



**Pre-feasibility Study**

# **TISSUE PAPER CONVERTING UNIT**

**March 2020**

*“The figures and financial projections are approximate due to fluctuations in exchange rates, energy costs, and fuel prices etc. Users are advised to focus on understanding essential elements such as production processes and capacities, space, machinery, human resources, and raw material etc. requirements. Project investment, operating costs, and revenues can change daily. For accurate financial calculations, utilize financial calculators on SMEDA’s website and consult financial experts to stay current with market conditions.”*

**Small and Medium Enterprises Development Authority**  
Ministry of Industries and Production  
Government of Pakistan

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The purpose and scope of this information memorandum is to introduce the subject matter and provide a general idea and information on the said area. All the material included in this document is based on data/information gathered from various sources and is based on certain assumptions. Although, due care and diligence has been taken to compile this document, the contained information may vary due to any change in any of the concerned factors, and the actual results may differ substantially from the presented information. SMEDA does not assume any liability for any financial or other loss resulting from this memorandum in consequence of undertaking this activity. Therefore, the content of this memorandum should not be relied upon for making any decision, investment or otherwise. The prospective user of this memorandum is encouraged to carry out his/her own due diligence and gather any information he/she considers necessary for making an informed decision.

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## DOCUMENT CONTROL

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# 1 EXECUTIVE SUMMARY

The demand for facial tissues, toilet rolls, kitchen rolls and sanitary napkin is entirely met through domestic production and import. According to Tissue World Magazine average per capita consumption of tissue in the world was 5.2 kg in 2018 but there are huge differences among various regions, from almost 26 kg per capita in North America to less than 01 kg in Africa and around 05 kg in Asia and Middle East. The estimated demand for tissue paper in the world is estimated at 40 million tones/anum.<sup>1</sup>

This report envisages the establishment of a plant for the production of tissue rolls, facial tissues and napkins with a capacity of 1732 tons per annum where 40% capacity will be utilized in initial year with 5% annual growth rate. The project is financially viable with an internal rate of return (IRR) of 56% and a net present value (NPV) of Rs. 67 million discounted at 10%.

The principal raw materials required are Jumbo roll, core paper, and wrapping paper. The total investment cost of the project including working capital is estimated at Rs. 36.22 million. From the total investment cost the highest share Rs. 25.42 million is accounted by fixed investment cost followed by working capital cost at Rs. 10.80 million.

The project can create employment for 27 persons. The establishment of such factory will have a foreign exchange saving effect to the country by substituting the current imports of finished products. The project will and also generates income for the Government in terms of tax revenue.

Investing in tissue production is relatively a profitable venture for investors due to many factors:

- Initial investment is correlated with production procedures which can vary from simple to complicated

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<sup>1</sup> Tissue World Magazine, 2019

- Simple organizational structure
- The ability to expand product offerings
- Product quality and cost are versatile to meet different markets requirements
- High profit on finished product
- A consumer staple business

As 36.66 %<sup>2</sup> percent of Pakistan's population lives in urban areas and urban spending is increasing at a double rate of rural spending, there also exist an opportunity to bypass large cities and establish roots in second tier urban cities, which pose less competition, offer better profit margins, and a more accessible territory for penetrating the product lines. The resilient low risk market means that the new investor still stand a chance to compete with the converters and domestic tissue mill installations, as the opportunities at hand in domesticating tissue paper production in Pakistan are obvious, particularly given the surge in Pakistan's urban population and private consumption. According to the market players only less than 3% of Pakistan population consumes tissue paper on daily basis.

## **2 BREIF DESCRIPTION OF PROJECT & PRODUCT**

Tissue paper is a soft paper used in homes, hospitals offices, schools and hotels/ restaurants to maintain personal hygiene. It is expected that global tissue paper will be enjoying substantial growth over the next five years due to its utility in the growing markets. The drivers of this industry are expected to be the consumer's lifestyle, increasing healthcare expenditures, increasing population and little penetration of alternates for tissue papers.

Also, the tissue paper industry is expected to dominate the market due to awareness of hygiene concepts among the consumers. The raw material used in its production is generally paper pulp, though, owing to the technological advancement and innovation in the manufacturing of tissue paper, paper pulp is now used in less quantity. The industry is classified into three main types on the basis of the raw material used for its production.

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<sup>2</sup> World Bank Data. 2018

They include; wood free (or chemical), wood containing (or mechanical pulp) and recycled paper. The tissue paper market is further categorized into five types based on usage into, Toilet Roll, Kitchen Roll, Napkins, Facial Tissue and Wrapping Tissue.

For this proposed project, tissue paper converting model is adopted where different types of finished products would be produced by converting Jumbo rolls. Following key parameters must be addressed as per business plan under consideration.

## **2.1 Technology:**

The process of the production of tissue paper is not a complicated one as most of the work will be done in the tissue paper making machine. Below is the different equipment that you will need for conversion process:

- Jumbo Reel Winding Machine
- Embossing unit
- Perforating unit
- Core Gluing Machine
- Band saw cutter
- Cutting Machine

## **2.2 Product:**

This unit will produce 02 ply economical toilet tissue paper roll of 100 sheets of 64 grams each.

### **Toilet Roll**

- Sheet (and roll) height: 90-100 mm
- Sheet length: 122-138 mm
- Roll length: sheet length x number of sheets

- Roll diameter: 100-120 mm
- Core diameter: 38-50 mm

### **Kitchen Roll**

- Roll diameter: 100-120 mm (“big” ones up to 160 mm)
- Core diameter: 38-50 mm
- Sheet (and roll) height: ~225 mm (rare up to 260 mm)
- Sheet length: 210-240 mm
- Roll length: sheet length x number of sheets

### **Napkins**

- Napkins common sizes: 24x24 cm – 30x30 cm – 33x33 cm – 38x38 cm – 40x40 cm
- In case of ¼ folded napkins the [single] pack sizes result: 12x12 cm – 15x15 cm – 16,5x16,5 cm – 19x19 cm – 20x20 cm

## **2.3 Raw Material**

Raw materials also play an important part in the successful running of this business. Core paper and jumbo reels are the main raw materials used in tissue paper manufacturing. The others materials are wrapping paper, glue, cellophane etc.

Two major types of raw material are used in Pakistan for manufacturing Tissue Paper products.

- Wood or Virgin Pulp
- Recycled

### **Types of Recycled Material**

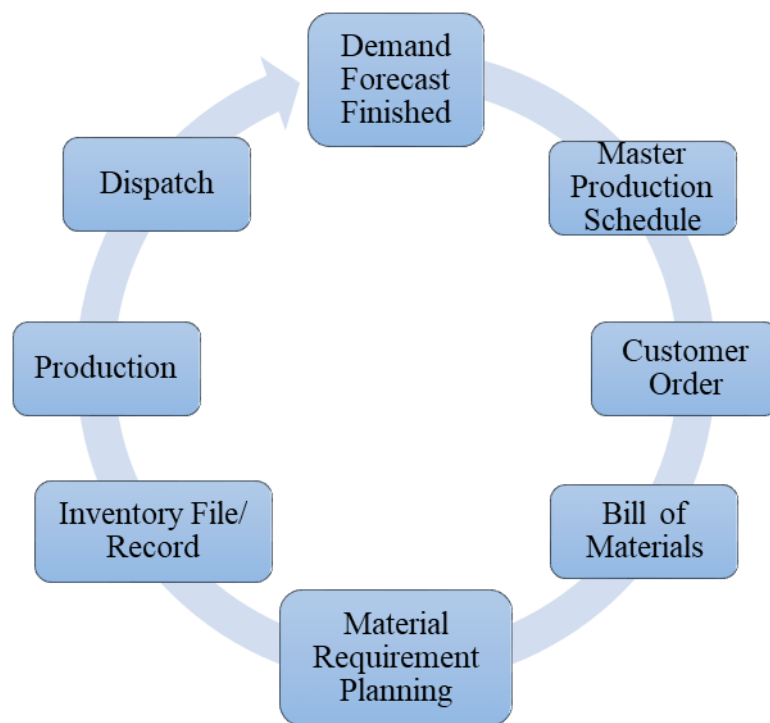
- Mix Material (Virgin Pulp + Semi Pulp derived from A Class recycled material)



- Semi Pulp Material (derived from A Class recycled material)
- 100% Recycled Material

## 2.4 Production Planning Process Flow

### Production Planning & Controlling of Tissue Paper Industry:



## 2.5 Process Flow Chart For Tissue Paper:

For this prefeasibility we have discussed production of different variety of tissue paper through “converting” process. In this process paper bobbins or jumbo rolls are loaded on “converting” lines where the paper is cut into required sizes and packages according to the demand. Each converting instrument is composed of one single line where no disruptions occur during cutting and packaging operations of tissue papers.

There are different categories of converting lines. The difference between these categories depends on the type of products produced on that particular line. Tissue paper converting lines can be divided into four major groups: Toilet rolls & Kitchen Rolls, where cylindrical products are produced, tissue paper lines, napkin lines and facial tissue lines.

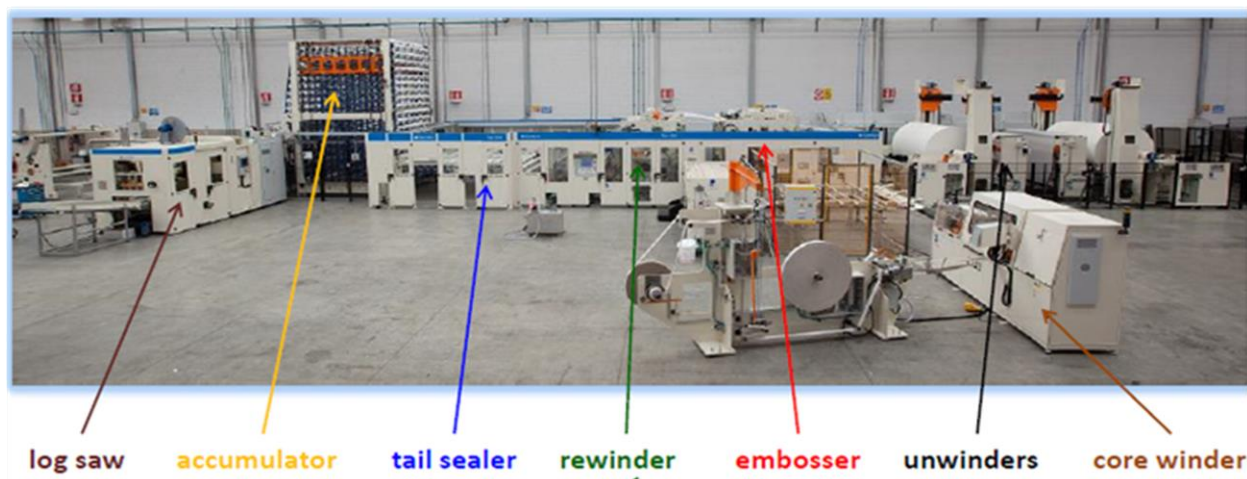
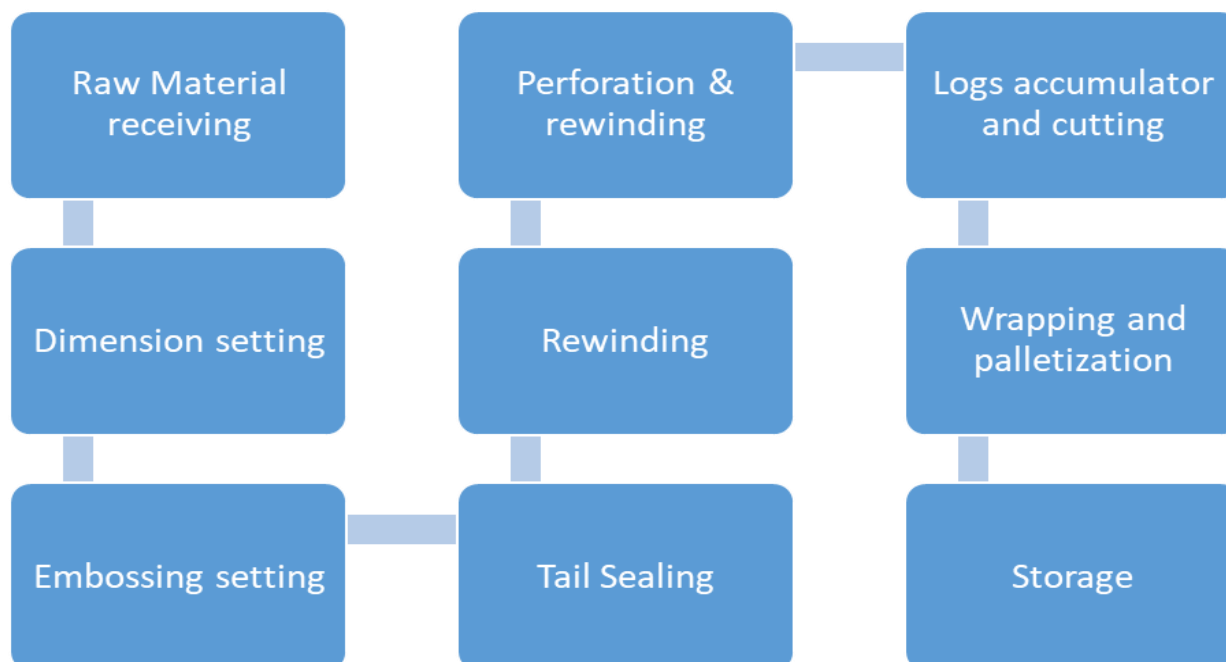


Photo Source: Tecnicelpa.com



### 3 INSTALLED AND OPERATIONAL CAPACITIES

In the production department, the following machines would be installed for the conversion of jumbo tissue rolls to economical sized tissue roll. Total installed capacity for different types of tissue products is 1732 tons / anum with initial capacity utilization of 40%.

- Jumbo Reel Winding Machine
- Embossing unit
- Perforating unit
- Core Gluing Machine
- Band saw cutter
- Cutting Machine

## **4 CRITICAL FACTORS**

The sustainable viability of the proposed Toilet Tissue Roll manufacturing unit depends on the following critical factors:

- Suitable location where raw material and skilled labour is easily available.
- Availability of continuous power supply (Alternatives like gas generators Solar options)
- Induction of trained human resource for the handling of business operations especially in operations and sales
- High quality and secure regular raw material supplies in economical price.
- Competition knowledge
- Pricing strategy
- Efficient marketing of the product and distribution
- Efficient management of stock to keep inventory cost at the minimum

## **5 GEOGRAPHICAL POTENTIAL FOR INVESTMENT**

Proposed project could be set up in various regions of Pakistan as per the easy availability of raw material. Beside this, there are many tissue paper manufacturing machines operational in Pakistan. Most of the manufacturing units are located in Karachi, Lahore, Rawalpindi, Peshawar, Quetta, Multan, Hyderabad and other cities of Pakistan. Therefore, any of the above cities will be suitable location for setting up a tissue paper manufacturing unit. Raw material and labor is also easily accessible in these cities.

## 5.1 POTENTIAL TARGET CUSTOMERS / MARKETS

Target Customers of economical size Toilet Tissue Roll in Pakistan usually covers most of the urban areas which includes household customers and commercial users. Toilet Tissue Roll consumers belongs to upper and middle educated class. Toilet roll is a soft tissue paper used in homes, offices, schools, Hospital, restaurants etc. to maintain personal hygiene. As per the discussion with suppliers and distributors, toilet tissue paper roll holds 27% of market share of the total market. The market is growing by 15% per annum on an average and presents a lot of potential for growth. But there is still a huge gap as household penetration of these products remains low and limited to urban middle and upper class consumers.

## 5.2 Import of Tissue Paper

Pakistan has imported 5,172 tons of different varieties of tissue paper in 2018 worth USD 7,073 million.<sup>3</sup> For imports of Jumbo roll it should be noted that Customs Duty, Sales Tax and Additional Sales Tax are important cost components of the imported product.

Exporters		Import of HSC 4803				
	Value imported in 2018 (USD thousand)	Share in Pakistan's imports (%)	Quantity imported in 2018 (Tons)	Unit value (USD/unit)	Growth in imported value between 2014-2018 (% , p.a.)	Growth in imported quantity between 2014-2018 (% , p.a.)
<b>World</b>	4,344	100	3,663	1,186	11	18
<b>Indonesia</b>	2,843	65.4	2,334	1,218	37	44
<b>China</b>	989	22.8	805	1,229	4	9
<b>UAE</b>	266	6.1	267	996	-21	-13
<b>Malaysia</b>	158	3.6	154	1,026	288	252
<b>UK</b>	30	0.7	33	909	33	45

<sup>3</sup> Trademap

<b>Japan</b>	23	0.5	30	767	66	118
<b>Europe</b>	16	0.4	15	1,067		115
<b>USA</b>	7	0.2	6	1,167	-15	-14
<b>Bangladesh</b>	7	0.2	11	636	-46	-35
<b>Belgium</b>	2	0	4	500	-13	19
<b>Spain</b>	1	0	1	1,000	-30	-29
<b>Australia</b>	1	0	2	500		

Exporters		Import of HSC 4818.1000				
	Value imported in 2018 (USD thousand)	Share in Pakistan's imports (%)	Quantity imported in 2018 (Tons)	Unit value (USD/unit)	Growth in imported value between 2014-2018 (% , p.a.)	Growth in imported quantity between 2014-2018 (% , p.a.)
<b>World</b>	754	100	362	2,083	-6	-8
<b>Egypt</b>	337	44.7	150	2,247		
<b>UAE</b>	217	28.8	105	2,067	51	47
<b>China</b>	85	11.3	51	1,667	27	25
<b>Turkey</b>	73	9.7	36	2,028	135	10
<b>USA</b>	21	2.8	9	2,333	8	1
<b>UK</b>	16	2.1	9	1,778	-3	-3
<b>Ukraine</b>	4	0.5	2	2,000		
<b>Thailand</b>	1	0.1	1	1,000	-65	-48

Exporters		Import of HSC 4818.2000				
	Value imported in 2018 (USD thousand)	Share in Pakistan's imports (%)	Quantity imported in 2018 (Tons)	Unit value (USD/unit)	Growth in imported value between 2014-2018 (% , p.a.)	Growth in imported quantity between 2014-2018 (% , p.a.)
<b>World</b>	1,975	100	1,147	1,722	23	30

<b>Egypt</b>	1,121	56.8	633	1,771		
<b>China</b>	305	15.4	186	1,640	-1	9
<b>UAE</b>	215	10.9	126	1,706	20	31
<b>Malaysia</b>	149	7.5	86	1,733	29	33
<b>Turkey</b>	81	4.1	49	1,653	21	25
<b>UK</b>	49	2.5	35	1,400	-20	-18
<b>Indonesia</b>	21	1.1	12	1,750	-5	-8
<b>Europe</b>	8	0.4	5	1,600	-15	-16
<b>Thailand</b>	7	0.4	5	1,400	4	3
<b>Germany</b>	6	0.3	3	2,000		
<b>USA</b>	3	0.2	2	1,500	21	28
<b>Saudi Arabia</b>	3	0.2	2	1,500	7	12

## 6 PROJECT COST SUMMARY

### 6.1 Project Economics

All the figures in this financial model have been calculated for estimated sales of Rs. 408 million in the year one. The capacity utilization during year one is worked out at 40 % with 5 % increase in subsequent years up to the maximum capacity utilization of 80 %.

The following table shows internal rate of return, payback period and net present value of the proposed venture.

**Table 1: Project Economics**

<b>Description</b>	<b>Details</b>
Internal Rate of Return (IRR)	56 %
Payback Period (yrs.)	2.40

Net Present Value (Rs.)	67,042,349
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## 6.2 Project Financing

Following table provides details of the equity required for the project.

**Table 2: Project Financing**

Description	Details
Total Equity (100%)	Rs.36,223,478
Bank Loan (0%)	Rs. 0

## 6.3 Project Cost

Following fixed and working capital requirements have been identified for operations of the proposed business.

**Table 3: Project Cost**

Description	Amount Rs.
<b>Capital Cost</b>	
Plant and Machinery	23,000,000
Furniture & Fixture	350,000
Office Vehicles (Motorcycles)	280,000
Office Equipment	485,000
Pre-operating Cost	807,575
Legal, Licensing & Training Cost	500,000



<b>Total Capital Cost</b>	<b>25,422,575</b>
Equipment Spare Parts Inventory	47,917
Raw Material Inventory	7,952,987
Cash	1,000,000
<b>Total Working Capital</b>	<b>10,800,903</b>
<b>Total Project Cost</b>	<b>36,223,478</b>

#### 6.4 Space Requirement

The space requirement for the proposed **Toilet Tissue Roll manufacturing** is estimated considering various facilities including management office, production hall, storage, open space, etc. It is recommended that at least 30,000 sq. ft. space can be rented out for processing and storage of raw material and finished goods.

#### 6.5 Machinery & Equipment Requirement

Plant, machinery and equipment for the proposed project are stated below.

**Table 4: Machinery & Equipment**

Description	Quantity	Total Cost (Rs.)
Tissue paper roll production line	01	6,000,000
Tissue Box Production Line	01	10,000,000
Tissue Napkins Production line	01	2,000,000
Generator (250 kVA)	01	5,000,000
<b>Total</b>		<b>23,000,000</b>

## 6.6 Furniture & Fixtures Requirement

Details of the furniture and fixture required for the project are given below;

**Table 5: Furniture & Fixture**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Furniture & Fixture	LS	200,000	200,000
Air Conditioners	02	75,000	150,000
<b>Total</b>			

## 6.7 Office Equipment Requirement

Following office equipment will be required for Tissue Paper Roll and its manufacturing and marketing.

**Table 6: Office Equipment**

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Laptop	05	85,000	85,000
Telephone/Modems	01	5,000	5,000
Printer	01	35,000	35,000
Fax Machine	01	20,000	20,000
<b>Total</b>			<b>485,000</b>

## 6.8 Human Resource Requirement

In order to run operations of **Toilet Tissue Paper Roll and its manufacturing and marketing** smoothly, details of human resources required along with number of employees and monthly salary are recommended as under;

**Table 7: Human Resource Requirement**

Description	No. of Employees	Monthly Salary per person (Rs.)
Director Operations	01	150,000
Admin & Accounts Manager	01	75,000
Marketing Manager	01	100,000
Sales Manager	01	85,000
Sales Officer	02	25,000
Production Manager	01	45,000
Supervisors	01	35,000
Helpers	15	18,000
Drivers	02	18,000
Guards	02	18,000
<b>Total</b>	<b>27</b>	

## 6.9 Utilities and other costs

An essential cost to be borne by the project is the cost of electricity. The direct electricity expenses are estimated to be around Rs. 1,386,000 per month. Furthermore, promotional expense

being essential for marketing of Tissue Paper is estimated as 3% of sales revenue whereas distribution expense is capped at 6% of sales revenue.

## 6.10 Revenue Generation

Based on the capacity utilization of 40%, for tissue paper manufacturing of different types, sales revenue during the first year of operations is estimated to be Rs. 408,385,860 with an average sales price of Rs. 597/kg;

## 7 CONTACT DETAILS

### 7.1 Machinery Suppliers

For Imported Machinery following can be contacted:

Name of Supplier	V-Flo Group		
Address	Street No 18, Banglow No.79/1 Khayaban-e-Qasim, Phase 8, DHA, Karachi, Pakistan.		
Phone	(+92-21) 35448212	Fax	(+92-21) 34641728
E-mail	<a href="mailto:md@mmilink.com">md@mmilink.com</a>		
Website	<a href="http://www.mmilink.com">www.mmilink.com</a>		

Name of Supplier	KBMC		
Address	Suite No. C-104, Block 2, K.A.E.C.H.S, Karachi - Pakistan.		
Phone	021-34547126, 021-	Fax	(+92-21) 34547127

	34376321		
<b>E-mail</b>	<a href="mailto:kaybeemachinery@gmail.com/">kaybeemachinery@gmail.com/</a>		
<b>Website</b>	<a href="http://www.kbmc.com.pk/">http://www.kbmc.com.pk/</a>		

Following can be contacted for local manufacturing and assembling unit.

<b>Name of Supplier</b>	Alpha Engineering		
<b>Address</b>	Head Office: Suite # 120 Shams Chamber, Shahra-e-Liaquat, Karachi SITE: Plot # 02 Sector 16-B, Near Shafiq Mor, NK Industrial Area Karachi - Pakistan.		
<b>Phone</b>	021-36047006, 0345-2941367	<b>Fax</b>	(+92-21) 3242447
<b>E-mail</b>	<a href="mailto:alfa_textile_eng@yahoo.com">alfa_textile_eng@yahoo.com</a>		

For Packing Machinery following can be contacted:

<b>Name of Supplier</b>	Plastipack Machines (PVT.) LTD		
<b>Address</b>	G-2, State Life Building No. 3, Dr. Ziauddin Ahmed Road, Karachi – 75530, Pakistan.		
<b>Phone</b>	(+92-21) 35684449	<b>Fax</b>	(+92-21) 35682150
<b>E-mail</b>	<a href="mailto:info@plastipack.com">info@plastipack.com</a>		
<b>Website</b>	<a href="http://www.plastipack.com">www.plastipack.com</a>		

## 7.2 Raw Material Suppliers / Expert

<b>Name of Expert /Organization</b>	Mr. Usman Bikiya		
<b>Address</b>	Plot 19, Sector 23, Korangi Industrial Area, Karachi 74900 Pakistan		
<b>Phone</b>	(+92213) 512-0766	<b>Fax</b>	
<b>E-mail</b>	info@bikiyaindustries.com		
<b>Website</b>	<a href="https://www.bikiyaindustries.com/">https://www.bikiyaindustries.com/</a>		

## 8 USEFUL WEB LINKS

<b>Small &amp; Medium Enterprises Development Authority (SMEDA)</b>	<a href="http://www.smeda.org.pk">www.smeda.org.pk</a>
<b>Government of Pakistan</b>	<a href="http://www.pakistan.gov.pk">www.pakistan.gov.pk</a>
<b>Ministry of Industries &amp; Production</b>	<a href="http://www.moip.gov.pk">www.moip.gov.pk</a>
<b>Ministry of Education, Training &amp; Standards in Higher Education</b>	<a href="http://moptt.gov.pk">http://moptt.gov.pk</a>
<b>Government of Punjab</b>	<a href="http://www.punjab.gov.pk">www.punjab.gov.pk</a>
<b>Government of Sindh</b>	<a href="http://www.sindh.gov.pk">www.sindh.gov.pk</a>
<b>Government of Khyber Pakhtunkhwa</b>	<a href="http://www.khyberpakhtunkhwa.gov.pk">www.khyberpakhtunkhwa.gov.pk</a>
<b>Government of Balochistan</b>	<a href="http://www.balochistan.gov.pk">www.balochistan.gov.pk</a>
<b>Government of Gilgit Baltistan</b>	<a href="http://www.gilgitbaltistan.gov.pk">www.gilgitbaltistan.gov.pk</a>
<b>Government of Azad Jamu Kashmir</b>	<a href="http://www.ajk.gov.pk">www.ajk.gov.pk</a>
<b>Trade Development Authority of Pakistan (TDAP)</b>	<a href="http://www.tdap.gov.pk">www.tdap.gov.pk</a>
<b>Security Commission of Pakistan (SECP)</b>	<a href="http://www.secp.gov.pk">www.secp.gov.pk</a>
<b>Federation of Pakistan Chambers of Commerce and Industry (FPCCI)</b>	<a href="http://www.fpcci.com.pk">www.fpcci.com.pk</a>

<b>State Bank of Pakistan (SBP)</b>	<a href="http://www.sbp.org.pk">www.sbp.org.pk</a>
<b>Punjab Small Industries Corporation</b>	<a href="http://www.psic.gop.pk">www.psic.gop.pk</a>
<b>Sindh Small Industries Corporation</b>	<a href="http://www.ssic.gos.pk">www.ssic.gos.pk</a>
<b>Pakistan Horticulture Development and Export Company (PHDEC)</b>	<a href="http://www.phdec.org.pk">www.phdec.org.pk</a>
<b>Punjab Vocational Training Council (PVTC)</b>	<a href="http://www.pvtc.gop.pk">www.pvtc.gop.pk</a>
<b>Technical Education and Vocational Training Authority (TEVTA)</b>	<a href="http://www.tevta.org">www.tevta.org</a>
<b>Plastic Technology Centre (PTC)</b>	<a href="http://www.ptc.org.pk">www.ptc.org.pk</a>
<b>All Pakistan Paper Merchants Association</b>	<a href="http://www.appma.com.pk">www.appma.com.pk</a>
<b>Indenter's Association Of Pakistan</b>	<a href="http://www.iaop.pk">www.iaop.pk</a>

## 9 KEY ASSUMPTIONS

### 9.1 Operating Cost Assumptions

Description	Details
Shift Length	08 hours
Number of shifts	01
Days operational per year	330 days

### 9.2 Production Cost Assumptions

Description	Details
Cost per unit of product (Combine Average Price)	Rs.459
Increase in Cost Price	05%
Production Capacity	1,732,500 Kg
Production Capacity Utilization	40%

### 9.3 Revenue Assumptions

Description	Details
Average Price per Kg	Rs.597
Price growth rate	06%

### 9.4 Financial Assumptions

Description	Details
Project Life	10 years
Debt Equity Ratio	00 : 100





## 10 FINANCIAL ANALYSIS

Calculations										SMEDA
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	408,385,860	492,479,746	580,112,373	676,487,988	782,340,273	898,459,474	1,025,696,555	1,164,967,632	1,317,258,730	1,397,385,961
<i>Cost of sales</i>										
Cost of goods sold 1	318,119,463	375,778,616	438,408,385	506,361,684	580,014,293	659,766,258	746,043,384	839,298,808	940,014,664	987,015,398
Operating costs 1 (direct labor)	5,925,000	6,575,024	7,216,181	7,919,659	8,691,553	9,538,540	20,935,890	22,975,606	25,213,858	27,690,348
Operating costs 2 (machinery maintenance)	1,150,000	1,265,000	1,391,500	1,530,650	1,683,715	1,852,087	2,037,295	2,241,025	2,465,127	2,711,640
Operating costs 3 (direct electricity)	16,632,000	20,582,100	25,155,900	30,438,639	36,526,367	43,527,254	51,563,054	60,770,743	71,304,338	78,434,772
Operating costs 4 (diesel for Genset)	5,848,920	7,238,039	8,846,492	10,704,255	12,845,106	15,307,084	18,133,007	21,371,045	25,075,359	27,582,895
Total cost of sales	347,675,383	411,438,778	481,018,457	556,954,888	639,761,033	729,991,222	838,712,631	946,657,226	1,064,073,347	1,123,435,052
Gross Profit	60,710,478	81,040,969	99,093,916	119,533,101	142,579,239	168,468,252	186,983,924	218,310,406	253,185,383	273,950,909
	15%	16%	17%	18%	18%	19%	18%	19%	19%	20%
<i>General administration &amp; selling expenses</i>										
Administration expense	4,584,000	5,030,305	5,520,062	6,057,503	6,647,270	7,294,458	16,637,952	18,257,846	20,035,456	21,986,136
Administration benefits expense	320,880	352,121	386,404	424,025	465,309	510,612	1,164,657	1,278,049	1,402,482	1,539,030
Building rental expense	1,800,000	1,980,000	2,178,000	2,395,800	2,635,380	2,898,918	3,188,810	3,507,691	3,858,460	4,244,306
Distribution Expense	24,503,152	29,548,785	34,806,742	40,589,279	46,940,416	53,907,568	61,541,793	69,898,058	79,035,524	83,843,158
Electricity expense	330,000	356,400	384,912	415,705	448,961	484,878	523,669	565,562	610,807	659,672
Communications expense (phone, fax, mail, internet, etc.)	229,200	251,515	276,003	302,875	332,364	364,723	831,898	912,892	1,001,773	1,099,307
Office vehicles running expense	98,000	107,800	118,580	130,438	143,482	157,830	173,613	190,974	210,072	231,079
Office expenses (stationary, entertainment, janitorial services, etc.)	183,360	201,212	220,802	242,300	265,891	291,778	665,518	730,314	801,418	879,445
Marketing & selling	12,251,576	14,774,392	17,403,371	20,294,640	23,470,208	26,953,784	30,770,897	34,949,029	39,517,762	41,921,579
Professional fees (legal, audit, consultants, etc.)	816,772	984,959	1,160,225	1,352,976	1,564,681	1,796,919	2,051,393	2,329,935	2,634,517	2,794,772
Depreciation expense	4,739,500	4,739,500	4,739,500	4,739,500	4,739,500	6,044,584	6,044,584	6,044,584	6,044,584	6,044,584
Amortization of pre-operating costs	161,515	161,515	161,515	161,515	161,515	-	-	-	-	-
Amortization of legal, licensing, and training costs	100,000	100,000	100,000	100,000	100,000	-	-	-	-	-
Bad debt expense	4,083,859	4,924,797	5,801,124	6,764,880	7,823,403	8,984,595	10,256,966	11,649,676	13,172,587	13,973,860
Miscellaneous expense 1	1,500,000	1,575,000	1,653,750	1,736,438	1,823,259	1,914,422	2,010,143	2,110,651	2,216,183	2,326,992
Subtotal	55,701,813	65,088,303	74,910,991	85,707,874	97,561,639	111,605,070	135,861,891	152,425,261	170,541,625	181,543,918
Operating Income	5,008,665	15,952,666	24,182,925	33,825,227	45,017,600	56,863,182	51,122,033	65,885,145	82,643,759	92,406,991
Gain / (loss) on sale of machinery & equipment	-	-	-	-	9,200,000	-	-	-	-	-
Gain / (loss) on sale of office vehicles	-	-	-	-	112,000	-	-	-	-	-
Earnings Before Interest & Taxes	5,008,665	15,952,666	24,182,925	33,825,227	54,329,600	56,863,182	51,122,033	65,885,145	82,643,759	92,406,991
Interest on short term debt	558,862	-	-	-	-	-	-	-	-	-
Subtotal	558,862	-	-	-	-	-	-	-	-	-
Earnings Before Tax	4,449,803	15,952,666	24,182,925	33,825,227	54,329,600	56,863,182	51,122,033	65,885,145	82,643,759	92,406,991
Tax	889,961	3,190,533	4,836,585	6,765,045	10,865,920	11,372,636	10,224,407	13,177,029	16,528,752	18,481,398
<b>NET PROFIT/(LOSS) AFTER TAX</b>	<b>3,559,842</b>	<b>12,762,133</b>	<b>19,346,340</b>	<b>27,060,181</b>	<b>43,463,680</b>	<b>45,490,545</b>	<b>40,897,626</b>	<b>52,708,116</b>	<b>66,115,007</b>	<b>73,925,593</b>

**Calculations**
**SMEDA**
**Balance Sheet**

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<b>Assets</b>											
<i>Current assets</i>											
Cash & Bank	-	1,310,049	18,888,698	30,625,684	45,046,317	37,471,842	56,055,629	66,487,689	82,792,484	105,554,114	132,337,872
Accounts receivable		16,782,981	18,510,937	22,039,564	25,820,555	29,975,923	34,536,981	39,537,453	45,013,648	51,004,651	55,780,370
Finished goods inventory		4,400,954	5,150,138	6,020,256	6,969,856	8,005,352	9,133,673	10,493,277	11,843,085	13,311,316	14,042,938
Equipment spare part inventory	47,917	55,344	63,922	73,830	85,274	98,491	113,757	131,389	151,755	175,277	-
Raw material inventory	7,952,987	9,394,465	10,960,210	12,659,042	14,500,357	16,494,156	18,651,085	20,982,470	23,500,367	24,675,385	24,675,385
Pre-paid building rent	1,800,000	1,980,000	2,178,000	2,395,800	2,635,380	2,898,918	3,188,810	3,507,691	3,858,460	4,244,306	-
<b>Total Current Assets</b>	<b>9,800,903</b>	<b>33,923,793</b>	<b>55,751,904</b>	<b>73,814,176</b>	<b>95,057,740</b>	<b>94,944,682</b>	<b>121,679,935</b>	<b>141,139,969</b>	<b>167,159,798</b>	<b>198,965,049</b>	<b>226,836,566</b>
<i>Fixed assets</i>											
Machinery & equipment	23,000,000	18,400,000	13,800,000	9,200,000	4,600,000	29,354,476	23,483,581	17,612,686	11,741,790	5,870,895	-
Furniture & fixtures	350,000	315,000	280,000	245,000	210,000	175,000	140,000	105,000	70,000	35,000	-
Office vehicles	280,000	224,000	168,000	112,000	56,000	450,943	360,754	270,566	180,377	90,189	-
Office equipment	485,000	436,500	388,000	339,500	291,000	242,500	194,000	145,500	97,000	48,500	-
<b>Total Fixed Assets</b>	<b>24,115,000</b>	<b>19,375,500</b>	<b>14,636,000</b>	<b>9,896,500</b>	<b>5,157,000</b>	<b>30,222,919</b>	<b>24,178,335</b>	<b>18,133,751</b>	<b>12,089,167</b>	<b>6,044,584</b>	<b>-</b>
<i>Intangible assets</i>											
Pre-operation costs	807,575	646,060	484,545	323,030	161,515	-	-	-	-	-	-
Legal, licensing, & training costs	500,000	400,000	300,000	200,000	100,000	-	-	-	-	-	-
<b>Total Intangible Assets</b>	<b>1,307,575</b>	<b>1,046,060</b>	<b>784,545</b>	<b>523,030</b>	<b>261,515</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL ASSETS</b>	<b>35,223,478</b>	<b>54,345,353</b>	<b>71,172,449</b>	<b>84,233,706</b>	<b>100,476,255</b>	<b>125,167,601</b>	<b>145,858,270</b>	<b>159,273,720</b>	<b>179,248,965</b>	<b>205,009,633</b>	<b>226,836,566</b>
<b>Liabilities &amp; Shareholders' Equity</b>											
<i>Current liabilities</i>											
Accounts payable		22,515,019	26,579,983	30,995,394	35,786,162	40,978,812	46,601,588	52,684,557	59,259,723	66,255,511	69,479,618
<b>Total Current Liabilities</b>	<b>6,952,987</b>	<b>22,515,019</b>	<b>26,579,983</b>	<b>30,995,394</b>	<b>35,786,162</b>	<b>40,978,812</b>	<b>46,601,588</b>	<b>52,684,557</b>	<b>59,259,723</b>	<b>66,255,511</b>	<b>69,479,618</b>
<i>Other liabilities</i>											
Deferred tax		-	-	-	-	-	-	-	-	-	-
Long term debt (Project Loan)	-	-	-	-	-	-	-	-	-	-	-
Long term debt (Working Capital Loan)	-	-	-	-	-	-	-	-	-	-	-
<b>Total Long Term Liabilities</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<i>Shareholders' equity</i>											
Paid-up capital	28,270,492	28,270,492	28,270,492	28,270,492	28,270,492	28,270,492	28,270,492	28,270,492	28,270,492	28,270,492	28,270,492
Retained earnings		3,559,842	16,321,975	24,967,820	36,419,601	55,918,297	70,986,190	78,318,671	91,718,751	110,483,630	129,086,456
<b>Total Equity</b>	<b>28,270,492</b>	<b>31,830,334</b>	<b>44,592,467</b>	<b>53,238,312</b>	<b>64,690,093</b>	<b>84,188,789</b>	<b>99,256,681</b>	<b>106,589,163</b>	<b>119,989,243</b>	<b>138,754,122</b>	<b>157,356,948</b>
<b>TOTAL CAPITAL AND LIABILITIES</b>	<b>35,223,478</b>	<b>54,345,353</b>	<b>71,172,449</b>	<b>84,233,706</b>	<b>100,476,255</b>	<b>125,167,601</b>	<b>145,858,270</b>	<b>159,273,720</b>	<b>179,248,965</b>	<b>205,009,633</b>	<b>226,836,566</b>

# Calculations

SMEDA

## Cash Flow Statement

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>Operating activities</i>											
Net profit		3,559,842	12,762,133	19,346,340	27,060,181	43,463,680	45,490,545	40,897,626	52,708,116	66,115,007	73,925,593
Add: depreciation expense		4,739,500	4,739,500	4,739,500	4,739,500	4,739,500	6,044,584	6,044,584	6,044,584	6,044,584	6,044,584
amortization of pre-operating costs		161,515	161,515	161,515	161,515	161,515	-	-	-	-	-
amortization of training costs		100,000	100,000	100,000	100,000	100,000	-	-	-	-	-
Deferred income tax		-	-	-	-	-	-	-	-	-	-
Accounts receivable		(16,782,981)	(1,727,957)	(3,528,627)	(3,780,991)	(4,155,368)	(4,561,058)	(5,000,472)	(5,476,195)	(5,991,004)	(4,775,719)
Finished goods inventory		(4,400,954)	(749,183)	(870,118)	(949,600)	(1,035,495)	(1,128,321)	(1,359,604)	(1,349,808)	(1,468,232)	(731,622)
Equipment inventory	(47,917)	(7,427)	(8,578)	(9,908)	(11,444)	(13,217)	(15,266)	(17,632)	(20,365)	(23,522)	175,277
Raw material inventory	(7,952,987)	(1,441,479)	(1,565,744)	(1,698,832)	(1,841,315)	(1,993,799)	(2,156,928)	(2,331,386)	(2,517,896)	(1,175,018)	-
Pre-paid building rent	(1,800,000)	(180,000)	(198,000)	(217,800)	(239,580)	(263,538)	(289,892)	(318,881)	(350,769)	(385,846)	4,244,306
Accounts payable		22,515,019	4,064,964	4,415,412	4,790,768	5,192,650	5,622,776	6,082,969	6,575,165	6,995,788	3,224,107
Cash provided by operations	(9,800,903)	8,263,035	17,578,649	22,437,481	30,029,033	46,195,928	49,006,440	43,997,205	55,612,831	70,111,757	82,106,526
<i>Financing activities</i>											
Project Loan - principal repayment		-	-	-	-	-	-	-	-	-	-
Working Capital Loan - principal repayment		-	-	-	-	-	-	-	-	-	-
Additions to Project Loan	-	-	-	-	-	-	-	-	-	-	-
Additions to Working Capital Loan	-	-	-	-	-	-	-	-	-	-	-
Issuance of shares	28,270,492	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing activities	28,270,492	(6,952,987)	-	-	-	-	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(25,422,575)	-	-	-	-	(29,805,419)	-	-	-	-	-
Cash (used for) / provided by investing activities	(25,422,575)	-	-	-	-	(29,805,419)	-	-	-	-	-
<b>NETCASH</b>	<b>(6,952,987)</b>	<b>1,310,049</b>	<b>17,578,649</b>	<b>22,437,481</b>	<b>30,029,033</b>	<b>16,390,509</b>	<b>49,006,440</b>	<b>43,997,205</b>	<b>55,612,831</b>	<b>70,111,757</b>	<b>82,106,526</b>
Cash balance brought forward		-	1,310,049	18,888,698	30,625,684	45,046,317	37,471,842	56,055,629	66,487,689	82,792,484	105,554,114
Cash available for appropriation	(6,952,987)	1,310,049	18,888,698	41,326,179	60,654,718	61,436,826	86,478,282	100,052,834	122,100,521	152,904,241	187,660,639
Dividend		-	-	10,700,494	15,608,400	23,964,984	30,422,653	33,565,145	39,308,036	47,350,127	55,322,767
Cash balance	(6,952,987)	1,310,049	18,888,698	30,625,684	45,046,317	37,471,842	56,055,629	66,487,689	82,792,484	105,554,114	132,337,872
Cash carried forward	-	1,310,049	18,888,698	30,625,684	45,046,317	37,471,842	56,055,629	66,487,689	82,792,484	105,554,114	132,337,872



# Small and Medium Enterprises Development Authority

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REGIONAL OFFICE PUNJAB	REGIONAL OFFICE SINDH	REGIONAL OFFICE KPK	REGIONAL OFFICE BALOCHISTAN
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