

# Food Packaging Technology Handbook

**(3rd Revised Edition)**

*(Biodegradable Films, Materials ,  
Polymers, Aseptic Packaging,  
Labels and Labelling, Packaging  
of Cashew Nuts, Dairy Products,  
Milk, Fish, Meat, Shrimps,  
Canning of Vegetables, Fruits  
with details of Machinery and  
Equipments)*

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with Details of Machinery and Equipments)



# **Introduction**

Food packaging technology is primarily concerned with packaging activities regarding protection of food products from biological, physical or chemical agents. With the growth of modern civilization, people are getting more concerned with hygiene and quality of the food.

## **Types of Food Packaging**

Packaging materials come in different shapes with various functions relative to their properties. It is essential for the packaging material to have a balance between its shape and its function. Given the packaging's main purpose of preservation, containment, and protection of food, the packaging material can be rigid, flexible, or semi-flexible.

**Related Book: - Food Packaging Technology Handbook (3rd Revised Edition)**

Rigid packages include bottles, trays, cans, jars, and caps.

Flexible packages include bags, cling wraps, bubble wraps, shrink wraps, squeezable tubes, foam trays, stand-up packets, and vacuum bags.

Semi-flexible packages include caps and closures, boxes, and tetra packs.

Food packaging types differ in various ways, such as weight, size, durability, and barrier properties

The packaging industry's growth has led to greater specialization and sophistication from the point of view of health and environment friendliness of packing material. The demand on the packaging industry is challenging, given the increasing environmental awareness among communities. The food packaging industry is growing at the rate of 22 to 25 per cent per annum. In near future it is going to be a booming industry.

**Related Projects:- Packaging Industry, Beverage Can, Bottles, Blister Packs, Carton, Bags, Plastic Bottles**

## **What is the Importance of Food Packaging?**

Food packaging is used to allow for easy transport of goods, protect the integrity of food products, and ensure separation from harmful chemicals, particles, bacteria, and pests. It also allows for food labeling and other information for consumers such as ingredients allowing you to adhere to any laws and regulations regarding labeling of for-consumption goods.

Food packaging uses a variety of different materials to protect food and provide surfaces for labeling. The types of material used in your food packaging will depend on your preferences and the food products that you're storing. Most food packaging consists of either glass, cardboard, metal, or plastic.

**Related Books: - Packaging Industry, Beverage Can, Bottles, Blister Packs, Carton, Bags, Plastic Bottles**

## **What is Primary and Secondary Packaging?**

Primary food packaging is the most essential form of packaging. Primary food packaging is in direct contact with the food product – it preserves the products and ensures protection from external bacteria or particles. Secondary packaging is used for branding and as an extra measure of protection for the food product.

In many cases, food suppliers use primary packaging to package small amounts of food. Secondary packaging is then used to contain the smaller packages together. It's a great way to bulk-sell smaller portions of food products.

**Related Videos:- Packaging Industry, Food Packaging, Paper, Beverage Can, Bottles, Carton, Plastic Bottles, Corrugated Boxes, Aseptic, Flexible, Aluminium, Glass**

## Why Do We Use Food Packaging?

At the end of the day, we use food packaging to protect food and to ensure customers can identify the product. Without food packaging, you wouldn't be able to distinguish your food products from other market competitors. You also wouldn't be able to guarantee that your food products aren't expired. Food packaging is vital for protecting food against external microbes and bacteria. It can also help preserve food and ensure it doesn't spoil. After food packaging is removed, the shelf life of a food product is greatly reduced.

**Related Projects:- Packaging, Holograms, Printing, Publishing, Screen Printing and DTP Projects**



## **Market Synopsis**

Food packaging ensures the protection of food products and ensures to improve the shelf-life of the product thereby, attracting more number of customers. The food packaging market is expected to grow significantly over the forecast period with the advent of numerous production facilities with the objective of catching up with latest trends in the market. Also, the rapid changes in the lifestyle of the people and changing food preferences of consumers along with growth in population in the developing nations is expected to drive the growth of the market over the forecast period. The increasing preference of people for processed food due to shifts in population dynamics from rural to urban areas is also driving the growth of the food packaging market.

**Projects:- Project Reports & Profiles**

The market is further driven by various factors such as the trend of consumers shifting towards specialty & processed food, advancement in materials used for packaging of food products, the adoption of different marketing strategies by key players in the market, increasing demand for food packaging materials and increasing consumer awareness towards the necessity of good quality food packaging in developing economies. The introduction of different technologies for manufacturing processed food packaging products and the introduction of various kinds of food packaging types for food packaging has further driven the growth of the market.

**Books:- BOOKS & DATABASES**





The increasing consumption of convenience foods owing to the rapidly changing lifestyle of consumers is driving the growth of the food packaging market. The key players in the market have convenience features in the food packaging such as easy opening, portability, and single-use packaging which are driving innovations for packaging of processed foods. The two aspects which drive the growth of the food packaging market are visual appeal and convenience.

### **Market Research:- Market Research Report**

Packaging has played a critical role as a differentiator in promoting brands, especially for packaged food products.



With the increase in urbanization and emergence of supermarkets and hypermarkets, differentiating food products through the aesthetic appeal of packaging has become important for food manufacturers. Furthermore, consumers are increasingly paying more attention to the ingredients and contents of the package. This provides an opportunity for the food packaging technology & equipment manufacturers as food manufacturers need to differentiate their products by conveying the benefits of packaging technology on the labels and packets, such as shelf life, the time required for preparing the food, and nutritional contents to the consumers.

**Projects:- Project Reports & Profiles**



On the basis of the application, the market is segmented as bakery & confectionery, dairy, meat, fruits & vegetables and others. Amongst these, the meat industry is the most attractive application for the food packaging market. The increasing preferences of the consumer for protein-rich food are in turn, leading to the increase in consumption of meat and seafood. The busy lifestyle of the consumers is driving the demand for frozen foods. Thus, meat food is an attractive application segment for market players in food packaging market.

**Books:- BOOKS & DATABASES**



## Application:

Bakery, Confectionery, Pasta, and Noodles

### Dairy Products

Sauces, Dressings, and Condiments

Snacks and Side Dishes

Convenience Foods

Meat, Fish, and Poultry

### Fruits and Vegetables

Others

**Market Research:- Market Research Report**

There are numerous factors driving, obstructing and creating opportunities for the market. The fact that food packaging market mainly in Europe is customer-oriented and remains unchanged. Thus, this industry is greatly driven by the growing demand for extended shelf-life of a product. Furthermore, the rising need for convenience food products indicate that this market definitely has a bright future. Besides this, increased disposable income and growing awareness among buyers over packaged food is also driving the market. Counterfeit activities reported from across Europe has however, hindered or restricted the progress of the market to a greater extent. Moreover, the disposable management of the waste during the production too has hindered the growth of the industry.

**Related Book: - [Food Packaging Technology Handbook \(3rd Revised Edition\)](#)**



Advent of new technologies within the industry such as water soluble packaging, edible packaging, smart packaging, self-cooling and self-heating packing and more are creating greater opportunities for the industry.

Good food packaging offers protection and can improve the shelf-life of products which consequently attracts more number of customers. The market for food packaging is expected to grow in the coming years as numerous production facilities are being set up to catch up with the latest trends coming up in the market. Also, world is experiencing rapid changes in lifestyle and food preferences that are coupled with growing population and economic growth of the respective region. All these factors have been influential in shaping up the global food packaging market. In addition to this, people are preferring processed food as result of shifting population dynamics from rural to urban areas.

**Related Book: - [Food Packaging Technology Handbook \(3rd Revised Edition\)](#)**

With rising awareness about environmental pollution and global warming, more people are not preferring to use eco-friendly food packaging techniques. This has created a significant impact on the growth of the global food packaging market. Moreover, rising disposable incomes of the people around the world, growing demand for ready-to-eat food, and rising awareness about the packaged food among the customers complement the development of the global food packaging market. Biodegradable packaging is produced using biopolymers, which are molecules often found in living organisms, like cellulose and proteins. This means they can be safely consumed, degrade quickly, and often be created from waste plant products. The main applications of bio-based and biodegradable plastics are currently in (food) packaging, food service ware, (shopping) bags, fibres/nonwovens and agricultural applications. Bio-based drop-in plastics such as bio-PE and bio-PET are identical to fossil-based counterparts and can be used in exactly the same applications.

The more recently developed bio-based plastics (bio-PE and bio-PET) are also mainly used in food packaging. The increasing awareness of the environmental impact of packaging products and a willingness to replace packaging materials by alternatives with e.g. a lower carbon footprint or made from renewable resources are the main driver for development and the use of these materials.

This book gives comprehensive account of food packaging, which is the most important part to preserve the food for a long time. The present volume has been written primarily for the benefit of new entrepreneurs, technologists, technical libraries and for those who want to diversify in the field of food industry.

**Related Book: - [Food Packaging Technology Handbook \(3rd Revised Edition\)](#)**





# Table of Contents

## **1. Introduction**

Containment

Protection/Preservation

Communication

Utility

Packaging Systems

Primary Packaging

Secondary Packaging

Tertiary Package

Unit Load

Consumer/Industrial Packaging

Biodegradable Packaging

Development of Bioplastic

Biopolymers

Starch Based Plastics (Biodegradable)

Bio-based and Biodegradable Plastics from

Genetically Modified Organisms

## **2. Biodegradable films for Food Packaging and Application of Nanotechnology in Biodegradable Food Packaging**

Biodegradable Polymer Films for Food Packaging

Biodegradable Polymers from Biomass Products

Starch

Cellulose

Other Materials

Pectin

Chitin and Chitosan

Proteins

Advantage and Limitations of Biodegradable

Polymer

Nanotechnology in Biodegradable Polymer

### **3. Biodegradable Materials for Food Packaging Applications**

Materials

Aliphatic Polyesters

Manufacturing Process

Manufacturing Filament Yarn

Polymerization

Drying

Melt Spinning

Drawing the Fiber

Winding

Manufacturing Staple Fiber

Drawing Tow

Crimping

Setting

Cutting

Polylactide Aliphatic Copolymer (CPLA)

Polycaprolactone (PCL)

Synthesis and Physicochemical Properties of  
PCL

Poly (Lactic Acid) (PLA)  
PLA Processing  
Extrusion  
Injection Molding  
Injection Stretch Blow Molding  
Cast Film and Sheet  
Thermoforming  
Polyurethane Foams  
Processing Technology  
Fillers for Bio based Packaging Materials  
Cellulose Fiber  
Wood Fiber  
Technical Requirements  
Types of Degradable Plastic  
Oxo-Biodegradable Plastic  
Fossil Resources  
Hydro-Biodegradable Plastics

## **4. Biodegradable Polymers in Food Packaging**

Polymers

Biopolymers

Origin and Description of Biobased Polymers

Starch

Production Process

Poly lactic Acid

Poly (hydroxyalkanoates) (PHAs)

PHAs Production

Polycaprolactone (PCL)

Cellulose and Derivatives

## **5. Packaging Materials for Processed Foods**

Metal Cans

Materials Used in Can Manufacture

The Steel Base

Thickness of Steel Base

Mechanical Properties

Basic Types of Metal Plate

Surface Finish

The Tin Coating

Marking of Differentially-Coated Plate

K Grade Tinplate

Grading of Tinplate

General

Tin-Free-Steel (TFS) Sheets

Tinplate and Its Application

Aluminium Cans

Manufacture of Three-piece Cans

Side Seam Welding

Types of Side Seam Welders

Other Types of Side Seams

Can Ends

Manufacture of Ends

Flanging, Beading and Double Seaming

Lacquers and Their Application

Plastic Lamination

The Future for Can Coatings

Discolouration in Lacquered Cans

Lacquer Performance

The Cans

The Two-Piece Can

DRD Cans

D&I or DWI Cans

Container Innovations

Corrosion of Tinplate

Corrosion in Lacquered Cans

Permissible Limits of Tin

Limits for Lead

Can Sizes

Inspection and Tear-down Examination of

Double Seam

*On the Seam*

*After Tear Down*

Critical Parameters

Optical Measurements

Performance Testing



Selection of Tin Coating Depending on the  
Corrosivity of Packs  
Specifications for the Metal Cans  
Glass Containers  
Composition of Glass  
Improvements in Glass Manufacture  
Hot and Cold End Treatment of Surface  
Coating  
Lightweight Containers  
Glass Container Characteristics  
Basic Parts of a Glass Container  
Glass Neck Ring Finish  
Closures for Glass Containers  
Parts of Glass Closures  
Vacuum Closures for Glass Containers

(i) Pry-off (side-seal) Cap  
(ii) Lug-type or Twist Cap (Non-Baby Food Type)  
(iii) Lug Type Caps for Baby Foods  
(iv) PT (Press-on, twist-off cap)

Sealing of Glass Containers  
Crown Corks  
Procedure for Determining Capper Efficiency  
Evaluation of Glass Container Closures  
Pry-off (side seal) Type Caps  
Lug Type Caps  
Vacuum Measurements  
PT (Press-on, twist-off) Cap  
Cocked-up Cap and Dud Detections  
Sampling Plan and Inspection  
Tamper-Evidence of Processed Containers  
Plastic Packaging Material  
General Properties

Polyethylene (PE)

Polypropylene (PP)

Polyethylene Terephthalate (Polyester) (PET)

Polyamide (PA) or Nylon

Polyvinylchloride (PVC)

Polyvinylidene Chloride (PVDC)

Polystyrene (PS)

Polycarbonate

Ethylvinylalcohol (EVOH)

Polyvinyl Alcohol (PVA)

Regenerated Cellulose (Cellophane)

Cellulose Acetate (CA)

Paper, Paperboard and Foil

Pack Requirements

Water Vapour Transmission (WVTR) of Plastics

Oxygen Absorption

Fabrication of Flexible and Rigid Plastic

Packages

Container Fabrication

PP/Foil/PP Laminated Tray

Co-extrusion

Closures for Hot-Fill or Retortable Plastic

Containers

*Cartons for Liquids*

Packaging Requirements for Distribution

Off-flavours in Packed Food

*Can and Can Coatings*

*Plastic Packaging*

Economic Considerations

## **6. Packaging Trend of Carbonated and “Still” Beverages**

Introduction

Carbonated Beverages

Basic Manufacturing/Packaging Technology

Glass Bottles

Plastic Bottles

Bottling System

Bottle Filling

Bottle Crowning or Bottle Capping

Aluminium Cans

Non-Carbonated Beverages / “Still” Drinks

Aseptic Packaging System (Tetrapak)

Plastic Bottles

Plastic Closures

Purpose of Hot Filling

Flexible Pouches

Retortable Pouches

Bag-In-Box System

- (a) Bags
- (b) Containers
- (c) Fillers

## **7. Aseptic Packaging of Foodstuffs**

Introduction

The Product and Performance Range  
The Functionality of Steam Aseptic Machines

Sterilization of Packaging Material

Forming the Cups

Positioning Stations

Sterile Zone

The Machine Technology

Drive and Control Engineering

Dosing Techniques

Labelling

Guidelines on Aseptic Packaging

Aseptic Packaging and Low-Germ Packaging

Aseptic Packaging

Low-Germ and Recontamination - Free  
Packaging

## **8. Modified Atmosphere Packaging**

Gases Used in Map

Techniques of Map

Gas Flushing

Compensated Vacuum

Different Modified Atmospheres

*High Oxygen Atmosphere Packaging*

*Low Oxygen Atmosphere Packaging*

*Vacuum Packaging*

Active Packaging or Functional Packaging or

Interactive Packaging

Packaging Materials

## 9. Labels and Labelling

Definition

Purpose of Labels

Identification

Information

Decoration

Types of Labels

Plain Paper Labels

Pre-gummed Paper Labels

Thermoplastic Paper Labels

Pressure-sensitive Paper Labels

Plain Paper Labels

Pre-gummed Paper Labels

Thermoplastic Labels

Pressure Sensitive Labels or Self-Adhesive Labels



Swing Labels — Tie on Tags

Printing of Labels

Alternative Markings

Surface Treatment

Materials Used for Labels

Papers

Foil and Laminates

Plastics

Adhesives

Labelling Machinery

Regulations

Labels for Freight Containers

Information

Position

Language

Pictorial Markings for Handling Instruction IS Recent Trends

## **10. Packaging of Milk**

Packaging of Milk and Milk Products

Liquid Milk

Concentrated Milks

Milk Powder

Ice Creams

Butter

Ghee

Cheese

Indigenous Milk Products

## **11. Trends for Cheese and Other Dairy Products**

### **Packaging**

Milk Powder-Bulk

Milk Powder-Retail

Butter

Yogurt

Ice-Cream

Cheese

Cheese - Retail

## **12. Packaging of Malted Milk Foods**

Introduction

Present Packaging System

Glass Containers

Variant

Advantages

Disadvantages

Modality of Usage

Pet Containers

Variant

Advantages

Disadvantages

Modality of Usage

Flexible Packaging Materials

Process of Packaging (Schematic)

Variant

Browns (Malted milk food)

Whites (Malted milk food)

Nutritional Health Beverage

Advantages

Disadvantages

Modality of Usage

Significance of Packaging on FFS

Functional Requirement

### **13. Packaging of Cashew Nuts**

Introduction

Packaging System

(a) Specification of Tinplate Containers

(b) Specification for CFB Box

Recent Developments

Alternate Packaging Systems

(a) Bag - in - Box (Flexible) System

(b) Bag - in - Box (Semirigid System) Consumer Packs

## **14. Lined Cartons for Packaging of Food Products**

Concept of Lined Carton Packaging System

Manufacture of Lined Cartons

Sequence of Operation

Printing

Varnish/lamination

Punching

Folding & Lining

Carton Filling & Sealing Machines

Sequence of Operation

Vacuum & Gas Flushing

Constituents of the Lined Carton

Tests

Liners

## Criteria for the Selection of Liners

1. The Product to be packed which includes
2. Performance properties include
3. Marketing Demands include

Versatility of Lined Cartons

Product: Package Compatibility

Future Prospects of the Lined Carton Packaging System

## **15. Canning of Vegetables and Animal Products**

Asparagus

*White Variety*

Beans

*Green (french waxed)*

*Broad Bean, Field Bean, Pigeon Pea (green) and*

*Cluster Bean*

Cabbage

Carrots

Cauliflower

Corn  
Whole-Grain Corn  
Cream Style Corn  
Creamogenised Corn  
Vaccum-Packed Whole-Kernel Corn without  
Brine  
Cultivation and Maturity  
Husking  
Silking  
Grading  
Whole-grain Corn  
*Filling*  
Cream-style Corn  
Handling of A10 Cans of Cream-style Corn  
Corn-on-the-Cob  
Drumsticks  
Gourds (Cucurbits)

Mushroom

Okra

Peas

Potato

Spinach

Tomato

Crushed Tomato

Canning of Acidified Vegetables

A. Lowering the pH Using Acid

B. Lowering the pH by Fermentation

Fermentation Procedure

Microbial Changes during Fermentation

pH Considerations in the Thermal Processing of  
Acidified Vegetables

Canning of Fermented Vegetables

Sterilization Requirements

Process Schedule for Vegetables Packed in Glass  
Containers

Thermal Process Schedule for Marine and

Animal Products

Process Schedule for Soups



## **16. Canning of Fruit Products**

pH Considerations in the Canning of Fruits

Strength of Covering Syrup

Pink Discolouration in Canned Fruits

Apricot

Cherries

Guava

Grapes

Mango

Muskmelon (*Cucutnis melo*)

Mandarin Orange (*Citrus reticulata*, Blanco)

Segments

Papaya (*Carica papaya*)

Peaches

Pears

Pineapple

Process Schedule

Crushed Pineapple

Plums

Canned Dried Prunes

Strawberries

Fruit Cocktail

Strained Baby Foods

Fruit Juices, Beverages, Pulp and Concentrates

Tomato Juice

## **17. Packaging of Fish in Modified Atmospheres**

Introduction

Modified Atmosphere Packaging

Application to Fish

Norwegian Practice

Disadvantages

Conclusion

## **18. Packaging of Fresh Meat**

Product Characteristics

Packaging Principles

Packaging Materials & Techniques

## **19. Packaging of Shrimps**

Introduction

Product Forms

Processing and Packaging

*(a) Glazing*

*(b) Code Slip*

*(c) Inner Wrap*

*(d) Primary Carton*

*(e) Master Carton*

*(f) Closure and Reinforcement*

Marking

Storage and Transportation

Quality Control and Inspection System

New Trends

Packaging Requirements for IQF Shrimps

Consumer Packs for IQF Shrimps

*1. Deep Drawn Plastic Pouches*

*2. Printed Preformed Pouches*

Flexible Vacuum Packed Pouches in Paper

Board Cartons

Labelling and Marketing for IQF Shrimps

## **20. Equipment Commonly used for Food Processing and Preservation**

Design Considerations

Indian Scenario

Special Development Needs

High Speed Specialised Centrifugal Separators

Large Capacity Spray-drying and Roller-drying  
Plants

Evaporation and Aroma Recovery Plants

Specialised Energy Efficient Heat Exchangers

Aseptic Processing and Packaging Equipment

Special Types of Forming and Cooking

Machinery

Latest Types of Freezing and Freeze Drying

Equipment

System Designs

R & D Efforts

Food Machinery Listing

Equipments commonly used in Food

Preservation

Food Dehydration

(a) Sun Dryer

Solar Dryer

(b) Cabinet or Tray Dryer

(c) Tunnel Dryer

(d) Conveyor Dryer (Conveyor band dryer/belt dryer)

(e) Spray dryer

(f) Freeze Dryer

(g) Drum Dryer

(h) Fluidized Bed Dryer

(i) Spouted Bed Dryer

(j) Flash Dryer

(k) Microwave Dryer

Food Irradiation

## Food Irradiation Technology

- (a) Ionizing Radiations
- (b) Sources of Radiations
- (c) Process Control

## Food Freezing and Refrigeration

- (a) Refrigeration Systems in Cold and Freezer Storage
- (b) Compression Refrigeration System

## Ammonia Systems

## Food Canning

### Metal or Tin Cans

### Glass Cans

## **21 Active Packaging**

Active Packaging Technologies

Antimicrobial Packaging

Ethylene Scavengers

Oxygen Scavenging

Carbon Dioxide Scavenging or Release

Humidity Buffering Films and Liquid Water  
Removal

Modified Atmosphere Packaging (MAP)

Aroma and Odour Removal

Regulations

Market Scenario



## **22. Nanotechnology in Food Packaging**

Nanomaterials in Food Packaging

Nanocomposites

Silver Nanoparticles and Nanocomposites as

Antimicrobial Food Packaging Materials

Nanosensors

Oxygen Sensors

Stress and Temperature Sensors

Biosensors

Advantages Nanotechnology to Food Packaging

Market Scenario

**23. BIS Specifications**

**24. Sample Plant Layouts**

**25. Photographs of Machinery with Supplier's Contact Details**

# Tags

#FoodPackaging #FoodPackagingIndustry #FoodPackagingMarket  
#FoodPackagingBusinessPlan #FoodPackagingMarketSize  
#MarketResearchReports #FoodandBeveragesMarket  
#FlexiblePackagingFoodMarket #FlexiblePackagingMarket  
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- *One of the leading reliable names in industrial world for providing the most comprehensive technical consulting services*
- *We adopt a systematic approach to provide the strong fundamental support needed for the effective delivery of services to our Clients' in India & abroad*

*We at NPCS want to grow with you by providing solutions scale to suit your new operations and help you reduce risk and give a high return on application investments. We have successfully achieved top-notch quality standards with a high level of customer appreciation resulting in long lasting relation and large amount of referral work through technological breakthrough and innovative concepts. A large number of our Indian, Overseas and NRI Clients have appreciated our expertise for excellence which speaks volumes about our commitment and dedication to every client's success.*





*We bring deep, functional expertise, but are known for our holistic perspective: we capture value across boundaries and between the silos of any organization. We have proven a multiplier effect from optimizing the sum of the parts, not just the individual pieces. We actively encourage a culture of innovation, which facilitates the development of new technologies and ensures a high quality product.*



## What do we offer?

- *Project Identification*
- *Detailed Project Reports/Pre-feasibility Reports*
- *Market Research Reports*
- *Business Plan*
- *Technology Books and Directory*
- *Industry Trend*
- *Databases on CD-ROM*
- *Laboratory Testing Services*
- *Turnkey Project Consultancy/Solutions*
- *Entrepreneur India (An Industrial Monthly Journal)*

## How are we different ?

- *We have two decades long experience in project consultancy and market research field*
- *We empower our customers with the prerequisite know-how to take sound business decisions*
- *We help catalyze business growth by providing distinctive and profound market analysis*
- *We serve a wide array of customers , from individual entrepreneurs to Corporations and Foreign Investors*
- *We use authentic & reliable sources to ensure business precision*

# Our Approach

Requirement collection

Thorough analysis of the project

Economic feasibility study of the Project

Market potential survey/research

Report Compilation

## Who do we Serve?

- Public-sector Companies
- Corporates
- Government Undertakings
- Individual Entrepreneurs
- NRI's
- Foreign Investors
- Non-profit Organizations, NBFC's
- Educational Institutions
- Embassies & Consulates
- Consultancies
- Industry / trade associations

## Sectors We Cover

- Ayurvedic And Herbal Medicines, Herbal Cosmetics
- Alcoholic And Non Alcoholic Beverages, Drinks
- Adhesives, Industrial Adhesive, Sealants, Glues, Gum & Resin
- Activated Carbon & Activated Charcoal
- Aluminium And Aluminium Extrusion Profiles & Sections,
- Bio-fertilizers And Biotechnology
- Breakfast Snacks And Cereal Food
- Bicycle Tyres & Tubes, Bicycle Parts, Bicycle Assembling

## Sectors We Cover *Cont...*

- Bamboo And Cane Based Projects
- Building Materials And Construction Projects
- Biodegradable & Bioplastic Based Projects
- Chemicals (Organic And Inorganic)
- Confectionery, Bakery/Baking And Other Food
- Cereal Processing
- Coconut And Coconut Based Products
- Cold Storage For Fruits & Vegetables
- Coal & Coal Byproduct

## Sectors We Cover *Cont...*

- Copper & Copper Based Projects
- Dairy/Milk Processing
- Disinfectants, Pesticides, Insecticides, Mosquito Repellents,
- Electrical, Electronic And Computer based Projects
- Essential Oils, Oils & Fats And Allied
- Engineering Goods
- Fibre Glass & Float Glass
- Fast Moving Consumer Goods
- Food, Bakery, Agro Processing



## Sectors We Cover *Cont...*

- Fruits & Vegetables Processing
- Ferro Alloys Based Projects
- Fertilizers & Biofertilizers
- Ginger & Ginger Based Projects
- Herbs And Medicinal Cultivation And Jatropha (Biofuel)
- Hotel & Hospitability Projects
- Hospital Based Projects
- Herbal Based Projects
- Inks, Stationery And Export Industries

## **Sectors We Cover**

*Cont...*

- Infrastructure Projects
- Jute & Jute Based Products
- Leather And Leather Based Projects
- Leisure & Entertainment Based Projects
- Livestock Farming Of Birds & Animals
- Minerals And Minerals
- Maize Processing(Wet Milling) & Maize Based Projects
- Medical Plastics, Disposables Plastic Syringe, Blood Bags
- Organic Farming, Neem Products Etc.

## **Sectors We Cover** *Cont...*

- Paints, Pigments, Varnish & Lacquer
- Paper And Paper Board, Paper Recycling Projects
- Printing Inks
- Packaging Based Projects
- Perfumes, Cosmetics And Flavours
- Power Generation Based Projects & Renewable Energy Based Projects
- Pharmaceuticals And Drugs
- Plantations, Farming And Cultivations
- Plastic Film, Plastic Waste And Plastic Compounds
- Plastic, PVC, PET, HDPE, LDPE Etc.

## **Sectors We Cover** *Cont...*

- Potato And Potato Based Projects
- Printing And Packaging
- Real Estate, Leisure And Hospitality
- Rubber And Rubber Products
- Soaps And Detergents
- Stationary Products
- Spices And Snacks Food
- Steel & Steel Products
- Textile Auxiliary And Chemicals

## **Sectors We Cover** *Cont...*

- Township & Residential Complex
- Textiles And Readymade Garments
- Waste Management & Recycling
- Wood & Wood Products
- Water Industry(Packaged Drinking Water & Mineral Water)
- Wire & Cable



# MARKET RESEARCH REPORTS

## Objective

- ⌘ To get a detailed scenario of the industry along with its structure and classification
- ⌘ To provide a comprehensive analysis of the industry by covering aspects like:
  - ⌘ Growth drivers of the industry
  - ⌘ Latest market trends
  - ⌘ Insights on regulatory framework
  - ⌘ SWOT Analysis
  - ⌘ Demand-Supply Situation
  - ⌘ Foreign Trade
  - ⌘ Porters 5 Forces Analysis

## Objective

- ∞ To provide forecasts of key parameters which helps to anticipate the industry performance
- ∞ To help chart growth trajectory of a business by detailing the factors that affect the industry growth
- ∞ To help an entrepreneur/manager in keeping abreast with the changes in the industry
- ∞ To evaluate the competitive landscape of the industry by detailing:
  - ∞ Key players with their market shares
  - ∞ Financial comparison of present players

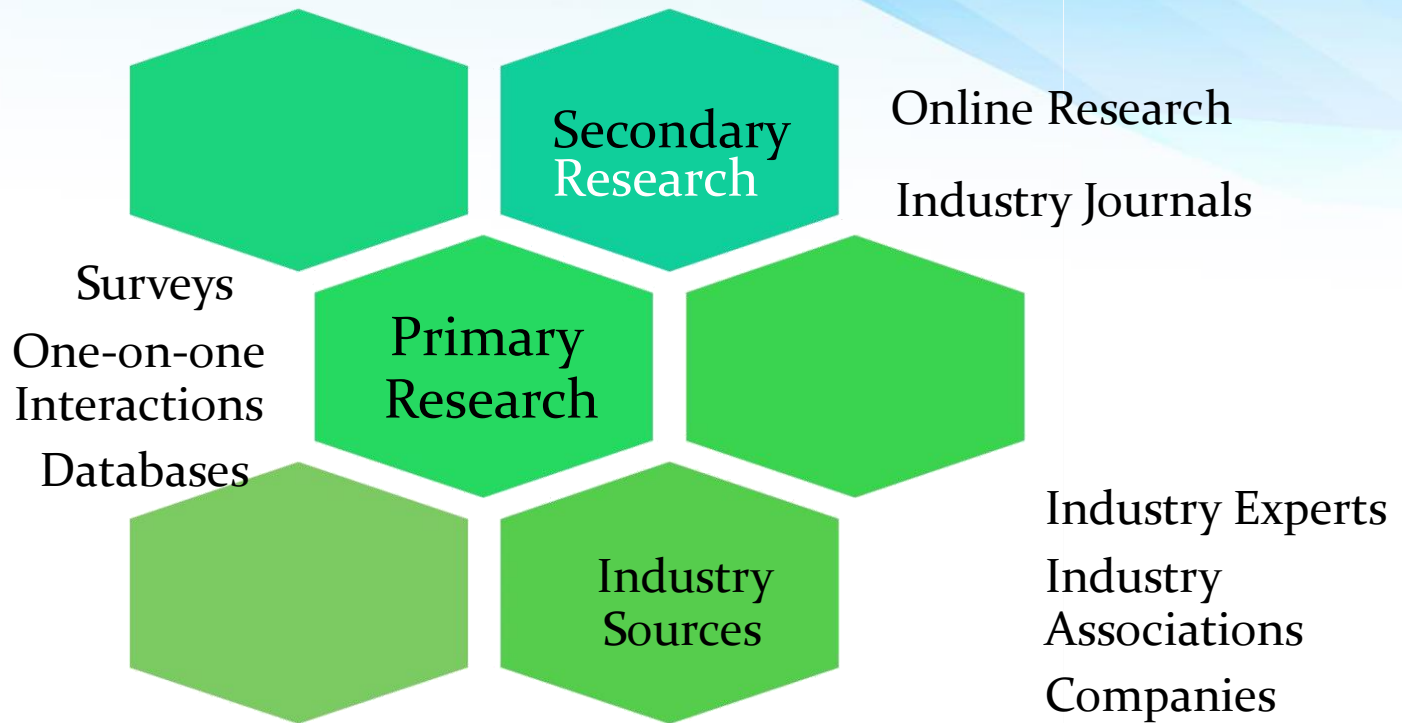


## Clientele

- ⌘Venturist/Capitalists
- ⌘Entrepreneur/Companies
- ⌘Industry Researchers
- ⌘Investment Funds
- ⌘Foreign Investors, NRI's
- ⌘Project Consultants/Chartered Accountants
- ⌘Banks
- ⌘Corporates

**[Click here for list](#)**

# Data Sources



# Scope & Coverage



## Our Team

- ⌘ Our research team comprises of experts from various financial fields:
  - ⌘ MBA's
  - ⌘ Industry Researchers
  - ⌘ Financial Planners
  - ⌘ Research veterans with decades of experience

# Structure of the Report

- 1. Overview
- 2. Market Analysis
  - 2.1 Growth Drivers
  - 2.2 Emerging Trends in the Industry
  - 2.3 Regulatory Framework
  - 2.4 SWOT Analysis
  - 2.5 Herfindahl–Hirschman Index (HHI)
- 3. Market Forecasts
- 4. Key Players

# Structure of the Report

*Cont*

- ⌘5. Key Financials and Analysis
  - ⌘5.1 Contact Information
  - ⌘5.2 Key Financials
  - ⌘5.3 Financial comparison
- ⌘6. Industry Size & Outlook

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## **Contact us**

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