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## About Us

NPCS is a well-known technical consultancy that focuses on Project Reports Compilation, and we have been following a tight system and procedure to assure only top quality in accordance with our clients' expectations in this rapidly increasing and changing market. We've created the list of the top projects to start your own business startups.

## Lucrative Business Ideas for Startup

### Profitable Business of Magnesium Sulphate

Magnesium sulphate is an inorganic salt with the formula  $MgSO_4(H_2O)_x$  where  $0 \leq x \leq 7$ . It is often encountered as the heptahydrate sulphate mineral epsomite ( $MgSO_4 \cdot 7H_2O$ ), commonly known as Epsom salt, is a mineral. It works by replacing magnesium in the body and increasing water in the intestines. Magnesium sulphate can be used orally as a laxative to relieve occasional constipation, and to treat low levels of magnesium, the majority was used in agriculture. Not all external uses for magnesium sulphate have been approved by the FDA.

Magnesium Sulphate is a chemical compound which is a mixture of magnesium, oxygen, and sulphur. Magnesium sulphate often faced as sulphate mineral & epsomite which are commonly known as Epsom Salt.

Magnesium Sulfate Market is to reach \$1,233.3 million by 2026, after growing at a CAGR of 5.1% during 2021-2026. The growing need to achieve high agricultural yields coupled with the substantial growth of the world-wide agricultural industry is expected to be the main driver of demand growth in the years ahead. Furthermore, increasing use of magnesium sulfate in the personal care & cosmetics sector to

formulate a range of important personal care items, including hair products, skincare products, sun-tan products and skin fresheners will create new opportunities for the growth of the global magnesium sulfate industry.

#### COST ESTIMATION

##### Capacity

Magnesium Sulphate	: 72 MT Per Day
Plant & Machinery	: ₹ 2.56 Cr
Cost of Project	: ₹ 9 Cr
Rate of Return	: 29%
Break Even Point	: 58%

### Business of Grain Processing (Grading, Cleaning & Packaging of Rice & Pulses)

Grain processing, as exemplified by four milling, is essentially a physical process whereby the kernel is cleaned, adjusted to an appropriate moisture content and then mechanically reduced to the desired particle size to produce a flour. Where appropriate, flour production also involves fractionation

not only to separate bran, germ and endosperm from each other but also assure the correct particle size of the milled endosperm. The process involves neither chemical nor thermal treatments and thus does not bring about decontamination of the grain itself. The milling process can bring about changes in the distribution of contaminants when comparing amounts within the grain and the resultant mill fractions.

- Major food grains basically used:
- Directly as food.
- For the production of starch, and starch to glucose.

- For the production of vegetable oil.
- For the production of protein rich food.
- For the production of cattle feed.
- In directly produced corn steep liquor which is used in the fermentation method as vitamin source or mineral source.

#### COST ESTIMATION

##### Capacity:

Moong Dal	: 1 MT Per Day
Masur Dal	: 1 MT Per Day
Toor Dal	: 1.5 MT Per Day
Chana Dal	: 1 MT Per Day
Kabuli Chana	: 1 MT Per Day
Desi Chana	: 1.5 MT Per Day
Katni Rice	: 1.5 MT Per Day
Bengal Joha Rice	: 1 MT Per Day
Assam Joha Rice	: 1.5 MT Per Day
Sonam Rice	: 1.5 MT Per Day
Groundnut	: 2 MT Per Day
Plant & Machinery	: ₹ 63 Lakhs
Cost of Project	: ₹ 1.65 Cr
Rate of Return	: 31%
Break Even Point	: 58%

Cereals and grains processing market is expected to grow at a rate of 10.40% in the period 2020 to 2027.

The rising consumption of food products is the major factor driving the growth of cereals and grains processing market in the period of 2020- 2027. Agriculture is the primary source of livelihood for about 58% of India's population. Gross Value Added by agriculture, forestry, and fishing was estimated at Rs. 19.48 lakh crore (US\$ 276.37 billion) in FY20. Share of agriculture and allied sectors in gross value added (GVA)

of India at current prices stood at 17.8 % in FY20. Consumer spending in India will return to growth in 2021 post the pandemic-led contraction, expanding by as much as 6.6%.

## Production Business of Zinc Sulphate

Zinc sulphate is a very water soluble, transparent, colorless, crystalline compound. It is commonly used as the heptahydrate,  $ZnSO_4 \cdot 7H_2O$ , and is commonly called white vitriol; it occurs naturally as the mineral goslarite, and can be prepared by reacting zinc with sulfuric acid. It is used to supply zinc in animal feeds, fertilizers, and agricultural sprays; in making lithopone; in coagulation baths for rayon; in electrolyte for zinc plating; as a mordant in dyeing; as a preservative for skins and leather; and in medicine as an astringent and emetic.

Global Zinc Sulfate Market is valued to grow at healthy CAGR of 4.2% over in period 2020-2026. Increasing usage as a fertilizer additive in agricultural industry to prevent and correct zinc deficiency in crops, rising demand of applications of raw material for manufacturing latex products and usage as a herbicide for moss control are the key factors driving the market. Zinc sulfate plays a prominent role in treating zinc deficiencies in humans and is used as a fertilizer for agricultural sprays to improve soil nutrient which is expected to play a crucial role in the market development.

### COST ESTIMATION

#### Capacity:

Zinc Sulphate 33%	: 2 MT Per Day
Zinc Sulphate 21%	: 2 MT Per Day
Zinc Sulphate 12% Soln.	: 2 MT Per Day
Plant & Machinery	: ₹ 1.21 Cr
Cost of Project	: ₹ 3.70 Cr
Rate of Return:	: 22%
Break Even Point	: 60%

## Manufacturing Industry of Kraft Paper

Kraft paper or kraft is paper or paperboard (cardboard) produced from chemical pulp produced in the kraft process. Sack kraft paper (or just sack paper) is a porous kraft paper with high elasticity and high tear resistance, designed for packaging products with high demands for strength and durability.

Pulp produced by the kraft process is stronger than that made by other pulping processes; acidic sulfite processes degrade cellulose more, leading to weaker fibers, and mechanical pulping processes leave most of the lignin with the fibers, whereas kraft pulping removes most of the lignin present

originally in the wood. Low lignin is important to the resulting strength of the paper, as the hydrophobic nature of lignin interferes with the formation of the hydrogen bonds between cellulose (and hemicellulose) in the fibers.

The kraft paper market is projected to grow from USD 15.6 billion in 2019 to USD 18.7 billion by 2025, recording a CAGR of 3.0% during the period. The rise in demand for kraft papers in various end-use industries, such as food & beverages, building & construction, cosmetics &

personal care automotive, and consumer durables, is a key factor that is projected to drive the growth of the kraft paper market across the globe. In addition, factors such as rapid urbanization across regions and the recyclability feature of kraft papers are projected to contribute to the growth of the kraft paper market.

### COST ESTIMATION

#### Capacity

Kraft Paper	: 200 MT Per Day
Plant & Machinery	: ₹ 47.24 Cr
Cost of Project	: ₹ 74.42 Cr
Rate of Return	: 26%
Break Even Point	: 49%

## Demanding Business of E-Rickshaw Assembling

E-rickshaws are now one of the preferred modes of transport in streets because of its low maintenance cost, low fuel cost, Eco-friendly, no noise pollution, easy to drive and last but not the least livelihood, e-rickshaw is a boon to the common man. Without putting in much physical efforts and without investing much amount of money, the earning is quite good for an e-rickshaw driver and hence it is an important means of livelihood for many. These e-rickshaws consist of 3 wheels with a differential mechanism at rear wheels. Basically these vehicles have a mild steel tubular chassis.

### COST ESTIMATION

#### Capacity

E-Rickshaw	: 200 Nos Per Day
Plant & Machinery	: ₹ 2.06 Cr.
Cost of Project	: ₹ 25.80 Cr.
Rate of Return	: 30%
Break Even Point	: 68%

The global e-Rickshaw market is projected to expand at around 9% CAGR during the upcoming period. The growth of the market is attributed to low cost of transportation and low power consumption. E-rickshaws are widely accepted as an alternative to diesel, petrol, CNG auto rickshaws. The mismatch between any of these components is nasty and may reduce performance. The global e-Rickshaw market is projected to expand at around 9% CAGR during the period. The growth of the market is attributed to low cost of transportation due better mileage and low power consumption. Increase in sales and production of electric vehicles as an alternative for fuel-based mobility, owing to several government initiatives and environmental regulations on the electric vehicle industry, is projected to drive the e-rickshaw market.

## Setting up a Multispeciality Hospital (200 Bedded)

A hospital is a health care institution providing patient treatment with specialized medical and nursing staff and medical equipment. The best-known type of hospital is the Multispeciality hospital, which typically has an emergency department to treat urgent health problems ranging from fire and accident victims to a sudden illness.

A Multi-speciality hospital as a health care organization has been defined in varied terms as an institution involved in preventive, curative/ameliorative, palliative or rehabilitative services. It is meant to treat patients suffering from various ailments. A private hospital is a place where one may get treatment from ordinary fever to a

### COST ESTIMATION

#### Capacity

Plant & Machinery	: ₹ 140 Cr
Cost of Project	: ₹ 212.48 Cr
Rate of Return	: 27%
Break Even Point	: 50%

major surgery operation.

Global Hospital Market stood at USD 4207.46 billion in 2020 and is expected to grow at a CAGR of 6.70% during the upcoming period. This can be attributed to the growing geriatric population suffering from various chronic diseases including cancer, diabetes, cardiovascular diseases, renal disorders, among others. This in turn has increased the patient pool requiring treatment. Furthermore, increasing awareness and advancements pertaining to diagnostic technologies are expected to create lucrative opportunities for the market growth through 2026.

## Dal Mill (Pulse)

India is still by and large vegetarian in dietary habit and heavily depends upon vegetative source to meet out its daily protein requirement. India is bound to be global leader in terms of production and consumer of pulses. Since, India is leading importer of pulses; production of pulse/legume crops has been stagnant over the years.

They are the main sources of protein. The important dals in the country are Channa, Moong, Urad, Moth, turdal and Masoor, Matar etc. The pulses are used for preparing hot dishes, sweet dishes and other varieties. Pulses are the important sources of proteins, vitamins and minerals and are popularly known as "Poor man's meat" and "rich man's vegetable", contribute significantly to

the nutritional security of the country. India is the largest producer (25% of global production), consumer (27% of world consumption) and importer (14%) of pulses in the world.

The dal milling industry in India is one of the major agro processing industries in the country. From an annual production of 13.19 million tonnes of pulse in the country, 75% of these pulses are processed by dal mills. Thus, due to demand it is a good project for entrepreneurs to invest.

### COST ESTIMATION

#### Capacity

Black Gram Dal	: 1800 MT/ Annum
Channa Dal	: 1800 MT/ Annum
Green Gram Dal	: 1800 MT/ Annum
Turdal	: 1800 MT/ Annum
Plant & Machinery:	₹ 104 Lakhs
Cost of Project	: ₹ 221 Lakhs
Rate of Return	: 29%
Break Even Point	: 70%

## Rising Demand in Spinning Mill

Spinning is a major part of the textile industry. It is part of the textile manufacturing process where three types of fibre are converted into yarn, then fabrics, which undergo finishing processes such as bleaching to become textiles. The textiles are then fabricated into clothes or other products. There are three industrial processes available to spin yarn, and a handicraft community who use hand spinning techniques. Spinning is the twisting together of drawn out strands of fibres to form yarn, though it is colloquially used to describe the process of drawing out, inserting the twist, and winding onto bobbins.

### COST ESTIMATION

<b>Capacity</b>	
30s Combed Cotton Yarn	: 20.8 MT Per Day
Cotton Waste Comber Noil	: 3.3 MT Per Day
Cotton Waste Carding	: 2 MT Per Day
Plant & Machinery	: ₹ 59 Cr
Cost of Project	: ₹ 82.94 Cr
Rate of Return	: 26%
Break Even Point	: 45%

The global textile market size was projected at USD 1000.3 billion in 2020 and is expected to expand at a compound annual growth rate (CAGR) of 4.4% from 2021 to 2028. Increasing demand for apparel from the fashion industry coupled with the

growth of e-commerce platforms is expected to drive the market over the period. The textile industry works on three major principles, namely designing, production, and distribution of different flexible materials such as yarn and clothing. A wide array of processes such as knitting, crocheting, weaving, and others are largely used to manufacture a wide range of finished and semi-finished goods in bedding, clothing, apparel, medical, and other accessories.

The textile industry occupies a leading position in the hierarchy of the Indian manufacturing industry. It was estimated to contribute 14% to industrial output, 4% to GDP and about 11% to India's export earnings. Besides, it provides direct employment to over 35 mn people and is the second biggest employer.

## Start Manufacturing of Aluminium Ingots from Aluminium Scrap

Aluminium, is a light weight, silver-white, metallic element that makes up approximately 7 per cent of the earth's crust. It weighs about one third as much as steel (7480- 8000 Kg/ cubic meter) or copper (8930 Kg/cubic meter). Aluminium is malleable, ductile, and easily casted and has excellent corrosion resistance and durability. It is mined in the form of bauxite ore and exists primarily in combination with oxygen as alumina. India has nearly 10 per cent of the world's bauxite reserves and a growing aluminium sector that leverages this. Demand in the domestic market is expected to grow by 8-10 per cent. By 2020, India is expected to have an installed aluminium capacity of 1.7 to 2 million tones per annum.

India's share in world aluminium market is estimated at around 3%. India ranks fifth in bauxite production after Australia (62 mntonnes), Guinea (17.50 mntonnes), Brazil (16.20 mntonnes) and China (10.75 mntonnes). With a total output of 9.25 mntonnes, the country contributes about 6% of the world's total production of 159 mntonnes, India holds the fifth position in reserves base and is ahead of China with 2300 mntonnes. India ranked seventh in alumina production with a total output of 3 mntonnes, a share of nearly 5% of the global production of 61 mntonnes.

Aluminium has a wide range of applications, from aircraft building to packaging, a major consumer being the electrical industry. The two sectors, electricity and transportation, account for more than half of the total off take. The key consumer industries in India are power, transportation, consumer durables, packaging and construction. Of this, power is the biggest consumer (about 44% of total) followed by infrastructure (17%) and transportation (about 10% to 12%).

### COST ESTIMATION

<b>Capacity</b>	
Aluminium Alloy Ingots	: 14 MT Per Day
Aluminium Scrap	: 0.23 MT Per Day
Plant & Machinery	: ₹ 7 Cr
Cost of Project	: ₹ 33.15 Cr

## Setting a Profitable Business of Edible Oil Refinery (Soya & Palm)

Edible oil is extracted from fruits, vegetables and animals. It is used to prepare a number of delicacies. Amongst the numerous types of edible oils available commercially, soybean, palm, rapeseed, and sunflower oils are prevalent among buyers. The edible oil market is anticipated to grow considerably in the upcoming years due to the rising popularity of crude, natural, healthy, and organic vegetable oils.

Edible oils are majorly used for cooking, though occasionally oils like coconut oil, almond oil and peanut oil are used for personal care in the making of hair oils and soaps. Almond oil is also perfect for hard candy making. It is ideal for candies, candy centers, fondants, frostings, fudges. Edible oil is cooking oil that is extracted from the fat of plants, animals or microbial origins. Edible oils are liquid at room temperature and are fit for consumption. Edible oils consist of 96% of triacylglycerides. Ghee, mustard oil, sunflower oil,

olive oil, rice brown oil, groundnut oil, soya oil, palm oil are some of the examples of edible oils among many.

The global edible oil market is estimated to grow at a CAGR of 3.57% from a market value of USD 96.878 billion in 2019 to attain a market value of USD 119.571 billion by the end of 2025. The global edible oil market is anticipated to witness

a substantial growth owing to increasing popularity of unrefined, unprocessed, healthy, and organic oil. In the coming years, vegetable oils with low cholesterol, fat, and calories are likely to gain high response due to growing health awareness among people across the world. In addition, major improvement in retail network, increasing crop yields, oil production, and growing economies are some of the prominent factors supporting the growth of the global edible oil market.

### COST ESTIMATION

<b>Capacity</b>	
Refined Palm Oil	: 50 MT Per Day
Refined Soya Oil	: 50 MT Per Day
Plant & Machinery	: ₹ 7 Cr
Cost of Project	: ₹ 36.14 Cr
Rate of Return	: 27%
Break Even Point	: 45%

## Fractionation of Turpentine Oil

Turpentine is an essential oil obtained from pine trees. It is one of the most important substances with many applications, being widely used as a solvent in chemical industries, resins and as an ingredient in paints. Uttarakhand, Himachal, J & K, and Assam are extremely rich in pine forests. Highly purified  $\alpha$ -pinene can be obtained by vacuum-fractional distillation of turpentine that has to reach 97% purity.

Pine oils are also widely utilized in cleaning & home products owing to their superior antibacterial and antiseptic properties. Other uses includes Ore-dressing Agent, Textile Degreaser, Bactericide, Fragrance, Others Customers are keen on specialized products as various applications require specific characteristics and ingredients.

Pine Oil (CAS 8002-09-3) Market is predicted to discover Vigorous Growth by 2021. Throughout

the world every industry is spending a large amount in Research for future expansion. Growing consumer preference for natural products has led to the development of innovative applications in personal care and cleaning products. Rapid industrialization and increasing disposable consumer income are the other major factors driving the market growth, mainly in developing countries such as China, India, Vietnam, and Thailand. Thus, as an entrepreneur this project offers an exciting opportunity to you.

### COST ESTIMATION

<b>Capacity</b>	
Turpentine Oil	: 3,000,000 Ltr/Annum
Plant & Machinery	: ₹ 82 Lakhs
Cost of Project	: ₹ 425 Lakhs
Rate of Return	: 30%
Break Even Point	: 52%

# Oleoresin of Spices

## Black Pepper, Paprika and Cardamom

**O**leoresin is a homogeneous mixture comprising of resin and oils that are volatile in nature. Spice oleoresins represent the complete flavour profile of the spice. It contains the volatile as well as non-volatile constituents of spices. Spice oleoresins guarantee superior quality of flavour and aroma. They have several applications like in the preparation of beverages, soup powders, confectionary, curries, noodles, sauces, canned meat etc.

The Indian spice oleoresin market is about Rs.600 crores. India accounts for 70% of the world oleoresin production with competition from China, US, Lanka, South Africa and Latin America. Entrepreneurs who invest in this project will be successful.

### COST ESTIMATION

#### Capacity

<b>Black Pepper Oleoresin</b>	: 14 Kgs/Day
<b>Black Pepper Spent</b>	: 545 Kgs/Day
<b>Cardamom Oleoresin</b>	: 10 Kgs/Day
<b>Cardamom Spent</b>	: 120 Kgs/Day
<b>Paprika Oleoresin</b>	: 1.2 Kgs/Day
<b>Paprika Spent</b>	: 15 Nos./Day
<b>Plant &amp; Machinery</b>	: ₹ 234 Lakhs
<b>Cost of Project</b>	: ₹ 424 Lakhs
<b>Rate of Return</b>	: 27%
<b>Break Even Point</b>	: 53%

## Emerging Business of

# Ductile Iron Pipe Fittings

### COST ESTIMATION

#### Capacity

<b>Capacity</b>	: 12 MT Per Day
<b>Plant &amp; Machinery</b>	: ₹ 311 Lakhs
<b>Cost of Project</b>	: ₹ 1135 Lakhs
<b>Rate of Return</b>	: 33.83%
<b>Break Even Point</b>	: 55.20%

**P**ipe fittings basically include the range of components that are used to connect pipe ends for in-line, multi-port, offset and mounting configurations. Pipe fitting cross sections are mostly, but not always, circular in shape to match with the pipe section with which they are connected. Pipes can be metallic or plastic and pipe fittings vary depending on the type of pipe used.

The plastic pipes used are predominantly PVC pipes and recent increase in use of HDPE pipes in competition for PVC pipes. The other

pipes include GRP, BWSCC pipes, Hume pipes, stoneware pipes, etc. GRP pipes, RCC pipes, and stoneware pipes are used predominantly in sewerage applications.

The increasing share of DI pipes obviously indicates its rising acceptance by customers and its growing popularity. The increasing share of DI pipes indicates that DI pipes are gradually replacing all other pipes, especially steel pipes. The government bodies have virtually stopped purchase of CI pipes for potable water supply and the existing CI pipelines are increasingly being replaced by DI pipes. Plastic pipes and cement pipes (AC/RCC/PSC) are also being replaced in urban and semi-urban areas; however, in rural water supply schemes they still exist due to the low initial investment.

# Industrial Gases

**I**ndustrial gases are gaseous materials that are manufactured for use in Industry. The principal gases provided are nitrogen, oxygen, carbon dioxide, argon, hydrogen, helium and acetylene; although a huge variety of gases and mixtures are available in gas cylinders. Industrial gases are used in a wide range of industries, which include oil and gas, petrochemicals, chemicals, power, mining, steelmaking, metals, environmental protection, medicine, pharmaceuticals, biotechnology, food, water, fertilizers, nuclear power, electronics and aerospace. Industrial gas is sold to other industrial enterprises; typically comprising large orders to corporate industrial clients, covering a size range from building a process facility or pipeline down to cylinder gas supply.

enhancement, as a useful end product, or for a particular use; as opposed to having value as a "simple" fuel. As per the latest report by Persistence Market Research (PMR), the global market for industrial gases is likely to witness robust growth, registering a 7.7% CAGR between 2017 and 2025. The global industrial gases market is estimated to reach US\$ 114.5 Bn in revenue by 2025 end. Rise in Metal Manufacturing &

### COST ESTIMATION

#### Capacity

<b>Oxygen Gas</b>	: 350 Nos Per Day
<b>(7M3 each Cylinder)</b>	
<b>Nitrogen Gas</b>	: 100 Nos Per Day
<b>(7M3 each Cylinder)</b>	
<b>Plant &amp; Machinery</b>	: ₹ 147 Lakhs
<b>Cost of Project</b>	: ₹ 466 Lakhs
<b>Rate of Return</b>	: 27%
<b>Break Even Point</b>	: 57%

Industrial gas is a group of materials that are specifically manufactured for use in industry and are also gaseous at ambient temperature and pressure. They are chemicals which can be an elemental gas or a chemical compound that is either organic or inorganic, and tend to be low molecular weight molecules. They could also be a mixture of individual gases. They have value as a chemical; whether as a feedstock, in process

Fabrication to Boost Demand for Industrial Gases there has been an exponential increase in metal manufacturing in recent years. Argon is also witnessing an increasing demand for fabrication and manufacturing to use as a shield gas in welding processes. Oxygen to Emerge as the Highly Preferred Gas in the Global Industrial Gases Market Oxygen is one of the largest used gases across various industries including steel, chemical, paper and pulp, and other industries.

## Business Opportunities in Venturing into

# Silicon Metal

**S**ilicon is the fourteenth element of the periodic table and is a Group IVA element, along with carbon, germanium, tin and lead. Pure silicon is a dark gray solid with the same crystalline structure as diamond. Its chemical and physical properties are similar to this material. Silicon has a melting point of 2570°F (1410°C), a boiling point of 4271°F (2355°C), and a density of 2.33 g/cm<sup>3</sup>.

Silicon is the second most common element in the Earth's crust, although it is hard to find it in nature as a pure element. China is by far the

world's largest producer of silicon, including thereby silicon content for ferrosilicon and silicon metal. Around 4.6 million metric tons of silicon was produced in China in 2016 which accounted for about two-thirds of global production that year, which reached about 7.2 million metric tons. Other major producers are Russia, the United States, and Brazil.

Silicon based polymers, known as silicones, provide an alternative to environmentally harmful hydrocarbon based products. We unknowingly use these polymers in everyday

### COST ESTIMATION

#### Capacity

<b>Capacity</b>	: 167 MT Per Day
<b>Plant &amp; Machinery</b>	: ₹ 2138 Lakhs
<b>Cost of Project</b>	: ₹ 6900 Lakhs
<b>Rate of Return</b>	: 28.47%
<b>Break Even Point</b>	: 60.26%

items from lubricants, greases and resins to skin and hair care products, antiperspirants, polishes, anti-foam agents and fabric softeners.

The silicon metal market was valued at over 2.9 million ton, and the market is projected to register a CAGR of 4% during the period of (2021-2026). Silicon metal is the

base material for so many products; hence, it has an important role in industrial and consumer sectors. Presently, the use of silicon metal for producing aluminum alloys holds the largest share in the total silicon metal production. Aluminum alloys are used in producing automotive components and aerospace products.

COVID-19 has affected both the demand and supply of silicon all around the world. Due to restrictions, there could not be a regular material supply, while most of the silicon metal plants stopped production temporarily. The price reversal due to COVID-19 and the recent commerce imposition of preliminary duties on all silicon metal imports may further affect the market negatively.

# Glass Reinforced Concrete (GRC)

**G**lass Fiber Reinforced Concrete (GFRC) or (GRC) is a type of fiber reinforced concrete. GRC is a composite material consisting of a mortar of hydraulic cement and fine aggregate reinforced with alkali resistant glass fibres. The GRC is a form of concrete that uses fine sand, cement, polymer (usually an acrylic polymer), water, other admixtures and alkali-resistant glass fibers. The fibre contents are typically 3% to 5% by weight depending on product application and production method employed.

GRC is a family of composite materials that combine the high

compressive strength properties of cement mortars with significantly increased impact, flexural and tensile strengths imparted by the fibre reinforcement. GRC products are safe, have good chemical resistance and will not rot or corrode. GRC is made of inorganic materials and will not burn, has negligible smoke emission and offers good fire resistance. GRC is normally of relatively thin cross section, giving a low component weight, which allows savings in handling, storage, transportation, and installation compared with traditional concrete products.

## COST ESTIMATION Capacity

Capacity	: 50 MT Per Day
Plant & Machinery	: ₹ 58 Lakhs
Cost of Project	: ₹ 405 Lakhs
Rate of Return	: 29%
Break Even Point	: 67%

The GRC or GFRC market was valued at USD 1.83 Billion in 2017 and is projected to reach USD 3.32 Billion by 2023, at a CAGR of 10.5% during the forecast period. Increasing demand for fire & weather resistance,

design flexibility, dimensional stability, ease of handling and rapid installation is driving the growth of the GFRC market. The global glass fiber reinforced concrete market (GFRC) is likely to gain significant momentum in the coming years, owing to the rising concerns about environment conservation. GFRC is produced using recycled and low toxicity raw materials including glass fibers, sand, cement, and water. They offer superior mechanical characteristics as compared to traditional building materials such as steel reinforced concrete (SRC).

## Neem Oil (Cold Process)

### COST ESTIMATION

#### Capacity

Neem Oil	: 150 Kgs/Day
Deoil Cake as by product	: 1680 Kgs/Day
Plant & Machinery	: ₹ 23 Lakhs
Cost of Project	: ₹ 51 Lakhs
Rate of Return	: 27%
Break Even Point	: 67%

**N**eem oil is obtained from the seeds of neem tree. Utilization of neem seeds is to be set with the problem of organization of systematic collection and crushing of seeds. Neem oil is usually opaque and bitter but it has recently been shown that it can be processed into non bitter edible oil with 50% oleic acid and 15% linoleum acid. 'Neem oil extractives', a waste from neem oil refining has been found to be effective mosquitolarvicide. The material acts as instant killer of the first in star larvae of Culexfatigans at 0.04% concentration whereas at lower concentrations it had delayed toxicity.

Azadirachtin, an active compound derived from neem seeds and other parts has natural insecticidal properties. It is potentially a substitute for synthetic pesticides used in crop production. Projected growth in global bio-pesticide market at CAGR of 15.8 per cent from 2012 to 2017 could be a prospective growth driver for the neem products in future. As a whole there is a good scope for new entrepreneur to invest in this business.

## Compressed Wood Pallets

**P**resswood pallets, also known as molded wooden pallets, are made of wood byproducts such as waste pallets, raw wood shavings, wood waste, saw-dust and any other material containing wooden fibre. Their unique design means that they can hold substantial load capacities, whilst also being relatively lightweight. They are also both stackable and nestable, helping to reduce storage space and freight costs during shipment. Generally they are made from 'resinous' trees (pine, fir, etc.), the chips come directly from logging and sawmills or from the wood recycling industry. This makes this particular type of pallet extremely eco-friendly. Compressed wood pallets are recognized worldwide as complying with ISPM 15 and that the vast majority of countries readily accept the pallets without the need for further treatment.

The demand for pallets in India is expected to increase at a Y-o-Y growth rate of 9.3% in 2016 over 2015. The India pallets market is estimated to register a CAGR of 13.9% during the forecast period (2016-2024). These are the major findings of a report titled "Pallets Market: Demand for pallets in India is expected to increase at a significant rate due to the growth of the manufacturing sector in India. Growing demand for safe transportation of products is also likely to propel the growth of the market. Moreover, a rise in the development of the warehousing and logistical structure in India is anticipated to boost pallet usage shortly.

Increased demand from the user industry, up-surged economic activity, positive business sentiments and

### COST ESTIMATION Capacity

Compressed Wood Pallets (each 15 Kgs)	: 180 Pcs. Per Day
Plant & Machinery	: ₹ 155 Lakhs
Cost of Project	: ₹ 408 Lakhs
Rate of Return	: 25%
Break Even Point	: 67%

rising investment in the manufacturing and infrastructure facilities are the major growth drivers for global pallet market in the upcoming years. In addition to that, escalating demand from packaging and automobile industry is yet another factor to act as a growth driver for the global pallet market in coming future. The limited availability of raw material and high cost of raw material are the two major challenges for the global pallet market.

## Ground Calcium Carbonate with 90% Brightness and Whiteness and > 90% CaCO<sub>3</sub>

**G**round calcium carbonate, commonly referred to as GCC in industrial applications, is widely used as a filler material. Ground calcium carbonate may be referred to as calcium or limestone in agricultural applications. GCC products are used in the whole variety of applications for lime stones – building products, paints, plastics, agriculture, glass, among others.

The demand in the global ground

### COST ESTIMATION Capacity

Ground Calcium Carbonate	: 200 MT/Day
5-10 Micron size	
Plant & Machinery	: ₹ 12 Crore
Cost of Project	: ₹ 24 Crore
Rate of Return	: 28%
Break Even Point	: 55%

calcium carbonate market at a considerable CAGR of 5.0% during the forecast period from 2017 to 2025. As per the research, the global ground calcium carbonate market is foreseen to reach around worth of US\$22,311.06 mn before 2025, considerably more the end of 2025. As a whole there is a good scope for new entrepreneur to invest in this business.

# 5 Star Hotel

A hospitality unit such as a restaurant, hotel, or an amusement park consists of multiple groups such as facility maintenance and direct operations (servers, housekeepers, porters, kitchen workers, bartenders, management, marketing, and human resources etc.).

The common law says that hotel is a place where all who conduct, themselves properly and who being able and ready to pay for their entertainment, accommodation and other services including the boarding like a temporary home. It is home away from home where all the modern amenities and facilities are available on a payment basis.

A hotel is an establishment that provides lodging paid on a short-term basis. Facilities provided may range from a modest-quality mattress in a small room to large suites with bigger, higher-quality beds, a dresser, a fridge and other kitchen facilities, upholstered chairs, a flat screen television and en-suite bathrooms. Small, lower-priced hotels may offer only the most basic guest services and facilities. Larger, higher-priced hotels may provide additional guest facilities such as a swimming pool, business centre (with computers, printers and other office equipment), childcare, conference and event facilities, tennis or basketball courts, gymnasium, restaurants, day spa and social function services. Hotel rooms are usually numbered (or named in some smaller hotels and B & Bs) to allow guests to identify their room. Some boutique, high-end hotels have custom decorated rooms. Some hotels offer meals as part of a room and board arrangement.

Most hotel establishments are run by a General Manager who serves as the head executive (often referred to as the "Hotel Manager"), department heads who oversee various departments within a hotel (e.g., food service), middle managers, administrative staff, and line-level supervisors. The organizational chart and volume of job positions and hierarchy varies by hotel size, function and class, and is often determined by hotel ownership and managing companies.

Hotels are found in almost all the cities. Hotels operate twenty four hours a day, seven days a week. The principal factor that determines the guest attitude towards a hotel is service although other amenities such as room, food and beverages are of equal importance tangible determinants.

Motel – The Concept Initially the term motel was meant for local motorists and foreign tourists travelling by road. They serve the needs and requirements of these travellers and meeting their demand for transit and accommodation. Some of the important services offered by the motels are parking, garage facilities, accommodation, and restaurant facilities.

Over the last decade business opportunities in India has intensified and elevated room rates occupancy levels in India. 'Hotel Industry in INDIA' success story is only second to china in Asia pacific. The world travel and tourism council, says that India ranks 18th in business travel and will be among the top 5 very soon. India's big success

## COST ESTIMATION

### Capacity

<i>Deluxe Rooms (Rent)</i>	: 38 Units Per Day
<i>Executive Rooms (Rent)</i>	: 28 Nos. Per Day
<i>Business Clientele Rooms (Rent)</i>	: 17 Nos. Per Day
<i>Suits Rooms (Rent)</i>	: 17 Nos. Per Day
<i>Coffee Shop (Visitors)</i>	: 25 Nos. Per Day
<i>Restaurant (Visitors)</i>	: 75 Nos. Per Day
<i>Bar (Visitors)</i>	: 25 Nos. Per Day
<i>Marriage Season – Booking</i>	: 0.15 Nos. Per Day
<i>Birthday</i>	: 0.17 Nos. Per Day
<i>Conferences</i>	: 0.17 Nos. Per Day
<i>Anniverseries</i>	: 0.17 Nos. Per Day
<i>Plant &amp; Machinery</i>	: ₹ 1172 Lakhs
<i>Cost of Project</i>	: ₹ 4032 Lakhs

stores includes the new model for development and growth; a model that is uniquely made.

Indian hotel industry's room rates are mostly likely to rise 25% annually and occupancy to rise by 80%, over the next two years. 'Hotel industry in India is gaining its competitiveness as a cost effective destination.

In many areas hotels are important attractions for visitors who bring with them spending power that the locals and who tend to spend at a higher rate than they do when they are at home. Through spending by visitors hotels thus often contribute significantly to local economies both directly and indirectly through the subsequent diffusion of the visitor expenditure to the Govt. offers and to other recipients in the community.

In areas receiving foreign visitors, hotels are often important foreign currency earners and in this way may contribute significantly to their countries' balance of payments. In countries with limited export possibilities, hotels may be one of the few prime sources of foreign currency earnings.

Hotels are an important source of amenities for local residents. Their restaurants, bars and other facilities often attract many local customers and many hotels have become social centres of their communities.

Hotels are also important outlets for the products of other industries. In the building and modernization of hotels, business is provided for the construction industry and related trades. Equipment, furniture and furnishings are supplied to hotels by a wide range of manufacturers.

INR (\$1.7 Billion) in 2019 and average annual revenue/room was ~\$12,400 per annum.

- Post COVID, revenues will decline by ~48% in 2020 YOY but the market will also see a sharp recovery in 2021 and 2022 led by domestic leisure tourism.

- The share of organized sector is expected to increase from ~5% in 2019 to ~8% in 2025 on account of growing pipeline from bigger brands and inventory reduction in unbranded hotels due to COVID.

# 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 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.

## COST ESTIMATION

### Capacity

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

# Cow Urine (Gomutra) Processing and Packing

Gomutra is not a toxic waste material. 95% of it is water, 2.5% consists of urea, and the remaining 2.5% is a mixture of minerals, salts, hormones and enzymes. Gomutra or gaumutra cow urine is urine from cows used for therapeutic purposes in traditional Indian medicine, Ayurveda and also for purification in VaastuShastra. Cow urine has bio enhancing activity for Rifampicin, the front-line anti-tubercular drug used against tuberculosis, increasing its action up to sevenfold against Escherichia coli, and up to 11-fold against Gram-positive bacteria.

## COST ESTIMATION

### Capacity

<i>Distilled Cow Urine (Gomutra)</i>	: 2000 Lts./Day
<i>Plant &amp; Machinery</i>	: ₹ 22 Lakhs
<i>Cost of Project</i>	: ₹187 Lakhs
<i>Rate of Return</i>	: 28%
<i>Break Even Point</i>	: 68%

There are more than 50 units processing cow urine in India. That cow urine is in demand not just in India, but around the world, became evident recently when health authorities in London raised objections to shopkeepers placing cow urine concentrate on shelves next to food items. As a whole any entrepreneur can venture in this project without risk and earn profit.

## Herbal/Ayurvedic Hand Sanitizer

India hand sanitizer market is projected to surpass \$ 43 million by 2025. Growth of hand sanitizer market in India can be attributed to rising awareness about healthy life-style & wellness, shifting consumer preference towards convenient hygiene products and rising disposable income. Moreover, the strong marketing activities by leading brands, in addition to huge endorsements, are some other drivers of hand sanitizer market in India. Moreover, the COVID-19 outbreak has boosted demand for sanitizers like never before across the diverse end user segments.

### COST ESTIMATION Capacity

Herbal/Ayurvedic Hand Sanitizer (100 ml Size each)	: 20,000 Bottles / Day
Plant & Machinery	: ₹ 14 Lakhs
Cost of Project	: ₹ 724 Lakhs
Rate of Return	: 32%
Break Even Point	: 36%

## Setup a Manufacturing Plant of Disposable Plate and Cups from Waste Rice Husk Powder

Disposable plate and cups has emerged as a better alternative to plastics across the globe and Indians have been early adopters of biodegradable products. All kinds of plant biomass material such as bagasse, rice husk, coconut coir etc. are being utilized for producing eco-friendly cutlery, tableware and packaging products that could see a surge in usage in the coming decade.

Rice husk plates is highly friendly, high performing, and cost-effective products manufacturing using top-quality materials and industry-leading technology. Great to hold and use and no unpleasant feeling of wooden single use tableware in your mouth. Ditch the single use plastic and bio plastic and reuse the natural sustainable alternative. Give a gift that has a positive effect, take to work, use at the deli takeaway, switch from plastic at the refectory and avoid single use surcharges too.

Disposable plates and cups has gathered groundswell of interest among consumer worldwide due to compelling environmental reasons.

To that end, augmenting the popularity of biodegradable utensils are their better sustainability than plastics and the salient environmental-friendliness of biodegradable materials. In particular, biodegradable tableware made of plant-based materials and biodegradable bio-plastics have attracted widespread attention world

over. Most popularly, eco-friendly tableware are made using corn, areca leaves, and bagasse, and rice husk. Over the years, the remains of fast growing trees have been utilized. The demand for disposable plate and cup with bamboo in regions where they are abundantly available has gathered stream, such as in India.

### COST ESTIMATION

#### Capacity

Disposable Plates from Waste Rice Husk Powder	: 10,000 Pcs Per Day
Disposable Cups from Waste Rice Husk Powder	: 10,000 Pcs Per Day
Plant & Machinery	: ₹ 38 Lakhs
Cost of Project	: ₹ 166 Lakhs
Rate of Return	: 28.44%
Break Even Point	: 59.78%

## Aluminium Easy Open End (EOE)

The term "easy open end" is used generally for that class of ends for containers that are provided with a built-in mechanism for permitting the consumer to open the container at the end for access to the ingredients within the container, without requiring the use of a can opener or other external tool. One conventional easy open end employs a pull tab having a pointed nose, the pull tab being riveted to the panel of the end so that the nose rests adjacent a weakened area along the periphery of the end panel. To open, the pull tab is rotated about the rivet, causing the nose to fracture the weakened area. Further pulling of the tab away from the end panel then causes the remainder of the weakened peripheral to rupture, thereby permitting the entire end to be opened.

One type of easy-open end that is in wide use is the so called "full-open" end, in which a peripheral score, generally circular in configuration, is formed in the end panel at or adjacent to the periphery thereof to permit its complete removal. Full-open type cans are to be distinguished from those self-opening cans which have a comparatively small removable section

which, when opened, provide a comparatively small hole for dispensing the product.

Sealing with PET Can, Aluminium can, Tinplate can, Metal can, Paper can, Composite can, Food can, Plastic can, etc.

- Non-processed foods such as snacks, nuts, powdered beverage, coffee and tea, infant formula, soup and sauce mixes, noodle/rice mixes, spices, pet food and treats; non-food products.

- Applications also include processed foods such as: pet food, fish and seafood, spreads and other food products.

Aluminium is used as a substrate, generally with an organic coating on both sides. This is necessary to facilitate the forming of the metal and/or to protect the metal against corrosion during the shelf life of the can or can end. It is often externally printed. Aluminium substrates are alloys. There are two major families of alloys de-

pending on the main alloying element: magnesium or manganese. The rolling process is driven to obtain the required mechanical properties. It is for instance possible to obtain harder metal and thereby allowing reduced thickness.

There has been a dynamic shift in the consumer consumption pattern in the food & beverage sector. Consumer inclination towards ready to eat food is increasing owing to changing lifestyles and growing disposable incomes, especially in the emerging economies across the globe has witnessed an increase in the sales of the global aluminium containers market. Foodservice operators & online food service outlets offers various services such as 'takeaway' and 'drive through' to cater the growing number of on the go consumers has resulted in the increase in the sales of the aluminium containers.

### COST ESTIMATION

#### Capacity

Aluminium Easy Open End, 63 mm Size	: 2,016,000 Units Per Day
Aluminium Scrap	: 200 Kg Per Day
Plant & Machinery	: ₹ 5338 Lakhs
Cost of Project	: ₹ 8483 Lakhs
Rate of Return	: 29%
Break Even Point	: 35%

Increase in usage of aluminium containers for packaging in food service industry, in turn, is expected to drive the demand for aluminium containers market during the forecast period. One of the key factors that increase the preference towards the aluminium containers for packaging is extended shelf life of products. Aluminium containers score very high in barrier properties. This factor is expected to fuel the growth of the global aluminium containers market. Despite the positive factors, there are certain factors which hinder the growth of the global aluminium containers market. Strict government regulation regarding the recyclability of aluminium may hinder the growth of the global aluminium containers market. Aluminium containers can react with the food, by leaching process which is considered as unsafe. Increasing awareness among the consumers related to health issues associated with the aluminium containers might hamper the growth of the global aluminium containers market.

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**PLASTICS, SPECIALITY PLASTICS, FOAMS (URETHANE, FLEXIBLE, RIGID), PET & PREFORM, BIODEGRADABLE PLASTICS, POLYESTER FIBERS, MOULD DESIGNS, PLASTIC FILMS, HDPE AND THERMOSET PLASTICS, MEDICAL PLASTICS, INDUSTRIAL POLYMERS, ADDITIVES, COLOURANTS AND FILLERS, FIBRE GLASS, OPTICAL GLASS AND REINFORCED PLASTICS**

• Modern Technology of Plastic Processing Industries (2nd Edn.) ...	975/- 100
• Handbook on Pet Film and Sheets, Urethane Foams, Flexible Foams, Rigid Foams, Speciality Plastics, Stretch Blow Moulding, Injection Blow Moulding, Injection and Co-Injection Preform Technologies .....	1275/- 125
• Handbook on Biodegradable Plastics (Eco-Friendly Plastics) ...	600/- 100
• Polymers and Plastics Technology Handbook.....	750/- 100
• The Complete Book on Biodegradable Plastics and Polymers (Recent Developments, Properties, Analysis, Materials & Processes) .....	1275/- 125
• The Complete Book on Medical Plastics.....	975/- 100
• The Complete Technology Book on Expanded Plastics, Polyurethane, Polyamide and Polyester Fibers .....	1275/- 125
• The Complete Technology Book on Industrial Polymers, Additives, Colourants and Fillers.....	1100/- 125
• The Complete Technology Book on Polymers (With Processing & Applications).....	1100/- 125
• The Complete Technology Book on Plastic Extrusion, Moulding and Mould Designs.....	1000/- 100
• The Complete Technology Book on Fibre Glass, Optical Glass and Reinforced Plastics.....	1275/- 125
• The Complete Technology Book on Plastic Films, HDPE and Thermoset Plastics.....	1175/- 125
• Modern Technology of Plastic and Polymer Processing Industries.....	750/- 100
• Profitable Plastic Industries .....	250/- 50
• The Complete Book on Water Soluble Polymers .....	1575/- 150
• Speciality Plastics, Foams (Urethane, Flexible, Rigid) Pet & Preform Processing Technology Handbook.....	1275/- 125

**LEATHER PROCESSING & TANNING**

• Leather Processing & Tanning Technology Handbook.....	1400/-150
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**TEXTILE SPINNING, WEAVING, FINISHING AND PRINTING, PROCESSING WITH EFFLUENT TREATMENT, TEXTILE DYES & PIGMENTS, NATURAL DYES & PIGMENTS, NATURAL FIBERS, JUTE & COIR**

• The Complete Technology Book on Textile Spinning, Weaving, Finishing and Printing (3rd Rev.Edn.) .....	1725/- 150
• The Complete Technology Book on Textile Processing with Effluent Treatment.....	1000/- 100
• Modern Technology of Textile Dyes & Pigments (2nd Rev. Edn.)..	1675/- 150
• The Complete Technology Book on Dyes and Dye Intermediates (2nd Rev. Edn.).....	1995/- 200
• The Complete Book on Natural Dyes & Pigments.....	1100/- 125
• Handbook on Natural Dyes for Industrial Applications (Extraction of Dyestuff from flowers, Leaves, Vegetables) 2nd Rev. Edn.....	1575/- 150
• Natural Fibers Handbook with Cultivation & Uses.....	1275/- 125

## NAME OF BOOKS

₹ / US\$

- Woollen Spinning, Weaving, Knitting, Dyeing, Bleaching and Printing Technology Handbook ..... 1100/- 125
- Handbook on Textile Auxiliaries, Dyes and Dye Intermediates Technology ..... 1575/- 150
- The Complete Book on Textile Processing and Silk Reeling Technology ..... 1750/- 150
- The Complete Book on Jute & Coir Products (With Cultivation & Processing) 2nd Rev.Edn. .... 1575/- 150
- A Concise Guide on Textile Dyes, Pigments and Dye Intermediates with Textile Printing Technology..... 1675/- 150

## ELECTROPLATING, ANODIZING & METAL TREATMENT, POWDER COATING AND METAL FINISHING

- Electroplating, Anodizing & Metal Treatment Handbook ..... 1475/- 150
- The Complete Technology Book on Electroplating, Phosphating, Powder Coating and Metal Finishing (2nd Rev. Edn.)..... 1675/- 150
- Handbook on Electroplating with Manufacture of Electrochemicals ..... 1695/- 150

## RUBBER PROCESSING AND COMPOUNDING

- 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

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- 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
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- 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

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- 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
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- 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).

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

**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.**



**Rice Husk, Rice Hull, Rice Husk Ash (Agricultural Waste) based Projects, (Precipitated Silica, Activated Carbon, Cement, Electricity, Ethanol, Hardboard, Oxalic Acid, Paper, Particle Board, Rice Husk Briquettes, Rice Husk Pellet, Silicon, Sodium Silicate)**

- » Activated Carbon from Rice Husk, Saw Dust & Coconut Shell
- » Cement from Rice Husk
- » Extraction of Ultra-Pure Silicon from Rice Husk Ash
- » Fuel Briquettes from Biomass (Bio Coal Briquettes from Agricultural Cellulosic Waste)
- » Liquid Glucose & Fructose (Fruit Sugar) Manufacturing from Broken Rice
- » Liquid Glucose from Broken Rice
- » Paper from Rice Husk & Wheat Husk



- » Paper from Waste Paper, Bamboo Chips, Rice Husk & Wheat Husk
- » Particle Board from Rice Husk
- » Precipitated Silica from Rice Husk
- » Precipitated Silica from Rice Husk Ash
- » Puffed Rice (Muri)
- » Rice Bran Based Solvent Extraction Plant
- » Rice Bran Oil
- » Rice Bran Oil (Solvent Extraction)
- » Rice Flakes from Broken Rice (Used in Beer Industry)



- » Rice Mill, Rice Bran Oil with Captive Power Plant (Integrated Unit)
- » Rice Syrup Processing Plant
- » Silica from Rice Husk
- » Silica from Rice Husk Ash
- » Silicon from Rice Husk
- » Sodium Silicate from Rice Husk
- » Sodium Silicate from Rice Husk Hull
- » Straw Board and Mill Board from Rice Husk and Bagasse
- » Straw Board from Rice Husk
- » Sweetener from Rice



**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

### Tobacco, Pan Masala, Khaini, Gutkha, Supari, Zarda, Mouth Freshener, Kimam, Cigarettes, Zafrani Patti, Smokeless Chewing Tobacco, Zarda Tobacco, Flavoured Chewing Tobacco Projects



- » Betel Nut (Supari) Processing
- » Chewing Tobacco (Raja Type)
- » Cigarette
- » Khaini (Chewing Tobacco)
- » Khaini, Zarda & Gutka
- » Mouth Freshener (Sounf, Supari, Elaichi Flavoured & Coloured in Pouch)



- » Nicotine from Tobacco Waste
- » Nicotine Gum
- » Pan Masala Sada, Meetha, Zarda (Gutka) & Packaging
- » Pan Masala, Gutka & Pouch Making Plant
- » Pan Masala, Khaini, Gutka, Supari
- » Pan Masala, Tobacco, Zarda & Kimam



- » Pan Masala, Zarda, Khaini, Gutka, Sweet & Scented Supari
- » Readymade Khaini (Geeli)
- » Sweet Scented Supari Manufacturing
- » Tobacco Cultivation and Processing (E.O.U.)
- » Zarda
- » Zarda of Various Grades

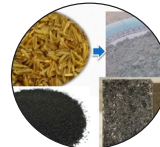


### Waste Management and Recycling, Industrial Waste Management, Agro Waste, Municipal Garbage, Plastic, Paper, Metal, Iron, Glass, Rubber, Electronic, Medical Waste Recycling, Solid Waste Treatment, Agricultural, Wood Waste, Residue Processing

- » 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



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

- » 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 5MM 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 Tyre Pyrolysis
- » Waste Tyre (Tire) Utilization
- » Waste Tyre Pyrolysis
- » Wax from Slack Wax
- » Yeast from Molasses
- » Zinc Oxide from Zinc Dross



## Lucrative Business Ideas for Startup

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

Dairy 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 improve-

#### 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%

ments 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.

### Eggshell Powder

The eggshell membrane powder market is expected to grow at a CAGR of ~13% during the forecast period 2019-2029. The pet food supplement industry is an emerging industry, as consumers are becoming fonder of their pets and take proper care of their nutrition. In order to ensure that their pets get adequate nutrients, consumers prefer pet food supplements that are organic and natural, to avoid any adverse effects on pets. Egg membrane protein powder is mainly used in pet supplements to reduce bone disorders and comfort them in case of seasonal allergies. Hence, this evolving demand for pet supplements is driving the global egg membrane protein powder market. Thus, due to demand it is best to invest in this project.

#### COST ESTIMATION

##### Capacity

Eggshell Powder	: 2 MT / Day
Plant & Machinery	: ₹ 11 Lakhs
Cost of Project	: ₹ 42 Lakhs
Rate of Return	: 30%
Break Even Point	: 79%

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## Wall Paper Starch

Starches are inherently unsuitable for most applications and, therefore, must be modified chemically and/or physically to enhance their positive attributes and/or to minimize their defects. Chemical modification of starch generally involves esterification, etherification or oxidation of the available hydroxyl groups on the B-D-glucopyranosyl units that make up the starch polymers. Reactions used to produce most commercially modified starches have been reviewed by others. Many commercial derivatives are produced by the addition of reactive, organic reagents to aqueous starch slurries while controlling alkalinity (pH 7–9 for esterification and pH 11–12 for etherification) and temperature (typically 60°C).

The wall paper starch is used in the fixing of the wallpaper on the walls. This is implied that this shall be directly connected

with construction industry and its opportunities. The demand for starches and derivatives looks very promising in India as all the major user segments of starches and derivatives are showing near double digit growth in their production. The major users of starches and derivatives are food, textile, paper and pharma sectors. Global Modified Starch Market

### COST ESTIMATION Capacity

Wall Paper Starch	: 32 MT /Day
Plant & Machinery	: ₹ 52 Lakhs
Cost of Project	: ₹ 367 Lakhs
Rate of Return	: 29%
Break Even Point	: 72%

was valued at \$7,995 million in 2016, and is projected to reach at \$10,700 million by 2023, growing at a CAGR of 4.2% from 2017 to 2023. Modified starch is formed by morphological or physicochemical changes in the structure of native starch via its treatment with heat, acids, alkalis, or enzymes. As a whole entrepreneur can venture in this field will be successful.

(an opening) to allow the surgeon to perform the operation. It comes in various sizes depending on the type of operation for which it is used. Drapes also vary from hospital to hospital.

The global medical disposable market is expected to reach USD 160 billion by 2023 from USD 114 million in 2018, growing at a CAGR of 7%. Increasing hospital visitation, increasing cases of hospital acquired infections, increasing awareness of patients are some of the major factors driving the growth of the global disposable medical market.

### COST ESTIMATION Capacity

Medical Gowns	: 1,250 Pcs Per Day
Medical Drapes	: 1,250 Pcs Per Day
Plant & Machinery	: ₹ 209 Lakhs
Cost of Project	: ₹ 529 Lakhs
Rate of Return	: 30.54%
Break Even Point	: 55.16%

Surgical gowns must repel diseases and infections yet provide adequate freedom to move. They must allow necessary mobility without rubbing and chafing, and must resist tearing and lining. They must fit closely but not restrict movement. Since there is generally excess fabric, the gowns must withstand constant pulls on the fabric during routine movements.

A surgical drape is a covering made of a disposable non-woven material and is used to cover the area of a patient. A drape usually has a fenestration

## Fiberglass Doors

### Surrounded Wood and Inside Filled Polyurethane Foam by Injection

Fiberglass doors are two large molded skins with a polyurethane foam core between the skins which is a great insulator against heat and cold. They are popular for their high insulation values, low maintenance, and resistance to dents and scratches. Fiberglass is widely used for manufacturing and building in today's most demanding industries—cars, boats, pools and more, due to its ability to create molds and create custom shapes and never become distorted over time.

Commercial doors market will witness a valuation of over USD 60 billion by 2024. The demand varies depending upon the client's requirement with varied functions.

### COST ESTIMATION Capacity

Fiberglass Doors	: 150 Nos./Day
Plant & Machinery	: ₹ 89 Lakhs
Cost of Project	: ₹ 392 Lakhs
Rate of Return	: 29%
Break Even Point	: 61%

Increase in consumer spending on new construction as well as renovation of existing residential & commercial buildings will drive the global doors market growth. As a whole there is a good scope for new entrepreneur to invest in this business.

## Ethanol from Broken Rice, Maize & Wheat

Ethanol is a clear, colorless liquid with a characteristic, agreeable odor. In dilute aqueous solution, it has a somewhat sweet flavor, but in more concentrated solutions it has a burning taste. Ethanol, CH<sub>3</sub>CH<sub>2</sub>OH, is an alcohol, a group of chemical compounds whose molecules contain a hydroxyl group, -OH, bonded to a carbon atom. Ethanol melts at -114.1°C, boils at 78.5°C, and has a density of 0.789 g/mL at 20°C. Its low freezing point has made it useful as the fluid in thermometers for temperatures below -40°C, the freezing point of mercury, and for other low-temperature purposes, such as for antifreeze in automobile radiators.

India ethanol market is projected to grow from \$ 2.50 billion in 2018 to \$ 7.38 billion by 2024, exhibiting a CAGR of 14.50% during 2019-2024, on the back of increasing ethanol use in applications such as fuel additives and beverages. Ethanol is a prominent alcoholic beverage, mainly found in beer, cider, wine, spirits and ale.

### COST ESTIMATION Capacity

Ethanol	: 60 K Ltrs / Day
Plant & Machinery	: ₹ 1938 Lakhs
Cost of Project	: ₹ 4569 Lakhs
Rate of Return	: 25%
Break Even Point	: 49%

Indian government is trying to reduce its dependence on imported crude oil and incentivizing Indian sugar manufacturers to produce ethanol for Oil Marketing Companies (OMCs). It is expected that ethanol production will increase by three to five folds in the future in order to meet the demand for its 20% Fuel Blending Program (FBP). Factors such as increasing alcohol consumption and changing lifestyle along with growing influence of the western culture are likely to drive the demand for ethanol in the country. As a whole any entrepreneur can venture in this project without risk and earn profit.

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## Dicyandiamide (DCDA)

Dicyandiamide is a strongly alkaline and water-soluble white crystalline compound with the scientific name of cyan guanidine. The chemical is the dimer of cyan amide or cyan guanidine, which is mainly used in the production of melamine. Dicyandiamide is also used as a curing agent for epoxy resins and laminates for circuit boards, powder coatings and adhesives.

Dicyandiamide Market size should observe lucrative CAGR from 2019 to 2025 in the coming years due to developments in the water treatment industry. Dicyandiamide or cyan guanidine is a free-flowing white colored versatile chemical with diverse applications. Extensive use of the product in wastewater treatment plants as a discoloring agent or flocculating agent will drive the market in coming years.

Entrepreneurs who invest in this project will be successful.

### COST ESTIMATION Capacity

Dicyandiamide (DCDA) :	10 MT/Day
Plant & Machinery :	₹ 50 Lakhs
Cost of Project :	₹ 373 Lakhs
Rate of Return :	29%
Break Even Point :	61%

## Particle Board from Wheat/Rice Straw

The 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, 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.

### 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%

## Copper Wire Manufacturing (Wire Drawing & Enamelling)

Wire and cables demand is directly dependent on the growth of the manufacturing industry and infrastructure in the power, telecommunications, residential and commercial sectors. Thus the government's initiatives on various fronts like – power, housing, infrastructure and digitization are sure to generate a lot of business for the wire and cable industry in foreseeable future. The global winding wire market size was valued at USD 25.6 billion in 2018 and is expected to witness a revenue-based CAGR of 3.7% from 2019 to 2025. Rising demand for the product from the energy sector is the significant factor driving the market for winding wire. Entrepreneurs who invest in this project will be successful.

### COST ESTIMATION

#### Capacity

Copper Wire (0.914 to 0.376 mm) :	350 Kgs / Day
Enamelled Copper Wire (0.914 to 0.376 mm) :	350 Kgs / Day
Intermediate Copper Wire (2.5 mm) :	4,000 Kgs / Day
Intermediate Copper Wire (1.2 mm) :	5,000 Kgs / Day
Plant & Machinery :	₹ 437 Lakhs
Cost of Project :	₹ 951 Lakhs
Rate of Return :	30%
Break Even Point :	52%

## Dry Lemon Powder and Lemon Oil

Spray dried lemon juice powder was used to enhance the acceptability and nutritive value. It reserves the most of bioactive ingredients of lemon and also its property (color, smell, and taste) Ingredient: Vitamin c, citric acid, malic acid. Lemon Essential Oil is a natural detoxifier and contains antiseptic properties that aid in clearing the face from pimples and acne. By doing so, lemon also tightens the skin, preventing wrinkles, and removes excess Oils that clog pores and cause blackheads.

According to Lemons and Limes–Market Report, Analysis and Forecast to 2025", the world market of lemons and limes grew by 19% to \$ 13.9 billion. The lemon juice powder market, in terms of value, is projected to reach around USD 93.94 Billion by 2021, at a CAGR of 6.0% from 2016 to 2021. The global lemon essential oils market is projected to register an estimated CAGR of 9.2%, during the forecast period, 2018-2023.

Thus, due to demand it is best to invest in this project.

### COST ESTIMATION Capacity

Lemon Powder :	32 MT/Day
Lemon Oil :	12 MT/Day
Plant & Machinery :	₹ 721 Lakhs
Cost of Project :	₹ 1983 Lakhs
Rate of Return :	33%
Break Even Point :	51%

## Roller Flour Mill

Roller Flour Mills involved in commercial milling operations and unorganized sector consisting of mainly Chakkis. Around 800 large Flour Mills in the country convert about 10.5 Million Tons of wheat into wheat products i.e., Coarse Flour, Flour, Semolina, Bran & Wheat Germ. The flour milling industry is the main consumer of wheat and rye because these grains are the key cereals used for bread production. Maize, oat, barley and rice are used in flour production.

The market size of packaged wheat flour will touch Rs 15,500 crore mark by 2020, double of its current market size of Rs 7,500 crore. The packaged wheat flour market in India is growing at a Compound Annual Growth Rate of almost 19 per cent since past three years. Entrepreneurs who invest in this project will be successful.

### COST ESTIMATION

#### Capacity

Maida :	10500 MT/Annum
Sooji :	2520 MT/Annum
Wheat Flour :	4200 MT/Annum
Wheat Bran :	3780 MT/Annum
Plant & Machinery :	₹ 154 Lakhs
Cost of Project :	₹ 538 Lakhs
Rate of Return :	29%
Break Even Point :	56%

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