

[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](#)



# World Silicones

---

Industry Study with Forecasts for **2015 & 2020**

---

Study #2779 | July 2011 | \$5900 | 285 pages

---

[www.freedoniagroup.com](http://www.freedoniagroup.com)



**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](mailto:info@freedoniagroup.com)

## Table of Contents

### EXECUTIVE SUMMARY

### MARKET ENVIRONMENT

General .....	4
Global Economic Overview .....	5
Recent Historical Trends.....	5
World Economic Outlook.....	7
World Demographic Outlook .....	10
World Construction Outlook .....	12
World Manufacturing Overview .....	14
World Chemicals Outlook .....	16
World Motor Vehicle Production Outlook	18
World Electronics Overview .....	21
World Health Care Overview .....	22
Technology .....	25
Basic Silicone Synthesis .....	26
Siloxane .....	26
Silicone Products .....	28
Environmental & Regulatory Trends.....	31

### OVERVIEW

General .....	34
Demand by Region .....	35
Demand by Market.....	38
Electrical & Electronic.....	41
Construction .....	44
Transportation.....	47
Health Care.....	50
Chemical .....	54
Other Markets.....	57
Demand by Product .....	60
Elastomers .....	62
Fluids.....	65
Resins .....	69
Gels & Other .....	71
Production & Trade.....	74

### NORTH AMERICA

Economic Overview.....	77
Silicone Demand .....	79
United States .....	81
Canada .....	87
Mexico .....	91

### WESTERN EUROPE

Economic Overview.....	96
Silicone Demand .....	98
Germany .....	100
France.....	105
Italy .....	110

United Kingdom.....	114
Spain .....	118
Other Western Europe .....	123

### ASIA/PACIFIC

Economic Overview.....	129
Silicone Demand .....	131
China .....	134
Japan.....	142
South Korea .....	148
Taiwan .....	152
India .....	157
Other Asia/Pacific .....	162

### OTHER REGIONS

Central & South America .....	169
Brazil.....	172
Other Central & South America .....	177
Eastern Europe .....	181
Russia .....	184
Other Eastern Europe .....	189
Africa/Mideast.....	193

### INDUSTRY STRUCTURE

General .....	198
Market Share .....	200
Mergers & Acquisitions.....	205
Marketing Strategies.....	207
Channels of Distribution.....	208
Technology & Manufacturing.....	209
Research & Development .....	211
Cooperative Agreements.....	211

### COMPANY PROFILES

Allergan Incorporated.....	215
Ashland Incorporated .....	217
Caledonia Investments.....	219
China National Bluestar.....	222
Clariant International .....	225
CRI-SIL Silicone Technologies .....	226
CSL Silicones .....	227
Dongyue Group .....	228
Dow Corning .....	229
Emerald Performance Materials .....	234
Evonik Industries .....	235
GB Silicone Technology .....	238
Gelest Incorporated.....	239
Handy & Harman.....	241
Henkel AG.....	243
Jiangsu Hongda New Material.....	245
Johnson & Johnson .....	246

Kaneka Corporation .....	247
KCC Corporation .....	249
Kemira Oyj .....	251
Lubrizol Corporation .....	252
Momentive Performance Materials .....	254
NuSil Technology .....	258
Provista SA .....	260
Rhodia SA .....	261
Rogers Corporation.....	263
Saint-Gobain .....	265
Shin-Etsu Chemical.....	268
Silchem Silicone Chemicals .....	271
SiVance LLC.....	274
Specialty Silicone Products .....	275
Total SA.....	277
Wacker Chemie.....	280
Zhejiang Wynca Chemical .....	284

## List of Charts

### MARKET ENVIRONMENT

- 1 World Siloxane Production, 2010 ..... 28

### OVERVIEW

- 1 World Silicone Demand by Region, 2000-2020 ..... 38
- 2 World Silicone Demand by Market, 2010 ..... 40
- 3 World Silicone Demand by Product, 2010 ..... 62

### NORTH AMERICA

- 1 North America Silicone Demand by Country, 2010 ..... 81

### WESTERN EUROPE

- 1 Western Europe Silicone Demand by Country, 2010 ..... 100

### ASIA/PACIFIC

- 1 Asia/Pacific Silicone Demand by Country, 2010 ..... 134

### INDUSTRY STRUCTURE

- 1 World Silicone Market Share by Company, 2010..... 201

## List of Tables

### EXECUTIVE SUMMARY

1 Summary Table .....3

### MARKET ENVIRONMENT

1 World Gross Domestic Product  
by Region ..... 10  
2 World Population ..... 12  
3 World Construction Expenditures ..... 14  
4 World Manufacturing Value Added ..... 16  
5 World Chemical Manufacturing  
Value Added ..... 18  
6 World Motor Vehicle Production ..... 20  
7 World Electronic Product Shipments .. 22  
8 World Health Care Expenditures ..... 25

### OVERVIEW

1 World Silicone Demand by Region ..... 37  
2 World Silicone Demand by Market ..... 40  
3 World Electrical & Electronic  
Markets for Silicones ..... 44  
4 World Construction Markets  
for Silicones ..... 46  
5 World Transportation Markets  
for Silicones ..... 50  
6 World Health Care Markets  
for Silicones ..... 54  
7 World Chemical Markets for Silicones . 56  
8 Other World Markets for Silicones ..... 60  
9 World Silicone Demand by Product .... 61  
10 World Silicone Elastomer  
Demand by Market ..... 65  
11 World Silicone Fluid  
Demand by Market ..... 68  
12 World Silicone Resin  
Demand by Market ..... 71  
13 World Gels & Other Silicone  
Demand by Market ..... 74

### NORTH AMERICA

1 North America -- Key Indicators  
for Silicone Demand ..... 78  
2 North America -- Silicone Demand  
by Market & Product ..... 80  
3 United States -- Key Indicators  
for Silicone Demand ..... 83  
4 United States -- Silicone Demand  
by Market & Product ..... 85  
5 Canada -- Key Indicators  
for Silicone Demand ..... 88  
6 Canada -- Silicone Demand  
by Market & Product ..... 90

7 Mexico -- Key Indicators  
for Silicone Demand ..... 93  
8 Mexico -- Silicone Demand  
by Market & Product ..... 95

### WESTERN EUROPE

1 Western Europe -- Key Indicators  
for Silicone Demand ..... 97  
2 Western Europe -- Silicone Demand  
by Market & Product ..... 99  
3 Germany -- Key Indicators  
for Silicone Demand ..... 102  
4 Germany -- Silicone Demand  
by Market & Product ..... 104  
5 France -- Key Indicators  
for Silicone Demand ..... 107  
6 France -- Silicone Demand  
by Market & Product ..... 109  
7 Italy -- Key Indicators  
for Silicone Demand ..... 111  
8 Italy -- Silicone Demand  
by Market & Product ..... 113  
9 United Kingdom -- Key Indicators  
for Silicone Demand ..... 115  
10 United Kingdom -- Silicone Demand  
by Market & Product ..... 117  
11 Spain -- Key Indicators  
for Silicone Demand ..... 120  
12 Spain -- Silicone Demand  
by Market & Product ..... 122  
13 Other Western Europe -- Key  
Indicators for Silicone Demand ... 124  
14 Other Western Europe -- Silicone  
Demand by Market & Product ..... 126  
15 Other Western Europe -- Silicone  
Demand by Country ..... 127

### ASIA/PACIFIC

1 Asia/Pacific -- Key Indicators  
for Silicone Demand ..... 131  
2 Asia/Pacific -- Silicone Demand  
by Market & Product ..... 133  
3 China -- Key Indicators  
for Silicone Demand ..... 137  
4 China -- Silicone Demand  
by Market & Product ..... 140  
5 Japan -- Key Indicators  
for Silicone Demand ..... 144  
6 Japan -- Silicone Demand  
by Market & Product ..... 146  
7 South Korea -- Key Indicators  
for Silicone Demand ..... 149

8 South Korea -- Silicone Demand  
by Market & Product ..... 151  
9 Taiwan -- Key Indicators  
for Silicone Demand ..... 154  
10 Taiwan -- Silicone Demand  
by Market & Product ..... 156  
11 India -- Key Indicators  
for Silicone Demand ..... 159  
12 India -- Silicone Demand  
by Market & Product ..... 161  
13 Other Asia/Pacific -- Key Indicators  
for Silicone Demand ..... 164  
14 Other Asia/Pacific -- Silicone  
Demand by Market & Product ..... 166  
15 Other Asia/Pacific -- Silicone  
Demand by Country ..... 167

### OTHER REGIONS

1 Central & South America -- Key  
Indicators for Silicone Demand ... 171  
2 Central & South America -- Silicone  
Demand by Market & Product ..... 172  
3 Brazil -- Key Indicators  
for Silicone Demand ..... 174  
4 Brazil -- Silicone Demand  
by Market & Product ..... 176  
5 Other Central & South America -- Key  
Indicators for Silicone Demand ... 178  
6 Other Central & South America --  
Silicone Demand by Market  
& Product ..... 180  
7 Eastern Europe -- Key Indicators  
for Silicone Demand ..... 182  
8 Eastern Europe -- Silicone Demand  
by Market & Product ..... 184  
9 Russia -- Key Indicators  
for Silicone Demand ..... 186  
10 Russia -- Silicone Demand  
by Market & Product ..... 188  
11 Other Eastern Europe -- Key  
Indicators for Silicone Demand ... 190  
12 Other Eastern Europe -- Silicone  
Demand by Market & Product ..... 192  
13 Africa/Mideast -- Key Indicators  
for Silicone Demand ..... 195  
14 Africa/Mideast -- Silicone Demand  
by Market & Product ..... 197

### INDUSTRY STRUCTURE

1 World Silicone Sales  
by Company, 2010 ..... 200  
2 Selected Acquisitions & Divestitures 206  
3 Selected Cooperative Agreements ... 213

[Click here to purchase online](#)

*Advances will be fueled in part by the increased penetration of high-value silicone materials into emerging applications, particularly in countries where the use of silicones is not yet mature.*

## World demand to rise 6.2% annually through 2015

World demand for silicones will rise 6.2 percent per year through 2015. Advances will represent a notable acceleration from the pace of the 2005-2010 period, in which most developed world markets in North America and Western Europe experienced sluggish increases -- or even declines -- in silicone demand. Going forward, gains will be driven by an improved economic outlook as these regions recover from the global economic recession of 2009. Advances will also be fueled by the increased penetration of high-value silicone materials into emerging applications, particularly in the newly industrialized nations of the world where the use of silicones is not yet mature. Price increases will reflect more rapid growth in demand for higher-value silicone products, although intense price competition among suppliers will limit gains.

## Asia/Pacific region to be largest, fastest-growing

The Asia/Pacific region will remain the largest and fastest-growing outlet for silicones through 2015. Gains will continue to be driven by the large silicone market in China; although slowing from the nearly 20 percent annual growth seen during the 2005-2010 period, the country will post strong double-digit annual gains going forward. Silicone demand in the region will also benefit from healthy gains in countries such as South Korea, Taiwan and India,

## World Silicone Demand, 2010 (\$12.4 billion)



Asia/Pacific	38%
North America	27%
Western Europe	26%
Other Regions	9%

photo: SignComplex

although subpar increases in the Japanese market will temper this to some extent. Above-average growth is also forecast for Central and South America, Eastern Europe and the Africa/Mideast region, areas in which silicone demand per capita is among the world's lowest.

North America and Western Europe, the historical centers of the world silicone industry, saw demand severely hampered by the recent economic recession. Through 2015, however, silicone demand is expected to make a solid recovery, fueled in large part by a strong rebound in construction spending and motor vehicle production. As silicones become increasingly mature in these regions, technological advancements

and product innovation will become essential to expand the application base for long-term market growth.

## Silicone gels among fastest growing products

Elastomers and fluids were the two leading silicone product types in 2010, accounting for over 80 percent of total demand. Of the two, stronger growth is expected for elastomers, which will benefit from the rebounding construction and transportation markets. The fastest increases, however, will be for silicone gels and other smaller-volume products, fueled by emerging opportunities in electronic components and motor vehicles.

Copyright 2011 The Freedonia Group, Inc.

[Click here to purchase online](#)

## Sample Text, Table & Chart

### ASIA/PACIFIC

#### Japan: Markets & Products

Silicone demand in Japan is forecast to rise 3.0 percent in 2011, which will represent a notable improvement over the 2010 decline, in which growth averaged just 1.0 percent. The turnaround in manufacturing activity in 2010, however, notwithstanding, the pace of increase in demand is expected to remain slow, as silicone demand will remain largely flat, with growth going forward. Japan will continue to be a major market for silicones in 2015, trailing only the United States and China. The country has among the world's highest levels of demand per dollar of GDP, as the country's advanced manufacturing industry and large consumer base provide ample opportunities for silicone demand.

Electrical and electronic applications are the largest market for silicones in Japan, accounting for about one-third of demand in 2010 -- a larger portion than in any major country other than Taiwan. After declining for much of the 2000s, electronics production in Japan rebounded significantly in 2010, driving strong increases in demand for silicones. Emerging opportunities for silicones in electronic components for LEDs and photovoltaic modules have also bolstered demand in recent years. Going forward, however, relatively slow increases in Japanese production of electronic goods and electrical power generation equipment will restrain advances in silicone demand.

As the world's second largest automaker, transportation remains another important outlet for silicones in Japan. Transportation demand declined slightly during the 2005-2010 period, hampered by economic recession and declining output in the Japanese automotive industry. While demand will rebound modestly through 2015, continued sluggishness in motor vehicle production will serve to limit further demand.

144

Copyright 2011

TABLE VI-5

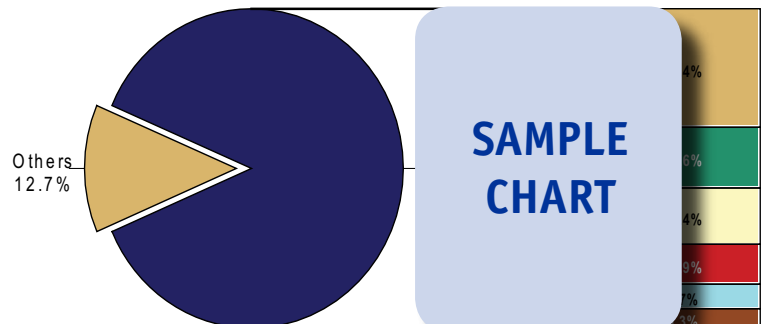
JAPAN -- KEY INDICATORS FOR SILICONE DEMAND

Item	2000	2005	2010	2015	2020
Population (million)	125.2	126.5	127.8	129.1	130.4
GDP/capita (2009\$)	23,500	25,000	26,500	28,000	29,500
Gross Domestic Product (bil 2009\$)	2,945	3,163	3,386	3,610	3,833
Manufacturing Value Added (bil 2009\$)	1,744	1,850	1,956	2,062	2,168
Construction Expenditures (bil 2009\$)	1,505	1,400	1,300	1,200	1,100
Health Expenditures (bil \$)	160	175	190	205	220
Electronic Product Shipments (bil \$)	15	18	21	24	27
Motor Vehicle Production (000 units)	1,500	1,400	1,300	1,200	1,100
\$ silicones/capita	0.6	0.6	0.6	0.6	0.6
\$ silicones/mil \$ GDP	0.02	0.02	0.02	0.02	0.02
Silicone Demand (mil \$)	300	320	340	360	380

SAMPLE  
TABLE

CHART VIII-1

WORLD SILICONE MARKET SHARE BY COMPANY  
 (\$12.4 billion, 2010)



SAMPLE  
CHART

## Sample Profile, Table & Forecast

**TABLE VI-6**

**JAPAN -- SILICONE DEMAND BY MARKET & PRODUCT**  
(million dollars)

Item	2000	2005	2010	2015	2020
Silicone Demand					
By Market:					
Electrical & Electronic					
Construction					
Transportation					
Health Care					
Chemical					
Other					
By Product:					
Elastomers					
Fluids					
Resins					
Gels & Other					
% Japan					
Asia/Pacific Silicone Demand	2120	2710	4120	4000	4200

**SAMPLE  
PROFILE**

**COMPANY PROFILES**

**Zhejiang Wynca Chemical Industry Group Company**  
 555, Xinan East Road  
 Xinan Jiang Street  
 Jiande, Zhejiang  
 China  
 86-571-6  
 http://www

Sales: \$  
 Employe

Key Products: basic polysiloxane, heat-cured silicone rubber, liquid silicone rubber, room-temperature vulcanization silicone, silicone-based surfactants, silicone resins, silicone oils and silane

Zhejiang Wynca Chemical Industry Group is a manufacturer of silicones, pesticides and fine chemicals under the WYNCA brand name. The Company markets its products in China, Southeast Asia, Australia, North and South America, and Africa.

Silicones accounted for \$300 million of the Company's total 2010 sales. Zhejiang Wynca Chemical Industry Group's silicone products encompass chlorosilane, siloxane intermediates, basic polysiloxane, heat-cured silicone rubber, liquid silicone rubber, room-temperature vulcanization silicone, silicone-based surfactants, silicone resins, silicone oils and silane. Silicone products are made by such China-based subsidiaries as Xinan Tinyo Silicon Industry Company Limited, Suihua Xinan Silicone Material Company Limited, Aba Prefecture Xilong Industrial Silicon Company Limited, Zhejiang Kaihua Yuantong Silicon Industry Company Limited and Zhejiang Kaihua Synthetic Material Company Limited. Xinan Tinyo Silicon Industry manufactures a range

166 Copyright 2011 The Freedonia Group, Inc.

"Fastest growth, however, will be seen in Japan's chemical silicone market, as a turnaround in chemical manufacturing activity and polyurethane foam production will drive nearly five percent annual growth in silicone demand through 2015. Similarly, construction markets are expected to see above-average gains in demand. After declining nearly four percent per year from 2005 to 2010, construction spending in the country is expected to rebound, fueling healthy gains in demand for silicones."  
 --Section VI, pg. 145

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.

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.

Credit Card Orders

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

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.2779

World Silicones ..... \$5900

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 #

Expiration Date MM YY

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**

**World Emulsion Polymers**

Global demand for emulsion polymers will rise 5.2 percent annually through 2014, driven by rising demand for latex polymers used in the production of water-based paints, coatings and adhesives. Acrylics will remain the leading emulsion polymer type and grow the fastest. This study analyzes the 9.9 million metric ton world emulsion polymer industry, with forecasts for 2014 and 2019 by market, product, world region and for 14 major countries. It also evaluates company market share and profiles industry players.

#2686 ..... October 2010 ..... \$5700

**Degradable Plastics**

US demand for degradable plastics is forecast to rise 16.6 percent annually through 2014, driven by interest in environmentally friendly products. Polylactic acid (PLA) and starch-based plastics will remain the dominant types and see strong growth. Polyhydroxyalkanoate (PHA) will be the fastest growing type, from a small base. This study analyzes the 151 million pound US degradable plastic industry, with forecasts for 2014 and 2019 by type, product and market. It also evaluates company market share and profiles industry players.

#2648 ..... August 2010 ..... \$4800

**Silicones**

US demand for silicones is forecast to rise 5.3 percent annually through 2014. Consumer goods such as cosmetics and toiletries will remain a fast growing market, as will medical products. Silicone gels will be the fastest growing type, driven by robust growth in demand for gel encapsulants in LED and photovoltaic applications. This study analyzes the \$2.8 billion US silicone industry, with forecasts for 2014 and 2019 by product, market and application. It also evaluates company market share and profiles industry players.

#2665 ..... July 2010 ..... \$4700

**Thermoplastic Compounding by Independents**

US demand for independently compounded thermoplastics will rise 2.7 percent yearly through 2013. Value gains will be fueled by shifts toward more highly tailored resin formulations. Best opportunities are expected for TPEs and polypropylene, while PVC remains the largest segment. This study analyzes the 6.6 billion pound US independently compounded TP industry, with forecasts for 2013 and 2018 by resin and market. It also evaluates company market share and profiles industry players.

#2577 ..... February 2010 ..... \$4700

**Extruded Plastics**

US demand for extruded plastics is forecast to expand 2.6 percent yearly through 2013, supported by a turnaround in the housing market. PVC will remain the largest segment, and will be one of the fastest growing. Slower advances for LDPE will reflect saturated film and sheet applications in packaging. Extruded polypropylene will grow the fastest. This study analyzes the 30 billion pound US extruded plastics industry, with forecasts for 2013 and 2018 by resin and market. It also evaluates company market share and profiles industry players.

#2566 ..... December 2009 ..... \$4700

**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)