Business Opportunity in Production of



from Corn and Cassava Starch
Granules

Start Your Own Industry in Biodegradable Plastic Packaging









Introduction

Biodegradable plastic is plastic that decomposes naturally within the environment. This is often achieved once microorganisms within the environment metabolize and break down the structure of biodegradable plastic. The tip result is one that is less harmful to the environment than traditional plastics.

Biodegradable plastics will be composed of bio-plastics that are plastics made of renewable raw materials. There are usually two types of biodegradable plastic, injection molded and solid. The solid forms normally are used for items similar to <u>food</u> containers, leaf collection bags, and water bottles.





Instead of using <u>packaging</u> materials made of <u>synthetic</u> polymers, new material has been developed using polylactic acid (PLA) or corn starch plastic granules that is formed from cornstarch. The materials made from PLA are <u>biodegradable</u> that is vital for the setting.

Related Projects: - <u>Biodegradable Products, Recyclable, Disposable,</u> **Eco-Friendly Plastics**

If disposed of correctly, <u>packaging</u> material made up of cornstarch can break down into carbon dioxide and water inside several months. However, if the material isn't disposed of correctly cornstarch-based material can take longer to decompose, especially if there is no oxygen or light available.





The bioplastics prepared from corn and cassava starch granules were found to exhibit properties that are comparable to the already on the market business <u>packaging</u> materials. The bioplastics were also found to be soluble in water and degradable in soil by conducting respective tests, thereby making it <u>environment-friendly</u>.





Applications

The main applications of <u>biodegradable plastics</u> are presently in (food) packaging, food service ware, (shopping) bags, garbage bags, fibres/nonwovens and agricultural applications. These materials were developed to reduce plastic waste and are <u>biodegradable</u> or rather compostable. Target applications were in products with a relatively short useful life (packaging and disposables) and in applications wherever biodegradability was beneficial (agriculture). The increasing awareness of the environmental impact of packaging products and a willingness to replace packaging materials by alternatives with e.g. a lower carbon foot print or made up of renewable resources are the main driver for development and therefore the use of these materials.

Starch granules use for packaging of <u>Food</u> waste bags, translucent grocery bags, garbage bags, shopping bags, <u>Vegetables and fruits</u> bags.



Biodegradable Plastics Bags Have Seen their Use are:

- Garbage
- <u>Agriculture</u> and horticulture
- Vegetables and fruits
- Food packaging
- Shopping
- Nursery products
- Toys
- Textiles





<u>Advantages</u>

- ❖ <u>Biodegradable plastics</u> take less time to break down
- Biodegradable plastics are renewable
- Biodegradable plastics are good for the environment
- Biodegradable plastics require less energy to produce
- Biodegradable plastics are easier to recycle





- Biodegradable plastics are not toxic
- Biodegradable plastics reduce dependence on fossil oil
- Reduced CO2Emissions
- Cheaper Alternative
- Waste
- ❖ Benefit to Rural Economy
- Reduced Carbon Footprint
- Multiple end-of-life Options
- Compostability
- Reduction of emission of greenhouse gas levels





Features

- ❖ PLA is a thermoplastic, meaning that it can be melted and reshaped without significantly degrading its mechanical properties. Hence, PLA is mechanically recyclable.
- ❖ It is derived from renewable resources, a sharp contrast to the petroleum-based <u>plastics</u>, which have a finite availability.
- ❖ (Close to) carbon neutral: its renewable sources actually absorb carbon.
- ❖ It does not release toxic fumes when oxygenated.
- ❖ Economic potential: bio-plastics offer a growing market, with opportunities for job creation and development of rural areas, estimates that by 2030 up to 300,000 highly skilled jobs will be created in the biomarket, more than 10 times its current numbers.



Market Outlook

The intensive adaptability for the use of plastics in sacks & bags and their insufficient disposal is probably going to feature to the immensely increasing pollution setback of conventional, <u>plastics</u> supported <u>petroleum</u>. made up of a range of all-natural plant products such as polyhydroxyalkanoates (PHAs), polylactic acids (PLAs), and corn, biodegradable sacks and bags also contain additives to help degradation and therefore cause a lesser impact on the ecosystem normally as well as aquatic life in particular. These biodegradable bags are being liked over ancient <u>plastic</u> products, especially for the fastmoving consumer goods and food packaging.





The development of <u>biodegradable plastics</u> led plant producers to growing environmental concerns as well as high regulatory standards. The growing demand for viable <u>packaging</u> alternatives across sectors appreciate <u>food</u>, drink and <u>pharmaceuticals</u> fuels demand for <u>biodegradable plastic</u> packaging and therefore support the development of the world <u>plastic</u> packaging market on <u>biodegradable products</u>.

Related Books: - <u>Environmentally Friendly, Eco-Friendly Products,</u>

<u>Natural Products, Biodegradable Plastics</u>





The primary motivators for the growth and use of such materials are increasing customer consciousness of the environmental effect of packaging goods and a desire to substitute packaging materials for solutions with reduced carbon footprint (or made from renewable resources). But high costs are restricting the growth of the biodegradable plastic packaging market as against regular plastic usage because biodegradable plastic comes from the starch of plants and its decomposition needs specific conditions, similar to temperature, bacteria, humidity, etc. <u>biodegradable</u> plastic bags are made up of polymers similar to polyethylene, polystyrene and polypropylene containing extra ingredients and are tested to degrade or biodegrade in the open environment.





Biodegradable plastic bags are extensively used because of their characteristics similar to light weight and easy disposability. Plastic has been extensively used for packaging in varied sectors across the world. Over the years, the demand for biodegradable plastic is witnessing a higher growth because of the implementation of the stringent regulations on the utilization of non-degradable plastic by various governments across the world and increase in health awareness among the consumers.

Related Videos: - <u>Biodegradable Plastic Bag Manufacturing Industry</u>

Bioplastic Carry Bags and Garbage Bags Production





Owing to increasing awareness among customers about protecting the environment followed by stringent regulatory landscape imposing bans on single use plastic bags, adoption of ecofriendly product manufacturers across the world shifted their focus towards <u>biodegradable</u> and <u>bio-based</u> plastic bags. The <u>food & beverage</u> trade contributes heavily to the <u>biodegradable</u> packaging industry. Thus, the growth of the f&b related packaging can promote the <u>biodegradable</u> bag market growth in coming back years.





The global <u>biodegradable plastic</u> packaging market was valued at USD 4.65 billion in 2019, and is expected to reach a market value of USD 12.06 billion by 2025, registering a CAGR of 17.04% during the forecast period of 2020-2025. Growing environmental concerns regarding <u>plastic</u> usage that consists of toxic pollutants which are harming plants, animals, and people are driving the use of <u>biodegradable plastic</u>.





Even though the factors similar to growing consumer preference toward eco-friendly plastic products as well as increasing government emphasis on the utilization of biodegradable plastics are driving the worldwide biodegradable plastics market, the higher cost of biodegradable plastics and shortcomings of biodegradable plastics are anticipated to dampen the market growth. The growing use of <u>biodegradable</u> <u>plastics</u> in the food and beverages business, as well as rapid growth of packaging business, is expected to develop new market growth opportunities for the worldwide biodegradable plastics market in the forthcoming years. The U.S. accounted for the most important market share in bio-degradable bags mainly because of increasing issues regarding the environment in people, which is anticipated to fuel the worldwide market in future.





Key Players:-

Smurfit Kappa Group, Mondi Group, BASF SE, WestRock Company, Georgia-Pacific, Metabolix, Inc., Cereplast Inc, ALPAGRO Plastics N.V, Novamont S.p.A, Bio Bag Americas, Inc., Biopak Pty Ltd.,





Machinery Photographs



BLOWN-FILM MACHINE



CUTTING - SEALING MACHINE





HYDRAULIC PRESS MACHINE



PRINTING MACHINE



Project at a Glance

COST C	F PROJE	CCT	MEANS	MEANS OF FINANCE						
	Existin	Propose			Existin	Propose				
Particulars	g	d	Total	Particulars	g	d	Total			
Land & Site										
Development Exp.	0.00	65.00	65.00	Capital	0.00	121.34	121.34			
Buildings	0.00	133.50	133.50	Share Premium	0.00	0.00	0.00			
				Other Type Share						
Plant & Machineries	0.00	76.50	76.50	Capital	0.00	0.00	0.00			
Motor Vehicles	0.00	10.00	10.00	Reserves & Surplus	0.00	0.00	0.00			
Office Automation										
Equipments	0.00	37.00	37.00	Cash Subsidy	0.00	0.00	0.00			
Technical Knowhow				Internal Cash						
Fees & Exp.	0.00	20.00	20.00	Accruals	0.00	0.00	0.00			
Franchise & Other				Long/Medium Term						
Deposits	0.00	0.00	0.00	Borrowings	0.00	364.01	364.01			
Preliminary& Pre-				Debentures /						
operative Exp	0.00	3.00	3.00	Bonds	0.00	0.00	0.00			
Provision for				Unsecured						
Contingencies	0.00	5.70	5.70	Loans/Deposits	0.00	0.00	0.00			
Margin Money -										
Working Capital	0.00	134.65	134.65							
TOTAL	0.00	485.35	485.35	TOTAL	0.00	485.35	485.35			



Project at a Glance

Year	Annu	alised	Book	Debt	Divide	Retained		Payou	Probab P/E		Yield	
			Valu		nd	Earnings		t	1e	Ratio	Price/	
			e						Market		Book Value	
									Price			
					Per					No.of		
	EPS	CEPS	Per S	Share	Share	Per Share				Times		
	•	•	•	•	•	%	•	%	•		%	
1-			16.5			100.						
2	6.57	9.31	7	24.00	0.00	00	6.57	0.00	6.57	1.00	0.00	
2-			26.0			100.						
3	9.52	11.94	9	18.00	0.00	00	9.52	0.00	9.52	1.00	0.00	
3-			38.6			100.						
4	12.54	14.68	3	12.00	0.00	00	12.54	0.00	12.54	1.00	0.00	
			54.1			100.						
4-5	15.47	17.36	O	6.00	0.00	00	15.47	0.00	15.47	1.00	0.00	
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PI	roje	ect	at	a (Glar	106							
Year	D. S. C. R.		•	Debt / Equity Total Retur - as- Net n on Deposi Equity Wort Net ts h Worth Debt					Profitability Ratio				
		Cumula tive	Overa 11					GPM	PBT	PAT	Net Contri bution		
	(Number of times)			,	ber of	%	%	%	%	%		%	

timesj (Number of times) % % % % % 70 Initi 3.00 3.00 al 1-557.2 8.75 6.02 8 2 1.36 1.36 4.04% 1.90% 1.25% % 1.45 1.45 4.57 1.10 613.8 8.26 2-3 1.69 1.52 0.69 0.69 4.04 % 4.71 1.15 4.37% 2.42% 1.55% 700.6 8.25 3-4 2.10 1.69 2.10 0.31 0.31 2.89 4.59% 2.81% 1.79% 2 % 4.69 1.22 787.4 8.24 4-5 2.58 1.89 0.11 0.11 2.19 4.74% 3.10% 1.96% 4 % 4.60 1.29 874.2 8.23

4.83% 3.30% 2.09%



4.46

1.44

%

Assets Curre

nt Ratio

Turnov

er Ratio

0.00

0.00

1.72

2.10

5-6

3.16

Project at a Glance

BEP	
BEP - Maximum Utilisation Year	5
Cash BEP (% of Installed Capacity)	56.90%
Total BEP (% of Installed Capacity)	59.24%

IRR, PAYBACK and FACR

Internal Rate of Return .. (In %age)

Payback Period of the Project is (In Years)

Fixed Assets Coverage Ratio (No. of times)

30.95%

48.753

2 Years 3

Months

www.entrepreneurindia.co

Major Queries/Questions Answered in the Report?

- 1. What is Biodegradable Plastic Bags from Corn & Cassava Starch Granules Manufacturing industry?
- 2. How has the Biodegradable Plastic Bags from Corn & Cassava Starch Granules Manufacturing industry performed so far and how will it perform in the coming years?
- 3. What is the Project Feasibility of Biodegradable Plastic Bags from Corn & Cassava Starch Granules Manufacturing Plant?
- 4. What are the requirements of Working Capital for setting up Biodegradable Plastic Bags from Corn & Cassava Starch Granules Manufacturing plant?



- 5. What is the structure of the Biodegradable Plastic Bags from Corn & Cassava Starch Granules Manufacturing Business and who are the key/major players?
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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 Biodegradable Plastic Bags from Corn & Cassava Starch Granules." provides an insight into Biodegradable Plastic Bags from Corn & Cassava Starch Granules market in India with focus on uses and applications, Manufacturing Process, Process Flow Sheets, Plant Layout and Project Financials of Biodegradable Plastic Bags from Corn & Cassava Starch Granules project. The report assesses the market sizing and growth of the Indian Biodegradable Plastic Bags from Corn & Cassava Starch Granules 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 Biodegradable Plastic Bags from Corn & Cassava Starch Granules sector in India along with its business prospects. Through this report we have identified Biodegradable Plastic Bags from Corn & Cassava Starch Granules project as a lucrative investment avenue.



Tags

#biodegradableplasticbags #compostablelinerbags #Recycle #bioplastics #biodegradableproducts #biodegradablebags #polymers #biodegradable #plasticbags #ecofriendly #compostable #cornstarch #cassavastarch #earthfriendly #bag #businessconsultant #BusinessPlan #startups #feasibilityReport #NPCS #industrialgasprojectreport #industrialproject #entrepreneurindia #marketresearchreport #IndustryTrends #industrialproject #startupbusiness #startups #businessbook #futurebusiness #packaging #Manufacturingbusiness



Niir Project Consultancy Services (NPCS)
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Business Opportunity in Production of
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OUR CLIENTS

Our inexhaustible Client list includes public-sector companies, Corporate Houses, Government undertaking, individual entrepreneurs, NRI, Foreign investors, non-profit organizations and educational institutions from all parts of the World. The list is just a glimpse of our esteemed & satisfied Clients.

Click here to take a look https://goo.gl/G3ICjV



Select and Choose the Right Business Startup for You

(Instant Online Project Identification and Selection)

Finding the right startup business is one of the most popular subject today. Starting a business is no easy endeavor, but the time, effort, and challenges can be worth it if you succeed. To give yourself the best chance to be successful, take your time to carefully find the right business for you. We, at NPCS, endeavor to make business selection a simple and convenient step for any entrepreneur/startup. Our expert team, by capitalizing on its dexterity and decade's long experience in the field, has created a list of profitable ventures for entrepreneurs who wish to diversify or venture. The list so mentioned is updated regularly to give you a regular dose of new emerging opportunities.

Visit: https://www.entrepreneurindia.co/project-identification



Download Complete List of Project Reports:

Detailed Project Reports

Visit:- https://www.entrepreneurindia.co/complete-project-list

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.



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

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



Contact us

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Fax: +91-11-23845886

Website: www.entrepreneurindia.co, www.niir.org

Take a look at NIIR PROJECT CONSULTANCY SERVICES on #StreetView

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NIIR PROJECT CONSULTANCY SERVICES

An ISO 9001:2015 Company



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.



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



What do we offer?

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



How are we different?

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



Our Approach

Requirement collection

Thorough analysis of the project

Economic feasibility study of the Project

Market potential survey/research

Report Compilation





Who do we Serve?

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



Sectors We Cover

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



Sectors We Cover cont...

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



Sectors We Cover Cont...

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



Sectors We Cover cont..

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



Sectors We Cover Cont...

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



Sectors We Cover cont..

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



Sectors We Cover Cont...

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



Sectors We Cover cont...

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



MARKET RESEARCH REPORTS



Objective

- №To get a detailed scenario of the industry along with its structure and classification
- ⊗To provide a comprehensive analysis of the industry by covering aspects like:
 - Something of the industry

 Something in the
 - Latest market trends
 - Insights on regulatory framework
 - **SWOT** Analysis

 - ⊗Porters 5 Forces Analysis



Objective

- №To provide forecasts of key parameters which helps to anticipate the industry performance
- ☼ To help chart growth trajectory of a business by detailing the factors that affect the industry growth
- №To help an entrepreneur/manager in keeping abreast with the changes in the industry
- ™To evaluate the competitive landscape of the industry by detailing:
 - ⊗Key players with their market shares
 - >> Financial comparison of present players



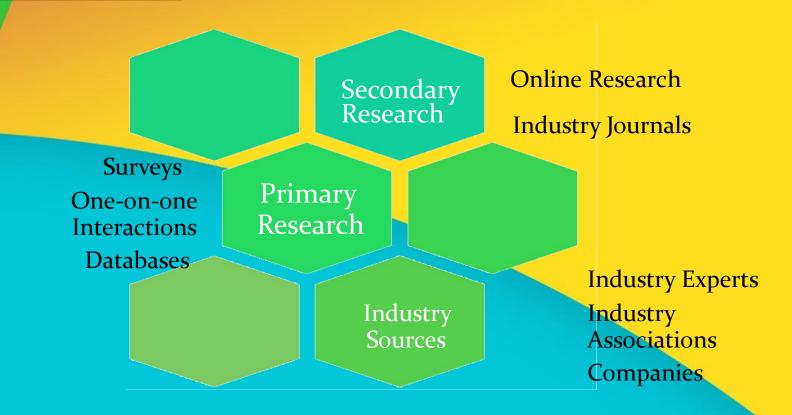
Clientele

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

Click here for list



Data Sources



www.niir.org







Our Team

©Our research team comprises of experts from various financial fields:

∞MBA's

®Industry Researchers

⊗Financial Planners

Research veterans with decades of experience



Structure of the Report

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



Structure of the Report

Con

- №5. Key Financials and Analysis
- ≈5.1 Contact Information
- ≈5.2 Key Financials
- ≈5.3 Financial comparison
- №6. Industry Size & Outlook



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