

Prepared By:-



**SAPIENT**

**SERVICES PVT. LTD**  
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## DETAILED PROJECT REPORT IKIO LIGHTING LIMITED

### Abstract

IKIO Lighting Limited is intending to commission the project through its wholly owned subsidiary, IKIO Solution Private Limited, to set up a new facility at Noida, Uttar Pradesh to undertake the following activities: 1. Manufacturing of Solar Panel for Recreational Vehicles.; 2. Manufacturing of LED Fixtures.; 3. ABS Pipes & Accessories and 4. LED Lights for Recreational Vehicles.

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Ref. No : SSPL/DPR/230556

Date : 17.05.2023

**BRIEF OVERVIEW**

Name of the Company	<b>IKIO Lighting Limited</b> IKIO Lighting Limited is intending to commission the project through its wholly owned subsidiary, IKIO Solution Private Limited
Year of Incorporation	2016
CIN Number	U31401DL2016PLC292884
Constitution	Company Limited by Shares
Nature of Business	Manufacturer
Registered Office	411, Arunachal Building 19 Barakhamba Road, Connaught Place, Central Delhi, Delhi - 110001, India
Directors	Mr. Hardeep Singh Mrs. Surmeet Singh Mr. Sanjeet Singh Mr. Chandra Shankar Verma Mr. Kishor Kumar Sansi Mr. Rohit Singhal
Details of the Project	IKIO Solutions Private Limited the Wholly owned subsidiary of IKIO Lighting Limited proposes to set up a new facility at Noida, Uttar Pradesh to undertake the following activities: <ol style="list-style-type: none"> <li>1. Manufacturing of Solar Panel for Recreational Vehicles.</li> <li>2. Manufacturing of LED Fixtures.</li> <li>3. ABS Pipes &amp; Accessories and</li> <li>4. LED Lights for Recreational Vehicles.</li> </ol> <b>(Collectively referred to as the Project)</b>
Unit Location	Plot No 10, Sector 156, Noida, Gautam Budh Nagar, Uttar Pradesh - 201301

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## Scope of Work

The financial position and related information of the Company. The present position of infrastructure available, the study of specifications and quantum of utilities, assessment of required area size, civil works, interiors, electrical, furniture and fittings, and other infrastructure, Profile of Manpower of Company available and their skill sets, Study of technology used, the related technical/commercial and financial aspects of the proposal, etc.



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## 1. EXECUTIVE SUMMARY

1.1. Sapient Services Private Limited (hereinafter referred to as "M/s. Sapient") has prepared Detailed Project Report ("DPR") for IKIO Lighting Limited having its registered office located at 411, Arunachal Building, 19 Barakhamba Road, Connaught Place, New Delhi - 110001, India for the proposed Project through its wholly owned subsidiary company IKIO Solutions Private Limited.

### 1.2. **Appointing Authority**

We have been appointed by IKIO Lighting Limited, to prepare 'Detailed Project Report ("DPR")', to do the technical & commercial feasibility and financial requirement of the project for its wholly owned subsidiary IKIO Solutions Private Limited.

### 1.3. **Purpose: -**

The purpose of this exercise is to prepare the Detailed Project Report of IKIO Lighting Limited. With reference to the Engagement letter dated 24<sup>th</sup> June 2022, we have prepared the detailed project report dated [26<sup>th</sup>] September 2022 prepared for IKIO Lighting Limited.

As requested by the Company, we are reissuing this detailed project report that has been updated and is now being dated 14<sup>th</sup> April 2023 ("DPR"). The DPR is prepared for the onward submission to the book running lead manager for the purpose of inclusion as part of the 'Object of the Offer' section in the updated draft red herring prospectus (the "UDRHP") / red herring prospectus (the "RHP")/ Prospectus prepared by the Company in connection with its proposed initial public offer ("IPO") in terms of the requirements of:

1.3.1. Section 26 of Part I of Chapter III of the Companies' Act, 2013 ("Act")

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**1.3.2** 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.

1.4. Sapien has inspected the Unit location.

1.5. This DPR does not include estimation of profitability, return on investment/internal rate of return at different investment levels and assessment of business value.

1.6. This executive summary forms part of and is not independent from the complete report. Particular attention is drawn to the assumption, qualification and disclaimers included in the report.

1.7. In the DPR, no allowances are made for any liability which may arise for payment of Corporation Tax or Capital Gains Tax, whether existing or which may arise, deemed or otherwise. No allowances are made in respect of capital or interest accrued thereon or for capital-based Government grants or potentially receivable on the date of this DPR.

1.8. This exercise is undertaken in light of existing infrastructure as of the date of 16<sup>th</sup> May 2023. Detailed assessment methodology has been provided in subsequent section of this DPR.

1.9. **Standard of Value | Techno Economic Viability**

**Techno Economic Viability (TEV)** study of a project encompasses the evaluation of a project for evaluating the technical and financial information about the project, with relevant data about its technological feasibility and



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economic viability, into one or a few criteria on the basis of which the project is recommended for selection, modification or rejection.

## 1.10. Use of Report

This report has been prepared at the instance of IKIO Lighting Limited for the purpose of the initial public offering of equity shares of INR 10/- each ("IPO").

## 1.11. Methodology uses for Report

- Verify the List of machineries.
- Based on the market search
- We've also undertaken the analysis of other factors as well such as government approvals required for such Projects, utilities etc.
- Information obtained through various channels of communication.

## 1.12. Statutory Regulation

Our DPR is prepared on the basis that the Company has complied with all the relevant statutory regulations. It is assumed that the Company has been or will be issued with the required certificate/license/operation by the competent authority.

For SAPIENT SERVICES PVT. LTD.

(Authorized Signatory)



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## 2. INTRODUCTION

### 2.1. Company Overview

IKIO Lighting Limited a company (erstwhile was a private company incorporated on 21 March 2016) and converted into a public Limited company on April 18, 2022. It is registered at Registrar of Companies, National Capital Territory of Delhi & Haryana, at New Delhi. Its authorized share capital is INR 1,000,000,000 and its paid-up share capital is INR 650,000,000.

The Company is focused on sustainability and providing low energy LED products to help India meet its sustainability goals. IKIO LED lighting offering includes lighting, fittings, fixtures, accessories, and components including LED strip lights, refrigeration lights. The Company also manufactures alternating current ("AC") light strips, moulding, and fan regulators. In addition, it also manufactures an alternative to polyvinyl chloride ("PVC") piping called Acrylonitrile Butadiene Styrene ("ABS") piping & its accessories.

The Company manufactures and assemble a wide array of products and serves as original design manufacturers ("ODM") to its customers. As ODMs, in addition to manufacturing, Company assists in the conceptualizing and designing their products which are then marketed by its customers under their brands.

The Company is planning to expand its business through expansion by construction of new facility by its wholly owned subsidiary, IKIO Solutions Private Limited, for carrying out electronic manufacturing services. Some new products being developed by its R&D team that they intend to add to customer offering includes solar power panels & systems for recreational Vehicles, ABS Pipes & accessories, LED Fixtures and LED Lights for recreational Vehicles.

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## SATELLITE VIEW OF SUBJECT LOCATION

(28.45691701079176, 77.44744269965791)



### 2.2. Appointment

Sapient is pleased to submit the Detailed Project Report (DPR) of IKIO Lighting Limited for their proposed project through IKIO Solutions Private Limited (Wholly owned subsidiary). The assessment has been carried out in accordance with the information received from client.

For SAPIENT SERVICES PVT. LTD.

(Authorized Signatory)



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### 3. PROJECT DETAILS

#### 3.1. IKIO Lighting Limited – Technical and Commercial Feasibility

The Company is planning to expand its business through the expansion by construction of new facility by its wholly owned subsidiary, IKIO Solutions Private Limited, to better serve existing customers, assist in better addressing the business requirements of large customers, and allow us to expand into new business verticals, in particular, to address the growing consumer of electronic manufacturing services for lights, rotary switch and electric switch, socket, ABS pipe and solar for recreational vehicles. Some new products being developed by its R&D team that they intend to add to customer offering includes solar power panels & systems for recreational Vehicles, ABS Pipes & accessories, LED Fixtures and LED Lights for recreational Vehicles.

#### 3.2. PROPOSED PRODUCT MIX

##### 3.2.1. SOLAR SYSTEM FOR RECREATIONAL VEHICLE

Solar system for recreational vehicles that use self-contained solar panels to power themselves from sunlight. Solar typically contain a rechargeable battery to help regulate and store the energy from the solar panels.

RV solar panels work like a regular home solar system - the solar panels convert sunlight into electricity. RVs have batteries within them that are able to power lights and small appliances, but they won't last very long. For using things like microwave and TV, we required an external power source. That's where RV solar panels come in.

A recreational vehicle, often abbreviated as RV, is a motor vehicle or trailer that includes living quarters designed for accommodation. Types of RVs

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include motorhomes, campervans, coaches, caravans (also known as travel trailers and camper trailers), fifth-wheel trailers, popup campers, and truck campers. RVs are most commonly used for living quarters while traveling. People may choose to take a road trip in their RV and use the RV to sleep in, rather than a hotel room. Typical amenities of an RV include a kitchen, a bathroom, and one or more sleeping facilities. RVs can range from utilitarian – containing only sleeping quarters and basic cooking facilities – to luxurious, with features like air conditioning (AC), water heaters, televisions and satellite receivers, and quartz countertops, for example.

Although the most common usage of an RV is as temporary accommodation when traveling, some people use an RV as their main residence.

RV solar panel system consists of 4 main components:

- Solar panels to convert sunlight into electricity
- A charge controller to prevent battery from overcharging
- An inverter to convert the DC solar electricity into usable AC power
- A battery to store the electricity

Solar system setup

- Manually set up portable solar panels
- Mount the panels on roof

Simply layout solar panels, connect them to the battery, and face them towards the sun. Then, simply move the panels in the direction of the sun every couple of hours to increase solar production.

Roof-mounted RV solar panels is also an alternative option to set up the portable solar panels. However, need to be parked in RV parks, as the roof will need to be exposed to sunlight. This type of system could be slightly more expensive, but their convenience can be valuable.



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## Process Flow Chart

### Photo Voltaic Module Line Process Flow Chart



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## Type of solar panels



Monocrystalline



Polycrystalline

There are two main types of solar panels: Monocrystalline and polycrystalline panels. Monocrystalline are the most efficient, and the most expensive. If you are limited on space, then monocrystalline panels are definitely the panels for you. Polycrystalline panels are slightly less efficient than monocrystalline panels, so they are a little bit cheaper.

## Production of Solar Panels for RVs

The company propose to produce 100-watt solar panel for RVs. It shall be able to produce 2,500 units per day on single shift basis. This includes Solar Panel, Charge Controller and Mounting Clamps. All the units produced shall be 100% EOU (Export Oriented Units).



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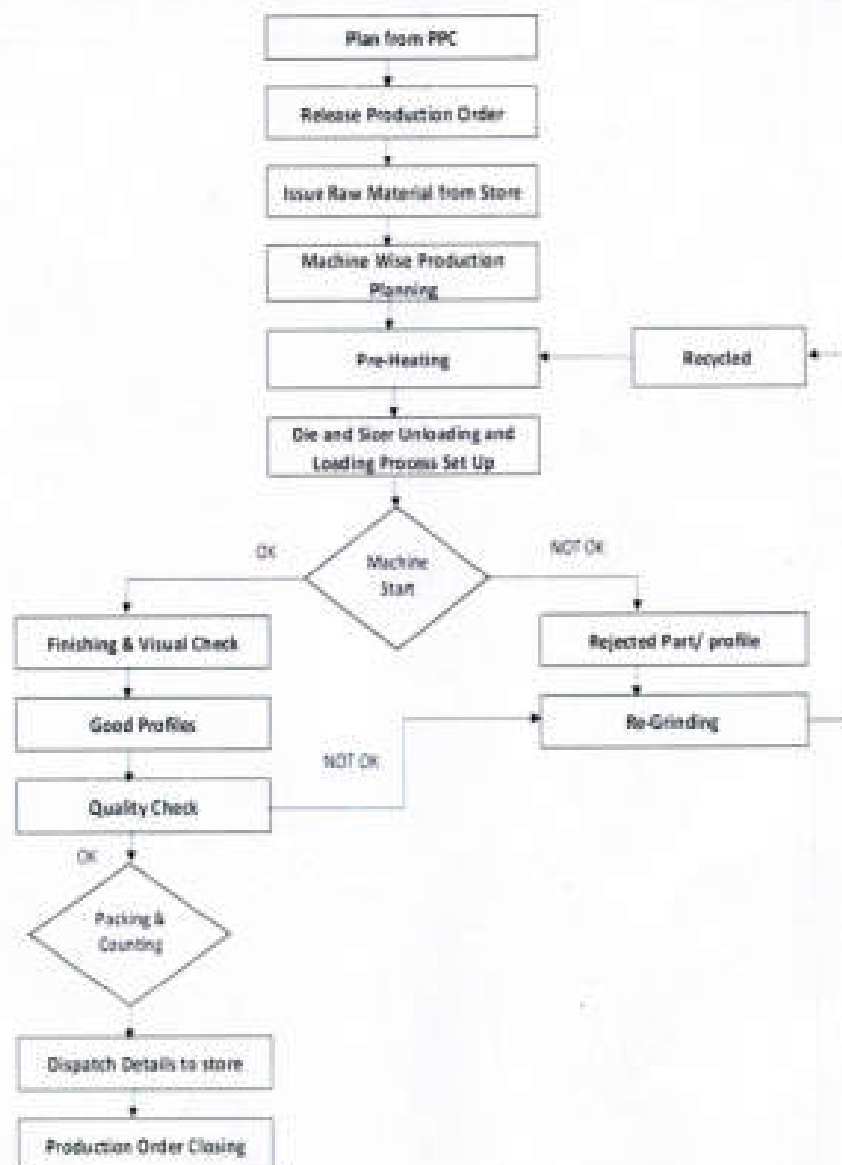




### 3.2.2. ABS Pipes

ABS, or Acrylonitrile Butadiene Styrene, is a plastic pipe that generally comes in black. It can be used for indoor or outdoor plumbing, generally as a drain, waste, or vent pipe as well as sewer pipe. ABS is a strong, rigid pipe, the sizes being proposed to be manufactured should be largely used in the RV's and other allied applications.

#### PROCESS FLOW CHART - ABS DRAINAGE PIPE



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**Properties of ABS Pipes:** - ABS provide favorable mechanical properties such as impact resistance, toughness, and rigidity when compared with other common polymers. A variety of modifications can be made to improve impact resistance, toughness, and heat resistance. The impact resistance can be amplified by increasing the proportions of polybutadiene in relation to styrene and also acrylonitrile, although this causes changes in other properties. Impact resistance does not fall off rapidly at lower temperatures. Stability under load is excellent with limited loads. Thus, by changing the proportions of its components, ABS can be prepared in different grades. Two major categories could be ABS for extrusion and ABS for injection molding, then high and medium impact resistance. Generally, ABS would have useful characteristics within a temperature range from  $-20$  to  $80$  °C ( $-4$  to  $176$  °F).

### **Production: -**

ABS is derived from acrylonitrile, butadiene, and styrene. Acrylonitrile is a synthetic monomer produced from propylene and ammonia; butadiene is a petroleum hydrocarbon obtained from the C4 fraction of steam cracking; styrene monomer is made by dehydrogenation of ethyl benzene — a hydrocarbon obtained in the reaction of ethylene and benzene.



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This unit will be producing only two sizes round pipes i.e. 1.5" & 3" diameter pipe having a length of 10 feet. Which has the maximum demand in the foreign market.

The proposed machinery shall be able to produce 1500 units of 1.5" pipe or 1200 units of 3" pipes per day in single shift operation of 10 Hrs. The Company shall be operating 300 days in a year.

### 3.2.3. LED Lights and Fixtures

It has a large product mix involving numerous lights and fixtures produced as per the client's/market requirement. The list of LED Lights & Fixtures is as appended below: -

DOWNLIGHT FIXTURE
SPOT LIGHT FIXTURE
TABLE LAMP FIXTURE
WALL LAMP FIXTURE
STEP LIGHT FIXTURE
WALL WASHER FIXTURE
TRACKLIGHT FIXTURE
ZOOM LIGHT FIXTURE
HANGING LIGHT FIXTURE
HIGHBAY LIGHT FIXTURE
DECORATIVE LIGHT FIXTURE
POTENTIOMETER
ROTARY SWITCH



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To manufacture the LED Lights & Fixtures, it involves various processes some of the main processes are as appended here under: -

**MOULDING PROCESS FLOW CHART: -**

OPERATION NO.	PROCESS FLOW DIAGRAM	PROCESS CHARACTERISTIC	Ref. Documents
1	<pre> graph TD     Start([Start]) --&gt; Op1[PLAN RELEASE]     Op1 --&gt; Op2[RELEASE WORK ORDER]     Op2 --&gt; Op3[RECEIVE MATERIAL FROM STORE]     Op3 --&gt; Op4[MATERIAL ISSUE TO THE SHOP FLOOR]     Op4 --&gt; Op5[MATERIAL PREHEATING]     Op5 --&gt; Op6[MOULD UNLOADING &amp; LOADING]     Op6 --&gt; Op7[PROCESS SETUP]     Op7 --&gt; Op8[MACHINE STARTUP]     Op8 --&gt; Op9{QUALITY CHECK}     Op9 --&gt; Op10[FINISHING &amp; VISUAL CHECK]     Op10 --&gt; Op11{QUALITY CHECK}     Op11 --&gt; Op12{PACKING &amp; PLACING}     Op12 --&gt; Op13{SUNNAR &amp; REJECTION PART}     Op13 --&gt; Op14[BURNED MATERIAL]     Op14 --&gt; Op15[MATERIAL CONVERTED FROM BURN MATERIAL IN TO FG]     Op15 --&gt; Op16[REPORTING PRODUCED QTY IN MISAP]     Op16 --&gt; Op17[FG KEPT IN FG STORE]     Op17 --&gt; Op18[MATERIAL READY FOR ISSUE]     Op18 --&gt; End([End])                     </pre>	TIME PLAN FROM PPC	PPC
2		RELEASE WORK ORDER ACCORDING TO PLAN	WORK ORDER (MISAP)
3		RECEIVE MATERIAL FROM STORE	STOCK TRANSFER (MISAP)
4		MATERIAL ISSUE TO THE SHOP FLOOR ACCORDING TO WORK ORDER/PLAN	ISSUE (MISAP)
5		MATERIAL PREHEATING	WORK PROCESS
6		MOULD UNLOADING & LOADING	WORK PROCESS
7		PROCESS SETUP	WORK PROCESS
8		MACHINE STARTUP	WORK PROCESS
9		FINISHING & VISUAL CHECK	WORK PROCESS
10		QUALITY CHECK	WORK PROCESS
11		PACKING & PLACING	WORK PROCESS
12		SUNNAR & REJECTION PART	WORK PROCESS
13		BURNED MATERIAL	WORK PROCESS
14		MATERIAL CONVERTED FROM BURN MATERIAL IN TO FG	WORK PROCESS
15		REPORTING PRODUCED QTY IN MISAP	PRODUCTION REPORTING (MISAP)
16		FG KEPT IN FG STORE AT THEIR DEFINED LOCATION	WORK PROCESS
17	MATERIAL READY FOR ISSUE TO STORE DEPARTMENT	WORK PROCESS	



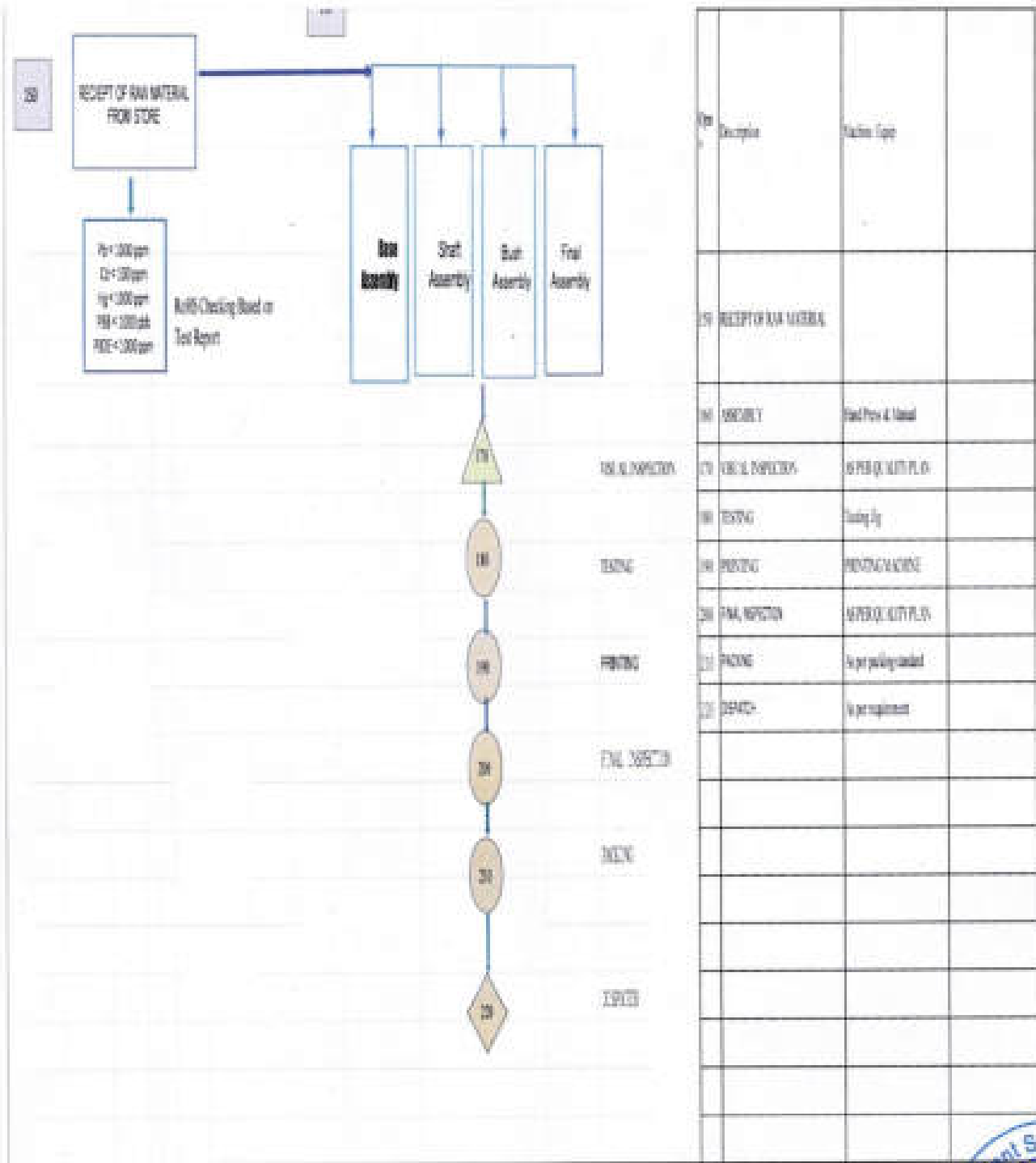
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## ROTARY & POTENTIOMETER FLOW CHART: -



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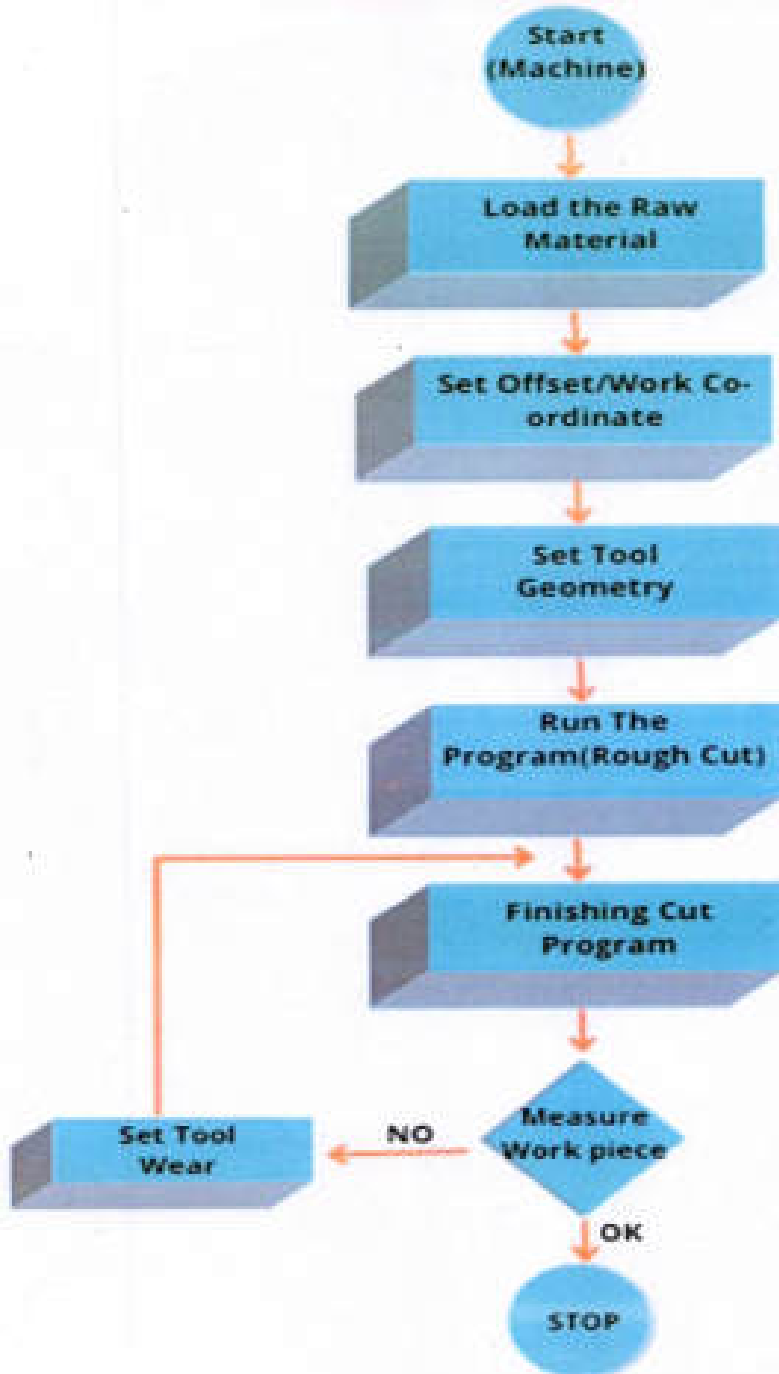
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**CNC MACHINE PROCESS FLOW CHART: -**

**CNC machining process flow chart**



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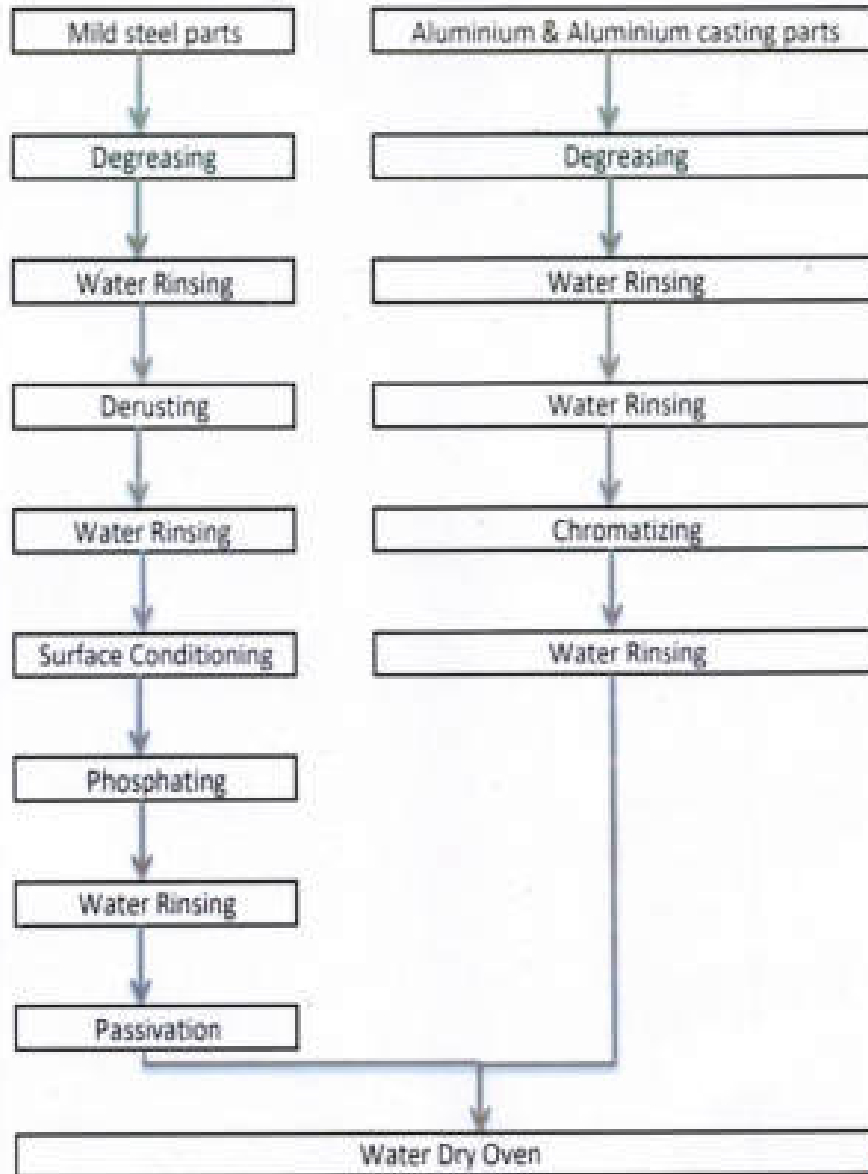
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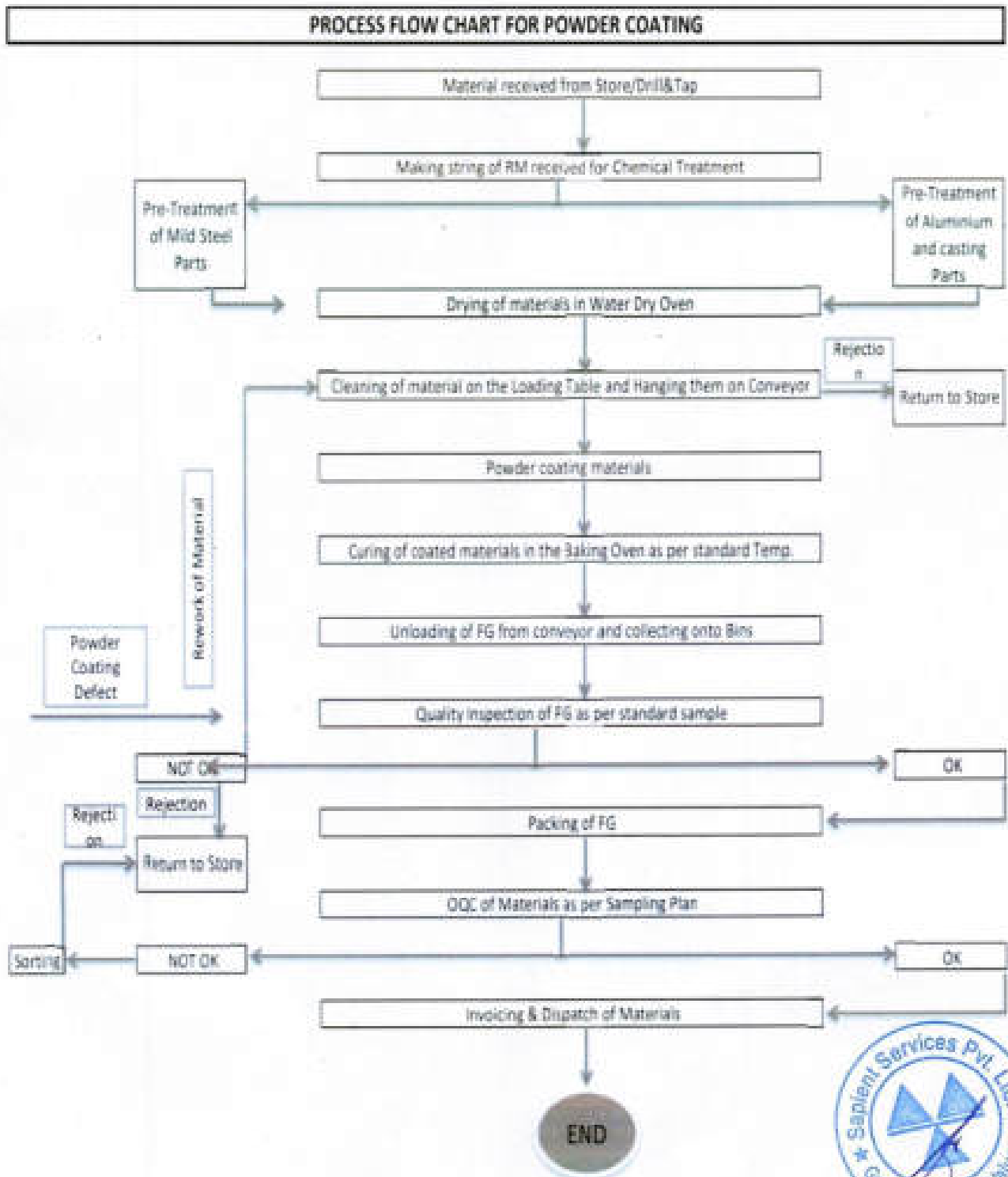
## POWDER COATING PRE- TREATMENT FLOW CHART: -

### PROCESS FLOW CHART FOR PRE TREATMENT LINE





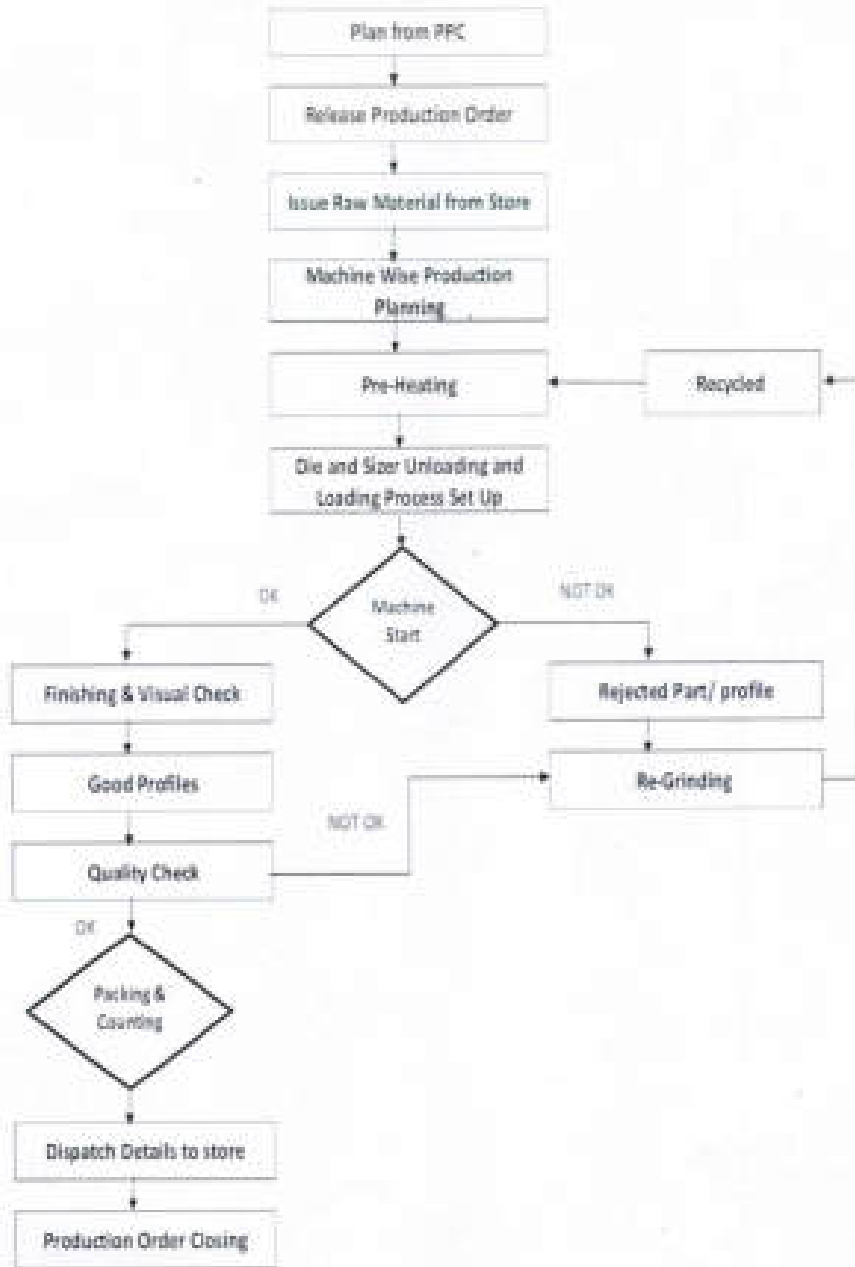
## POWDER COATING FLOW CHART: -





**EXTRUSION FLOW CHART: -**

**PROCESS FLOW CHART - Extrusion**



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**Plastic moulding:** - Plastic moulding is the process of manufacturing by shaping liquid or raw material using a rigid frame called a mold. This itself may have been made using a pattern or model of the final object. Moulding is of two types is as follows:

- **Injection Moulding:** - This production method is basically based on the molten die-casting method. Heated liquid fills a mold followed by cooling to set and eject a piece as a solid shape and is suitable for three- dimensional product.
- **Extrusion Moulding:** - It is a method by which molten plastic and metal granules through a two-dimensional die opening. In this method, the finished products have a dimensional form which are continuous in length and produces liner form.

**Drilling & Tapping Line:** - Drilling is the process to creating a smooth hole in a material with a drill and motor whereas tapping is the operation for making internal threads in a hole by means of a tool called tap. The tap is essentially a bolt with threads cut on it.

**Power Press Line:** - This process is generally used for cutting, shaping, blending and pressing any metal sheet into required shape. It is majorly used in manufacturing industries for getting the casing ready for the appliances.

**Power Coating (Automatic & Manual):** - Powder coating is one of the most durable finishes that can be applied to industrial manufactured products and offers excellent corrosion protection and is very safe because of its lack of volatile organic compounds. It is also known as a dry finishing process used to apply a dry coating material.



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**CNC Machine Process:** - Computer Numerical Control (CNC) machining is a manufacturing process in which pre-programmed computer software dictates the movement of factory tools and machinery. The process can be used to control a range of complex machinery, from grinders and lathes to mills and CNC routers. With CNC machining, three-dimensional cutting tasks can be accomplished in a single set of prompts.

### 3.3 BASIC INFRASTRUCTURE

**Land and Building:** Land admeasuring 20,001 square meter (~5 Acres) has been allotted by New Okhla industrial development authority (NOIDA) vide a lease deed dated 25-July-2019, entered with IKIO Solutions Private Limited (wholly owned subsidiary of IKIO Lighting Limited) located at Plot No. 10, Sector - 156, Noida, District - Gautam Buddha Nagar, Uttar Pradesh - 201301 ("Subject Land"). Subject Land is on long term lease for the period of 90 years. The construction work has already started and the Company, through its wholly owned subsidiary IKIO Solutions Private Limited has planned to construct the building area admeasuring 5,06,381 Sq. Ft. The Subject Land lies in an industrial area and is accessible through an approx. 20 ft. wide road.

### UTILITIES

- **Research and Development:** The Company's R&D team is constantly dedicated to advance and upgrade company technology; their lighting systems are produced in an efficient and sustainable way. Which means fewer materials are needed to manufacture the same product, which leads to a reduced system cost and the number of leftover materials which need to be recycled or thrown away as waste. At IKIO, company follow strict quality control protocols and have partnered with sourcing companies known for their outstanding records in maintaining impeccable standards of their supplied components. With their R & D Lab, assembly lines and a

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round-the clock team of well-equipped engineering and support staff, company strive to deliver innovative, reliable, efficient lighting solutions befitting their client's specific needs. Company continue to keep focus on creating innovative technologies to bring sustainable products for the market because IKIO understand that savings on energy also means fewer greenhouse gases and more money in your pocket. Company recognize the future environmental and economic impacts that would be brought about by climate change and increasing energy demands in the upcoming future.

- **Availability of Raw Materials:** The Company procures raw material from various domestic and foreign vendors. Majority of the Company's raw materials are sourced from so many vendors, based on the Company's requirement. Further, the suppliers undergo a qualification process to ensure that the supplied raw materials are of appropriate quality. The purchase price of raw materials generally follows market prices. The Company typically purchases raw materials based on the historical levels of sales, actual sales orders on hand and the anticipated production requirements taking into consideration any expected fluctuation in raw material prices and delivery delay. Moreover, the Company does not rely on a single source or vendor for components, instead, have alternative sources for vendors for each component category. This offers leverage to ensure availability of materials and negotiate better credit terms at cost-effective rates.
- **Power Requirements:** Since the proposed locations are set up in Industrial Zones notified under New Okhla Industrial Development Authority, the power availability normally remains stable. High tension power supply is required for manufacturing operations. The requirements for power supply for the proposed Project shall be obtained from Noida Power Company Limited (NPCL). A backup power system is used by the company to provide

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energy when the primary source of energy fails. This system is very important since an uninterruptible power supply is crucial for any operation. The current backup systems include diesel generators, which operate on diesel, propane, or gasoline. Two DG sets of 1 Megawatt each. Which will be sufficient to run the entire unit uninterruptedly.

Power required for all the products manufactured at Sector - 156, Noida: -

Particular	Power Required
Solar For Recreational Vehicles	200 KW
ABS Pipe	235 KW
Led Lights and Fixtures	350 KW
Total	785 KW

- **Water:** Proposed RO plant is to be set up by the company with total capacity of 4000 Ltrs. Per Day with ETP. The water supplies sufficient for the initiation of the proposed Project.
- **Pollution and Control technology:** Manufacturing process of the Company does not create pollution to the environment in any aspects (Air, Water & Sound). All the plants of the Company are classified under the Green and White zone category under the pollution standards. Annual air quality is monitoring in the company to ensure that the air quality is within the prescribed limits of the company.
- **Fire Fighting Setup:** Firefighting setup is present at the subject location of the company. Prevent the spread of and extinguish significant unwanted fires in buildings, vehicles, and woodlands. All fires can be extinguished by cooling, smothering, starving or by interrupting the combustion process to extinguish the fire.



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### 3.3. Approvals

- All relevant statutory approvals are followed by the company. Statutory Approvals means any and all approvals, non-objections, authorizations ratifications etc. required from Ministries, Authority, government agencies, local government agencies etc. as are, from time to time, required for completion of the Project has initiated by the company.
- The Company is required to obtain certain approvals from various authorities. The necessary applications will be made with respective authorities as and when the project execution is in force on a timely basis (i.e. prior to commencement of these projects).

#### Land Related Approval:

Building plan approval is already in place

List of Material Government approvals or registrations which shall be obtained by the Company as and when required under the said regulations.

No approval is required to be taken at this stage except as marked follows:

Sr. No	Approval for	Authority	Application date	Approval date	Stage at which approvals are required	Status
1	Consent to establish	Noida Authority	To be applied	NA	Before commissioning	Not yet Applied
2	In-principle approval of building layout	Noida Authority	17 March 2020	17 July 2020		
3	Sanction of electrical load	UP Electricity Board	11 April 2023	NA	Before commissioning	Applied
4	In-principle approval to construct, extend or take into use any building as a factory	Noida Authority	To be applied	NA	Before commissioning	Not yet Applied
5	Factory License	Industrial Deptt.	To be applied	NA	Before commissioning	Not yet Applied





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## ▪ **Factory Related Approvals**

- There are no certifications applicable for Production Plans. Food & Safety Certification is for the Food preparation arrangement for the employees. This is not for any commercial usage.
- Company is certified by Bureau Veritas Certification Holdings SAS for SA 8000 – the Social Accountability Management System Standard.

- **Operating Shifts:** The Company operates in single shift basis i.e. 8 hours in a day and 25 days in a month. The Company have spare time to extend the operating hours because company running in a single shift basis. There are 10 days maintenance period in a year.



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#### 4. TOTAL ESTIMATED COST

4.1. The total estimated cost for setting up of the proposed Project is approximately ₹ 2,628.75 million. Please see below the table for the break down of the estimated costs, including the period of deployment:

4.2. **Contingency Costs:** We envisage that there might be price fluctuations and the currently estimated project cost may increase on account of factors beyond the control, including increase in cost of machinery and associated transportation or other charges or taxes. The total estimated cost for contingencies is ₹ 216.18 million as estimated based on our past experience which is 10 % of the total amount for setting up the proposed Project.

S No.	Particulars	Total Estimated Costs (Excl Tax)	GST @18%	Total Estimated Costs (Incl Tax)	Already Spent (Till Apr-23)	Fiscal 2024	Fiscal 2025
(INR / Mn)							
<b>A</b>	<b>Land &amp; Building (Already Spent)</b>						
1	Land	225.52	-	225.52	225.52	-	-
	<b>Sub Total (A)</b>	<b>225.52</b>	<b>-</b>	<b>225.52</b>	<b>225.52</b>	<b>-</b>	<b>-</b>
<b>B</b>	<b>Civil and Structural Works &amp; Others</b>						
1	Building Works	489.75	107.51	597.25	274.44	238.90	83.91
2	Interior Fitouts	149.48	32.81	182.30		72.92	109.38
3	Electrical Works	119.05	21.43	140.48		56.19	84.29
4	Plumbing Works	37.99	6.84	44.82		17.93	26.89
5	Fire Fighting Works	40.77	7.34	48.11		19.24	28.86
6	Lifts	33.33	6.00	39.33	5.67	15.73	17.93
	<b>Sub Total (B)</b>	<b>870.36</b>	<b>181.93</b>	<b>1,052.29</b>	<b>280.11</b>	<b>420.91</b>	<b>351.27</b>
<b>C</b>	<b>Plant &amp; Machineries</b>						
1	Solar Panels	55.78	10.04	65.82	-	65.82	-
2	ABS Pipe	13.09	2.36	15.44	-	15.44	-
3	LED Fixture	485.27	87.35	572.62	-	572.62	-
4	LED Lights for RV	215.94	38.87	254.81	-	254.81	-
5	DG Sets	86.80	15.62	102.42	-	102.42	-
	<b>Sub Total (C)</b>	<b>856.88</b>	<b>154.24</b>	<b>1,011.12</b>	<b>-</b>	<b>1,011.12</b>	<b>-</b>
<b>D</b>	<b>Administrative</b>						
1	Furniture & Fixtures	50.69	9.13	59.82	-	59.82	-
2	Airconditioners	54.08	9.73	63.82	-	63.82	-
	<b>Sub Total (D)</b>	<b>104.78</b>	<b>18.86</b>	<b>123.63</b>	<b>-</b>	<b>123.63</b>	<b>-</b>
<b>E</b>	<b>Contingencies</b>	183.20	32.98	216.18		155.57	60.61
	<b>Sub Total (E)</b>	<b>183.20</b>	<b>32.98</b>	<b>216.18</b>		<b>155.57</b>	<b>60.61</b>
	<b>Total (A+B+C+D+E)</b>	<b>2,240.74</b>	<b>388.01</b>	<b>2,628.75</b>	<b>505.63</b>	<b>1,711.23</b>	<b>411.88</b>

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- 4.3. **Civil and structural works:** Civil and structural works for the proposed Project include land development work, pre-engineered building contractions, and others. The total estimated cost for civil and structural works for the proposed Project is ₹ 1,052.29 million. A detailed break-up of such estimated cost towards civil and structural works is set forth below:

**Building Planning is as under:**

BUDGETARY ESTIMATE FOR FACTORY AT SAID LAND		
	Sq. Mtr.	Sq. Ft.
Area under construction in Basement	10,176	1,09,534.46
Area in Block 1	14,534	1,56,443.98
Area in Block 2	14,534	1,56,443.98
Area in Block 3	7,800	83,959.20
<b>Total Built-up</b>	<b>47,044</b>	<b>5,06,381.62</b>

S No.	Description	QTY	Unit	Rate (Rs.)	Total Amount (Rs./Mn)	GST out of total amount (Rs./Mn)
<b>A.</b>	<b>BUILDING, SERVICES, FITMENTS &amp; SITE DEVELOPMENT WORKS</b>					
1.	Civil & Structural work including all RCC and brickwork & elevator shafts					
	Concrete M30	21169.8	Cu.m	7,500	158.77	28.58
	Reinforcement Steel	352830	Kg	82	28.93	5.21
	Brickwork 230mm THK	18817.6	Cu.m	6,500	122.32	22.02
	Shuttering	141132	Sq m	600	84.68	15.24
2	Building Skin @ 30% glass surface finished with glass and 70% finished with Plaster and sand stone cladding / equivalent permanent finish	506381.62	sq ft.	250	126.59	22.79
3	Landscape & site development including levelling of existing ground, soft and hard finishes including RCC / Stone finished road surface & water bodies.	506381.62	sq ft.	150	75.96	13.67
	<b>Total for Building works</b>				<b>597.25</b>	<b>107.51</b>
<b>B</b>	<b>INTERIOR FITOUTS</b>					
1	Civil finishing / Interior work for atriums, stairwells, common areas etc.	101276.32	sq ft.	1800.00	182.30	32.81
	<b>Total for Interior Fitouts</b>				<b>182.30</b>	<b>32.81</b>
<b>C</b>	<b>ELECTRICAL SERVICES</b>					

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S No.	Description	QTY	Unit	Rate (Rs.)	Total Amount (Rs./ Mn)	GST out of total amount (Rs./ Mn)
1	High side & Low side	506381.62	sq ft.	235	140.48	21.43
D	<b>PLUMBING</b>					
1	High side & Low side	506381.62	sq ft.	75.00	44.82	6.84
E	<b>FIRE FIGHTING</b>					
1	High side & Low side	506381.62		80	48.11	7.34
F	<b>LIFTS</b>					
1	Passenger Lifts	9	nos.	2.51839	26.75	4.08
2	Service Lift	7	nos.	1.52310	12.58	1.92
	<b>Total for Lifts &amp; Escalators</b>				39.33	6.00
<b>SUMMARY OF THE ABOVE COSTS</b>						
A	BUILDING, SERVICES, FITMENTS & SITE DEVELOPMENT WORKS				597.25	107.51
B	INTERIOR FITOUTS				182.30	32.81
C	ELECTRICAL WORKS (LOW SIDE & HIGH SIDE)				140.48	21.43
D	PLUMBING (LOW SIDE & HIGH SIDE)				44.82	6.84
E	FIRE FIGHTING WORKS				48.11	7.34
F	LIFTS				39.33	6.00
	<b>TOTAL FOR THE ABOVE COSTS</b>				<b>1,052.29</b>	<b>181.93</b>

#### 4.4. **LIST OF MACHINERY FOR SETTING UP A MANUFACTURING UNIT AS PER ANNEXURE - I**

Out of the total estimated cost of the proposed Project, the estimated cost towards the plants and machineries are ₹ 1,134.75 million. A detailed break-up of such estimated cost towards process plants and machineries which is proposed to be funded from the Net Proceeds is set forth below:

S. No.	Machine	Source	Rate (Mn)	Qty	Machine Cost (Inc. Tax) (Mn)	Name of Vendor	Date of Quotation	Validity of Quotation
1	<b>Solar Module Manufacturing Equipment</b>	<b>Imported</b>	\$0.672	1	₹ 65.82	AW Solar Solutions India	26 Aug, 2022	25 Aug, 2023
1.1	FULLY AUTOMATIC TABBER STRINGER (2600 Cell/Hr) with 13BB Kit							

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S. No.	Machine	Source	Rate (Mn)	Qty	Machine Cost (Inc. Tax) (Mn)	Name of Vendor	Date of Quotation	Validity of Quotation
	FULLY AUTOMATIC LAMINATOR (2600x5800)							
	SEMI AUTO FRAMING MACHINE with Corner Crimp.							
	SUN SIMULATOR CLASS AAA (for Poly & Mono PERC)							
	FULLY AUTOMATIC EL TESTER WITH AOI APPERANCE TESTER (8 Camera)							
<b>2</b>	<b>ABS Pipe Extrusion Setup</b>	<b>Imported</b>	\$0.073	2	₹15.44	QINGDAO Hanhai Plastic Machinery Co, Ltd.	02 Sep 2022	01 Sep 2023
2.1	1.75/33 75KW Out layer							
	2.75/33 75KW Middle layer							
	3.65/33 45KW Inner layer							
	4.25/25 1.5KW Mark line							
<b>3</b>	<b>Fixtures</b>					Phillips Machine Tools India Pvt. Ltd.		
<b>3.1</b>	<b>Tool Room</b>							
3.1.1	CNC Wire Cut EDM	Imported	\$0.08	2	₹16.91		08 Aug 2022	07 Aug 2023
3.1.2	VMC-1	Imported	\$0.06	3	₹18.11		07 Aug 2022	06 Aug 2023
3.1.3	VMC-2	Imported	\$0.07	3	₹21.91		07 Aug 2022	06 Aug 2023
3.1.4	Lathe 250x1500	Domestic	₹1.31	3	₹4.64	08 Aug 2022	30 Jul 2023	

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S. No.	Machine	Source	Rate (Mn)	Qty	Machine Cost (Inc. Tax) (Mn)	Name of Vendor	Date of Quotation	Validity of Quotation
3.1.5	Lathe 325x2000	Domestic	₹1.66	3	₹5.88		08 Aug 2022	07 Aug 2023
3.1.6	EDM Die Sinker 400mm	Domestic	₹1.47	2	₹3.46		08 Aug 2022	07 Aug 2023
3.1.7	EDM Die Sinker 450mm	Domestic	₹1.61	2	₹3.79		08 Aug 2022	07 Aug 2023
3.1.8	Surface Grinder 1	Domestic	₹2.36	3	₹8.35		08 Aug 2022	07 Aug 2023
3.1.9	Milling Machine	Domestic	₹0.72	3	₹2.57		08 Aug 2022	31 Aug 2023
3.1.10	3D Printer	Domestic	₹2.15	2	₹5.07		08 Aug 2022	31 Aug 2023
<b>3.2</b>	<b>Molding Setup</b>							
3.2.1	Moulding Machine 110T	Domestic	₹4.08	3	₹14.45	Milacron India Pvt. Ltd	05 Aug 2022	03 Sep 2023
3.2.2	moulding Machine 180 T	Domestic	₹5.26	3	₹18.63		05 Aug 2022	03 Sep 2023
3.2.3	moulding Machine 230 T	Domestic	₹6.44	4	₹30.37		05 Aug 2022	03 Sep 2023
3.2.4	Mould (Walpack)	Domestic	₹5.83	3	₹20.62	KH ENGINEERING & BUSINESS CONSULTANT	07 Feb 2023	06 Aug 2023
3.2.5	Mould (Flood Light)	Domestic	₹5.92	3	₹20.94		07 Feb 2023	06 Aug 2023
3.2.6	Mould (Area Light)	Domestic	10.91	2	₹25.75		07 Feb 2023	06 Aug 2023
3.2.7	Mould (Bollard Light)	Domestic	₹7.44	2	₹17.55		07 Feb 2023	06 Aug 2023
3.2.8	Mould (UFO)	Domestic	₹3.92	3	₹13.88		07 Feb 2023	06 Aug 2023
<b>3.3</b>	<b>Die Casting Setup</b>							
3.3.1	Die Casting Machine 420	Imported	\$0.21	2	₹45.19	YOTA INTERNATIONAL/D S TECH	09 Aug 2022	08 Aug 2023
3.3.2	Die Casting Machine 650	Imported	\$0.34	2	₹71.78		09 Aug 2022	08 Aug 2023
3.3.3	Die Casting Machine 900	Imported	\$0.47	2	₹99.70		09 Aug 2022	08 Aug 2023
<b>3.4</b>	<b>CNC Machine Setup</b>							
3.4.1	CNC Hydraulic Press Brake	Domestic	₹2.85	3	₹10.09	HACO Machinery Pvt. Ltd.	05 Aug 2022	02 Oct 2023

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S. No.	Machine	Source	Rate (Mn)	Qty	Machine Cost (Inc. Tax) (Mn)	Name of Vendor	Date of Quotation	Validity of Quotation
3.5	<b>Machining Setup</b>							
3.5.1	Laser Cutting	Domestic	₹3.10	3	₹10.97	Premier Laser	02 Sep 2022	01 Sep 2023
3.5.2	Powder Coating Plant	Domestic	₹34.75	2	₹82.01	Shyamlee Metal Industries	04 Feb 2023	05 Aug 2023
4	<b>LED Lights for RV</b>							
4.1	SMT Line 1							
4.1.1	Printer	Imported	\$0.055	3	₹17.45	JUKI INDIA PRIVATE LTD	12 Jun 2022	11 Jun 2023
4.1.2	Pick & Place	Imported	\$0.20	3	₹63.46		12 Jun 2022	11 Jun 2023
4.1.3	SPI+AOI	Imported	\$0.045	3	₹14.28		12 Jun 2022	11 Jun 2023
4.1.4	Reflow Oven	Imported	\$0.153	3	₹48.55	SHENZHEN ETA TECHNOLOGY CO., LTD	12 Jun 2022	11 Jun 2023
4.1.5	ISM	Imported	\$0.15	3	₹47.60	JUKI INDIA PRIVATE LTD	12 Jun 2022	11 Jun 2023
4.1.6	Thru-Hole Insertion	Imported	\$0.20	3	₹63.47		12 Jun 2022	11 Jun 2023
5	<b>Administrative</b>							
5.1	<b>Furniture &amp; Fixture</b>							
5.1.1	Wooden Flooring	Domestic	₹3.23	1	₹3.81	Rajendra Carpets	16 Sep 2022	15 Sep 2023
	Carpeting	Domestic	₹6.00	1	₹7.08		16 Sep 2022	15 Sep 2023
	Blinds	Domestic	₹5.64	1	₹6.65		16 Sep 2022	15 Sep 2023
	Cartage & Fixing Labour	Domestic	₹0.78	1	₹0.91		16 Sep 2022	15 Sep 2023
5.1.2	Air conditioning					EKOAIRE INC		
	High Side VRV (Equipments)	Domestic	₹26.23	1	₹30.95		15 Sep 2022	13 Sep 2023
	Low Side VRV (Installation & Accessories)	Domestic	₹27.86	1	₹32.87		15 Sep 2022	13 Sep 2023
5.1.3	Cabins & Work Stations	Domestic	₹35.06	1	₹41.37	Impact Interior Systems	16 Sep 2022	15 Sep 2023

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S. No.	Machine	Source	Rate (Mn)	Qty	Machine Cost (Inc. Tax) (Mn)	Name of Vendor	Date of Quotation	Validity of Quotation
5.1.4	Gas DG Set - 1160 Kwe	Imported	\$0.40	2	₹78.35	JAKSOM Limited	21 Sep 2022	20 Sep 2023
	Gas DG Set - Parts Fitting & Installation	Domestic	₹10.20	2	₹24.07		21 Sep 2022	20 Sep 2023
	<b>Total</b>				₹1134.75			

\*Note- The List of Machinery contains conversions of certain currency amounts into Indian Rupees that have been presented solely to comply with the requirement as per RBI Guideline.

The following table sets forth, for the periods indicated, information with respect to the exchange rate: -

Currency	Exchange rate
1 USD	83.00
INR	1.00



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**4.5. Proposed schedule of implementation of the proposed Project**

**The proposed schedule of activities in respect of the proposed Project are as follows:**

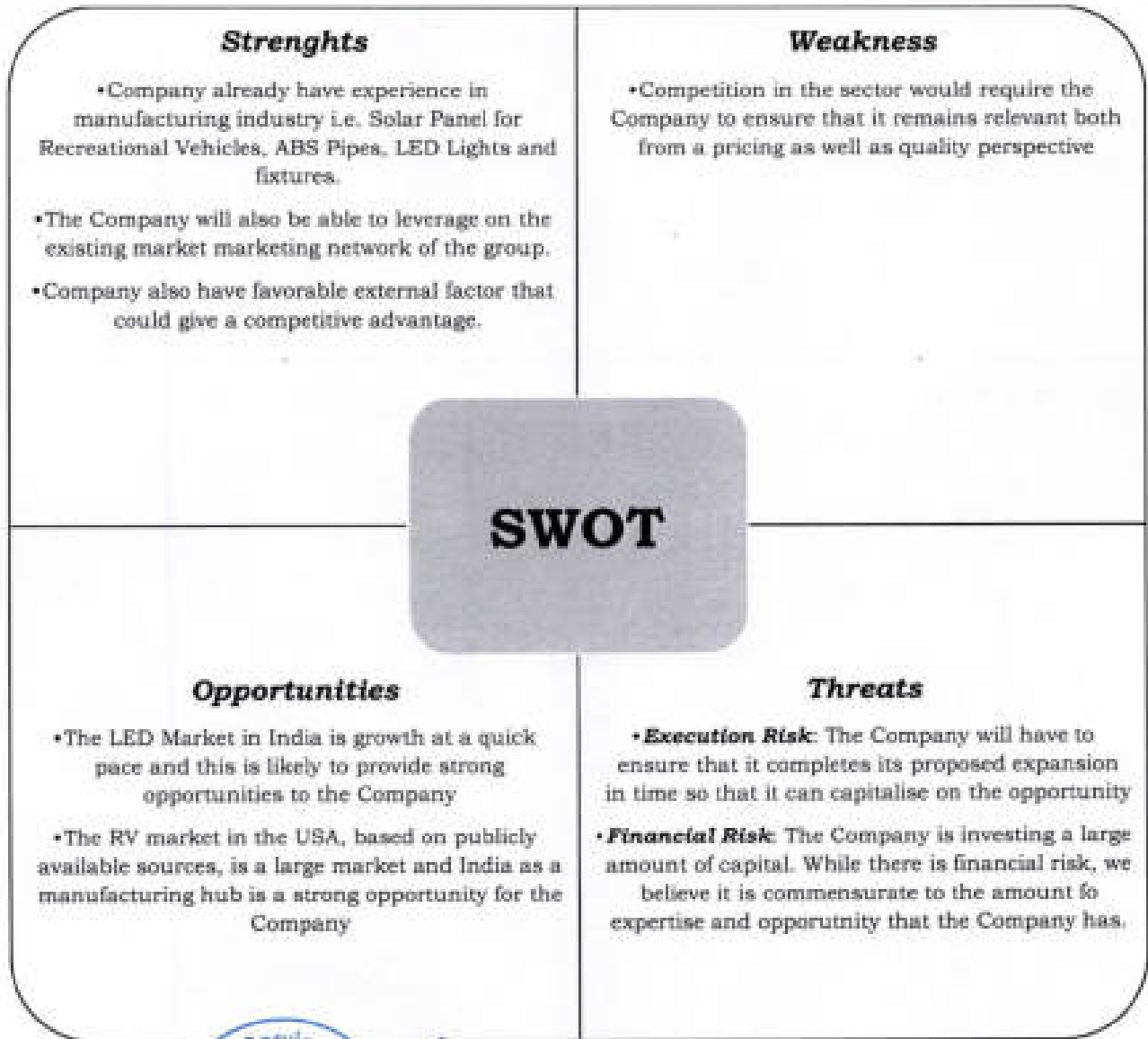
<b>S. No</b>	<b>Particulars</b>	<b>Actual / Estimated Commencement Date</b>	<b>Expected completion date#</b>
1.	Land acquisition	Land acquired (Lease deed dated 25-July-2019 entered with Okhla industrial development authority)	N.A
2.	Site development and civil and structural works	November 2022	March 2025
3.	Procurement of Plants and machineries	May 2023	October 2023
4.	Procurement of Utilities and others	May 2023	September 2023
5.	Procurement of Electrical and construction supervision	May 2023	March 2025
6.	Installation of Plant and Machineries	June 2023	December 2023
7.	Erection of Utilities and others	June 2023	October 2023
8.	Erection of Electricals	November 2022	March 2025
9.	Trial run	November 2023	December 2023
10.	Commencement of commercial production	January 2024	N.A.

# Subject to receipt of proceeds from the IPO in the May 2023.





## 4.6. SWOT Analysis of the Project:



For **SAPIENT SERVICES PVT. LTD.**



(Authorized Signatory)



## 5. GENERAL ASSUMPTIONS AND LIMITING CONDITIONS

Following Assumptions and Limiting conditions also form the basis of this assessment report:

- 5.1. For the purpose of this exercise, we have assumed that the assets propose in the Detail Project Report shall be owned by the Client.
- 5.2. In the course of this exercise, we have relied upon the hardcopy, softcopy, email, documentary and verbal information provided by the client without further verification. We have assumed that the information provided to us is reliable, accurate and complete in all respects. We reserve our right to alter our conclusion at a later date, if it is found that the data provided to us by the client was not reliable, accurate, or was incomplete.
- 5.3. We have submitted a list of information required to carry out this assessment of the specified tangible assets to the company. Accordingly, we have prepared Detailed Project Report (DPR) of IKIO Solutions Private Limited on the basis of information furnished to us.
- 5.4. Other observations, assumptions and limiting conditions, as appropriate, are also mentioned in the respective sections of this report and annexure.

For **SAPIENT SERVICES PVT. LTD.**

**(Authorized Signatory)**



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