporated in 2018and already includes 10 members who are subscribing to the necessary equity base of the company. The SPV shall be open for new members to join and for the existing members to leave while maintaining a minimum member base of at least 10 at all times. The proposed CFC will be implemented on public-private partnership basis through an SPV under the name and style of **'Techview Research and Processing 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 garment 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 garment manufacturing, entrepreneurship development, IPR, energy efficiency, GST, barcoding, equity schemes, SME IPO process, sustainability, etc.These programs were conducted in collaboration with DIC, Apparel Export Council of India (AEPC), the State Government, and IAMSME of India, 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, Faridabad, 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 Faridabad and has also helped in validation of DSR. It has kept the State Government and the DIC Faridabad 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 apparel

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

All the 10 SPV members will be shareholders in the **Techview Research and Processing 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 garment 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	Dinesh Sharma	Weave-Tech Solutions	Plot No:48, Sector:58, Faridabad
2	Rajender Mishra	S.R.Enterprises	16/2,Mathura Road, Sarin Complex, Faridabad

The lead promoters/shareholders have several years of successful experience in apparel 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 Faridabad 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 garments in Faridabad for several years and have considerable experience in marketing and manufacturing of garments. 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.N.	Contact Person	Company Name	Contact No.	Address of Unit	UAM No	Products
1	Dinesh Sharma	Weavetech Solutions	9811580097	Plot No:48, Sector:58, Faridabad	HR03A0007684	Ladies Garments
2	Jogender Sharma	Priyanka Impex	9818261251	Plot No:18-B, DLF Phase-1,Faridabad	HR03B0007554	Men's, Ladies & Kids Garments
3	Rajender Mishra	S.R.Enterprises	9811101618	16/2,Mathura Road, Sarin Complex, Faridabad	HR03A0007627	Garments
4	Prashant Kumar	Magadh Handlooms	9350509090	Plot No:102, DLF Phase 1, Faridabad	DL08A0001203	Ladies Garments
5	Lajpat Rai Bhatia	Modern Fashion	9810225522	1C/65, NIT, Faridabad	HR03A0007714	Boys & Girls Garments
6	Laxman Rathore	Salasar Fashion	9971050599	78,DLF Phase 1, Faridabad	HR03A0002989	Men's & LadiesGarments
7	Arun Malhotra	Matangi Exim	9911446100 /9899697677	Basement part 2, 12/6, Mathura Road, Faridabad	HR03A0002506	Ladies Garments
8	Sandeep Sharma	S.K. Fabrics	9015147184	Shop No : 121, 1st Floor, Sabji Mandi, Ballabhgarh, Faridabad	HR03A0007717	Boys & Girls Garments

9	Sohan Lal Adlakha	Somang Creations	8860771583	Plot No:18-B, 2nd Floor, DLF Phase 1, Faridabad	HR03A0007778	Men's & Ladies Garments
10	Ramkishen Sharma	Tushar Enterprises	9999617226	Plot No:5, Badhkal Complex, Faridabad	HR03A0007787	Printing

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, discussion on draft Textile Policy, 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 so as 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 on the basis of 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 garment 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, store-keepers etc. to ensure effective functioning of the CFC. The proposed organizational structure of the CFC is given in figure below:

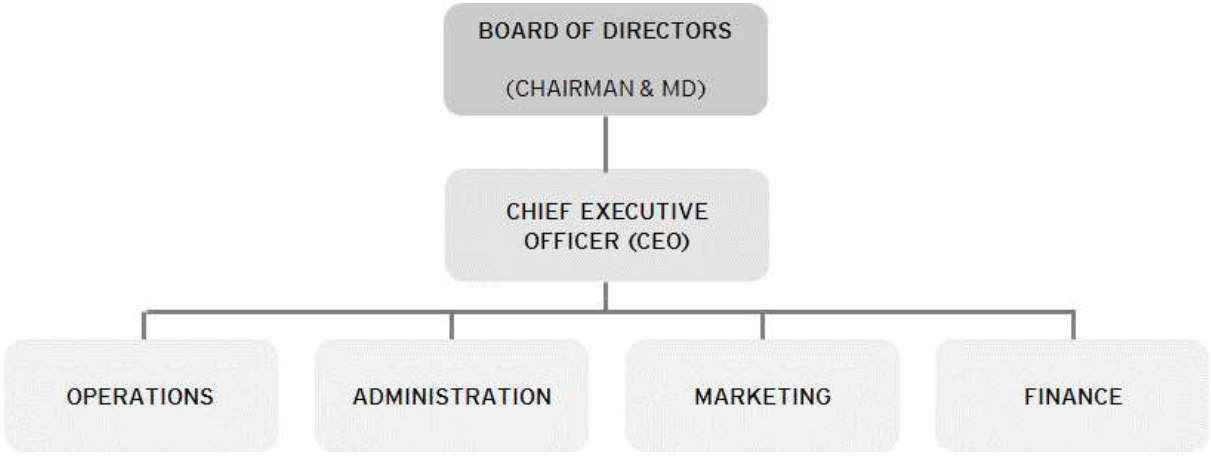


Figure 12: Organisational Structure

Project Economics

6. Project Economics

6.1 Project Cost

The total project cost is estimated at **Rs. 238.85 lakhs**. The project cost for setting up a CFC in the Faridabad textile research and processing 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 48, Sector 58 Industrial Area, Faridabad, Haryana. The available area is 4400 square feet and the monthly rent for the first year would be Rs. 0.75 lakhs, with an annual increase at the market rate (estimated at 10%).

6.1.2 Plant and Machinery

As detailed in section 4.2 (hard interventions), 35 machines have been recommended to 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 Digital Printing and Advance Fabric Testing. The total cost of plant and machineries has been estimated at INR 205.83 lakhs including taxes and installation fees, and contingency works out to INR 10.29 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 & Machinery

PLANT & MACHINERY										
S. No.	Machine Name	Qty.	Basic Price	Total Basic Price	Custom Duty as Applicable	GST as Applicable	Total Price	Supplier Options	Model / Specifications	Power Requirement (kW)
A	Primary Machinery									
1	Digital Printing Facility									
1.a	Ink-Jet Printing Machine	1	114	114.00	6.84	21.75	142.59	Range-O-Tech P. Ltd.	MS-Jpevo-Printing width 180 cm complete with accessories	11.00
2	Post Digital Printing Facility									
2.a	Industrial Steamer-300 m with loading/unloading trolley	1	8.02	8.02	-	1.44	9.46	Fabcare Garments and Textile Machinery Pvt. Ltd	Model FPS 300 (300 mtr)	
2.b	Hydro Extractor	1	1.46	1.46	-	0.26	1.72		Model HDS 25 (25 kg capacity)	
2.c	Hot Water Generator	2	2.96	5.92	-	1.06	6.98		Model HWD 120 (120 ltr capacity)	
2.d	Flatwork Ironer Machine	1	5.76	5.76	-	1.04	6.79		Model FIS 14 (single roller 14" dia x 72" length, steam heated)	15.00
3	Testing Facility									
3.a	Spectra Vision with 5 lights	1	0.41	0.41	-	0.07	0.49	Paramount Instruments P. Ltd.	Color matching with Rocker switches, 5 lights	
3.b	Quick cut (for GSM)	1	0.16	0.16	-	0.03	0.19		Round cutter with wheel blades	
3.c	GSM Scale Digital Model	1	0.27	0.27	-	0.05	0.32		Digital GSM Balance i2 (300 gms, 0.01 gms)	2.00

3.d	Washing Fastness Tester	1	1.96	1.96	-	0.35	2.31		Digiwash i2 (ISO & AATC) as per European & American Standards	
3.e	Perspirometer	1	0.53	0.53	-	0.09	0.62		Perspirometer i5 (ISO) as per European Standards	
3.f	Dead Weight (AATCC)	1	0.06	0.06	-	0.01	0.07		-	
3.g	Hot Air Oven	1	0.84	0.84	-	0.15	0.99		Hot Air Oven i2, with German technology	
3.h	Piling & Abrasion Machine	1	2.98	2.98	-	0.54	3.52		Abrasion Master i4, Next Gen. Martindale - II	
3.i	Advanced Shaking Machine	1	0.60	0.60	-	0.11	0.70		ShakeMASTER i5 with Controlled Shaking Operation	
3.j	Yarn Count Tester	1	0.23	0.23	-	0.04	0.27		CountMASTER i5 (manual)	
3.k	crock Master	1	0.75	0.75	-	0.13	0.88		motorized	
3.l	Shrink Master	1	0.24	0.24	-	0.04	0.28		i4 (ISO), Shrinkage Template and Scale as per European Standard	
3.m	Buttonpull Master	1	1.38	1.38	-	0.25	1.63		To Check Button / Snap Pull Strength of Kids Garments	
3.n	Q-Thermostir	1	0.22	0.22	-	0.04	0.26		Special Unit for Heating & Stirring Simultaneously	
3.o	Pilling Master	1	0.76	0.76	-	0.14	0.90		To check the Pilling of Fabrics (2 station)	
3.p	Projection Microscope	1	1.09	1.09	-	0.20	1.29		Specialized Projection Microscope for the Textile Industry	

3.q	Grading Scales for Staining (as per ISO)	1	0.19	0.19	-	0.03	0.22		-	
3.r	Grading Scales for Change in Color (as per ISO)	1	0.19	0.19	-	0.03	0.22		-	
3.s	Grading Scales for Staining (as per AATC)	1	0.33	0.33	-	0.06	0.39		-	
3.t	Grading Scales for Change in Color (as per AATC)	1	0.33	0.33	-	0.06	0.39		-	
3.u	Pilling Photographs ASTM	1	0.19	0.19	-	0.03	0.22		(5 Photographs duly Framed)	
3.v	Pilling Photographs IWS (woven)	1	0.28	0.28	-	0.05	0.33		(Set of 20 Photographs)	
3.w	Pilling Photographs IWS (knitted)	1	0.28	0.28	-	0.05	0.33		(Set of 20 Photographs)	
	Sub Total (A)	**29**	**146.42**	**149.37**	**6.84**	**28.12**	**184.33**			**28.00**
B	**Secondary Machinery**									
1	Effluent Treatment Plant	1	7.50	7.50	-	1.35	8.85	Betterworld Enviro Consultants		3.00
2	Genset (62.5 KVA)	1	4.42	4.42	-	0.80	5.22	Jakson & Company	62.5 kVA	
3	UPS (30KVA)	1	3.30	3.30	-	0.59	3.89	Enventa Power Technologies P. Ltd.		
4	Air Conditioners	3	1.00	3.00	-	0.54	3.54		4 ton each	12.00
				-	-	-	-			
	Sub Total (B)	**6**	**16.22**	**18.22**	**-**	**3.28**	**21.50**			**15.00**
	Grand Total (A+B)	**35**	**162.64**	**167.59**	**6.84**	**31.40**	**205.83**			**43.00**

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. 3.25 Lakhs. Details are provided in the table below.

Table 9: Miscellaneous Fixed Assets

MISCELLANEOUS FIXED ASSETS		
S. No.	Particulars	Amount (Rs. Lakh)
1	Office computer-5 nos.	2.00
2	Furniture (tables & chairs)	0.50
3	Office items and allied items	0.25
4	Power back up (UPS-5)	0.50
	Total	3.25

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. 8.05 Lakhs (details provided in the table below).

Table 10: Preliminary and Pre-Operative Expenses

PRELIMINARY & PRE OPERATIVE EXPENSES		
S. No.	Particulars	Amount (Rs. Lakh)
1	Company Registration Charges	0.50
2	Tender forms & tendering cost	1.00
3	Project Report Preparation (DSR & DPR)	Nil
4	Project Management Charges	Nil
5	Travelling Cost	0.25
6	Machine testing cost	0.25
7	Pre-operative salaries	0.30
8	Cost of Refurbishment, electricity fittings, plumbing	0.50
9	Lease deed registration charges	2.15
10	Security Deposit (Rent)	1.50
11	Bank Appraisal Charges	0.60
12	NABL Accreditation Charges	1.00
	Total	8.05

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. 10.29 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. 44.42 lakh. The working capital loan, if required, will be availed from a local bank and is calculated at Rs. 33 lakh with margin money requirement of Rs. 11.42 Lakh (minimum 25% of working capital requirement as margin). The working capital requirement has been calculated based on requirement of one month of operational expenses and 3 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

(Rs in Lakh)

PROJECT COST				
S. No.	Particulars	Total Project Cost	Amount as per Guidelines	Remarks
1	**Land & Building**			
	a. Land Value	0.00	0.00	Eligible for grant-in-aid (Max 25% of total of L&B, P&M, and Misc. F.A.)
	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**			
	a. Primary-Indigenous	41.74	200.00	Eligible for grant-in-aid
	b. Primary-Imports	142.59		
	c. Secondary Machines	21.50		
	Sub Total (B)	**205.83**	**200.00**	
3	**Miscellaneous fixed assets (C)**	**3.25**	**0.00**	Not eligible for grant-in-aid
4	**Preliminary & Preoperative Expenses (D)**	**8.05**	**0.00**	
5	**Contingency**			
	a. Building @ 2%	0.00	0.00	

	b. Plant & Machinery @ 5%	10.29	0.00	
	Sub Total (E)	**10.29**	**0.00**	
6	**Margin money for working capital @ 75% C.U. (F)**	**11.42**	**0.00**	
	Grand Total (A+B+C+D+E+F)	**238.85**	**200.00**	

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 200 lakhs. SPV will be required to contribute 10% of project cost for project cost up to Rs. 200 lakh. Hence, the SPV members have proposed to contribute the entire amount beyond Rs. 180 lakhs, taking their overall contribution to about 25% of the total project cost. The total contribution of SPV members will amount to Rs. 58.85 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	58.85
	Total	**238.85**

Detailed Means Of Finance							
S. No.	**Source of finance**	**Project cost up to INR 200 lakh**		**Project cost over INR 200 lakh**			**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 (Govt. of Haryana)	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%	38.85	58.85	
	Total	**100%**	**200.00**	**100%**	**38.85**	**238.85**	

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. 58.85 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 ink, diesel, water, oil and chemicals, etc.

Table 13: Consumables

CONSUMABLES REQUIRED FOR MACHINES													
S. No.	**Machine Name**	**No. Of Machines**	**Particulars**	**Amount per day (Rs.)**	**No. Of working days per month**	**Total monthly Amt (Rs.)**	**Consumables required annually (Rs. In Lakh)**	**Amount (in Rs. Lakh)**	**Amount (in Rs. Lakh)**	**Amount (in Rs. Lakh)**	**Amount (in Rs. Lakh)**	**Amount (in Rs. Lakh)**	**Amount (in Rs. Lakh)**
								Year 1	Year 2	Year 3	Year 4	Year 5	Year 6-10
								75%	80%	85%	90%	95%	100%
A.	**Primary Machines**												
1	**Digital Printing Facility**												
1.a	Ink-Jet Printing Machine	1	Ink (450 l/day @ Rs. 30/l)	13500	25	3.38	40.50	30.38	32.40	34.43	36.45	38.48	40.50
2	**Post Digital Printing Facility**												
2.a	Industrial Steamer-300 m with loading/unloading trolley	1	Diesel (50L/day @ Rs.64/L) Water (55L/day @ Rs. 1/L)	3255	25	0.81	9.77	7.32	7.81	8.30	8.79	9.28	9.77
2.b	Hydro Extractor	1											
2.c	Hot Water Generator	1											

2.d	Flatwork Ironer Machine	1											
3	**Testing Facility**												
3.a	Washing Fastness Tester	1	Water (40 L/day @ Rs. 1/L)	40	25	0.01	0.12	0.09	0.10	0.10	0.11	0.11	0.12
B	**Secondary Machinery**												
1	Effluent Treatment Plant	1	Oil, Grease, Hydraulic Oil, Chemicals			0.03	0.36	0.27	0.29	0.31	0.32	0.34	0.36
2	GenSet (62.5 KVA)	1	Diesel			0.02	0.24	0.18	0.19	0.20	0.22	0.23	0.24
	Total Consumables						50.99	38.24	40.79	43.34	45.89	48.44	50.99
	Consumables per month						4.25	3.19	3.40	3.61	3.82	4.04	4.25

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 16 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. 21.38 lakh and for indirect at 5.68 lakhs. The total expense on manpower is projected at Rs. 2.26 lakh per month or Rs. 27.06 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)

Category	No. of Manpower Required	Salary per month per person (INR)	Total Salary Per Month (INR)	Total salary & wages per Year (INR lakh)
DIRECT MANPOWER				
Digital Printing Process				
Supervisor	1	20,000.00	20,000.00	2.40
Machine Operator	1	15,000.00	15,000.00	1.80
Computer Operator	1	15,000.00	15,000.00	1.80
CAD operator	1	15,000.00	15,000.00	1.80
Helper	1	8,500.00	8,500.00	1.02
Post Digital Printing Process				
Operator	2	12,000.00	24,000.00	2.88
Washing Master	1	15,000.00	15,000.00	1.80
Helper	1	8,500.00	8,500.00	1.02
Testing Facility				
Lab In charge	1	15,000.00	15,000.00	1.80
Helper	1	8,500.00	8,500.00	1.02

Office Boy	1	8,500.00	8,500.00	1.02
Security Guard	1	9,000.00	9,000.00	1.08
	13	**1,50,000.00**	**1,62,000.00**	**19.44**
Add: Perquisites/Fringe Benefits @ 10%				**1.94**
Total				**21.38**

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

Category	No. of Manpower Required	Salary per month per person (INR)	Total Salary Per Month (INR)	Total salary & wages per Year (INR lakh)
INDIRECT MANPOWER				
Cluster Development Executive (CDE)	1	22,000.00	22,000.00	2.64
Accountant	1	12,000.00	12,000.00	1.44
Security Guard	1	9,000.00	9,000.00	1.08
	3	**43,000.00**	**43,000.00**	**5.16**
Add: Perquisites/Fringe Benefits @ 10%				**0.52**
Total				**5.68**

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 44.55 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

UTILITIES			
S. No.	Machine & Equipment	Power Requirement (kW)/ Connected Load	Total power requirement (60% of drawn power) kWh
1	**Digital Printing Facility**	11.00	6.60
2	**Post Digital Printing Facility**	12.00	7.20
3	**Testing Facility**	2.00	1.20

4	**Secondary Equipment**		
4.a	Effluent Treatment Plant	3.00	1.80
4.b	Air Conditioner	7.50	4.50
5	**Administrative Facility**	5.00	3.00
	Total Connected Load for CFC	**40.50**	**24.30**
	Buffer Connected Load (10% of Total Connected Load)	**4.05**	
	Total	**44.55**	

The power requirement for operation of core machinery and equipment and administrative facilities is 40.50 kW. 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 44.55 kW.

Fixed charges for connection of 44.55 kW @ Rs. 173 per kW equals Rs. 7,707/- per month and monthly consumption charge @ Rs. 9 per unit for 4860 units amounts to Rs. 43,740/- 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

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	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Variable	3.94	4.20	4.46	4.72	4.99	5.25	5.25	5.25	5.25	5.25
Total	**4.86**	**5.12**	**5.39**	**5.65**	**5.91**	**6.17**	**6.17**	**6.17**	**6.17**	**6.17**
Per month	**0.41**	**0.43**	**0.45**	**0.47**	**0.49**	**0.51**	**0.51**	**0.51**	**0.51**	**0.51**

6.3.4 Annual Repairs and Maintenance Expenses

The annual repairs and maintenance expenses have been estimated to be Rs. 6.67 lakh. The details are presented in the table below:

Table 18: Annual Repairs and Maintenance Expenditure

REPAIR & MAINTENANCE	
ANNUAL REPAIR AND MAINTENANCE EXPENSES	
Repair & Maintenance of Building	0.50
Repair & Maintenance of Plant and Machineries @ 3%	6.17

Total	**6.67**

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. 1.20 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. 10.29 Lakh)	1.08
Miscellaneous Expenses (Stationery, communication, travelling, and other misc. overheads)	1.20
Total	**2.28**

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 three 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 25% 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. 44.42 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. 47.35 lakh. The corresponding margin money for working capital requirement at 75% & 80% capacity utilization in the first 2 years amounts to Rs. 11.42 lakh and Rs. 14.35 lakh respectively, and the corresponding loan amounts to Rs. 33 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	3.19	3.40	3.61	3.82	4.04	4.25	4.25	4.25	4.25	4.25
2	Utilities (Power)	1 month	0.41	0.43	0.45	0.47	0.49	0.51	0.51	0.51	0.51	0.51
3	Working Expenses (Manpower)	1 month	1.81	1.90	1.99	2.08	2.17	2.26	2.26	2.26	2.26	2.26
4	Sundry Debtors (Sales Value)	3 months	39.02	41.62	44.22	46.83	49.43	52.03	52.03	52.03	52.03	52.03
5	Working capital (Total expenses)		44.42	47.35	50.27	53.20	56.12	59.05	59.05	59.05	59.05	59.05
6	Working Capital Margin		11.42	14.35	17.27	20.20	23.12	26.05	26.05	26.05	26.05	26.05
7	Working Capital Loan		33.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00
8	Interest on Working capital loan @11% p.a.		3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63
9	Working Cap Margin %age		25.71 %	30.30 %	34.36 %	37.97 %	41.20 %	44.11 %	44.11 %	44.11 %	44.11 %	44.11%

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

(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
Land										
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
Building and Civilwork										
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
Plant & Machinery										
Opening Balance	216.12	183.70	156.15	132.73	112.82	95.89	81.51	69.28	58.89	50.06
Less: Depreciation @ 15%	32.42	27.56	23.42	19.91	16.92	14.38	12.23	10.39	8.83	7.51
Closing Balance	183.70	156.15	132.73	112.82	95.89	81.51	69.28	58.89	50.06	42.55
Computers										

Opening Balance	2.00	0.80	0.32	0.13	0.05	0.02	0.01	0.00	0.00	0.00
Less: Depreciation @ 60%	1.20	0.48	0.19	0.08	0.03	0.01	0.00	0.00	0.00	0.00
Closing Balance	0.80	0.32	0.13	0.05	0.02	0.01	0.00	0.00	0.00	0.00
Furniture										
Opening Balance	0.50	0.45	0.41	0.36	0.33	0.30	0.27	0.24	0.22	0.19
Less: Depreciation @ 10%	0.05	0.05	0.04	0.04	0.03	0.03	0.03	0.02	0.02	0.02
Closing Balance	0.45	0.41	0.36	0.33	0.30	0.27	0.24	0.22	0.19	0.17
Other Misc. Fixed Assets										
Opening Balance	0.75	0.64	0.57	0.52	0.46	0.42	0.38	0.34	0.30	0.27
Less: Depreciation @ 15%	0.11	0.06	0.06	0.05	0.05	0.04	0.04	0.03	0.03	0.03
Closing Balance	0.64	0.57	0.52	0.46	0.42	0.38	0.34	0.30	0.27	0.25
Total Depreciation	**33.78**	**28.14**	**23.71**	**20.07**	**17.03**	**14.47**	**12.30**	**10.45**	**8.89**	**7.56**
Depreciated value	**185.59**	**157.45**	**133.74**	**113.66**	**96.63**	**82.16**	**69.87**	**59.41**	**50.53**	**42.97**

6.6 Income/Revenue estimates

The CFC is expected to generate revenue by way of user charges that shall be levied based upon the number of meters of cloth printed as well as number of tests conducted. 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 Faridabad shall be charged a premium for availing the CFC services. The major income sources for the CFC are envisaged by the way of providing digital printing (on both fabric and garment) and NABL accredited advance fabric testing facilities.

The user charges have been estimated based upon the operational expenses of the CFC and the prevalent market rates in Faridabad. 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 basic and specialized digital printing and fabric testing.

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 an absolutely viable project.

The estimated user charges are presented in table below:

Table 22: User Charges for Machinery

REVENUE GENERATION AT CFC														
S. No.	Machine Name	No. Of Machines	Qty. per day (output in metres/ no. of tests)	User Charge per metre/test (Rs.)	Revenue per day (Rs. lakh)	No. Of Working days per month	Revenue per month (Rs. lakh)	Annual Revenue generation (in Rs. lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)	Amount in Rs. Lakh)
									Year 1	Year 2	Year 3	Year 4	Year 5	Year 6-10
									75%	80%	85%	90%	95%	100%
1	Digital Printing Facility with Post Digital Printing Equipment	1	650	100	0.65	25	16.25	195.00	146.25	156.00	165.75	175.50	185.25	195.00
2	Testing Facility													
2.a	Quick cut (for GSM)	1	5	200	0.01	25	0.25	3.00	2.25	2.40	2.55	2.70	2.85	3.00
2.b	GSM Scale Digital Model	1												
2.c	Washing Fastness Tester	1	5	250	0.01	12	0.15	1.80	1.35	1.44	1.53	1.62	1.71	1.80
2.d	Perspirometer	1	5	200	0.01	12	0.12	1.44	1.08	1.15	1.22	1.30	1.37	1.44

2.e	Dead Weight (AATCC)	1												
2.f	Hot Air Oven	1												
2.g	Piling & Abrasion Machine	1	1	500	0.01	25	0.13	1.50	1.13	1.20	1.28	1.35	1.43	1.50
2.h	Yarn Count Tester	1	2	150	0.00	12	0.04	0.43	0.32	0.35	0.37	0.39	0.41	0.43
2.i	Crock Master	1	2	175	0.00	12	0.04	0.50	0.38	0.40	0.43	0.45	0.48	0.50
2.j	Shrink Master	1	2	175	0.00	12	0.04	0.50	0.38	0.40	0.43	0.45	0.48	0.50
2.k	Button pull Master	1	2	325	0.01	12	0.08	0.94	0.70	0.75	0.80	0.84	0.89	0.94
2.l	Pilling Master	1	2	250	0.01	25	0.13	1.50	1.13	1.20	1.28	1.35	1.43	1.50
2.m	Projection Microscope	1	2	250	0.01	25	0.13	1.50	1.13	1.20	1.28	1.35	1.43	1.50
	Total							**208.12**	**156.09**	**166.49**	**176.90**	**187.30**	**197.71**	**208.12**

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. 156.09 lakhs for the first year of operation at an operating capacity of 75%. For projection purposes, operating capacity of 75% is considered during first year, 80% during second year and 100% capacity from 6th year onwards.

The income tax rates have been considered depending upon the announcement made in the Budget 2017 and the tax applicable to a Pvt. Limited Company. Income tax has been considered at 25.75 per cent on taxable profit inclusive of all the tax components. The incidence of tax ranges from INR 9.26 lakhs in the first year to INR 21.47 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 shift	1	1	1	1	1	1	1	1	1	1
Capacity Utilisation in %	**75%**	**80%**	**85%**	**90%**	**95%**	**100%**	**100%**	**100%**	**100%**	**100%**
A. Income										
(User/ Service Charge)	**156.09**	**166.49**	**176.90**	**187.30**	**197.71**	**208.12**	**208.12**	**208.12**	**208.12**	**208.12**
B. Cost of Production :										
1. Utilities Power (Fixed + Variable)	4.86	5.12	5.39	5.65	5.91	6.17	6.17	6.17	6.17	6.17
2. Direct labour and wages	16.04	17.11	18.18	19.25	20.31	21.38	21.38	21.38	21.38	21.38

3. Consumables	38.24	40.79	43.34	45.89	48.44	50.99	50.99	50.99	50.99	50.99
4. Repair and Maintenance	5.01	5.34	5.67	6.01	6.34	6.67	6.67	6.67	6.67	6.67
5. Depreciation	33.78	28.14	23.71	20.07	17.03	14.47	12.30	10.45	8.89	7.56
Total Cost of production	**97.93**	**96.50**	**96.29**	**96.86**	**98.04**	**99.69**	**97.51**	**95.67**	**94.10**	**92.77**
C. Administrative expenses :										
6. Manpower (Indirect)	5.68	5.68	5.68	5.68	5.68	5.68	5.68	5.68	5.68	5.68
7. Rent	9.00	9.90	10.89	11.98	13.18	14.49	15.94	17.54	19.29	21.22
8. Insurance	1.08	0.93	0.79	0.67	0.57	0.48	0.41	0.35	0.30	0.25
9. Misc Expense	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Total Administrative Expenses	**16.96**	**17.70**	**18.55**	**19.52**	**20.62**	**21.85**	**23.23**	**24.76**	**26.47**	**28.35**
D. Financial expenses :										
10. Interest on Working capital loan @ 11% p.a.	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63
Total Financial Expenses	**3.63**	**3.63**	**3.63**	**3.63**	**3.63**	**3.63**	**3.63**	**3.63**	**3.63**	**3.63**
E. Total Expenses B+C+D	**118.51**	**117.84**	**118.47**	**120.02**	**122.29**	**125.17**	**124.37**	**124.06**	**124.20**	**124.75**
F. Profit A - E	**37.58**	**48.66**	**58.43**	**67.29**	**75.42**	**82.95**	**83.74**	**84.05**	**83.92**	**83.36**
G. P&P Expenses written off	1.61	1.61	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00
H. Income before Tax (F-G)	**35.96**	**47.05**	**56.82**	**65.68**	**73.81**	**82.95**	**83.74**	**84.05**	**83.92**	**83.36**
I. Adjustment of Loss	-	-	-	-	-	-	-	-	-	-
J. Income Tax (@ 25.75% for company)	9.26	12.11	14.63	16.91	19.01	21.36	21.56	21.64	21.61	21.47
K. Net Profit /Loss for the year	**26.70**	**34.93**	**42.19**	**48.77**	**54.81**	**61.59**	**62.18**	**62.41**	**62.31**	**61.90**
L. Cumulative Surplus	**26.70**	**61.63**	**103.82**	**152.59**	**207.40**	**268.98**	**331.16**	**393.57**	**455.88**	**517.78**

As evident from the table above, the project is financially viable. A cumulative surplus of about Rs 517.78 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

CASH FLOW STATEMENT (Rs in Lakh)											
Particulars	Construction Period	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
A. Source Funds :											
1. Cash Accruals (Net Profit + Interest Paid)		41.21	52.29	62.06	70.92	79.05	86.58	87.37	87.68	87.55	86.99
2. Increase in capital	58.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3. Depreciation		33.78	28.14	23.71	20.07	17.03	14.47	12.30	10.45	8.89	7.56
4. Increase in WC Loan		33.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Total Sources of Funds	**238.85**	**107.99**	**80.43**	**85.77**	**90.99**	**96.09**	**101.04**	**99.67**	**98.13**	**96.43**	**94.55**
B. Use of Funds :											
1. P&P Expenses	8.05	-	-	-	-	-	-	-	-	-	-
2. Increase in fixed assets	219.37	-	-	-	-	-	-	-	-	-	-
3. Increase in loan & advances		35.00	7.00	8.40	10.08	12.10	14.52	17.42	20.90	25.08	30.10
4. Increase in Sundry Debtors		39.02	2.60	2.60	2.60	2.60	2.60	0.00	0.00	0.00	0.00
5. Increase in Stock of consumables		3.19	0.21	0.21	0.21	0.21	0.21	0.00	0.00	0.00	0.00
6. Interest		3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63
7. Taxation		8.80	11.97	14.51	16.80	18.90	21.24	21.55	21.64	21.61	21.47
Total Use of Funds	**227.42**	**89.64**	**25.42**	**29.35**	**33.32**	**37.44**	**42.20**	**42.60**	**46.17**	**50.32**	**55.20**

C. Net Surplus (A -B)	11.42	18.35	55.01	56.42	57.67	58.64	58.84	57.07	51.96	46.11	39.35
D. Cumulative Surplus	11.42	29.77	84.79	141.21	198.88	257.52	316.37	373.43	425.40	471.51	510.86

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.

6.9 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 impl. Period**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
1. Fixed Assets :											
Gross Block	219.37	219.37	185.59	157.45	133.74	113.66	96.63	82.16	69.87	59.41	50.53
Less : Depreciation (WDV)		33.78	28.14	23.71	20.07	17.03	14.47	12.30	10.45	8.89	7.56
Net Block	219.37	185.59	157.45	133.74	113.66	96.63	82.16	69.87	59.41	50.53	42.97
Total Fixed Assets (A)	**219.37**	**185.59**	**157.45**	**133.74**	**113.66**	**96.63**	**82.16**	**69.87**	**59.41**	**50.53**	**42.97**
2. Current Assets :											
Cash & bank Surplus (B.F)	11.42	29.77	84.79	141.21	198.88	257.52	316.37	373.43	425.40	471.51	510.86
Sundry Debtors		39.02	41.62	44.22	46.83	49.43	52.03	52.03	52.03	52.03	52.03

Advance Tax		8.80	11.51	13.90	16.07	18.06	20.29	20.49	20.56	20.53	20.39
Stock of Consumables		3.19	3.40	3.61	3.82	4.04	4.25	4.25	4.25	4.25	4.25
Loans & Advances		35.00	42.00	50.40	60.48	72.58	87.09	104.51	125.41	150.49	180.59
P&P Exp	8.05	6.44	4.83	3.22	1.61	0.00	0.00	0.00	0.00	0.00	0.00
Total current Assets (B)	**19.47**	**122.22**	**188.15**	**256.57**	**327.69**	**401.62**	**480.03**	**554.71**	**627.65**	**698.81**	**768.12**
Total Assets (A+B)	**238.85**	**307.81**	**345.60**	**390.30**	**441.35**	**498.25**	**562.19**	**624.57**	**687.06**	**749.33**	**811.09**
3. Current Liabilities :											
Working Capital Loan		33.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00
Provision for Taxation		9.26	12.11	14.63	16.91	19.01	21.36	21.56	21.64	21.61	21.47
Total Current Liabilities (C)		**42.26**	**45.11**	**47.63**	**49.91**	**52.01**	**54.36**	**54.56**	**54.64**	**54.61**	**54.47**
4. Fixed Liabilities											
Shareholders' Contribution	58.85	58.85	58.85	58.85	58.85	58.85	58.85	58.85	58.85	58.85	58.85
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		26.70	61.63	103.82	152.59	207.40	268.98	331.16	393.57	455.88	517.78
Total Fixed Liabilities (D)	**238.85**	**265.55**	**300.48**	**342.67**	**391.44**	**446.24**	**507.83**	**570.01**	**632.42**	**694.73**	**756.62**
Total Liabilities (C+D)	**238.85**	**307.81**	**345.60**	**390.30**	**441.35**	**498.25**	**562.19**	**624.57**	**687.06**	**749.33**	**811.09**

6.10 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%
A. Total Earning by way of user charges	**156.09**	**166.49**	**176.90**	**187.30**	**197.71**	**208.12**	**208.12**	**208.12**	**208.12**	**208.12**
B. Variable costs										
Consumables	38.24	40.79	43.34	45.89	48.44	50.99	50.99	50.99	50.99	50.99
Utilities (power- variable charge)	3.94	4.20	4.46	4.72	4.99	5.25	5.25	5.25	5.25	5.25
Interest on WC Loan	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63
Repair & Maintenance	5.01	5.34	5.67	6.01	6.34	6.67	6.67	6.67	6.67	6.67
Manpower (Direct)	16.04	17.11	18.18	19.25	20.31	21.38	21.38	21.38	21.38	21.38
Misc. Expenditure (90% Variable)	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Total Variable Cost (B)	**66.85**	**71.06**	**75.28**	**79.49**	**83.71**	**87.92**	**87.92**	**87.92**	**87.92**	**87.92**
C. Contribution (A-B)	**89.24**	**95.43**	**101.62**	**107.81**	**114.00**	**120.19**	**120.19**	**120.19**	**120.19**	**120.19**
D. Fixed Overheads (Cash)										
Manpower (Indirect)	5.68	5.68	5.68	5.68	5.68	5.68	5.68	5.68	5.68	5.68

Utilities (Power - fixed charges)	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Rent	9.00	9.90	10.89	11.98	13.18	14.49	15.94	17.54	19.29	21.22
Insurance	1.08	0.93	0.79	0.67	0.57	0.48	0.41	0.35	0.30	0.25
Misc. Expenditure (10% Fixed)	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Sub-total (D)	**16.80**	**17.55**	**18.40**	**19.37**	**20.47**	**21.70**	**23.08**	**24.61**	**26.31**	**28.20**
E. Fixed Overheads (Non-cash)										
Depreciation	33.78	28.14	23.71	20.07	17.03	14.47	12.30	10.45	8.89	7.56
Preliminary & Pre-operative expenses written off	1.61	1.61	1.61	1.61	1.61	0.00	0.00	0.00	0.00	0.00
Sub-total (E)	**35.39**	**29.75**	**25.32**	**21.68**	**18.64**	**14.47**	**12.30**	**10.45**	**8.89**	**7.56**
F. Total Fixed Overheads (D+E)	**52.19**	**47.30**	**43.72**	**41.05**	**39.11**	**36.17**	**35.37**	**35.06**	**35.20**	**35.75**
Break even point (F/C)	**58.49 %**	**49.57 %**	**43.02 %**	**38.08 %**	**34.31 %**	**30.09 %**	**29.43 %**	**29.17 %**	**29.28 %**	**29.74%**

Book break-even is achieved at 58.49% (of operational capacity at 75 per cent) and at 49.57% (of operational capacity at 80 percent). The operation of the CFC is expected to break-even and realizes profit from 1st year of operations. Therefore, very low risk is involved in the project.

6.11 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%)	58.49%
2	Av. ROCE (PAT/CE)	30.72%
3	Internal Rate of Return (IRR)	25.02%
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. 181.51 lacs) at a conservative project life of 10 years
5	Payback period	4.79 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	AVERAGE
ROCE	16.58%	21.22%	25.31%	29.02%	32.42%	36.25%	36.58%	36.71%	36.65%	36.42%	30.72%

The average value of ROCE (with grant-in-aid) is 30.72%. 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. 181.51. 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 25.02% (at a conservative project life of 10 years). This substantiates the viability of the project.

6.12 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.

6.13 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

SENSTIVITY 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%)	58.49%	64.09%	70.89%	79.29%
2	Internal Rate of Return (IRR)	25.02%	22.03%	18.86%	15.46%
3	Av. ROCE (PAT/CE) (with Grant)	30.72%	26.91%	23.03%	19.09%
4	Net Present Value (at a discount rate of 10 per cent) - incorporating viability gap funding (grant) GoH	181.51	140.66	99.81	58.96

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.

6.14 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. 238.85 Lakh on the basis of estimates and quotations.

2. To finance the project, a total of Rs. 238.85 Lakhs is required. The financing will consist of grant from Government of Haryana and contribution by SPV.

In the financial projections and analysis, year 2018 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 2018.

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 an eight 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 6th 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. 173 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 3 months of calculation of Working Capital Limits.

15. Provision for income tax has been made @ 25% (excluding cess).

16. Profitability estimates in terms of ROCE, NPV, and IRR are computed considering operating results for first 10 years of operation.

Project Implementation and Monitoring

7. Project Implementation and Monitoring

7.1 Envisaged Implementation Framework

1. **Time frame:** 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.

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							

Activity/Month	1	2	3	4	5	6	7
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 10 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 Faridabad district. A floor of a building of 4400square 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 Faridabad Textile Research and Processing Cluster, a Project Management Committee (PMC) comprising the Joint Director, DIC, Faridabad and representatives of SPV, Corporation Bank, Kurukshetra University 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 Faridabad.

Conclusion

8. Conclusion

There is a high demand for apparel manufacturing with attractive digital printing and NABL accredited testing facility in both domestic and international markets. Faridabad, as one of the leading apparels hub of the country, is a leading market for digitally printed apparels, supplying to some of the leading global brands such as Walmart, Mango etc. However, the 500 apparel manufacturing MSEs in Faridabad are currently facing a major technology handicap in terms of the absence of digital printing equipment that is conducive for all fabrics as well an NABL accredited advance testing facility. This has resulted in units having to approach private service providers, manifesting further into higher costs of manufacturing for the units, thereby reducing their competitiveness. This challenge can be overcome by setting up a CFC with these facilities, which can be availed at lower costs. The micro and small garment units of Faridabad are dependent on external service providers for availing digital printing services, as a result of which they often face increased costs and production inefficiencies. Job-work providers often do not accept low-volume orders from SMEs, or charge high prices for this. MSMEs are not the priority customers for the job-work providers, and thus they often delay MSMEs orders if they receive bulk orders from larger players. As a result they are unable to compete with the leading domestic and international players. Similar, is the case for outsourcing testing requirement to private labs within the area.

Against this backdrop, the Faridabad Textile Research & Processing Cluster requires support for setting up NABL accredited testing and digital printing facility. This will reduce their costs, increase efficiency and enable them to be more competitive in the market. Due to this, the following have been proposed in the CFC as primary machinery:

- Digital Printing Facility
  - Ink Jet digital textile printing machine
  - Post digital printing machine
- NABL Accredited Advance Testing Facility

The total project cost (including plant/machinery and building) is estimated to be INR 246 lakhs. The project shall be implemented by the Techview Research & Processing 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 66 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


celebrate
Entrepreneur
GROWTH
TAKE
GALA
WORLD
IDEA
options

9. Annexures

1. DSR Approval Letter from Department of Industries & Commerce, Government of Haryana

From

The Director of Industries & Commerce, Haryana,
Chandigarh.

To

M/s Ernst & Young LLP,
SCO-166-167, 1st Floor, Sector 9-C, Madhya Marg,
Chandigarh.
Email :- upinder.dhingra@in.ey.com

Memo No.Mini Cluster/Textile Research & Processing/Faridabad/1296-A
Dated:- 2.2.2018

Subject: **Approval of Diagnostic Study Report (DSR) and directions for preparation of Detailed Project Report (DPR) of Faridabad Textile Research and Processing Cluster.**

Kindly refer to the subject cited above.

It is informed that the Diagnostic Study Report (DSR) of Faridabad Textile Research and Processing Cluster has been approved by Director of Industries and Commerce under the state mini cluster scheme.

Therefore, EY LLP is directed to initiate steps for preparation of Detailed Project Report (DPR) of the cluster.

(R.C Dahra)
Consultant (Cluster)
for Director of Industries & Commerce, Haryana

Endst.No.Mini Cluster/Textile Research & Processing/Faridabad/1297-A Dated:- 2.2.2018

A copy of the above is forwarded to

1. SPV, Faridabad Textile Research and Processing Cluster for Information. They are directed to provide the requisite information desired by EY so as to enable them to prepare the DPR at the earliest.
2. Joint Director, DIC, Faridabad.

Recieved
Shesin. P. Roy
02/02/2018.

Consultant (Cluster)
for Director of Industries & Commerce, 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 of the Companies Act, 2013 (18 of 2013) and rule 18 of the Companies (Incorporation) Rules, 2014]

I hereby certify that TECHVIEW RESEARCH AND PROCESSING PRIVATE LIMITED is incorporated on this Twenty fourth day of February Two thousand eighteen under the Companies Act, 2013 (18 of 2013) and that the company is limited by shares

The Corporate Identity Number of the company is U73100HR2018PTC072740.

The Permanent Account Number (PAN) of the company is **AAGCT6350D** *

Given under my hand at Manesar this Twenty fourth day of February Two thousand eighteen .

Digital Signature Certificate
Mr AJAY KUMAR MEENA
Deputy Registrar Of Companies
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

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

TECHVIEW RESEARCH AND PROCESSING PRIVATE LIMITED
PLOT NO 48, SECTOR-58, FARIDABAD, Faridabad, Haryana, India,
121004

* as issued by the Income Tax Department

3.a Memorandum of Association (MoA)

[Pursuant to Schedule I (see Sections 4 and 5) to the Companies Act, 2013)] FORM NO. INC-33

SPICe MOA

(e-Memorandum of Association)

MOA language: (•) English ( ) Hindi

SRN of RUN G77068757 Pre-fill

* **Table applicable to company as notified under schedule I of the companies Act, 2013** A

Table A- MEMORANDUM OF ASSOCIATION OF A COMPANY LIMITED BY SHARES

1. The Name of the Company is TECHVIEW RESEARCH AND PROCESSING PRIVATE LIMITED

2.The Registered office of the company will be situated in the state of Haryana-HR

3.(a)The objects to be pursued by the company on its incorporation are

1. To function as Special Purpose Vehicle (SPV) and Set up Common Facilities Centre(CFC) and other infrastructure activities for Garment and Apparels Industry and for the benefits of its members and Industry/concerned stake holders following the guidelines and notifications for Mini Cluster Scheme of Government of Haryana.
2. To undertake works/scheme/programs of Government relating to growth and development of Garment and Apparels Industry and carry out/conduct soft and hard intervention activities under Mini Cluster Scheme of Government of Haryana.
3. To act as a resource centre for development and strengthening network as Business development Services related to Technology, Market, Capacity building and Hand holding support for the purpose of growth and development of the Garment and Apparels Industry under Mini Cluster Scheme of Government of Haryana.
4. To make available raw and packing material to all members of Garment and Apparels Industry at competitive rates by opening of raw and packing material bank.
5. To arrange latest technology for upgrading all manufacturing units to provide Quality certificate to its members.
6. To render assistance and encouragement as may be necessary to persons engaged in Garment and Apparels and/or Manufacturing Industry.
7. To undertake and to do trading, manufacturing, import, export of all type of Garment and Apparels products and research work in connection with development of Garment and Apparels Industry.
8. To conduct training centre programs/seminars.

3.(b)Matters which are necessary for furtherance of the objects specified in clause 3(a) are

Page 1 of 13

1. To enter into agreements, franchise agreement and contracts with Indian or Foreign individuals, firms or companies for technical, financial or other assistance or collaboration for carrying on all or any of the objects of the Company.

2. To apply for, purchase or otherwise acquire any trademarks, copy rights, patents, licenses, concessions and the like, concerning any exclusive or non-exclusive or limited rights of any kind which may appear to be necessary or convenient for the business of the Company and to purchase or otherwise acquire any information as to any invention which may seem capable of being used for any of the purposes of the Company.

3. To acquire and take over the whole or any part of the Business, Goodwill, Property and Liabilities of any person or persons, Firm, Corporation or Undertaking, either existing or new engaged in any Business which the Company is authorized to carry on and to pay for the same either in cash or in shares or partly in cash and partly in shares.

4. To amalgamate, enter into partnership or make any arrangements for sharing profits, co-operation, joint venture or reciprocal concession, with any individual person or Company carrying on or engaged in or about to carry on with similar or identical objects.

5. To sell, lease or otherwise dispose of the undertaking of the Company or any part thereof as the Company may deem fit.

6. To purchase, take on lease or in exchange, hire, construct or otherwise acquire any movable or immovable properties or any rights or privileges, which the Company may think necessary or convenient for the purpose of its business.

7. To subscribe or contribute or otherwise to assist or to grant money to charitable, benevolent, religious, scientific, national, public or any other useful institutions, objects or purposes or for any exhibition.

8. To pay out of the Company's funds the costs and expenses incurred in connection with all matters preliminary and incidental to the formation, promotion and incorporation of this Company and the costs and expenses incurred in connection with all matters preliminary and incidental to the formation and incorporation of any Company which may be promoted by this Company and to remunerate any person, firm or Company for services rendered in the promotion of the Company or the conduct of its business.

9. To provide for the welfare of the employees (including Directors) or ex-employees of the Company and wives and families or the dependents or relations of such persons by building or contributing to the building of houses, dwellings or quarters or by grant of money, gratuities, pensions, allowances, incentives bonus or any other payments or by creating and subscribing or contributing to provident and other funds, associations, institutions, profit sharing or other schemes or trusts and by providing or subscribing or contributing towards places of instructions and recreations, hospitals and dispensaries and medical assistance.

10. To invest any money of the Company, not for the time being required, for any of the purposes of the Company in such investments as may be thought proper and to hold, sell or otherwise deal with such investments subject to the provisions of the Companies Act, 2013 or any other applicable Act(s), Rule(s) and Regulation(s) etc.

11. To open account or accounts with any bank or banks in the name of the Company and to operate upon the same.

12. To create any depreciation fund, sinking fund, insurance fund, reserve fund or any special or other funds, whether for depreciation or for repairing, improving, extending or maintaining of any of the property of the Company or for any purposes, whatsoever to the interests of the Company.

13. To make, draw, accept, endorse, execute, discount, negotiate and issue cheques, promissory notes, hundies, bills of exchange, bills of lading, railway receipts, debentures and other negotiable or transferable instruments subject to the Banking Regulation Act, 1949.

14. To employ or pay experts, foreign consultants, management consultants and others in connection with the prospecting, acquiring, planning, execution, development, delivery and maintenance, training, and consulting, of all or any part of the business which the Company is entitled to carry on.

15. To promote any other Company or companies for the purpose of acquiring all or any of the property of the Company or advancing directly or indirectly the objects or interests thereof and to take or otherwise acquire and hold shares in any such Company or companies.

16. To appoint agent, franchise of the Company subject to the provisions of Companies Act,2013 or any other applicable Act(s), Rule(s) and Regulation(s) etc.

17. To distribute among members in specie or otherwise any property or assets of the Company and particularly the shares, debentures or other securities of any other Company including the Company formed to take over the whole or any part of the assets of this Company, subject to provisions of the Companies Act, 2013 or any other applicable Act(s), Rule(s) and Regulation(s) etc.

18. To borrow or raise moneys, from commercial banks/financial institutions and/or other companies, or to receive it on deposit at interest or otherwise, and to secure the payment of such money in such manner as the Company may think fit and in particular by the issue of debentures or debenture stock, perpetual or otherwise, stocks, bonds, obligations, notes and securities of all kinds, to mortgage, pledge, guarantee, hypothecate or charge the whole or any part of the property, assets or revenue of the Company present or future, including its uncalled paid capital, by special assignment or otherwise, or to transfer or convert the same absolutely or any interest therein and to give the lenders power of sale and other powers as may seem expedient and to purchase, redeem or pay off such securities provided, the Company shall not carry on banking business as defined in the Banking Regulation Act, 1949.

19. To advance, deposit or lend with or without security money, securities, assets and property to or with such person, companies or corporations and on such terms as may seem expedient, to negotiate loans, to discount, buy, sell and deal in bills, notes, warrants, coupons and other negotiable or transferable security or documents

4.The liability of the member(s) is limited and this liability is limited to the amount unpaid, if any, on the shares held by them.

5.The share capital of the company is 100,000.00 rupees, divided into,

10,000.00	Equity	shares of	10.00	rupees each	

6 ☒ 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 against our respective names:

☐ I, whose name and address is given below, am desirous of forming a company in pursuance of this memorandum of association and agree to take all the shares in the capital of the company (Applicable in case of one person company):

S.No.	Subscriber Details					
	Name, Address, Description and Occupation	DIN/PAN/Passport Number	No. of shares taken		DSC	Dated
1	Dinesh Sharma S/o Satya Narain Sharma House No. 127, Sector-9 Faridabad-121006 Occupation Business	07957324	5000	Equity		24/02/18
2	Rajendra Mishra S/o Shiv Kumar Mishra House No. 267, Sector-8 , Near GPW College Faridabad-121006 Occupation Business	08047652	5000	Equity		24/02/18
	Total Shares taken		10,000.0	Equity		

Signed before Me					
Name		Address, Description and Occupation	DIN/PAN/Passport Number/ Membership Number	DSC	Dated
ACS	Subhash Chand Gupta S/o Moti Lal Gupta	House No. 2098A, Sector-3 Faridabad-121004 Company Secretary In Practice	13013		24/02/18

7.Shri/Smt ,

of

resident of

Aged years shall be the nominee in the event of death of the sole member.

3.b Article of Association (AoA)

[Pursuant to Schedule I (see Sections 4 and 5) to the Companies Act, 2013)] FORM NO. INC-34

SPICe AOA

(e-Articles of Association)

AOA language (•) English ( ) Hindi

SRN of **RUN** G77068757 Prefill

*Table F as notified under schedule I of the companies Act, 2013 is applicable to the company

TECHVIEW RESEARCH AND PROCESSING PRIVATE LIMITED

A COMPANY LIMITED BY SHARES

Table F - ARTICLES OF ASSOCIATION OF A COMPANY LIMITED BY SHARES

		Article No	Description
			Interpretation
☐	☒	I	(1) ((1) In these regulations- (i) "The Act" means the Companies Act, 2013, (ii) "The seal" means the common seal of the company. (iii) "Company" is a private limited company within the meaning of Sections 2(68) Of the Companies Act, 2013, and which by its articles- (A) Restricts the right to transfer its shares; (B) Except in case of One Person Company, limits the number of its members to two hundred. Provided 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 that employment and have continued to the members after the employment ceased, shall not be included in the number of members; and (C) Prohibits any invitation to the public to subscribe for any securities of the company. (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 binding on the company..
			Share capital and variation of rights
☐	☐	II 1	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.
☐	☐	2	(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

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☐	☐	3	(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.
☐	☐	4	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.
☐	☐	5	(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 thereunder. (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.
☐	☐	6	(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.
☐	☐	7	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.
☐	☐	8	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
☐	☐	9	(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.
☐	☐	10	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.
☐	☐	11	(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.

☐	☐	12	(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
☐	☐	13	(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.
☐	☐	14	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.
☐	☐	15	The joint holders of a share shall be jointly and severally liable to pay all calls in respect thereof.
☐	☐	16	(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.
☐	☐	17	(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.
☐	☐	18	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
☐	☐	19	(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.
☐	☐	20	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.
☐	☐	21	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.

☐	☐	22	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
☐	☐	23	(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.
☐	☐	24	(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.
☐	☐	25	(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.
☐	☐	26	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.
☐	☐	27	In case of a One Person Company -- (i) on the death of the sole member, the person nominated by such member shall be the person recognised by the company as having title to all the shares of the member; (ii) the nominee on becoming entitled to such shares in case of the member's death shall be informed of such event by the Board of the company; (iii) such nominee shall be entitled to the same dividends and other rights and liabilities to which such sole member of the company was entitled or liable; (iv) on becoming member, such nominee shall nominate any other person with the prior written consent of such person who, shall in the event of the death of the member, become the member of the company.
			Forfeiture of shares
☐	☐	27	If a member fails to pay any call, or instalment 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 instalment remains unpaid, serve a notice on him requiring payment of so much of the call or instalment as is unpaid, together with any interest which may have accrued.

☐	☐	28	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.
☐	☐	29	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.
☐	☐	30	(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.
☐	☐	31	(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.
☐	☐	32	(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.
☐	☐	33	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
☐	☐	34	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.
☐	☐	35	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.

☐	☐	36	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.
☐	☐	37	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
☐	☐	38	(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.
☐	☐	39	(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

☐	☐	40	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
☐	☐	41	All general meetings other than annual general meeting shall be called extraordinary general meeting.
☐	☐	42	(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
☐	☐	43	(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.
☐	☐	44	The chairperson, if any, of the Board shall preside as Chairperson at every general meeting of the company.
☐	☐	45	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.
☐	☐	46	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.
☐	☐		In case of a One Person Company -- (i) the resolution required to be passed at the general meetings of the company shall be deemed to have been passed if the resolution is agreed upon by the sole member and communicated to the company and entered in the minutes book maintained under section 118; (ii) such minutes book shall be signed and dated by the member; (iii) the resolution shall become effective from the date of signing such minutes by the sole member.
			Adjournment of meeting
☐	☐	47	(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
☐	☐	48	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.
☐	☐	49	A member may exercise his vote at a meeting by electronic means in accordance with section 108 and shall vote only once.

☐	☐	50	(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.
☐	☐	51	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.
☐	☐	52	Any business other than that upon which a poll has been demanded may be proceeded with, pending the taking of the poll.
☐	☐	53	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
☐	☐	54	(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
☐	☐	55	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.
☐	☐	56	An instrument appointing a proxy shall be in the form as prescribed in the rules made under section 105
☐	☐	57	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
☐	☒	58	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.
☐	☐	59	(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.
☐	☐	60	The Board may pay all expenses incurred in getting up and registering the company.
☐	☐	61	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 thinks fit respecting the keeping of any such register.
☐	☐	62	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
☐	☐	63	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.

☐	☐	64	(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
☐	☐	65	(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.
☐	☐	66	(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.
☐	☐	67	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.
☐	☐	68	(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.
☐	☐	69	(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.
☐	☐	70	(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.
☐	☐	71	(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.
☐	☐	72	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.
☐	☐	73	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.
☐	☐		In case of a One Person Company -- (i) where the company is having only one director, all the businesses to be transacted at the meeting of the Board shall be entered into minutes book maintained under section 118; (ii) such minutes book shall be signed and dated by the director; (iii) the resolution shall become effective from the date of signing such minutes by the director.
			Chief Executive Officer, Manager, Company Secretary or Chief Financial Officer

☐	☐	74	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 thinks 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
☐	☐	75	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
☐	☐	76	(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
☐	☐	77	The company in general meeting may declare dividends, but no dividend shall exceed the amount recommended by the Board.
☐	☐	78	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.
☐	☐	79	(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, thinks 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
☐	☐	80	(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.
☐	☐	81	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.
☐	☐	82	(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.
☐	☐	83	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.

☐	☐	84	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.
☐	☐	85	No dividend shall bear interest against the company.
			Accounts
☐	☐	86	(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
☐	☐	87	Subject to the provisions of Chapter XX of the Act and rules made thereunder -- (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
☐	☐	88	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.

Table G- ARTICLES OF ASSOCIATION OF A COMPANY LIMITED BY GUARANTEE AND HAVING A SHARE CAPITAL

			Number of members
			All the articles of Table F in Schedule I annexed to the Companies Act, 2013 shall be deemed to be incorporated with these articles and to apply to the company.
☐	☐		The number of members with which the company proposes to be registered is hundred, but the Board of Directors may, from time to time, register an increase of members.

Table I-ARTICLES OF ASSOCIATION OF AN UNLIMITED COMPANY AND HAVING A SHARE CAPITAL

			Number of members
			All the articles of Table F in Schedule I annexed to the Companies Act, 2013 shall be deemed to be incorporated with these articles and to apply to the company.
☐	☐		The number of members with which the company proposes to be registered is hundred, but the Board of Directors may, from time to time, register an increase of members.
☐			

	Subscriber Details				
S. NO	Name, Address, Description and Occupation	DIN/PAN/Passport Number	Place	DSC	Dated
1	Dinesh Sharma S/o Satya Narain Sharma House No. 127, Sector-9 Faridabad-121006 Occupation Busines	07957324	Faridabad		24/02/2018
2	Rajendra Mishra S/o Shiv Kumar Mishra House No.267, Sector-8, NearGPW College Faridabad-121006 Occupation Business	08047652	Faridabad		24/02/2018

Signed Before Me						
Name		Address, Description and Occupation	DIN/PAN/ Passport Number/ Membership Number	Place	DSC	Dated
ACS	Subhash Chand Gupta S/o Moti Lal Gupta	House No. 2098A, Sector-3, Faridabad-121004. Company Secretary In Practice	13013	Faridabad		24/02/2018

Table H- ARTICLES OF ASSOCIATION OF A COMPANY LIMITED BY GUARANTEE AND NOT HAVING SHARE CAPITAL

		Article No	Description
			Interpretation
☐	☐	I	(1) In these regulations— (a) "the Act" means the Companies Act, 2013; (b) "the seal" means the common seal of the company. (2) Unless the context otherwise requires, words or expressions contained in these regulations shall have 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.
			Members
☐	☐	II 1	The number of members with which the company proposes to be registered is hundred, but the Board of Directors may, from time to time, whenever the company or the business of the company requires it, register an increase of members.

☐	☐	2	The subscribers to the memorandum and such other persons as the Board shall admit to membership shall be members of the company.
			General meetings
☐	☐	3	All general meetings other than annual general meeting shall be called extraordinary general meeting.
☐	☐	4	(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.
			Proceedings at general meetings
☐	☐	5	(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.
☐	☐	6	The Chairperson, if any, of the Board shall preside as Chairperson at every general meeting of the company.
☐	☐	7	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.
☐	☐	8	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
☐	☐	9	(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
☐	☐	10	Every member shall have one vote.
☐	☐	11	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.
☐	☐	12	No member shall be entitled to vote at any general meeting unless all sums presently payable by him to the company have been paid.
☐	☐	13	(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.
☐	☐	14	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.

☐	☐	15	A member may exercise his vote at a meeting by electronic means in accordance with section 108 and shall vote only once.
☐	☐	16	Any business other than that upon which a poll has been demanded may be proceeded with, pending the taking of the poll.
			Board of Directors
☐	☐	17	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.
☐	☐	18	(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
			Proceedings of the Board
☐	☐	19	(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.
☐	☐	20	(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.
☐	☐	21	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.
☐	☐	22	(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 members to be Chairperson of the meeting.
☐	☐	23	(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.
☐	☐	24	(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.
☐	☐	25	i) A committee may meet and adjourn as it thinks proper. (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 chairman shall have a second or casting vote.
☐	☐	26	All acts done by 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.
☐	☐	27	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 as valid and effective as if it had been passed at a meeting of the Board or committee, duly convened and held.

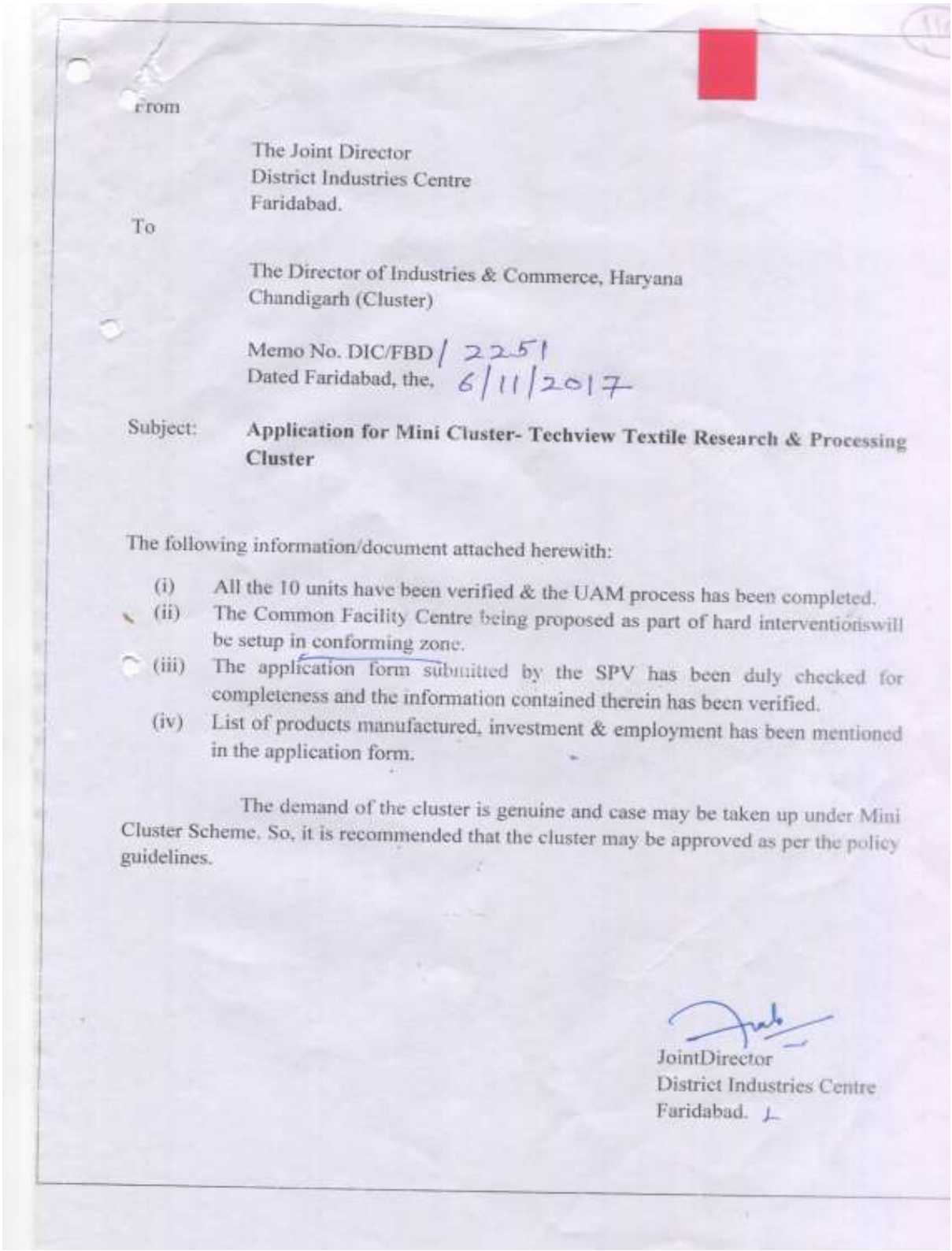
			Chief Executive Officer, Manager, Company Secretary or Chief Financial Officer
☐	☐	28	Subject to the provisions of the Act,— (i) A chief executive officer, manager, company secretary or chief financial officer may be appointed by the Board for such term, at such remuneration and upon such conditions as it thinks 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.
☐	☐	29	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
☐	☐	30	(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.

TABLE J - ARTICLES OF ASSOCIATION OF AN UNLIMITED COMPANY AND NOT HAVING SHARE CAPITAL

All the articles of Table H in Schedule I annexed to the Companies Act, 2013 shall be deemed to be incorporated with these articles and to apply to the company.

☐			

4. Verification of units by DIC, Faridabad



From

The Joint Director
District Industries Centre
Faridabad.

To

The Director of Industries & Commerce, Haryana
Chandigarh (Cluster)

Memo No. DIC/FBD/ 2251
Dated Faridabad, the, 6/11/2017

Subject: **Application for Mini Cluster- Techview Textile Research & Processing Cluster**

The following information/document attached herewith:

(i) All the 10 units have been verified & the UAM process has been completed.
(ii) The Common Facility Centre being proposed as part of hard interventionswill be setup in conforming zone.
(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, investment & employment has been mentioned in the application form.

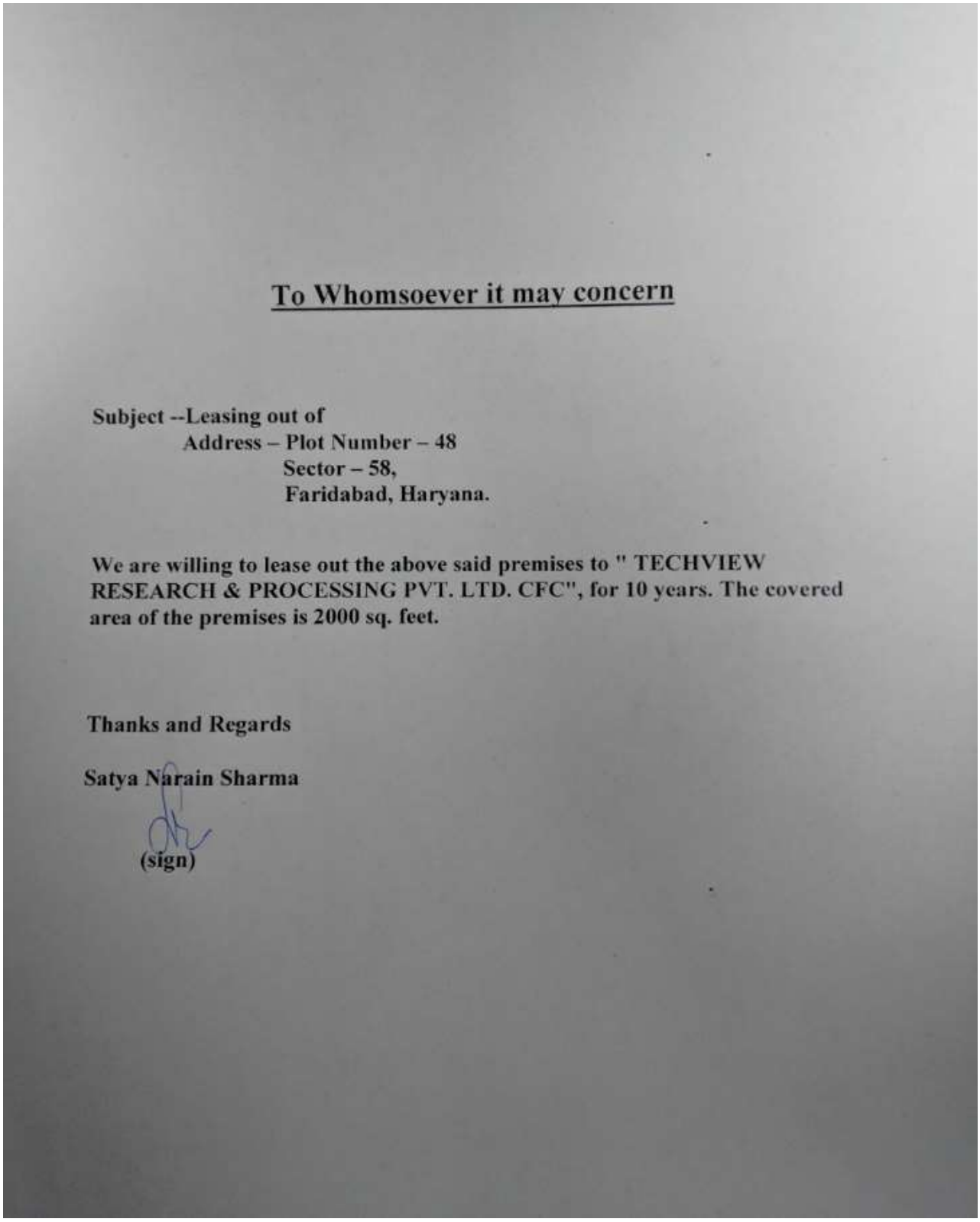
The demand of the cluster is genuine and case may be taken up under Mini Cluster Scheme. So, it is recommended that the cluster may be approved as per the policy guidelines.

JointDirector
District Industries Centre
Faridabad.

S.N.	Contact Person	Company Name	Contact No	Address of Unit	UAM No	Products
1	Dinesh Sharma	Weavetech Solutions	9811580097	Plot No:48, Sector-59, Faridabad	HR03A0007684	Garments
2	Jogender Sharma	Priyanka Impex	9818261251	Plot No:18-B, DLF Phase-1,Faridabad	HR03B0007554	Garments
3	Rajender Mishra	S.R.Enterprises	9811101618	16/2,Mathura Road, Sarin Complex, Faridabad	HR03A0007627	Garments
4	Prashant Kumar	Magadh Handlooms	9350509090	Plot No:102, DLF Phase 1, Faridabad	DL08A0001203	Garments
5	Lajpat Rai Bhatia	Modern Fashion	9810225522	1C/65, NIT, Faridabad	HR03A0007714	Garments
6	Laxman Rathore	Salasar Fashion	9971050599	78,DLF Phase 1, Faridabad	HR03A0002989	Garments
7	Arun Malhotra	Matangi Exim	9911446100/ 9899697677	Basement part 2, 12/6, Mathura Road, Faridabad	HR03A0002506	Garments
8	Sandeep Sharma	S.K. Fabrics	9015147184	Shop No : 121, 1st Floor, Sabji Mandi, Ballabhgarh, Faridabad	HR03A0007717	Garments
9	Sohan Lal Adlakha	Somang Creations	8860771583	Plot No:18-B, 2nd Floor, DLF Phase 1, Faridabad	HR03A0007778	Garments
10	Ramkishen Sharma	Tushar Enterprises	9999617226	Plot No:5, Badhkal Complex, Faridabad	HR03A0007787	Printing
11						

Joint Director
Dist. Industries Centre
Faridabad

5. Building Availability Proof



To Whomsoever it may concern

Subject --Leasing out of
Address – Plot Number – 48
Sector – 58,
Faridabad, Haryana.

We are willing to lease out the above said premises to " TECHVIEW RESEARCH & PROCESSING PVT. LTD. CFC", for 10 years. The covered area of the premises is 2000 sq. feet.

Thanks and Regards

Satya Narain Sharma

(sign)

6. Machinery Quotations

Digital Printing Facility

ORANGE-O-TEC PVT. LTD.

Date:13.11.2017 Performa No.: OTPL/1311-17

To,

Mr. SN Sharma
M/S PRIYANKA IMPEX PVT. LTD.
Plot No 18-B, DLF Industrial Area,
Phase I, Faridabad - 121003 Haryana, India.

Subject: Quotation MS JP5evo Digital Printing Machine.

Quantity	Description	Amount
01	INK-JET PRINTING MACHINE MODEL MS - JP5evo - Printing width 180cm complete with accessories.	Euro 1,50,000.
		Approx. INR@76 = 1,14,00,000/-

Terms & Conditions:-

- Terms : CIF Tughlakabad Port, New Delhi, in box container.
- Shipment : Approx. 45 days after finalization of all Technical & Commercial aspect, subject to advance credited.
- Port of Origin : Any port in Italy.
- Payment : 25% payment in advance, 75% against copy of B/L.
- **Euro : Any Changes in Euro conversion will affect the prices respectively.**
- Partial Shipment : Allowed.
- Bank Details : M/s ORANGE O TEC PVT LTD.
  Bank: YES BANK
  Branch: Ring Road
  A/C no. 001184600003408
  IFSC: YESB0000011

ORANGE-O-TEC PVT LTD

Shed No. A2/7111, Street No.71, Gate No.: 01, G.I.D.C Sachin, Surat – 394230, (Guj.) India.

FABCARE

FABCARE GARMENTS & TEXTILE MACHINERY (P) LTD

Dated: 13th November 2017 **Ref.:** FE/SAL/FARIDABAD/PRIYANKA/QUOTE	FABCARE™ Fabric care ... at its best
M/s Priyanka Impex Pvt. Ltd. **B - 18-B, DLF Phase - 1** **Faridabad**	**Address:** **90/4, 90/5 & 90/6, Road No. # 7** **Industrial Area Mundka South, Delhi-110041** **Telephone # 011-64646634, 38**
E-Mail- priyankaimpex@airtelmail.in	**GSTIN - 07AAACF7954R1ZZ**
Mobile # +91 9811580097	
Kind Attention:- Mr Dinesh Sharma	**fabcare@vsnl.com, sales@fabcare.com**

QUOTATION

ITEM NO.	MACHINE IMAGE	DESCRIPTION	QTY	Unit Price Rs.	Amount Rs.
1		**Fabcare Industrial Steamer Machine Model FPS 200, 200 Mtr** suitable for steaming after Digital Printing of Fabric, complete in Stainless Steel, Pneumatic Operated Steam Valve, Control Panel etc. **HSN CODE 8451**	1	475,750	475,750
2		**Fabcare Industrial Steamer Machine Model FPS 300, 300 Mtr** suitable for steaming after Digital Printing of Fabric, complete in Stainless Steel, Pneumatic Operated Steam Valve, Control Panel etc. **HSN CODE 8451**	1	725,750	725,750
		OPTIONAL ACCESSORIES			
		Loading - Unloading Trolley suitable for 2 Hanger	1	75,750	75,750
3		**Fabcare Hydro Extractor Machine Model HDS 25.** 25 Kg. cap. per charge, Inner basket and Outer drum Stainless Steel. **HSN CODE 8451**	1	145,750	145,750
4		**Fabcare Hot Water Generator Model HWD 120.** **120 Ltrs.** cap. with diesel tank etc. (Note: water softener depends upon the water analysis report, rates excluded in prices) **HSN CODE 8402**	2	295,750	591,500
5		**Fabcare Flat Work Ironer Machine Model FIS 14 (Chest Heated) Single Roller, Steam heated** with air suspended ironing chest. **(Without air compressor).** **Size of the roller 14" dia X 84" length.** **HSN CODE 8451**	1	675,750	675,750
		OR			
		**Fabcare Flat Work Ironer Machine Model FIS 14 (Chest Heated) Single Roller, Steam heated** with air suspended ironing chest. **(Without air compressor).** **Size of the roller 14" dia X 72" length.** **HSN CODE 8451**	1	575,750	575,750

TERMS & CONDITIONS

Validity	15 Days.
G.S.T	@ 18 % extra (But as applicable at the time of dispatch from Works)
Transit Insurance	1% extra, if required.
Delivery	10 - 12 Weeks
Payment Terms	40% as advance and balance against our Proforma Invoice, before delivery.
Freight	To pay at actual.
Packing	Inclusive only PVC Sheet Wrapped. **OR** **Wooden Packing @ 7.5 % extra.**
Unloading / Placement	Unloading of machines and its placement up to the installation site is under Customer's Scope.
Warranty	12 months from the date of supply against any manufacturing defect.*
Installation	For Delhi & NCR:- Only supervision, without any labour and material. For Outstation:- To & Fro fare and Rs. 3,000/- per day to be provided by you to our service engineer. Only supervision, without any labour and material.
Road Permit	Statutory Forms/Road Permit forms must be released against Proforma Invoice, Wherever Applicable.

***Any Bought out components defect doesn't mean manufacturing defect in the machine, however we shall arrange its repair/replacement on urgent basis.**
***Any type of defect found due to malfunctioning or machine operated/maintained by untrained staff at your end, the machine becomes out of warranty automatically from that particular date.**

For Fabcare Garments & Textile Machinery Pvt. Ltd.

J.P. Sharma
9873154824

Fabric Testing Facility

Paramount Instruments Pvt Ltd.
Plot no 1644-45-46 & 1600-01 M.I.E PHASE-II
BAHADURGARH- 124 507 (HARYANA)
T +91 11 2525 0630, 2527 3292
F +91 11 2525 9336, 2528 3571
Sales (24X7) : +91 999 999 1080, +91 9811144929
Customer Care: +91 999 999 8037, +91 999 999 4477
Website: www.paramountinstruments.com
GST No. 06AAACP5952H1ZE

PCVPL: 2017-18
09Th JAN, 2018

M/s Priyanka Impex Pvt Ltd
DLF PHASE-1,
FARIDABAD
Email: priyankaimpex@priyankaimpex.com

Kind Attn.: Mr. DINESH SHARMA (9811580097)

PARAMOUNT: *CELEBRATING 53 YEARS OF SERVICE TO THE NATION!*

OUR COMPETITIVE QUOTATION

Dear Sir,

PARAMOUNT, the Pioneers and Leaders, in Textile Testing and Quality Control Instruments is pleased to quote most competitive Rates for the items required by you.

On the 53rd Anniversary, as a mark of regard and honor to our esteemed clients, we are offering Special Prices, which are true value for money. Accordingly this quotation is prepared with special prices.

With PARAMOUNT you are Always in Safe Hands. We assure you of the below:-

1. **All equipment with Life Long Buy back WARRANTY.**
2. **All equipment to the 100% Satisfaction of the user.**
3. **All equipment completely adhering to International Standards.**
4. **All equipment to the complete satisfaction of your International Buyers.**

Sl. No.	ITEM	Rate (Rs.)	Per
1.	spectraVISION With 5 Lights (Rocker Switches) Color Matching with Rocker Switches , 5 Lights	41,200.00	Each
2.	quickCUT (FOR GSM) Round Cutter with Wheel Blades	15,800.00	Each
3.	digital GSM Balance i2 (300gms, 0.01 gms) GSM Scale Digital Model	26,800.00	Each
4.	digiWASH i2 (ISO & AATCC) Washing Fastness Tester as per American& European Standards	1,96,000.00	Each
5.	Perspirometer i5 (ISO) Perspiration Fastness Tester as per European Standards	52,500.00	Each
6.	DEAD WEIGHT (AATCC)	6,000.00	Each
7.	Hot Air Oven i2 Advance Hot Air Oven with German Technology	83,500.00	Each
08.	abrasionMASTER i4 (Martindale 4) Next Gen. Martindale - II (4 Station) (Pilling + Abrasion)	2,98,000.00	Each
09.	shakeMASTER i5 Advanced Shaking Machine with Controlled Shaking Operation	59,500.00	Each
10.	countMASTER i5 Yarn Count Tester (Manual)	22,800.00	Each
11.	crockMASTER i5 (Motorized)	74,800.00	Each
12.	shrinkMASTER i4 (ISO) Shrinkage Template and Scale as per European Standard	23,800.00	Each
13.	buttonpullMASTER i4 To Check Button / Snap Pull Strenght of Kids Garments	1,38,000.00	Each
14.	Q-Thermostir i4 Special Unit for Heating & Stirring Simultaneously	21,800.00	Each
15.	pilling MASTER i4 (2 Station) To check the Pilling of Fabrics (2 station)	76,000.00	Each

16.	Q-Projectino i5 Specialized Projection Microscope for the Textile Industry	1,09,000.00	Each
17.	Grading Scales for Staining (as per ISO)	18,800.00	Each
18.	Grading Scales for Change in colour (as per ISO)	18,800.00	Each
19.	Grading Scales for Staining (as per AATCC)	32,800.00	Each
20.	Grading Scales for Change in Colour (as per AATCC)	32,800.00	Each
21.	Pilling Photographs ASTM (5 Photographs duly Framed)	18,500.00	Each
22.	Pilling Photographs IWS (Woven) (Set of 20 Photographs)	27,800.00	Each
23.	Pilling Photographs IWS (Knitted) (Set of 20 Photographs)	27,800.00	Each

Please refer to the attachment for the technical details of the product.

TERMS AND CONDITIONS		
1.	GST:	18% Extra
2.	PAYMENT :	50% Advance and Balance 50% Before Dispatch.
3.	TRANSPORT :	Extra as per Actual
4.	DELIVERY:	Within 5-6 weeks

We now look forward to receiving your Valuable Orders.

PARAMOUNT reiterates its pledge to serve you with same Zeal and Personalized Service for NEXT 53 YEARS.

Thanks and Warm Regards.

Yours Faithfully
For Paramount Instruments Pvt Ltd

DEEPAK KUMAR
SALES MANAGER
9818086229

Secondary Equipment

BETTERWORLD ENVIRO CONSULTANTS
113, 5-R/8, NEELAM CHOWK, FARIDABAD – 121 001, HARYANA, INDIA
TEL: +91-0129-2420100 TELEFAX: +91-0129-2430100
E-mail: contact@betterworldenviro.com Website: www.betterworldenviro.com

BEC/ETP/offr/PIPL/ January 8, 2018

Priyanka Impex Pvt. Ltd.
Plot No. 18-B, DLF-I,
Faridabad

Kind Attention: **Mr. Dinesh Sharma**
Subject: **Effluent Treatment Plant**

Dear Sir,

This has the reference to the discussions we with your goodself on the subject requirement.

a) The wastewater is generated from the digital printing section of your unit.
b) The total effluent generated would be maximum 10KLD of waste water in a day.
c) The outlet characteristics of the treated water will be such that it can be used in secondary purposes like toilet flushes, floor washings, green belt development etc. However, the characteristics of the treated wastewater will meet the discharge limits as prescribed by the stipulated authorities.
d) The area required for the ETP would be approximately 15-20 sqm. The package ETP can be placed directly on the underground civil tanks.
e) The ETP will operate utilizing the principles of primary and tertiary treatment.
f) We are providing our offer on the item wise basis exclusive of civil construction but including, mechanical components, pumps & plumbing, electrical starters and cabling, erection, commissioning and testing from neutral laboratory.
g) Our battery limit starts from the inlet to the ETP and ends at outlet of the treated effluent from the ETP.
h) Time required for completion is 8-10 weeks from receipt of work order provided the work to be done by you is completed on scheduled time.
i) The completion date of the contract will be the date on which we provide conforming sampling report of the treated effluent sample from a neutral test laboratory. We will provide our own sampling report for the system.
j) The ETP would be designed to meet the following parameters

Design flow	- 10 m^3/d
pH	- 6-9
Zinc	- less than 5 mg / lt.
Iron	- less than 3 mg / lt.
T.S.S.	– less than 100 mg / lt.
Oil & Grease	- less than 10 mg/lt.

KOEL GREEN BY KIRLOSKAR

Jakson & Company
Office : 114, Prabhat Kiran Building
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65433053/54, Fax: 011-66405602, Email: jakson.rp@jakpower.com
Website: www.jakpower.com

JAKPOWER
Jakson & Company

Ref. -No. J&CO-SSA/QTN/SDG (15-125)PS/5036
Dated: 10.01.2018

M/S PRIYANKA IMPEX PVT LTD
PLOT NO-18/B DLF INDUSTRIAL ESTATE PHASE-1
NEAR NHPC CHOWK
FARIDABAD

Kind Attention: MR SHARMA
Cell Number: 9811580097
E-mail:- priyankaimpex@priyankaimpex.com

SUBJECT: -YOUR REQUIREMENT KOEL GREEN SILENT DIESEL GENERATOR SET

Dear Sir,
This has reference to your subject requirement and in line with same we wish to submit our **"JAKSON–KOEL GREEN Silent DG Set"** manufactured by us as per CPCB Norms "Under License from Kirloskar Oil Engine Limited Pune". Proposal as per following annexure, for your kind perusal and acceptance.

Price Schedule	(Page no. 2)	-Annexure "I"
Commercial Terms & Conditions	(Page no. 3)	-Annexure "II"
Technical Specification of DG Set	(Page no. 4 - 7)	-Annexure "III"
Salient Features of KOEL Green DG Set	(Page no. 8-9)	-Annexure "IV"

We trust, you will find our offer in line with your requirement and we look forward to receive your most valued order.

Thanking and assuring you our prompt attention at all times.

Yours faithfully,
FOR JAKSON & COMPANY

Pawan Sahni
9910049719
jakson.pawansahni@jakpower.com

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ANNEXURE – "I"

PRICE SCHEDULE

Dear Sir,

We thank you very much for your enquiry for **"KOEL GREEN" SILENT DIESEL GENERATOR SET".**
We are pleased to quote as under:

ENGINE (KVA)	ENGINE (MODEL)	ENGINE (BHP)	ALTERNATOR (THREE PHASE)	BASIC PRICE,GST EXTRA (EACH)
62.5 (WC)*	4R810TAG1	83	62.5 KVA / 50 KW	442000.00

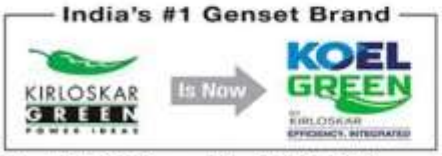
*** Terms & Conditions given in Annexure-II**

SCOPE OF SUPPLY:

Factory assembled Unpacked "KOEL GREEN SILENT DG SET" comprising of KOELGreen Make above model Diesel Engine directly coupled To "KOEL GREEN" make Alternator mounted on Common Base Frame fitted with AVM Pads complete with Fuel Tank, Standard Manual Control Panel, Battery with leads and Acoustic Enclosure (C A N O P Y) as per latest CPCB Norms along with K-Oil Premium & K-Cool (Coolant).

Note: These prices are governed by Commercial Terms & Conditions given in Annexure-"II".

(WC)*= Water Cooled



- **After First Oil Change Next LUBE Oil Change Period is 500 hrs/1 Year whichever is earlier**
- **Free 4 Service Check (CSP Check) as per KOEL Policy**

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Continuation Sheet

ANNEXURE – "II"

COMMERCIAL TERMS & CONDITIONS

PRICE	Ex-Works
GST	Extra @ 18% .
DESPATCH	With in 7 Days from the date of receipt of Techno Commercial clear order along with balance payment.
VALIDITY	Our offer is open for acceptance for 10 Days from the date of offer.
PAYMENTS	30% advance (Non Refundable) along with order, Entry Permit (if applicable) and balance payment against Proforma invoice
WARRANTEE	The Warranty of the offered DG Set is applicable as per KOEL Policy.However The DG Set comprising of Engine, Alternator & battery carries a warranty against defective material/ Manufacturing defects for a period of 24 months from the date of commissioning or 5000Hrs whichever occurs earlier. The terms of KOEL warranty policy will have precedence under all circumstances & the Warrantee Will Be applicable if customer sources K-Oil Premium, Cool Super and avail the services from authorized service dealers.
INSTALLATION /CUSTOMER SCOPE	Unloading of "D G" and installation work like Foundation Exhaust Piping, Earthing, Cabling, Change Over Switch, Fuel (Diesel) has to be arranged by Customer.
INSURANCE	Extra at cost, if required.
Note	If the order is cancelled after one month, for whatever reason ,may be the advance amount will not be refunded

COMMISSIONING

Commissioning of DG Set shall be done by our service engineer (will visit for commissioning after getting confirmation of completion of Installation). Extra visit will be on chargeable basis.

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ANNEXURE - "III"

TECHNICAL SPECIFICATION OF AIR / WATER COOLED KOEL GREEN SDG SETS

DIESEL ENGINE:

"KOEL GREEN" make diesel engine rated at 1500 rpm, Water Cooled, Four Stroke Electric Start Diesel Engine conforming to ISO 3046 with capacity of 10% over loading for one hour in every twelve hours duration having following accessories as scope of supply:

AIR INTAKE SYSTEM
- *Air intake manifold
- *Dry type air cleaner.
- *Vacuum indicator.

EXHAUST SYSTEM
- *Expansion bellow.
- *Exhaust manifold
- *Exhaust silencer.

COOLING SYSTEM

FOR AIR COOLED
- * Blower Fan in built in Engine
- * Exhaust Fan

FOR WATER COOLED
- *Engine water pump.
- *Coolant
- *Radiator with pusher type fan (Fan mounted on engine Shaft)

LUBRICATING SYSTEM
- *Lube oil cooler
- *Lube oil filter "Spin-on" type
- * Centrifugal filter

FUEL SYSTEM
- *"Spin-on" type fuel filter
- * 12 V DC solenoid coil
- *Inline fuel injection pump and Fuel Feed Pump.
- *Governor – Mechanical (15-82.5kva) / Electronic (100 & 125Kva)

STARTING SYSTEM
* 15-125 KVA 12 Volt Starter *12 Volt DC solenoid coil & 12 Volt DC Battery charging Alternator

INSTRUMENT PANEL
- *Start / stop Push Button.
- *Lube oil pressure indication.
- *Water temperature indication.
- *RPM indication.
- *Engine running hour indication.
- *Low lube oil trip indication.

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*High Engine temperature trip indication
* Over /Under Speed trip Indication
* Over Load trip Indication
* Battery Charging Indication
*Low Fuel level Indication

SAFTY CONTROLS

* Low lube oil pressure trip.
* Low Fuel Level Trip
* Over / Under Speed trip
* High Engine temp trip.
* Over load trip

OTHERS

- AVM pad.
- Engine suitable for closed couple alternator
- Front and rear engine-mounting supports.

ALTERNATOR:

Synchronous alternator of** "KOEL GREEN (KIRLOSKAR GREEN)" **make suitable for continuous operation at 1500 RPM generating 415 volts at 0.8 p. f (lag) suitable for 50 Hz, three phase, 4 wire system. The alternator shall be brushless, single bearing, self excited & self regulated with an AVR .The alternator will be suitable for tropical climate and shall generally confirm to IS: 4722. The salient features of the alternators are:

- +-1% voltage regulation (max) in static conditions.
- IP: 23 protections with class 'H' insulation.
- Permanent lubricating bearing.
- Permissible overload of 10% for one hour in 12 hours of operation.

CONTROL PANEL:

The standard control panel is fabricated from 16/14 SWG sheet and powder coated after seven tank treatment process. The panel is equipped with:

- (A) Digital Genset Control Unit ,
  Digital Control Unit is Special Designed to Standardize most of control Panels components in Single Unit.

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Salient Features of Controller

Gen –set Display Parameters	Engine Display parameters	Electrical safeties (along with display)	Mechanical safeties (along with Display)
1) Line /Phase Voltage	1) Oil Pressure	1) Under / Over voltage	1) Under/Over speed
2) Line current	2) Engine coolant Temperature	2) Under/Over Battery voltage (Only digital message not tripping)	2) Low Lube oil pressure
3) Frequency	3) Fuel Status	3) Under/Over frequency	3) High engine coolant temperature
4) Average Voltage	4) Engine Speed(RPM)	4) Phase Failure	4) Battery Charging Indication(only digital message not tripping)
5) Average Current	5) Engine running Hours	5) Phase sequence reverse	5) Low fuel level
6) Phase kW & Total kW	6) Total no. of starts	6) Over Current	6) Start / Stop fail
7) Kwh & PF	7) Battery Voltage Minimum Battery Voltage required	7) Over kW	
8) KVA / KVA r			

(B) The Control Panel is equipped with MCB/MCCB of suitable rating and CT along with bus bars & cables.

C). **Set of Buttons**
a) Canopy Lamp ON/OFF

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ACOUSTIC ENCLOSURE:
KOEL GREEN Acoustic enclosure shall be powder coated and fabricated out of 16 SWG CRCA MS sheet. The silent canopy shall be of nut bolt type construction. Critical processes of punching is done on CNC machines to maintain dimensional accuracy of holes within 0.1 mm. Powder coating is done after seven-tank surface preparation process of sheet metal. Canopy panel and doors shall have inside lining of FIRE-RETARDANT foam as acoustic material & Rock wool for hot zone. Adequate hinged doors shall be provided to canopy, one door shall have glass window for control panel visibility.

BASE FRAME:
Base frame is fabricated either in ISMC channel or in sheet metal. The base frame will be primer coated and painted. The base frame is rugged in construction and designed for mounting KOEL engine and KG alternator close coupled, with cross members mounted on AVM. The base frame shall have provision for mounting of acoustic enclosure & control panel on it. The base frame is having provision of lifting hook for convenient lifting of complete set, i.e. along with canopy, engine and alternator.

COLOR SCHEME:
The base plate is painted/ powder coated with KOEL BLUE, the canopy is powder coated with IVORY color.

FUEL TANK:
Daily service fuel tank of 8 hours of continuous operation, fabricated form 14/16 SWG sheet metal complete with drain, inlet and outlet connection and fuel gauge.

BATTERIES:
1 No Kirloskar Green/ KOEL GREEN make battery of 12 V in charged condition with its leads.

DOCUMENTATION:
One set of following documents shall be provided with each set.

- O & M Manual of Diesel Engine.
- Packing list of S.D.G. Set.
- Test certificate of diesel engine.
- Test certificate of alternator.
- Test certificate of S.D.G set.

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ANNEXURE – "IV"

SALIENT FEATURES OF KOEL GREEN DG SETS

- Low ownership costs due to competitive upfront investment, optimal fuel, and Lube Oil & parts consumption.
- The best Lube oil Change interval in its class
- Diesel Engines meeting the latest CPCB norms for emission.
- Convenient lifting arrangement.
- Microprocessor based DG controller which provide safety for engine and alternator.
- Branded Sound-Proof Enclosures with standard warranty & serviced by company service dealer.
- The only DG set brand to offer consistent deliverables (All DG manufacturing Plants ISO 9001:2008, BS EN 14001:2004 and OHSAS 18001:2008 certified & most Service Dealers are ISO 9001:2008 certified.
- The most extensive After Sales Service Network rated the best in the industry (according to a survey* conducted by AC Neilsen) with:
  - 65 Service Dealers & 195 locations. (41- cities 24*7 service)
  - Complement of trained engineers.
  - Easy parts availability with first pick at above 95 % level
  - Specially formulated Lube oil (K-Oil Premium) for longer Change intervals.
  - Single Window Support for providing support Engine, Alternator and acoustic enclosure, another unique KGPI advantage.
  - Value added Services like Annual Maintenance Contracts, Stand-by DG sets, Customer training programme – to name a few

- **Industry best Warranty**

* The Customer Satisfaction Survey conducted by AC Nielsen, an independent market research firm of international
repute, has placed KOEL at the top of the charts consecutively for 2 years in a row. Our Customer Satisfac Index
(CSI) is one of the best in the world in manufacturing sector.

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KOEL GREEN SALIENT CANOPY FEATURES

- RTU canopy kits, which can be assembled on site within a time period of 90 minutes.
- Canopy fabricated on machines with dimensional accuracy of 0.1mm.
- Canopy is powder coated after passing through seven tank processes.
- Canopy is lined with acoustic foam, which is non-igniting / Fire Retardant (confirming to UL94-HF1)
- No grouting required on the ground, only a level surfaces capable of withstanding the DG weight.
- Suitable for outdoor/ rooftop installation.
- Lockable doors provided.
- Lockable fuel filling arrangement provided inside the canopy.
- Residential Silencer.
- Externally accessible emergency stops button.
- The exhaust gases shall be taken out through a suitable flexible pipe to prevent any back pressure on the engine.

Performance Parameters

- The average sound level, when measured in green field condition (ISO 3744 OR 8528 PT 10) at 1-meter distance from all four sides shall be less than 75-dBA averages or as per CPCB norms.

- The average stabilized hot air temperature rise with in the canopy near suction of air filter is maintained within 0-7°C above ambient temperature.

Jakson & Company
JC/QUOTE-01 /15-125

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Ernst & Young LLP

Assurance | Tax | Transactions | Advisory

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Artwork by: JG

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