



Engagement Examples

On-Time * On-Target * On-Budget

Freedonia Custom Research, Inc.
767 Beta Drive
Cleveland, Ohio 44143
+ 1 440 684 9600
info@freedonia.com
www.freedonia.com

Table of Contents

Advanced Materials	1
Materials Science Company and Market Due Diligence.....	1
Advanced Materials New Market Opportunity Assessment	1
Automotive and Transportation	2
Aerospace Component Market Opportunity and Acquisition Candidate Assessment	2
Aviation Electronics Market Opportunity Assessment.....	2
Acquisition Due Diligence – Automotive Aftermarket Product Market Assessment.....	2
Dealer Network Root-Cause Assessment	3
Industrial Equipment Market Potential Analysis	3
Market Positioning Assessment within the Industrial Equipment/Transportation Sector	3
Automotive Industry Competitive Intelligence	4
China Motorcycle Market Assessment	4
Building and Construction	6
US Market Entry Feasibility & Plant Location Assessment.....	6
European Construction Equipment Market Environment Assessment.....	6
Wholesale and Retail Market Structure Assessment	7
Building and Construction Material Growth Opportunity Assessment.....	7
Acquisition Target Identification in the Building Product Sector	8
Competitive Analysis of Regional Markets	8
Building Product Market Attractiveness.....	8
Risk Assessment & Litigation Support	8
Manufactured Stone Market Assessment	9
Window and Door Market Opportunity Assessment	9
Building Product Market Growth Assessment.....	10
Geomembranes Market Assessment.....	11
Engineered Sealing Market Due Diligence.....	11
Mexican Construction Material Market Demand and Channel Assessment	11
Construction Market Assessment.....	12
Acquisition Target Identification	12
Global Fiberglass Pipe Market Assessment	13
Large and Small Diameter Pipe Market Assessment	13
US and European Specialty Insulation Market Assessment	14
Aluminum Composite Panel Market Assessment.....	14
Security Equipment Market Due Diligence.....	15
Engineered Quartz and Solid Surface Material Market Assessment.....	15

Chemicals.....	16
Due Diligence – Market Assessment	16
Market Gap Assessment in the Adhesives Sector	16
New Market Assessment	17
Competitor Cost Benchmarking.....	17
Targeted Customer Analysis	17
Food Additive Market Assessment	18
Global Lubricants Market and Value Chain Assessment	18
Sealant Market Assessment.....	19
Competitor Sales Analysis.....	19
Sustainable Chemicals Market Growth Analysis	19
Renewable Chemicals Market Trend Assessment.....	20
Global Polyol Sweetener Market Assessment.....	20
Global Market Assessment of Acrylic Acid Derivatives	20
Alternative Markets Opportunity Assessment	21
Household Goods.....	22
Retail Channel Analysis in the Wet Wipe Market.....	22
Market Opportunity and Acquisition Assessment.....	22
Market Due Diligence of Industrial Component Manufacturer	22
US Consumer Water Purification Market Assessment	23
US Garden Hose Market Assessment	23
Commercial Appliance Market Opportunity	23
Industrial Components.....	25
Acquisition Support – Identification of Potential Targets	25
Industrial Component Sourcing Practices Survey.....	25
Industrial Component Market Opportunity Assessment	25
Industry Structure and Value Chain Assessment of an Industrial Component Sector	26
Electric Motor Market Assessment and Key Buying Criteria.....	26
Maintenance Services Market Assessment	27
Sealing and Tube Market Opportunity	27
Engineered Sealing Market Due Diligence.....	28
Emerging Electric Power Technology Market Assessment and Key Buying Criteria	28
Niche Market Opportunity Evaluation within the Nuclear Power Industry	28
Heavy Truck HVAC Market Assessment.....	29
Industrial Controls Market Assessment.....	29
Precision Ball Bearing Market Study.....	30
Refractory Customer List Development	30

Industrial Equipment.....	31
New Market Feasibility Study and Potential Customer Survey in the Packaging Equipment Industry	31
Customer Intelligence – Plant Operations Assessment.....	31
HVAC Equipment Competitive Intelligence	31
Industrial Equipment Market Opportunity Assessment.....	32
Industrial Equipment Market Assessment.....	32
US Swiss Lathe Market Assessment.....	32
Packaging Equipment Purchasing Criteria	33
Downhole Drilling Motor Market Assessment	33
Janitorial and Sanitation.....	34
Industrial Supply Product Opportunity Assessment.....	34
Regional Market Opportunity and Channel Assessment.....	34
US Commercial Paper, Wipes and Soap Market Assessment.....	34
Medical and Life Sciences	36
Medical Device Market Opportunity Assessment	36
Global Medical Supplies Market Opportunity Assessment	36
Market Opportunity Assessment of Acquisition Target	37
Pharmaceutical Market Assessment and Competitor Analysis.....	37
Biopharmaceutical Capital Spending Study	37
US Healthcare Wipes and Mops Market Assessment	37
Packaging.....	39
Customer Needs and Trends Analysis in the Flexible Medical Packaging Industry.....	39
Flexible Pharmaceutical Packaging Market Size and Environment Analysis	39
Secondary Packaging Market Assessment.....	39
Market Due Diligence of Packaging Materials Firm.....	39
Product Portfolio Diversification Assessment in the Packaging Sector.....	40
Industrial Bag Market Study	40
Consumer Packaging Competitive Assessment	41
Pharmaceutical Packaging Market Assessment	41
Global Packaging Market Assessment	41
Global Bulk Packaging Market Assessment	42

Plastics	44
Plastic Resin Product Line Expansion – Market Outlook & Competitor Assessment.....	44
Potential Resin Customer Analysis	44
Performance Fiber Technology and Market Opportunity Assessment.....	44
Global Competitive Analysis by Technology and Region.....	45
Performance Fiber Market Opportunity and Acquisition Assessment.....	45
Strategic Market Analysis for Biodegradable Resins	46
Rubber Markets.....	47
Industrial Rubber Compounding Market Assessment.....	47
Compounded Rubber Strategic Market Assessment in Mining Applications.....	47
Compounded Rubber Strategic Market Opportunity.....	48
North America/Europe Strategic Market Analysis for Silicone Rubber.....	48
Steel Markets	49
Target Market Assessment for Steel Products	49
European Steel Market Assessment	49
China Cold-Rolled Steel Market Assessment.....	49

Advanced Materials

Materials Science Company and Market Due Diligence

For a private equity firm targeting a materials science company for acquisition, we analyzed the market growth opportunity and competitive threats to the target company's product line that primarily serves three end-use markets. In order to gather feedback regarding the target company's market positioning, customer relationships and brand perception, Freedonia conducted primary research interviews with customers across the three primary end-use markets as well as with direct competitors. During the course of the primary research interviews, Freedonia analyzed alternate technologies to determine the potential threat of substitution that would adversely impact future growth of the target company. Further, Freedonia forecast the health and growth prospects of the underlying end-use markets that the target company's products serve in order to validate pro-forma estimates provided by the target company.

Advanced Materials New Market Opportunity Assessment

For a leading global manufacturer of engineered materials, we analyzed the size, degree and likelihood of opportunities in new applications by multiple product categories. The engineered material was typically regarded as a commodity product, but the client desired to find new, high margin opportunities for this product line. To identify the size and nature of these opportunities, Freedonia conducted analysis and primary research interviews from multiple viewpoints in 22 new and different highly specialized market segments. As part of Freedonia's research process that filtered out low-likelihood, low-margin potential end-use segments, Freedonia provided eight unique segments, with multiple applications in these segments. We accomplished this by taking into consideration in-house macro- and microeconomic indicators, in-house demand estimates and growth rates by end-use market, further industry analysis, and significant primary research with competitors and end-users.

As a result, the client contact (a sales executive with 20 years of experience in the market) was able to focus his commercial team on new opportunities in previously unidentified market segments.

Automotive and Transportation

Aerospace Component Market Opportunity and Acquisition Candidate Assessment

For a leading aerospace component manufacturer involved in an acquisition process including several companies, we assessed market size and growth estimates for products manufactured by these companies through both primary and secondary research. The research and analysis included:

- Global market outlook highlighting key factors that will drive or retard growth
- Demand estimates for select products used in aerospace applications
- Market share estimates for acquisition targets along with their top competitors
- Competitor and acquisition profiles providing basic company information, sales estimates, related product estimates, estimated market share, key product lines offered, major markets served, growth outlook, industry issues, major customers, and strengths and weaknesses

Aviation Electronics Market Opportunity Assessment

For a leading global electronics company, Freedonia prepared an assessment of the US and Mexican markets for airfield ground lighting and control systems. Conducting over 40 interviews with general, civil and military airfields as well as engineers, installers of aviation equipment, government associations and competitors, Freedonia's research developed findings regarding:

- Overall North American (US and Mexico) market for airfield ground lighting equipment, regulators and control systems, including projected five-year annual growth rates, segmented by product category
- Market share analysis and competitor profiles
- Funding analysis for airfield lighting projects and the impact of government funding programs versus alternative funding
- Unmet needs and key buying factors for airfield lighting equipment, including the feasibility of outsourcing the maintenance of these systems
- Technological trends, such as airport integration requirements and alternative technology usage

Acquisition Due Diligence – Automotive Aftermarket Product Market Assessment

For a leading US private equity firm considering entry through acquisition into a segment of the automotive aftermarket, Freedonia Custom Research:

- Determined key macroeconomic factors affecting future demand and developed indicators and forecasts for these crucial elements

- Assessed emerging OEM technology and its expected impact on demand
- Reviewed OEM maintenance trends, consumer trends and behavior concerning automotive maintenance, and determined their expected impact on the market outlook
- Forecasted outlook for this aftermarket segment based upon a comprehensive review of the market drivers

Ultimately, our client successfully completed its acquisition.

Dealer Network Root-Cause Assessment

For a global manufacturer of automotive components and equipment interested in a root-cause analysis of its dealer network's performance, we assessed the dealer network's sales practices and factors influencing its supplying competitors' products. Based on extensive primary research interviews with dealers, end-use customers and competitors, we identified:

- Drivers to dealers' performance
- Key factors influencing dealer sales practices (eg, margins, warranty policies, product features, aftersales support)
- Best practices used by the high performing dealers
- Brand perceptions of end-use customers
- Recommendations for improving dealer network sell through

Industrial Equipment Market Potential Analysis

For a major industrial equipment manufacturer, Freedonia assessed the industry structure and five-year market outlook for construction and off-road vehicles, agricultural equipment, recreational boating, buses and trucks. The deliverable provided the client with a view of future growth in the end-use markets it served or targeted for expansion. Based on both primary and secondary data sources, we analyzed:

- Regulatory issues and trends affecting each targeted industry
- Regional factors impacting demand in the US
- Key producers, market share estimates and trends within each industry
- Profiles of 20 leading product manufacturers in the industry, including basic company information, products made, key plant locations, total sales and product-related sales
- Estimates of historical, current and future shipments by product segment

Market Positioning Assessment within the Industrial Equipment/Transportation Sector

For a \$10+ billion diversified heavy machinery and construction equipment company, we conducted a comprehensive market opportunity assessment of a specific material handling equipment segment the company had entered. During the course of the study, Freedonia conducted primary research with 40 current and potential customers, six competitors and 20 dealers. Specific areas of analysis were:

- The customer analysis included the segmentation of customers into six discrete groups and the identification and prioritization of each customer segment's key buying factors
- Dealer analysis determined key elements of high performing dealers such as competitive brands carried, duration of relationship and number of dealer locations
- The promotion assessment activity identified competitors' use of promotional programs, targeted customer segments, frequency of use and program effectiveness
- The competitor analysis identified competitors' positioning in the market, target segments and brand reputation. Competitors' performance across the key buying factors of each customer segment were benchmarked against our client based on customer interviews
- We provided actionable recommendations for our client's positioning of its products and brand in the market and its development of its dealer network based on specific primary research data and Freedonia analysis

Automotive Industry Competitive Intelligence

For a major supplier of automotive interior components surveying the competitive landscape, Freedonia developed detailed profiles of leading Tier 2 suppliers of a specified automotive interior component and determined the supply chain of these components for every light vehicle manufactured in North America. Each competitor profile included:

- Plant locations and type of component produced
- Component production and production capacity by facility
- Automotive programs supplied, by plant, from 2002 to 2007

Despite the North American automotive supplier industry undergoing numerous plant idlings and closures, Freedonia successfully developed the requested competitor profiles, as well as similar data for several smaller competitors of the client.

China Motorcycle Market Assessment

For a leading Indian manufacturer of two- and three-wheeled motorcycles weighing market entry options in China as part over its growth strategy, Freedonia Custom Research assessed demand, competition and growth prospects for three major regions including 17 key provinces. Key insights were developed for regions with respect to the regulatory, tax and urban versus rural market environment, as well as demand and growth prospects. The final report included both quantitative and qualitative findings, such as:

- Demand and forecast for two- and three- wheeled motorcycles in the named provinces
- Detailed pricing analysis from factory to consumer
- Detailed analysis of taxation and regulatory costs at each step of the value chain
- Analysis of the macroeconomic factors driving/inhibiting growth

- A comparative analysis and profiles of the major two- and three-wheeled motorcycle manufacturers

Based on the data collected and analyzed, Freedonia Custom Research recommended six to seven provinces that provided the best opportunity for the client to locate. Freedonia Custom Research then escorted the client to the top province to conduct face-to-face interviews.

Building and Construction

US Market Entry Feasibility & Plant Location Assessment

For a large, diversified Asian manufacturer, we assisted in determining the feasibility of entering the US market, including where to establish its manufacturing presence in the US. To do this we:

- Reviewed the competitive landscape establishing market size, market share and competitive positioning
- Determined demand by state and sub-region
- Identified channels of distribution and a comprehensive list of potential distributors
- Determined pricing, availability and geographic location of raw materials
- Compiled economic data concerning all operating costs (utilities, labor, taxes, etc.)
- Developed detailed financial pro-forma statements
- Made final recommendations for plant locations

Market Analysis – Large Diameter Pipe Product and End-Use Segmentation

For a multinational plastic pipe manufacturer, we analyzed the large-diameter pipe market in the US to determine the market size (in tons and dollars) by type of pipe, diameter and end-use, and the forecast growth rates of each. The final deliverable provided industry compliance specifications for each product classification and included:

- Market size estimates:
 - By material and diameter from 1997 to 2012
 - By end-use market from 1997 to 2012
- Profiles of leading industry participants and the types of products they manufacture

European Construction Equipment Market Environment Assessment

For a manufacturer of heavy-duty construction equipment that was seeking growth and considering expansion into Western Europe, we conducted an extensive analysis of the market. Our approach involved significant primary research “on the ground” in Europe in an effort to understand this diverse market. Our approach incorporated analysis of the market environment for the five leading countries, including economic drivers, regulatory issues, forecasted market demand, and customer and competitor analysis. The final deliverable included detailed breakouts of the markets in each country, including:

- Key indicators for construction equipment demand
- Existing fleet size and type
- Sales of related equipment

- Aftermarket sales of related equipment and parts
- Component lifecycles
- Customer analysis including:
 - Size of fleet
 - Typical annual purchases
 - Key buying motives
 - Perceptions of competitive equipment suppliers
- Competitor Analysis
 - Product features
 - Production plant and capacity information
 - Pricing
 - Distribution and sales practices
 - Key customer identification

Wholesale and Retail Market Structure Assessment

For a South American manufacturer, we assessed the structure of the wholesale and retail markets for one category of its building products. The deliverable included profiles of the fifteen leading US wholesale distributors of and fifteen leading retail outlets for the building product. Each detailed profile included information concerning:

- Current suppliers of the product
- Prices paid, formats and volumes purchased
- Minimum purchase order amount
- Types of customers served
- Openness to new suppliers
- Perspectives regarding supplier value proposition

Building and Construction Material Growth Opportunity Assessment

For a major international building and construction material producer seeking new growth opportunities within the industry, we analyzed wholesale distribution channels to identify building and construction markets greater than \$5 billion and assessed market opportunities. The project deliverable provided:

- Current US market size for 15 types of building products
- A description of the distribution chain, estimated markup and level/type of service generally provided for markets valued over \$5 billion
- A list of ten leading distributors for each major market that included name, location, estimated sales and profitability estimates

Acquisition Target Identification in the Building Product Sector

For a building product company looking to acquire a firm within a new product category, we identified 36 North American manufacturers of the building product that could be potential acquisition targets. Profiles of each of the 36 companies identified included:

- Basic company information
- Corporate structure
- Estimated total revenue
- Related product revenue
- Types of products manufactured
- Market share
- Channels to market
- End-use markets served

Competitive Analysis of Regional Markets

For a leading global supplier of cement and concrete products, Freedonia Custom Research assessed the world market for a niche cement product serving a specific end-use market. The client sought a clear picture of worldwide and Middle East consumption of the product by region and the market shares held by selected manufacturers. The project deliverable outlined:

- Global and Middle East demand for the product, in both value and volume terms
- Market share for the top five to ten producers in the Middle East and worldwide
- Competitor summaries with each company's sales and market share of related products across regions

Building Product Market Attractiveness

For a multinational building products company seeking growth in the US siding market, we conducted a comprehensive market opportunity assessment of the US siding market for a specific material type. The analysis included demand estimates and five-year growth rate estimates, market share for producers of the selected siding material, value chain assessment, market trends and homebuilder insights. We identified siding trends and preferences by census region and determined the purchasing decision-making process and roles. For each of the competitors producing the selected products, we identified the types of products they manufactured, estimated related product sales, distribution channels, market share and their outlook on the market.

Risk Assessment & Litigation Support

For a national insurance underwriter looking at the historical usage of a specialty siding and roofing material, we determined the historical percentages of US housing stock in 1995 that utilized the particular roofing and siding material. Our methodology began with determining

current levels of housing stock and determined material usage for the target year by investigating new, and repair and improvement construction trends over the last 100 years. Housing stock analysis detailed roofing and siding data into regional and subregional markets, as well as by specific material type.

Manufactured Stone Market Assessment

For a major international producer of building materials, Freedonia Custom Research assessed the US market for manufactured stone veneer in order to help the company vet its potential as a market entrant. We enhanced high-level statistics on siding demand by leveraging our own macroeconomic indicators and conducting interviews with numerous manufacturers, distributors and installers of relevant building products. The final report included:

- Total historical, current and forecast demand estimates for the US in square feet
- Detailed breakdowns of market demand and growth in terms of US census region and major segment of construction spending (residential and nonresidential)
- Findings on regional preferences for manufactured stone and competing types of siding
- An evaluation of the current structure of the manufactured stone veneer industry, including:
 - Profiles of key producers with a discussion on current market share and any historical shifts thereof
 - Threats and barriers to new entrants
 - An assessment of manufactured stone veneer's current position on the product life-cycle curve
 - Significance of imports and exports
- A description of channels to market for the product, including:
 - Methods of distribution
 - Identification of shipping thresholds
 - Assessment of the level of fragmentation of distributors
- Customer profiling in terms of key buying factors, the typical purchasing process and the impact of competitor brand equity on buying decisions

Window and Door Market Opportunity Assessment

For a leading building and construction material company, we conducted a comprehensive analysis of the eastern seaboard and gulf coast markets for windows and doors. Primary research interviews with residential builders, building and construction material distributors and dealers, competitors, and regional building code officials yielded significant intelligence and input to the demand analysis. Freedonia's research and analysis activities provided the following output related to a specific building and construction material product segment:

- Demand and five-year growth rate estimates for the new and replacement markets in the 12 states within the scope of the study, as well as the total US market

- Analysis of building code specifications, enforcement and adoption of hurricane-related regulations was considered part of the forecasting activity
- US and regional market share estimates for our client and its primary competitors
- Competitor profiles providing related product annual sales, channels to market, product positioning, service offerings and regional markets served
- Distribution channel assessment providing market share by channel, customer channel preferences and distribution channel trends by region

Building Product Market Growth Assessment

Freedonia conducted a comprehensive analysis of the US metal building market for a large multinational producer of building materials seeking growth opportunities. We assessed the industry structure, trends, market size, value chain opportunities and purchasing decision-making processes for a specific building product through both primary and secondary research. More than 40 industry players were interviewed, including building material suppliers, building material manufacturers, metal building contractors and government/trade associations. To help the client understand shifts in the industry structure and market opportunities, we developed:

- Current and projected five-year market size with growth rate for a product in the metal building market
- Value chain analysis of the metal building market segment that included participants' path to the market and role, purchasing decision processes and trends regarding the composition of the value chain
- Estimate of market share for major building material suppliers to the metal building market
- Competitor profiles included major related products offered, related product revenue, metal building industry market share, channels to markets, major customers, and level of vertical integration

Exterior Railing Market Analysis and Product Segmentation

For a leading manufacturer of exterior railings looking to increase its market share, we provided a market demand assessment for the US exterior railing market. Primary and secondary research was conducted to develop market demand and growth for residential and commercial exterior railing that included:

- Market size by region
- Regional demand by product material type
- Market demand by application
- Projected five-year growth rates by application and material type
- A sales channel analysis that included discussion of the distribution channels and unmet needs in the market
- Industry trends

Geomembranes Market Assessment

For a major building products company considering further investments in its geomembranes division and new strategic directions in the greater product family of geosynthetics, we investigated current and historical demand for all major products on the North American market, as well as developed demand forecasts in terms of product, resin type and application. Applications were, in turn, broken down in terms of each geosynthetic product. Moreover, we interviewed dealers, geotechnical engineers and end-users to develop a *Voice of the Market* report, which identified:

- Important value propositions of the various geosynthetic products
- Unmet needs and expectations among customers
- Strengths and weaknesses of major suppliers (including the client)
- Key issues for the company to differentiate itself among its competitors.

Finally, Freedonia supported the client's efforts to facilitate effective communication among major stakeholders by personally presenting our findings to key executives at the company's headquarters as well as at an off-site conference of selected distributors.

Engineered Sealing Market Due Diligence

For a private equity firm with investment interests in the engineered sealing market, we provided analytical findings to support its due diligence efforts in a rapid timeline. Freedonia analyzed a specific value segment of the industry by supplier and product type. Although we were committed to providing analysis for only the top five suppliers, our efforts, in an extremely limited timeframe, resulted in demand estimates for highly specialized end-use segments for over 25 key suppliers in eight different product segments. We also provided top-level estimates in a specialized segmentation to suit the client's needs. To meet the client's time sensitive requirements, we accomplished this analysis in a fraction of the time that Freedonia typically requires for custom engagements of comparable scale.

Mexican Construction Material Market Demand and Channel Assessment

A manufacturer of raw materials was seeking to understand demand for its product in the Mexican commercial and residential construction markets to develop distinct vertical market and sales channel strategies. Freedonia conducted an extensive analysis of the construction market, which included significant primary research within the Mexican market and the development of new models for measuring demand and growth for various construction sectors. The study included company profiles and market share analysis of the top 10 value-added processors serving the market. The final deliverable included detailed breakouts of demand by:

- Market channel—distributor and value-added processor
- Value-added processors channel for both end markets by product type

- Residential
 - High-end
 - Low-end
- Commercial
 - Office
 - Commercial
 - Institutional
 - Multi-unit residential
 - Other
- Each segmented by the six major product types

Construction Market Assessment

For a leading multinational chemical manufacturing corporation seeking insights into the US construction market, we derived demand estimates for 19 product categories from Freedonia industry studies that the client had already purchased. The deliverable was provided in an Excel spreadsheet that organized demand data for each major and minor product category, and also provided additional data to fill in any gaps that were identified during the course of the project.

Acquisition Target Identification

For a global, diversified manufacturer exploring potential acquisition targets in the North American fastener industry, Freedonia identified and profiled eight distributors of a specific type of fasteners that met an established revenue range. For each of the profiled companies, Freedonia provided data and estimates of:

- Ownership structure
- Total company revenue
- Related fastener sales
- Key products
- Regional focus
- Financial information
- Strengths/weaknesses
- Major suppliers
- Major customers
- Distribution center locations
- Likely interest in being acquired or partnering

With these profiles, the client was able to downselect specific companies for further analysis, discussion and due diligence.

Global Fiberglass Pipe Market Assessment

For a leading international pipe manufacturer seeking an assessment of the fiberglass pipe market, we analyzed the large diameter pipe market for North America, South America, Europe, Russia, Asia/Pacific, GCC (Gulf Cooperation Council), MENA (Middle East/North Africa), Sub-Saharan Africa and Rest of World. During the course of the study, Freedonia conducted more than 150 primary research interviews with industry constituents including EPC firms, fiberglass and competitive pipe manufacturers, brokers/agents, extrusion machinery manufacturers, oil and gas companies, and governments in each global region. The final report included:

- Key macroeconomic and end-use application indicators for pipe demand
- Current and forecasted market demand estimates for fiberglass pipe broken out by product segment, including industrial, oil and gas, petrochemical, desalination and power, municipal/infrastructure, and water distribution
- Profiles of 15 fiberglass pipe manufacturers, including estimated sales and market segment focus by region
- Regulatory and environmental trends
- Competitor information, target market segments, SWOT analyses and market share estimates
- Purchasing behaviors and insights – discussion of drivers and barriers to adoption of fiberglass pipe across market segments and regions

Large and Small Diameter Pipe Market Assessment

For a key manufacturer of piping systems and plumbing-related products exploring several new product development initiatives, we conducted a detailed study of client-directed segments of the global pipe industry. Within an extremely fragmented market, Freedonia successfully developed:

- Demand within narrow client-specified product categories and geographic markets
- Detailed market assessments, including volume and value consumption by:
 - Geographic regions
 - Product material types
 - End-use markets
- Analysis of trends and demand forecast
- Information on material types, including market trends, factors driving demand and insights into product applications

In an industry heavily impacted by macroeconomic conditions and commodity prices, Freedonia's careful research and analysis accurately informed the client's exploration of potential expansions into new product categories and geographic regions.

US and European Specialty Insulation Market Assessment

A multinational insulation manufacturer engaged us to investigate the demand for a new type of insulation called aerogel. The firm was concerned that process advances potentially reduced the cost of production to the point where this could be a “killer app” to the insulation industry. As part of our investigation, we conducted research and analysis that included:

- Developing and modeling key indicators that would likely drive demand for insulation
- Creating a model of adoption that allowed us to forecast demand for aerogel in the US and Europe in 2012
- Generating a model to estimate aerogel manufacturing costs
- Documenting the manufacturing process, including potential bottlenecks
- Developing in-depth competitor profiles of key manufacturers
- Providing SWOT analysis and recommendations

As a result of the study, the client was reassured that aerogel insulation was not a credible threat to its business in the foreseeable future and therefore there was no need to pursue an affiliation or acquisition in the market at this time.

Aluminum Composite Panel Market Assessment

For a multinational manufacturer of steel prefabricated buildings, panels and related components, we examined the market for aluminum composite panels (ACP). The company had recently developed a new product based upon steel that would compete directly with ACPs. With this new product, the company sought to understand the competitive landscape and size of the markets in Russia, Europe and the Middle East/North Africa (MENA). In the course of this study, we:

- Provided key insights and observations regarding the ACP market in the desired geographies
- Offered commentary and analysis of key industry suppliers
- Developed a five-year forecast for ACPs in each of the geographic regions
- Analyzed the key technological trends
- Provided insights into key buying factors and switching costs
- Analyzed and commented on regulatory impacts on the market
- Developed lists of potential customers by region

As a result, the client was able to make an informed assessment of the size and growth rate of this market. Additionally, the client was able to determine the best mix of product attributes valued by customers in these regions.

Security Equipment Market Due Diligence

For a private equity firm considering investment in a manufacturer, distributor, integrator and installer of physical and electronic security equipment and systems, Freedonia Custom Research analyzed the industry structure and outlook within the corrections market segment. Products within the scope of the study were security hardware (eg, locks, bars), electronic security (eg, CCTV, alarms, control panels, access controls) and communication systems (eg, paging, intercom). As part of the study, Freedonia:

- Assessed the budget and fiscal outlook and prison populations of ten target states, and analyzed the impact of these variables on the target company's project backlog and revenue projections.
- Identified underlying drivers (eg, trends in facility security requirements, growth of private prisons) to the corrections equipment market that may have impacted the target company's position and outlook, and therefore, the buyer's view of the acquisition target.
- Developed SWOT analyses of the target company and its primary competitors to determine the company's position, and strategic opportunities and challenges within the corrections market segment.
- Conducted primary research interviews with public prison systems, private prison operators, general contractors, security equipment manufacturers, architects and government budget offices to gather data and perspectives across the value chain related to the target company, competitors, industry trends and the market outlook.

Engineered Quartz and Solid Surface Material Market Assessment

For a venture-backed startup company in the engineered quartz and solid surface material industry, Freedonia Custom Research assessed the current and forecast demand for those products and sought comments from industry participants regarding their impressions of the client's proprietary manufacturing process. Specific deliverables included:

- Global demand in square meters for 2008 through 2013
- Approximate historical and forecast growth of the market
- Competitor profiles of the top producers
- Market insights concerning the client's value proposition
- Profile of a major engineered quartz machinery manufacturer

The information gathered will be used by the client to position and market this company as the venture capital firm prepares to divest this business from its portfolio.

Chemicals

New Product Launch – Opportunity Assessment in the Chemical Industry

For a large global chemicals manufacturer considering the launch of a flame retardant product, we researched, developed and presented findings for the US, Western Europe and Asia including:

- Total market size by region
- Development of current and forecast demand by application, market, region and competitive product
- Technical and regulatory issues discussion and implications
- Survey results of end-users that presented an understanding of their buying motivations and technical requirements
- Identification of top markets and potential customers (including detailed customer profiles)
- SWOT analysis of competitive products

Due Diligence – Market Assessment

For a bank acting as a funding agent for a company participating in the oil and gas well stimulation market, we analyzed the underlying end-use industries served by the company. The final deliverable was a market environment report that could be shared with potential lenders to understand the opportunity and outlook for the market. The report included:

- Macroeconomic drivers impacting the oil and gas market
- Supply and demand outlook for the petroleum and natural gas markets for ten years
- Production data for petroleum and natural gas
- Exploration and drilling activity
- Pricing history of oil and gas
- Correlation analysis of well drilling activity and stimulant demand

Market Gap Assessment in the Adhesives Sector

For a chemicals manufacturer seeking to understand the unmet adhesives needs and product requirements of pressure sensitive tape (PST) manufacturers, we assessed the key drivers to product acceptance among major PST manufacturers and provided an overview of the market structure and trends. The analysis of the PST market included technology trends, competitive climate and motivations and obstacles to change. The final deliverable included profiles for 36 major PST producers including:

- Annual adhesive use
- Target price/wet pound

- Current suppliers
- Technical data:
 - Resin type
 - Adhesive technology
 - Backing type
- Markets served

New Market Assessment

For a major polymer manufacturer seeking to explore potential new applications for a current product, Freedonia Custom Research conducted an analysis of the pharmaceutical and nutritional markets in the US and Europe. We reviewed technical literature in these fields, conducted in-depth interviews with more than 20 producers, distributors and end-users, and contacted the Food and Drug Administration to obtain specific regulatory requirements for gaining marketing approval for the client's product. Our report:

- Identified application areas in these markets with high sales potential
- Estimated current value in use and forecast market size for each application area
- Discussed how the attributes of the client's product compare to those of other polymers used in these markets, identifying unmet needs, disruptions that may be taking place, and key motivations and obstacles to change
- Provided recommendations concerning attractive development areas, and identified potential partners that may have an interest in pursuing development

Competitor Cost Benchmarking

For a mineral mining company, we analyzed competitors' cost structures to determine the potential to market a production by-product. In order to establish potential pricing and the profitability of bringing the finished by-product to market, we developed cost structure models for the competitors, which were mostly private companies. Using the estimated competitor financial statements, our client was able to understand the pricing flexibility its competitors had to react to its market entry. The final deliverable included:

- Estimated competitor financial statements
- Description of competitors' manufacturing processes and staffing levels
- Definition of competitor product mix and pricing

Targeted Customer Analysis

Freedonia conducted a comprehensive analysis of an industrial building material company for a leading global chemical producer seeking deeper insights into the target company's purchasing practices and use of a selected high growth chemical. Over 35 interviews were conducted with current and former employees of the target company, which yielded significant intelligence and input for analysis. Freedonia provided the client with:

- An estimate of company use of the chemical in volume terms
- Identification of key buying criteria
- Awareness and impressions of the client and major competitors
- Level of interest in potential future partnerships
- Identification of unmet or underserved needs
- Perceived challenges and future growth opportunities

Food Additive Market Assessment

For a major Asian manufacturer of food additives and specialty chemicals, we assessed the global, Asian and Chinese markets for specific products including xanthan gum and monosodium glutamate. Freedonia's US and China offices collaborated on the research, analysis and synthesis of the project findings. Highlights of the final deliverable included:

- Historical, current and forecast demand tables for specific food additive products including unit (tons), price and value estimates for a ten-year time period across global regions
- Regional demand tables with import and export estimates
- Discussion of product trends and factors impacting supply and demand such as regulatory issues and capital investments in production by competitive firms
- Competitor profiles providing plant locations and capacity, products offered, geographic market served, total company revenue, related product sales (units and value), estimated market share and recent capital investments

Global Lubricants Market and Value Chain Assessment

For a major chemicals manufacturer examining further integration along the synthetic lubricant value chain, we analyzed the supply chain and relationships among value chain constituents, and established the global demand for our client's products and competitive materials. Our approach took a 360 degree view of the value chain as well as a top down approach of analyzing global lubricants including:

- Lubricant product demand by type
- Synthetic lubricant demand
- Basestocks demand in synthetic lubricants
- Synthetic lubricant producers' market share by product type
- Value chain decomposition
- Value chain mobility opportunities
- Industry constituent profiles – including revenue, market share estimates, key products, channels to market, markets served and key customers for each group:
 - Synthetic basestock producers
 - Lubricant additives producers
 - Synthetic lubricant producers

Sealant Market Assessment

For a leading North American manufacturer of construction products, Freedonia Custom Research assessed the market for one-part urethane sealants as a key contribution to the company's marketing strategy. Because the product was sold exclusively through third-party distribution, the client required an independent, unbiased evaluation of the market and the potential impact of proposed changes on its marketing mix. The final report included:

- Demand estimates for one-part urethane sealants in terms of market channel (eg, big box retail, "division 7" distributors) and customer segment (eg, homebuilders, waterproofing contractors)
- Profiles of each major distribution channel including:
 - The value proposition of each channel
 - An analysis of margins and profitability
 - Identification of key buying factors particular to the channel
 - A deeper investigation of the big box retail channel including positions of competitors therein
- Profiles of customer segments in terms of key buying factors, channel preferences, price sensitivity, expectations for customer support and so on
- Profiles of major competitors including market share estimates and strength of brand

Competitor Sales Analysis

For a leading chemical manufacturer interested in a competitor's participation in the Chinese sealant market, we conducted research interviews with employees, agents and distributors to assess its market presence. The final report showed estimated company sales, average prices and imports segmented by product.

Sustainable Chemicals Market Growth Analysis

Freedonia conducted a comprehensive analysis of the US renewable chemicals market for a global leader in agricultural processing seeking to understand the growth trends in several end-use segments. We developed demand estimates, both historical and forecast, for eight product types across end-use segments including construction, household products, industrial chemicals, mining and drilling, packaging, plastic and personal care. The results of the project provided the client with reliable industry insights to enable its business strategy development and market position.

Renewable Chemicals Market Trend Assessment

For a leading global investment bank seeking to better understand the Chinese and global markets for selected renewable chemicals, Freedonia's China and US offices collaborated to analyze the market from both upstream and downstream value chain positions. The project deliverable provided:

- Historical and forecast demand, in value and volume terms; growth rate estimates for each product, for China and the world; and import/export statistics for China
- A discussion of global and Chinese market trends, focusing on industry competition, supply, demand, substitute products and pricing
- China and global market share estimates across selected product categories

Global Polyol Sweetener Market Assessment

For an Asian manufacturer of natural and artificial sweeteners, we investigated the demand for a specific class of artificial sweeteners, called polyols, and assessed the likely success that a new sweetener in development would have in capturing demand from the incumbent sweeteners. In conducting this study we engaged in several key analytical activities, including developing:

- Key indicators of demand for artificial sweeteners
- Points of view regarding trends in dietetic food, legislative/regulatory conditions, pricing and differences in international influences
- Demand for 2007 and projecting demand for 2009, 2012 and 2017 in terms of dollars and pounds by region and by seven different end-use segments
- A robust model of likely new product adoption over the forecast period based on various characteristics of the new sweetener versus the incumbents
- Key insights related to important buying factors of end-users

As a result, the client was able to make informed decisions about which geographies and segments would be most open to switching to its new sweetener. This was especially important as the firm was scaling up production.

Global Market Assessment of Acrylic Acid Derivatives

A client engaged us to investigate global demand for acrylic acid derivatives. The client was in the midst of building an acrylic acid manufacturing facility and needed to know which derivatives had the greatest growth and pricing potential. Our analysis focused on:

- Developing and modeling key indicators that would likely drive demand for acrylic acid derivatives
- Creating a method that allowed us to forecast global demand for each derivative for 2007, 2012 and 2017 in metric tons
- Developing a model to estimate global derivative capacity

- Crafting a method that allowed us to forecast global demand for each derivative for 2007, 2012 and 2017 in dollar per kilogram terms

As a result of the study, was able to make informed decisions as to where demand and pricing were most favorable for each of the acrylic acid derivatives and also to better understand the capacity/pricing/demand dynamic, which will be useful in future manufacturing expansion decisions.

Alternative Markets Opportunity Assessment

For an environment technology and specialty chemical firm raising capital for a new plant through a debt offering, we assessed the market opportunity for its products in alternative applications in the event that the target market did not develop as expected. For the specialty chemical within the scope of the project, Freedonia estimated US production capacity, trade activity and demand across three end-use segments. Within each end-use segment, we estimated current demand, forecasted future demand out five years, and discussed pricing levels and export potential for the chemical within each segment. Based upon forecasted demand and production capacity, Freedonia analyzed the over/undercapacity for the specialty chemical over the forecast period and the potential impact on product pricing.

During the course of the study, Freedonia conducted primary research interviews with industry constituents across the value chain – including US and China-based competitive specialty chemical suppliers, end-users across each of the three market segments, local and regional governments, and distributors – to develop and challenge hypotheses and assumptions related to the market and to gather specific competitive intelligence. The Freedonia study was provided to rating agencies and investment banks as an objective third party assessment of the alternative markets for the specialty chemical to assist in the analysis of the prospects for the subject company and its debt offering.

Household Goods

Retail Channel Analysis in the Wet Wipe Market

For an international contract manufacturer of wet wipes that was targeting expansion in the US market, we provided key insights regarding how selected tier one mass merchandisers, grocery and drug store chains purchase and view private label wipes. Based upon extensive primary research, the final deliverable detailed the following elements for over a dozen of the top US retailers' private label wipes programs:

- Categories of wipes carried and number of suppliers
- Logistics and distribution requirements for private label suppliers
- Vendor evaluation process
- Commercial terms
- Perceptions of current and competitive suppliers
- Interest in alternative programs

Market Opportunity and Acquisition Assessment

For a large erosion-control product manufacturer interested in an assessment of the US market for a landscaping material, we evaluated the demand and growth potential. During our primary and secondary research, we obtained input from major producers, competitors, potential customers, trade associations and government sources. This project was undertaken to provide information enabling the client to make a decision whether to move forward with a potential acquisition. The deliverable provided:

- Market size and growth rate estimates in value and volume terms, segmented by market
- Key factors driving demand and a market environment overview

Market Due Diligence of Industrial Component Manufacturer

For a private equity firm considering the acquisition of a home appliance component manufacturer, we conducted a market due diligence assessment of the home appliance industry to determine:

- Current and future US demand and 5-year growth rate (CAGR)
- Forecasted shifts in US market share across suppliers and impact of the entry of new importers on market share
- Impact of the trend to move production to foreign markets such as Mexico and China
- Role of "big box" retailers in product design and category management
- Market entry strategies for Asian manufacturers importing products into the US market

US Consumer Water Purification Market Assessment

For a major division of a diversified global technology company, we conducted an assessment of the US consumer water purification market to determine the competitive landscape, distribution channels, market segmentation and forecasted growth rates. During the course of the project, more than 50 industry constituents across the value chain – including competitors, water quality dealers, industrial supply firms, plumbing supply houses, home improvement retailers and plumbers – were interviewed to get their perspectives on the consumer water purification market. The project deliverable included:

- Estimated 2007 and forecasted 2012 water purification system demand by product category and new versus replacement products by sales channel in unit and dollar terms
- Analysis of the value chain from manufacturer to installation in order to identify the level of value (profit) derived at each step in the chain
- Technology trends driving the market and the impact on industry participants
- Competitor SWOT analyses and competitors' market positions in terms of market share, target market segments and products, channels to market, product portfolio and, sales by channel and product category

As a result, the client has market data to determine opportunities along the value chain and the market outlook moving forward.

US Garden Hose Market Assessment

For a leading maker of rubber and plastic products, Freedonia Custom Research forecast the North American garden hose market by product category based on calculation and analysis of historical demand. Using both bottom-up and top-down approaches, we segmented the current market by distribution channel and further estimated the demand attributed to each distribution channel by product category. Because of the growing prevalence of imports from China and Taiwan, Freedonia analysts in Beijing contributed to the final report by interviewing representatives of the foremost exporters to North America. Based on interviews with leading industry participants and other sources of data, Freedonia estimated the market share of the top producers and provided a detailed profile on each, identifying their key products and channel partners.

Commercial Appliance Market Opportunity

For a European manufacturer of domestic and commercial appliances, Freedonia Custom Research provided analysis to help the company assess its prospects for entering a commercial segment of the US market. The research and reporting focused on:

- Assessing the size and forecasting the growth of the segment

- Conducting interviews to determine the procurement practices and purchase criteria of customers, especially in terms of differences from European counterparts
- Compiling profiles of a major customer group
- Providing competitive intelligence on key competitors in the US market

Industrial Components

Acquisition Support – Identification of Potential Targets

For a leading US private equity firm with a holding in the specialty fastener industry we:

- Developed a list of possible acquisition candidates based upon client criteria
- Researched and profiled selected organizations to provide company revenue, related product revenue, markets served and product portfolio
- Identified and reported companies that were interested in possible acquisition

Industrial Component Sourcing Practices Survey

For a Japanese consulting firm seeking an understanding of selected US toilet manufacturers' sourcing practices, we conducted a market survey of suppliers, manufacturers and industry experts. The deliverable provided:

- Toilet manufacturer purchasing profiles, including a description of how parts and materials are purchased, and the types of parts purchased
- Supplier business and technical requirements
- Supplier profiles with:
 - Company overviews including basic information, business description, markets served, related product revenue and products manufactured
 - Functional resources such as R&D facilities, manufacturing plants, and aftersales service and maintenance network

Industrial Component Market Opportunity Assessment

For a leading global industrial component supplier interested in the Chinese market, Freedonia assessed the market size and growth rate across product categories, competitive environment and industry structure. Research interviews were conducted with competitors, customers, distributors and trade associations. The deliverable served as a framework from which the client could further assess market opportunities in China as input for company investment decisions. Our report provided:

- Demand and growth rate estimates in value and volume terms, broken out by region and product segment
- Identification of major distributors and their location
- Descriptions of primary channels to market
- Average pricing ranges by product category
- Discussion of industry standards and approvals required in the Chinese market
- Approximately 40 competitor profiles including:
 - Basic company information

- Major product offerings
- Brands
- Regional and end-use markets served
- Channels to market
- Key industry standards/approvals

Industry Structure and Value Chain Assessment of an Industrial Component Sector

For a leading industrial fastener distribution firm, Freedonia assessed the value chain for imported industrial fasteners, competitors' positioning and vertical integration strategies of industry constituents across the value chain. We conducted primary research with respect to industrial fastener importers, distributors and end-users to determine end-user purchasing decision criteria, differentiation between master distributors/importers, forward integration by Asian manufacturers and distributors, and the implication to our client's position in the value chain. Freedonia's Beijing office conducted detailed primary research related to China- and Taiwan-based manufacturers and distributors. The project deliverable outlined:

- Trends and drivers of industrial fastener demand and the impact to our client's business model – from end-user, master distributor/importer and distributor points of view
- Asian industrial fastener manufacturer and distributor insights, channel strategies and approaches to the market
- Competitor profiles
 - Business strategy
 - Outlook on the market
 - Estimated revenues
 - Number of SKUs carried
 - Estimated annual growth
 - Strengths and weaknesses

Electric Motor Market Assessment and Key Buying Criteria

For a large, multinational electrical equipment manufacturing company interested in the electric motor market, we investigated the market size, competitive landscape and purchasing behavior to help facilitate further growth in the market. Freedonia provided analysis for the market opportunity for electric motors and several other competing technologies within the electro-mechanical power market. Some factors of this analysis included:

- Analysis of historical, current and future demand segmented by power ratings and enclosure types
- Detailed competitor information that included sales estimates by the target product class and all competing technologies
- Detailed analysis of the market share and product development activities of industry participants for approximately 90% of the target market of a niche product with highly fragmented suppliers

- Market dynamics and purchasing behavior along several primary and secondary end-use markets
- Effect of global supply and regulatory environments
- Comparative price and market positioning of the target product versus several competing technologies

Freedonia's research and analysis yielded reliable results that gave the client a drastically modified view of the competitive environment that had previously been described by a well-known industry association. Freedonia was successful in this initiative because we were able to contact all key suppliers and acquire a detailed perspective, unlike the industry association.

Maintenance Services Market Assessment

For a leading international elevator and escalator OEM developing its US market strategy for aftermarket services, we conducted a market opportunity assessment. The engagement investigated and quantified market share and demand for key competitors in the US elevator/escalator services market. Detailed analysis included:

- Historic and forecasted number of lifts in service
- Maintenance service revenues segmented by contract type:
 - Aftermarket preventive maintenance service agreements
 - OEM maintenance contracts
 - Remedial services
 - Modernization and upgrade services
- Competitive insights included market share by vendor and included a detailed analysis with estimates of:
 - Total lifts under contract
 - Revenues by contract type of equipment
 - Contract revenues broken out by the company's own brand vs. other OEM brands under contract

Sealing and Tube Market Opportunity

For a large, multinational engineered products company with interests in growth opportunities in the medical product market, Freedonia investigated North America/ Europe sealing and tubing opportunities in this market. Interviews were conducted in both North America and Europe to meet the objectives of this assignment. Key elements of the research included:

- Demand for medical products by several different medical-specific segments
- Demand for sealing and tubing in these end-use segments
- Analysis of trends and forecast demand for captive vs. non-captive sealing and tubing operations at medical product manufacturers
- Research into sophisticated engineering facets that affected demand:
 - Engineered sealing materials - polymers, composites, metals

- Sealing types – dynamic, static, extruded polymer, molded, overmolded
- Tubing materials – silicone, PVC, polyurethane, PTFE, others

Engineered Sealing Market Due Diligence

For a private equity firm with investment interests in the engineered sealing market, we provided analytical findings to support its due diligence efforts in a rapid timeline. Freedonia analyzed a specific value segment of the industry by supplier and product type. Although we were committed to providing analysis for only the top five suppliers, our efforts, in an extremely limited timeframe, resulted in demand estimates for highly specialized end-use segments for over 25 key suppliers in eight different product segments. We also provided top-level estimates in a specialized segmentation to suit the client's needs. To meet the client's time sensitive requirements, we accomplished this analysis in a fraction of the time that Freedonia typically requires for custom engagements of comparable scale.

Emerging Electric Power Technology Market Assessment and Key Buying Criteria

For a leading electric power systems company interested in an emerging technology, we investigated the market size, growth rate, market opportunities, purchasing behavior, and major factors affecting adoption and growth rates in the material handling market. Over 75 interviews were conducted with material-handling OEMs, material-handling end-users, battery distributors/dealers, material-handling dealers, battery manufacturers, competitors and trade associations, which yielded significant intelligence and input for segment analysis. Freedonia's project research and analysis activities provided the following output related to the material-handling battery market:

- Material handling's current market size, along with a five-year demand and growth rate estimate, and rate of market penetration for suppliers
- Niche battery market size and market share estimates
- Breakdown of market segments that offered the greatest opportunities
- Key buying factors and perceptions impacting purchasing decisions
- Market environment summary, including macroeconomic factors impacting material-handling battery market demand
- Competitor profiles providing related product sales, related product offerings, major customers, strengths and weaknesses, and channel strategies

Niche Market Opportunity Evaluation within the Nuclear Power Industry

For a global leader in specialty metal products contemplating future expansion into new applications, we analyzed the growth prospects for selected extruded metal products in the nuclear power industry. We conducted interviews with key industry participants and nuclear power regulators, and reviewed regulator filings and nuclear plant design firm publications to understand component specifications and market opportunities within four different nuclear

power plant designs. The deliverable provided key data to inform our client's future product strategy. This information included:

- An analysis of material use by type and product size in various reactor designs
- Estimated product demand by material type for each plant design
- Identification of substitute technologies
- Discussion of reactor design and material usages trends

Heavy Truck HVAC Market Assessment

For a major division of a Fortune 500 manufacturer of thermal control devices, we examined the original equipment market for in-cab HVAC systems and components to determine whether the size, growth rate, and competitive forces were favorable for the firm to enter this market. Freedonia's findings provided:

- Key insights and observations regarding the class 8 heavy truck HVAC market
- Commentary and analysis of key industry suppliers
- A five-year forecast for class 8 truck production and vehicle park
- Pricing and profitability for HVAC systems and components
- A five-year demand forecast for class 8 heavy truck HVAC systems
- Analysis and commentary on technological and regulatory impacts on the market

As a result, the client was able to make an informed assessment of the size and growth rate of this market, which was not as large and attractive as previously thought.

Industrial Controls Market Assessment

For a Fortune 500 manufacturer of industrial controls, power equipment and power transmission components, Freedonia Custom Research examined the purchasing behavior, competitive intelligence and growth prospects for distributed motor controls in the United States. Due to the diverse nature of end-use markets served and differing customer key buying factors, deep analysis was required to understand these markets, including:

- Analyzing key distributed motor control growth trends
- Developing insight into major suppliers of distributed motor controls, and the influence of integrated solutions versus OEM solutions
- Identifying and analyzing qualitative findings regarding end-use markets
- Developing historical demand and growth rates
- Developing a ten-year demand forecast
- Providing in-depth competitive profiles for the top competitors
- Providing in-depth analysis of channels to market

As a result, the client was able to make an informed assessment of the health of this emerging segment of the motor control market and how its participation in this segment of the market compared to its competitors.

Precision Ball Bearing Market Study

For a leading manufacturer of ball bearings seeking insight regarding the North American precision miniature bearing market to support strategic planning, Freedonia Custom Research conducted an extensive market study of ball bearings in various channels, applications, size ranges and precision ratings. Major research topics included:

- An analysis of macroeconomic factors that influence key end-use segments
- Regional demand for high-precision miniature ball bearings for the current period and a five-year forecast
- Demand segments by product size range, precision rating, market segment and channel
- A discussion of the distribution channels in each of the North American countries

As a result of this study, the client independently developed market estimates it could use for strategic planning and identified previously unexploited end-use segments that could be pursued to drive growth.

Refractory Customer List Development

For a US manufacturer of refractory materials, Freedonia Custom Research developed a potential customer list by specific SIC codes and presented these customers graphically on a map so the firm could evaluate its current sales staff positioning. In the second phase, the initial list was pared down to eliminate businesses not considered top prospects. To accomplish this, Freedonia Custom Research:

- Used secondary research to identify a list of several thousand potential customers across specific SIC codes
- Screened the list based on specific client requirements and reduced the list to a manageable 450 prospects across two initial SIC categories
- Conducted primary research via the telephone to further refine the list, determining the type of refractory purchased at each facility and the name and contact information of the plant-level specifier

As a result of the initial mapping exercise, the client determined another sales person was required in a specific geographic area.

Industrial Equipment

New Market Feasibility Study and Potential Customer Survey in the Packaging Equipment Industry

For a large, privately held US packaging equipment manufacturer considering entry into a new market segment, we:

- Identified the market potential within specific submarkets and recommended specific markets for deep exploration
- Developed a list of potential customers within each market segment
- Designed and executed a survey designed to identify specific needs of potential customers within the market
- Developed market size estimates and forecasts based upon survey results and analysis of market dynamics
- Recommended specific markets and customers with greatest potential

Customer Intelligence – Plant Operations Assessment

For a US packaging equipment manufacturer seeking an understanding of potential customers' current plant operations and equipment, we assessed the current processes and technologies used by these potential customers. The final deliverable provided a breakout of the following elements of production on a plant-by-plant basis for over 100 facilities:

- Type of raw material used
- Number of production lines
- Brand/make of machinery
- Type of post-processing
- Type of packaging

HVAC Equipment Competitive Intelligence

For a large international consulting organization we developed competitive profiles of leading global heating, ventilation, and air conditioning (HVAC) producers. The information developed for each competitor included:

- Revenues by product and geographic segment, the latter of which encompassed:
 - North America (US, Canada and Mexico)
 - Europe (all European countries)
 - China
 - Other Asia (Asian countries not including China)
 - Other (Central and South America, Africa and the Middle East)
- Global production strategies

- Global sales and distribution strategies for commercial and residential segments
- Major strengths and weaknesses

Industrial Equipment Market Opportunity Assessment

For a food processing and packaging equipment platform company owned by a private equity firm contemplating a potential acquisition, we analyzed the market size and industry structure of a product segment for which the acquisition target would extend its product line. Our approach included:

- Determining the market potential for the new product by developing demand and growth rate estimates for the product category by application and end-use market
- Developing an industry structure overview that included market shares, channels to market, competitor profiles, product customization trends and unmet needs for each of the end-use markets
- Identifying market purchasing profiles to summarize the purchasing decision-making process and distribution channel that is used for each market

Industrial Equipment Market Assessment

For a large, diversified, international manufacturing company that was exploring the potential of entering a new market of integrated refrigeration components, we assessed the current market size and growth rates for several potential end-use markets in the US and Mexico. To assist the company in the decision-making process, we developed:

- Current demand and growth for the overall market along with the specific segment the company was looking at entering
- Current demand drivers and purchasing trends for each end-use market
- Market share estimates of current end-use market participants
- Market share estimates for commercial refrigeration component producers
- Scenario analyses estimating expected market growth based on several potential market scenarios

US Swiss Lathe Market Assessment

For an Asia-based manufacturer of precision machining equipment considering entry into the US market, Freedonia Custom Research assessed the US market for Swiss-type lathes. The research and analysis included:

- Development of a thorough understanding of key demand drivers for the equipment through numerous interviews with manufacturers, distributors and end-use customers
- Estimates of current and forecasted demand with breakdowns by market segment and census region

- Reporting on the structure of the industry including profiles of major competing manufacturers and their approach to distribution, service, promotions, pricing and other policies
- Recommendations to the client on market entry in terms of segments and regions to target, distribution channels to leverage and other marketing mix tools to employ

Packaging Equipment Purchasing Criteria

For a major packaging technology manufacturer seeking insight into the key purchasing criteria and requirements for a niche packaging technology, we conducted more than 20 interviews with current, former and prospective customers across markets and company sizes; and with competitors. Freedonia synthesized the project data to develop actionable insight to assist the client with market intelligence regarding:

- Customer needs that may impact the design of a future product line
- Areas and methods in and by which the company can improve its customer service
- Customer perceptions of pricing and ROI expectations
- Insights into competitive positioning and market views of client and competitors

Downhole Drilling Motor Market Assessment

For a US manufacturer of downhole drilling motors seeking to understand the North American market for strategic planning purposes, Freedonia Custom Research developed demand estimates and profiles for competitors and potential customers. As part of the engagement, Freedonia Custom Research:

- Developed current and forecast demand for downhole drilling motors less than or equal to three inches
- Identified and mapped the value chain
- Profiled top competitors
- Developed a list of potential customers

During the course of the study, the research team identified several links in the value chain that had been previously unknown to the client. Based on that information, the client was able to reassess its strategy and better position itself in the market.

Janitorial and Sanitation

Industrial Supply Product Opportunity Assessment

For a major North American manufacturer of cleaning supplies looking to expand its product offering to the manufacturing market segment, we assessed nine product categories typically sold through the industrial supply distribution channel to help the client evaluate the fit and size of product opportunities. During the course of the study, Freedonia Custom Research conducted primary research interviews with industrial supply manufacturers, industrial supply and distribution companies, and key manufacturing end-users. The final deliverable included:

- Current and forecasted demand estimates for industrial supply products
- Information on trends in distribution channel dynamics
- A discussion of technology trends that will impact future demand
- Market share and gross margin estimates for each of the nine product categories
- Industrial supply distribution channel supplier profiles, including basic company information, product lines sold through industrial supply and related product sales estimates

Regional Market Opportunity and Channel Assessment

For a distributor of janitorial and sanitation supplies, we analyzed a specific regional geography in order to understand its market size and particular customer profile in order to determine the distributor's market position and how it could position itself to its target customers. Freedonia conducted more than 100 primary research interviews across eight target market segments to identify purchasing behaviors, product purchasing patterns and volumes, and unmet needs within the targeted customer profile group. The project deliverable included regional demand estimates for five janitorial and sanitation supply product categories across eight end-use segments. Further, Freedonia determined the key buying factors that drive purchasing decisions in each of the eight end-use segments.

As a result of this study, the client understood the market size of its target customer base in a specific region and its position (market share) across the five product categories in the scope of the study. In addition, Freedonia provided a method by which the client could assess the relative market size of other geographies to determine the scale of opportunities and the likely staffing requirements to penetrate a given regional market. Based on customer feedback from the primary research interviews, the client gained validation and/or new perspectives on how and why each end-use segment purchases different janitorial and sanitation supply categories.

US Commercial Paper, Wipes and Soap Market Assessment

For a leading manufacturer of paper products, we investigated and quantified demand for 15 selected paper, wipes and soap products by 11 end-use segments, four levels of end-user

establishment size and eight distribution channels. Further, we estimated share of demand by competitor across five major product categories. The study entailed in-depth interviews with a large number of suppliers, distributors and end-users of paper products, wipes and soaps.

Freedonia's final report provided the following:

- Base-year and forecasted demand via a thorough analysis of end-user consumption rates and related economic indicators
- Competitor profiles including company information, key product offerings, estimated base-year sales by selected products, and a discussion of strengths and weaknesses by end-use segment and/or channel

Medical and Life Sciences

Medical Device Market Opportunity Assessment

For an international manufacturer of medical devices interested in future growth opportunities, we assessed the market size and growth potential of the global market for a niche product. More than 50 research interviews were conducted with hospitals, physician practices, product manufacturers, trade associations and government agencies in the US and other countries. Highlights of the final report included:

- Current and future market size estimates for the niche product in value and volume terms, broken out by type and market
- Market size estimates and projections of associated medical procedures performed in the US, Canada, Germany, France, United Kingdom, Japan, and South Africa.
- Profiles of key competitors, including:
 - Basic company information
 - Products
 - Role in industry
 - Estimated related sales

Global Medical Supplies Market Opportunity Assessment

For a world leader in the chemical products industry seeking to better understand sales opportunities and trends in the medical supplies market, we analyzed the end-use medical product segments and conducted primary research interviews across selected medical product categories and with competitors. This project was undertaken to provide input enabling the client to leverage its product development and marketing activities to grow its revenue share in this market. The deliverable provided:

- Estimated unit production by product, broken out by country and region for Western Europe, the Asia/Pacific region and the United States
- Recent product introductions and product development trends by category
- Profiles of the leading suppliers in each category, including basic company information, estimated sales volume, related product lines and major plant locations
- Market estimates for 10 product categories: blood and fluid collection/drainage supplies; catheters and accessories; dialysis supplies; drug delivery systems; hypodermic devices; IV and blood administration devices; respiratory therapy and anesthesia devices; surgical supplies and devices; wound management supplies; and other medical supplies

Market Opportunity Assessment of Acquisition Target

For a medical and life science supply company contemplating a potential acquisition, we analyzed the market size and industry structure of a product segment for which the acquisition target had a product innovation. Our approach included:

- Determining the market potential for the new product by developing demand and growth rate estimates for the product category by application and end-use market (eg, hospitals, dental offices, outpatient facilities, nursing homes and life science facilities)
- Developing an industry structure overview that included market shares, channels to market, competitor profiles, product forms and unmet needs
- Identifying market purchasing profiles to summarize the purchasing decision-making process and distribution channel that is used for each market

Pharmaceutical Market Assessment and Competitor Analysis

For a Global 500 pharmaceutical company that was exploring the possibility of entering a new geographic market in a specific product category, we assessed the market sizes and growth rates of each application within the product category and segmented the market by trade channels. For each trade channel, we analyzed price ranges and pricing trends over a ten-year period. The market assessment included developing market share estimates by application and defining the competitors' revenue by application, advertising spending and use of medical professionals for endorsement.

Biopharmaceutical Capital Spending Study

For a national architecture and design firm interested in expanding its operations into the life sciences industry, we analyzed trends in capital spending within the pharmaceutical and biotechnology segments to determine the outlook for facility engineering, construction and environmental consulting services. Analysis within this study included:

- Determining the capital spending compounded annual growth rate for leading biotech and pharmaceutical companies
- Identifying specific construction and expansion activities for the leading and middle market pharmaceutical and biotech firms to determine the level of capital investment, engineering and construction services used, as well as the purpose of the facility (eg, R&D, manufacturing)
- Highlighting trends in facility requirements that have been driven by technology advancements and innovation (eg, dust control, vibration control)

US Healthcare Wipes and Mops Market Assessment

For a large, integrated paper company, we investigated the US market for disposable wipes and mops in the healthcare sector. This included wet and dry wipes, segmented by patient care,

disinfectant and all other. In conducting this study, we engaged in several key analytical activities, including:

- Generating key indicators that would likely drive demand for wipes and mops
- Developing demand for 2007 and 2012, in terms of dollars, by seven different end-use subsegments for wipes (further by wet and dry for each) and mops
- Creating in-depth competitor profiles of key manufacturers
- Providing prospective on industry raw material suppliers and profitability at the manufacturer level

As a result, the client was able to make informed decisions about the efficacy of extending its existing non-healthcare related wipes business into the healthcare arena.

Packaging

Customer Needs and Trends Analysis in the Flexible Medical Packaging Industry

For a leading international flexible medical packaging company we identified key trends and factors affecting the selection and purchasing of flexible packaging by medical supply and device producers, pharmaceutical producers and hospitals throughout the world. Interviews were conducted with medical supply and device manufacturers, pharmaceutical producers, hospitals and hospital product distributors. Specific topics addressed included:

- Types of packaging products and components used
- Key criteria considered in selecting packaging suppliers
- Use of contract versus in-house packaging systems
- Market recognition and perception of key suppliers of flexible medical packaging
- Emerging trends in the medical device and pharmaceutical markets

Flexible Pharmaceutical Packaging Market Size and Environment Analysis

For a leading packaging manufacturer we conducted a market assessment to determine the opportunity and outlook for a specific form of flexible pharmaceutical packaging. Market size and outlook were determined based upon package size and market segment (eg, institutional, retail prescription, clinical trial and over-the-counter). Analysis also included the regulatory impact of child-resistant packaging standards on market demand for the package type.

Secondary Packaging Market Assessment

For a Fortune 500 packaging firm looking for expansion opportunities, we explored the market for high-value secondary packaging across targeted consumer product categories. The project assessed and quantified the current market opportunity for high-value secondary packaging and forecast future demand based upon macroeconomic factors, consumer product packaging trends, and anticipated substitution from traditional and incumbent packaging across six specific product categories. Primary research interviews were conducted across the value chain, including competitive packaging producers, contract packaging firms, consumer product firms, retailers and trade associations, to determine packaging trends, regulations, adoption and substitution rates, pricing estimates and growth drivers/inhibitors.

Market Due Diligence of Packaging Materials Firm

For a global private equity firm, we analyzed the growth potential of a specialized packaging materials company it was seeking to acquire. We analyzed the potential growth of this packaging offering, along with the growth of several competitive product alternatives for both the US and Europe. In addition, we provided an analysis of sales channels and customer

behavior, as well as current end-user product preferences. As a result, our client was able to determine an appropriate strategy for its acquisition bid. The final deliverable included:

- Projected five-year growth for the product analyzed and competitive alternatives
- Projected company sales growth by product use
- Scenario analysis of market dynamics driving product demand
- Analysis of competitive positioning
- An analysis of end-user purchasing process

Product Portfolio Diversification Assessment in the Packaging Sector

For a leading global manufacturer of flexible and rigid packaging seeking to diversify its product line, we analyzed a specific segment of the packaging market to identify areas of growth. Analysis included developing demand estimates, growth rates and substitution opportunities for specific packaging types across multiple end-use consumer product segments. Primary research interviews with consumer product companies, competitors, retailers, packaging equipment manufacturers and investment analysts yielded insights into material and packaging shifts in the marketplace, as well as unmet needs.

In further phases of the project, Freedonia utilized this information to identify selected acquisition targets for the company. These acquisition targets were selected based on our analysis of the technical capabilities of the company and its position in growth-orientated markets. In-depth primary research interviews revealed valuable selection criterion for the client that included:

- Profitability estimates by target product category
- Production capabilities (including proprietary technologies)
- Openness to partnering opportunities and degree of financial distress
- Key executives currently with the company
- Executives (either currently with target companies or those that have recently left) with management expertise in the target technology and market segment

Industrial Bag Market Study

For a major global manufacturer of flexible packaging solutions, we undertook a world study of industrial bags to help the client understand the competitive position of paper industrial bags against the perceived threats of filmic plastic and woven polypropylene bags. Particular attention was paid to assessing the North American and European markets. Freedonia China delivered an assessment of the Chinese market. Highlights of the final reports included:

- A thorough analysis of the value proposition of industrial bags versus alternative methods of packaging and distributing granular materials
- Current and forecast demand for paper, filmic plastic and woven polypropylene industrial-type bags, and analysis of drivers to any shifts among the materials

- Further market dynamics such as end-use market (eg, cement, chemicals) outlook and trends, shifts to alternative distribution methods such as bulk containers, technological innovations and regulatory factors
- Profiles of the top 40 industrial bag producers in North America and Europe with particular emphasis on regional market shares of the top 20 companies

Consumer Packaging Competitive Assessment

On behalf of a US paper packaging producer, Freedonia conducted a study of the North American market for preprinted linerboard as well as its producers. Competitor interviews were augmented by discussions with packaging converters, machinery producers, trade associations and other third parties to analyze the following:

- Historical, current and forecasted demand for preprinted linerboard in North America
- North American preprinted linerboard demand segmented by color process and estimated across six end-use segments
- Analysis of total North American capacity versus estimated demand
- Competitive analysis of rival preprinted linerboard producers, including market share, plant locations and capacity utilization
- Machinery analysis of competitors' facilities, including number and types of machines employed along with estimated capacities

Pharmaceutical Packaging Market Assessment

For a leading global supplier of pharmaceutical packaging, Freedonia Custom Research conducted a thorough analysis of the North American pharmaceutical packaging and machinery markets. Major pharmaceutical and generic drug companies, machinery manufacturers, contract packaging firms and equipment distributors were interviewed during the course of the study. The analysis of the pharmaceutical packaging and machinery markets included industry trends, production volume and machinery capacity estimates. The final deliverable included profiles of 20 pharmaceutical companies with captive packaging operations and contract pharmaceutical packaging companies that included:

- Basic company information
- Types of pharmaceutical packaging produced
- Estimated current number of machines, installed annual capacity and estimated utilization
- Production volume and market share estimates

Global Packaging Market Assessment

For a multinational packaging and disposable product company seeking to strengthen its global market position, Freedonia Custom Research conducted a comprehensive analysis of the North America, Europe, Latin America, Asia and Rest of World markets for paperboard. Primary

research interviews with paperboard and packaging suppliers, packaging distributors, paperboard machinery manufacturers and trade associations yielded significant intelligence and input to the demand analysis. Freedonia's project deliverable reported information on:

- Current and forecasted product demand by region
- Global market trends in paperboard and competing technologies
- Regulatory and environmental issues
- Pricing trends and cost analysis for paperboard stock
- Technology trends
- Imports and exports
- Major paperboard companies, with each profile including:
 - Basic company information
 - Manufacturing locations
 - Key products
 - Estimated paperboard sales and capacity
 - Relative market presence in each region
- Capital investment costs
- Partnering/acquisition opportunities

Global Bulk Packaging Market Assessment

For a major packaging manufacturer, Freedonia conducted a comprehensive assessment of the global bulk packaging industry. The client was exploring diversification into new product segments in response to erosion of its core product sales by substitute goods. The scope of the study included five bulk packaging product categories and the major end-use segments for each, six global regions and ten manufacturers in each bulk packaging product category.

In the course of the study, Freedonia conducted more than 80 primary research interviews across the six global regions and the value chains of each of the bulk packaging product categories to gather data and to validate and challenge assumptions. To inform the demand estimates, we developed key economic and end-use indicators and forecasts for each of the six regions including GDP; manufacturing value added (MVA); food, beverage and tobacco MVA; chemical MVA; agriculture value added; pharmaceutical shipments; motor vehicle production and park; and crude oil production. For each of the five bulk packaging product categories, Freedonia developed historical, current and forecasted demand estimates segmented by the major end-use segments. Furthermore, for each bulk packaging product category, we profiled ten leading manufacturers and provided the following data related to the companies:

- Total company sales
- Bulk packaging financial estimates
- Sales – by bulk packaging product
- EBITDA
- Operating income

- Global market share
- Capacity utilization
- Revenue trend
- Apparent viability of acquisition

As a result of the study, the client had wide-ranging and detailed data to inform its strategic direction, including data related to global demand and forecasted growth for each bulk packaging product category, financial estimates related to potential acquisition or partnering candidates, and an assessment of product substitution across end-use segments.

Plastics

Plastic Resin Product Line Expansion – Market Outlook & Competitor Assessment

For a leading, Asia-based plastic resin manufacturer that was targeting expansion of a key product line in the US market, we:

- Developed market size estimates and ten-year forecasts for five competitive resins
- Identified market leaders and their respective market shares for each of the five subject resins
- Developed profiles of 36 competing resin producers including plant locations, and production volume and capacity by resin type
- Profiled the top fabricators including their sales, employment, related products and operations

Potential Resin Customer Analysis

For a major South American resin producer, Freedonia assessed specific participants in the value chain within the US, Canadian and Mexican markets for a niche resin compound. The deliverable provided the client with information on buyers of the selected resin, their current suppliers and interest in switching suppliers. Based on both primary and secondary data sources, we:

- Identified the best sales prospects from an initial list of 44 potential buyers or manufacturers
- Examined 17 additional companies to determine their use of the specific resin
- Provided profiles of eleven customers with:
 - Basic company information
 - Estimated annual resin purchases
 - Applications
 - Processes
 - Estimated pricing
 - Suppliers
 - Individual buyer name and title

Performance Fiber Technology and Market Opportunity Assessment

For a major chemicals manufacturing company interested in the growth opportunities related to fiber markets, we looked for technologies that were either involved in fiber manufacturing or directly associated with fiber manufacturing. As a guiding principle, we narrowed our investigation efforts as follows:

- Fit within the client's core competencies in manufacturing capabilities

- Fit within the client's end-use market strategies
- Potential for the target technology and company to be open to partnering opportunities (e.g., acquisition, joint venture or technology license)
- Future growth potential of the technology
- Risk vs. reward of the potential technology
- Volume and value of the technology

As a result of this analysis, Freedonia supported the client's efforts to look for growth opportunities by effectively narrowing the potential technologies down to a few that aligned with these objectives. The technologies/applications included diverse areas such as protective fabrics, medical textiles, nonwovens, elastic fibers and antimicrobial applications.

Global Competitive Analysis by Technology and Region

For a leading Asian manufacturer of polymers and specialty chemicals, we analyzed the global sales of a specialty polymer by key supplier, segmented by end-use. For this investigation we conducted primary research interviews and analysis in separate regions of the world that included contact with individuals in China, Taiwan, Japan, India, Brazil, France, Germany and Austria. Freedonia also leveraged our China office to overcome both language and cultural barriers in China and other Asia/Pacific countries. A significant portion of our analysis was conducted in Asia (approximately one-third of all constituents interviewed), where the client had the most interest in refined demand numbers by segment. Some highlights of our analysis included:

- Final deliverable segmenting global production into eight separate regions for six suppliers into six different end-use segments for a total of 288 separate demand estimates
- End-use segmentation was out of industry norms and required significant research effort to establish and then verify baselines (sometimes multiple times). This was performed via primary research and confirmed with analysis efforts, internal Freedonia indicators, secondary research and further primary research

Performance Fiber Market Opportunity and Acquisition Assessment

For a major chemicals manufacturing company interested in the protective clothing market, we investigated a variety of competitive intelligence factors involving engineered fibers. During our primary research, we facilitated feedback from suppliers of fiber, fiber weave manufacturers, distributors and end-users of protective fabrics. The factors were used to evaluate future growth strategies for the company in this sector. Some factors of this analysis included:

- Sales by specific application
- Market pricing by application
- Capacity, capacity utilization and manufacturing costs
- M&A activities and opportunities

- Effect of global supply and regulatory environments
- Sales by channel
- Selling price/performance mapping

Freedonia's research gathering efforts yielded excellent results even though the target sector had many obstacles, including highly technical products, closely held information about very narrow product lines, and information in sensitive areas involving military and para-military organizations.

Strategic Market Analysis for Biodegradable Resins

For a large, Asia-based multinational supplier of chemicals and polymers, Freedonia Custom Research analyzed the potential opportunity for the company to enter the biodegradable resin market. Our team provided a profile of the global available, addressable and target polymer market opportunity. Strategic recommendations were made to empower the company's efforts in the biodegradable resin market. The final report included demand, specific insights and strategic analysis, such as:

- A tiered opportunity analysis for biodegradable resins provided a comprehensive view of the market for the target product. Data was presented as follows:
 - Available opportunity (all resins that fit the price/performance profile)
 - Addressable opportunity (size of market that could be replaced by target biodegradable polymer. This was developed as a smaller subset for all polymer types in the available market)
 - Target opportunity (size of market for the specific biodegradable polymer the company had targeted)
- Barriers and enablers to success in the market were investigated along the entire value chain from renewable feedstock resources to intermediate chemicals, polymer production to compounding, and finally to end-use markets.
- Interviews and analysis were conducted globally with a particular focus on Asia-based constituents.
- We targeted, identified and profiled potential customers satisfying a desirable profile that included elements of volume potential, partnering potential and strategic fit.

Based upon the summation of this research and the combined insight uncovered, Freedonia Custom Research made strategic recommendations to the company regarding capital investment, sourcing practices, and target customers, regions and end-use markets.

Rubber Markets

Industrial Rubber Compounding Market Assessment

For a leading independent supplier of polymer compounds weighing options for a growth strategy, Freedonia Custom Research assessed the North American market for compounded rubber (non-tire). Key insights were provided on the scale of compounding undertaken by rubber-consuming industries themselves – a significant but largely obscure portion of the addressable market – as well as the rationale behind decisions to outsource or mix in-house. The final report included both quantitative and qualitative findings, including:

- Demand for rubber compounds in pounds, segmented in terms of compound type (SBR, EPDM, NBR, CR, etc.) and end-use market (belts, hose, flooring, roofing, gaskets and seals, etc)
- Breakdowns of each product type and end-use market by compounds mixed in-house versus by external suppliers
- A voice of the market section highlighting the reasons end-users outsource the compounding function or retain it in-house
- Detailed profiles on the top consumers of rubber compounds, with particular emphasis on identifying potential new customers; and the leading independent suppliers

Compounded Rubber Strategic Market Assessment in Mining Applications

For a leading supplier of polymer compounds investigating strategic options and the competitive landscape within specific applications targeting mining and mining equipment, Freedonia Custom Research assessed the North American market for compounded rubber and related components made from compounded rubber. The engagement detailed path-to-market and competitive activities along the rubber-to-finished-good value chain, and included profiles of equipment use and activities related to rubber components at key mining sites in North America. The final report included both quantitative and qualitative findings, including:

- Profiles of key mining sites, and the rubber-related activities and needs at these sites
- Analysis of demand for niche engineered rubber components with details on product types (eg, function, dimensions, other factors)
- Key findings, from the end-user perspective, related to the factors that drive purchasing decisions for these engineered components

Compounded Rubber Strategic Market Opportunity

For a leading supplier of polymer compounds investigating strategic options for product offerings and end-use markets, Freedonia Custom Research assessed the North American market for compounded rubber and “adjacent space” rubber opportunities. The engagement detailed not only demand in traditional compounded rubber markets and their applications, but analyzed the opportunity (both demand and growth) for “adjacent space” polymer markets such as thermoplastic elastomers, fluoroelastomers and other elastomeric polymers. The final report included both quantitative and qualitative findings, including:

- Demand for rubber compounds in pounds, segmented in terms of compound type (SBR, EPDM, NBR, CR, etc.)
- Opportunity analysis for entering new polymer markets (eg TPEs, FKM, silicone, others) versus staying in current compounded rubber offerings
- Analysis of different paths to market (such as toll compounding, custom compounds and vertical integration)
- Examination of different elastomeric markets and their dynamics, as well as end-user trends in in-house compounding versus externally sourced compounding
- Detailed profiles of the top consumers of rubber compounds, with particular emphasis on identifying potential new customers; and the leading independent suppliers

North America/Europe Strategic Market Analysis for Silicone Rubber

For a large multinational supplier of chemicals and polymers, Freedonia Custom Research analyzed the potential opportunity in the liquid silicone rubber market. Our team provided a profile of the global market opportunity segmented by region, product type, end-use and application. The final report included demand, specific insights and strategic analysis, such as:

- Insights from all North American countries and the majority of European nations. These insights were developed, in large part, from targeted primary research with key value chain participants. Freedonia’s primary research specialists with linguistic and cultural experience in these regions successfully conducted the interviews.
- Competitor analysis including market share (by product, region and end-use), products offered, strengths and weaknesses, and technological capabilities.
- Detailed segmentation analysis of product types, product performance features, end-use markets and applications within those end-use markets.
- Pricing and channel-to-market differences, gap analysis, unmet needs, emerging technologies and other factors were analyzed to provide a comprehensive view of the strategic opportunity in the market.

Based upon the summation of this research and the insight uncovered, Freedonia Custom Research provided a comprehensive view of the North American/European market to inform the company’s current and future decisions regarding the liquid silicone rubber market.

Steel Markets

Target Market Assessment for Steel Products

For a large steel producer aiming at market opportunities outside the automotive industry, we identified the top key potential customers within 300 miles of its plant and analyzed this end-user market. The final deliverable contained the following detailed analysis of 36 non-automotive steel end-users in the region specified:

- Amount (unit and value), type, grade, quality and gauge of steel utilized
- Key end-user product lines manufactured
- Current supplier and openness to new supplier
- Purchasing method and identification of buyer

European Steel Market Assessment

For a leading US-based steel processor seeking to vet strategic investment options in Europe, we assessed the East European market for steel processing services by:

- Analyzing the regional dynamics of supply from crude steel production to flat steel consumption by various industries
- Estimating the historical and current demand for flat steel and selected products in each country of the subject region
- Forecasting demand growth by country and product, as well as in total
- Investigating and analyzing the competitive and commercial landscape of the region by profiling key suppliers, processors and consumers of flat steel
- Highlighting relevant trends in the operating environment that may affect foreign direct investment

China Cold-Rolled Steel Market Assessment

For a large Chinese manufacturer of cold-rolled steel attempting to raise money in the US capital markets, Freedonia Custom Research prepared an unbiased market study and comparative analysis of key competitors to be included in filings with the US Securities and Exchange Commission. As part of the final deliverable, Freedonia Custom Research provided:

- A comprehensive analysis of the drivers of key cold-rolled steel end-use markets
- An overview of the cold-rolled steel value chain
- Comparative pricing trends between aggregate steel products and cold-rolled steel
- Demand and forecast for cold-rolled steel
- A comprehensive analysis of the competitive environment, including competitors' sales, capacities and outlook

As a result of the study, the client successfully addressed the market environment requirement contained in the F-1 registration document and filed its registration documentation with the SEC.