

29th July 2022

The Board of Directors,

Syrma SGS Technology Limited

Dear Sir(s),

Re: Detailed Project Report

With reference to the Engagement letter dated 06 September 2021, we have prepared the Detailed Project Report (DPR) for Syrma SGS Private Limited ("Syrma"). The DPR is prepared for the onward submission to the Book running lead managers for the purpose of inclusion as part of the 'Object of the offer' section in the red herring prospectus (the "RHP") prepared by the Company in connection with its proposed Initial Public Offer ("IPO") in terms of the requirements of:

- (i) Section 26 of Part I of Chapter III of the Companies' Act, 2013("the Act");
- (ii) Relevant provisions of the Securities and Exchange Board of India (Issue of Capital and Disclosure Requirements) Regulations, 2018, issued by the Securities and Exchange Board of India, as amended.

The DPR should not be used for any other purpose without our prior written consent.

Accordingly, we enclose herewith the Detailed Project Report of Manesar & Bawal, Haryana dated 29th July 2022.

The professional engagement has been carried out based upon our knowledge of business, discussions carried out with the Management and the relevant stakeholders, visits to existing manufacturing plants and a few planned expansion sites, and other supporting documents (technical and otherwise) received from the Management.

The DPR is prepared based upon the current plans of utilization of the funds proposed to be raised through the IPO as at date of DPR and any subsequent change in plans will require an update to the DPR.

We would like to thank the Management and the staffs for their co-operation and courtesies extended to us during the course of our assignment.

Should you require any clarification, we shall be pleased to provide the same.

Thanking you,

For and on behalf of **M/s Rahul R Pujara & Associates**

Rahul R Pujara, Proprietor

Syrma SGS Technology Limited

Detailed Project Report dated 29-Jul-22 prepared by Rahul R Pujara & Associates in connection with the project proposed to be undertaken by our Company in Bawal and Manesar in Haryana, India.

Prepared by:

Rahul R Pujara & Associates

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Parrys, Chennai - 600001

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1. Brief About the Company

Syrma SGS Technology Limited (“Syrma” or “the Company”), was established in Jan 2005 in the Madras Export Processing Zone (MEPZ), a Special Economic Zone (SEZ), situated in Chennai, Tamil Nadu. The Company a leading technology-focussed engineering and design company engaged in turnkey electronics manufacturing services (“EMS”), specialising in precision manufacturing for a variety of end-use industries Company was incorporated in 2004 when it commenced manufacturing of magnetics and memory modules. In November 2005, it commenced manufacturing of RFID products and subsequently progressed into manufacturing of PCBA products in April 2007. It leverages our various strengths to consolidate and bring down the cost of raw materials and components, and explore alternative components, vendors, materials and processes to reduce product cost and bring faster products to market. Their concept of co-creation initiative enables to design products for customers from an idea or concept that they initiate, and give them the preliminary prototypes for their testing and trials. Once the design and quality are approved, company help them to seamlessly transition to volume manufacturing with high-speed state-of-the-art manufacturing facilities. Company have continuously diversified product portfolio to keep pace with developments in technology. In addition, company’s continued focus on technology innovation and design infrastructure have also enabled to undertake design and engineering services for customers over time.

Company currently operates through eleven manufacturing facilities spread across five states namely Tamil Nadu, Karnataka, Himachal Pradesh, Uttar Pradesh and Haryana. Company’s manufacturing facilities in Tamil Nadu are located in a special economic zone, which allow us to avail certain tax and other benefits in respect of the products manufactured out of these facilities. Manufacturing facilities are strategically located in Tamil Nadu and Karnataka, which allow company to cater to its customers in south India and our export requirements (in light of the proximity of these facilities to the respective city airports and Chennai port). In addition, manufacturing facilities in Himachal Pradesh and Haryana enable company to cater to its customers in north India. Manufacturing facility in Gurgaon, Haryana, which caters exclusively to export customers, has been set up under the Electronic Hardware Technology Park scheme, allows to avail various tax benefits. Not far from Delhi Airport and with better road connectivity Ghaziabad (Uttar Pradesh) plant specialises in manufacturing of RFID inlay tags. Further details on the SMT manufacturing process and facilities, are provided under the Current Business operations section.

In addition to existing manufacturing, and engineering and design services offerings, company have also started ‘zone of autonomous creation’ in 2019 pursuant to which company provided quick prototyping services where a design concept is provided to the company by its customers and company help create an early form of the final product. Company has a dedicated line for PCB assembly with an autonomous team that has procurement, process, quality, and NPI (new product introduction) engineers independent of manufacturing facilities.

2. Current Business Operations

Company currently operates through eleven strategically located manufacturing facilities in north India (i.e. Himachal Pradesh, Haryana and Uttar Pradesh) and south India (i.e. Tamil Nadu and Karnataka). Pan-India presence enables us to efficiently cater to the requirements of our customers in north and south

India. The Company offers competitive advantage to the customers as compared to other competing locations like China in terms of:

- Competitive cost
- In house Design & Development capability
- Well Developed Supply Chain for short delivery timelines.
- Competitive prices and ease of doing business.
- Quick Custom Clearance for Exports
- Proximity to Port and Airport, thus lower logistical costs.

During the recent years, the Company had done business in the following segments of industry for its overseas customers:

- Telecom and Wireless systems
- Medical Electronics
- Radio Frequency Identification devices
- Internet of things (IoT) devices
- Automotive Electronics
- Switched Mode Power Supply (SMPS)
- Electronics Hardware & Appliances.

Some of the industries that Syrma is serving includes, Aerospace, automotive, consumer durables, industrial, renewable energy, power, opto-electronics, smart homes, software, telecom, etc.

The Company is proposing to invest Rs. 5,712.15 million as part of the Capital expenditure in 4 projects, across four different locations of the country. Out of Rs. 5,712.15 million budgeted CAPEX, the Company has budgeted a total CAPEX of Rs. 2,834.03 million (49.61% of the Rs. 5,712.15 million proposed budgeted CAPEX) for its Project at Bawal and Manesar, Haryana. The Capital expenditure is spread across years for which all the details is given in the following detailed project report.

The summary of the entire investment in Capital Assets proposed to be made across projects as part of utilisation of the proceeds of the issue is as follows:

Project	Brief	Amount deployed as on 05-Jul-22	Amount proposed to be utilized		Total	Contribution %
			FY 22-23 (From 06-Jul-22)	FY 23-24		
Project Chennai, Tamil Nadu(A)	Development of R&D lab, expansion of EMS manufacturing facility	198.98	1001.44	372.93	1573.35	27.54%
Project Manesar and Bawal, Haryana (B)						
Manesar	Purchase of premises for	667.52	756.21	823.94	2247.67	39.35%

Project	Brief	Amount deployed as on 05-Jul-22	Amount proposed to be utilized		Total	Contribution %
			FY 22-23 (From 06-Jul-22)	FY 23-24		
	establishment of EMS manufacturing facilities					
Bawal	Development and construction of premises for setting up of SMT lines operations	45.59	470.53	70.24	586.36	10.27%
Project Hyderabad, Telangana (C)	Development of factory for setting up EMS manufacturing facilities	-	125.60	372.41	498.01	8.72%
Project Hosur, Tamil Nadu (D)	Development and construction of premises for setting up of SMT lines operations	-	261.69	545.07	806.76	14.12%
Total (A)+(B)+(C)+(D)		912.09	2615.47	2184.59	5712.15	100.00%

The Promoters, Promoter Group, Directors, Key Managerial Personnel and Group Companies do not have any interest in the proposed purchase of building, leasing of land, execution of civil works, acquisition of plant and machinery, or in the entities from whom we have obtained quotations in relation to such activities, except for Sandeep Tandon being the Director of J T Holdings Private Limited from whom the land and building is to be leased for Project Hyderabad.

In respect of the proposed capital expenditure, the Company has not made payments for 95.72% of the plant and machinery required and proposed to be purchased for these projects as on **05-Jul-22**. No second-hand or used machinery is proposed to be purchased out of the net proceeds from the issue of shares.

Project Manesar, Haryana

A. Background of the Project

The Company and SGS Tekniks (Subsidiary Company) has its manufacturing facility across various location. The Company runs the operations in Chennai, Bawal, Bargur and Manesar (in the Mumbai-Delhi Corridor). The company's core business portfolio is into offering world class Electronics Manufacturing Service for products such Printed Circuit Board Assembly and Product Manufacturing, Turnkey Radio Frequency Identification (RFID) and High precision Magnetic coils.

The Company has undertaken project in Manesar for expansion of the SMT lines for venturing into new business segment, which comprises of 3 major sub-projects for the purpose of expansion of current business operations and venturing into new business segments. The 3 sub-projects in Manesar expansion are as follows:

1. Developing and setting up additional SMT lines for manufacturing of products in Telecom sector.
2. Developing and setting up additional SMT lines for manufacturing of products used in White goods.
3. Expansion of the current manufacturing facilities, by installation of Balancing equipment

The Company has currently been manufacturing products for both Telecom and white goods in various locations across the country. However, the same was carried on a small-scale basis. The Company is now establishing plants with sole focus on the manufacturing of such specific products, considering the potential volume of the market and the current demand from the customers.

The Production Linked Incentive (PLI) Scheme for Telecom and Networking products & White goods intends to promote manufacture of Telecom and Networking Products & white goods like air conditioners & LED lights in India along with the corresponding components for these products. The Scheme proposes a financial incentive to boost domestic manufacturing and attract investments in the above-mentioned target segments while encouraging "Make in India". The scheme will also be encouraging exports.

The Telecom PLI scheme, of the Company has been approved by the Government for the manufacturing of components used in Telecom and Networking Products., The Company has committed to invest at-least Rs. 1,060 million under the PLI scheme over 4 financial years from FY 21-22 to FY 24-25.

The Company has projected a cumulative net sales target of Rs. 41,130 million in 5 financial years commencing FY 21-22 to FY 25-26 to avail the incentives of around Rs. 2,009.60 million across the corresponding years under the PLI Scheme

The prime objective of the PLI scheme is to make manufacturing in India globally competitive by removing sectoral disabilities, creating economies of scale, and ensuring efficiencies, including, enhancing exports, creating a robust component ecosystem and employment generation.

B. Capital Expenditure of the Manesar, Haryana Project

The Company has budgeted an expenditure of around Rs. 2,247.67 million for setting up additional SMT lines for full-fledged assembling operations for components for Telecom and White Goods products. The overall expenditure breakup and the implementation schedule of the capital expenditure of expansion of SMT lines in Manesar is listed below:

Amount in Rs. Millions

S. No.	Project	Nature of Expenditure	Amount deployed as on 05-Jul-22	FY 22-23 (From 06-Jul-22)	FY 23-24	Total
1	Acquisition of Land and building (including Civil Structure)	Land and Building	599.79	-	-	599.79
	Sub-Total		599.79	-	-	599.79
2	Developing and setting up additional SMT lines for manufacturing components for Telecom products. (8 SMT lines)	SMT Machinery Purchase	67.73	403.09	470.82	941.64
3	Developing and setting up additional SMT lines for manufacturing of components for White goods. (6 SMT lines)	SMT Machinery purchase	-	353.12	353.12	706.24
	Sub-Total		67.73	756.21	823.94	1647.88
	Total		667.52	756.21	823.94	2247.67

The Expenditure shall be incurred on broad three categories:

- a) **Land & Building** – In accordance with extensive discussions with [EIH Limited], the Company has acquired land and building located at Industrial Model Township (IMT) in Manesar for an aggregate consideration of Rs. 599.79 million (including taxes, stamp duty & other miscellaneous charges) for developing and setting up infrastructure for assembling of components of Telecom products and White goods products. The location acquired consists of a fenced land of around 7,875 sq. meters. In Plot No. 22, Sector 5, Industrial Model Township (IMT) in Manesar along with a constructed building having a built-up facility of around 0.14 lac sq meters in the premises. The estimated cost (before taxes) of land & building is around Rs. 477.06 million and Rs. 122.73 million

for civil cost for infrastructure customization. The Company does not anticipate any additional expenditure for the purpose of Civil work.

There is no relationship of the sellers of land (EIH Limited) to any promoter or director of the Issuer Company. The land has been acquired and is registered in the name of the Company. The land is free from all encumbrances and has a clear title.

The Company shall meet the requirement of establishing all the 14 SMT lines in the same building.

Note on Expenditure Incurred as on 05-Jul-22:

As on 05-Jul-22, the Company has already incurred certain costs and has paid advances towards the Building costs of this project. Summary and other details are listed in the table below:

S. No.	Particulars	Amount in INR Millions
1	Acquisition of Land and building (including Civil Structure)	599.79
	Total	599.79

b) Machinery Purchase – A total of 14 SMT lines are proposed to be procured for manufacturing of Telecom and white goods. The Company has proposed to utilize 8 SMT lines for the purpose of manufacture of components for Telecom products and 6 SMT lines for manufacture of components for White goods manufacturing. The cost towards procurement of Machinery is the purchase cost based on the quotations obtained from vendors and excludes applicable freights, miscellaneous costs & import taxes, if any. Such additional costs shall be incurred and paid from internal accruals of the Company. The Costs have been computed assuming a conversion rate of Rs. 76/USD. No second-hand or used machinery is proposed to be purchased out of the investment amount considered for Project cost. The total expenditure of 90 million is estimated to be incurred for procuring and installing each SMT line. The breakup of the machinery to be purchased is included below.

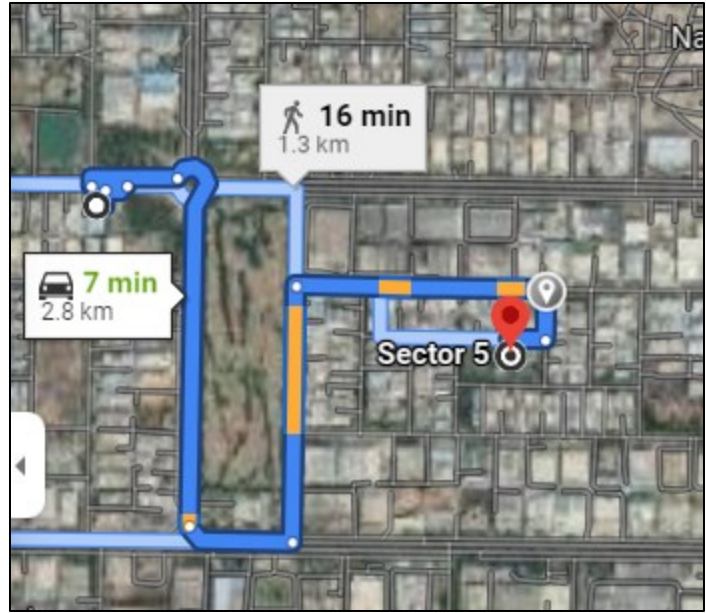
C. Location and it’s viability

The address of the proposed area in Manesar, Haryana:

Plot No. 22, Sector 5, Industrial Model Township (IMT) Manesar, Gurgaon - 122050, Haryana

The Location of the proposed unit in Manesar where the additional 8 SMT lines shall be set up, is within a distance of 2 kms from another operational unit of SGS Tekniks (Subsidiary Company) in Manesar.

S. No	Particulars	Area	Address
1	Additional SMT lines expansion for Telecom products and White goods	1.94 acres (84,506 sq. ft.) of land with a built-up capacity of 1.48 lac sq ft.	Plot No. 22, Sector 5. Industrial Model Township (IMT) Manesar, Gurgaon, Haryana



Picture of the Proposed Location:



Viability of the location:

1. The proposed new location is situated in an approved industrial estate. The primary benefits of industrial zones like, Govt. support, ease of doing business, availability of skilled manpower, availability of power etc. are available to the Company.
2. Smoother functioning & lower logistical costs. The New unit in Manesar is set up within a proximity of less than 1 km from another unit of SGS Techniks (Subsidiary of the Company) in Manesar.
3. The proposed new location offers ready to use manufacturing facility and hence the project can have a small wait-in period before it can go live / operational.
4. Since the plant is situated in a dedicated Industrial Zone other local issues surrounding noise pollution, disturbance from local civil issues not faced by the Company ensuring a stable, uninterrupted work-flow.
5. Since the proposed location is situated in closed proximity to existing plants, access and personal involvement of Senior Management team based at existing 2 Manufacturing plants is readily available ensuring faster and smoother execution of all projects.

D. Factory requirement and Cost Breakup**Plant and Machinery requirements**

The Company has planned to install a total of 14 SMT lines with the balancing backend equipment. 8 of the SMT lines, shall be used for telecom product component manufacturing, while the other 6 SMT lines, shall be used for establishing white goods component manufacturing through the SMT lines. The list of equipments required for one SMT line along with the corresponding amounts is proposed as follows: **(Table 1)**

Description	Vendor	Date of Quotation	Amount (Rs. in million)	
Reflow Oven with Standard Accessories	NM Tronics (India) Private Limited	25-Apr-22	4.47	
Automatic Solder Paste Printer with Standard Accessories		25-Apr-22	4.69	
Automatic Test and Inspection Equipment SPI		25-Apr-22	5.17	
Automatic Test and Inspection Equipment AOI		25-Apr-22	17.90	
Electrical and Air supply Accessories & Cleaning Machine		25-Apr-22	1.88	
Pick and Place Machine (Chip Shooter)		25-Apr-22	54.30	
Magazine, Loader, Unloader, Conveyors		25-Apr-22	3.08	
JT Wave Soldering Machine WS 350		25-Apr-22	5.29	
N2 Generator		25-Apr-22		
Feeders for Pick and Place Machine		25-Apr-22	12.66	
Camera Barcode Reader		25-Apr-22	0.22	
Total			109.66	
Rounded off landed cost for investment in each SMT line– A			109.66	

Proposed Number of SMT lines expansion (8 lines for manufacture of components for Telecom Products & 6 lines for White goods components manufacturing) – B	14
Proposed Investment for 14 SMT lines (A * B)	1,535.24
Expenditure estimated for SMT lines for	
- telecom product components manufacturing (8 SMT lines)	877.28
- White goods components manufacturing (6 SMT lines)	657.96
Total estimated expenditure for SMT Expansion	1,535.24

Apart from the core machineries required for installing a single SMT line, the EMS manufacturing plant also requires other ancillary machineries and equipment to be procured and installed. The Company proposes to purchase certain machinery or equipment which shall be used by a bunch of SMT lines i.e., certain expenditure which shall be incurred at factory level. The following is the breakup of such expenditure which shall be incurred on setting up of the SMT lines manufacturing plant: **(Table 2)**

Description	Vendor	Date of Quotation	Amount (Rs. in million)
FLEXA Programming Software – Pick and Place machinery software (Intangible asset)	NM Tronics (India) Private Limited	25-Apr-22	1.67
FLEXA Programming Software and Machine Interface - 32mm		25-Apr-22	3.47
FLEXA Programming Software and Machine Interface - 44mm			
System pc fujitrax and fujiflexa			
Aoi review system			
Offline Router (4 Axes machine)		25-Apr-22	10.95
Asyntek selectcoat			
Total			16.09
Rounded off landed cost for investment in each SMT line – A			16.10
Proposed set of other equipment under the Manesar Project – B			7
Proposed Investment for other equipment in setting up SMT manufacturing premises (A * B)			112.63

Total Expenditure proposed to be incurred on machinery for setting up additional EMS manufacturing for Telecom and White goods component manufacturing products:

Particulars	Amount (Rs. in million)
Estimated expenditure arrived for setting up additional of SMT lines (Table 1)	1,535.24
Estimated expenditure incurred for purchasing of other equipment – factory level expenditure (Table 2)	112.63
Total Expenditure estimated to be spent on additional SMT lines in Manesar	1,647.87

Total Expenditure proposed to be incurred for setting up SMT lines under the respective segment:

Particulars	Amount (Rs. in million)
Estimated expenditure arrived for telecom product components manufacturing (8 SMT lines)	941.64
Estimated expenditure arrived for White goods components manufacturing (6 SMT lines)	706.23
Total estimated expenditure for setting up plant for SMT lines for manufacturing telecom products and white goods components under Manesar Project (14 lines)	1,647.87

Note on Expenditure Incurred as on 05-Jul-22:

As on **05-Jul-22**, the Company has already incurred certain costs and has paid advances towards the building costs of the project. Summary and other details are listed in the table below:

S. No.	Particulars	Amount in INR Millions
1	Payment towards Capex pertaining SMT Lines as mentioned above	67.73
	Total	67.73

The quotations for the above equipment, are valid for a period of 180 days, from the date of respective quotation.

The Company has partly placed orders for the purchase of plant and machinery. Details of the same are provided below

Proposed Capacity of expansion for Manesar SMT line

With the expansion of each SMT line, the capacity shall increase by the given components per hour (CPH). Capacity of each SMT line shall be as follows. For Telecom products and White goods component manufacturing, the Company does not have current capacity, however the subsidiary involved in such operations at Manesar, with 6 SMT lines is included for comparing the Proposed incremental capacity.

S. No.	Particulars (Capacity in CPH)	Total Actual Capacity in Manesar plant - 6 SMT lines (A)	Proposed Capacity - Additional 14 SMT lines (B)	% of incremental capacity (C = B/A)
	MACHINE MAKE	FUJI, ASM and Yamaha	Fuji	
	Model	NXT - M3 & NXT M6 & AIMEX IIIC	6 X M3III + 3X M6III NXTIII	
A	Rated Machine capacity of Chip shooter	605,000	5,320,000	879%
B	Actual Machine capacity - Precision Placer	119,200	350,000	294%

S. No.	Particulars (Capacity in CPH)	Total Actual Capacity in Manesar plant - 6 SMT lines (A)	Proposed Capacity - Additional 14 SMT lines (B)	% of incremental capacity (C = B/A)
C	Total Line components placement capacity (A + B)	724,200	5,670,000	783%
D	Actual capacity - Chip shooter (@55%) (C*55%)	398,310	3,118,500	783%
	Capacity per hour @ 85 % Efficiency (G = F*85%)	338,564	2,650,720	783%
E	Optimum Capacity per day (@85% efficiency) (in CPH)	4,739,889	37,110,150	783%

The Capacity is indicative and shall however depend on the Products and the head used to place the components over the PCB in the SMT lines. The above-mentioned details shall be the average output based on the manufacturing capacity currently in the SMT lines with the latest technology.

3. Project Bawal, Haryana

A. Background of the Project

The Company is currently running with 2 SMT lines in Bawal with respect to manufacturing of EMS products. The Company has now undertaken project in Bawal for expansion through, construction of additional building premises in the current operational unit in Bawal and setting up additional SMT lines for EMS manufacturing. The Bawal project shall comprise majorly of the following 2 sub-projects:

1. Construction of building in the existing leased land in Bawal
2. Setting up additional SMT lines in existing manufacturing facilities and new additional building premises.

The Company further may expand the number of lines proposed to be purchased based on the demand and the market conditions for the Company. The newly constructed additional building may also, accommodate higher number of SMT lines, in case of increased demands from the customer and favorable market changes for the Company.

B. Capital Expenditure of the Bawal Project

The Company has budgeted an expenditure of around Rs. 586.36 million for construction of additional building premises in the current operational unit in Bawal and setting up additional SMT lines for EMS manufacturing. The overall expenditure breakup and the implementation schedule of the capital expenditure of expansion of SMT lines in Bawal is listed below:

Amount in Rs. Millions

S. No.	Project	Nature of Expenditure	Amount deployed as on 05-Jul-22	FY 22-23 (From 06-Jul-22)	FY 23-24	Total
1	Cost incurred towards construction of building and infrastructure customisation	Building	-	95.30	20.24	115.54
2	Developing and setting up additional SMT lines in the existing facilities (2 SMT lines)	SMT Machinery Purchase	45.59	164.82	25.00	235.41
3	Developing and setting up additional SMT lines in the new building premises (2 SMT lines)	SMT Machinery purchase	-	210.41	25.00	235.41
Sub-Total			45.59	470.53	70.24	586.36

The Expenditure shall be incurred on broad three categories:

a) Building and Civil cost – The Company proposes to construct an additional building on the existing leased land for setting up EMS manufacturing facilities. The Company shall construct the additional building for the purpose of setting up additional 2 SMT lines in the constructed building. The estimated landed cost of construction of the building is estimated to be around 76.00 million and other civil cost of the building construction, which is estimated to amount around, Rs. 39.00 million.

Costs towards civil work will be incurred by the Company for the purpose of setting up of clean air-conditioned rooms, interior and facility development, customized storage of materials, etc. The breakup of the civil expenditure is given below.

b) Machinery Purchase – A total of 4 SMT lines are proposed to be procured for EMS manufacturing in Bawal. 2 SMT lines are proposed to be installed in the current operational facilities in Bawal and new 2 SMT lines are to be set up in the new manufacturing facilities. The cost towards procurement of Machinery is the purchase cost based on the quotations obtained from vendors and excludes applicable freights, miscellaneous costs & import taxes, if any. Such additional costs shall be incurred and paid from internal accruals of the Company. The Costs have been computed assuming a conversion rate of Rs. 76/USD. No second-hand or used machinery is proposed to be purchased out of the investment amount considered for Project cost. The total expenditure of 103.31 million is estimated to be incurred for procuring and installing each SMT line. The breakup of the machinery to be purchased is included below.

C. Location and it's viability

The address of the proposed area in Bawal, Haryana:

Plot No. 62, Sector 14, Industrial Model township (IMT), Bawal, Rewari district, Haryana.

The Location of the proposed unit in Bawal where the additional 2 SMT lines shall be set up, is exactly the same plot where the current operational unit of the Company in Bawal is situated.

Viability of the location:

1. The location is situated in an approved industrial estate. The primary benefits of industrial zones like, Govt. support, ease of business, availability of skilled manpower, availability of power etc. are available to the Company.
2. Smoother functioning & lower logistical costs.
3. Since the plant is situated in a dedicated Industrial Zone other local issues surrounding noise pollution, disturbance from local civil issues not faced by the Company ensuring a stable, uninterrupted work-flow.
4. Since it's the same location, access and personal involvement of Senior Management team is readily available ensuring faster and smoother execution of all projects.

D. Breakup of Civil Expenditure

The Company has estimated to incur an expenditure of around, Rs. 115.54 million for the purpose of renovation of the building premises and development of infrastructure for setting up the Research and development lab. The broad breakup of the estimated Civil cost expenditure based on the quotation (dated 21-Apr-22) received from the Contractor or Vendor, is as follows:

S. No.	Contractor or Vendor	Particulars	Amount in million
1	M/s Perfect Air	PEB Building construction with RCC Flooring	76.05
2		Interior and Utility.	30.42
3		Office Furniture and canteen tables	1.76
4		IT Infrastructure	3.66
5		Compact storage Racks & Racks	1.76
6		Testers & PC's	1.17
7		Tools and tool room machines	0.73
		Total estimated Civil expenditure	115.54
		Amount estimated above for Construction and Civil cost	115.54

The building construction includes the cost incurred for the development of the clean room for EMS manufacturing facility, electrical fittings, false ceiling, Mezzanine level, transformer and generators, power backup facility, etc. The above-mentioned expenditure is excluding applicable taxes.

E. Factory requirement and Cost Breakup

Plant and Machinery requirements

The Company has planned to install a total of 4 SMT lines. 2 of the SMT lines, shall be installed in the current operational facilities, while the other 2 SMT lines, shall be installed in the new building premises constructed by the Company. The list of major equipment required for one SMT line along with the corresponding amounts is proposed as follows: (Table 1)

Description	Vendor	Date of Quotation	Amount (Rs. in million)
Reflow Oven with Standard Accessories	NM Tronics (India) Private Limited	25-Apr-22	4.47
Automatic Solder Paste Printer with Standard Accessories		25-Apr-22	4.69
Automatic Test and Inspection Equipment SPI		25-Apr-22	5.17
Automatic Test and Inspection Equipment AOI		25-Apr-22	17.91

Description	Vendor	Date of Quotation	Amount (Rs. in million)
Electrical and Air supply Accessories & Cleaning Machine		25-Apr-22	1.88
Pick and Place Machine (Chip Shooter)		25-Apr-22	54.30
Magazine, Loader, Unloader, Conveyors		25-Apr-22	3.08
JT Wave Soldering Machine WS 350		25-Apr-22	5.29
N2 Generator			
Feeders for Pick and Place Machine		25-Apr-22	12.66
Camera Barcode Reader		25-Apr-22	0.22
Total			109.66
Rounded off landed cost for investment in each SMT line– A			109.66
Proposed Number of SMT lines under the Bawal Division (Normal EMS manufacturing and IT products manufacturing) – B			4
Proposed Investment for 4 SMT lines (A * B)			438.64

Apart from the core machineries required for installing a single SMT line, the EMS manufacturing plant also requires other ancillary machineries and equipment to be procured and installed. The Company proposes to purchase certain machinery or equipment which shall be used by a bunch of SMT lines i.e., certain expenditure which shall be incurred at factory level. The following is the breakup of such expenditure which shall be incurred on setting up of the SMT lines manufacturing plant: (Table 2)

Description	Vendor	Date of Quotation	Amount (Rs. in million)
FLEXA Programming Software – Pick and Place machinery software (Intangible asset)		25-Apr-22	1.67
FLEXA Programming Software and Machine Interface - 32mm	NMTronics (India) Private Limited		
FLEXA Programming Software and Machine Interface - 44mm		25-Apr-22	3.47
System pc fujitrax and fujiflexa			
Aoi review system			
Offline Router (4 Axes machine)		25-Apr-22	10.96
Asyntek selectcoat			

Total	16.09
Rounded off landed cost for investment in each SMT line – A	16.09
Proposed set of other equipment under the Bawal Project – B	2
Proposed Investment for other equipment in setting up SMT manufacturing premises (A * B)	32.18

The total expenditure proposed to be incurred to setting up additional EMS manufacturing facilities in Bawal:

Particulars	Amount (Rs. in million)
Estimated expenditure arrived for setting up additional of SMT lines (Table 1)	438.64
Estimated expenditure incurred for purchasing of other equipment – factory level expenditure (Table 2)	32.18
Total Expenditure estimated to be spent on additional SMT lines in Bawal	470.82
- EMS manufacturing in existing facilities	235.41
- EMS manufacturing in the new building premises	235.41
Total estimated expenditure for setting up additional EMS production (as estimated above)	470.82

Total Expenditure proposed to be incurred for setting up SMT lines under the respective segment:

Particulars	Amount (Rs. in million)
Estimated expenditure arrived for EMS manufacturing in existing facilities (2 SMT lines)	235.41
Estimated expenditure arrived for EMS manufacturing in the new building premises (2 SMT lines)	235.41
Total estimated expenditure for setting up plant for SMT lines under Bawal Project (4 SMT lines)	470.82

The Company is yet to place orders for the 100% of the plant and machinery.

Note on Expenditure Incurred as on 05-Jul-22:

As on **05-Jul-22**, the Company has already incurred certain costs and has paid advances towards the costs of this project. Summary and other details are listed in the table below:

S. No.	Particulars	Amount in INR Millions
1	Advance payment towards procurement of Automatic Test and Inspection Equipment AOI and Pick and Place Machine (Chip Shooter)	45.59
	Total	45.59

The quotations for the above equipment, are valid for a period of 180 days, from the date of respective quotation.

Proposed Capacity expansion for Bawal SMT line

With the expansion of each SMT line, the capacity shall increase by the given components per hour (CPH). Capacity of each SMT line shall be as follows. The Proposed incremental capacity of the lines in Bawal is as follows:

S. No.	Particulars (Capacity in CPH)	Total Actual Capacity in Bawal plant -2 SMT lines (A)	Proposed Capacity - Additional 4 SMT lines (B)	% of incremental capacity (C = B/A)
	MACHINE MAKE	FUJI	Fuji	
	Model	NXT - M3 & NXT M6 & AIMEX IIIC	6 X M3III + 3X M6III NXTIII	
A	Rated Machine capacity of Chip shooter	124,000	1,520,000	1226%
B	Actual Machine capacity - Precision Placer	25,000	80,000	320%
C	Total Line components placement capacity (A + B)	149,000	1,600,000	1074%
D	Actual capacity - Chip shooter (@55%) (C*55%)	81,950	880,000	1074%
E	Capacity per day @ 85 % Efficiency (D*85%)	69,658	748,000	1074%
F	Optimum Capacity per day (in CPH)	975,205	10,472,000	1074%

The Capacity is indicative and shall however depend on the Products and the head used to place the components over the PCB in the SMT lines. The above-mentioned details shall be the average output based on the manufacturing capacity currently in the SMT lines with the latest technology.

5. Manufacturing Process – SMT lines Manufacturing

Overview

The Electronic Manufacturing is a term used for companies that designs, manufactures, tests, distributes and provides repair services for electronic components and assemblies for Original Equipment Manufacturers (OEMs). The Manufacturing process is carried out with combination of Surface Mounting Technology (SMT) and Through-Hole (TH) and box Assembly.

The production process from handling of Raw materials to shipment of Finished Goods, all the operations are carried out in completely electro-static Discharge Controlled Environment.

The stages of electronic manufacturing service in generic are as follows:

- Material Handling and Kitting
- SMT Assembling
- Through-Hole Assembling
- Box/product Assembly
- Quality Audit and Shipping

The various stages of manufacturing process are as follows:

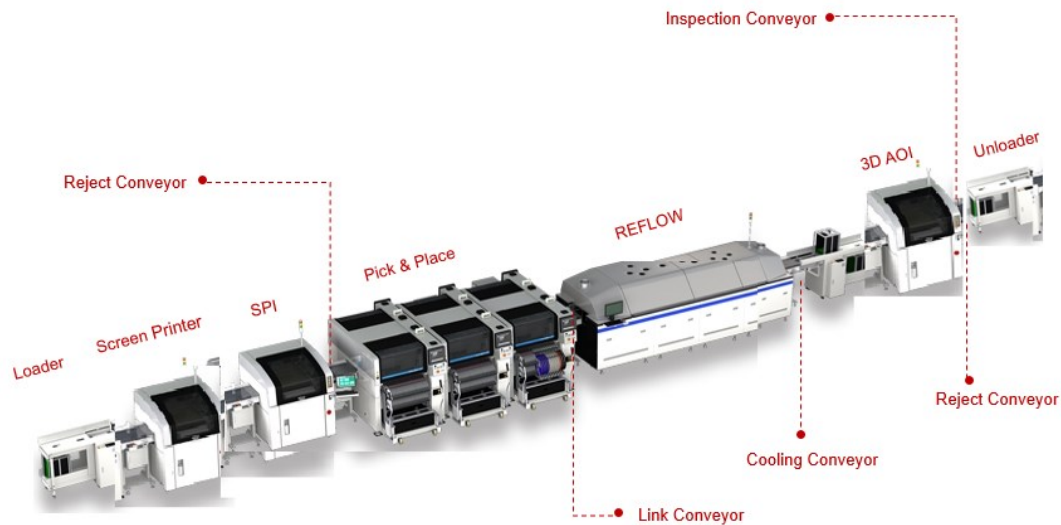
Material Handling and Kitting

Operation	Detailed description
Receiving Stores	The Raw Materials (RM) for Electronics manufacturing service includes various materials such as bare Printed circuit Boards (PCB's), active and passive electronic components (Surface Mount and Through-Hole Technology components), mechanical and plastic parts and other Consumables like Solder paste, ESD Gloves and masks, etc., These Raw Materials are stores in Material Receiving stores for Quality Inspection.
Incoming Quality Check (IQC)	The Quality inspection is carried out for all the RM to evaluate whether the same conforms to the technical requirements like control plan/Process Management Plans/test certificate/Drawing/Purchase specification.
Raw Material Storage	The QC cleared RM stock, is then moved to stores which is completely electro-static. Discharge controlled Environment to protect against static discharges since the components are sensitive to static discharges result in damage of the components. Material which do not pass Incoming Quality check are sent to our internal Material Review Board for further review of materials to analyse feasibility of using the raw material or rejecting it back to the supplier.
Kitting	The availability of Bill of Materials (BOM) i.e. Electronic Components, Mechanical and plastic parts as per the specification are checked for Manufacture of Printed Circuit Board Assemblies (PCBA). Materials as per BoM are assembled and kits are prepared by the Company. These kits for Manufacturing of Printed Circuit Board Assemblies are then moved to Production Area for Manufacturing. This process is termed as Kitting.

SMT Assembling

SMT is where surface mount Device (SMD) or surface mount components are soldered onto the bare Printed Circuit Board (PCB) using high-end automatic Assembly lines.

Overview of SMT Line



Surface Mount Technology (SMT)

Surface Mount Technology process has a collective list of Automatic assembly equipment's to solder the surface mount components onto the PCB as follows:

Loader – It Loads the bare PCB to production line automatically by pushing PCBs out of Magazine onto the conveyor of the downstream machine.

Screen Printing – It is a process of printing solder paste on the solder pads of PCBs automatically, on which surface mount components are place for soldering.

Solder Paste Inspection (SPI) – SPI machine automatically inspects the deposits of solder paste on solder pads as per specification. Once the boards passes SPI stage, it is moved down the line for further process.

Chip Shooter (Pick & Place) – It is a collective list of automatic equipment's, which picks and places the SMD components on the PCB, with the printed solder paste for soldering process.

Reflow Oven - Reflow oven has multiple zones, whose temperature can be individually controlled. It has multiple heating zones followed by cooling zones. The PCB with SMD components placed on it, passes through this Reflow oven on automated conveyor line, where the components are soldered to the PCB. It is then moved to Automatic Optical Inspection stage through conveyor line.

Automatic Optical Inspection (AOI) – AOI inspects the PCBA and verify if the SMD components are soldered to the PCB as per the specification. Once the PCBA passes AOI stage, it is moved to Magazine unloader through conveyor.

Un Loader - It un Loads the SMD components Assembled PCB from SMT production line automatically by pushing the PCBs to Magazine.

Through – Hole (TH) Assembling

TH Assembly is where Non-SMD and Leaded components are soldered onto PCB using semi-Automatic Lines.

Overview of Through-Hole Assembly Line



Manual Insertion Conveyor

The Non-SMD or Through-Hole components are inserted in the PCB using Manual operators in this line.

Wave Soldering

Wave soldering is a process of soldering Through-hole components automatically. PCB with components inserted is passed through the Wave Soldering Machine. The machine has molten solder over which the PCB is passed through over automated conveyor line. As the board makes contact with the molten solder, the components get soldered to the PCB. These populated or Assembled PCBs are termed as Printed Circuit Board Assemblies (PCBAs).

Box Build or Product Assembling

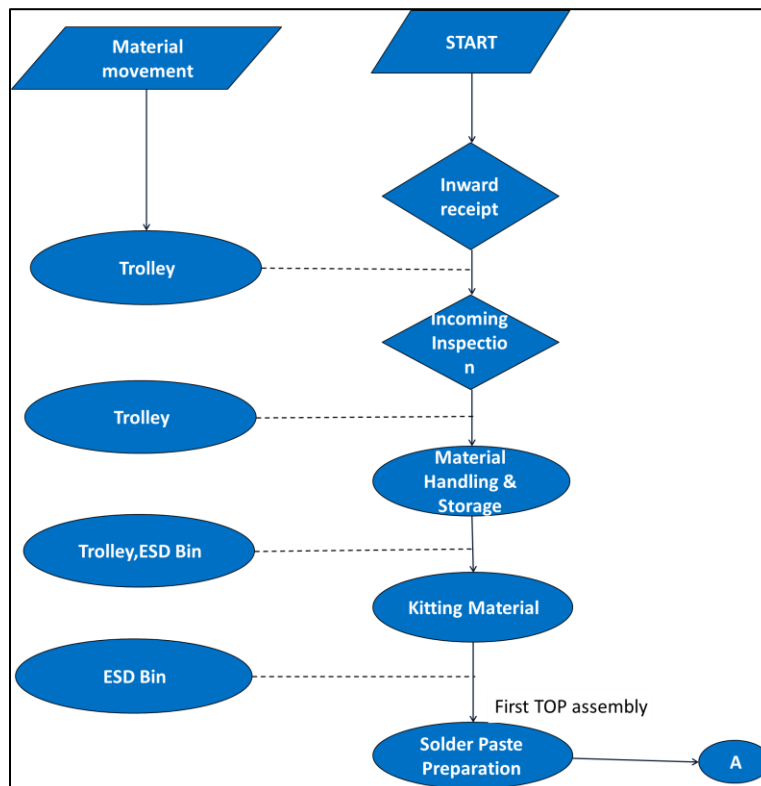
This soldered PCBA from the above production line is then passed to Box/product assembly Line where Mechanical and plastic parts are assembled as per customer requirement.

Quality Testing and Dispatch

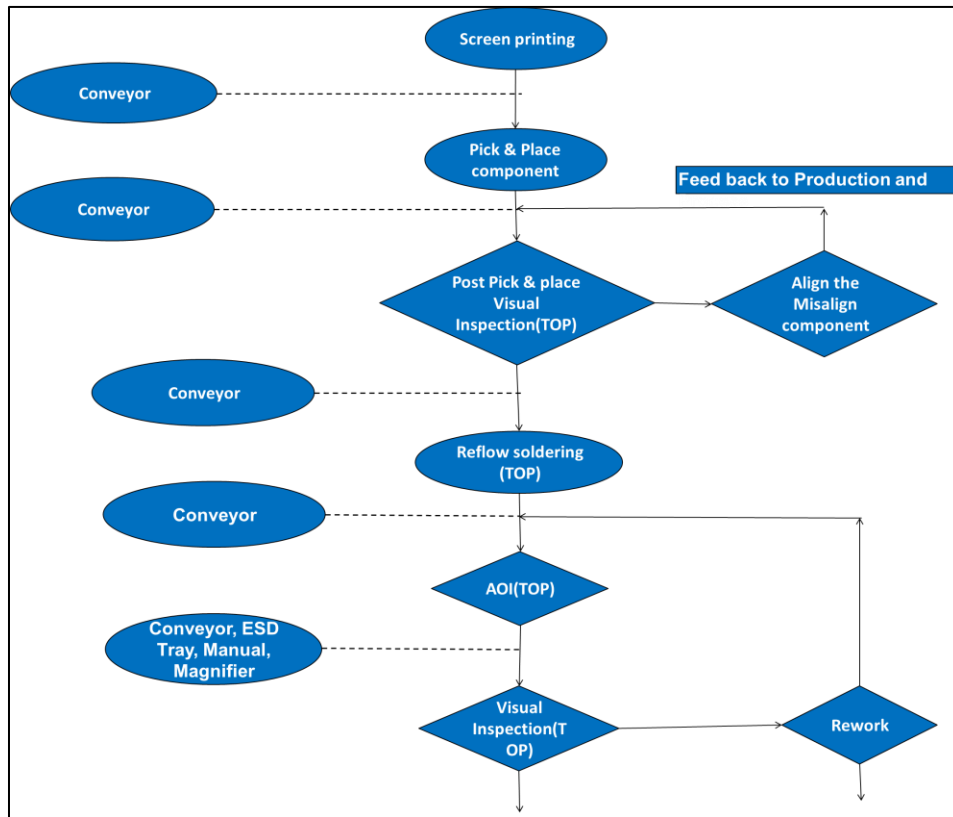
Operation	Description
Testing	Functional and reliability testing of PCBA or products is done based on customer requirements using various in-house developed test or off the shelf test equipment.
Out Box Audit (OBA)	Quality team inspects, audits and verifies the conformance of products to all specified requirements such as functionality, product dimension, etc.
Packing	Post clearance from OBA, the PCBA/products are packed as per customer requirements using ESD packing materials to make shipment.
Shipping Audit & Delivery	Shipping audit is carried out to verify Actual shipment Quantity is in line with the packing list, Invoice, address, and the goods are finally shipped to Customer.

DETAILED MANUFACTURING PROCESS FLOW

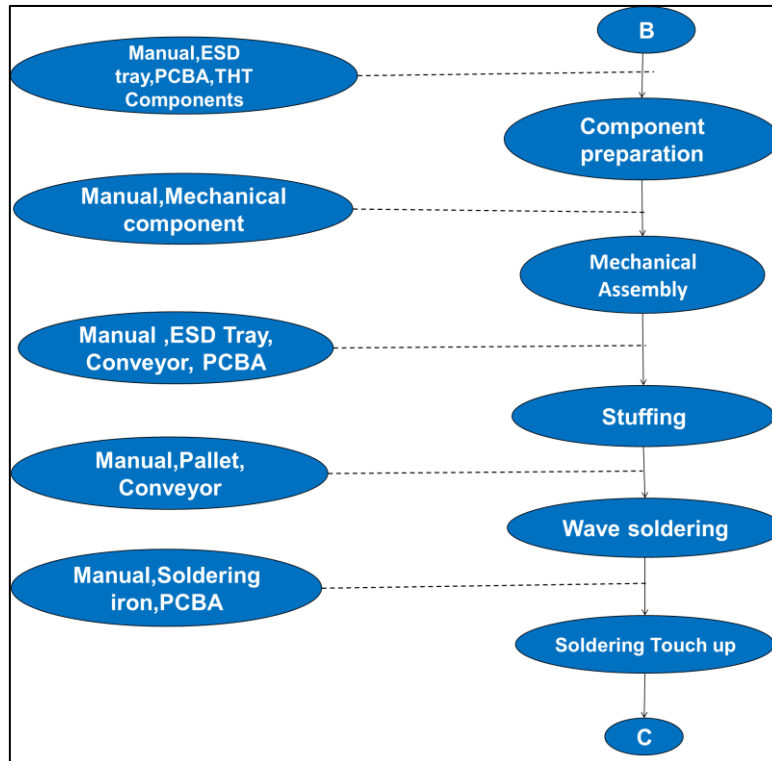
- **Material Handling to Kitting**



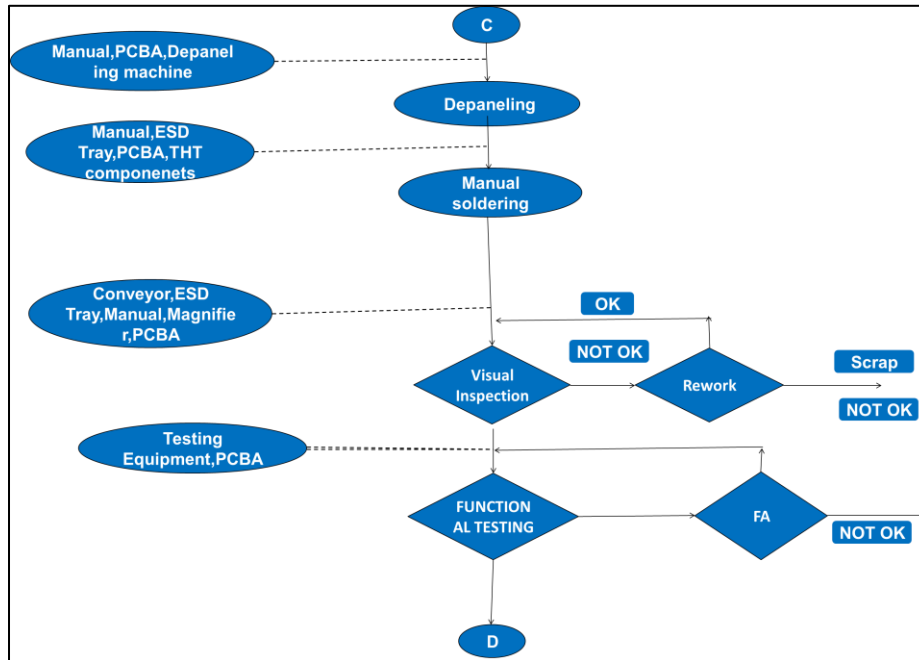
- SMT Assembly



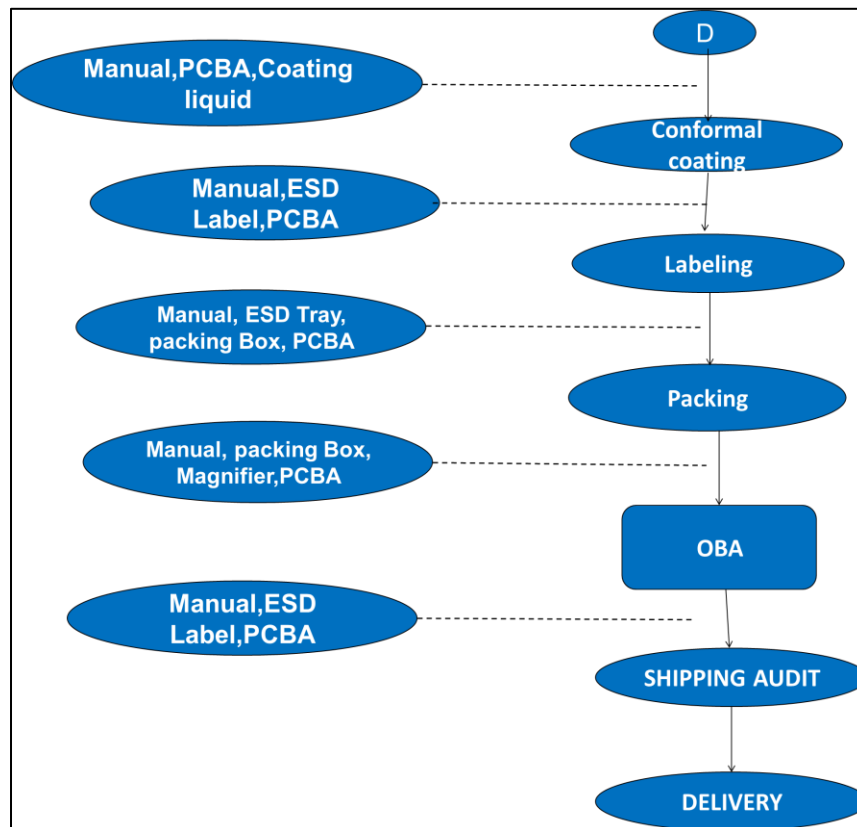
- **Through-Hole Assembly**



- **Testing**



- **Quality Audit and Shipping**



6. Other aspects

I. Overall Project Implementation Timelines and Schedule

S. No.	Location	Project	Estimated Period of Commencement	Estimated Period of Purchase Order (PO)	Estimated Period of Delivery	Estimated Period of Installation or Erection	Estimated Period of Completion	Estimated Commercial Production
1	Manesar, Haryana	Developing and setting up additional SMT lines for manufacturing of Telecom products.	Jan-22	Apr-22	Dec-22	Jun-23	Sep-23	Oct-23
2	Manesar, Haryana	Developing and setting up additional SMT lines for manufacturing of White goods products.	Apr-22	Jul-22	Dec-22	Jun-23	Sep-23	Oct-23
3	Manesar, Haryana	Expansion of the current manufacturing facilities, by installation of Balancing equipment	Apr-22	Jul-22	Dec-22	Jun-23	Sep-23	Oct-23
4	Bawal, Haryana	Developing and setting up additional SMT lines in the existing facilities	Feb-22	Jun-22	Dec-22	Mar-23	Jun-23	Jul-23
5	Bawal, Haryana	Developing and setting up additional SMT lines in new building facilities	Apr-22	Jun-22	Dec-22	Mar-23	Jun-23	Jul-23

The proposed capacity expansion plans relating to the Company's manufacturing facilities are subject to the risk of unanticipated delays in implementation and cost overruns.

II. Pollution and Control technology

The Company is based in SEZ, a dedicated Industrial Zone. As such the manufacturing process of the Company does not create pollution to the environment in any aspects (Air, Water & Sound). The proposed installing SMT lines will also not create pollution to the environment in any aspects (Air, Water & Sound).

As a nature, the SMT lines do not create any major pollutions in production. Further, all the plants of the Company are classified under the Green and White zone category under the pollution standards.

Additionally, the SMT lines includes a fume exhaust system in the reflow oven and in the wave soldering machine (machines part of the SMT lines) to ensure that the pollution is within the prescribed limits. Further, annual air quality monitoring with external lab shall be conducted to ensure that the air quality is within the prescribed limits of pollution.

The Company will ensure that terms in the Consent order approval from the Haryana Pollution Control Board will be complied with for existing as well as proposed facilities.

The machineries required to be set up in the factory for maintaining appropriate pollution levels, as mentioned above are considered in the list of equipment and machines listed above.

During the process, some E-Waste may be generated. The E-scrap generated at manufacturing plant (Existing/Proposed) is/will be disposed through Authorized scrap dealer.

The machineries required to be set up in the factory for maintaining appropriate pollution levels, are included in the list of equipment mentioned above and no other machineries are required to be set up for pollution control.

III. Safety

Safety of its employees is utmost priority for the Company. The proposed locations are fitted with suitable & sufficient Fire safety equipment like fire extinguishers, fire alarm system, fire hydrant system etc. Further, the Company shall design a full fledged fire exit plan in the new manufacturing facility set up.

IV. Power Requirements

Since the proposed locations are set up in Industrial Zones, the power availability normally remains stable. Both the proposed locations have High Tension power supply connections to cater to the requirement of the Manufacturing Operations. The average monthly Power requirement for the additional SMT lines of the Company shall be as given below.

Particulars	Monthly Power Capacity (Kilo Watt (KW))
Existing average power Capacity in Manesar Unit -6 SMT lines	420 KW
Average Power requirement each SMT line	70 KW
Additional Power requirement w.r.t additional 8 SMT lines for Telecom and white goods	560 KW

V. Manpower Requirement

The incremental manpower requirement across 3 years as per the projections are given below:

S. No.	Project Details	FY 21-22	FY 22-23	FY 23-24	Total
Developing and setting up additional SMT lines for manufacturing of Telecom product components.					
1	Senior Level Executives		10	5	15
2	Middle Level Executives		25	10	35
3	Junior Level Executives and Apprentices		500	300	800
	Sub-total		535	315	850
Developing and setting up additional SMT lines for manufacturing of White goods product components.					
1	Senior Level Executives		5	2	7
2	Middle Level Executives		20	10	30
3	Junior level executives Operators and Apprentices		300	150	450
	Sub-total	-	325	162	487
	Grand Total		860	477	1337

Setting up the additional SMT lines and the SMT lines for setting up of IT products, the Manpower requirement shall be as follows, where on average a single SMT line, shall involve 10 operators per shift for the production in the SMT lines. The Company is currently running for 3 shifts hence, the average requirement per day for each SMT line production shall be around 30 operators. Apart from the main SMT lines production, variable operators shall be required for the backend operations for making of Box Build.

VI. Government Approvals

In relation to the Capital Expenditure, we are required to obtain approvals from various authorities which are routine in nature. The necessary applications will be made with respective authorities as and when the project execution is in force on a timely basis. As on date, none of the approvals listed below are required, or are obtainable at this stage (i.e. prior to commencement of these projects).

List of Material Government approvals or registrations which shall be obtained by the Company are as follows:

1. Obtaining factory license
2. Consent order from Pollution control board (PCB), Water department, etc. under the respective State.
3. New premises registration with the GST and Customs authorities.
4. Restriction of certain Hazardous Substances (ROHS) Certification as required for electronic devices for sale in European Union.
5. Renewal & updation of agreements and power sanctions for electricity with local electricity boards.
6. E-waste registration.
7. No-objection certification (NOC) from fire safety authorities.

8. License required under specific labour laws for setting up new establishments or factories such as Provident funds, Employee State Insurance, Professional tax, etc.
9. End use industry specific compliances.