



Gypsum Mining Business.

Investment and Business

Opportunity in Mineral & Mining

Sector

Introduction

Gypsum is an evaporite mineral most commonly found in layered sedimentary deposits in association with halite, anhydrite, sulfur, calcite, and dolomite. Gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) is very similar to Anhydrite (CaSO_4). The chemical difference is that gypsum contains two waters and anhydrite is without water. Gypsum is the most common sulfate mineral.

Gypsum



Gypsum is a mineral found in crystal as well as masses called gypsum rock. It is a very soft mineral and it can form very pretty, and sometimes extremely large colored crystals. Massive gypsum rock forms within layers of sedimentary rock, typically found in thick beds or layers. It forms in lagoons where ocean waters high in calcium and sulfate content can slowly evaporate and be regularly replenished with new sources of water. The result is the accumulation of large beds of sedimentary gypsum. Gypsum is commonly associated with rock salt and sulfur deposits. It is processed and used as prefabricated wallboard or as industrial or building plaster, used in cement manufacture, agriculture and other uses.

Uses of Gypsum

Gypsum uses include: manufacture of wallboard, cement, plaster of Paris, wall plasters, mortars, sheet rock, fertilizer, soil conditioning, and a hardening retarder in Portland cement. Varieties of gypsum known as "satin spar" and "alabaster" are used for a variety of ornamental purposes; however, their low hardness limits their durability.



Relation to Mining

Most of the world's gypsum is produced by surface-mining operations. In the United States, gypsum is mined in about 19 states. The states producing the most gypsum are Oklahoma, Iowa, Nevada, Texas, and California. Together, these states account for about two-thirds of the United States' annual production of gypsum. Over 30 million tons of gypsum is consumed in the United States annually. Canada, Mexico and Spain are other significant producers of raw gypsum. In all, more than 90 countries produce gypsum. In most open pit gypsum operations, benches are drilled and blasted using ammonium nitrate as the explosive. Because gypsum is so soft, most drills can drill through it at a rate of roughly 23 ft. per minute.

Sometimes the drill holes become wet, which can cause problems with the ammonium nitrate. In these cases the ammonium nitrate is bagged in plastic bags before being lowered into the blast hole. Mines use approximately 1 kg of explosives for each ton of gypsum they blast.



Market Outlook

On the back of rising demand from industries such as construction, ceramic, cement etc., the India gypsum market is poised to grow significantly in the coming years. Government is also backing the industry by allowing up to 100% foreign direct investment (FDI) for gypsum products. As a result, FDI inflows to gypsum products industry in India have registered significant growth in the last few years.

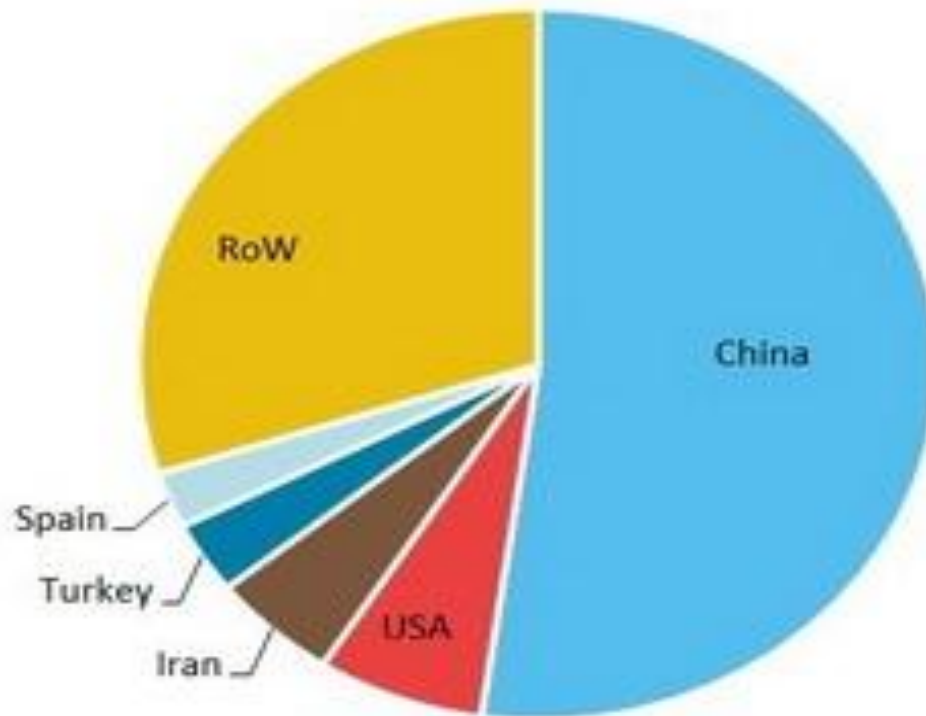
The country is thus anticipated to witness huge growth in gypsum consumption. And as per our prophecy, gypsum consumption in India would grow at a CAGR of around 4% during 2012-13 to 2017-18. The rapid infrastructure development in the country is expected to boost the Indian Gypsum industry.

The growing demand for Gypsum, due to amplified construction industry, massive cement consumption and extensive use of gypsum in fertilizer and ceramic has resulted in very high gypsum consumption. The Indian gypsum Market is expected to exhibit immense opportunity for domestic as well as foreign investors.

With the support of rising demand from industries such as construction, ceramic, and cement; the Indian gypsum market is poised to grow significantly in the coming years.



Gypsum Mine Production Globally



The global gypsum market is valued at \$1.49 billion in 2016, equivalent to 252 million tonnes, with 33.3% and 60.9% being consumed in the plasterboard and cement industries, respectively. The gypsum market is forecast to grow at a CAGR of 9.9% to reach nearly \$2.4 billion by 2018 and \$3.8 billion by 2026.

Nearly all gypsum is used in three prime applications: building construction, cement (where it is used as a setting retarder), and agriculture (mostly for soil conditioner and fertilizer). Another common application is wet or powdered plaster. Minor applications include dentistry and surgical/medical, e.g., plaster casts.

Population growth is dramatic in many developing countries, particularly India and China, and represents a major driver in gypsum consumption. Not only does large-scale industrialization create a need for rapid improvements in infrastructure, but increasingly prosperous population's demand higher-quality housing and better living conditions.

The global gypsum industry is mainly driven by the construction and renovation sectors as natural gypsum is especially suitable for the manufacture of cement, building plasters, dry mixes, wallboards and other gypsum products. In some of these uses, gypsum has no effective substitutes, for instance, in Portland cement production. On an average basis, an increased use of wallboards and plasters has been a major driver for gypsum production worldwide.

The construction industry has significant spatial and temporal variability, with strong dependence on macroeconomic situation in each specific country and region. The macroeconomic variability in the construction industry affects the behavior of the gypsum market, which influences the dynamics of gypsum production volumes.



The total reserves/resources of mineral gypsum in India as on 1.4.2015 have been estimated at 1,330 million tonnes of which 37 million tonnes have been placed under 'Reserves' and 1,293 million tonnes under 'Remaining Resources' category.

Of the total reserves/resources, Fertilizer/ Pottery grade accounts for about 80% and Cement/Paint grade 13%. The Unclassified and Not-known grades together account for 5% resources. The remaining two percent of resources is shared by Surgical Plaster and Soil Reclamation grades. By States, Rajasthan alone accounts for 81% resources, Jammu & Kashmir 14% and Tamil Nadu 2% resources. The remaining 3% resources are in Gujarat, Himachal Pradesh, Karnataka, Uttarakhand, Andhra Pradesh and Madhya Pradesh

Gypsum deposits are usually found at shallow depths and are scattered over large areas. The deposits are mined out by opencast method and usually by manual mining except a few semi-mechanized mines in Rajasthan. In semi mechanized mines, gypsum is excavated by backhoe excavator and directly loaded into trucks/ dumpers. The trucks and dumpers loaded with gypsum are dispatched directly to the user industry or are taken to railway siding for further loading into railway wagons for dispatch to far living user industry. In some mines of Rajasthan, the excavated gypsum is ground before dispatching to the user or party. Based on the use of gypsum, the production is classified into different grades like Fertilizer grade, Cement grade, plaster of Paris grade, surgical grade, etc.

surgical grade, etc.

Exports of gypsum and plaster at 110,882 tonnes in 2015-16 increased by 69% from 65,645 tonnes in the preceding year. Exports of alabaster was not reported during 2015-16, although during 2014-15, it was 21 tonnes.

Other segments that would attract attention would be production of gypsum wallboard which is currently negligible in India. It could find better prospects because of its light weight and other special characteristics. It being an excellent partition material could facilitate its utility in high rise building constructions. India's domestic resources of gypsum are large enough to meet increased demand.

Exports of Gypsum & Plaster (By Countries)

Country	2014-15		2015-16 (P)	
	Qty (t)	Value (₹'000)	Qty (t)	Value (₹'000)
All Countries	65645	158036	110882	291059
Nepal	60297	92993	108491	260015
Singapore	80	3945	101	5181
UAE	287	7419	583	4352
Bangladesh	548	4536	464	4171
Kenya	162	2360	251	2885
Sri Lanka	320	5897	279	2687
Tanzania	134	2388	113	2640
Germany	2	10	21	2124
Maldives	22	501	72	1374
Ghana	-	-	153	1008
Other countries	3793	37987	354	4622

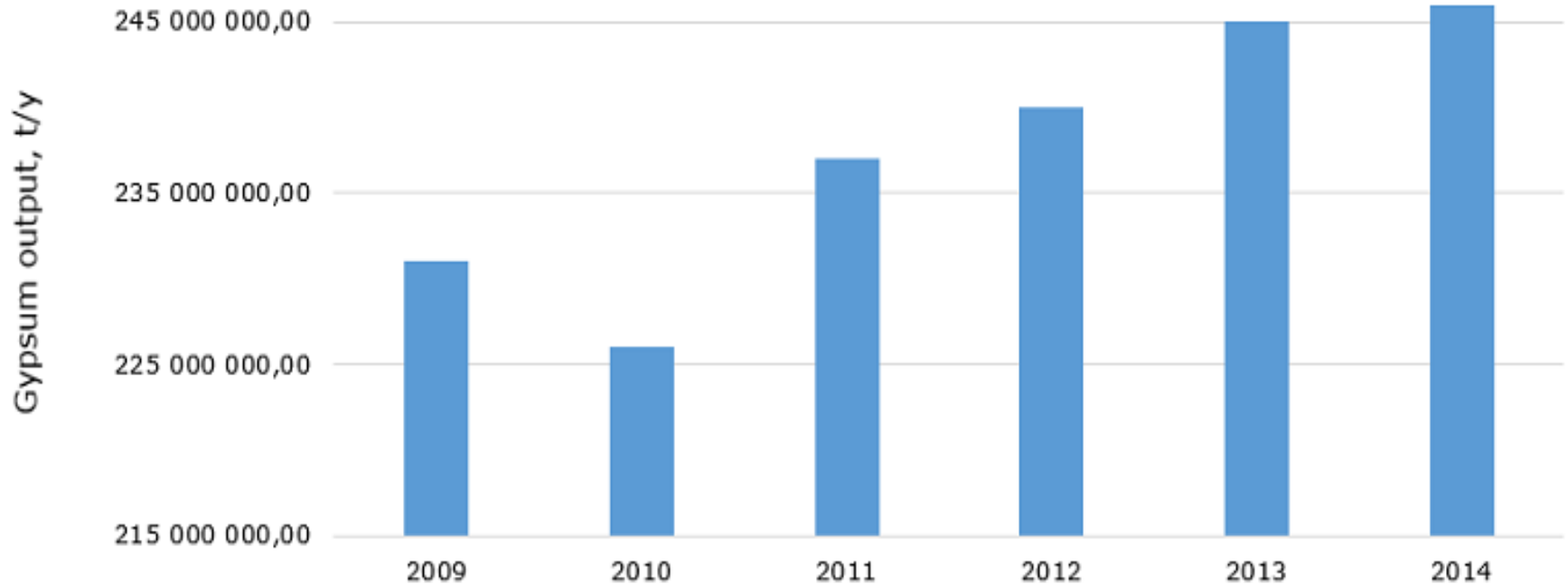
Source: Indian Minerals Yearbook 2016 (Part- III: Mineral Reviews)

Consumption* of Gypsum, 2013-14 to 2015-16 (By Industries & Category wise)

Category	Industry	2013-14	2014-15 (R)	2015-16 (P)
All Industries	Grand Total	9220800	9748900	10313900
Natural Gypsum	Total	5393100	5677900	6020700
	Asbestos products	700	700	700
	Cement	5353300	5640900	5965600
	Pharmaceutical	900	900	900
	Plaster of Paris	37700	13700	15700
	Refractories	++	21200	37300
	Others (ceramic, fertilizer, paint & textile)	500	500	500
By-product Gypsum	Total	3289900	3587400	3808700
	Cement	3287800	3585300	3806600
	Ceramic	600	600	600
	Fertilizer	1500	1500	1500
Marine Gypsum	Total	534900	481500	482400
	Cement	534900	481500	482400
Gypsum Moulds	Total	2900	2100	2100
	Ceramic	2900	2100	2100

Source: Indian Minerals Yearbook 2016 (Part- III: Mineral Reviews)

Gypsum: Mine Production Dynamics in 2009-2014, Tonnes/Year



Major Queries/Questions Answered in the Report?

- 1. What is Gypsum Mining industry ?**
- 2. How has the Gypsum Mining industry performed so far and how will it perform in the coming years ?**
- 3. What is the Project Feasibility of Gypsum Mining Plant ?**
- 4. What are the requirements of Working Capital for setting up Gypsum Mining plant ?**

- 5. What is the structure of the Gypsum Mining Business and who are the key/major players ?**
- 6. What is the total project cost for setting up Gypsum Mining Business?**
- 7. What are the operating costs for setting up Gypsum Mining plant ?**
- 8. What are the machinery and equipment requirements for setting up Gypsum Mining plant ?**

- 9. Who are the Suppliers and Manufacturers of Plant & Machinery for setting up Gypsum Mining plant ?**
- 10. What are the requirements of raw material for setting up Gypsum Mining plant ?**
- 11. Who are the Suppliers and Manufacturers of Raw materials for setting up Gypsum Mining Business?**
- 12. What is the Plant Layout for setting up Gypsum Mining Business?**

- 13. What is the total size of land required for setting up Gypsum Mining plant ?**
- 14. What will be the income and expenditures for Gypsum Mining Business?**
- 15. What are the Projected Balance Sheets of Gypsum Mining plant ?**
- 16. What are the requirement of utilities and overheads for setting up Gypsum Mining plant?**
- 17. What is the Built up Area Requirement and cost for setting up Gypsum Mining Business?**

18. What are the Personnel (Manpower) Requirements for setting up Gypsum Mining Business?

19. What is the Market Study and Assessment for setting up Gypsum Mining Business?

20. What is the time required to break-even of Gypsum Mining Business?

21. What is the Break-Even Analysis of Gypsum Mining plant?

22. What are the Project financials of Gypsum Mining Business?

- 23. What are the Profitability Ratios of Gypsum Mining Project?**
- 24. What is the Sensitivity Analysis-Price/Volume of Gypsum Mining plant?**
- 25. What are the Projected Pay-Back Period and IRR of Gypsum Mining plant?**
- 26. What is the Process Flow Sheet Diagram of Gypsum Mining project?**
- 27. What are the Market Opportunities for setting up Gypsum Mining plant?**

Project Financials

Project at a Glance	Annexure
• Assumptions for Profitability workings	1
• Plant Economics.....	2
• Production Schedule.....	3
• Land & Building.....	4
Factory Land & Building	
Site Development Expenses	

- **Plant & Machinery.....5**
 - Indigenous Machineries**
 - Other Machineries (Miscellaneous, Laboratory etc.)**

- **Other Fixed Assets.....6**
 - Furniture & Fixtures**
 - Pre-operative and Preliminary Expenses**
 - Technical Knowhow**
 - Provision of Contingencies**

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 - Raw Material**
 - Packing Material**
 - Lab & ETP Chemical Cost**
 - Consumable Store**

- **Overheads Required Per Month and Per Annum.....8**
 Utilities & Overheads (Power, Water and Fuel Expenses etc.)
 Royalty and Other Charges
 Selling and Distribution Expenses

- **Salary and Wages9**

- **Turnover Per Annum10**

- **Share Capital.....11**
 Equity Capital
 Preference Share Capital

- **Annexure 1 :: Cost of Project and Means of Finance**
- **Annexure 2 :: Profitability and Net Cash Accruals**
 - **Revenue/Income/Realisation**
 - **Expenses/Cost of Products/Services/Items**
 - **Gross Profit**
 - **Financial Charges**
 - **Total Cost of Sales**
 - **Net Profit After Taxes**
 - **Net Cash Accruals**

- **Annexure 3 :: Assessment of Working Capital requirements**

- **Current Assets**
- **Gross Working Capital**
- **Current Liabilities**
- **Net Working Capital**
- **Working Note for Calculation of Work-in-process**

- **Annexure 4 :: Sources and Disposition of Funds**

- **Annexure 5 :: Projected Balance Sheets**

- **ROI (Average of Fixed Assets)**
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- **Annexure 6 :: Profitability Ratios**

- **D.S.C.R**
- **Earnings Per Share (EPS)**
- **Debt Equity Ratio**

• **Annexure 7 :: Break-Even Analysis**

- **Variable Cost & Expenses**
- **Semi-Variable/Semi-Fixed Expenses**
- **Profit Volume Ratio (PVR)**
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- **B.E.P**

- **Annexure 8 to 11 :: Sensitivity Analysis-Price/Volume**

- **Resultant N.P.B.T**
- **Resultant D.S.C.R**
- **Resultant PV Ratio**
- **Resultant DER**
- **Resultant ROI**
- **Resultant BEP**

- **Annexure 12 :: Shareholding Pattern and Stake Status**

- **Equity Capital**

- **Preference Share Capital**

- **Annexure 13 :: Quantitative Details-Output/Sales/Stocks**

- **Determined Capacity P.A of Products/Services**

- **Achievable Efficiency/Yield % of Products/Services/Items**

- **Net Usable Load/Capacity of Products/Services/Items**

- **Expected Sales/ Revenue/ Income of Products/ Services/ Items**

- **Annexure 14** :: **Product wise Domestic Sales Realisation**
- **Annexure 15** :: **Total Raw Material Cost**
- **Annexure 16** :: **Raw Material Cost per unit**
- **Annexure 17** :: **Total Lab & ETP Chemical Cost**
- **Annexure 18** :: **Consumables, Store etc.**
- **Annexure 19** :: **Packing Material Cost**
- **Annexure 20** :: **Packing Material Cost Per Unit**

- **Annexure 21** :: **Employees Expenses**
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- **Annexure 28** :: **Selling Expenses**

- **Annexure 29 :: Depreciation Charges – as per Books (Total)**
- **Annexure 30 :: Depreciation Charges – as per Books (P & M)**
- **Annexure 31 :: Depreciation Charges - as per IT Act WDV (Total)**
- **Annexure 32 :: Depreciation Charges - as per IT Act WDV (P & M)**
- **Annexure 33 :: Interest and Repayment - Term Loans**
- **Annexure 34 :: Tax on Profits**
- **Annexure 35 :: Projected Pay-Back Period and IRR**

Reasons for Buying our Report:

- **This report helps you to identify a profitable project for investing or diversifying into by throwing light to crucial areas like industry size, market potential of the product and reasons for investing in the product**
- **This report provides vital information on the product like it's characteristics and segmentation**
- **This report helps you market and place the product correctly by identifying the target customer group of the product**

- **This report helps you understand the viability of the project by disclosing details like machinery required, project costs and snapshot of other project financials**
- **The report provides a glimpse of government regulations applicable on the industry**
- **The report provides forecasts of key parameters which helps to anticipate the industry performance and make sound business decisions**

Our Approach:

- **Our research reports broadly cover Indian markets, present analysis, outlook and forecast for a period of five years.**
- **The market forecasts are developed on the basis of secondary research and are cross-validated through interactions with the industry players**
- **We use reliable sources of information and databases. And information from such sources is processed by us and included in the report**

Scope of the Report

The report titled “Market Survey cum Detailed Techno Economic Feasibility Report on Gypsum Mining.” provides an insight into Gypsum Mining market in India with focus on uses and applications, Manufacturing Process, Process Flow Sheets, Plant Layout and Project Financials of Gypsum Mining project. The report assesses the market sizing and growth of the Indian Gypsum Mining Industry. While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line. And before diversifying/venturing into any product, they wish to study the following aspects of the identified product:

- **Good Present/Future Demand**
- **Export-Import Market Potential**
- **Raw Material & Manpower Availability**
- **Project Costs and Payback Period**

We at NPCS, through our reliable expertise in the project consultancy and market research field, have demystified the situation by putting forward the emerging business opportunity in the Gypsum Mining sector in India along with its business prospects. Through this report we have identified Gypsum Mining project as a lucrative investment avenue.

Tags

Gypsum Mining, Gypsum, Gypsum Mines in India, Gypsum Industry, Gypsum Mining Business Plan, Gypsum Mining Business, Industrial Minerals & Rocks, Gypsum Mine Production, Mineral & Mining Sector Investment and Business Opportunity, Business Plan for Gypsum Mining, Gypsum Industry in India, Project Report on Gypsum Mining, Detailed Project Report on Gypsum Mining, Project Report on Gypsum Mining, Pre-Investment Feasibility Study on Gypsum Mining, Techno-Economic feasibility study on Gypsum Mining, Feasibility report on Gypsum Mining, Free Project Profile on Gypsum Mining, Project profile on Gypsum Mining, Download Free Project Profile on Gypsum Mining, How to Start a Gypsum Mining Business, Business Plan for Gypsum Production, Gypsum Mining Opportunity, Process of Mining Gypsum, Gypsum Mining and Processing, Gypsum Mining Plant, Gypsum Mining Startup Business

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NPCS is manned by engineers, planners, specialists, financial experts, economic analysts and design specialists with extensive experience in the related industries.

Our Market Survey cum Detailed Techno Economic Feasibility Report provides an insight of market in India. The report assesses the market sizing and growth of the Industry. While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line.



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The detailed project report covers all aspect of business, from analyzing the market, confirming availability of various necessities such as Manufacturing Plant, Detailed Project Report, Profile, Business Plan, Industry Trends, Market Research, Survey, Manufacturing Process, Machinery, Raw Materials, Feasibility Study, Investment Opportunities, Cost and Revenue, Plant Economics, Production Schedule,

Working Capital Requirement, uses and applications, Plant Layout, Project Financials, Process Flow Sheet, Cost of Project, Projected Balance Sheets, Profitability Ratios, Break Even Analysis. The DPR (Detailed Project Report) is formulated by highly accomplished and experienced consultants and the market research and analysis are supported by a panel of experts and digitalized data bank.

We at NPCS, through our reliable expertise in the project consultancy and market research field, have demystified the situation by putting forward the emerging business opportunity in India along with its business prospects.....[Read more](#)



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Who are we?

- *One of the leading reliable names in industrial world for providing the most comprehensive technical consulting services*
- *We adopt a systematic approach to provide the strong fundamental support needed for the effective delivery of services to our Clients' in India & abroad*



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



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What do we offer?

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

How are we different ?

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

Our Approach

Requirement collection

Thorough analysis of the project

Economic feasibility study of the Project

Market potential survey/research

Report Compilation

Contact us

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