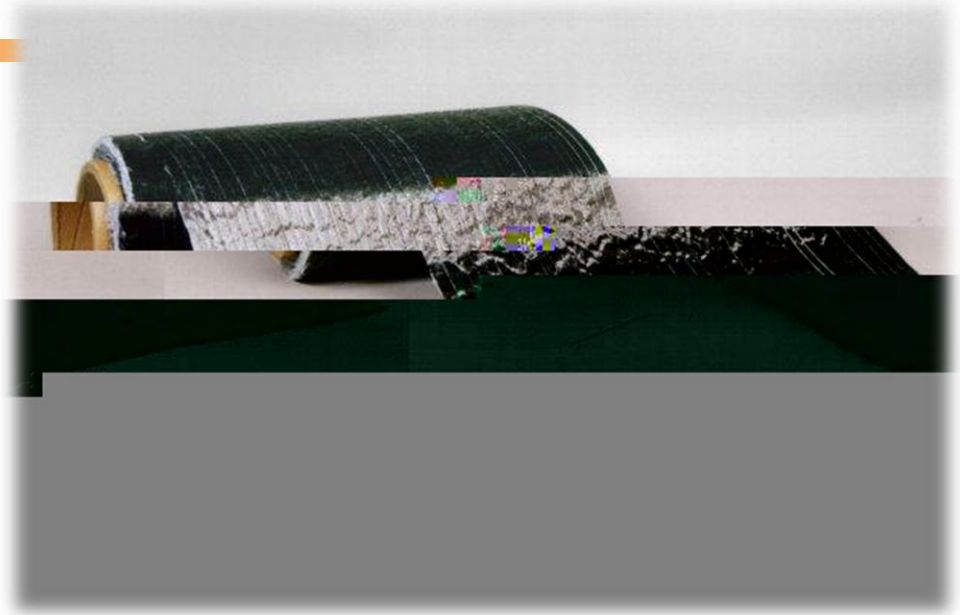
Carbon Fiber, Carbon Fiber Composites, Graphite Fiber and Carbon Fiber Reinforced Polymer

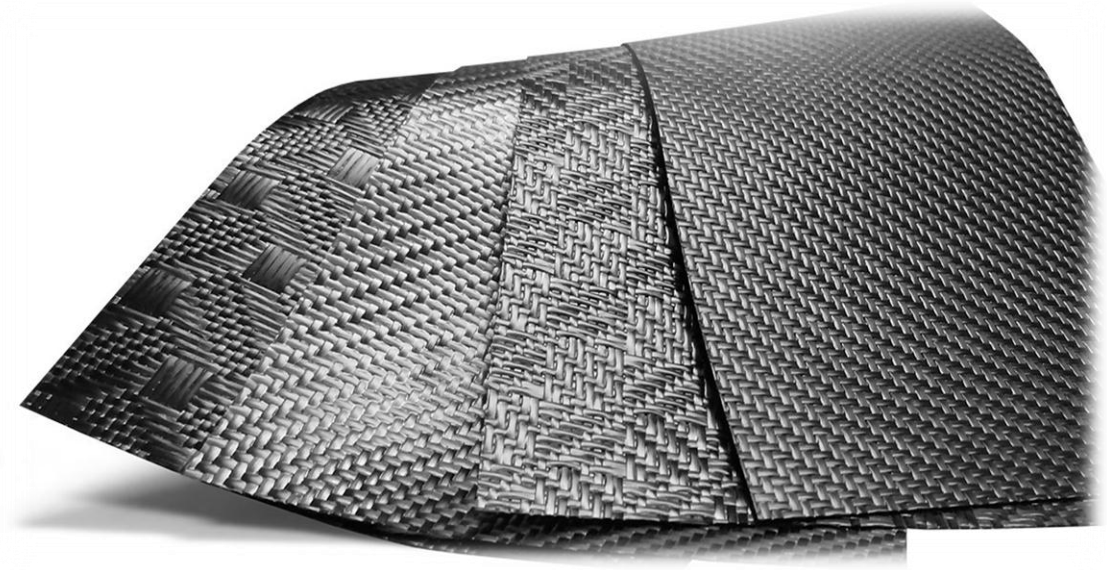
Manufacturing Plant, Detailed Project Report, Profile, Business Plan, Industry Trends, Market Research, Survey, Manufacturing Process, Machinery, Raw Materials, Feasibility Study, Investment Opportunities, Cost and Revenue, Plant Economics, Production Schedule, Working Capital Requirement, Plant Layout, Process Flow Sheet, Cost of Project, Projected Balance Sheets, Profitability Ratios, Break Even Analysis

Carbon fibers or carbon fibres (alternatively CF, graphite fiber or graphite fibre) are fibers about 5–10 micrometres in diameter and composed mostly of carbon atoms. To produce a carbon fiber, the carbon atoms are bonded together in crystals that are more or less aligned parallel to the long axis of the fiber as the crystal alignment gives the fiber high strength-to-volume ratio (making it strong for its size). Several thousand carbon fibers are bundled together to form a tow, which may be used by itself or woven into a fabric.



Carbon fiber material has a wide range of applications, as it can be formed at various densities in limitless shapes and sizes. Carbon fiber is often shaped into tubing, fabric, and cloth, and can be custom-formed into any number of composite parts and pieces.

Carbon fiber reinforced polymer, carbon fiber reinforced plastic or carbon fiber reinforced thermoplastic (CFRP, CRP, CFRTP or often simply carbon fiber, or even carbon), is an extremely strong and light fiber-reinforced plastic which contains carbon fibers.



CFRPs can be expensive to produce but are commonly used wherever high strength-to-weight ratio and rigidity are required, such as aerospace, automotive, civil engineering, sports goods and an increasing number of other consumer and technical applications.

Graphite composites have exceptional mechanical properties which are unequalled by other materials. The material is strong, stiff, and lightweight. Graphite composite is the material of choice for applications where lightweight & superior performance is paramount, such as components for spacecrafts, fighter aircrafts, and race cars.

Composite materials are made by combining reinforcement (fiber) with matrix (resin), and this combination of the fiber and matrix provide characteristics superior to either of the materials alone. In a composite material, the fiber carry majority of the load, and is the major contributor in the material properties. The resin helps to transfer load between fibers, prevents the fibers from buckling, and binds the materials together.

Graphite fibers (sometimes called carbon fibers) are made from organic polymer such as polyacrylonitrile.

- Graphite and carbon fibers are extensively used in high-strength, high-modulus applications.
  - Graphite fibers have carbon content in excess of 99%.
  - Carbon fibers have carbon content in the range 80-95%
- Fiber's carbon content depends on processing method for these fibers.
- Significantly more expensive than glass fibers.

- Key application areas include aerospace, sporting, railway, infrastructure, automotive, oil drilling, as well as consumer sector industries.
- Graphite structure consists of hexagonally packed carbon atoms in layers, and several such layers are interconnected through weak van der Waals forces. Thus, such a structure structure generates:
  - High inplane modulus
  - Significantly less modulus in out-plane direction

Reasons for buying our report:

- The 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
- The report provides vital information on the product like it's characteristics and segmentation
- The report helps you market and place the product correctly by identifying the target customer group of the product

- **The 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

Major Queries/Questions Answered in our Report?

1. How has the industry performed so far and how will it perform in the coming years?
2. What is the Project Feasibility of the Plant?
3. What are the requirements of Working Capital for setting up the plant?
4. What is the structure of the industry and who are the key/major players?

5. What is the total project cost for setting up the plant?
6. What are the operating costs for setting up the plant?
7. What are the machinery and equipment requirements for setting up the plant?
8. Who are the Suppliers and Manufacturers of Plant & Machinery for setting up the plant?
9. What are the requirements of raw material for setting up the plant?

10. Who are the Suppliers and Manufacturers of Raw materials for setting up the plant?

11. What is the Manufacturing Process and Formulations of the plant?

12. What is the total size of land required for setting up the plant?

13. What will be the income and expenditures for the plant?

14. What are the Projected Balance Sheets of the plant?

15. What are the requirement of utilities and overheads for setting up the plant?
16. What is the Built up Area Requirement and cost for setting up the plant?
17. What are the Personnel (Manpower) Requirements for setting up the plant?
18. What are Statistics of Import & Export for the Industry?
19. What is the time required to break-even?

20. What is the Break-Even Analysis of the plant?
21. What are the Project financials of the plant?
22. What are the Profitability Ratios of the plant?
23. What is the Sensitivity Analysis-Price/Volume of the plant?
24. What are the Projected Pay-Back Period and IRR of the plant?
25. What is the Process Flow Sheet Diagram of the plant?
26. What are the Market Opportunities for setting up the plant?
27. What is the Market Study and Assessment for setting up the plant?
28. What is the Plant Layout for setting up the plant?

Niir Project Consultancy Services (NPCS)

can provide Detailed Project Report.

For more details, Click below link:

Carbon Fiber, Carbon Fiber Composites, Graphite Fiber and Carbon Fiber Reinforced Polymer

http://goo.gl/fzfjP3

Carbon Composite Fiber

Carbon Composite fibre is produced from the raw material used PAN, pitch etc. Quality of composite carbon fibre produced from PAN is much better than the product produced from the pitch. It is one of high technology base product with fair market demands in India. Carbon fibers are black fibers used as yarns felt or powder like short mono filaments with diameters smaller than 10 mm. They are mainly applied to reinforce polymers, much like glass fibers have been used for.....Read more

Carbon Fiber

Carbon fibers have been under continuous development for the last 50 years. The properties of carbon fibers, such as high stiffness, high tensile strength, low weight, high chemical resistance, high temperature tolerance and low thermal expansion, make them very popular in aerospace, civil engineering, military, and motorsports, along with other competition sports. However, they are relatively expensive when compared to similar fibers, such as glass fibers or plastic fibers. Carbon fibers are usually combined with.....Read more

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NIIR PROJECT CONSULTANCY SERVICES

An ISO 9001:2008 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*

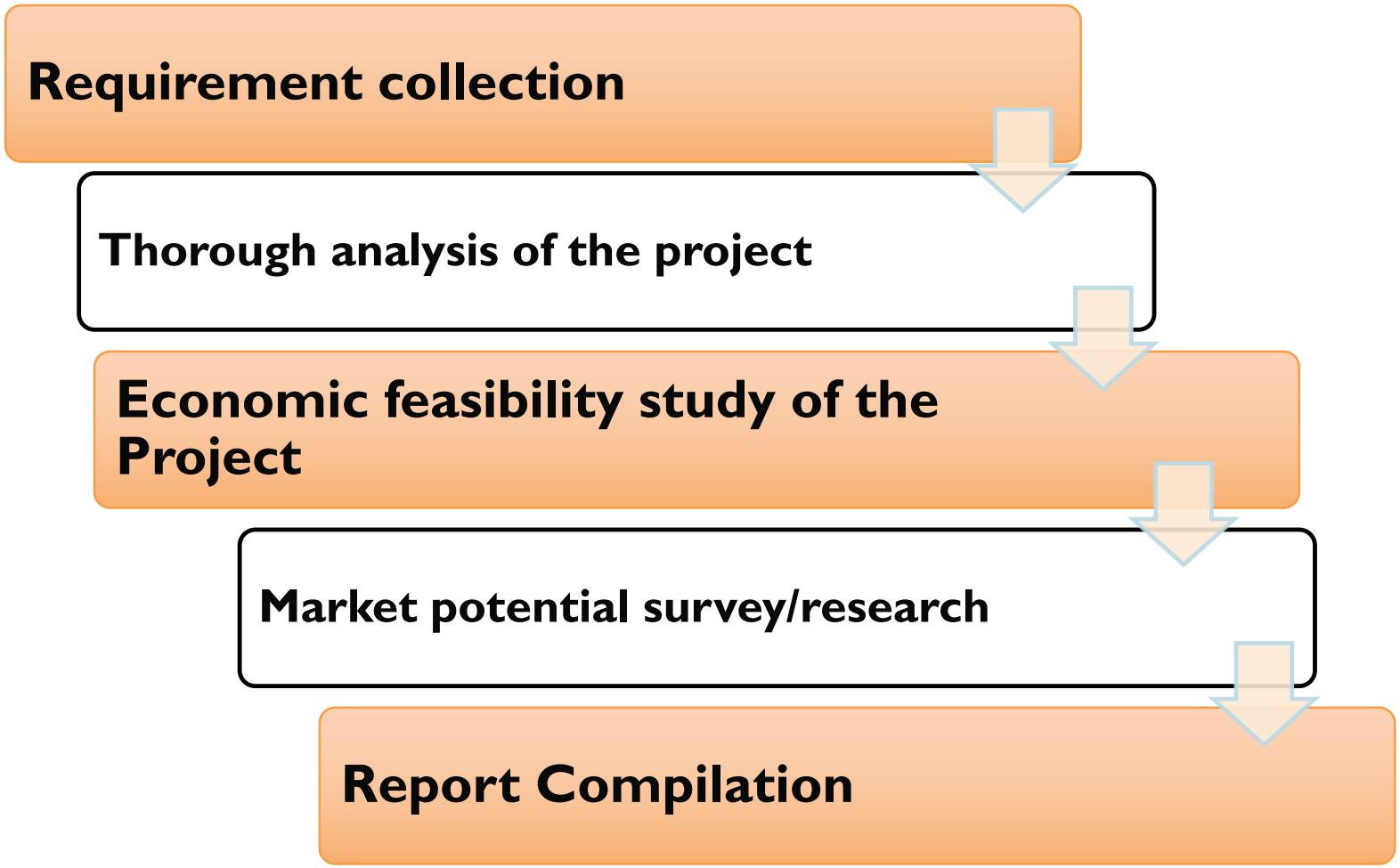
What do we offer?

- *Project Identification*
- *Detailed Project Reports/Pre-feasibility Reports*
- *Business Plan*
- *Market Research Reports*
- *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



Who do we serve?

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

Sectors We Cover

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

Sectors We Cover *Cont…*

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

Sectors We Cover *Cont…*

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

Sectors We Cover *Cont…*

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

Sectors We Cover *Cont…*

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

Sectors We Cover *Cont…*

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

Sectors We Cover *Cont…*

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

Sectors We Cover *Cont…*

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

Contact us

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