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**EDITOR :**

**AJAY KUMAR GUPTA**  
D.M.S, M.B.A.

Entrepreneurship Management

**ASSOCIATE EDITOR**

**P. K. TRIPATHI**  
**UDANT GUPTA**

**NIIR PROJECT CONSULTANCY SERVICES**

AN ISO 9001:2015 CERTIFIED COMPANY

106 E, Kamla Nagar, Delhi - 110 007 (India).

Tel. : 91-11- 23843955, 23845886, 23845654, Mob.: +918800733955, 9097075054, Fax : 91-11-23845886  
E-mail : [info@niir.org](mailto:info@niir.org) , [npcs.india@gmail.com](mailto:npcs.india@gmail.com), Website : [www.niir.org](http://www.niir.org), [www.entrepreneurindia.co](http://www.entrepreneurindia.co)

## SELECTED BUSINESS IDEAS FOR YOU

### Manufacturing Business of Blood Collection Tubes (Vacutainer)

A vacuum blood collection tube is a sterile glass or plastic test tube that uses a stopper to create a vacuum seal inside the tube and enable the depiction of a predetermined volume of liquid. The vacuum blood collection tube prevents needle stick damage by preventing needles from coming in human contact and thus, contamination. The vacuum blood collection tube contains a double pointed needle, attached to a plastic tubular adapter. Double pointed needles are available in many gauge sizes. Vacuum blood collection tubes may contain additional constituents which are used to preserve blood for treatment in a medical laboratory.

A vacuum blood collection tube is mostly used by clinics and laboratories for storing blood for future testing. Vacuum blood collection tubes have a substitute which can preserve blood for an extended period for testing processes. Vacuum blood collection tubes are available in different types of sizes and specimens. Blood collection tubes expire because over time the vacuum is lost and blood will not be drawn into the tube when the needle punctures the cap.

Blood Collection Tubes Market size is estimated to reach \$2.81bn by 2025, growing at a CAGR of 7.1% during the period 2020-2025. Blood plays an important role in the diagnosis and treatment of many diseases. The blood processing includes the collection, storing and managing the blood after collected from the donor. The blood collection tubes which are also known as vacuainers are made of either plastic or glass, these

tubes are sterilized and have a safety-engineered stopper with different labeling options with the volume on it and color of the caps indicates the additives in the tube.

### Profitable Business Industry of Electric Motors

An electric motor is an electrical machine that converts electrical energy into mechanical energy. Some motor manufacturers, particularly those that produce sizes of 5 hp and up, finish-machine the bearing journals and rotor diameter as a rotor assembly. This operation produces the best possible concentricity between the bearing journals and rotor diameter. Most electric motors operate through the interaction between the motor's magnetic field and electric current in a wire winding to generate force in the form of torque applied on the motor's shaft. The applications of electrical motor include the following.

- The applications of electrical motor mainly include blowers, fans, machine tools, pumps, turbines, power tools, alternators, compressors, rolling mills, ships, movers, paper mills.

- The electric motor is an essential device in different applications like HVAC- heating ventilating & cooling equipment, home appliances, and motor vehicles.

The Indian market for electric motors is highly fragmented owing to the presence of a large number of players including major companies and

medium-sized enterprises. India Electric Motors Market is projected to grow at a CAGR of 5.9% during 2020-2026. The growing acceptance of electric vehicles is catalyzing the growth of the electric motors market size globally and in India as well. An upsurge in demand for automotive electric motors is expected over the coming years owing to rising fuel price-

#### COST ESTIMATION

**Capacity:**

Blood Collection Tubes (Vacutainer) 13x100 with EDTA	: 100,000 Nos Per Day
Blood Collection Tubes (Vacutainer) 13x75 Plain	: 100,000 Nos Per Day
Plant & Machinery	: ₹ 345 Lakhs
Cost of Project	: ₹ 983 Lakhs
Rate of Return	: 30%
Break Even Point	: 51%

#### COST ESTIMATION

**Capacity:**

5 KW Three Phase Induction Motors	: 120 Nos Per Day
10 KW Three Phase Induction Motors	: 120 Nos Per Day
10 KW Brushed DC Motors	: 120 Nos Per Day
Automated Water Pump 5 KW Three Phase Induction Motors	: 120 Nos Per Day
Plant & Machinery	: ₹ 467 Lakhs
Cost of Project	: ₹ 3949 Lakhs
Rate of Return	: 26%
Break Even Point	: 41%

es and stringent regulations towards reducing the air pollution level across the nation. Additionally, FAME II for 100% vehicle electrification, Make in India program and other initiatives to achieve India's target of becoming a global manufacturing hub would continue to boost the demand for electric motors in the country.

## Production Business of Sodium Bicarbonate and Acetic Acid

**S**odium bicarbonate is a chemical compound with the formula  $\text{NaHCO}_3$ . It is a salt composed of sodium ions and bicarbonate ions. Sodium bicarbonate is a white solid that is crystalline but often appears as a fine powder. It has a slightly salty, alkaline taste resembling that of washing soda (sodium carbonate). It has long been known and is widely used as baking soda, bread soda, cooking soda and bicarbonate of soda.

Acetic acid, systematically named ethanoic acid, is an acidic, colourless liquid and organic compound with the chemical formula  $\text{CH}_3\text{COOH}$  (also written as  $\text{CH}_3\text{CO}_2\text{H}$ ,  $\text{C}_2\text{H}_4\text{O}_2$ , or  $\text{HC}_2\text{H}_3\text{O}_2$ ). Vinegar is no less than 4% acetic acid by volume, making acetic acid the main component of vinegar apart from water. Acetic acid is the second simplest carboxylic acid (after formic acid). It is an important chemical reagent and industrial chemical, used primarily in the production of cellulose acetate for photographic film, polyvinyl acetate for wood glue, and synthetic fibres and fabrics.

The sodium bicarbonate market is projected to grow at a CAGR of 4.95% to reach US\$2.053 billion in 2026 from US\$1.464 billion in 2019. Sodium bicarbonate is widely known as baking soda or sodium hydrogen carbonate. It is available in white crystalline powder or granules and is odorless and has a cooling and slightly salty taste. It is moderately soluble in the water. It is one of the key ingredients in bakery products and is widely used in many detergents and cleaning products.

### COST ESTIMATION

**Capacity:**  
**Sodium Bicarbonate** : 100.0 MT Per Day  
**Acetic Acid** : 150.0 MT Per Day  
**Plant & Machinery** : ₹ 7051 Lakhs  
**Cost of Project** : ₹ 10501 Lakhs  
**Rate of Return** : 24%  
**Break Even Point** : 69%

The global acetic acid market size was valued at USD 8.92 billion in 2019 and is expected to grow at a compound annual growth rate (CAGR) of 5.2% from 2020 to 2027. Rising demand for the product from Vinyl Acetate Monomer (VAM) producers worldwide is projected to remain a key driving factor for the market growth. VAM consumes a majority of the acetic acid produced worldwide. VAM is traditionally produced by reacting acetic acid with ethylene and oxygen along with a palladium catalyst which is typically conducted in the gas phase.

## Start Trading Business (Potato Powder, Onion Powder, Capsicum Powder, Ginger Powder and Curcumin Powder)

**T**rade is a basic economic concept involving the buying and selling of goods and services, with compensation paid by a buyer to a seller, or the exchange of goods or services between parties. Trade can take place within an economy between producers and consumers. International trade allows countries to expand markets for both goods and services that otherwise may not have been available. As a result of international trade, the market contains greater competition and therefore, more competitive prices, which brings a cheaper product home to the consumer.

Potatoes are the fourth most cultivated crop after wheat, rice and corn. They produce the highest amount of starch derived per hectare of crop grown, which is 6.5 tons! There are various varieties of potatoes but those that have a high starch content are preferred for this purpose. Such potatoes are very good for protection against colon cancer and are very slowly digested. Powder from potatoes is a gluten-free starch powder extracted from potatoes.

Onions are abundantly cultivated and used around the world. Onion powder is made from ground dehydrated onions, grown by 'working with nature' using no chemical pesticides, herbicides or artificial fertilisers. It has a concentrated onion flavour that can be used in a wide range of dishes, making it an absolute essential in the kitchen. Because of its rich concentration of nutrients, onion powder offers many health benefits, including 10% or more of your required daily intake of vitamin C, vitamin B6 and manganese.

Capsicum is the genus of pepper plants, which includes sweet peppers such as bell peppers. These peppers are a part of the nightshade family along with eggplant, potatoes and tomatoes. This vegetable is native to the Americas but is produced and used worldwide in international cuisines and as natural remedies.

Ginger is one of the healthiest spices, full of nutrients and bioactive compounds that have many benefits for our body and brain. Dry ginger powder or shunthichurna is a warm spice with pungent taste, extracted from the dried ginger roots. It helps to pacify Vata and Kaphadoshas and increases Pitta dosha.

Curcumin is the main biologically active phytochemical compound of Turmeric. It is extracted, concentrated, standardized and researched. Curcumin, which gives the yellow color to turmeric, was first isolated almost two centuries ago, and its structure as diferuloylmethane was determined in 1910. Extensive research within the last half a century has proven that its renowned range of medicinal properties, once associated with Turmeric, is due to Curcumin.

### COST ESTIMATION

**Capacity:**  
**Potato Powder** : 40 Kgs Per Day  
**Capsicum Powder** : 40 Kgs Per Day  
**Curcumin Powder** : 40 Kgs Per Day  
**Ginger Powder** : 40 Kgs Per Day  
**Onion Powder** : 40 Kgs Per Day  
**Plant & Machinery** : ₹ 1 Lakhs  
**Cost of Project** : ₹ 27 Lakhs  
**Rate of Return** : 30%  
**Break Even Point** : 77%

## Investment Opportunities in Carbonated Health Drinks

**C**arbonated drinks or fizzy drinks are beverages that contain dissolved carbon dioxide. The dissolution of  $\text{CO}_2$  in a liquid, gives rise to fizz or effervescence. The process usually involves carbon dioxide under high pressure. When the pressure is removed, the carbon dioxide is released from the solution as small bubbles, which causes the solution to become effervescent, or fizzy. A common example is the dissolving of carbon dioxide in water, resulting in carbonated water. The Food and Drug Administration (FDA) ensures that carbonated soft drinks are safe, sanitary, and honestly labeled. In fact, FDA has established Current Good Manufacturing Practices (CGMPs) for carbonated soft drinks, which describe the basic steps manufacturers and distributors must follow to make sure carbonated soft drinks are safe.

Carbonated water is water that manufacturers infused with carbon dioxide gas. Drinking sparkling water provides the same sensation as drinking a soda without the added calories and sugar. Most manufacturers flavor carbonated water using natural flavors. You may see carbonated water sold common-

### COST ESTIMATION

**Capacity:**  
**Carbonated Health Drinks Size 250 ml** : 8,000 Packs Per Day  
**Carbonated Health Drinks Size 330 ml** : 4,000 Packs Per Day  
**Carbonated Health Drinks Size 500 ml** : 4,000 Packs Per Day  
**Plant & Machinery** : ₹ 49 Lakhs  
**Cost of Project** : ₹ 299 Lakhs  
**Rate of Return** : 31%  
**Break Even Point** : 59%

ly under names such as: Sparkling Water, Soda Water, Club Soda, Fizzy Water, and Seltzer Water.

Energy drinks are widely consumed by adolescents as these claim to improve performance, endurance and alertness. Looking at the contents in the energy drinks and their benefits, the industry may like to relook at what the consumers really need.

Increased urbanization, rising disposable income and growing health consciousness among the Indian youth has increased the demand for non-carbonated drinks called energy drinks. At the same time long and erratic working hours and the increasing occurrence of social gatherings are driving Indian consumers towards consumption of energy drinks which are primarily classified as non-alcoholic, caffeinated beverages and sports drinks.

## Start Manufacturing of uPVC Profiles for Doors and Windows

Unplasticized Polyvinyl Chloride (uPVC) is a rare material that delivers all requirements comprehensively. The incredible combination of properties it has to offer has contributed to its widespread utilization. According to the British Plastics Federation (BPF), about 80% of the world's windows today are made of uPVC. The uPVC profile is basically an extruded section of a mixture of PVC with certain additives to make it suitable for making uPVC Windows and Doors.

The impressive properties of uPVC like rigidity, lightness, thermal and weather resistance, durability, and low cost of production made it a huge commercial success. It is highly recommended by builders and architects till date, for its versatility and utility, especially as a window framing material.

uPVC products are fire retardant. This is because they contain more than 70% unplasticised uPVC which turns 57% Chlorine. This contributes

efficiently to the flame retardant. Further, it has very high ignition temperature 400°C against 210°C of wood and has an index of 50% against 21% for wood.

Doors are a must for everyone who likes the idea of keeping up with the time. Very elegant

yet functional, these are made out of high-tech rust proof frames and rigid, extruded uPVC profiles. These doors are made as per the customer requirement. uPVC Doors have various advantage over other doors namely they are waterproof, Termite Proof, Fire Retardant, Economical, No Wharping, Maintenance free easy to install & available in various colours shades & no hassles of Painting & Polishing.

The UPVC window and door market is growing at a faster pace with substantial growth rates over the last few years. The global uPVC market was valued at USD 43.32 Billion in 2018 and is expected to reach USD 70.47 Billion by the year 2026, at a CAGR of 6.3%. uPVC is also known as rigid PVC or unplasticized PVC.

## Set up a Medical College with Hospital

A medical college is meant to impart education of medical field to students to qualify them as doctors in different specialized disciplines so as to treat patients suffering from various ailments. Doctors with their dedicated spirit serve the nation at large by providing medication and treatment for eradication of diseases, which exchange

health and add suffering to humanity. Normally a medical college is associated with a hospital. Hospitals provide the facilities of O.P.D. and admission for seriously ill seriously injured, seriously burnt and pregnant ladies, causalities etc.

A hospital as a health care organization has been defined in varied terms as an institution involved in preventive, curative/ameliorative, palliative or rehabilitative services. However, the definition given by WHO is quite exhaustive and exclusive, in which it is defined as, 'an integral part of the medical and social organization which is to provide for the population complete health care, both curative and preventive; and whose outpatient services reach out into the family in its home environment.

Healthcare has become one of India's largest sectors—both in terms of revenue and employment. Healthcare comprises hospitals, medical devices, clinical trials, outsourcing, telemedicine, medical tourism, health insurance and medical equipment. The Indian healthcare sector is growing at a brisk pace due to its strengthening coverage, services and increasing expenditure by public as well private players.

The overall Indian healthcare market is worth around US\$ 100 billion and is expected to grow to US\$ 280 billion by 2022, a Compound Annual Growth Rate (CAGR) of 22.9 per cent. Healthcare delivery, which includes hospitals, nursing homes and diagnostics centres, and pharmaceuticals, constitutes 65 per cent of the overall market.

### COST ESTIMATION

#### Capacity:

Student Admission Fee	: 1.39 Units Per Day
Student (Indian) Tuition College Fee	: 1.17 Units Per Day
Student (NRI) Tuition College Fee	: 22 Units Per Day
Student Hostel and Fooding Fee	: 1 Units Per Day
Hospital Special Ward Patents	: 80 Units Per Day
Hospital Outdoor Treatment Patients	: 885 Units Per Day
Hospital Admitted Treatment Patients	: 160 Units Per Day
Plant & Machinery	: ₹ 1804 Lakhs
Cost of Project	: ₹ 12227 Lakhs
Rate of Return	: 16%
Break Even Point	: 46%

### COST ESTIMATION

#### Capacity:

uPVC Profiles	: 2,000 Kgs Per Day
Wood Laminated uPVC Profiles	: 1,570 Kgs Per Day
Plant & Machinery:	: ₹ 104 Lakhs
Cost of Project:	: ₹ 241 Lakhs
Rate of Return:	: 26%
Break Even Point:	: 75%

## Emerging Industry of Maize & It's By Products (Starch, Sorbitol, Dextrose, Liquid Glucose & Malto Dextrose)

Maize also known as corn is a cereal grain. Maize has become a staple food in many parts of the world, with total production surpassing that of wheat or rice. However, not all of this maize is consumed directly by humans. Some of the maize production is used for corn ethanol, animal feed and other maize products, such as corn starch and corn syrup. The six major types of corn are dent corn, flint corn, pod corn, popcorn, flour corn, and sweet corn.

Sorbitol was first isolated by the French chemist Joseph Boussingault in 1872 from the fresh juice of mountain ash berries. It has since been found in many natural products such as edible fruits (apples, plums, peaches, cherries, etc.), berries of mountain ash, hawthorn and Sorbusdomestica, tobacco, algae, and red seaweed.

Maize Starch exhibits all the properties of native starch with some special features such as non-foaming & non-thinning characteristics of boiling solution. Hence, maize starch has a marginal effect on the efficiency in weaving and paper industry. Where high viscosity starch is used, it imparts higher tensile strength to the fibre and thus improves the sizing.

Liquid Glucose (sweetose) is a clear, colorless, viscous solution mak-



ing it compatible with the physical properties desired in the end products. Chemically, Liquid Glucose has functional properties such as high ferment ability, viscosity, humectancy -hygroscopicity, sweetness, colligative properties and its role in Maillard's reaction.

Dextrose equivalence (DE) is a measure of the total reducing sugars calculated as D-glucose on a dry weight basis. The approved method for determining DE is the Lane-Eynon titration, which measures reduction of a copper sulfate solution. Unhydrolyzed starch has a DE value of zero, while the DE value of anhydrous D-glucose is 100.

Malt dextrin is a polysaccharide that is used as a food additive. It is produced from starch by partial hydrolysis and is usually found as a white hygroscopic spray-dried powder. Malt dextrin is easily digestible, being absorbed as rapidly as glucose and might be either moderately sweet or almost flavorless.

India corn starch market is estimated to be valued at 1.37 Billion in 2018 and is estimated to grow at a CAGR of 3.9% during the 2019-2024. India Corn Starch market growth can be attributed to the easy availability of corn and its wide range of applications in various industries such as food and beverage, pharmaceutical, animal feed, textile industry, paper industry, and others. The Food and Beverage industry dominated the application segment of India Corn Starch Market.

## COST ESTIMATION

### Capacity:

Maize Starch	: 18 MT Per Day
Sorbitol	: 60 MT Per Day
Liquid Glucose	: 11.34 MT Per Day
Dextrose Monohydrate	: 11.34 MT Per Day
Dextrose Anhydrous	: 5.60 MT Per Day
Gluten	: 11 MT Per Day
Maltodextrin	: 5.70 MT Per Day
Germ	: 12.67 MT Per Day
Fiber	: 19.33 MT Per Day
Plant & Machinery	: ₹ 7522 Lakhs
Cost of Project	: ₹ 10124 Lakhs
Rate of Return	: 24%
Break Even Point	: 43%

## Rising Business of IV Fluids (FFS Technology)

Intravenous fluids are fluids which are intended to be administered to a patient intravenously, directly through the circulatory system. These fluids must be sterile to protect patients from injury, and there are a number of different types available for use. Many companies manufacture packaged intravenous fluids, as well as products which can be mixed with sterile water to prepare a solution for intravenous administration.

Intravenous fluids can be broken into two broad groups. Crystalloids such as saline solutions contain a solution of molecules which can dissolve in water. When crystalloids are administered, they tend to create low osmotic pressure, allowing fluid to move across the blood vessels, and this can be linked with edema. Colloids contain particles which are not soluble in water, and they create high osmotic pressure, attracting fluid into the blood vessels. Blood is an example of a commonly administered intravenous colloid.

Dextrose (D-glucose, Corn Sugar, Starch Sugar, Blood Sugar, and

Grape Sugar) is by far the most abundant Sugar in nature and occurs either in the Free State (mono saccharine form) or chemically linked with other sugar varieties. In the Free State, it occurs in substantial quantities in honey, fruits, and berries. As a polymer of hydro dextrose units, it occurs in starch, cellulose, and glycogen. Sucrose is a disaccharide of dextrose and fructose.

The global intravenous solutions market size is expected to reach USD

## COST ESTIMATION

### Capacity:

IV Fluids (500 ml Size)	: 180,000 Bags Per Day
IV Fluids (1000 ml Size)	: 240,000 Bags Per Day
Plant & Machinery	: ₹ 10492 Lakhs
Cost of Project	: ₹ 13361 Lakhs
Rate of Return	: 27%
Break Even Point	: 37%

18.9 billion by 2028, the market is expected to expand at a CAGR of 7.9% from 2021 to 2028. The growing incidence rate of chronic diseases such as cancer, increase in the number of premature births, and shortage of I.V. solutions in the U.S. are some of the key factors expected to drive the market.

One of the prime areas wherein intravenous (IV) fluids find usage is severe dehydration. Severe dehydration is seen in diseases such as diarrhea, resulting in the depletion of fluids from the body. According to the WHO, in 2017, diarrhea was the second leading cause of death in children under 5 years of age with around 5,25,000 lives lost each year. Intravenous (IV) fluids can play a key role in the treatment and prevention of deaths caused due to the dehydration/fluid loss associated with diarrhea.

## Manufacturing Business of Steel Shipping Containers (Cargo Container)

The cargo container industry produces a lot of intermodal containers each and every year. They are used to transport goods all over the world. About 180 million container loads crisscross the oceans each year in about 5000 container ships. International shipping of containerized commodities is indispensable for global trading firms to thrive in the increasingly competitive economic environment.

Containers are either made of steel (the most common for maritime containers) or aluminum (particularly for domestic) and their structure confers flexibility and hardness.

1. Refactor Existing Applications For Containers: Although refactoring is much more intensive than lift-and-shift migration, it enables the full benefits of a container environment.
2. Develop New Container-Native Applications: Much like refactoring, this approach unlocks the full benefits of containers.
3. Provide Better Support for Micro services Architectures: Distributed applications and micro services can be more easily isolated, deployed, and scaled using individual container building blocks.
4. Provide Easier Deployment of Repetitive Jobs and Tasks: Containers are being deployed to support one or more similar processes, which often run in the background, such as ETL functions or batch jobs.

The global Shipping Containers Market was accounted for US\$ 10,350.1 Mn in terms of value and 306,324 Thousand Units in 2019 and is expected to grow at CAGR of 5.9% for the period 2020-2027. Increasing speed, reliability, and safety of containerization have compelled companies to opt for containers to ship their goods. Decreasing the cost of long-distance containerized transportation combined with globalization of trade further boosts containerization.

## COST ESTIMATION

### Capacity:

Cargo Containers (Size 20 Feet)	: 4.0 Nos Per Day
Cargo Containers (Size 40 Feet)	: 4.0 Nos Per Day
Cargo Containers (Size 40 Feet High Cube)	: 2.0 Nos Per Day
Plant & Machinery:	: ₹ 2945 Lakhs
Cost of Project:	: ₹ 1364 Lakhs
Rate of Return:	: 26%
Break Even Point:	: 45%

## Plastic Waste Pyrolysis (Plastic to Oil Conversion)

Pyrolysis is the chemical decomposition of organic substances by heating the word is originally coined from the Greek-derived elements pyro "fire" and lysis "decomposition". Pyrolysis is usually the first chemical reaction that occurs in the burning of many solid organic fuels, cloth, like wood, and paper, and also of some kinds of plastic. Anhydrous Pyrolysis process can also be used to produce liquid

fuel similar to diesel from plastic waste.

Increasing industrialization and motorization has led to a significant rise in demand of petroleum products. As these are the nonrenewable resources it is difficult to predict availability of these resources in future, resulting uncertainty in its supply and price and is impacting growing economies like India. Many alternate fuels like Alcohols, Biodiesel, LPG, CNG etc have been already commercialized in the transport sector. Recent developments in recycled plastic and plastic waste to oil market indicate that policymakers and energy industry players in various regions, particularly in North America and Europe, are focusing on the commercialization of the technology. As a whole entrepreneur can venture in this field will be successful.

### COST ESTIMATION

Capacity	
Pyrolysis Oil	: 10 MT/Day
Carbon (by product)	: 3.33 MT/Day
Gas (by product)	: 2 MT/Day
Plant & Machinery	: ₹ 197 Lakhs
Cost of Project	: ₹ 512 Lakhs
Rate of Return	: 26%
Break Even Point	: 58%

## Recovery of Lead from Scrap Batteries

The recovery of metals from metal scrap has the advantage that it is easier and far less energy dependent than the production of primary lead from ores. Lead is a chalcophile metallic element forming several important minerals including galena PbS, angle

### COST ESTIMATION

Capacity	
Lead Ingot	: 8 MT/Day
Plant & Machinery	: ₹ 96 Lakhs
Cost of Project	: ₹ 370 Lakhs
Rate of Return	: 29%
Break Even Point	: 54%

site PbSO<sub>4</sub>, crosstie PbCO<sub>3</sub> and minimum Pb<sub>3</sub>O<sub>4</sub>. Recycling lead is relatively simple and in most of the applications where lead is used, such as lead-acid batteries, it is possible to recover it for use over and over again.

The production of lead in India from primary sources accounts for nearly two thirds of the total lead

production in the country whereas, the world over, the production from secondary smelters accounts for nearly 60% of the total production of lead. This facilitates the development of new technologies and ensures a high quality product.

## Methyl isobutyl Ketone (MIBK) from Acetone

Methyl isobutyl ketone (MIBK) is a colorless liquid with an odor similar to mothballs. MIBK is also known as 4-methyl-2-pentanone, hexane and isopropylacetone. While it is usually in liquid form, MIBK can change into a gas. MIBK will dissolve in water, alcohols, benzenes and ethers.

Methyl isobutyl ketone (MIBK) [CAS registry number: 108-10-1] is an organic compound with the formula (CH<sub>3</sub>)<sub>2</sub>CHCH<sub>2</sub>C(O)CH<sub>3</sub>. This colorless liquid, a ketone, is widely used as a solvent. MIBK is a colorless liquid with a characteristic ketone odor. It is highly flammable and vapors may travel to the source of ignition and flashback. It is soluble in water and miscible with most organic solvents and evaporates in air. It irritates the skin, eyes and respiratory tract and in high concentrations leads to nausea, headaches, dizziness and unconsciousness. MIBK is a clear liquid with a sweet odor; the odor threshold is 1.64-mg/m<sup>3</sup> (0.4 ppm). It is moderately soluble in water. MIBK can react violently

### COST ESTIMATION

Capacity	
Methyl Isobutyl Ketone (MIBK)	: 166 MT/ Day
Plant & Machinery	: ₹ 3216 Lakhs
Cost of Project	: ₹ 5881 Lakhs
Rate of Return	: 27%
Break Even Point	: 54%

with oxidizing and reducing agents. When heated, peroxides may form by auto-oxidation and may explode spontaneously

Methyl isobutyl ketone is used in a number of industrial applications. The primary use of methyl isobutyl ketone, accounting for approximately 62 percent of all use, is as a solvent in protective coatings. It is also used as a solvent in specialty adhesives; in ink formulations; in dewaxing mineral oil; and in textile coatings and leather finishing. As a process solvent methyl isobutyl ketone is used in the separation and purification of certain metal ions, such as zirconium from hafnium; in the extraction and purification of antibiotics and other pharmaceuticals; and in the manufacture of insecticides and other pesticides. It is also used in purifying stearic acid; refining tall oil; and extracting rosin from softwood, especially pine.

## Linear Alkyl Benzene Sulphonic Acid

Linear Alkyl Benzene Sulphonic Acid is a largest volume synthetic surfactant because of its relatively low cost, good performance, the fact that it can be dried to a stable powder and the biodegradable environmental friendliness. LAB Sulphonic Acid is an anionic surfactant widely used in formulation of all ranges of Domestic Detergents Powder, Cake & Dish wash cleaners. Due to its high active matter, miscibility with water and low salt content, it is also used in formulation of Industrial & Household liquid cleaners as well as in numerous industrial applications like as a coupling agent and as an emulsifier for agricultural herbicides and in emulsion polymerization. Linear Alkyl Benzene Sulphonic Acid is an anionic surface active agent with superior detergency and compatibility with a broad range of other anionic, nonionic and amphoteric surfactants.

The global Linear Alkyl Benzene Sulphonic Acid market size is expected to gain market growth in the forecast period of 2020 to 2025, with a CAGR of 3.3% in the forecast period of 2020 to 2025 and will expected to reach USD 4234.1 million by 2025, from USD 3711.3 million in 2019. Rise in demand for industrial cleaners to maintain industrial hygiene is also

boosting the linear alkyl benzene sulfonic acid market in the region. The U.S. is a leading consumer of linear alkyl benzene sulfonic acid in North America. Rise in demand for biodegradable surfactants in the country is expected to hamper the linear alkyl benzene sulfonic acid market in North America. Latin America and Middle East & Africa are projected to provide lucrative opportunities to manufacturers in the near future due to the rapid urbanization and industrialization. As a whole any entrepreneur can venture in this project without risk and earn profit.

### COST ESTIMATION

Capacity	
Linear Alkyl Benzene Sulphonic Acid	: 20 MT / Day
Plant & Machinery	: ₹ 384 Lakhs
Cost of Project	: ₹ 757 Lakhs
Rate of Return	: 26%
Break Even Point	: 50%

## Rice Husk Based Biodegradable Cutlery

The global biodegradable cutlery market size was accounted for USD 33.9 million, in 2018 and is projected to grow at a significant rate of CAGR of 5.9% during the forecast period, 2019 to 2025. The growing awareness about hazardous impacts of non-biodegradable waste is expected to positively affect the market growth. The government has formed strict regulations for banning non-biodegradable plastic. Supportive government initiatives along with

### COST ESTIMATION

Capacity	
Biodegradable Cutlery (Per Set 9 Pcs. Flatware)	: 1,852 Sets / Day
Plant & Machinery	: ₹ 28 Lakhs
Cost of Project	: ₹ 142 Lakhs
Rate of Return	: 28%
Break Even Point	: 63%

growing consumer awareness about side effects of non-biodegradables are projected to boost the market growth. Entrepreneurs who invest in this project will be successful.

## Ready to Eat Food (RTE)

**R**eady to Eat Foods (RTE) are convenience foods, enclosed in aluminium container or pouches that only need to be cut and heated before being served. Instant vegetables in retort pouches fall under this category and find application not only as home meal replacement in working class households but also in fast-food restaurants and multi cuisine food joints. These are handy meals for armed forces and paramilitary forces deployed in remote places. RTE food includes wide range of products viz. vegetarian/non-vegetarian, basic food/delectable desserts, south and north Indian items available from a specialty or multi cuisine restaurant & food joint only.

### COST ESTIMATION

#### Capacity:

Vegetable Pulao	: 3000 Kgs. Per Day
Dal Makhani	: 2000 Kgs. Per Day
Palak	: 600: Kgs. Per Day
Rajmah	: 700 Kgs. Per Day
Potato Peas	: 600 Kgs. Per Day
Mutter Mushroom	: 250 Kgs. Per Day
Plant & Machinery	: ₹ 580 Lakhs
Cost of Project	: ₹ 954 Lakhs
Rate of Return	: 30%
Break Even Point	: 58%

Ready To Eat, Shelf Stable, Retort Sterilized Foods are completely cooked foods packed in airtight containers, which could be preserved at room temperature for a long period of time without the necessity of freezing, cooling and drying. The thermally-processed retort pouch foods are waterproof, weatherproof and bug proof. The Shelf Life of Ready To Eat Foods is from 1 year to 5 years, depending on the type of

packing materials and processing procedures.

India's Food Processing industry is one of the largest industries in the country—it is ranked fifth in terms of production, consumption, export and expected growth. The industry employs 1.6 million workers directly. Now the time is to provide better food processing & marketing infrastructure for Indian industries to serve good quality & safest processed food like READY TO EAT (RTE) food, keeping in mind the changing tastes and lifestyle of the Indian demography.

The Indian food processing market was worth INR 24,665 Billion in 2018. Looking forward, the market is projected to reach INR 50,571 Billion by 2024, exhibiting a CAGR of 12.4% during 2019-2024. Rising household incomes, urbanization and the growth of organized retail are currently some of the major drivers of this market. Food processing is a large sector that covers activities such as agriculture, horticulture, plantation, animal husbandry and fisheries.

## E-Waste & Lithium Battery Recycling Plant

**E**lectronic Waste – or e-waste – is the term used to describe old, end-of-life electronic appliances such as computers, laptops, TVs, DVD players, mobile phones, mp3 players etc. Technically, electronic "waste" is the component which is dumped or disposed or discarded rather than recycled, including residue from reuse and recycling operations.

Recycling of used lithium batteries has primarily focused on extracting active metal cobalt (Co) and lithium (Li).

According to E-Waste Market in India 2015-2019 research, the need to prevent biological hazards is one of the major

### COST ESTIMATION

#### Capacity

E-Waste & Lithium Battery Recycling Plant	: 20 MT/Day
Plant & Machinery	: ₹ 225 Lakhs
Cost of Project	: ₹ 540 Lakhs
Rate of Return	: 26%
Break Even Point	: 59%

trends upcoming in this market. Indians become richer and spend more on electronic items and appliances, computer equipment accounts for almost 70% of e-waste material, followed by telecommunication equipment (12%), electrical equipment (8%) and medical equipment (7%). Other equipment, including household account for the remaining 4%. As a whole any entrepreneur can venture in this project without risk and earn profit.

## E-Rickshaw Assembling

**E**-Rickshaws are three wheel battery operated vehicles, which are considered as an upgrade to conventional rickshaws, and economically better than auto rickshaws and other fuel variants, these rickshaws, since are battery powered have zero emission, and is often argued to be much better than other rickshaws as they are considered almost pollution free. Such vehicle is constructed or adapted to carry not more than four passengers, excluding the driver, and not more than forty kilograms luggage in total.

### COST ESTIMATION

#### Capacity

E Rickshaw	: 4 Nos./Day
Plant & Machinery	: ₹ 28 Lakhs
Cost of Project	: ₹ 323 Lakhs
Rate of Return	: 24%
Break Even Point	: 56%

The Indian automobile industry is one of the largest growing markets of the world, and contributes highly in the country's manufacturing facilities. Not only this, the automotive industry in India is further expected to pull up the share of manufacturing in India's GDP to 25% by 2022 from 15% currently, with production of Electric Vehicles being new talk of the town. Entrepreneurs who invest in this project will be successful.

## Transparent LPG Cylinder from Fiber Glass

**A** gas cylinder is a pressure vessel for storage and containment of gases at above atmospheric pressure. High-pressure gas cylinders are also called bottles. Inside the cylinder the stored contents may be in a state of compressed gas, vapor over liquid, supercritical fluid, or dissolved in a substrate material, depending on the physical characteristics of the contents.

Global composite cylinders market stood at \$ 601 million in 2018 and is projected to reach \$ 921 million by 2024, exhibiting a CAGR of over 7% during 2019-2024, owing to increasing demand for explosion proof, non-corrosive and lightweight LPG cylinders. Composite cylinder is a high-pressure vessel that is made of a composite-polymer material and placed in a plastic body. The technology of manufacturing a modern composite cylinder is a very complex and high-tech process, thus its cost is much higher than the cost of a metal analogue. Increasing consumption of LPG in the developing countries is expected to boost the demand.

Indian LPG imports have been registering some remarkable trends in the last 10 years. The growth trends over the last 10 years, 5 years and 1 year are: 17% CAGR (FY07 to FY17), 14% CAGR (FY12 to FY17) and 23%. At nearly 11 million tonnes in FY17, India surpassed Japan's imports at 10.6 million tonnes. Increasing demand for lightweight, explosion proof and non-corrosive LPG cylinders and government push towards the usage of composite cylinders are some of the major drivers of the market. Increase in the consumption of LPG in the developing economies further elevate the demand for composite LPG cylinders over the next five years. As a whole any entrepreneur can venture in this project without risk and earn profit.

### COST ESTIMATION

#### Capacity

Transparent LPG Cylinder	: 2,243.6 Nos. / Day
Plant & Machinery	: ₹ 28274 Lakhs
Cost of Project	: ₹ 32012 Lakhs
Rate of Return	: 25 %
Break Even Point	: 27%



## Dairy Farming & Dairy Products (Milk, Butter, Ghee & Paneer)

**D**airy farming has been part of agriculture for thousands of years, but historically, it was usually done on a small scale on mixed farms. Specialist scale dairy farming is only viable where either a large amount of milk is required for production of more durable dairy products such as cheese, or there is a substantial market of people with cash to buy milk, but no cows of their own.

The global dairy products market is expected to grow at a CAGR of 5.2% from 2019 to reach \$645.8 billion by 2025. Dairy is defined as a business enterprise that deals with the processing and harvesting of animal milk for human consumption. Some of the common milch animals include cow, goat, buffalo, camel and sheep. The milk obtained from these animals can be consumed directly and processed into ice cream, cheese, paneer, butter, ghee, condensed milk and yogurt. These products offer various nutrients such as calcium, proteins, zinc, magnesium, and vitamin D and B12. With widespread demand for dairy products and their proactive function in the global food industry, dairy plays a crucial role in the growth of the economies worldwide. Over the years, the dairy industry has witnessed improvements in product safety through specialization, modernization and consolidation. Moreover, advancements in global trade have also influenced the profitability of dairy farms.

India has the highest livestock population in the world with 50% of the buffaloes and 20% of the world's cattle population, most of which are milch cows and milch buffaloes. India's dairy industry is considered as one of the most successful development programs in the post-Independence period. India is the world's largest milk producer, accounting for more than 13% of world's total milk production. As it is the world's largest consumer of dairy products, but consuming almost 100% of its own milk production. Dairy products are a major source of cheap and nutritious food to millions of people in India and the only acceptable source of animal protein for large vegetarian segment of Indian population, particularly among the landless, small and marginal farmers and women. In India, about three-fourth of the population live in rural areas and about 38% of them are poor. As a whole any entrepreneur can venture in this project without risk and earn profit.

### COST ESTIMATION

#### Capacity:

Milk	: 5,000 Ltrs / Day
Butter	: 120 Kgs/ Day
Ghee	: 100 Kgs/ Day
Paneer	: 220 Kgs/ Day
Cow Urine	: 6,500 Ltrs / Day
Kande	: 2,900 Pkts/ Day
Plant & Machinery	: ₹ 276 Lakhs
Cost of Project	: ₹ 1768 Lakhs
Rate of Return	: 27%
Break Even Point	: 42%

## Particle Board from Wheat/Rice Straw

**T**he particle board market reached a value of US\$ 19.3 Billion in 2018, growing at a CAGR of 6.1% during 2011-2018. Particle boards are mostly used in places such as recording studios and concert venues due to their excellent sound-absorbing properties. These are also used for making household furniture such as kitchen cabinets, bookcases, doors, windows, and covering the walls and floor. Moreover,

### COST ESTIMATION

#### Capacity

Particle Board (Size 6x3x0.471')	: 5,000,000.0 Sq.Mtrs. / Annum
Plant & Machinery	: ₹ 335 Lakhs
Cost of Project	: ₹ 930 Lakhs
Rate of Return	: 28%
Break Even Point	: 57%

particle boards can be painted, wallpapered and laminated which adds to the aesthetic quality of the surroundings. Owing to these factors, the market is expected to reach a value of US\$ 25 Billion by 2024.

## WPC Profile for Building Materials

### Like Door and Window Frame and Shutters

**W**PCs are composites containing a wood component in particle form (wood particles/wood flour) and a polymer matrix. They are used in a variety of structural and non-structural applications ranging from component and product prototyping to outdoor decking. Wood plastic composites (WPCs) are roughly 50:50 mixtures of thermoplastic polymers and small wood particles. The wood and thermoplastics are usually compounded above the melting temperature of the thermoplastic polymers and then further processed to make various WPC products.

The wood-plastic composites market is projected to reach US\$ 2.6 bn in 2012. Analysts anticipate the market to expand at a CAGR of 10.80% during the period from 2013 to 2019 and attain a value USD 5.84 Billion by 2021, at a CAGR of 12.4% from 2016 to 2021. Market is poised to grow at a CAGR of around 13.2% over the next decade to reach approximately \$9.7 billion by 2025. This facilitates the development of new technologies and ensures a high quality product.

### COST ESTIMATION

#### Capacity

WPC Profile for Building Materials	: 9600 Kgs/Day
Plant & Machinery	: ₹ 155 Lakhs
Cost of Project	: ₹ 737 Lakhs
Rate of Return	: 28%
Break Even Point	: 64%

## Dehydrated Fruits

**D**ehydration is a process by which shelf life of the fruits can be extended by evaporating water while preserving the taste. Dehydrated products can be used during off season and the fresh produce of far off places can be saved from decomposition due to severe weather conditions and inefficient transport facilities. It is one of the oldest methods of preserving fruit is removes moisture stops the growth of bacteria, yeasts & molds that normally spoil fruit.

The Indian dried fruits industry size is currently pegged at Rs 15,000 crore (4,50,000 tons approx.). By 2020, this is likely to reach almost a million tonnes in volume, leading to an industry size exceeding Rs 30,000 crore. As a whole any entrepreneur can venture in this project without risk and earn profit.

### COST ESTIMATION

#### Capacity

Dehydrated Fruits	: 400 Kgs./Day
Plant & Machinery	: ₹ 1084 Lakhs
Cost of Project	: ₹ 1425 Lakhs
Rate of Return	: 26%
Break Even Point	: 45%

## Hybrid Electric Scooter Assembling

**A** plug-in hybrid electric vehicle (PHEV) is an HEV that can be plugged-in or recharged from wall electricity. PHEVs are distinguished by much larger battery packs when compared to other HEVs. The size of the battery defines the vehicle's All Electric Range (AER), which is generally in the range of 30 to 50 miles. PHEVs can be of any hybrid configuration. PHEVs start in 'all electric' mode, runs

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- The Complete Book on Rubber Processing and Compounding Technology (with Machinery Details) (2nd Revised Edition) .. 1875/- 150
- The Complete Book on Rubber Chemicals..... 1575/- 150

## SURFACE COATING, PAINTS, VARNISHES & LACQUERS

- The Complete Book on Resins (Alkyd, Amino, Phenolic, Polyurethane Epoxy, Silicone, Acrylic) Paints, Varnishes, Pigments & Additives (Surface Coating Products with Formulae) 3rd Rev. Edn..... 1995/- 150
- Paints, Pigments, Varnishes and Enamels Technology Handbook (With Process & Formulations) 2nd Rev. Edn. .... 1675/- 150
- Modern Technology of Paints, Varnishes & Lacquers (2nd Edn.) ..... 1075/- 125
- Handbook on Paints and Enamels..... 1275/- 125
- Surface Coating Technology Handbook ..... 1475/- 125
- Spirit Varnishes Technology Handbook (with Testing and Analysis) ..... 1275/- 150
- The Testing Manual of Paints, Varnishes and Resins..... 1875/- 150
- Handbook on Paint Testing Methods ..... 1575/- 150
- Manufacture of Thinners & Solvents (Properties, Uses, Production, Formulation with Machinery Details) 2nd Edn. Rev..... 1875/- 150

## GUMS, ADHESIVES & SEALANTS, ROSIN & DERIVATIVES, RESINS AND OLEORESINS

- Gums, Adhesives & Sealants Technology (with Formulae & their Applications) 2nd Rev. Edn. .... 1475/- 150
- Adhesives Formulary Handbook ..... 1275/- 125
- Handbook on Speciality Gums, Adhesives, Oils, Rosin & Derivatives, Resins, Oleoresins, Katha, Chemicals with Other Natural Products ..... 1275/- 125
- The Complete Book on Adhesives, Glues & Resins Technology (with Process & Formulations) 2nd Rev. Edn. .... 1675/- 150
- Phenolic Resins Technology Handbook (2nd Revised Edition) 1895/- 150
- The Complete Technology Book on Industrial Adhesives..... 1675/- 150
- The Complete Book on Gums and Stabilizers for Food Industry ..... 1275/- 125
- The Complete Book on Water Soluble Gums and Resins ..... 1675/- 150
- Handbook on Tall Oil Rosin Production, Processing and Utilization ..... 1575/- 150

## SYNTHETIC RESINS

- Modern Technology of Synthetic Resins & Their Applications (2nd Revised Edition)..... 1575/- 150
- Synthetic Resins Technology Handbook ..... 1100/- 125
- The Complete Technology Book on Synthetic Resins with Formulae & Processes ..... 1150/- 125
- Alkyd Resins Technology Handbook..... 1100/- 125
- Epoxy Resins Technology Handbook (Manufacturing Process, Synthesis, Epoxy Resin Adhesives and Epoxy Coatings) 2nd Revised Edition..... 1895/- 150

## PETROLEUM, GREASES, PETROCHEMICALS, LUBRICANTS

- Modern Technology of Petroleum, Greases, Lubricants & Petrochemicals (Lubricating Oils, Cutting Oil, Additives, Refining, Bitumen, Waxes with Process and Formulations) 3rd Rev. Edn. .. 1995/- 150
- The Complete Book On Distillation And Refining of Petroleum Products (Lubricants, Waxes And Petrochemicals) ..... 975/- 100

## NAME OF BOOKS

₹ / US\$

- Lubricating Oils, Greases and Petroleum Products Manufacturing Handbook..... 1475/- 150
- Manufacturing of Petroleum Products (Petroleum Waxes, Greases and Solid Lubricants, Solid Fuels, Gaseous Fuels, Gasoline, Diesel Fuel Oils, Automotive, Diesel and Aviation Fuels, Lubricating Oils and Lubricating Greases)..... 1675/- 150
- Petroleum & Petroleum Products Technology Handbook (Thermal Cracking of Pure Saturated Hydrocarbons, Petroleum Asphalts, Refinery Products, Blending and Compounding, Oil Refining and Residual Fuel Oils)..... 1875/- 150

## WASTE MANAGEMENT, PRODUCTS FROM WASTE, MEDICAL, MUNICIPAL WASTE, E-WASTE, BIOMASS, MEDICAL & SURGICAL DISPOSABLE PRODUCTS

- Products from Waste (Industrial & Agro Waste) 2nd Edition ... 975/- 100
- Modern Technology Of Waste Management: Pollution Control, Recycling, Treatment & Utilization ..... 975/- 100
- Handbook on Recycling & Disposal of –Hospital Waste Municipal, –Solid Waste, –Biomedical Waste, –Plastic Waste..... 1275/- 125
- Water and Air Effluents Treatment Handbook..... 1275/- 125
- The Complete Guide on Industrial Pollution Control ..... 1275/- 125
- The Complete Book on Managing Food Processing Industry Waste ... 1275/- 125
- Handbook on Organic Waste for Biological Treatment, Liquid Manure into a Solid, Tomato Waste Water Treatment, Oxalic Acid from Jute Stick, Cotton Processing Waste, Fish Waste, Agro-Industrial Wastes, Bioconversion of Pretreated Wheat Straw and Sunflower Stalks to Ethanol, Agricultural Waste Treatment, Waste of Dehydrated Onion, Beef-Cattle Manure Slurry, Meat Meal and Algae for Calves, Wastes from Large Piggeries, Pig Waste, Oxytetracycline, Methane from Cattle Waste ..... 1275/- 125
- Handbook on Medical and Surgical Disposable Products (Blood Bags, Plastic Gloves, I.V. Cannula, Infusion Set, Gowns, Masks, Catheter, Cotton and Bandage, Surgical Wear, Syringes)..... 1775/- 150
- Disposable Products Manufacturing Handbook (Plastic Cups, Cutlery, Paper Cups, Banana Leaf Plates, Facial Tissues, Wet Wipes, Toilet Paper Roll, Sanitary Napkins, Baby Diapers, Thermocol Products, PET Bottles) ..... 1575/- 150
- The Complete Book on Biomass Based Products (Biochemicals, Biofuels, Activated Carbon) ..... 1575/- 150
- The Complete Technology Book on E-Waste Recycling (Printed Circuit Board, LCD, Cell Phone, Battery, Computers) 3rd Rev. Edn. .... 1975/- 150
- The Complete Book on Waste Treatment Technologies (Industrial, Biomedical, Water, Electronic, Municipal, Household/ Kitchen, Farm Animal, Dairy, Poultry, Meat, Fish & Sea Food Industry Waste) ..... 1675/- 150
- Manufacture of Value Added Products from Rice Husk (Hull) and Rice Husk Ash (RHA) (Precipitated Silica, Activated Carbon, Cement, Electricity, Ethanol, Hardboard, Oxalic Acid, Paper, Particle Board, Rice Husk Briquettes, Rice Husk Pellet, Silicon, Sodium Silicate Projects) 2nd Rev. Edition..... 1400/- 150
- Medical, Municipal and Plastic Waste Management Handbook..... 1275/- 125
- The Complete Book on Biological Waste Treatment and their Utilization ..... 1675/- 150

## WOOD AND ITS DERIVATIVES

- The Complete Technology Book on Wood and Its Derivatives .... 1100/- 125
- Bamboo Plantation and Utilization Handbook ..... 1475/- 150

## HERBAL PRODUCTS, AYURVEDIC, HERBAL & UNANI MEDICINES, DRUGS, NEEM, HERBS & MEDICINAL PLANTS CULTIVATION, COSMETICS, NATURAL PRODUCTS, JATROPHA

- Handbook on Unani Medicines with Formulae, Processes, Uses And Analysis ..... 1100/- 125
- Handbook on Herbal Drugs And Its Plant Sources ..... 1000/- 100
- Herbal Foods And Its Medicinal Values ..... 1275/- 125
- Herbal Cosmetics & Ayurvedic Medicines (Eou) (3rd Rev. Edn.).. 1475/- 150
- Handbook on Ayurvedic Medicines with Formulae, rocesses & Their Uses (2nd Rev. Edn.)..... 1475/- 150
- Herbal Cosmetics Handbook (3rd Revised Edition)..... 1875/- 150
- The Complete Technology Book on Herbal Beauty Products with Formulations and Processes ..... 1100/- 125
- Modern Technology of Cosmetics ..... 1100/- 100
- Handbook of Herbal Products (Medicines, Cosmetics, Toiletries, Perfumes) 2 Vols..... 1500/- 220

## NAME OF BOOKS

₹ / US\$

- Herbs Cultivation & Medicinal Uses..... 975/- 100
- Herbs Cultivation & Their Utilization..... 800/- 100
- Medicinal Plants Cultivation & Their Uses..... 975/- 100
- Compendium of Medicinal Plants..... 875/- 100
- Compendium of Herbal Plants..... 975/- 100
- Cultivation And Processing of Selected Medicinal Plants..... 1175/- 125
- Aromatic Plants Cultivation, Processing and Uses ..... 975/- 100
- Cultivation and Utilization of Aromatic Plants..... 1100/- 125
- The Complete Book on Jatropha (Bio-Diesel) with Ashwagandha, Stevia, Brahmi & Jatamansi Herbs (Cultivation, Processing & Uses) ..... 1500/- 150
- Handbook on Medicinal Herbs With Uses..... 1075/- 125
- Aloe Vera Handbook Cultivation, Research Findings, Products, Formulations, Extraction & Processing ..... 1275/- 125
- Handbook on Herbs Cultivation & Processing ..... 875/- 100
- Handbook of Neem & Allied Products ..... 975/- 100
- Handbook on Herbal Medicines..... 750/- 100
- Handbook on Cosmetics (Processes, Formulae with Testing Methods)..... 1675/- 150
- Handbook on Drugs from Natural Sources ..... 1175/- 125

## ESSENTIAL OILS, AROMATIC CHEMICALS, PERFUMES, FLAVOURS, FOOD COLOURS

- The Complete Technology Book of Essential Oils (Aromatic Chemicals (Reprint 2011))..... 1275/- 125
- Essential Oil Hand Book..... 975/- 100
- The Complete Technology Book on Herbal Perfumes & Cosmetics (2nd Rev Edn.)..... 1275/- 125
- Modern Technology of Perfumes, Flavours and Essential Oils 2nd Edn. .... 975/- 100
- Food Colours, Flavours And Additives Technology Handbook .... 1000/- 100
- Food Flavours Technology Handbook..... 1075/- 125
- The Complete Technology Book on Flavours, Fragrances and Perfumes..... 1675/- 150
- Perfumes and Flavours Technology Handbook..... 1875/- 150

## SOAPS, DETERGENTS, ACID SLURRY, TOILETRIES & DISINFECTANTS

- Modern Technology of Soaps, Detergents & Toiletries (With Formulae & Project Profiles) (4th Rev. Edn.)..... 1275/- 125
- Herbal Soaps & Detergents Handbook..... 1275/- 125
- Handbook on Soaps, Detergents & Acid Slurry (3rd Rev. Edn.)... 1575/- 150
- The Complete Technology Book on Detergents (2nd Rev. Edn.).. 1100/- 125
- The Complete Technology Book on Soaps (2nd Revised Edn.) .... 1425/- 150
- Surfactants, Disinfectants, Cleaners, Toiletries, Personal Care Products Manufacturing and Formulations (Phenyl, Naphthalene Ball, Mosquito Coil, Floor Cleaner, Glass Cleaner, Toilet Cleaner, Utensil Cleaning Bar, Liquid Detergent, Detergent Powder, Detergent Soap, Liquid Soap, Handwash, Hand Sanitizer, Herbal Shampoo, Henna Based Hair Dye, Herbal Cream, Shaving Cream, Air Freshener, Shoe Polish, Tooth Paste) 2nd Revised Edition .... 1895/- 200
- Soaps, Detergents and Disinfectants Technology Handbook (Washing Soap, Laundry Soap, Handmade Soap, Detergent Soap, Liquid Soap, Hand Wash, Liquid Detergent, Detergent Powder, Bar, Phenyl, Floor Cleaner, Toilet Cleaner, Mosquito Coils, Naphthalene Balls, Air Freshener, Hand Sanitizer and Aerosols Insecticide) (3rd Revised Edition)..... 1595/- 150

## GLASS, CERAMICS, COAL, LIGNIN & MINERALS

- The Complete Book on Glass & Ceramics Technology (2nd Revised Edition)..... 1495/- 150
- The Complete Book on Glass Technology..... 1625/- 150
- The Complete Technology Book on Minerals & Mineral Processing ..... 2200/- 200
- Handbook on Rare Earth Metals and Alloys (Properties, Extraction, Preparation and Applications)..... 1875/- 150
- Hand book on Coal, Coke, Cotton, Lignin, Hemicellulose, Wood, Wood-Polymer Composites, Lignocellulosic-Plastic Composites from Recycled Materials, Wood Fiber, Rosin and Rosin Derivatives ..... 1875/- 150

## NAME OF BOOKS

₹ / US\$

## ALUMINIUM, STEEL, FERROUS, NON-FERROUS METALS WITH CASTING AND FORGING, FERROALLOYS & AUTOMOBILE COMPONENTS

- The Complete Technology Book On Hot Rolling Of Steel ..... 1575/- 150
- Steel Rolling Technology Handbook (2nd Revised Edition) .... 1775/- 150
- The Complete Book on Ferrous, Non-Ferrous Metals with Casting and Forging Technology..... 1575/- 150
- The Complete Technology Book on Aluminium and Aluminium Products ..... 1450/- 150
- The Complete Technology Book on Steel and Steel Products (Fasteners, Seamless Tubes, Casting, Rolling of flat Products & others)..... 1625/- 150
- The Complete Book on Ferroalloys (Ferro Manganese, Ferro Molybdenum, Ferro Niobium, Ferro Boron, Ferro Titanium, Ferro Tungsten, Ferro Silicon, Ferro Nickel, Ferro Chrome).... 2775/- 250
- Steel and Iron Handbook..... 1775/- 150
- Handbook on Steel Bars, Wires, Tubes, Pipes, S.S. Sheets Production with Ferrous Metal Casting & Processing ..... 1775/- 150
- The Complete Book on Production of Automobile Components & Allied Products ( Engine Parts, Piston, Pin, Piston Ring, Valve, Control Cable, Engine Mounting, Auto Lock, Disc Brake, Drum, Gear, Leaf Spring, Shock Absorber, Silencer, Chain, Cylinder Block, Chassis, Battery, Tyre & Flaps) ..... 2275/- 200

## FORMULARY (FORMULATION) BOOKS

- Selected Formulary Book on Cosmetics, Drugs, Cleaners, Soaps and Detergents (2nd Revised Edition) ..... 1475/- 150
- Selected Formulary Book on Inks, Paints, Lacquers, Varnishes and Enamels ..... 1475/- 150
- Selected Formulary Handbook..... 1475/- 150
- Selected Formulary Book on Petroleum, Lubricants, Fats, Polishes, Glass, Ceramics, Nitrogenous Fertilizers, Emulsions, Leather and Insecticides ..... 2275/- 200

## CONSTRUCTION MATERIALS, CEMENT, BRICKS, ASBESTOS

- The Complete Book on Construction Materials ..... 1475/- 150
- The Complete Technology Book on Bricks, Cement and Asbestos..... 1400/- 150
- The Complete Technology Book on Asbestos, Cement, Ceramics and Limestone..... 1875/- 150
- Handbook on Gypsum and Gypsum based Products (Mining, Processing, Transportation, Handling & Storage, Gypsum Board, Plaster of Paris with Machinery & Equipment Details) ..... 2275/- 200

## EMULSIFIERS AND OLEORESINS

- The Complete Book on Emulsifiers with Uses, Formulae and Processes. (2nd Rev. Edn.) ..... 1400/- 150
- Handbook on Oleoresin and Pine Chemicals (Rosin, Terpene, Derivatives, Tall Oil, Resin & Dimer Acids..... 2200/- 200

## COLD STORAGE, COLD CHAIN & WAREHOUSE

- The Complete Book on Cold Storage, Cold Chain & Warehouse (with Controlled Atmosphere Storage & Rural Godowns) 4th Revised Edition..... 1575/- 150

## NIIR PROJECT CONSULTANCY SERVICES

AN ISO 9001:2015 CERTIFIED COMPANY

106 E, Kamla Nagar, Delhi - 110 007 (India).

Tel. : 91-11- 23843955, 23845886, 23845654

Mob.: +918800733955, 9097075054 Fax : 91-11-23845886

Website : [www.niir.org](http://www.niir.org) [www.entrepreneurindia.co](http://www.entrepreneurindia.co)

E-mail : [info@niir.org](mailto:info@niir.org) , [npcs.india@gmail.com](mailto:npcs.india@gmail.com)



# SELECTED BUSINESS IDEAS FOR RIGHT INVESTMENT

## EACH DETAILED PROJECT REPORT (BUSINESS PLAN) CONTAINS



AN ISO 9001 : 2015 CERTIFIED COMPANY



**Market Survey  
Cum  
Detailed Techno  
Economic  
Feasibility  
Reports**

**BEGINNING :** Project Introduction, Brief History of the Product, Properties, BIS (Bureau of Indian Standard) Specifications & Requirements, Uses & Applications.

**MARKET SURVEY :** Present Market Position, Expected Future Demand, Statistics of Imports & Exports, Export Prospect, Names and Addresses of Existing Units (Present Manufactures).

**PLANT & MACHINERY :** List of Plant & Machineries, Miscellaneous Items and Accessories, Instruments, Laboratory Equipments and Accessories, Plant Location, Electrification, Electric Load and Water, Maintenance, Suppliers/Manufacturers of Plant and Machineries.

**RAW MATERIAL :** List of Raw Materials, Properties of Raw Materials, Availability of Raw Materials, Required Quality of Raw Materials, Cost/Rates of Raw Materials.

**MANUFACTURING TECHNIQUES :** Formulae Detailed Process of Manufacture, Flow Sheet Diagram.

**PERSONNEL REQUIREMENTS :** Requirement of Staff & Labour, Personnel Management, Skilled & Unskilled Labour.

**LAND & BUILDING :** Requirement of Land Area, Rates of the Land, Built up Area, Construction Schedule, Plant Layout.

**FINANCIAL ASPECTS :** Cost of Raw Materials, Cost of Land & Building, Cost of Plant & Machineries, Fixed Capital Investment, Working Capital, Project Cost, Capital Formation, Cost of Production, Profitability Analysis, Break Even Point, Cash Flow Statement for 5 to 10 Years, Depreciation Chart, Conclusion, Projected Balance Sheet, Land Man Ratio.

- Prepared by highly qualified and experienced consultants and Market Research and Analyst Supported by a panel of experts and computerised data bank.
- Data provided are reliable and upto date collected from suppliers/manufacturers, plant already commissioned in India.
- NPCS Reports are very economical and immediabely available on demand where as commissioned Feasibility Studies are time consuming and costly.

**FOR ASSESSING MARKET  
POTENTIAL, INVESTMENT  
DECISION MAKING  
CORPORATE  
DIVERSIFICATION  
PLANNING ETC.**

**NPCS Engineers and Consultants have prepared Market Survey Cum Detailed Techno Economic Feasibility Report on the following products which are most viable and profitable.**



**Potato Processing, Potato Based Products, Potato Chips & Wafers, Potato Granules, Potato Wine, Alcohol, Vodka, Sticks, French Fries, Potato Specialties, Dehydrated, Frozen Potato Products, Potato Starch, Potato Powder, Flakes & Pellets, Liquid Glucose, value added Products**

- » Frozen Finger Chips
- » Grain & Potato Based Vodka Distillery
- » Liquid Glucose from Potatoes
- » Modified Potato Starch
- » Potato Chips (Different Recipe and Flavors)
- » Potato Chips Wafers Automatic Plant
- » Potato French Fries



- » Potato Granules
- » Potato Powder
- » Potato Powder (Automatic Plant)
- » Potato Powder Flakes
- » Potato Powder, Flakes & Granules with Cold Storage
- » Potato Powder, Flakes and Pellets



- » Potato Powder, Granules and Pellets
- » Potato Processing
- » Potato Products
- » Potato Products (Potato Balls, Nuggets and French Fries)
- » Potato Starch
- » Vodka from Potato



## Readymade Garments, Textile & Textile Auxiliaries, Hosiery, Spinning, Jeans and Under Garments



- » Coverall (Boiler Suit)
- » Hosiery Products (Vest, Briefs, Leggings, T-Shirts & Socks)
- » Jeans
- » Men & Women Undergarment
- » Necktie



- » PVC Rexine Cloth
- » Readymade Garments, Clothing
- » Sweat Free And Antibacterial Socks
- » Terry Towels
- » T-Shirt
- » Viscose Filament Yarn



- » Women Lingerie-Ladies Undergarments (Bra & Panties)
- » Workwear, Uniform Clothing For Factory (Trousers & High Visibility Long Sleeves Jackets)
- » Yarn, Fabric & Garments Production Using Solar Charkha & Solar Looms

**Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :**

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Website : [www.niir.org](http://www.niir.org) [www.entrepreneurindia.co](http://www.entrepreneurindia.co) E-mail : [info@niir.org](mailto:info@niir.org) , [npcs.india@gmail.com](mailto:npcs.india@gmail.com)

## SELECTED BUSINESS IDEAS FOR RIGHT INVESTMENT



### Soap, Detergents, Surfactants, Cleaners, Cleaning Powder, Laundry Care, Fabric Care and Wash, Household and Industrial Detergents, Washing and Toilet, Liquid Soaps, Liquid Detergents, Acid Slurry

- » Blue Detergent Powder
- » Car Wash Shampoo
- » Cleaning Powder (Vim Type)
- » Cleaning Powder for Utensils (Vim Type)
- » Detergent Cake, Powder and Dish Washing Detergent Cake and Powder
- » Dish Wash (Liquid & Soap Bar) and Detergent (Liquid Soap Bar and Powder)
- » Floor Cleaners
- » Glass Cleaner, Floor Cleaner & Toilet Cleaner



- » Glycerin Bath Soap (Pears Type)
- » Laundry Soap
- » Liquid Detergents
- » Liquid Washing Soap, Scouring Powder, Toilet Tills Hard Stains Remover Liquid & Detergent Powder
- » Natural Glycerine
- » Nerol Soap and Detergent
- » Optical Whiteners
- » Soap and Detergent Powder
- » Soap Coated Paper



- » Soap Noodles
- » Soap Noodles from Vegetable Oil
- » Soda Ash
- » Stain Removers
- » Surfactants (Hand Wash, Floor Cleaner, Toilet Cleaner, Phenyl Black and White, Glass Cleaner, Dish Wash Liquid, Air Freshener)
- » Toilet and Herbal Soap
- » Utensil Cleaning Bar
- » Washing Soap and Washing Powder (Nirma Type)
- » Zeolite 4a (Detergent Grade)



### Spices and Condiments, Indian Kitchen Spices, Masala Powder



- » Chilli Oleoresin
- » Curcumin Extraction
- » Extraction of Essential Oil and Packing of Ground Spices
- » Extraction of Spice Oleoresin (Chilly)
- » Indian Kitchen Spices (Masala Powder) Spices Powder and Blended Spices, Readymade Mixes (Red Chilli Powder, Sambhar Masala, Biryani Masala, Chicken Fry Masala, Garam Masala)
- » Indian Kitchen Spices (Turmeric, Chilli & Masala Powder)
- » Oleoresin of Spices
- » Oleoresins of Spices by Steam Distillation Process
- » Processed Food & Spices (Spices, Vegetable Sauces, Fruit Pulp)



- » Saffron Cultivation
- » Spice (Chilli) Oleoresin
- » Spice Oil Extraction from Curry Leaves
- » Spice Oil or Oleoresins (Extraction of Essential Oil, Cardamom, Jeera, Ajwain, Ginger & Other Spices)
- » Spice Powder- Masala Powder (Cryogenic Grinding)
- » Production of (Turmeric, Red Chilli, Coriander, Cumin, Cardamom, Cloves, Cassia, Shah Jeera, & Nutmeg Mace Powder)
- » Spices
- » Spices (Masala)
- » Spices (Turmeric Powder, Red Chilli Powder, Dhaniya Powder, Garam Masala, Sabji Masala, Popcorn Masala)
- » Spices (Turmeric, Red Chilli, Dhaniya and



- » Jeera Powder)
- » Spices and Masala Grinding, Blending and Packing
- » Spices in Pouch Packing
- » Spices- Masala Powder Spices Powder, Blended Spices and Readymade Mixes (Mirchi Powder, Turmeric Powder, Sambhar Powder, Biryani Masala)
- » Turmeric Oleoresin, Spice Oils and Oleoresins, Curcumin from Curcuma Longa, Extraction of Curcumin
- » Turmeric Powder, Coriander Powder and Chilli Powder Processing
- » Turmeric, Dhania and Chilli Powder
- » Whole Spices Processing (Cleaning Grinding & Packaging)



### Textile Bleaching, Dyeing, Spinning, Weaving, Printing, Finishing and Textile Auxiliaries Projects

- » Coir Geotextiles
- » Cotton Ball (Hospital and Cosmetic Use)
- » Cotton Cultivation & Cotton Yarn
- » Cotton Ginning and Pressing
- » Cotton Yarn Dyeing
- » Dyeing of Hank Yarn for Power Loom
- » Dyeing on Rayon in Hanks Form & Cone Form
- » Geotextiles for Road Construction
- » Home Furnishing (Export Quality)
- » Integrated Unit Textile Mill and Readymade Garments



- » Jute Mill (With Spinning & Weaving)
- » Mattress & Quilt
- » Mink Blankets
- » Open End Spinning Unit
- » Pigment Binders for Textile Printing
- » Polyester Yarn from Waste
- » Production of Urea Formaldehyde Uf85
- » Sewing Thread Reels
- » Silk Reeling Unit
- » Spinning & Carding of Wool into Yarns



- » Sulphur Black Dye
- » Surgical Cotton
- » Textile Bleaching, Dyeing & Finishing
- » Textile Cotton Spinning
- » Textile Dyeing & Printing Mill
- » Textile Softeners (Cationic, Anionic & Non Ionic)
- » Textile Weaving Mill
- » Ultramarine Blue
- » Water Proofing Finishing of Textile Fabric
- » Wetting Oil (Textile Yarn Wetting Agent)



Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :

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# SELECTED BUSINESS IDEAS FOR RIGHT INVESTMENT

## Waste Management and Recycling, Industrial Waste Management, Agro Waste, Municipal Garbage, Plastic, Paper, Metal, Iron, Glass, Rubber, Electronic, Medical Waste Recycling, Solid Waste Treatment, Agricultural, Wood Waste, Residue Processing



- » AAC Blocks (Autoclaved Aerated Concrete Blocks) Fly Ash Based
- » Absolute Alcohol from Molasses
- » Activated Carbon from Bamboo
- » Activated Carbon from Cashew Nut Shell
- » Activated Carbon from Coconut Shell
- » Activated Carbon from Coconut Shell, Rice Husk & Saw Dust
- » Activated Carbon from Saw Dust
- » Activated Carbon from Saw Dust & Coconut Shell
- » Activated Charcoal from Wood
- » Aluminium Alloy from Scrap and Virgin Metal
- » Aluminium Ingots from Aluminium Scrap
- » Aluminium Ingots from Used Beverage Cans
- » Aluminium Recycling Plant
- » Animal Feed from Bagasse
- » Animal Feed Using Date Pits, Discarded Dates and Other Ingredients (Barley, Bran, Oats, Soyabean Meal, Molasses, Vitamin and Minerals)
- » Artificial Sand from Stones and Waste Metals
- » Automated Vehicle Scrapping and Recycling Unit
- » Bagasse Based Cogeneration Power Plant
- » Billets from Steel Scrap by Electric Furnace
- » Bio Coal Briquettes from Agricultural Cellulosic Waste
- » Bio-Fertilizer from Birds Excreta
- » Biofertilizer from Herbal Waste
- » Biofertilizers from Cotton Seed Cake
- » Biogas Power Plant from Cow Dung
- » Biomass Briquettes from Bio Waste
- » Biomass Briquettes from Bio-waste
- » Biomass Gasification Power Plant
- » Biomass Pellets from Bio Waste
- » Biomass Power Generation Plant
- » Biomedical Waste Recycling
- » Bricks from Cow Dung
- » Bricks from Fly Ash
- » Bricks from Fume Dust
- » Caffeine from Tea Waste
- » Carbon Black from Oil of Tar
- » Carbon Black from Waste Tyres (Waste Tyre Pyrolysis)
- » Card & Gray Board from Pulp and Waste Paper
- » Card Gray Board from Pulp & Waste Paper
- » Cashew Nut Shell Liquid (Using Waste Shell)
- » Cashew Shell Liquid & Kernel Processing
- » Cattle & Poultry Feed
- » Cattle Feed from Molasses & Bagasse
- » Cattle Feed from Tapioca
- » Cellulose Powder from Cotton Linter (Waste of Cotton)
- » Cement from Rice Husk
- » Cenosphere
- » Cenosphere from Fly Ash
- » Charcoal from Bagasse
- » Charcoal from Biomass
- » Charcoal from Coconut Shell
- » Charcoal Powder from Rice Husk
- » Chip Block (Compressed Wood)
- » Chipboard Industry
- » Clay and Sand Bricks Plant (Light Weight)
- » Co-Generation Power Plant Based On Bagasse
- » Coir Mattresses
- » Composite Materials-Carbon Fibre Composites & Glass Fibre Composites
- » Compound Wax from Residual Oil
- » Compressed Biogas
- » Copper Flats and Copper Tubes
- » Copper Sulphate from Copper Scrap, Copper Ash, Industrial Waste Containing Copper Content
- » Cotton Yarn from Waste Yarn
- » Crushed Stone
- » Depolymerisation of Waste Pet Scrap
- » Dextrin from Starch
- » Diaper (Baby and Adult) and Sanitary Napkins
- » Disposable Plastic Syringes and Needles
- » Disposable Plates from Banana Leaves
- » Drum Stick Powder
- » Egg Shell Powder
- » Electronics (E-Waste, E-Scrap) Recycling Plant
- » Ethanol from Molasses
- » Ethanol from Rice, Rice Straw, Rice Husk, Rice Bran
- » E-Waste & Lithium Battery Recycling Plant
- » E-Waste Recycling For Extraction of Precious Metals (Nickel, Tin & Zinc), Gold, Silver, Palladium
- » E-Waste Recycling Plant
- » E-Waste Recycling Plant (Electronic Waste, E-Waste, E-Scrap, or Waste Electrical and Electronic Equipment (WEEE))
- » Extraction of Gelatin Glue from Leather Waste
- » Extraction of Ultra-Pure Silicon from Rice Husk Ash
- » Fly Ash Beneficiation
- » Fly Ash Bricks by Triboelectric Beneficiation Process
- » Fly Ash Bricks from Limestone
- » Fuel Bricks from Ground Nuts, Soyabean Hulls and Jute
- » Fuel Briquettes from Agro Waste
- » Fuel Briquettes from Biomass (Bio Coal Briquettes from Agricultural Cellulosic Waste)
- » Furfural from Corncobs, Rice Husk & Sugarcane Bagasse
- » Gelatin from Bones
- » Glucose from Broken Rice
- » Glue from Leather Waste
- » Hard Board from Bagasse
- » Iodised Salt (Free Flowing) From Sea Water
- » Iron Powder from Mill Scale Scrap
- » Kraft Paper from Bagasse
- » Kraft Paper from Waste Carton Boxes
- » Kraft Paper from Waste Paper
- » Lead Acid Battery Recycling
- » Lead Metal from Lead Ore
- » Lead Production (Litharge, Refined Lead, Red Lead & Grey Lead)
- » Lead Recycling (Smelting & Refining)
- » Lithium Battery & E-Waste (Electronic Waste) Recycling Industry
- » Methyl Methacrylate (Monomer) From Acrylic Scrap
- » Methylated Spirit from Sugarcane Molasses
- » Mosquito Repellent Coils
- » Municipal Solid Waste (MSW) Management
- » Municipal Waste Treatment
- » Nicotine Extraction from Tobacco Waste
- » Nicotine from Tobacco Waste
- » Oxalic Acid from Molasses
- » Oxalic Acid from Rice Husk
- » Paper Bags from Waste
- » Paper Board
- » Paper from Bamboo
- » Paper from Hemp
- » Paper from Waste Paper
- » Paper from Waste Paper, Bamboo Chips, Rice Husk & Wheat Husk
- » Paper Manufacturing Plant with Pulp from Bamboo, Wood and Grass
- » Particle Board
- » Particle Board from Bagasse
- » Particle Board from Rice Husk
- » Pectin from Apple Pomace
- » Pet Bottle Recycling
- » Pet Recycling
- » Plastic Extruded Product (Slab Rod) From Plastic Scrap
- » Plastic Granules from Plastic Waste
- » Plastic Granules from Scrap
- » Plastic Granules from Waste
- » Plastic Granules Making from Scrap
- » Plastic Pyrolysis Plant (Waste Plastic to Oil Conversion)
- » Plastic Pyrolysis Waste Plastic to Oil Conversion
- » Plastic Waste Pyrolysis (Plastic to Oil Conversion)
- » Plastic Waste Recycling Plant
- » Plastic, Glass and Copper
- » Polyester Yarn from Waste
- » Polyphenols Antioxidants from Tea Extracts
- » Poultry & Cattle Feed
- » Power Generation from Garbage
- » Precipitated Silica from Rice Husk Ash
- » Production of Caffeine
- » Reclaim Rubber
- » Reclaimed Rubber Sheet from Waste Tyre
- » Reclamation of Used Engine Oil
- » Reclamation of Used Engine Oil by Alkali Refining Process (Using Caustic Soda)
- » Recovery of Lead
- » Recovery of Lead from Scrap Batteries
- » Recovery of Zinc Metal from Zinc Ash
- » Rectified Spirit & Extra Neutral Alcohol (ENA)
- » Recycled Pet Polyester Fiber Manufacturing from Used Pet Bottles
- » Recycling of Waste Computer
- » Refining of Used Engine Oils for Making Base Oil
- » Re-Refining of Engine Oil, Transformer Oil & Hydraulic Oil
- » Rewinding of Burnt Electric Motors
- » Rice Bran Based Solvent Extraction Plant
- » Rice Bran Oil
- » Rice Bran Oil (Solvent Extraction)
- » Rice Bran Oil from Rice Bran
- » Rice Flakes from Broken Rice (Used In Beer Industry)
- » Rubber Powder from Waste Tyre
- » Rubber Reclamation
- » Rumen by Pass Fat used in Cattle Feed
- » Silica from Rice Husk Ash
- » Silver Extraction from Waste Hypo Solution, X-Ray Film, Colour Paper Bleach, Cinema Films Etc. (By Chemical Process)
- » Sodium Silicate from Rice Husk Hull
- » Solid Waste Management
- » Steel Tubes from Scraps and PVC Pipe with 5MW HR Captive Power Plant
- » Straw Board and Mill Board from Rice Husk and Bagasse
- » Sugar Mill with Bio-Ethanol from Molasses
- » Tissue Paper from Recycled Paper
- » Used and Waste Oil Recycling Plant
- » Vermicompost
- » Vermicompost from Solvent Extracted Spice Waste
- » Waste Lubricating Oil Recycling
- » Waste Plastic to Oil Conversion
- » Waste To Wealth-Value Recovery from Agricultural and Industrial Biomass Residues
- » Waste Tyre (Tire) Utilization
- » Waste Tyre Pyrolysis
- » Wax from Slack Wax
- » Yeast from Molasses
- » Zinc Oxide from Zinc Dross



Market Survey Cum Detailed Techno Economic Feasibility Report on all above Businesses are Available. Contact :

**NIIR PROJECT CONSULTANCY SERVICES**

AN ISO 9001:2015 CERTIFIED COMPANY

106 E, Kamla Nagar, Delhi - 110 007 (India). Tel. : 91-11- 23843955, 23845886, 23845654

Mob.: +918800733955, 9097075054 Fax : 91-11-23845886

Website : www.niir.org www.entrepreneurindia.co E-mail : info@niir.org , npcs.india@gmail.com



on electricity and when the batteries are low in charge.

India electric scooters and motorcycles market size valued at \$24.6 million in 2016, it is expected to grow at a CAGR of 45.4% during 2017- 2025. Some 4,50,000 electric two-wheelers were sold in India in the past eight years. The potential of electric vehicles in this segment is massive, say industry executives, given that more than 17 million two-wheelers are sold annually in the country. This facilitates the development of new technologies and ensures a high quality product.

### COST ESTIMATION Capacity

Hybrid Electric Scooter	: 50 Nos./Day
Plant & Machinery	: ₹ 95 Lakhs
Cost of Project	: ₹ 279 Lakhs
Rate of Return	: 34%
Break Even Point	: 74%

## Ladies Under Garments

**H**osiery industry is an ancient industry in the field of textile industry having very good potential in domestic market and also in the export market. Ludhiana in the state of Punjab is one of the largest and oldest centres of Hosiery industry in India.

Lingerie has been an intimate part of a woman's life since long. They are considered as an important garment among females for properly supporting and covering their sensitive body parts, it keeps them fit for daily general works. The market was highly fragmented and was dominated by local and unorganized brands.

Between 2000 and 2008, premium international brands started foraying into the Indian market. Indian brands showcased new designs and styles to woo the new age Indian women. The focus was mainly on the width of the product range. Men's and women's innerwear began to be sold through a variety of retail formats such as EBOs, LFS and departmental stores. India's lingerie market is currently valued at \$3 billion. A mere 1% of it is online. In the next few years the market value is projected to jump to \$5 billion. As a whole it is a good project for new entrepreneurs to invest.

### COST ESTIMATION Capacity:

Bra	: 450,000 Pcs/Annum
Panties	: 450,000 Pcs/Annum
Plant & Machinery	: ₹ 121 Lakhs
Cost of Project	: ₹ 270 Lakhs
Rate of Return	: 28%
Break Even Point	: 56%

## Manufacturing of Sanitary Napkins

**S**anitary Napkin comes under Nonwoven fabrics which as a whole come under technical textile. The functions of sanitary napkins are to absorb and retain menstrual fluid, and isolate menstrual fluids from the body. Important and desired properties are: no leakage, no unaesthetic appearance or color, no odor, no noise, stay in place, comfortable to wear (thin body shape), and a high level of hygiene. Technical textiles are defined as textile materials and products used primarily for their technical performance and functional properties rather than their aesthetic or decorative characteristics. Some example of technical textile is as follows:

-Fabrics- Reinforcement for composites, cushioning, fillings, electrical components, Insulation, Sports equipment, toys.

- Yarn types product-Sutures, Ropes, Fishing gears, shoe components, swings, etc.

There are several different types of disposable sanitary pads:

**Panty Liner:** Designed to absorb daily vaginal discharge, light menstrual flow, "spotting", slight urinary incontinence, or as a backup for tampon use.

**Ultra-thin:** A very compact (thin) sanitary pad, which may be as absorbent as a Regular or Maxi/Super pad but with less bulk.

**Regular:** A middle range absorbency sanitary pad.

**Maxi/Super:** A larger absorbency pad, useful for the start of the menstrual cycle when menstruation is often heaviest.

**Night:** A longer pad to allow for more protection while the wearer is lying down, with absorbency suitable for overnight use.

**Maternity:** These are usually slightly longer than a maxi/Super pad and are designed to be worn to absorb lochia (bleeding that occurs after childbirth).

Sanitary Napkins are exclusively used by adult girls & Ladies around the world during their menstrual periods as a means of maintaining physical aid & to avoid wetting or staining of the clothes. Sanitary Napkin is not reasonable & it is to be thrown away only. When it is saturated with wet liquids.

The global Sanitary Napkin Market is expected to register a double-digit CAGR of 5.2% by 2023. Female hygiene and health are major concerns across the world. Sanitary napkin is an absorbent item used by a woman during her menstruation cycle. Sanitary napkins are made of cellulose, plastic, and cotton. Manufacturers are expected to focus on untapped rural markets and increase their CSR (corporate social responsibility) activities related to women's hygiene.

## Profitable Opportunities in Business of 7-Aminocephalosporanic Acid (7-ACA)

**7**-aminocephalosporanic acid is abbreviated as 7-ACA, white or almost white crystalline powder, 7-ACA is an important nucleus in synthesis of cephalosporin antibiotics, in the nucleus 7 and 3 chemical transformation can be used to prepare many cephalosporins: cefazolin sodium, cefotaxime sodium, ceftriaxone sodium, cefoperazone sodium, sodium ceftazidime, cefuroxime sodium.

7-Aminocephalosporanic Acid [chemically, 3-(Acetyloxy-methyl)-7-amino- 8-oxo-5-thia-1- azabicyclo (4.2.0) oct-2-ene-2-carboxylic acid] is the active nucleus for the synthesis of cephalosporins and intermediates. India has the world's third largest active pharmaceutical ingredients (API) for the industry valued at a little less than USD 2 bn. Top 5 API producers account for approximately 6.5 %. The leading APIs are anti-infectives, gastrointestinal, cardiovascular and respiratory drugs. The Chemical Pharmaceutical

Generic Association (CPA) projects that India's share of the world API market will grow by 10.5% by 2010 as patented blockbuster drugs lose

### COST ESTIMATION Capacity:

7-Aminocephalosporanic Acid	: 0.5 MT Per Day
Plant & Machinery:	: ₹ 593 Lakhs
Cost of Project:	: ₹ 1937 Lakhs
Rate of Return:	: 28.20%
Break Even Point:	: 45.58%

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106 E, Kamla Nagar, Delhi - 110 007 (India). Tel. : 91-11- 23843955, 23845886, 23845654

Mobile: +918800733955, 9097075054 Fax : 91-11-23845886

AN ISO 9001:2015 CERTIFIED COMPANY

Website : www.niir.org www.entrepreneurindia.co E-mail : info@niir.org , npcs.india@gmail.com

their patent protection. The CPA also expects that the domestic Indian market for APIs, both generic and branded, will rise from USD 755 mn in 2005 to USD 1.9 bn in 2010. The API market in India to grow at a CAGR of 10.76 percent.

## Indian Kitchen Spices (Masala Powder)

### Spices Powder and Blended Spices, Readymade Mixes

*(Red Chilli Powder, Sambhar Masala, Biryani Masala, Chicken Fry Masala, Garam Masala)*

The Indian spices market is worth INR 40,000 crore annually. Key spices produced in the country include pepper, cardamom, chilli, ginger, turmeric, coriander, cumin, celery, fennel, fenugreek, ajwain, dill seed, garlic, tamarind, clove, and nutmeg among others. The market is largely unorganized and the branded segment makes up about 15%.

The population in India is surging and the increasing consumer expenditure on food explains the swelling demand for food in India. Accordingly, the demand for spices is expected to grow in the future which will lead to a prominent growth in the revenues from the sales of spices in India. The revenues from India market are expected to expand to around USD 18 billion in FY'2020, growing with a CAGR of ~% from FY'2016 to FY'2020. The highest contribution to this growth is expected to come from the spice mixes and blended spices.

#### COST ESTIMATION

##### Capacity:

Red Chilli Powder	: 100 Kgs. / Day
Sambhar Masala	: 100 Kgs. / Day
Biryani Masala	: 100 Kgs. / Day
Chicken Fry Masala	: 100 Kgs. / Day
Garam Masala	: 100 Kgs. / Day
Plant & Machinery	: ₹ 35 Lakhs
Cost of Project	: ₹ 195 Lakhs
Rate of Return	: 29%
Break Even Point	: 53%

## Biodegradable Plastic Pellets

• Corn Starch Thermoplastic & Polyvinyl Alcohol • PBAT & Corn Starch Thermoplastic • PLA + PBAT + Corn Starch Thermoplastic • PLA + PBAT + CaCO<sub>3</sub>

Among the biodegradable polymers made from renewable resources, starch is probably the most renewable naturally biodegradable polymer source because it is versatile, cheap, and abundant. It shows compatibility with extrusion processes used in the manufacture of conventional films and in the presence of a plasticizer it produces a material with thermoplastic characteristics,

#### COST ESTIMATION

##### Capacity

Biodegradable Plastic Pellets	: 1,200,000 Kgs Per Annum
Plant & Machinery	: ₹ 128 Lakhs
Cost of Project	: ₹ 407 Lakhs
Rate of Return	: 29%
Break Even Point	: 48%

known as thermoplastic starch (TPS). As a result, TPS is often blended with other polymers, such as poly (butylene adipate-co-terephthalate) (PBAT) and biodegradable aliphatic-aromatic copolyester, which combines biodegradability with other desirable physical properties.

The massive use of synthetic plastics, in particular in the food packaging area, has a great environmental impact, and alternative more ecologic materials are being required. Poly(lactic) acid (PLA) and starch have been extensively studied as potential replacements for non-degradable petrochemical polymers on the basis of their availability, adequate food contact properties and competitive cost. Indeed, plastics represent the second most widely used material for food packaging applications, after paper and cardboard.

## Production of Crumb Rubber Powder from Waste Tyres

Crumb rubber is a term usually applied to recycled rubber from automotive and truck scrap tires. There are two major technologies for producing crumb rubber – ambient mechanical grinding and cryogenic grinding. Of the two processes, cryogenic process is more expensive but it produces smoother and smaller crumbs.

Waste tyre recycling technology is very cost effective and performs 100% wastage tyre recycling (No churn left after the process). In this process no chemical ingredients are used, therefore it is environment friendly. Raw material (scrap tyre) is cheap and easily available, Generate economically valuable products out of waste tyres and products have good market value and demand. Also each recycled ton of tyres preserves 10 tons of carbon dioxide (CO<sub>2</sub>) that is a major greenhouse gas.

#### Features of Tire Recycling Plant:

1. Compact structure, small floor area, easy maintenance.
2. Low energy consumption, low operating cost.
3. Easy operation, stable performance.
4. Large capacity, high working efficiency.
5. High automatic control, reducing labor cost.
6. Long service life, low rate of breakdown.
7. Eco-friendly. No sewage and waste gas discharge.

There is a rapid market increase of rubber powder in India. Demand of rubber powder in India is increased by 5%-8%. There is fair scope of this product. Every year over 1.6 billion new tires are generated and around 1 billion of waste tires are generated. However, the recycling industry processed only 100 million tires every year. The tire is extensively designed with several complex processes which makes it indestructible in nature and creates difficulty in the recycling of tires.

Furthermore, the growing implementation of crumb rubber generated from scrap tires is supporting the growth of the tire recycling market. In 2016, over 30% of crumb rubber used on sports fields and 25% of crumb rubber used as playground surfacing which is expected to create a significant disruption of the tire recycling market. Application of rubberized asphalt for the construction of pavements is also generating a pool of opportunities for tire recyclers and is expected to fuel the growth of the tire recycling market in the near future.

#### COST ESTIMATION

##### Capacity:

Crumb Rubber Powder	: 24 MT Per Day
By Product Steel Wire	: 4.8 MT Per Day
Plant & Machinery	: ₹ 115 Lakhs
Cost of Project	: ₹ 426 Lakhs
Rate of Return	: 28%
Break Even Point	: 66%

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