

Customer Profiling

Demographic and lifestyle segmentation

—by Fred L. Miller

Introduction

Susan Jensen and Mary Louise Baker are professional women and mothers who have experienced the difficulties of managing child care in the context of hectic family lifestyles. In response to this challenge, they formed the Cooperative Child Care Center in Minneapolis, Minnesota. This organization provides educationally oriented child care services to working parents on a 4:00 a.m. to 11:00 p.m., seven-day-a-week schedule. Parents contract for a specific number of hours each week but can adjust them to their professional and personal schedules.

The Cooperative Child Care Center (CCC) also has a bartering dimension. Parents who complete the organization's training and certification process may perform child care duties as payment for the services they purchase from the center. This helps parents, especially those with several young children, manage the financial demands of child care more effectively.

The center has been quite successful, developing a client base of 300 families in its first two years of operation. However, Susan and Mary Louise believe that many more parents in the Minneapolis area could benefit from the center's services. They could serve these families by increasing the number of clients in the current service area and/or opening new centers in other parts of the city. Over the longer term, they believe that the Cooperative Child Care Center concept could be franchised to owner-operators in other cities in the United States.

To pursue these growth strategies, Susan and Mary Louise wish to develop a profile of existing clients and use it to guide their marketing efforts and expansion program. Specifically, they want to identify the core demographic characteristics of their clients, their lifestyle segmentation patterns, and their buying behavior relative to child care. They will then use this profile to locate clusters of families that match this profile and, therefore, offer opportunities for growth.

In this lab, you will use web-based business geographic information system (GIS) tools to help Susan and Mary Louise create a comprehensive profile of their clients and use it to seek opportunities in the Minneapolis area.

Location

Minneapolis-St. Paul core-based statistical area (CBSA)

Keywords: marketing; business GIS; business; customer profiling; segmentation; targeting; market penetration; market expansion

Time to complete the lab

60 to 90 minutes

Prerequisites

An understanding of the importance of customer profiling in developing marketing strategies management

Access to ArcGIS Explorer Online with a web browser

Data used in this lab

- Demographic and consumer spending data at various levels of geography
- Internal Cooperative Child Care Center client data
- Tapestry™ Segmentation data
- Market Potential Index (MPI) data from GfK Mediamark Research & Intelligence, LLC (GfK MRI)

Student activity

This lab focuses on customer profiling and segmentation. You will create demographic and lifestyle profiles of the Cooperative Child Care Center's clients. You will then use these profiles to (1) learn more about media habits and buying behavior, (2) identify opportunities for the center to penetrate its current markets more fully, and (3) seek expansion opportunities in other parts of the Minneapolis-St. Paul market area.

EXPLORE MARKET AREA

Your first task is to explore the characteristics of the Minneapolis market area relative to the center's marketing strategy. You will do so by reviewing a thematic map that displays average household size.

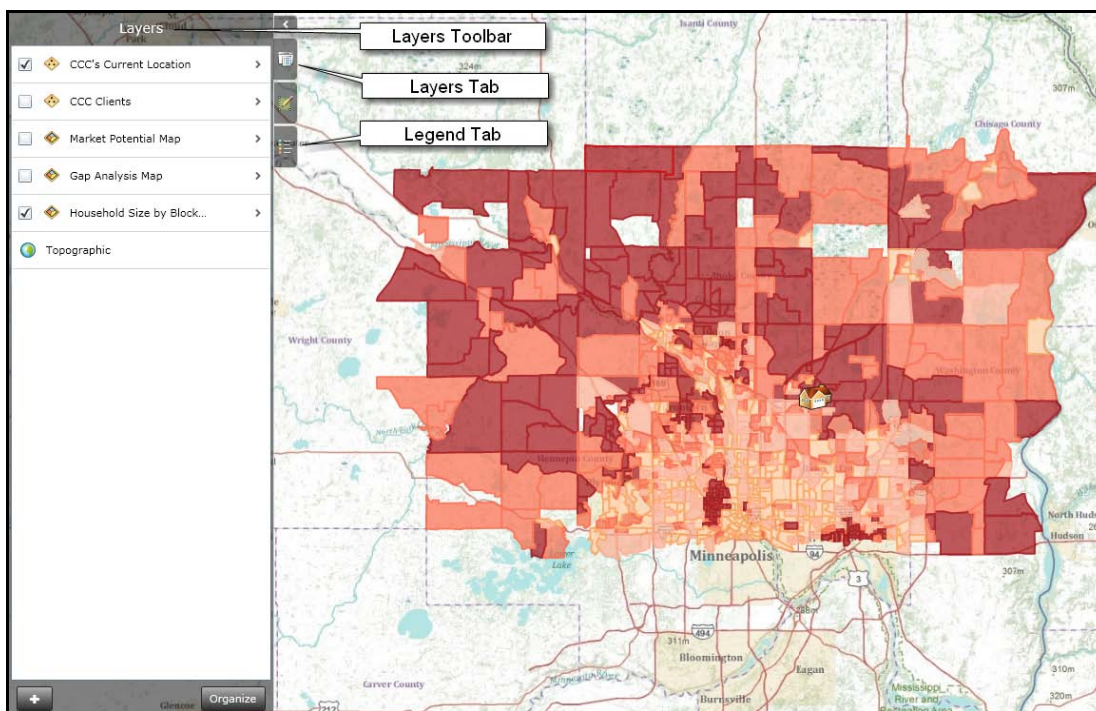
VISUALIZE

- 1 Press the **CTRL** key and click **CCC Profiling Map** to run ArcGISSM Explorer Online and load the map for this lab.

In the initial map screen, the *Layers* toolbar is at the top left of the map.

- 2 Click the right arrow icon at the top of the *Layers* toolbar (see illustration at right) to open it. Your screen will resemble the one below, with the *Layers* list displayed.

Each layer listed is a collection of related data and map settings that control the display of the data on the map.



Map 1: Median household income by census block group in the Indianapolis market area

The boxes on the left control layer visibility. Only the *Household Size by Block Group* and *CCC's Current Location* layers are currently visible. The map displays the average household size in the census block groups surrounding the center's facility. Census block groups are relatively small geographic areas used by the US Census Bureau to collect and report census data.

- 3 Click the *Legend* tab at the right of the toolbar to view the map legend.

Note that legend items appear only for those layers that are visible. Note how the color codes in the legend help you identify census block groups with the highest average household size.

- 4 Move your mouse over the map and click on any colored census block group to open a pop-up window displaying data available for that area. The map legend and pop-up windows allow you to learn more about the market area the center currently serves.

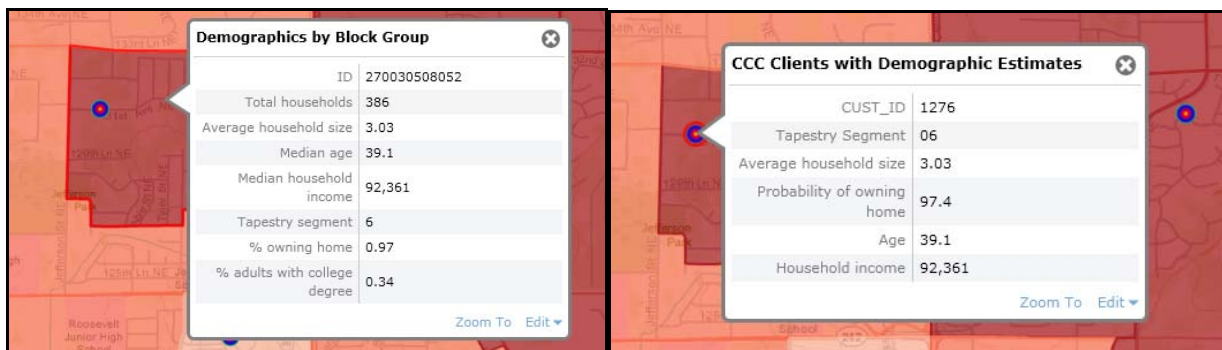
GEOCODE CLIENTS AND APPEND SEGMENTATION DATA

Geocoding is the process of using a customer's address to estimate the location of their residence and displaying it on a map. It involves analyzing each record in a customer list—in this case, a list of Cooperative Child Care Center clients—with a geocoding service and determining its location.

VISUALIZE

- 1 Click the *Layers* tab and check the *CCC Clients* layer box to display it. This layer shows the geocoded locations of the firm's current clients. Note the unusual distribution around its facility and that few clients live in the areas of large household size to the north and east of that facility.

In the spatial overlay process, demographic values for the census block group are appended to the record of each client located in that area. This process is illustrated below. The map on the left shows demographic data from a census block group. The map on the right illustrates how this data has been appended to the record of a Cooperative Child Care Center client who lives in that block group. Note that the values are identical.



Map 2: Appending demographic data with spatial overlay

- 2 Click several Cooperative Child Care Center clients (dots on the map) to view the data that has been attached to each record.

This is the data you will use to create demographic and lifestyle profiles of the firm's clients.

CREATE DEMOGRAPHIC PROFILE

Once demographic values have been associated with each client record, they may be summarized to discover the characteristics of the client base as a whole. The table below contains this data for the center's client base as well as the comparative values for the Minneapolis-St. Paul CBSA as a whole.

	CCC's clients	Minneapolis-St. Paul CBSA
Average household size	2.76	2.56
Median age	37.94	35.8
Percentage of homeownership	86.4%	72.3%
Median household income	\$93,424	\$72,379

Table 1: Data on CCC client base versus Minneapolis-St. Paul CBSA

This data reveals that center clients are, on average, a bit older than the Minneapolis-St. Paul population as a whole. They are also more likely to own their homes, have larger households, and have higher income levels.

- 1 In the *Layers* list, confirm that the *Household Size by Block Group* layer is selected.
- 2 Move your cursor around the map.
- 3 Click the block groups that have the highest values for this variable.

Those block groups that match the other characteristics of the demographic profile are good candidates for the Cooperative Child Care Center's services.

CREATE LIFESTYLE PROFILE

Lifestyle segmentation uses the Tapestry Segmentation system, which classifies all households in the United States into one of 65 segments. These segments are demographically similar but also share characteristics relative to housing, lifestyle, values, and purchasing patterns. Thus, if the demographic profile indicates who the center's clients are, the lifestyle profile indicates why they are attracted to the firm's services.

- 1 In the *Layers* list, confirm that the *CCC Clients* layer is selected.
- 2 Move your cursor around the map and click a customer record.
- 3 When the pop-up window opens, note the *Tapestry Segment* field.

This is the field on which the lifestyle profile of the center's clients is based. When aggregated and compared with Minneapolis-St. Paul's population, this profile is presented in the following table:

	Percent of CCC Clients in each lifestyle segment	Index (CCC concentration relative to Minneapolis-St. Paul CBSA)
06: <i>Sophisticated Squires</i>	38.6%	+3.38 times
13: <i>In Style</i>	21.3%	+3.75 times
12: <i>Up and Coming Families</i>	18.0%	+2.24 times
18: <i>Cozy and Comfortable</i>	8.1%	+1.41 times

Table 2: Lifestyle segments—Percentage of Cooperative Child Care Center clients and concentration relative to Minneapolis-St. Paul CBSA

The *Percentage of clients in each lifestyle segment* column indicates the percentage of the center's clients that falls into each of these four segments. Overall, these segments account for 84 percent of the firm's clients. The *Index* column indicates the concentration of each segment in the center's's customer base compared to its presence in the general population of the Minneapolis-St. Paul CBSA. Thus, the percentage of the *Sophisticated Squires* segment is 3.38 times higher in the client base than it is in the general population of the market area.

The sidebars below from the *Tapestry Segmentation Reference Guide* provide summary descriptions of these four Tapestry segments. Note how the descriptions broaden the profile of these important clients beyond the values in the demographic table. They include the typical values, activities, purchases, and media exposure patterns of each segment. Thus, this profile helps the Cooperative Child Care Center determine how to reach its clients more effectively, with appropriate messages and effective inducements.

Segment 06: *Sophisticated Squires*

Demographic

Residents of *Sophisticated Squires* neighborhoods enjoy cultured country life on the urban fringe. These city escapees accept longer commutes to live near fewer neighbors. Mostly married couple families, more than 40 percent of the households are married couples with children that range from toddlers to young adults. The median age is 38.4 years. Most are baby boomers and are aged between 35 and 54 years. This segment is not ethnically diverse; most residents are white.

Socioeconomic

These residents are educated; more than one-third of the population aged 25 years or older holds a bachelor's or graduate degree; another third has attended college. Labor force participation rates are high; occupations range from management to unskilled labor positions. Most work in white-collar jobs. The median household income is \$85,144. Nearly 90 percent of the households earn wage or salary income; nearly half supplement their wages and salaries with interest, dividends, or rental income. The median net worth is \$287,727.

Residential

Sophisticated Squires live in less densely populated areas concentrated along the Atlantic coast and around the Great Lakes. Approximately 90 percent of the housing is single-family homes; the median home value is \$230,333. Seventy-four percent of the housing was built before 1990; 55 percent was built between 1970 and 1989. More than 80 percent of the households own at least two vehicles. They prefer compact SUVs; however, many drive minivans or full-size SUVs.

Preferences

Do-it-yourselfers, *Sophisticated Squires* residents take care of their lawns and landscaping; make home improvements; and undertake remodeling projects such as bathroom remodeling, installing new light fixtures, painting home interiors, staining decks, and cleaning carpets with their steam cleaners. They like to barbecue on their gas grills and make bread with their bread-making machines. Many households own a motorcycle. A typical household will own three or more cell phones. Looking toward the future, many residents own stocks, bonds, and large life insurance policies. When dieting, they go on Weight Watchers; many own a treadmill or stationary bike to stay fit.

They go power boating, play board and word games, do woodworking projects, and attend football and baseball games. Adults also take photos, play golf, and ride their motorcycles. Children play games on the home personal computer and typically own a video game system. Residents listen to soft adult contemporary music; classic hits; news; all-talk; and sports radio, including broadcasts of professional games. Although many households have four or more TVs, residents watch as much television as typical US households. Favorite programs include news, comedies, dramas, and programs on Home & Garden Television.

Segment 12: *Up and Coming Families*

Demographic

With an annual household growth rate of 4.56 percent, *Up and Coming Families* represents Tapestry Segmentation's second-highest household growth market. A mix of Generation Xers and baby boomers, with a median age of 31.9 years, this segment is the youngest of Tapestry Segmentation's affluent family markets. Residents of these neighborhoods are young, affluent families with younger children. Eighty percent of the households are families. Most of the residents are white; however, diversity is increasing as the segment grows.

Socioeconomic

Beginning their careers, residents of *Up and Coming Families* are earning above-average incomes. The median household income is \$76,135, higher than the national median. The median net worth is \$175,142. Nearly two-thirds of the residents aged 25 years and older have attended college; more than one in five holds a bachelor's degree. Labor force participation is well above average at 71 percent; unemployment is low. Ninety-one percent of households earn income from wages and salaries. Although half of the households have children, they also have working parents.

Residential

In the suburban outskirts of mid-sized metropolitan areas with populations higher than 250,000, approximately half of *Up and Coming Families* neighborhoods are concentrated in the South, the other half in the West and Midwest. Most residents live in new single-family housing; more than half the housing units were built in the last 10 years. Homeownership is at 83 percent. The median home value is \$175,637.

Preferences

Family and home dictate the products these residents buy. Many are beginning or expanding their families, so baby equipment, children's clothing, and toys are essential purchases. Because many are first-time homeowners, basic household furniture and lawn fertilizer, weed control, and insecticide products are important. Car loans and mortgage payments are major household budget items. They are most likely to own or lease an SUV or a minivan. They eat out at family restaurants, especially on the weekends, and buy fast food at the drive-through or for takeout.

They play softball, take the kids to the zoo, and visit theme parks (generally Sea World or Disney World) where they make good use of their digital camera or camcorder. They rent comedy, family, and action/adventure DVDs. Cable station favorites include Country Music Channel, ESPN news, The Learning Channel, and the Disney Channel. They listen to country, soft rock, and contemporary hit radio.

Segment 13: *In Style*

Demographic

In Style residents live in the suburbs but prefer the city lifestyle. Professional couples predominate. Household distributions by type are similar to those of the United States. Married-couple families represent 54 percent of households. Households without children (married couples without children, single-person, shared, and other family types), comprise more than two-thirds of all households. This count is increasing. The population is slightly older, with a median age of 40 years. There is little diversity in these neighborhoods.

Socioeconomic

In Style residents are prosperous, with a median household income of \$70,745 and a median net worth of \$182,665. Wages and salaries provide income for 84 percent of the households; 47 percent also receive some form of investment income. *In Style* residents are more educated compared to the US level: 42 percent of the population aged 25 years and older hold a bachelor's or graduate degree. Labor force participation is 68.5 percent; unemployment is 8.4 percent. Forty-six percent of employed residents have professional or management positions, with above-average concentrations in the finance, insurance, health care, technical services, and education industry sectors.

Residential

In Style residents live in affluent neighborhoods of metropolitan areas across the country. More suburban than urban, they embrace an urbane lifestyle; 14 percent prefer townhouses to traditional single-family homes chosen by 56 percent of the households. The median home value is \$218,289. The 68 percent rate of homeownership is just slightly above average. More than three-quarters of the housing was built in the last 30 years.

Preferences

Computer-savvy *In Style* residents go online daily to research real estate information; do their banking; track investments; trade stocks; book travel; and buy computer hardware or software, concert tickets, or tickets to sporting events. They use a financial planner and invest in stocks, bonds, money market funds, money market bank accounts, and securities. Looking toward the future, residents hold life insurance policies and contribute to IRA and 401(k) retirement accounts. To maintain their homes, they hire professional household cleaning services and contractors to remodel their kitchens.

Residents stay fit by exercising, eating a healthy diet to control their weight, buying low-fat foods, and taking vitamins. They attend live musical performances and gamble at casinos. They take domestic vacations to hike, golf, and go backpacking. They read magazines, listen to news-talk radio, and watch professional sports events and golf on TV.

Segment 18: Cozy and Comfortable

Demographic

Cozy and Comfortable residents are middle-aged married couples who are comfortably settled in their single-family homes in older neighborhoods. The median age of 42.3 years is five years older than the US median of 37 years. Most residents are married without children or married couples with school-aged or adult children. With 8.7 million people, this is a relatively large segment that has been growing moderately by 0.48 percent annually since 2000. Most of these residents are white.

Socioeconomic

Although the labor force is older, they are in no hurry to retire. The labor force participation rate is 65.7 percent; the unemployment figure is 9.3 percent. Employed residents work in professional, managerial, and service occupations in a variety of industry sectors. Occupation distributions are similar to US values. The median household income is \$65,665. Income for 80 percent of the households is earned from wages and salaries.

Forty-six percent of households receive investment income. Their median net worth is \$181,850.

Residential

Cozy and Comfortable neighborhoods are located in suburban areas, primarily in the Midwest, Northeast, and South. Many residents are still living in the homes in which they raised their children. Single-family structures make up 88 percent of the household inventory. The median home value is \$154,868. Sixty-two percent of the housing units were built before 1970. Homeownership is at 85 percent.

Preferences

Cozy and Comfortable residents prefer to own certificates of deposit and consult a financial planner. They typically hold a second mortgage, a new car loan, a home equity line of credit, and a universal life insurance policy. Home improvement and remodeling projects are important to them. Although they will contract for some work, they attempt many projects, especially painting and lawn care. Depending on the season, they play golf or ice skate for exercise. They attend ice hockey games, watch science fiction movies on DVD, and take domestic vacations. They eat at family restaurants such as Friendly's, Bob Evans Farms, and Big Boy.

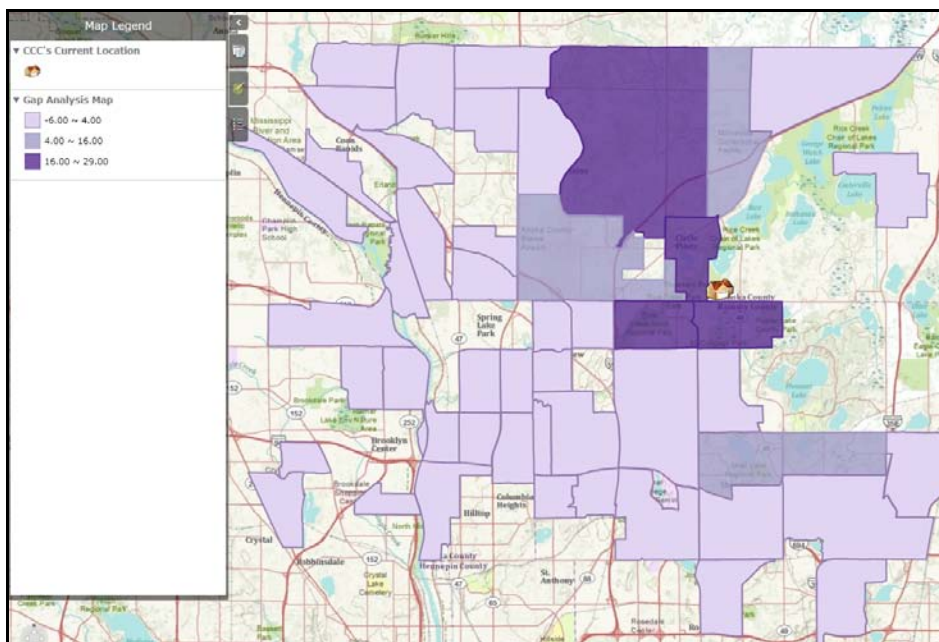
Going online isn't a priority, so they own older home computers. Television is very important; many households own four or more sets so they won't miss any of their favorite shows. They watch sports, particularly football, and news programs. Reading the Sunday newspaper is part of the routine for many.

USE LIFESTYLE PROFILES TO ACHIEVE MARKET GROWTH

The Cooperative Child Care Center wishes to use two different methods to increase its client base. First, it wants to increase the number of clients in its current market area, an approach called *market penetration*. Second, it wants to identify population clusters that match its client profile and that, therefore, would be attractive locations for new facilities. This approach is called *market expansion*. You will use the *CCC map* to develop both approaches, beginning with *market penetration* and *gap analysis*.

ANALYZE

- 1 In the *Layers* list, unselect the *CCC Clients* and *Household Size by Block Group* layers and select the *Gap Analysis Map* layer.
- 2 Click the *Legend* tab to view the legend for this map.
- 3 Zoom the map to the area around the center's current location.



Map 3: Gap analysis map for CCC's service area

Gap analysis uses lifestyle profile information to calculate the number of expected clients for a firm in each block group. It then subtracts the number of actual clients from the number of expected clients to calculate the client gap. If this number is negative for a block group, the firm

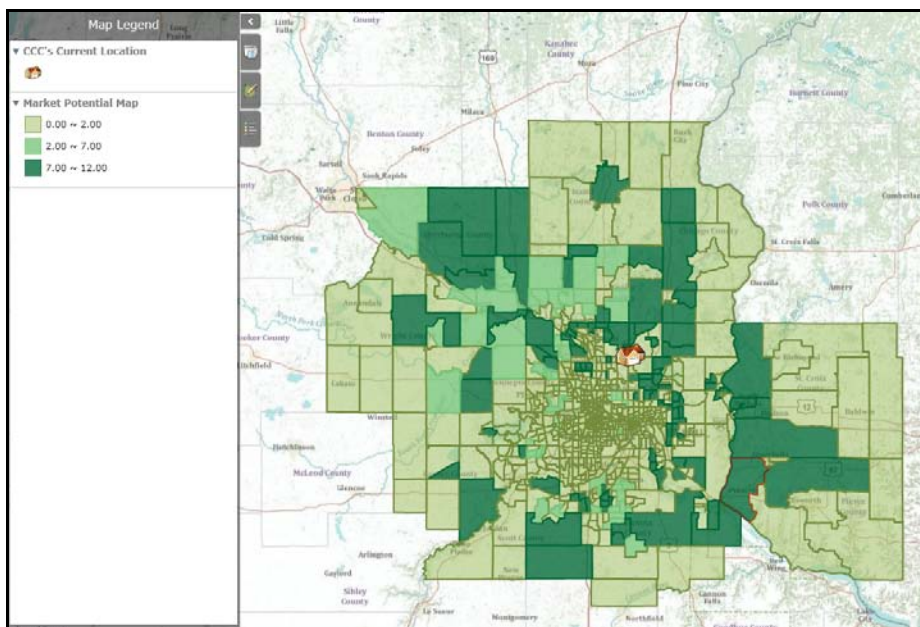
is doing better than expected there. If it is positive, there is still unmet market potential in that area.

- 4 Move your cursor around the map and click a block group with a dark color. Note the number of projected new clients in that block group. Use this approach to answer the question below:

Question 1: *Are there block groups near Cooperative Child Care Center's facility with unmet market potential? If so, where are these block groups located relative to the firm's facility?*

To assess the opportunities for market expansion, you will use *Market Potential* analysis. This approach uses the lifestyle profile to calculate the projected number of potential clients in block groups across the full market area. Clusters of block groups with large numbers of potential clients offer the opportunity to serve these markets with new facilities.

- 5 In the *Layers* list, click the *Layers* tab, unselect the *Gap Analysis Map* layer, and select the *CCC Market Potential* layer. Click the *Legend* tab to view the legend for this map. If necessary, zoom out to view the full extent of this layer.



Map 4: Market potential map for Minneapolis-St. Paul market area

Use this map to answer the following question relative to the center's market expansion strategy:

Question 2: *Are there clusters of block groups in the Minneapolis-St. Paul market area that present market expansion opportunities? If so, where are these block groups located relative to the firm's facility?*

Submit your work

Prepare and submit a brief written report with the answers to these questions from the lab.

Question 1: *Are there block groups near Cooperative Child Care Center's facility with unmet market potential? If so, where are these block groups located relative to the firm's facility?*

Question 2: *Are there clusters of block groups in the Minneapolis-St. Paul market area that present market expansion opportunities? If so, where are these block groups located relative to the firm's facility?*

Credits

Data

Data displayed in screen captures of Business Analyst™ is courtesy of Esri; the US Census Bureau; Infogroup; the Bureau of Labor Statistics; Applied Geographic Solutions, Inc.; Directory of Major Malls, Inc.; GfK Mediamark Research & Intelligence, LLC (GfK MRI); and Market Planning Solutions, Inc.

Instructor resources

Answers to questions

Question 1: *Are there block groups near Cooperative Child Care Center's facility with unmet market potential? If so, where are these block groups located relative to the firm's facility?*

Yes, the block groups that have the largest unmet market potential are to the immediate northwest, southwest, and southeast of the facility.

Question 2: *Are there clusters of block groups in the Minneapolis-St. Paul market area that present market expansion opportunities? If so, where are these block groups located relative to the firm's facility?*

Yes, the block groups that have the greatest market expansion opportunities lie to the north, northwest, east, and south of the facility. Several areas offer opportunities, and they are distributed widely enough across the market area that cannibalization among facilities located in these areas would not likely be significant.

Additional discussion questions

1. This lab offers students the opportunity to understand the differences between demographic and lifestyle approaches to profiling and segmentation. Draw their attention to the increased detail of the lifestyle system as well as the breadth of information included in the profile. The information on buying behaviors and media habits provided for each segment provides a rich resource for managers wishing to tailor marketing strategies to those segments. In short, the lifestyle approach provides significantly more actionable information than does the demographic approach.
2. Invite students to discuss the spatial overlay procedure and its value in estimating demographic and lifestyle characteristics of consumers. While appending block group-level data to individual records produces obvious inaccuracies, it does represent a reasonably useful way of estimating household-level data but avoids the privacy concerns of detailed household-level data. As a method of providing accurate household-level data, the procedure is questionable. However, as a method of indicating tendencies over a large number of households in a firm's customer base, it is more useful.
3. The segment descriptions are provided in table 1 of the *Tapestry Segmentation Reference Guide*, which is listed in the references below and available online. Invite students to review this resource, including the *LifeMode* and *Urbanization* groups, each of which is composed of a collection of Tapestry segments with similar characteristics. Ask students to identify *Tapestry segments* with similar demographic profiles and then examine their differences in

values, buying behavior, and media patterns. This exercise illustrates the value of lifestyle segmentation.

4. Using the information in the *Tapestry profiles*, invite students to craft promotional messages and media plans that are responsive to the traits of target *Tapestry* segments. This exercise illustrates the transition from profiling through segmentation and marketing plan development.

Additional learning activities

1. Direct students to the **Tapestry Segmentation** page (http://www.esri.com/data/esri_data/tapestry.html) and invite them to enter their home ZIP Code to view a brief profile of their home neighborhood and its dominant segments. Repeat this process but have them enter their current residential ZIP Code. (If these are the same, ask them to use the ZIP Code of a friend or relative.) How do the profiles of these areas differ?
2. Invite students to review the case studies in the references section below. How do these organizations apply the tools of customer profiling, segmentation, and targeting to their organizations?

Business GIS references

Business Analyst Resource Center.

<http://resources.esri.com/businessAnalyst/>

Esri Business GIS site—Resources for business applications of GIS.

<http://www.esri.com/industries/business/index.html>

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