

[CLICK TO VIEW](#)

[Table of Contents 2](#)

[List of Tables & Charts 3](#)

[Study Overview 4](#)

[Sample Text, Table
& Chart 5](#)

[Sample Profile, Table &
Forecast 6](#)

[Order Form & Corporate
Use License 7](#)

[About Freedonia,
Custom Research,
Related Studies, 8](#)



Water & Wastewater Pipe

Industry Study with Forecasts for **2016 & 2021**

Study #2848 | February 2012 | \$4900 | 282 pages



The Freedonia Group

767 Beta Drive

Cleveland, OH • 44143-2326 • USA

Toll Free US Tel: 800.927.5900 or +1 440.684.9600

Fax: +1 440.646.0484

E-mail: info@freedoniagroup.com

www.freedoniagroup.com

Table of Contents

EXECUTIVE SUMMARY

MARKET ENVIRONMENT

General	4
Macroeconomic Environment.....	5
Consumer Spending	8
Demographic Trends	11
Construction Outlook.....	15
Building Construction	18
Residential Building Construction	21
Nonresidential Building Construction....	23
Nonbuilding Construction.....	26
Water & Sewer Spending	28
Public Highway Spending	31
Water Distribution Outlook	33
Agricultural Outlook	37
Regulatory Concerns	40
Pricing Factors	43
Recycling.....	45
World Markets & Foreign Trade	46

MARKETS & APPLICATIONS

General	48
Markets	48
Municipal	51
Building Construction	54
Other Markets.....	57
Applications.....	58
Sewer & Drain Pipe.....	60
Sewer Pipe.....	63
Storm Sewer.....	66
Sanitary Sewer	70
Drainage Pipe.....	73
Drain, Waste & Vent Pipe	75
Potable Water.....	77
Distribution Pipe	81
Transmission Pipe	84
Service Pipe	87
Rural Pipe.....	88
Irrigation Pipe.....	89
Other Pipe	93

PRODUCTS

General	95
Plastic Pipe.....	98
Markets & Applications	99

Resins	102
Polyvinyl Chloride	103
Markets & Applications	105
Producers	108
High Density Polyethylene.....	109
Markets & Applications	111
Producers	114
Other Plastics.....	115
Resins.....	115
Markets & Applications	120
Producers	123
Concrete Pipe.....	124
Markets & Applications	126
Producers	129
Ductile Iron	130
Markets & Applications	132
Producers	135
Steel Pipe	136
Markets & Applications	137
Producers	139
Copper	140
Markets & Applications	141
Producers	143
Other Pipe Materials	144

REGIONS

General	148
Regional Demographic & Economic Trends	149
Population Patterns.....	150
Economic Outlook	152
Construction Outlook.....	154
Water & Wastewater Pipe Demand.....	156
Northeast	158
Midwest.....	161
South.....	163
West	166

INDUSTRY STRUCTURE

General	170
Market Share	172
Mergers & Acquisitions.....	175
Marketing Strategies.....	178
Channels of Distribution.....	180
Research & Development.....	181
Cooperative Agreements.....	182

COMPANY PROFILES

Advanced Drainage Systems.....	187
American Cast Iron Pipe.....	191
AMSTED Industries	194
Berkshire Hathaway.....	196
Cambridge-Lee Industries	198
Can-Clay Corporation	199
CEMEX SAB.....	201
Charlotte Pipe & Foundry	203
Chevron Phillips Chemical.....	205
CONTECH Engineered Solutions.....	207
CreteX Companies.....	210
Denali Incorporated	212
Duininck Companies	214
Dura-Line Holdings.....	216
Endot Industries	218
Future Pipe Industries	220
Genova Products	222
Global Brass and Copper.....	224
Hastings Irrigation Pipe	226
HeidelbergCement AG	228
HOBAS Engineering	232
J-M Manufacturing	233
Lane Enterprises	236
Logan Clay Products	238
MCP Industries	239
McWane Incorporated	240
Mitsubishi Corporation.....	243
Mueller Industries	246
Mueller Water Products	248
National Oilwell Varco.....	251
National Pipe & Plastics	254
Northwest Pipe.....	255
Pacific Corrugated Pipe	258
PolyPipe Incorporated	260
REHAU AG.....	262
Saint-Gobain	264
Synalloy Corporation	266
TrueNorth Steel.....	268
Tyco International.....	270
United States Steel	273
Uponor Corporation	274
Vianini Pipe	276
Viega GmbH	278
Vinylplex Incorporated.....	280
Westlake Chemical.....	281

List of Tables/Charts

EXECUTIVE SUMMARY

1 Summary Table3

MARKET ENVIRONMENT

1 Macroeconomic Indicators8
2 Personal Consumption Expenditures . 11
3 Population & Households 15
4 Construction Expenditures 18
5 Building Construction Expenditures.. 20
6 Residential Building Construction Expenditures 23
7 Nonresidential Building Construction Expenditures 26
8 Nonbuilding Construction Expenditures 28
9 Water & Sewer Construction Expenditures 31
10 Public Highway Spending 33
11 Water Use 36
12 Agricultural Indicators 40
13 Pipe Pricing 45

MARKETS & APPLICATIONS

1 Water & Wastewater Pipe Demand by Market 50
Cht Water & Wastewater Pipe Demand by Market, 2011..... 50
2 Municipal Water & Wastewater Pipe Demand by Material..... 53
Cht Municipal Water & Wastewater Pipe Demand by Material, 2011 53
3 Building Construction Water & Wastewater Pipe Demand by Material 56
Cht Building Construction Water & Wastewater Pipe Demand by Material, 2011..... 56
4 Other Markets for Water & Wastewater Pipe by Material 58
5 Water & Wastewater Pipe Demand by Application 59
Cht Water & Wastewater Pipe Demand by Application, 2011 60
6 Sewer & Drain Pipe Demand by Application & Material..... 62
Cht Sewer & Drain Pipe Demand by Application, 2011 63
7 Sewer Pipe Demand by Application & Material..... 66

8 Storm Sewer Demand by Material..... 70
9 Sanitary Sewer Pipe by Material 73
10 Drainage Pipe Demand by Material... 75
11 Drain, Waste & Vent Pipe Demand by Material..... 77
12 Potable Water Pipe Demand by Application & Material..... 80
Cht Potable Water Pipe Demand by Application, 2011 81
13 Water Distribution Pipe Demand by Material..... 83
14 Water Transmission Demand by Material 86
15 Service Pipe Demand by Material 87
16 Rural Potable Water Pipe Demand by Material..... 89
17 Irrigation Pipe Demand by Material.. 92
Cht Irrigation Pipe Demand by Material, 2011..... 93
18 Other Water & Wastewater Pipe Demand..... 94

PRODUCTS

1 Water & Wastewater Pipe Demand by Material..... 97
Cht Water & Wastewater Pipe Demand by Material, 2011..... 98
2 Plastic Water & Wastewater Pipe Demand..... 99
3 Plastic Water & Wastewater Pipe Demand by Market & Application . 101
Cht Plastic Water & Wastewater Pipe Demand by Application, 2011 102
4 Polyvinyl Chloride Water & Wastewater Pipe Demand 105
5 Polyvinyl Chloride Water & Wastewater Pipe Demand by Market & Application..... 107
Cht Polyvinyl Chloride Water & Wastewater Pipe Demand by Application, 2011 108
6 High Density Polyethylene Pipe Demand..... 111
7 High Density Polyethylene Water & Wastewater Pipe Demand by Market & Application..... 113
Cht High Density Polyethylene Water & Wastewater Pipe Demand by Application, 2011 114
8 Other Plastic Water & Wastewater Pipe Demand by Resin 119

9 Other Plastic Water & Wastewater Pipe Demand by Market & Application . 122
Cht Other Plastic Water & Wastewater Pipe Demand by Application, 2011 123
10 Concrete Water & Wastewater Pipe Demand..... 126
11 Concrete Water & Wastewater Pipe Demand by Market & Application . 128
Cht Concrete Water & Wastewater Pipe Demand by Application, 2011 129
12 Ductile Iron Water & Wastewater Pipe Demand..... 132
13 Ductile Iron Water & Wastewater Pipe Demand by Market & Application . 134
Cht Ductile Iron Water & Wastewater Pipe Demand by Application, 2011 135
14 Steel Water & Wastewater Pipe Demand..... 137
15 Steel Water & Wastewater Pipe Demand by Market & Application . 139
16 Copper Water & Wastewater Pipe Demand..... 141
17 Copper Water & Wastewater Pipe Demand by Market & Application . 143
18 Other Water & Wastewater Pipe Demand by Market & Application . 147

REGIONS

1 Population by Region 151
2 Gross Domestic Product by Region . 154
3 Construction Expenditures by Region 156
4 Water & Wastewater Pipe Demand by Region 158
5 Northeast Water & Wastewater Pipe Demand by Subregion & Market... 161
6 Midwest Water & Wastewater Pipe Demand by Subregion & Market... 163
7 South Water & Wastewater Pipe Demand by Subregion & Market... 166
8 West Water & Wastewater Pipe Demand by Subregion & Market... 169

INDUSTRY STRUCTURE

1 US Water & Wastewater Pipe Sales by Company, 2011..... 171
Cht Water & Wastewater Pipe Market Share by Company, 2011.. 172
2 Selected Acquisitions & Divestitures 177
3 Selected Cooperative Agreements .. 184

[Click here to purchase online](#)

Growth in water and wastewater pipe demand will benefit from an improved housing outlook and the continued need to upgrade and repair the aging US sewer and water pipe network.

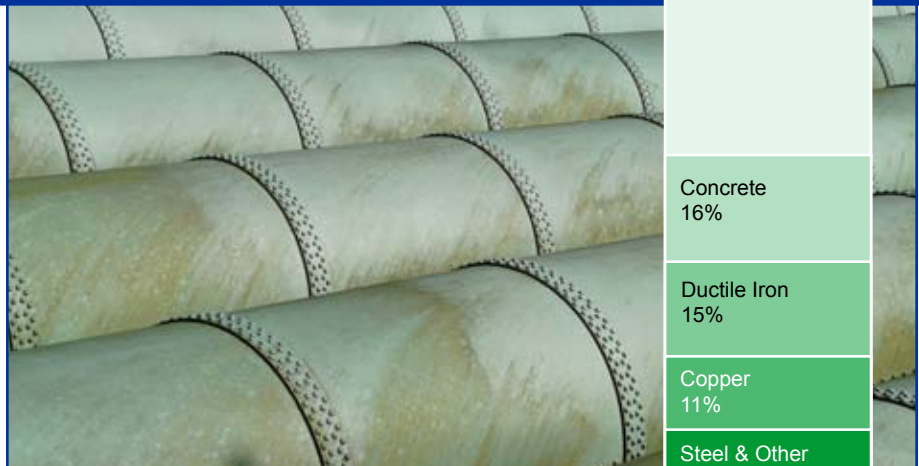
US demand to approach \$18 billion in 2016

US demand for water and wastewater pipe is expected to rise 8.2 percent per year to \$17.8 billion in 2016. Gains will rebound strongly from declines experienced during the 2006-2011 period, during which pipe markets were negatively impacted by the 2007-2009 recession. Going forward, rising demand will be fueled by a more favorable environment for public infrastructure spending, as state and municipal governments faced severe budgetary constraints in 2011, which caused many major projects to be delayed. Other factors benefiting pipe demand through 2016 will include healthy increases in building construction spending and the continued need to upgrade and repair the country's aging sewer and water pipe network.

Recovery expected in municipal, housing markets

Although gains will be modest in the near term, recovery is expected in the housing market by 2016. This will fuel construction spending, benefiting pipe demand as a matter of course. Also boosting water pipe demand will be a rebound in the size and number of bathrooms per new housing unit to levels common in the middle of the last decade. During the 2007-2011 downturn in housing construction, many builders installed fewer and smaller bathrooms in the new houses that were completed, further restraining pipe demand. Demand for pipe in the municipal market will rebound due to improved govern-

US Water & Wastewater Pipe Demand by Material (\$17.8 billion, 2016)



ment spending on infrastructure projects. As the economy recovers, water utility suppliers will have additional revenue to invest in pipe replacement. Despite this improvement, the nation's water infrastructure is expected to remain in disrepair. Legislators and pipe industry participants hope to increase private investment in public water infrastructure via legislation that would lift limits on tax-exempt funding for water projects

Plastic to grow fastest among pipe materials

Plastic will be the fastest-growing pipe material through 2016, continuing to take market share from competing materials in a range of markets. Rising demand for plastic pipe will be driven by resin im-

provements that enhance pipe performance in more demanding environments, while processing improvements will allow plastic pipe to be more cost-effective compared to other materials. Polyvinyl chloride (PVC) will remain the top resin used in plastic pipe through 2016, due to its dominant position in small-diameter applications such as potable water distribution, sanitary sewer and agricultural markets. While PVC pipe demand declined during the 2006-2011 period, the expected recovery in building construction activity will fuel gains through 2016. High density polyethylene (HDPE) pipe, however, has the best long-term growth prospects among major plastic pipe resins. HDPE will continue to gain ground on concrete, steel, PVC and other competing pipe materials.

Copyright 2012 The Freedonia Group, Inc.

[Click here to purchase online](#)

Sample Text, Table & Chart

MARKETS & APPLICATIONS

Building Construction

Demand for water and wastewater pipe in building construction markets is expected to grow through 2016 to \$4.6 billion. Advances will result particularly in the residential market, as a rebound in the size and number of new housing units to levels common in the mid-2000s is expected. The 2011 downturn in housing construction and smaller bathrooms in the new construction restraining pipe demand.

**SAMPLE
TEXT**

Building construction markets include residential, commercial, educational, institutional and industrial buildings. Building construction pipe includes a variety of water service and distribution pipe, as well as drainage pipe and drain, waste and vent (DWV) piping. Water distribution pipe consists of the latticework of piping within a building's structure which provides potable water to faucets, toilets, baths and showers, washing machines, ice makers, and other devices. Pipe materials include copper, polyvinyl chloride, chlorinated polyvinyl chloride and cross-linked polyethylene (PEX). Drain, waste and vent (DWV) systems are used to remove sewage and greywater from a building and to vent the gases produced by said waste. DWV pipe is widely used in sinks, toilets, baths/showers and toilets for their proper functioning. Polyvinyl chloride (PVC) is the dominant DWV pipe material. Service pipe is used to connect building plumbing to main water transmission lines and also the leading material for service pipe.

Plastic comprised just over one-half of all building construction pipe value in 2011, and demand for plastic pipe is expected to grow 10 percent annually through 2016 to \$4.6 billion. Advances will result in lower cost and installation advantages over copper pipe in water distribution applications. PVC, which is the primary type of plastic pipe

54

Copyright 2012

TABLE IV-11

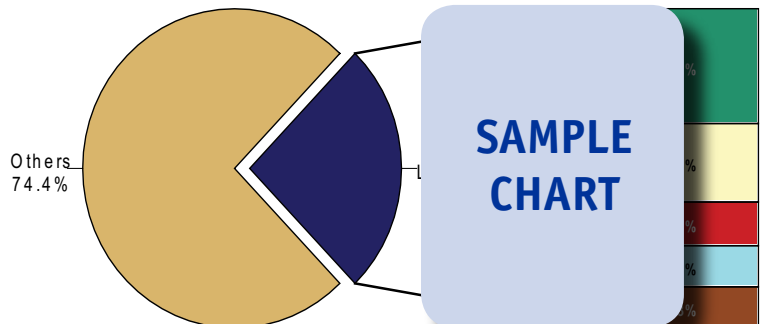
CONCRETE WATER & WASTEWATER PIPE DEMAND BY MARKET & APPLICATION (million dollars)

Item	2001	2006	2011	2016	2021
Concrete Pipe Demand					
By Market:					
Municipal					
Building Construction					
Other					
By Application:					
Sewer & Drain					
Sewer					
Storm					
Sanitary					
Drainage					
Potable Water Transmission					
Irrigation	35	40	30	40	45

**SAMPLE
TABLE**

CHART VI-1

WATER & WASTEWATER PIPE MARKET SHARE BY COMPANY (\$12 billion, 2011)



**SAMPLE
CHART**

Sample Profile, Table & Forecast

COMPANY PROFILES

Can-Clay Corporation

402 Washington Street
 Cannelton, IN 47520
 812-547-2
 http://ww

Annual S
 Employ

Key Pro

Can-Clay Corporation manufactures vitrified clay pipes primarily for construction. The Company also produces vitrified clay perforated pipes, tapping saddles, wall coping, flue liners, thimbles and filter block.

The Company is active in the US water and wastewater pipe industry through the manufacture of CANOLOCK and NOBEL vitrified clay pipes. These pipes are engineered to exhibit enhanced compressive strength, resistance to corrosion and chemical inertness. CANOLOCK vitrified clay pipe is made by the Company in 4- to 48-inch diameters and lengths of up to ten feet for use in gravity sewer projects. This open trench pipe features enhanced abrasion and corrosion resistance properties, and water- and air-tight joints made from a resin that is bonded to the ceramic barrel of the pipe using precisely machined molds. NOBEL low-profile vitrified clay trench pipe from the Company is available in diameters from 12 to 48 inches. This pipe utilizes Can-Clay's NOBEL joint system, which consists of a molded polyurethane joint attached to the spigot end of the pipe and a polyvinyl chloride collar rigidly fitted and sealed to the socket end of the pipe. This design makes NOBEL pipe suitable for use in gravity sewer

**SAMPLE
PROFILE**

TABLE V-7

SOUTH WATER & WASTEWATER PIPE DEMAND BY SUBREGION & MARKET (million dollars)

Item	2001	2006	2011	2016	2021
South Construction Expenditures (bil \$ pipe/000\$ construction)	5.2	5.7	5.7	5.8	5.8
South Water & Wastewater Pipe	0.0	0.0	0.0	0.0	0.0
By Subregion:					
South Atlantic	0.0	0.0	0.0	0.0	0.0
East South Central	0.0	0.0	0.0	0.0	0.0
West South Central	0.0	0.0	0.0	0.0	0.0
By Market:					
Municipal	0.0	0.0	0.0	0.0	0.0
Building Construction	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0
% South Water & Wastewater Pipe Demand	10998	17888	11950	17750	21000

**SAMPLE
TABLE**

"Demand for water and wastewater pipe in the South is forecast to grow 8.6 percent annually through 2016 to \$6.8 billion. Reflective of the national trend, gains will be paced by the building construction market. New construction is expected to rebound due to an improved macroeconomic environment. This will boost pipe demand in water distribution applications, benefiting regional demand for materials used in smaller diameter pipe, particularly plastics and copper."
 --Section V, pg. 164

ONLINE: www.freedoniagroup.com

MAIL: Print out and complete the order form and send to The Freedonia Group (see address at the bottom of this form)

PHONE: Call toll free, 800.927.5900 (US) or + 1 440.684.9600

FAX: + 1 440.646.0484 (US)

EMAIL: info@freedoniagroup.com

Free Handling & Shipping

There is NO charge for handling or UPS shipping in the US. Expect delivery in 3 to 5 business days. Outside the US, Freedonia provides free airmail service. Express delivery is available at cost.

Credit Card Orders

For convenience, Freedonia accepts American Express, MasterCard or Visa. Credit card purchases must include account number, expiration date and authorized signature.

Orders Outside of the US

Checks must be made payable in US funds, drawn against a US bank and mailed directly to The Freedonia Group. For wire transfers please contact our customer service department at info@freedoniagroup.com. Credit cards accepted.

Save 15%

If you order three (3) different titles at the same time, you can receive a 15% discount. If your order is accompanied by a check or wire transfer, you may take a 5% cash discount (discounts do not apply to Corporate Use Licenses).

Corporate Use License

Now every decision maker in your organization can act on the key intelligence found in all Freedonia studies. For an additional \$2600, companies receive unlimited use of an electronic version (PDF) of the study. Place it on your intranet, e-mail it to coworkers around the world, or print it as many times as you like,

Click here to learn more about the Corporate Use License

ORDER FORM

F-WEB.-2848

Water & Wastewater Pipe \$4900

Corporate Use License (add to study price) * + \$2600

Additional Print Copies @ \$600 each *

Total (including selected option) \$_____

Enclosed is my check (5% discount) drawn on a US bank and payable to The Freedonia Group, Inc., in US funds (Ohio residents add 7.75% sales tax)

Bill my company American Express MasterCard Visa

Credit Card # grid

Credit Card #

Expiration Date MM YY

Expiration Date

Signature _____

Name _____

Title _____

Company _____

Division _____

Street (No PO Box please)

City/State/Zip _____

Country _____

Phone _____ Fax _____

Email _____

* Please check appropriate option and sign below to order an electronic version of the study.

Corporate Use License Agreement

The above captioned study may be stored on the company's intranet or shared directory, available to company employees. Copies of the study may be made, but the undersigned represents that distribution of the study will be limited to employees of the company.

Signature _____

Individual Use License Agreement

The undersigned hereby represents that the above captioned study will be used by only ___ individual(s) who are employees of the company and that the study will not be loaded on a network for multiple users. In the event that usage of the study changes, the Company will promptly notify Freedonia of such change and will pay to Freedonia the appropriate fee based on Freedonia's standard fee schedule then in effect. Note: Entire company corporate use license, add \$2600; one additional user, add \$600; two additional users, add \$1200; three additional users, add \$1800.

Signature _____

OTHER STUDIES

Large Diameter Pipe

US large diameter pipe demand will rise 6.2 percent yearly through 2016 to 197 million feet. Storm and sanitary sewers will remain the leading market, while drainage and water transmission will grow the fastest. Concrete pipe will rebound from a depressed base to be the fastest growing material, while HDPE will surpass steel as the most common type. This study analyzes the 146 million foot US large diameter pipe industry, with forecasts for 2016 and 2021 by market and material. The study also evaluates company market share and profiles industry players.

#2974December 2012 \$5100

Plastic & Competitive Pipe

US demand for pipe is expected to grow 6.2 percent per year to \$50.1 billion in 2016. Plastic pipe will experience the fastest growth, led by PVC. Concrete and ductile iron pipe will lead gains among other material types. Steel pipe will remain the leading pipe material in value terms, based on its dominance in the oil and gas market. This study analyzes the \$37 billion US pipe industry, with forecasts for 2016 and 2021 by market, material and resin. The study evaluates company market share and profiles industry participants.

#2958October 2012 \$5300

World Water Treatment Products

World demand for water treatment products will rise 6.2 percent annually through 2015. China will remain by far the fastest growing major market. In the US, Japan and Western Europe, gains will favor advanced membrane systems, disinfection and desalination equipment, and industrial wastewater treatment chemicals. This study analyzes the \$48.1 billion world water treatment product industry, with forecasts for 2015 and 2020 by product, market, world region and for 30 countries. The study also evaluates company market share and profiles industry players.

#2802September 2011..... \$6400

World Water Desalination

World demand for water desalination products and services will grow 9.3 percent annually through 2015. The Africa/Mideast region will remain the dominant market, while the Asia/Pacific region grows the fastest. Reverse osmosis and other membrane-based technologies will continue to gain market share over thermal methods. This study analyzes the \$8.6 billion world water desalination industry, with forecasts for 2015 and 2020 by technology, product, service, world region and for 17 countries. The study also evaluates company market share and profiles industry players.

#2782 July 2011..... \$5900

World Plastic Pipe

World plastic pipe demand is forecast to increase 7.3 percent annually through 2015. More than two-thirds of all gains will be attributable to the Asia/Pacific region, although the North American market will grow at the same pace as plastic pipe sales in the US recover rapidly. HDPE and smaller-volume plastic pipe will outpace PVC. This study analyzes the 15.8 million metric ton world plastic pipe industry, with forecasts for 2015 and 2020 by resin, world region and for 39 countries. The study also evaluates company market share and profiles industry participants.

#2748 May 2011..... \$6100

About The Freedonia Group

The Freedonia Group, Inc., is a leading international industry market research company that provides its clients with information and analysis needed to make informed strategic decisions for their businesses. Studies help clients identify business opportunities, develop strategies, make investment decisions and evaluate opportunities and threats. Freedonia research is designed to deliver unbiased views and reliable outlooks to assist clients in making the right decisions. Freedonia capitalizes on the resources of its proprietary in-house research team of experienced economists, professional analysts, industry researchers and editorial groups. Freedonia covers a diverse group of industries throughout the United States, the emerging China market, and other world markets. Industries analyzed by Freedonia include:

- Chemicals • Plastics • Life Sciences • Packaging • Building Materials • Security & Electronics • Industrial Components & Equipment • Automotive & Transportation Equipment • Household Goods • Energy/Power Equipment

[Click here to learn more about Freedonia](#)

Freedonia Custom Research

Freedonia Custom Research delivers the same high quality, thorough and unbiased assessment of an industry or market as an industry study. Since the research initiative is based upon a company's specific needs, companies harness Freedonia's research capabilities and resources to answer unique questions. When you leverage the results of a Freedonia Custom Research engagement, you are able to obtain important answers to specific questions and issues associated with: mergers and acquisitions, new product launches/development, geographic expansion, entry into new markets, strategic business planning, and investment and funding decisions.

Freedonia Custom Research is ideal for companies seeking to make a strategic difference in the status quo and focus on future business growth. Working side by side with clients, Freedonia's team is able to define a research project that is custom-tailored to answer specific questions and provide the basis from which a company can make informed business decisions.

[Click here to learn more about Custom Research](#)



[Click here for complete title list](#)



[Click here to visit freedoniagroup.com](http://www.freedoniagroup.com)