



# INDIVIDUAL QUICK FREEZING OF FRUITS & VEGETABLES

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*Project Report*  
(2020-21)

Prepared By,  
Meticulous Business Plans, Pune



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# 1. CONFIDENTIALITY AGREEMENT

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## 2. EXECUTIVE SUMMARY

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### 2.1 WHO ARE WE?

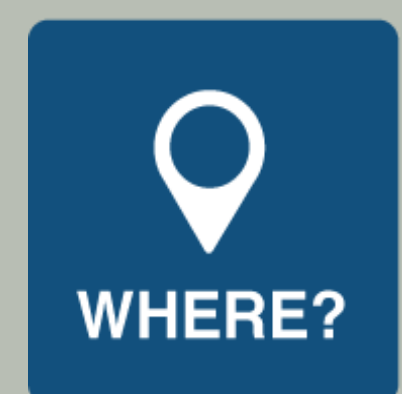
**Company name** – Dinanath Overseas India Pvt. Ltd.  
**Promotor's name** – Mr. Rohit D. Naranje



**Project** – Individual Quick Freezing (IQF) of Fruits & Vegetables  
**Products** – IQF green peas, cauliflower, mix vegetables, etc.  
**Initial investment** – INR 13.94 Cr.  
**Capital investment** – INR 50,368,000  
**BEP** – 1<sup>st</sup> year



**Location** – the proposed manufacturing unit will be in MIDC Umred, Nagpur, Maharashtra.



**Model** – the model is to carry on freezing of Fruits & Vegetables by the principle of Individual Quick Freezing (IQF) to increase the shelf life of the highly perishable commodity and making these IQF products available in the market at a reasonable price.





2.2 WHAT WILL WE BE DOING – THE MODEL?

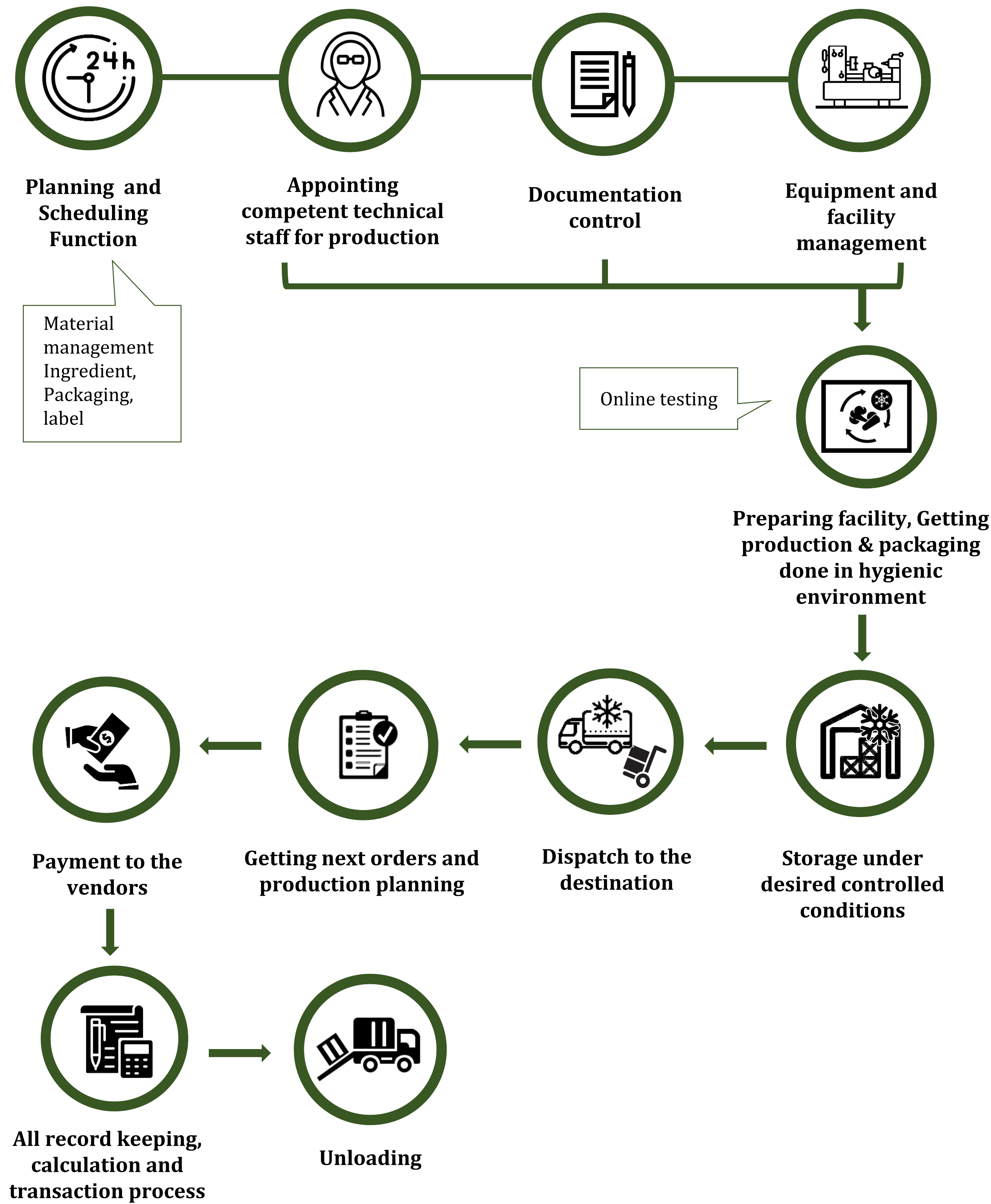


FIGURE 1: BUSINESS MODEL

2.3 STATEMENT OF PURPOSE

The purpose of this project report is to understand business investment and project in depth.

S.N	Particular	Year 1 (INR)	Year 2 (INR)
1	Sales	136,476,000	240,000,000
2	Working Capital	118,827,000	168,570,000
3	Net Profit/Net Revenue	12,117,000	67,050,000
4	Cash in Bank/ Margin Money/Closing Balance	106,174,000	177,623,000
5	ROI	9%	56%
6	Net Profit Ratio	9%	28%
7	Operational Projections (units)	4,590,000	8,262,000
8	HR Projections	26	26

TABLE 1: STATEMENT OF PURPOSE



## 2.4 GOAL CONGRUENCE

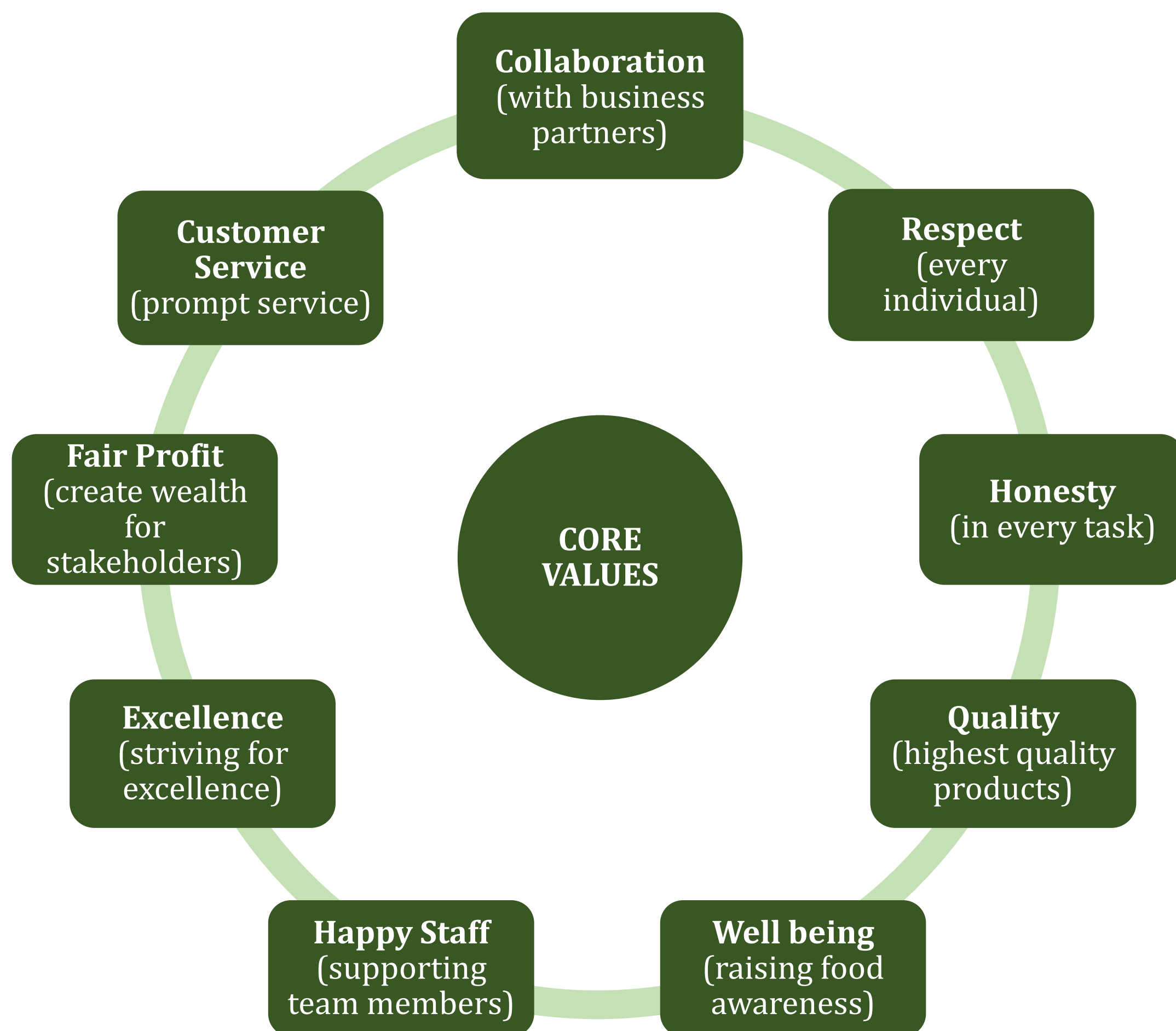


FIGURE 2: CORE VALUES

## MISSION, VISION AND OBJECTIVE

- Our mission is to be a producer of hygienic, supreme quality of IQF products for the customer segment in domestic as well as international market
- The prime focus of Dinanath Overseas India Pvt. Ltd. is to satisfy the needs of our customers through our products by reducing its cost with utmost quality and achieve the trust of our customers globally.
- We will consistently follow sustainable environmental practices and its duty towards environment.
- In 5-10 years, we would enlarge the extent of our potential and want to be the most admired company in the ecosystem, deliver continuous sustainable food products, safety, security, and environmental excellence.
- Our objectives include:
  - Attracting demand for projected products.
  - Establishing a distinctive position in the market and reduce the risk of competitive potential.
  - To earn profit for projected IQF products in long run and during its lifeline.

2.5 TARGET GEOGRAPHY AND MARKET

TARGET GEOGRAPHY



- Predominant target market is any customer with significant ‘product awareness’ and who aspires for quality IQF products. This market segment is also interested to know quality aspects like date of manufacturing / packaging and expiry, nutritional value, ingredients, mode of usage, etc. Our planning includes export of products to other regions and countries along with India to cater the demand for Individually Quick Frozen fruits & vegetables.
- Big emphasis shall be given on retail market, large scale distributors so as to expand the operations. Web based business can also be considered as the use of internet is increasing by the target customers.

TARGET MARKET

- The target market is a central focus within a marketing plan that determines other essential factors for the product, such as distribution, price, and promotion efforts. The target market also determines significant factors about the product itself. As a company’s product sales grow, it may also expand its target market domestically and internationally. Our target market would include the following:



Individuals



B2B Companies



Retail stores, Malls,  
Supermarkets



Restaurants



Distributors

FIGURE 3: TARGET MARKET



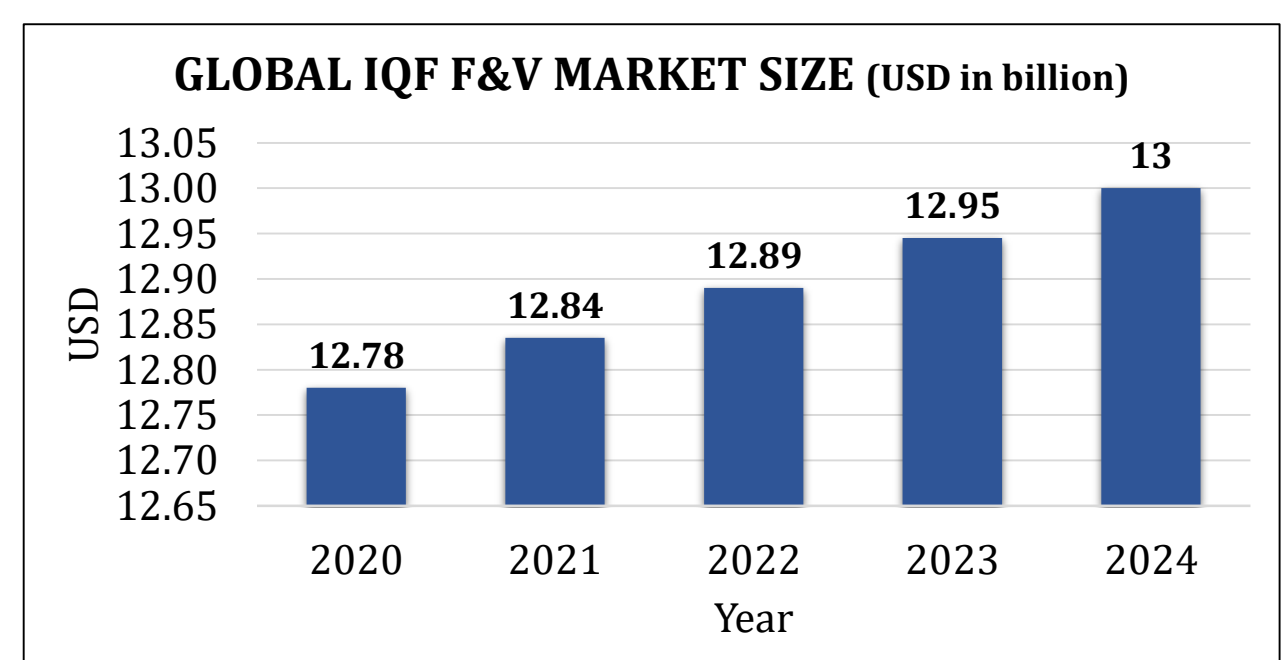
## 2.5 TARGET GEOGRAPHY AND MARKET

### MARKET INSIGHTS

- Frozen foods are witnessing growth in their demand since past few years owing to innovations in freezing technologies across the globe.
- Major freezing methods employed in the market include cold store freezing and Individual Quick Freezing (IQF). From these two methods, the most quick and advanced method is the IQF i.e. Individual Quick Freezing and it has various advantages over cold store method as well.
- Individual Quick Freezing involves freezing of individual pieces of food in a very short time with no intervention of humans preventing cross contamination of finished product.
- Fluidization principle is responsible for freezing each and every piece of food separately in an efficient manner.
- This technology can be employed for freezing products like:
  1. Fruits
  2. Vegetables
  3. Meat
  4. Dairy
  5. Pasta
- Here, we will be focusing on IQF of fruits and vegetables in the proposed project.
- **The factors driving the market of Individual Quick Frozen Fruits & Vegetables market include:**
  - ✓ Growth of population across the world and change in lifestyle
  - ✓ Major use as ingredient in various products across food industry including bakery, confectionery, etc.
  - ✓ Rise in working population across the world and hectic work schedule
  - ✓ Rising need for convenience foods in the

market owing to its longer shelf life

- ✓ Increasing health importance among population
- **The IQF market has been segmented based on:**
  1. Types:
    - a. Fruits
    - b. Vegetables
  2. Category:
    - a. Organic
    - b. Conventional
  3. End users:
    - a. Household
    - b. industrial
- The global IQF Fruits & vegetable market is around USD 12.7 Billion in the year 2020 and is expected to grow at a CAGR of 5.5% y-o-y.
- Few of the factors restraining the growth are the COVID 19 pandemic lockdown, fluctuating demand post lockdown from consumer point of view, inflation, changing government regulations, etc.



- **The renowned market players in IQF Fruits and Vegetable market include:**
  - ✓ SunOpta Inc. (Canada)
  - ✓ Ardo N.V. (Belgium)
  - ✓ Capricorn Food Products India Ltd. (India)
  - ✓ Uren Food Group Ltd. (UK)
  - ✓ BS Foods B.V. (the Netherlands), etc.

## 3. PROJECT OVERVIEW

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### 3.1 PRE-REQUISITES OF PROJECT

#### **Pre – operative expenses**

The pre-operative expenses would be INR 595,000 which includes raw material, legal company registration, project report fee, consultation fee, deposits with electricity dept plus promoter's expenses in initial gestation period.

#### **Project/Company Registration**

Company registration required under Companies' Act 2013 to process with the further legal and formal business proceedings, tax registration, Food license, etc.

#### **Business Plan / Project Report**

A Concise and comprehensive business plan / Project Report is needed to raise the funds and to have clear execution plan.

#### **Plant**

The proposed IQF Fruits & Vegetable Processing plant will require manufacturing unit & an administration office for its business operations.

#### **Processing Unit**

1 acre – Built up Area – industrial construction  
The production of IQF green peas, cauliflower, mix vegetables etc. will be done initially and will expand the product portfolio as per the feasibility in the future.

#### **Legal Requirement:**

- Company Registration
- PAN/TAN
- Bank Account
- Shop Act
- GST
- Professional tax
- Food License obtained from Food Safety & Standards Authority of India (FSSAI)
- Export License
- Trademark and domain name registration
- ISO Certificate (Food Safety Management System FSMS)
- HACCP (following Hazard Analysis Critical Control Points i.e. HACCP Principles)



### 3.2 IMPLEMENTATION SCHEDULE AND PLAN

1	Company Registration	-	
2	Project Report	05/10/2020	15/10/2020
3	Coaching	25/09/2020	
4	Funds Collection	16/10/2020	15/11/2020
5	Admin/Plant Set Up	16/11/2020	20/03/2021
6	Legal Certification	20/10/2020	15/11/2020
7	Entering into contract	10/01/2021	
8	Vendor Setup	01/02/2021	20/03/2021
9	Marketing and Promotion	15/03/2021	15/04/2021
10	Operations- Trail Run	20/04/2021	
11	Inauguration	02/05/2021	

TABLE 2: IMPLEMENTATION SCHEDULE AND PLAN

**Note:** the schedule timing can change based on type of project and certain other prevailing environmental conditions.

### 3.3 BASIS & PRESUMPTIONS OF PROJECT

**Market Potential:** The market potential of IQF fruits & vegetables in the said target market is assumed on the basis of non-field market research done in regards to this project.

**Sales:** Sales of projected IQF fruits & vegetables business is assumed to be; everything will get sold that gets produced as it shows sales potential in said market.

**Funds Availability:** We assume that the funds required for setting up said project will get available through bank and various funding institutions and from promoter, director of company.

**Resource Availability:** We assume that said business project will have availability of all resources like 5M - men, money, machinery, material and market.

**Cost of capital:** Cost of capital assumed to be at 12-15 %

**Working Hours/Shift:** The working hours/shift to be assumed at 16 hrs. as per labor law.

- Number of Shift per day: 2
- Total numbers of working hours per week: 96
- Number of working days per annum: 360

**Plant Efficiency:** Initial Plant Working Efficiency Plant will be 75%

**Wages & Salaries:** Wages and salaries are assumed as per industry standard and labor law.

**Seed Capital:** Promoter, Director, Entrepreneur and partners will need to raise 15% of the capital as margin money.

**Machines & Material Cost:** The costs of machinery, equipment, raw material and other direct & Indirect material is based on the quotation provided by suppliers and market rates at the time of report preparation.

### 3.4 PRODUCT CONCEPT AND STANDARD

- Individual Quick Freezing (IQF) is a technique of freezing fresh fruits and vegetables at a very low temperature of -18°C individually and quickly.
- The technique involves sending pieces of individual fruits & vegetables inside a freezer tunnel, where the principle of fluidization is applied i.e. the product act like fluid inside the freezer due to the upward stream of air; separating the product during the freezing process.
- The fast freezing causes formation of small ice crystals within the product, which is beneficial for product as it does not cause any damage to the tissues.
- In other freezing techniques formation of large ice crystals takes place due to longer time that tend to damage the tissues of product.
- IQF retain the color, texture and flavor of fruits and vegetables increasing their shelf life as well. Frozen fruits and vegetables have the same nutritional value as that of freshly picked one's.
- Few of the fruits like berries do not require operations like cutting, or the operation like blanching need to be skipped for certain fruits/vegetables in case they can be bypassed to next operation.
- We have considered freezing of vegetables in the first year and gradually increasing the capacity as well as introducing fruits categories from 2<sup>nd</sup> and 3<sup>rd</sup> year.

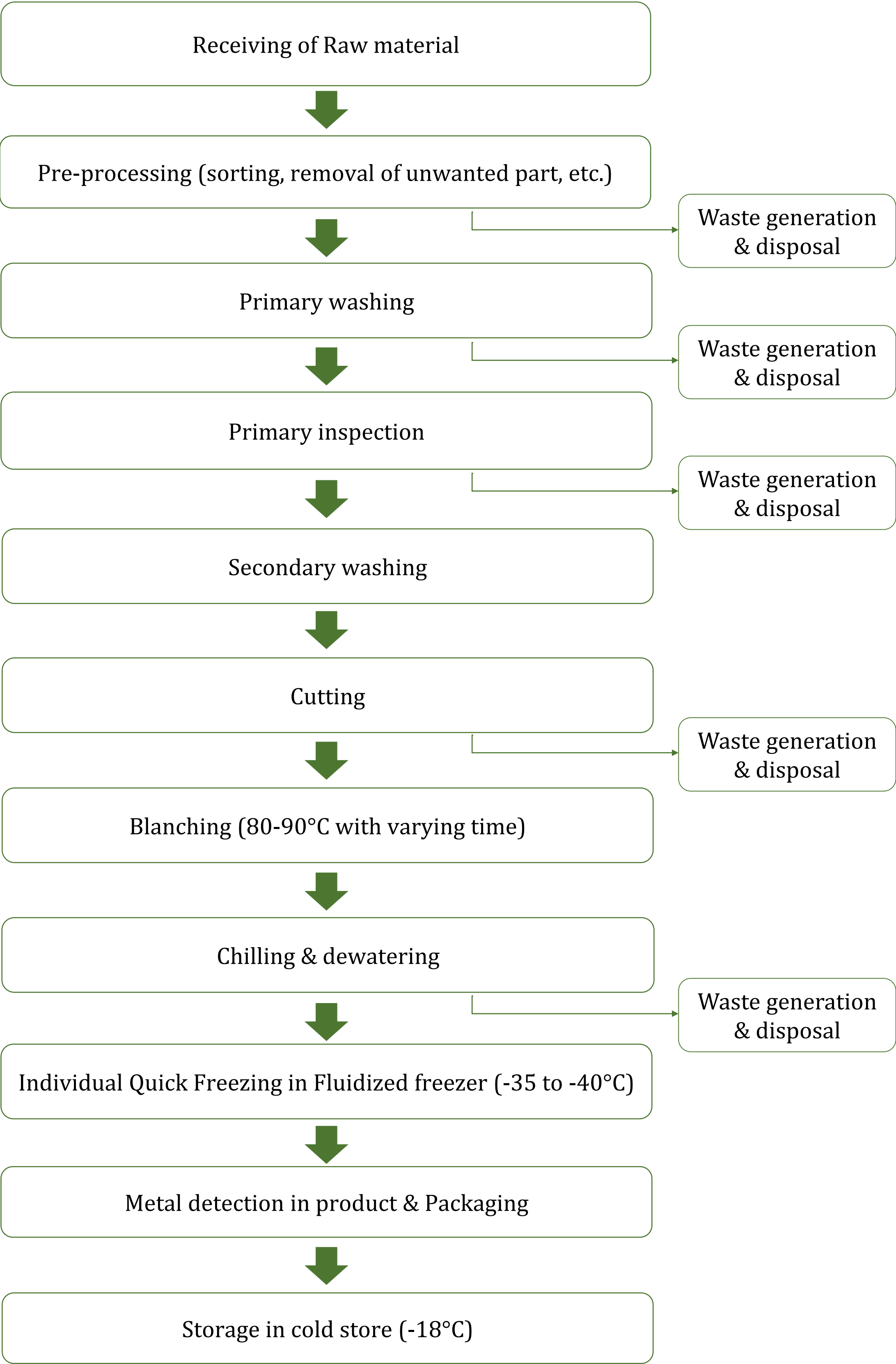


Different fruits and vegetables that can be frozen using IQF technique include:

IQF Fruits	IQF Vegetables
Strawberries	Green peas
Peaches	Sweet corn
Blueberries	Baby corn
Banana	Okra
Mango	Carrots
Papaya	Jalapeno
Pineapple	Cauliflower
Apple	French beans
Kiwi	Capsicum
Guava	Potato
Pomegranate	Onion
Amla	Asparagus
Lemon	Broccoli
Oranges	Bitter gourd
Watermelon	Spinach
Coconut	French beans
Musk melon, etc.	Mix vegetables, etc.

TABLE 3: IQF FRUITS & VEGETABLES LIST

3.5 PRODUCTION PROCESS FOR IQF FRUITS & VEGETABLES



## 4. PROJECT DETAILS

### 4.1 INFRASTRUCTURAL PLAN

#### 4.1.1. Location:



**Location details:** the location selected for manufacturing unit is Umred MIDC, Nagpur, in the state of Maharashtra , India.

#### Land details:

The main aim of selection of location is to maximize the benefit of location to the firm. The industrial location analysis has a cost focus viz.

- Capital cost
- Procurement cost
- Operating cost
- Distribution cost

The location of project is also dependent on some sub factors, that are:

- Raw material availability
- Proximity to the market
- Availability of labor
- Availability of supporting industries
- Availability of infrastructural facility (power, water, transport)

#### 3.1.2. Plant Layout and Design:

**1. Outside the food production premise:** layout and design should be unidirectional to prevent backward flow of material during processing. This is required in order to

prevent cross contamination.

**2. Outside the food production premise:** Floors, ceilings, doors and walls of the establishment must be made of impervious material, smooth and easy to clean. The floor shall have adequate and proper drainage with appropriate slope and they should be easy to clean and disinfect. The windows, doors & all other openings to outside environment in the establishment shall be well screened with wire-mesh or insect- proof screen to protect the premise from pests.

**3. Equipment and containers:** All the containers, tanks, silos, hopper, etc. coming in contact with food must be non-corrosive, smooth, easy to clean and maintained regularly; of food grade quality, generally made of stainless steel or galvanized iron material. All equipment shall be kept clean, washed, dried and stacked at the close of business to ensure freedom from growth of mold/ fungi and infestation.

#### 4. Facilities:

**a) Water supply:** Continuous supply of potable water shall be ensured in the premises. In case of intermittent water supply, adequate storage arrangement for water used in food or washing shall be made. Water used in cleaning of equipment's / containers, etc. shall not introduce any hazards or contaminate the food product.

**b) Drainage and waste disposal:** waste generated during processing should be collected periodically and stored in such a manner that it will not contaminate the food process and the premises. An Effluent treatment plant if required shall be set up as per the Environment Pollution Control Board. There should be efficient drainage system and there shall be adequate provisions for disposal of refuse.



**c) Personal facilities:** personal facilities include hand washing and drying system with potable water supply, adequate and separate lavatories and changing facilities. Hand wash facilities shall be provided with hot or cold running water with self-closing / or elbow operated tap, soap solution, hand drying system / towel and disinfectant. A display board mentioning do's & don'ts for the workers shall be put up inside at a prominent place in the premise in English or in local language for everyone's understanding.

**d) Air quality, ventilation and lighting system:** ventilation is necessary especially in raw material handling, processing and storage. Adequate lighting facility shall be provided to enable the food handlers to operate in a hygienic manner. Lighting shall be protected / covered to prevent contamination due to accidental breakages.

**Development of good layout should fulfill following objectives:**

- ✓ Improve or facilitate production operation.
- ✓ Minimize material handling.
- ✓ Unidirectional Flow.
- ✓ Have flexibility of operation for alterations.
- ✓ Minimize investment in equipment.
- ✓ Economize use of floor area.
- ✓ Make labor utilization effective.
- ✓ Make effective utilization of by-product.
- ✓ Provide convenience and comfort for employees.
- ✓ Ensure proper cleaning, operation and monitoring of processes.
- ✓ Prevent cross contamination.
- ✓ Provide maximum security.

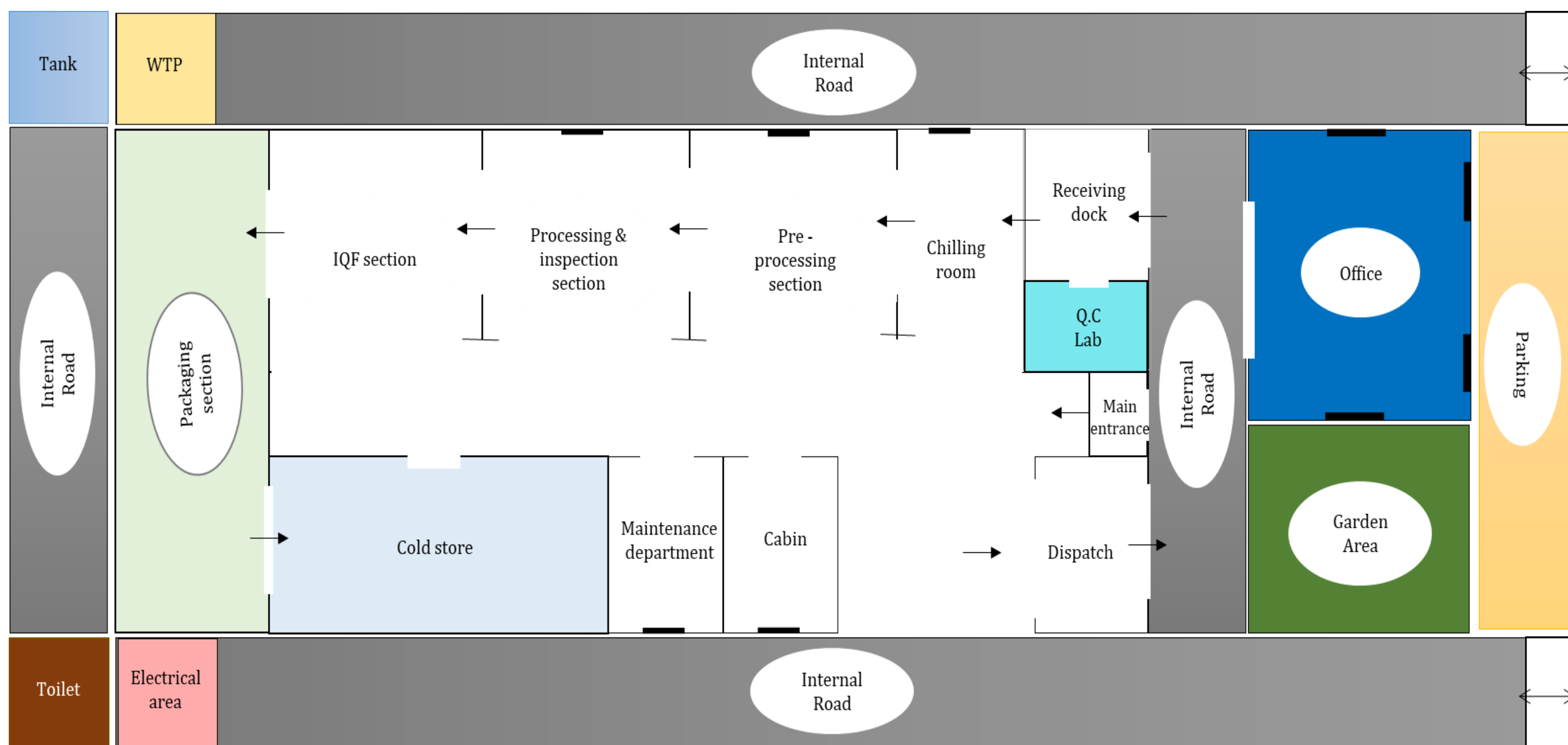


FIGURE 4 : PLANT LAYOUT

4.2 MECHA-STRUCTURAL PLAN

Sr. No.	Description	Quantity	Power (Hp)	Water (Liters)
A.	Primary Processing Line			
A.1	Primary Washing-1 (Alkaline Wash)	1	14	1400
A.2	Inspection Conveyor with Stands	1	2	NA
A.3	Secondary Washing Machine-2 (Ozone Wash)	1	14	1400
A.4	Transfer Conveyor	1	2	NA
A.5	Roller Conveyor	1	NA	NA
B.	Secondary Processing Line			
B.1	Cutting Machine ( Vegetables & Fruits)	4	4	NA
B.2	Product Collection Conveyor	1	2	NA
B.3	Inspection Conveyor	1	1	NA
B.4	Blanching Machine	1	3	1800
B.5	Pre Cooling Machine	1	7	800
B.6	Chiller Cool Water Re- Cycling System	1	2	NA
B.7	Vibration Screen	1	2	NA
B.8	Conveyor Feeder	1	2	NA
C.	IQF Section			
C.1	Fluidized IQF	1	350	NA
D.	Packing Section			
D.1	Multi Head Packing Machine	1	10.5	NA
D.2	Collection Conveyor With Magnetic Detector	1	2	NA
D.3	Working Tables	8	NA	NA
D.4	Crate Handling Trolley	5	NA	NA
D.5	Crate Washer	1	11.5	800
D.6	Cold Store	1	12	NA
B	Solid & Root Vegetable Process Line Equipment			
B.1	Elevator Conveyor	1	2	NA
B.2	Root Washing Machine	1	2	600
B.3	Elevator Conveyor	1	2	NA
B.4	Top and Tail Cutting Machine	1	2	NA
	TOTAL		449	6800

Machinery supplier: SS Engineers & Consultants

TABLE 4: MACHINERY AND EQUIPMENT

4.2 MECHA-STRUCTURAL PLAN

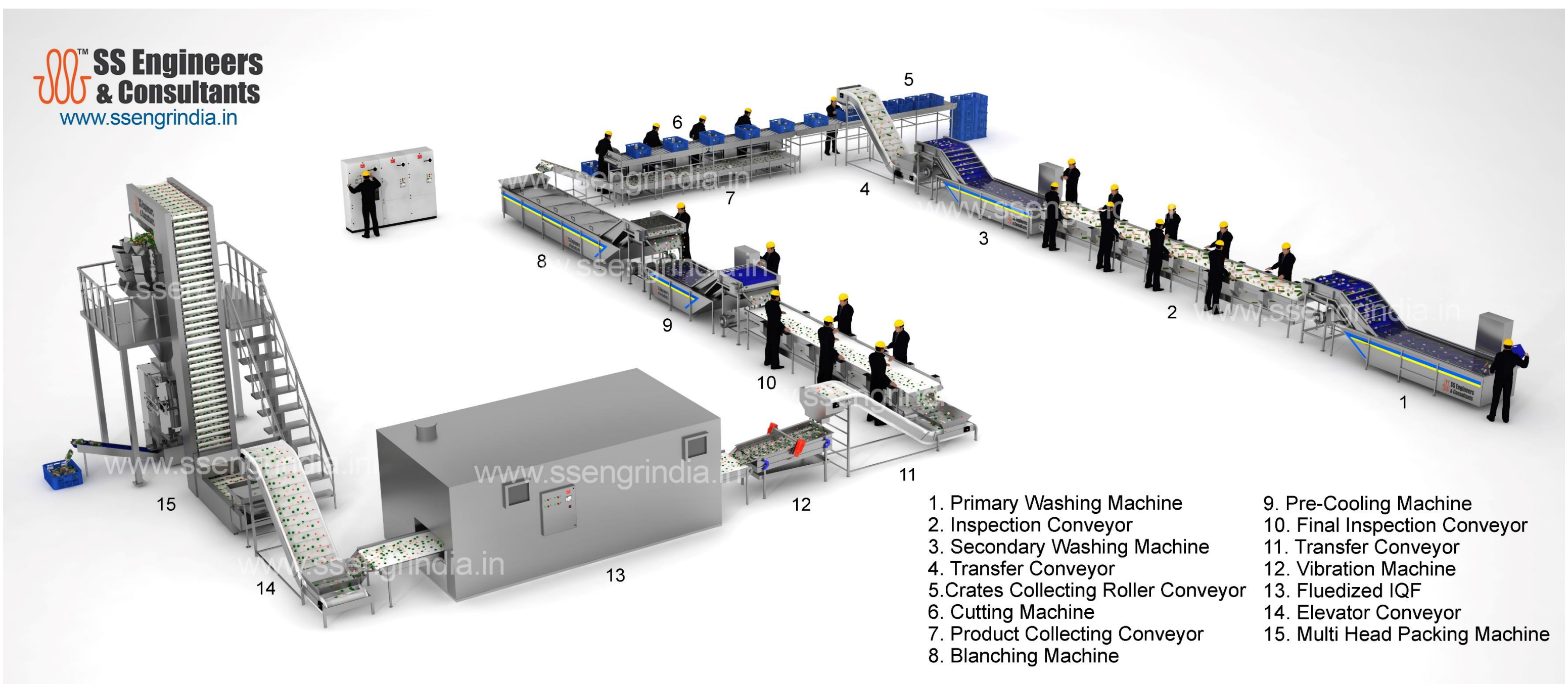
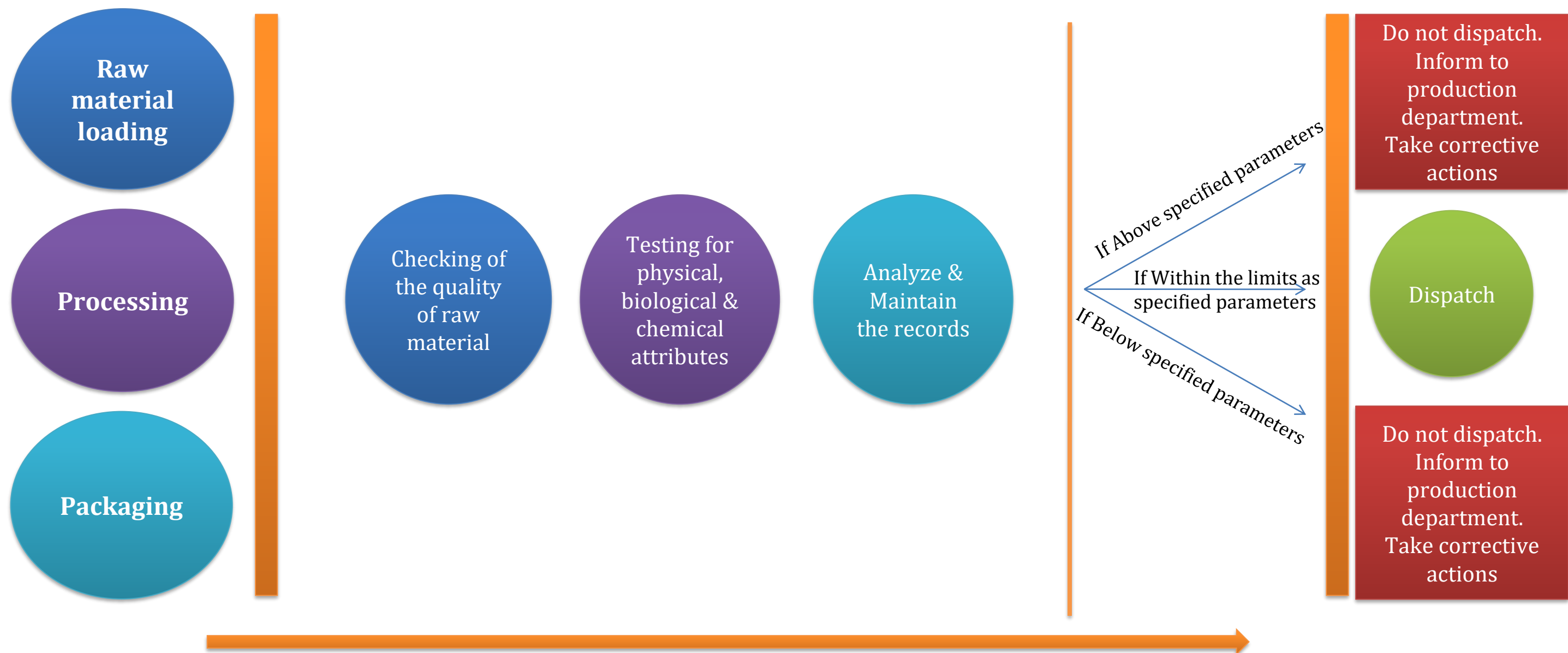


FIGURE 5: MACHINERY AND EQUIPMENT



**Lab Plan:**



**Lab Tests:**

Tests for Raw material	Attributes
Physical	Size, color, texture
Chemical	Pesticide residue, other toxic elements
Microbiological	<i>E. coli</i> , <i>Staphylococcus</i> , <i>Pseudomonas</i> , <i>Enterobacteria</i> , etc.

Tests for Water	Attributes
Physical	Color, taste, turbidity, pH
Chemical	BOD, Hardness check, toxic chemicals
Microbiological	<i>E. coli</i> , <i>Pseudomonas</i>

Tests for IQF Product	Attributes
Physical	Color, texture,
Chemical	Fats, proteins, CHO, minerals, energy value, etc.
Microbiological	<i>Streptococcus</i> , <i>Leuconostoc</i> , LAB, <i>Pseudomonas</i> , etc.

- ✓ Appoint an experienced chemist / microbiologist to handle this dept.
- ✓ All the test and procedures have to be carried out with the guidelines of FSSAI.
- ✓ The laboratory testing can also be outsourced to nearby food labs.

## **4.3 PRODUCTION & OPERATIONAL PLAN**

### **4.3.1. Production Planning and Control (PPC):**

For efficient, effective and economical operation in a manufacturing unit of an organization, it is essential to integrate the Production Planning and Control system. Production planning and subsequent production control follow adaption of product design and finalization of a production process. Production planning and control address a fundamental problem of low productivity, inventory management and resource utilization.

**Production Planning:** it deals with basic concepts of what to produce, when to produce, how much to produce, etc. Therefore, we will be ensuring that:

- Right quantity & quality of raw material, equipment, etc. are available during times of production.
- The capacity of utilization is in tune with forecast demand at all time.
- The overall production process is streamlined providing following benefits:
  - Organization will deliver a product in a timely & regular manner.
  - Supplier are informed well in advanced for the requirement of raw materials.
  - It reduces overall production cost by driving in efficiency.

Production planning takes care of two basic strategies: product planning and process planning. Production planning will be done at three different time dependent levels:

- Long-range planning dealing with facility planning, capital investment, location planning, etc.;
- Medium-range planning dealing with demand forecast and capacity planning.
- Lastly short-term planning dealing with day to day operations.

**Production control:** utilizes different type of techniques to achieve optimum performance out of the production system as to achieve overall production planning targets.

Therefore, we will make sure that the objectives of production control are met by:

- Regulating inventory management.
- Organizing production schedule.
- Optimally utilizing resources.

This will benefit as follows:

- Ensure a smooth flow of all production processes.
- Ensure production cost savings thereby improving the bottom line.
- Control wastage of resources.
- Maintaining standard of quality through the production life cycle.

Production planning and control are essential for customer delight and overall success of our organization.

### 4.3 PRODUCTION & OPERATIONAL PLAN

No. of units of IQF Fruits and Vegetables produced				
No. of years	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	
Capacity per day	10 ton/day	10 ton/day	10 ton/day	
<b>Mix Vegetables</b>				
250 Gm	1,224,000	734,400	734,400	
500 Gm	612,000	367,200	367,200	
1 Kg	306,000	183,600	183,600	
2 Kg	153,000	91,800	91,800	
<b>Green Peas</b>				
250 Gm	1,224,000	734,400	734,400	
500 Gm	612,000	367,200	367,200	
1 Kg	306,000	183,600	183,600	
2 Kg	153,000	91,800	91,800	
<b>Cauliflower</b>				
250 Gm	-	734,400	734,400	
500 Gm	-	367,200	367,200	
1 Kg	-	183,600	183,600	
2 Kg	-	91,800	91,800	
<b>Sweet Potato</b>				
250 Gm	-	734,400	367,200	
500 Gm	-	367,200	183,600	
1 Kg	-	183,600	91,800	
2 Kg	-	91,800	45,900	
<b>Potato</b>				
250 Gm	-	734,400	367,200	
500 Gm	-	367,200	183,600	
1 Kg	-	183,600	91,800	
2 Kg	-	91,800	45,900	
<b>Onion</b>				
250 Gm	-	734,400	367,200	
500 Gm	-	367,200	183,600	
1 Kg	-	183,600	91,800	
2 Kg	-	91,800	45,900	
<b>Papaya</b>				
250 Gm	-	-	367,200	
500 Gm	-	-	183,600	
1 Kg	-	-	91,800	
2 Kg	-	-	45,900	
<b>Banana</b>				
250 Gm	-	-	367,200	
500 Gm	-	-	183,600	
1 Kg	-	-	91,800	
2 Kg	-	-	45,900	
<b>Guava</b>				
250 Gm	-	-	367,200	
500 Gm	-	-	183,600	
1 Kg	-	-	91,800	
2 Kg	-	-	45,900	
<b>TOTAL Packets</b>	<b>4,590,000</b>	<b>8,262,000</b>	<b>8,262,000</b>	

TABLE 5: PRODUCTION PLANNING

*Note: the yield of product varies as per fruit/vegetable characteristics. We have assumed 85% yield on an average for every product. For detailed production capacity calculations/assumptions please refer financial statement sheet.*



### **4.3.2. Productivity Strategies:**

#### **Inspection & Quality Control:**

The raw material, ingredients, supplies, WIP and final products should undergo the different processes, and test to ensure the desired quality and quantity.

#### **Total Quality Management:**

Total quality management (TQM) consists of organization-wide efforts to install and make permanent a climate in which an organization continuously improves its ability to deliver high-quality products and services to customers. It says that organizations must strive to continuously improve the processes by incorporating the knowledge and experiences of workers. The simple objective of TQM is “Do the right things, right the first time, every time.”

#### **JIT:**

Just in time (JIT) is a production strategy that strives to improve a business' return on investment by reducing in-process inventory and associated carrying costs. An inventory strategy companies employ to increase efficiency and decrease waste by receiving goods only as they are needed in the production process, thereby reducing inventory costs.

#### **KAIZEN:**

Kaizen is a system of continuous improvement in quality, technology, processes, company culture, productivity, safety and leadership. Kaizen involves setting standards and then continually improving those standards. It is based on:-  
Standardize an operation and activities, Measure the operation (find cycle time and amount of in-process inventory). Gauge measurements against requirements. Innovate to meet requirements and increase productivity. Standardize the new, improved operations.

#### **Monitory & Non-Monitory benefits & Incentive:**

The strategy says that offer some monitory and non monitory benefits like perks, party, cash, prizes, recognition, promotion, paid leaves etc. to boost the moral and productivity of employee & labor force within the organization.

#### **Statistical Quality Control:**

Statistical quality control refers to the use of statistical methods in the monitoring and maintaining of the quality of products. One method, referred to as acceptance sampling, can be used when a decision must be made to accept or reject a group of parts or items based on the quality found in a sample. A second method, referred to as statistical process control, uses graphical displays known as control charts to determine whether a process should be continued or should be adjusted to achieve the desired quality.

#### **Theory of Constraint:**

TOC is an overall management philosophy that aims at continually achieving more goals. According to TOC, every organization is having one or more key constraints that limits the growth of organization. The constraint might be internal or external. The theory says that: identify constraint and work on it to exploit and continue this to limitless time.

#### **Six Sigma**

A comprehensive and flexible system for achieving, sustaining and maximizing business success. It can be applied by two methods –  
DMAIC – Define, Measure, Analyze, Improve & Control.  
DMADV - Define, Measure, Analyze, Design & Verify

## **KANBAN:**

KANBAN is the Japanese word means “CARD”. The strategy says the use card system for every raw material, ingredient, supplies, WIP and final products as get clear idea. Also it says that keep dedicated space for material according to their nature, state , use and shelf life.

***Few of the strategies which we would follow include Inspection & quality control, TQM, Monitory & non monitory benefits & incentives.***

### **4.3.3. WIP Management:**

- Work in progress (WIP) is a form of inventory, usually unfinished goods which still require further work, processing, assembly and or inspection. This type of inventory is usually found within steps or sub-processes of a production process.
- Only raw materials which have commenced to move through their value adding processes can be classified as WIP. Raw materials which have still not been worked with are still classified as raw materials.
- Work in progress is usually the major type of inventory in a one bin or two bin system.
- Some operations use work in progress between production steps in order to meet peak demand or volatile demand patterns.
- The presence of unnecessary work in progress can also be an indicator of an unreliable supply chain, lack of proper production planning, excessive manual labor required in the production process, production line balancing or supply chain which are causing unnecessary delays and build-up of work in progress inventory. This may warrant further analysis. An efficient productive system should only pull materials through when needed, without the need for much WIP.
- Work in progress is considered a type of waste just like inventory as it ties up cash for

a certain period of time which could be generating higher returns elsewhere in the organization. In a larger manufacturing facility even small amounts of WIP can add up to a large sums of capital locked up in this type of inventory.

- Work in progress also presents a business risk to the company because WIP will usually be stored on the factory floor, close to machinery, plant and equipment and also mobile equipment traffic areas.

**We will use of techniques like JIT, Barcode, RFID, KANBAN which can give productive output to WIP management.**

### **4.3.4. Maintenance Management:**

All activities involving keeping equipment working are part of maintenance management.

The purpose of the maintenance management department will be keeping the equipment running at high capacity and produce quality products at lowest cost possible.

The term maintenance consists of three main parts:

- Corrective maintenance
- Preventive maintenance
- Improvement maintenance

Total Productivity Maintenance (TPM) is a way of organizing maintenance to support productivity & quality through increased equipment efficiency and to reduce costs. TPM concept means that all employees work in small groups to maximize the improvement of equipment efficiency. Operators are working independently with all maintenance activities of their own equipment and have also the total responsibility of operation and maintenance.

**We will be scheduling for corrective, preventive and improvement maintenance and also TPM to avoid break down and its affecting cost / loss.**



#### **4.3.5. Cost Cutting Techniques:**

The WIP Inventory policies drive two types of costs: period operating expenses and working capital requirements and these cost can be minimized by applying following techniques:-

- Standardization
- Codification
- Value chain analysis of WIP
- ABC
- One Bin
- Two Bin
- Also strategies from inventory management can be used.

#### **4.3.6. Purchase Management:**

Purchased inputs offer a potential source for helping the company develop leverage against its competitors. Purchasing gives the firm advantages over the competitors. Purchasing actions will be designed to emphasize the competitive strategy.

Strategic planning for a comprehensive sustainable purchasing plan includes following essential steps to either creating or enhancing the EPP (Environmentally Preferable Purchasing) and supply chain management program:

- ✓ Understanding organizational readiness
- ✓ Assessing current contracts
- ✓ Ensuring full control of the supply chain
- ✓ Reviewing current policies
- ✓ Building teams, getting leadership support, assigning dedicated resources
- ✓ Working with the vendors to make the case financially, environmentally, and relating to staff impact
- ✓ Setting targets/goals and developing action plans for improvement
- ✓ Tracking, measuring, and reporting
- ✓ Training, educating, and celebrating
- ✓ Implementing strategies like JIT, Material resource planning, ABC, centralized and decentralized purchasing

- ✓ Five R's of Purchasing include:- Right Quality, Right Quantity, Right Time, Right Source and Right Prices. Maintaining these gives a concise plan for purchase management.

#### **4.3.7. Vendor Management:**

Vendor management will be enabling to control costs, driving service excellence and mitigating risks to gain increased value from our vendors throughout the deal life cycle.

It is just as important to communicate with the suppliers and vendors as it is to communicate with our customers. Establishing the proper communication channels and information flows between the company and suppliers will lead to increased efficiencies, reduced costs and better customer service. It covers simple communication methods (i.e. telephone) and other ideas that will allow the company to build a win-win relationship with its suppliers and vendors. Vendor management involves:-

- Vendor Development
- Vendor Rating

#### **Vendor Development:**

The right vendor may be one who can supply goods and services of right quality in right quantity, at right time, at right price. The process of VD will be including:

- Generating need of goods & services
- Locating the vendors
- Investigating vendor capabilities
- Preliminary selection of few vendors
- Techno-commercial discussion
- Trial Order
- Vendor Appraisal
- Retaining or sourcing new vendor.



#### 4.3.8. MRP:

##### Manufacturing resource planning (MRP II):

It is necessary for effective planning of all resources of a company. Ideally, it addresses operational planning in units, financial planning, and has a simulation capability to answer "what-if" questions and extension of closed-loop MRP.

An integrated information system used by businesses. Manufacturing Resource Planning (MRP II) evolved from early Materials Requirement Planning (MRP) systems by including the integration of additional data, such

as employee and financial needs. The system is designed to centralize, integrate and process information for effective decision making in scheduling, design engineering, inventory management and cost control in manufacturing.

This is a development that seeks to address some of the shortcomings of MRP. It includes all of the elements of MRP,

- It is based around the Bill of Materials,
- Uses a Master Production Schedule (MPS) as its starting point and
- Uses the three steps of Explosion.

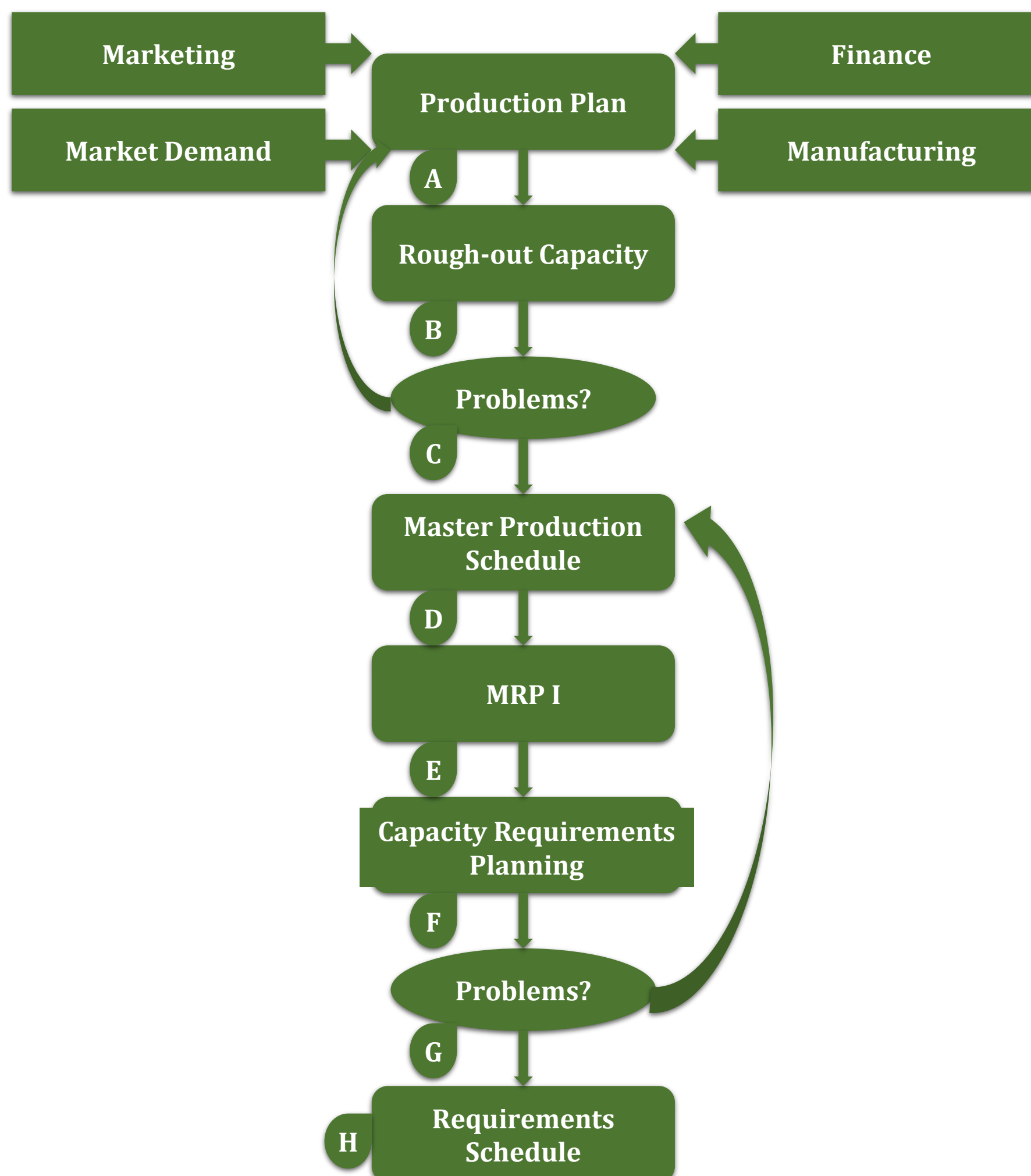


FIGURE 6: (A) MRP

### Material requirements planning (MRP):

It is a production planning and inventory control system used to manage manufacturing process. Most MRP systems are software-based, while it is possible to conduct MRP by hand as well.

An MRP system is intended to simultaneously meet three objectives:

- Ensure materials are available for production and products are available

for delivery to customers.

- Maintain the lowest possible material and product levels in store.
- Plan manufacturing activities, delivery schedules and purchasing activities.

MRP is the scientific technique for planning the ordering and usage of materials at various levels of production and for monitoring the inventories.

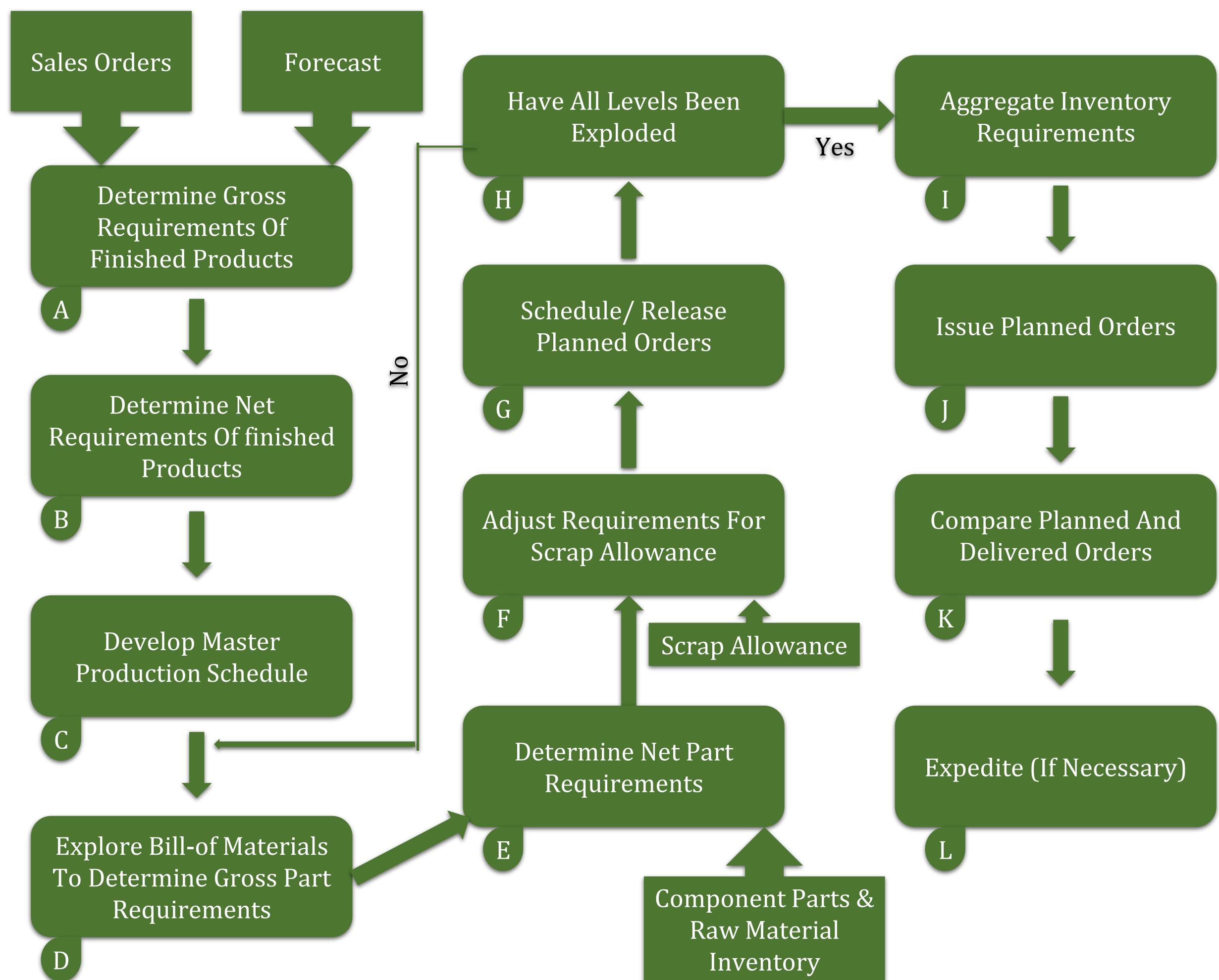


FIGURE 6: (B) MRP

**4.3.9. Inventory Management:**

Inventory or stock refers to the goods and materials that a business holds for the ultimate purpose of resale.

Strategic planning create greater efficiencies by establishing processes within the control, such as forecasting and ordering procedures.

What to order, when and how much to order is decided based on informed strategies. What comes in the back door and leaves through store’s entrance is part of several strategic plans for inventory management.

The process of determining the optimal quantity and timing of inventory for the purpose of aligning it with sales and production capacity. Inventory planning has a direct impact on a company's cash flow and profit margins especially for smaller businesses that rely upon a quick turnover of goods or materials. The overseeing and controlling of the ordering, storage and use of components that a company will use in the production of the items it will sell as well as the overseeing and controlling of

quantities of finished products for sale. An inventory is one of the major assets and represents an investment that is tied up until the item is sold or used in the production of an item that is sold. It also costs money to store, track and insure inventory. Inventories if mismanaged can create significant financial problems for the business, whether the mismanagement results in an inventory glut or an inventory shortage.

**Strategies**

- Single Period inventory Model:- Buying and stocking all the inventory for a day or one production cycle
- Multi Period Inventory system:- Buying and stocking the inventories at multiple time
- Fixed-order quantity method
- Fixed-time period method
- Quantity discounts orders
- Safety stock level order
- Fixed-order quantity method with safety level
- Fixed-time period method with safety level
- One bin system
- Two Bin System.

<b>ABC Analysis:-</b> <b>Criteria is usage value i.e. Consumption period and price per unit.</b> <b>A:- High price &amp; Less quantity items</b> <b>B:- Medium price and moderate quantity items</b> <b>C:- Low price &amp; Large quantity items.</b>	<b>GOLF Analysis:-</b> Criteria is source of procurement G:- Government O:- Ordinary L:- Local, F:- Foreign
<b>HML Analysis:-</b> Criteria is unit price H:- High Price M:- Medium Price L:- Low Price	<b>S-OS Analysis:-</b> Criteria is seasonality S-O:- Seasonal Off S:- Seasonal
<b>SDE Analysis:-</b> Criteria is procurement difficulties: S:- Scares D:- Difficult E:- Easy	<b>FSN Analysis:-</b> Criteria is speed of movement from stores F:- Fast Moving items S:- Slow moving items N:- Non moving or too slow-moving items
<b>VED Analysis:-</b> Criteria is criticality of the items V:- Vital E:- Essential D:- Desirable	Study and analyze the all inventory required and choose the appropriate inventory system and control system.



4.4 SALES AND MARKETING PLAN:

4.4.1. Marketing mix:



Product	High quality, value for money, convenient to use, meeting the said standards by FSSAI , safe.
Price	Cost plus pricing strategy is adopted to ensure optimum profitability.
Place	Physical (B2B and B2C), Online (ecommerce platforms).
Promotion	Moderate marketing and sales promotion specified to the geographic area and target market.
People	Hiring of Skilled, semi-skilled people.
Process	Will maintain SOP with flexibility in operations and develop systematic distribution system.
Physical evidence	Establishing physical as well as psychological evidence in marketing. Making, effective, efficient, convenient product.

TABLE 6: MARKETING MIX

**4.4.2. Strategy:**

<b>USP</b>  <ul style="list-style-type: none"><li>✓ Highest quality product</li><li>✓ Cost-effective product</li><li>✓ Welfare of society</li></ul>	<b>PRICING &amp; POSITIONING STRATEGY</b>  <ul style="list-style-type: none"><li>✓ The adoption of cost plus is done which involves adding a markup to the <b>cost</b> of goods and services to arrive at a selling price.</li></ul>	<b>DISTRIBUTION PLAN</b>  <ul style="list-style-type: none"><li>✓ Direct distribution will reduce the distribution cost as well as potential risks involved.</li></ul>	<b>YOUR OFFERS</b>  <ul style="list-style-type: none"><li>✓ Discounts or some offer on first wholesome purchase.</li><li>✓ Discounts or some offer on bulk purchase.</li></ul>
<b>MARKETING MATERIAL</b>  <ul style="list-style-type: none"><li>✓ Business cards</li><li>✓ Brochures</li><li>✓ Blogs / PR</li><li>✓ Banners.</li><li>✓ Magazines</li></ul>	<b>PROMOTION STRATEGY</b>  <ul style="list-style-type: none"><li>✓ Online &amp; offline marketing</li><li>✓ Social media promotion.</li><li>✓ Personal meetings</li><li>✓ Technical and financial presentations</li><li>✓ Word to mouth</li></ul>	<b>ONLINE MARKETING STRATEGY</b>  <ul style="list-style-type: none"><li>✓ Paid marketing</li><li>✓ Brand building</li><li>✓ Keyword strategy.</li></ul>	<b>REFERRAL STRATEGY</b>  <ul style="list-style-type: none"><li>✓ Loyalty points to wholesalers / retailers to attract more sales.</li></ul>

**4.4.3. Pricing:**

**Process of setting price of the product:-**

- ✓ Selecting the pricing objective
- ✓ Determining the demand
- ✓ Estimating the cost
- ✓ Analyzing competitor's costs, prices, offers
- ✓ Selecting pricing strategy
- ✓ Deciding final price of products.

**An effective pricing strategy will help you:**

- ✓ Meet company's profit objectives.
- ✓ Meet or beat the competitors' prices.
- ✓ Retain or increase your market share.
- ✓ Match the image or reputation of business, product or service.
- ✓ Match company's offer to market demand.

4.4.3. Pricing:

		Price		
Product Quality		High	Medium	Low
	High	Premium	High value	Super value
	Medium	Overcharging	Medium value	Good value
	Low	Rip-off	False economy	Economic

Penetration Pricing	Skimming Pricing	Cost Plus Pricing	Marginal Cost Pricing
Price Leadership	Cyclic Pricing	Seasonal Pricing	Going Rate Pricing
Full Cost pricing	Intuitive Pricing	Dynamic Pricing	Experimental Pricing



**4.4.4. Channel Management:**

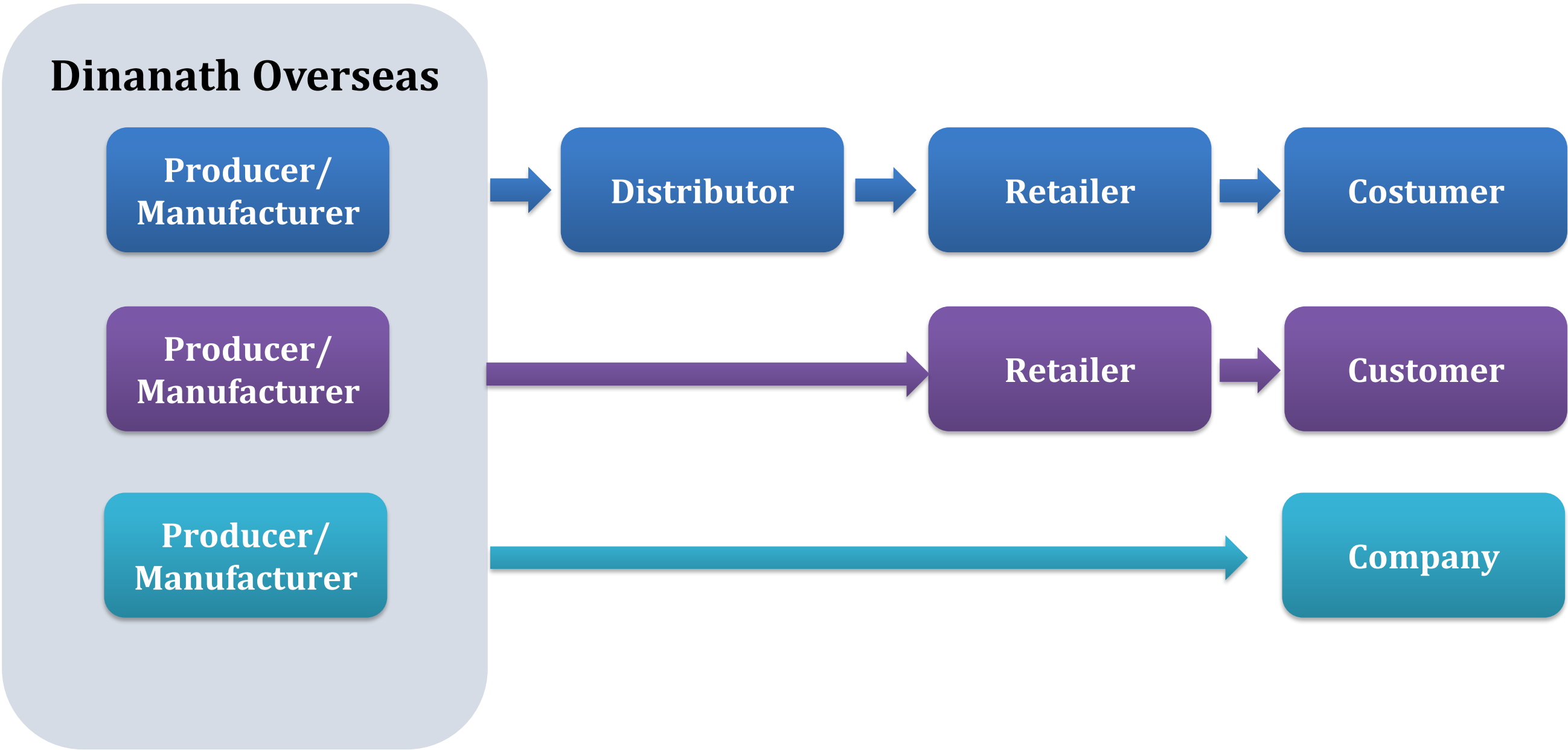


FIGURE 7: CHANNEL MANAGEMENT

## 4.5 FINANCIAL ANALYSIS AND PLAN

### 4.5.1. CAPITAL BUDGETING

CAPITAL BUDGETING (INR)			
Particular	Year 1	Year 2	Year 3
Fixed Assets	50,368,000	45,431,200	41,032,480
Working Capital	118,827,080	168,571,190	187,965,291
Initial Investment	<b>139,488,310</b>		
<b>Sales</b>	<b>136,476,000</b>	<b>240,020,280</b>	<b>299,243,214</b>
% Growth		76%	25%
LESS : All expenses includes raw materials, overhead, selling & distributions exp, salaries	<b>118,827,080</b>	<b>168,571,190</b>	<b>187,965,291</b>
Preoperating Expenses	<b>595,000</b>		
<b>Gross Profit</b>	<b>17,053,920</b>	<b>71,449,090</b>	<b>111,277,923</b>
Depreciation on Machinery (10%)	4,844,700	4,360,230	4,154,330
Depreciation on Furniture (10 %)	32,100	28,890	26,001
Depreciation on computer,laptops(60%)	60,000	9,600	-
<b>Depreciation Total</b>	<b>4,936,800</b>	<b>4,398,720</b>	<b>4,180,331</b>
<b>Profit before Tax (PBT/EBT)</b>	<b>12,117,120</b>	<b>67,050,370</b>	<b>107,097,592</b>
Income Tax			
<b>Net Profit/ Net Revenue (EAT)</b>	<b>12,117,120</b>	<b>67,050,370</b>	<b>107,097,592</b>

TABLE 7: CAPITAL BUDGETING

4.5 FINANCIAL ANALYSIS AND PLAN

4.5.2. COST SHEET

COST SHEET (INR)			
Particular	Year 1	Year 2	Year 3
Direct material	101,808,000	143,112,960	159,693,120
Direct Employees	945,000	1,039,500	1,778,700
Direct expenses	1,018,080	1,431,130	1,596,931
Prime cost	103,771,080	145,583,590	163,068,751
Factory overheads	360,000	396,000	435,600
Employee Salaries	2,064,000	2,270,400	3,339,600
Factory cost	106,195,080	148,249,990	166,843,951
Administration overheads	248,000	272,800	300,080
Employee Salaries	1,416,000	1,557,600	1,713,360
Cost of production	107,859,080	150,080,390	168,857,391
Selling and distribution overheads	780,000	858,000	986,700
Packing Exp	9,180,000	16,524,000	16,524,000
Employee Salaries	1,008,000	1,108,800	1,597,200
Cost of sales	118,827,080	168,571,190	187,965,291

TABLE 8: COST SHEET



## 4.5 FINANCIAL ANALYSIS AND PLAN

### 4.5.3. CASH FLOWS

CASH FLOW STATEMENT (INR)			
Particular	Year 1	Year 2	Year 3
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>			
Cash receipt from from customers	136,476,000	240,020,280	299,243,214
Less-Cash paid to the supplier	113,989,080	162,594,890	179,536,431
Less-Cash paid to employees	5,433,000	5,976,300	8,428,860
Cash generated from operation	17,053,920	71,449,090	111,277,923
Income Tax Paid			
Cash flow before extra ordinary items	17,053,920	71,449,090	111,277,923
disaster	-	-	-
<b>Cash flow from operating activities</b>	<b>17,053,920</b>	<b>71,449,090</b>	<b>111,277,923</b>
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>			
Purchase of Fixed asset	(50,368,000)		
Sale of Fixed asset			
<b>Cash flow from investing activities</b>	<b>(50,368,000)</b>	<b>-</b>	<b>-</b>
<b>CASH FLOW FROM FINANCING ACTIVITIES</b>			
Receive from share capital	139,488,310		
Receive from long term borrowing			
<b>Cash flow from Financial activities</b>	<b>139,488,310</b>	<b>-</b>	<b>-</b>
Net increase in cash and cash equivalent	106,174,230	71,449,090	111,277,923
Add : opening cash and cash equivalent	-	106,174,230	177,623,320
closing cash and cash equivalent	106,174,230	177,623,320	288,901,243

TABLE 9: CASH FLOWS

## 4.5 FINANCIAL ANALYSIS AND PLAN

### 4.5.4. BALANCE SHEET

BALANCE SHEET (INR)			
	at the end of the year...		
Particular	Year 1	Year 2	Year 3
LIABILITIES			
Non- current Liabilities			
(a) Share holder fund	139,488,310	139,488,310	139,488,310
(b) Reserve and surplus(retain earning)	12,117,120	79,167,490	186,265,082
total shareholder fund	151,605,430	218,655,800	325,753,392
<b>Total Non-Current Liability</b>	<b>151,605,430</b>	<b>218,655,800</b>	<b>325,753,392</b>
Current Liabilities			
(a) Outstanding liabilities	-	-	-
<b>Total Current Liability</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL LIABILITIES</b>	<b>151,605,430</b>	<b>218,655,800</b>	<b>325,753,392</b>
ASSETS			
Non Current Assets			
(a) Fixed assets			
(1) Tangible Assets	50,368,000	45,431,200	41,032,480
Less- Depreciations	4,936,800	4,398,720	4,180,331
<b>Net Tangible Assets</b>	<b>45,431,200</b>	<b>41,032,480</b>	<b>36,852,149</b>
(b) Non current investment			
<b>Total non current assets</b>	<b>45,431,200</b>	<b>41,032,480</b>	<b>36,852,149</b>
Current Assets			
(a) cash and cash equivalent	106,174,230	177,623,320	288,901,243
(b) Inventories			
<b>Total current assets</b>	<b>106,174,230</b>	<b>177,623,320</b>	<b>288,901,243</b>
<b>TOTAL ASSETS</b>	<b>151,605,430</b>	<b>218,655,800</b>	<b>325,753,392</b>

TABLE 10: BALANCE SHEET

4.5 FINANCIAL ANALYSIS AND PLAN

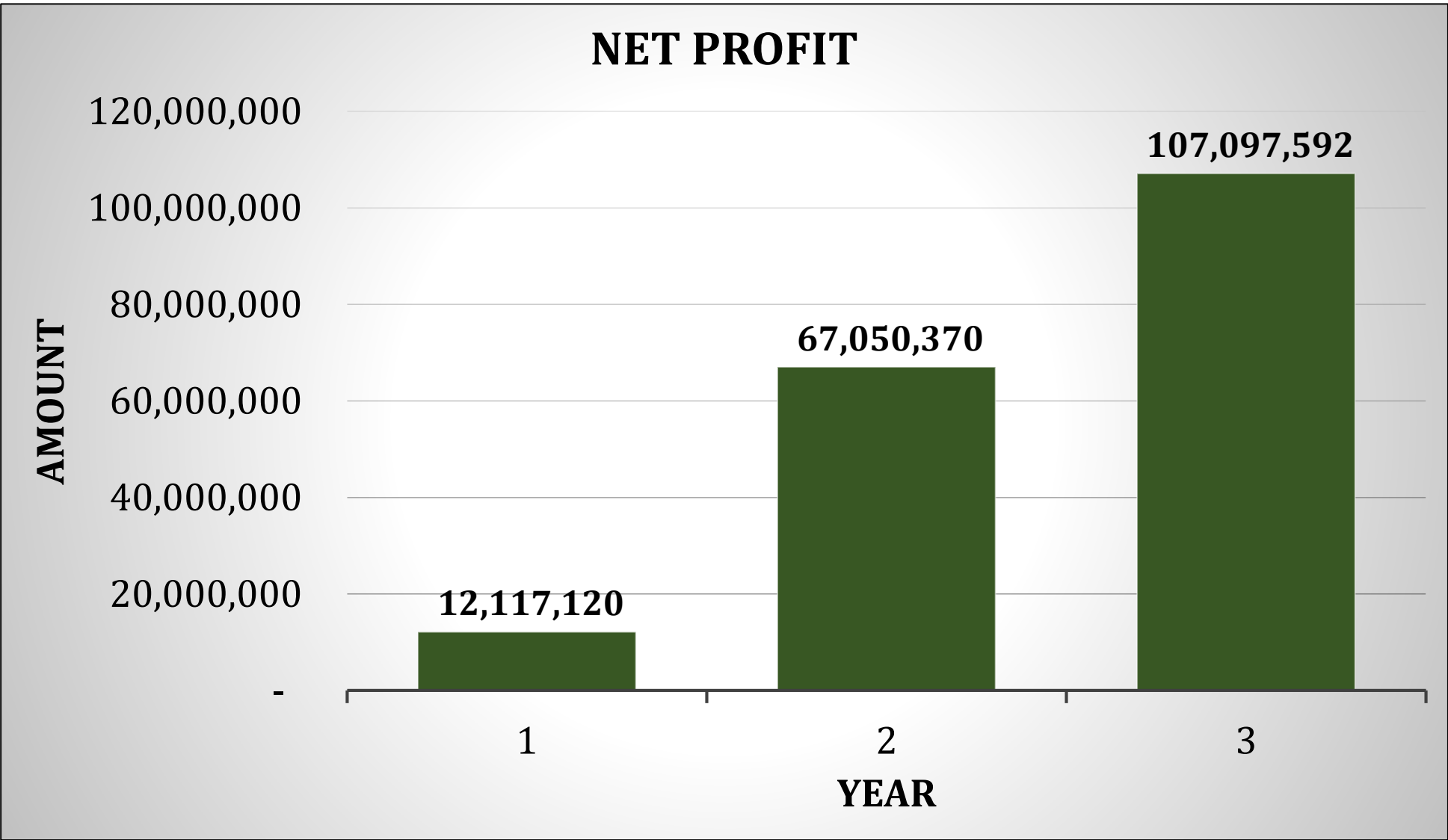
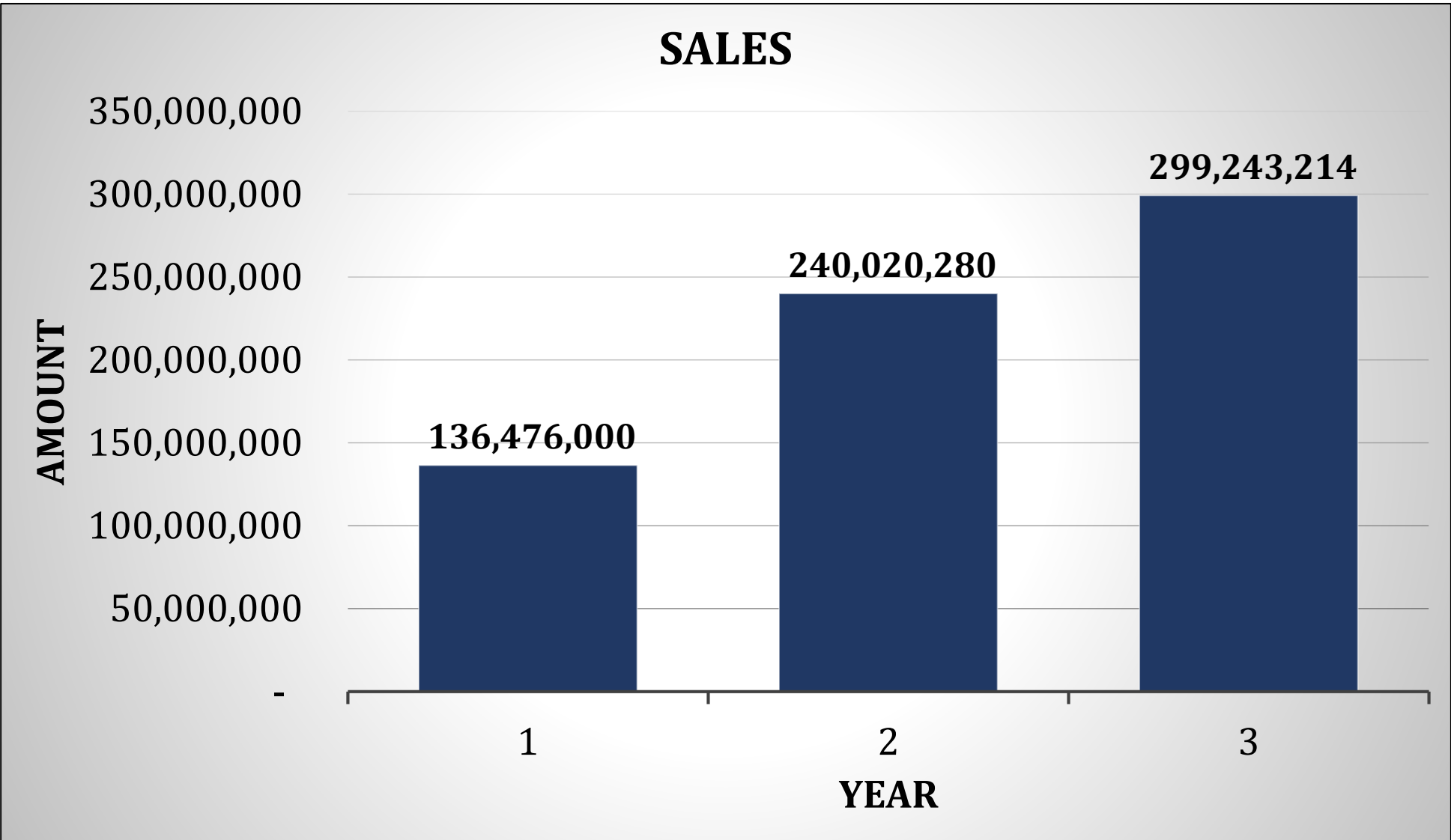
4.5.5. FINANCIAL RATIOS

RATIO ANALYSIS			
Particular	Year 1	Year 2	Year 3
PROFITABILITY RATIOS			
Gross Profit Ratio (GP/Sales*100)	12.50%	29.77%	37.19%
Net Profit Ratio (NP/ Sales*100)	8.88%	27.94%	35.79%
Operating profit margin (OP/sales*100)	87.07%	70.23%	62.81%
Return on Asset ( Net income /Asset)	0.24	1.33	2.13
TURNOVER RATIOS			
Working Capital turnover Ratio (sales/ WC)	1.15	1.42	1.59
FINANCIAL RATIOS			
Average Rate of Return(Avg income/Avg investment)	0.45		
ROI ( Net return / cost of investment)	8.7%	56.8%	133.5%
BEP (Break Even Point) in unit	3,274,834		
BEP (Break Even Point) in INR.	389,486,902		
BEP (Break Even Point) in Year	in 1st Year		

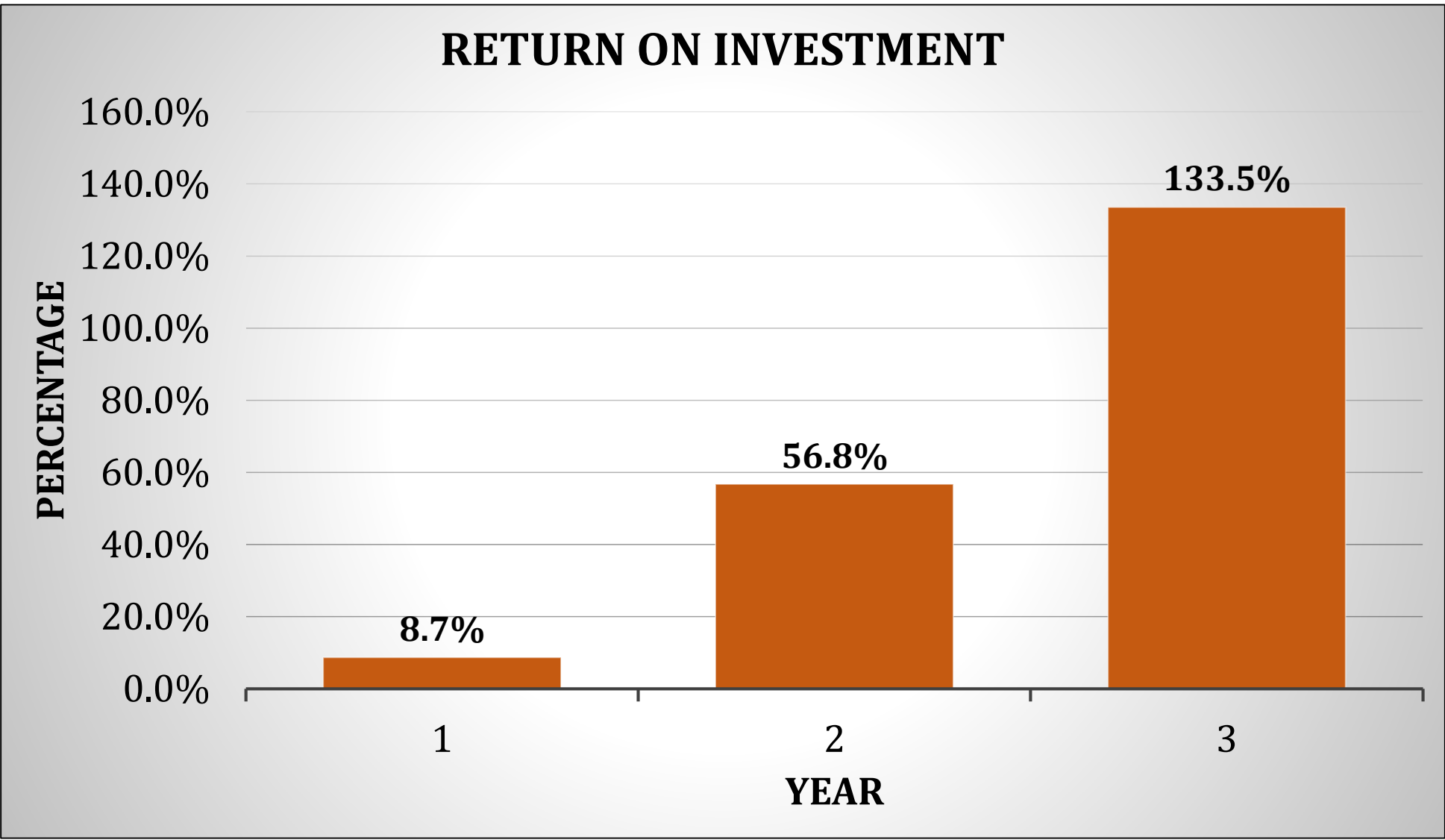
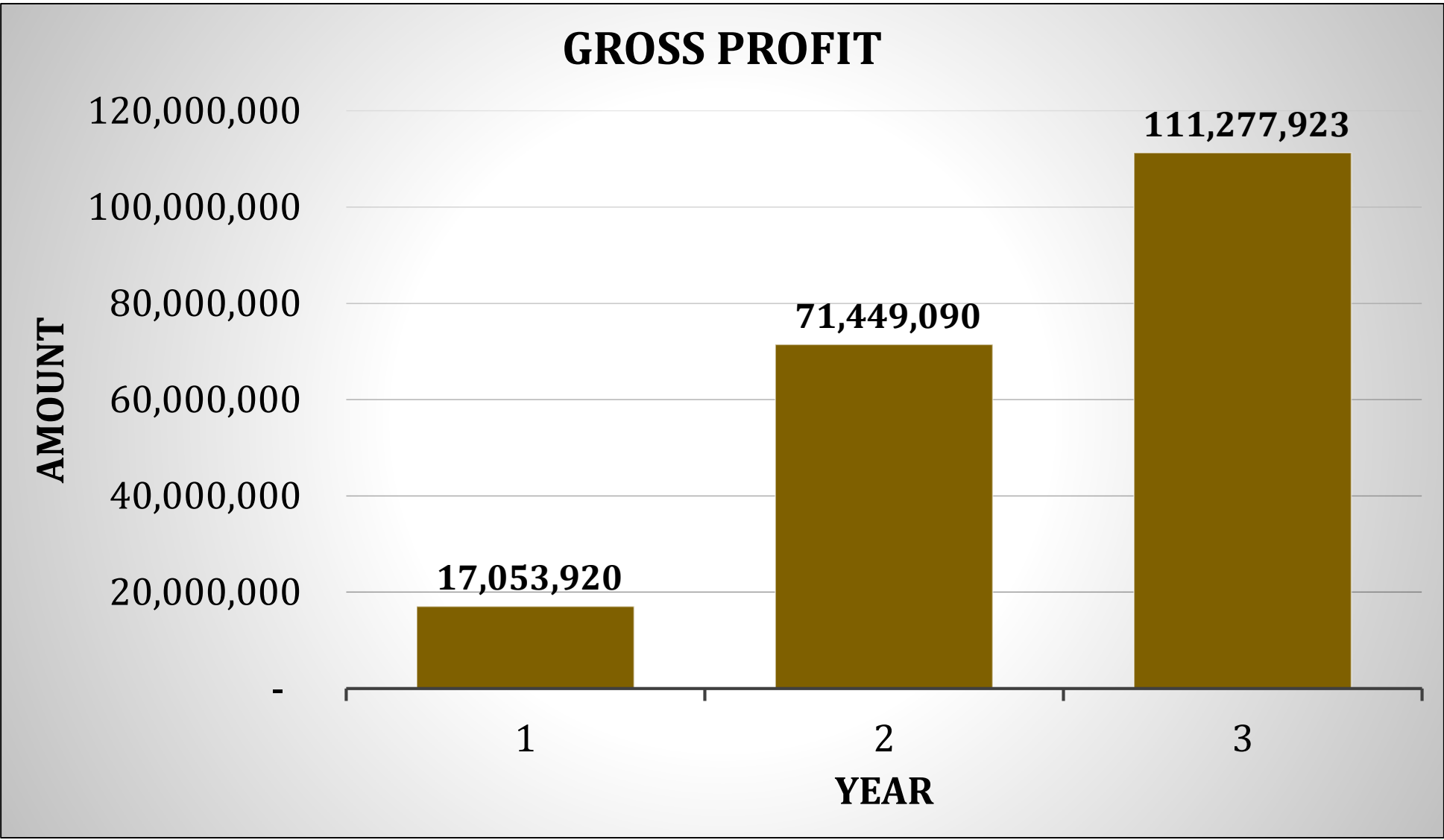
TABLE 11: FINANCIAL RATIOS



4.5.6. GRAPHS:



4.5.6. GRAPHS:



## 4.6 HUMAN RESOURCE & MANPOWER PLAN

### 4.6.1. Administrative plan:

Personnel		Responsibilities
Director		They are responsible for directing, governing and controlling the policy or management of a company.
Managers		Complete management responsibilities in ensuring company objectives & mission to be achieved according the plan.
1	Production	Oversees all production related tasks of organization.
2	Finance	Presenting true and fair view of the company, managing and controlling overall budget, expenses, and profits of the company.
3	Sales & Marketing	Designing & implementing sales strategies and business development activities, etc. To set strategic marketing plan and identify new market opportunities.
4	HR	Managing, recruiting and hiring employees, suggesting T&D activities, etc.
5	Quality control In charge	Determining, negotiating and agreeing on in-house quality procedures, standards and specifications. assessing customer requirements and ensuring that these are met.
Supervisors, Executives		Organizing workflow and ensuring that employees understand their duties or delegated tasks.
Support (helper, payroll based)		Supportive personnel.

TABLE 12: ADMINISTRATIVE PLAN



**4.6.2. HR & Manpower Requirement:**

**Human resources planning** is a process that identifies current and future human resources needs for an organization to achieve its goals. The current need of organization include:

TEAM	NUMBER
Director	1
Managers:	
-: Production Manager	1
-: Sales & Marketing Manager	1+1
-: Human Resource Manager	1
-: Finance Manager	1
-: Q.C. In charge	1
Supervisor	1
Food Technician	1
Laboratory Technician	1
Plant Operator	2
Executives	3
Employees	5
Other employees	4
Peon and driver	1+1
<b>TOTAL</b>	<b>26</b>

TABLE 13: HR & MANPOWER REQUIREMENT

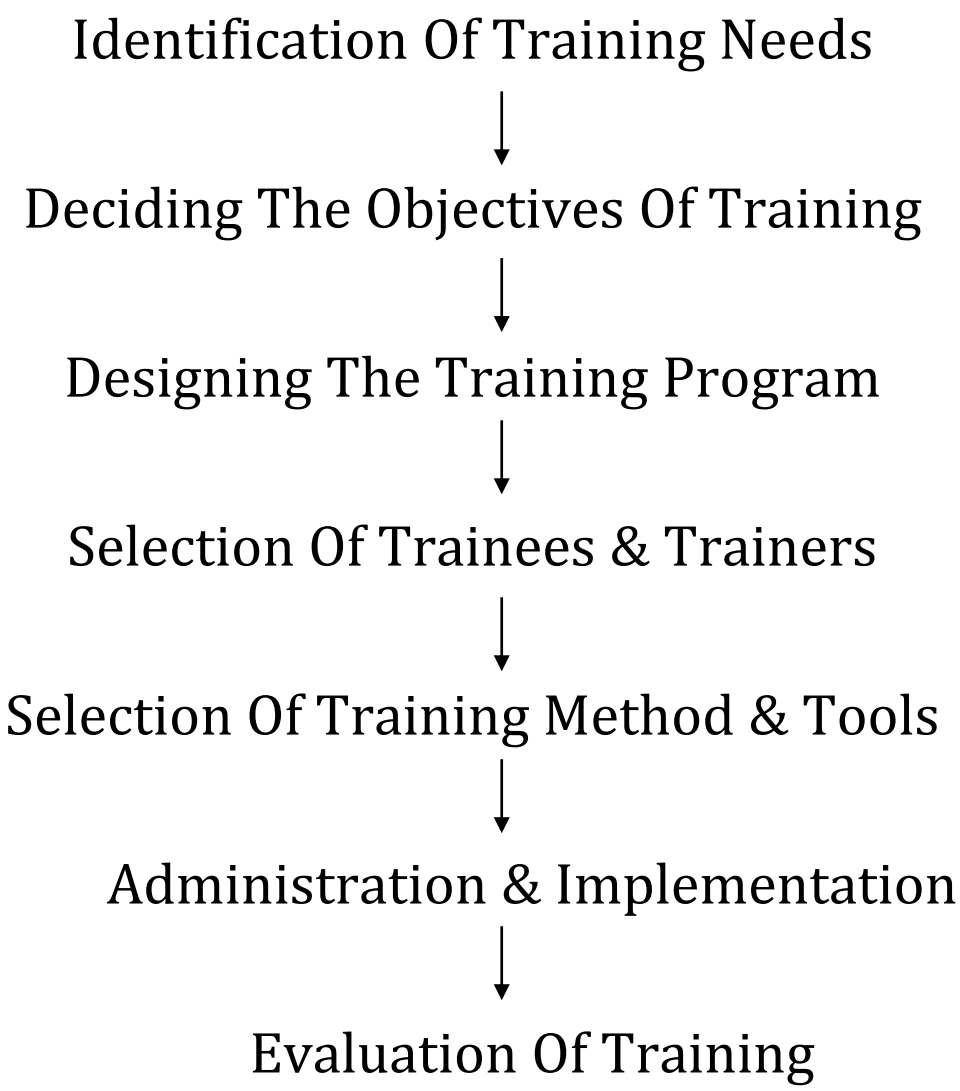
**Training and Development**

With the rapid expansion and coming up of major players in the sector, the need of human resource development has increased. The sector is facing the severe shortage of trainers. Also, the current education system is not sufficiently prepared to address the new processes, according the industrial majors.

Training Programmes employed include:

- Sales Training
- On-the-Job Training
- Seminars/Workshops
- Customer Relationship Management
- Online Course
- Group Study
- Computer-Based Training
- Self-Directed Training.

Following is the basic flow for training and development plan.



#### **4.6.2. HR & Manpower Requirement:**

##### **Compensation**

Compensation Management is an organized practice that involves balancing the work-employee relation by providing monetary and non-monetary benefits to employees. Compensation is an integral part of human resource management which helps in motivating the employees and improving organizational effectiveness.

- ✓ Compensation tries to give proper returns to the workers for their contribution to the organization.
- ✓ It imparts a positive control on the efficiency of employees and encourages them to perform better and achieve the specific standards.
- ✓ It forms a basis of happiness and satisfaction for the workforce that minimizes the labour turnover and confers a stable organization.
- ✓ It is designed to comply with the various labour acts and therefore does not result in disputes between the employee union and the management.
- ✓ This builds up a peaceful relationship between the employer and the employees.
- ✓ It arouses an environment of morale, efficiency and cooperation among the workers and provides satisfaction to the workers.
- ✓ It provides growth and advancement opportunities to the deserving employees.

##### **Types of Compensations**

- **Direct Compensation** is typically made up of salary payments and health benefits. Direct compensation that is in line with industry standards provides employees with the assurance that they are getting paid fairly.
- **Indirect Compensation** focuses on the personal motivations of each person to work. Although salary is important, people are most productive in jobs where they share the company's values and priorities. These benefits can include things like free staff development courses, subsidized

day care, the opportunity for promotion or transfer within the company, public recognition, the ability to effect change in the workplace, and service to others.

Components of compensation:

- Wages and salary
- Allowances:
  - Dearness allowance
  - House rent allowance
  - City compensatory allowance
  - Transport allowance / conveyance allowance
- Incentives
- Fringe benefits

The compensation to employees and labor will be in accordance with industry standards and labor law.

##### **Performance Management**

Performance management is the process of creating a work environment or setting in which people are enabled to perform to the best of their abilities.

Performance management is the current buzzword and is the need in the current times of cutthroat competition and the organizational battle for leadership. Performance management is a much broader and a complicated function of HR, as it encompasses activities such as joint goal setting, continuous progress review and frequent communication, feedback and coaching for improved performance, implementation of employee development programs and rewarding achievements.

The process of performance management starts with the joining of a new incumbent in a system and ends when an employee quits the organization. Performance management can be regarded as a systematic process by which the overall performance of an organization can be improved by improving the performance of individuals within a team framework.

Performance management

It is a means for promoting superior performance by communicating expectations, defining roles within a required competence framework and establishing achievable benchmarks.

4.7 MILESTONE & TIMELINE:

Sr No	Milestone	Timeline
1	Commencement of operations	May 2021
2	Catering in B2B	May-Dec 2021
3	Entering into Premium Market	Jan 2022
4	Increasing capacity	Jan 2022
5	Catering to entire country	Feb 2022
6	Planning and introduction of more categories in the market	June 2022
7	Expansion of product portfolio and global presence	June 2023

TABLE 14: MILESTONE AND TIMELINE

*Note: the timeline is subject to vary based on several external & internal environmental conditions.*



#### **4.8 SAFETY ASPECT:**

Safety programs in food industry are designed to help & maintain product integrity. Anticipating and preventing unintentional contamination before it occurs is the foundation of the modern, science-based process.

##### **Hazard Analysis & Critical Control Point Programs:**

HACCP principles will be regularly followed for manufacturing of proposed IQF products by the organization in the facility.

Hazard Analysis & Critical Control Point (HACCP) is a prevention-based food safety system that identifies, monitors and prevents specific food safety hazards that will adversely affect the safety of food products if not properly managed. HACCP plans identify potential food safety hazards so that key actions can be taken to reduce or eliminate the risk of those hazards. Prevention is the most effective means of ensuring food safety. More than 150 countries have adopted HACCP, making it the global standard in food safety programs. HACCP programs include pre-requisite programs. The pre-requisite programs include inspection and testing of raw grain as it arrives at the mill, sanitation programs, pest control programs, Good Manufacturing Practices (GMPs), traceability and recall programs, shipping and receiving procedures that cover truck and railcar inspections and sealing, chemical control programs, allergen control programs, customer complaint responses, lab testing procedures, preventative maintenance programs, machinery and equipment programs, supplier programs and grounds and facilities programs. In addition, testing is performed on in-process products.

##### **Good Manufacturing Practices:**

Good Manufacturing Practices (GMPs) is a system for ensuring that products are consistently produced and controlled according to quality standards. It is designed to minimize the risks involved in any Food production that cannot be eliminated through testing the final product.

GMP covers all aspects of production from the starting materials, premises, and equipment to the training and personal hygiene of staff.

Detailed written procedures are essential for each process that could affect the quality of the finished product. There must be systems to provide documented proof that correct procedures are consistently followed at each step in the manufacturing process - every time a product is made.

Products which do not fulfill the purported purpose during processing and packaging predisposes a firm to regulatory action by the regulatory body.

##### **Audits:**

Routine self-audits ensure that the programs in place are being followed and monitored correctly. Independent third party auditors verify that the procedures stated in the programs are being followed. They also perform a physical inspection of the facility to ensure that the programs and procedures are reflective of industry and company standards and requirements.

## **4.9 ENVIRONMENTAL ASPECT:**

The Ministry of Environment, Forests and Climate Change (MoEFCC), Central Pollution Control Board (CPCB) and the State Pollution Control Board (SPCB) are the environmental regulatory authorities in India.

The main environmental laws, including under which various key environmental permits (or consents) are being issued in India, include the:

- Water (Prevention and Control of Pollution) Act 1974 (Water Act),.
- Air (Prevention and Control of Pollution) Act 1981 (Air Act).
- Environment (Protection) Act 1986 (EP Act).

Depending on the type of activities undertaken by a company, multiple permits may need to be obtained.

The industries regulated under MoEFCC are categorized based on size of industries, Pollution Index (PI) for emissions (air pollutants), effluents (water pollutants) and hazardous waste

generated apart from the consumption of resources as:

1. White
2. Red
3. Orange
4. Green

Food and food processing with PI score of 41 to 59 comes under orange category.

All the permits, consents i.e. Consent to Establish (CTE) and Consent to Operate (CTO) and their renewals under the Water Act and Air Act can typically be obtained by submitting a combined consent application to the state authority.





#### **4.10 SCHEMES AND SUBSIDIES:**

##### **Prime Minister's Employment Generation Programme (PMEGP):**

PMEGP loan can be taken by individual entrepreneurs, Self-Help Groups (SHGs), Institutions, Co-operative societies and Trusts.

Under this scheme, the beneficiary has to invest only 5-10% of the project cost while the government provides a subsidy of 15-35% of the project based on different criteria. The participating banks provide the rest of the funds as term loans to the entrepreneur. The scheme offers financial assistance to people based on different criteria. However, since the scheme covers micro, small and medium-sized enterprises (MSMEs), there are certain specifications on the amount of projects that qualify and the size of the loan that is offered.

The balance amount of the total project cost is provided by the banks as a term loan to the micro unit entrepreneur. This term loan is more commonly referred to as a PMEGP Loan. The rate of subsidy will be 15% for the General category in urban areas and 25% in rural regions. For the Special categories of people, the subsidy from the government will be 25% for urban areas and 35% for rural locations.

##### **Stand Up India Scheme**

The Stand Up India Scheme provides financial assistance to SC/ST and women entrepreneurs for setting up greenfield projects. It facilitates bank loans starting from Rs. 10 Lakh to Rs. 1 Crore. The loan amount is accessible to at least one SC/ST or one woman entrepreneur per bank branch for the initiation of such projects.

The Stand Up India Scheme is available for first-time ventures in the fields of manufacturing, services or trading. It will also facilitate non-individual enterprises where at least 51% of the shareholding is held by an SC/ST or a woman entrepreneur. The Stand Up India loan amount

will cover 75% of the total project cost. The entrepreneur is expected to commit at least 10% of the project costs as per the Stand Up India loan Scheme.

##### **Rs. 3 Lakh Crore MSME Loan Scheme:**

The government of India notified the Rs 3 lakh crore Emergency Credit Line Guarantee Scheme for Medium, Small and Micro Enterprises (MSMEs) under the Atma Nirbhar Bharat Abhiyan to help them tide over the economic distress being faced due to the COVID-19 pandemic.

Under this scheme, MSMEs borrowers with up to Rs 25 crores of total borrowing can avail an additional 20 percent of the loan outstanding from banks, NBFCs and other financial institutions.

The government will set up a Rs 41,600 cr fund under National Credit Guarantee Trustee Company Limited (NCGTC) for this scheme.

##### **PSB Loans in 59 minutes**

The government of India introduced a quick business loan portal for the individuals who wish to expand their existing business. Under this scheme MSMEs can get loan amount from Rs. 1 Lakh to Rs. 5 Crore in less than 59 minutes from public and private sector banks and Non-Banking Financial Companies (NBFCs).

PSB Loans in 59 minutes is an online marketplace, which enables the business individuals to apply for Business Loan at an interest rate of 8.50% onwards. This initiative was taken to ease the MSME Business and promote self-employed business model in India by reducing the loan approval process and long queues at the bank.

##### **Pradhan Mantri Mudra Yojana (PMMY)**

Mudra Loan is a funding scheme initiated by Government of India. Mudra loan under PMMY provides funding support of maximum up to



#### **4.10 SCHEMES AND SUBSIDIES:**

Rs. 10 lakh to individuals, SMEs, MSMEs, and non-corporate and non-farm small/micro enterprises. There is no collateral or security required by the banks. The repayment tenure is from 3 years to 5 years.

##### **Credit Linked Capital Subsidy for Technology Upgradation**

The Credit Linked Capital Subsidy Scheme, shortly referred to as the CLCSS is an innovative credit product launched by the Ministry of Micro, Small and Medium Enterprises. The primary objective of this scheme is to aid the technology up-gradation of micro and small enterprises, especially in rural and semi-urban areas.

Ceiling on loans under the scheme has been raised from INR 40 Lakhs to INR 1 Cr while the rate of subsidy has been enhanced from 12% to 15%.

##### **Biotechnology Industry Partnership Programme (BIPP)**

BIPP is a government partnership with Industries for support on a cost sharing basis for path-breaking research in frontier futuristic technology areas having major economic potential and making the Indian industry globally competitive. Support is provided for high-risk, accelerated technology development especially in futuristic technologies.

##### **Technology Development Programme (TDP)**

Technology Development (TD) Programme supports activities aimed at developing and integrating technologies to evolve materials / process / techniques both in the advanced / emerging areas and in traditional sectors / areas. Under the Programme, feasibility of fresh ideas / concepts is assessed for their potential conversion into useful technology / product. Applications of R&D for socio-economic benefits is consciously promoted under this Programme.





**4.11 RISK MITIGATION:**

The objectives of risk mitigation and planning are to explore risk response strategies for the high-risk items identified in the qualitative and quantitative risk analysis. The process identifies and assigns parties to take responsibility for each risk response. It ensures that each risk requiring a response has an owner. Risk mitigation and

planning efforts require that the organization set policies, procedures, goals, and responsibility standards. Formalizing risk mitigation and planning will help establish a risk culture that should result in better cost management from planning through construction and better allocation of project risks that align teams with customer-oriented performance goals.

Risks identified	Measures taken
Target market	Broad target market selection
Pricing of product / services	Selecting cost plus pricing strategy
Technology risk	Monitoring and upgradation with newest technology
Transaction risk	Payment security
Information risk	Data security
Material handling	Minimal handling of resources
Cross contamination	Ensuring hygienic environment in processing area. Following GMP guidelines.
Environmental damage	Use of sustainable environmental practices (provision for ETP)

TABLE 15: RISK MITIGATION

**All these measure can reduce the risk arising in this business**

# 5. OBLIGATIONS

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## 5.1 TO THE LAW

- ✓ Companies Act
- ✓ Direct & Indirect Taxation Rules
- ✓ Follow packaging laws
- ✓ Follow FSSAI guidelines
- ✓ Environmental laws

## 5.3 TO THE CUSTOMER

- ✓ Standard & Prescribed Quality
- ✓ Provide safe & hygienic product
- ✓ At right price, place and time
- ✓ Consumer protection

## 5.2 TO THE GOVERNMENT

- ✓ Payment of all taxes
- ✓ Environmental Control.

## 5.4 TO THE SOCIETY

- ✓ Brand loyalty
- ✓ Safety
- ✓ Generating employment.





## 6. MBP ANALYSIS

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Meticulous has been always positive towards encouraging start up business especially in food, pharma, environment friendly product sector, etc. as it has a wide gap on demand & supply. Manufacturing of Individually Quick Frozen Fruits & Vegetables is a challenging sector as fruits & vegetables tend to be highly perishable commodity and managing the supply change while minimizing the wastage is quite difficult as well freezing requires strict regulations to be followed as final product is directly related to human consumption.

Individually Quick Frozen fruits & vegetables find a wide demand in the global market owing to its longer shelf life, preserved nutrition, favorable taste, etc. the market in India is at emerging state in IQF technology as the consumption is limited to middle class & mostly upper middle class population where there is higher product awareness.

Starting an IQF unit requires a lot of planning, research and development. Government schemes like Stand Up India, MSME Loan scheme, etc. would favour this business.

The global market for IQF Fruits & vegetables is expected to reach a market of USD 13 billion by 2024 growing at a CAGR of 5.5% y-o-y with increased demand in the developed countries.

The company can flourish by adopting the policy of “Increase the profit by reducing cost and not by raising the price”..





## 7. DISCLAIMER

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