

Customer Profiling

Understanding loyal customers to achieve market growth

—by Fred L. Miller

Introduction

Problem

Four years ago, Janice Brown and Steven Bent opened the first *Living in the Green Lane* store in the Minneapolis-St. Paul area.¹ Building on the success of that store, they expanded their retail concept to become a "green" living center and opened two additional stores. Their marketing strategies have focused on green consumers who are motivated either by environmental concerns or the economic savings available from green technologies (Schaefer 2007). In general, green consumers are characterized by higher-than-average levels of income, education, and home value (Kannan 2007).

Each of the three stores has been successful, and each has developed its own Living Green loyalty club for its best customers. Total membership in the club totals nearly 1,800 customers. These customers shop at *Living in the Green Lane* stores frequently and account for a substantial percentage of the firm's revenues.

Based on this success, Janice and Steven plan to expand the enterprise in two ways: by seeking greater penetration of the market areas served by current stores and by opening *Living in the Green Lane* stores in new geographic areas of the United States. To maximize the impact of these efforts, they wish to focus both strategies on potential customers who match the characteristics of current Living Green loyalty club members.

Janice and Steven have charged you, in your position as *Living in the Green Lane*'s business geographic information system (GIS) analyst, to create profiles of current Living Green customers to support these two growth strategies. That will be your task in this SpatialLAB.

¹ The organizations and people in this SpatialLAB are fictional. Any resemblance to actual individuals or organizations is coincidental.

Location

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

Time to complete the lab

Four to six hours

Prerequisites

An understanding of the importance of customer profiling using lifestyle segmentation in the process of designing enterprise growth strategies

Access to Esri Business Analyst™ Desktop Premium 10

Data used in this lab

- Tapestry™ Segmentation data
- Demographic and sales data
- Market Potential Index values from GfK Mediamark Research & Intelligence, LLC (GfK MRI)

Student activity

Living in the Green Lane's growth strategies rely heavily on an accurate profile of current customers and their values and shopping patterns. Your tasks in this SpatiaLAB are to create profiles of *Living in the Green Lane's* market area and loyalty club members and use these profiles to select target customer groups for the firm. You will accomplish these tasks in five steps:

1. Create a profile of the Minneapolis-St. Paul CBSA to serve as a base profile with which to compare *Living in the Green Lane's* customer profile.
2. Use Address Coder™ to geocode the addresses of *Living in the Green Lane's* loyalty club members from all three stores and create a customer data layer as well as a customer profile.
3. Create a new profile with sales information from the customer layer file containing club members.
4. Use the customer profile with sales data to determine *Living in the Green Lane's* Core, Developmental, and Niche target groups.

5. Use the customer profile with sales data to create a customized target group for *Living in the Green Lane* by selecting attractive *Tapestry Segmentation* segments and grouping them together.

At the conclusion of this lab, you may be required to submit written answers to the questions in this exercise, prepare a written project that covers the customer profiling tasks you perform here, or prepare a written report that covers your work in this lab as well as those in the *Customer Segmentation SpatiaLAB*.

Conventions used in the data

CBSA Core-based statistical area

CY Current-year data

FY Future-year projections, which are five years beyond the current year

HH Household

MPI Market Potential Index, consumer survey data covering hundreds of values, behaviors, shopping patterns, and media exposure, provided by GfK MRI

Prepare your workspace

This lab uses Business Analyst™ Desktop Premium 10 software to perform the analysis. To prepare for it, you should confirm that this software is available on your workstation.

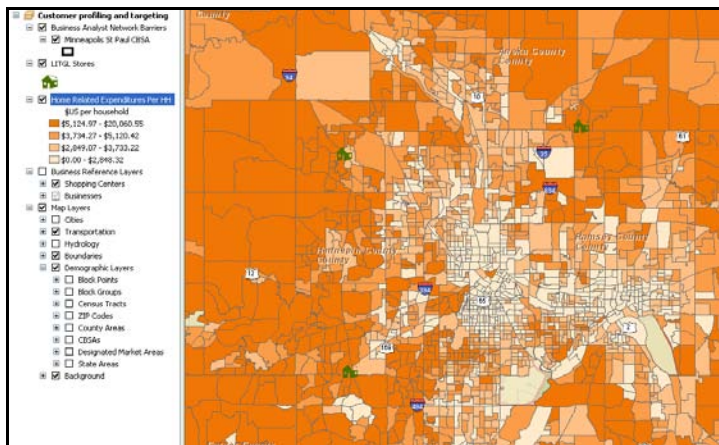
CREATE PROFILE FOR MINNEAPOLIS-ST. PAUL CBSA

Living in the Green Lane's core market area is the Minneapolis-St. Paul CBSA. A profile of this area will provide a basis for identifying the distinctive characteristics of the firm's best customers. You will create this profile as your first task.

- 1 If you have not already done so, copy the *LITGL Minneapolis St Paul* project folder to the *C:\My Output Data\Projects* folder on your hard drive.
- 2 Click *Start » Programs » ArcGIS » Business Analyst » BusinessAnalyst.mxd* to run ArcMap™, load *Business Analyst Extension*, and then load *Business Analyst Message Center*.
- 3 Click *LITGL Minneapolis St Paul* under *Recent Projects* to select this project and load the business GIS default map.

- 4 Click *File » Open*. Navigate to *C:\My Output Data\Projects\LITGL Minneapolis St Paul\CustomData\ChapterFiles\Chapter9\LITGLProfile.mxd*. Click the map file to open it.

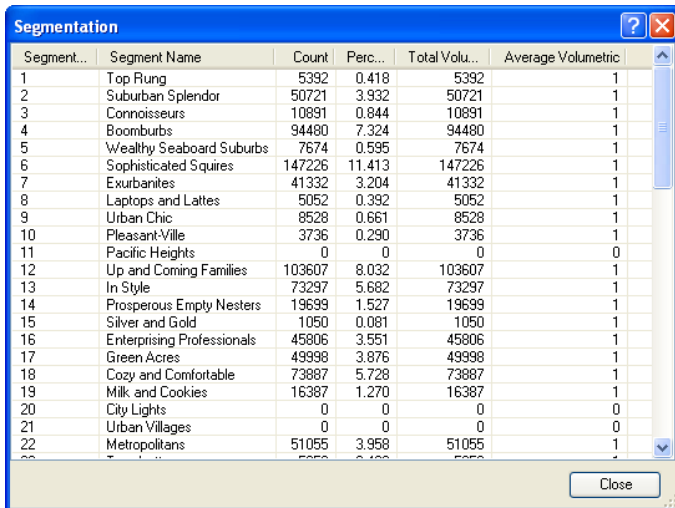
This map contains a layer displaying available *Living in the Green Lane Steiers, Mason, and Longwell* stores over a thematic map of *Home Related Expenditures per Household by block group*. The data source for this layer is a shapefile customized for this enterprise. You will use this map to display the members of the Living Green Club for each store and determine their distinguishing characteristics.



- 5 Click the drop-down menu on the toolbar, click *Target Marketing*, and then click *Create Profiles* to open the *Profiles* wizard. Select the *Create Geographic Profile* option and click *Next*.
- 6 In the next window, select *CBSAs* as the boundary layer to profile and select the *Use only selected features* option (*Minneapolis-St. Paul CBSA* is already selected in this layer) and *Total Households* as the profile base. *Households* is the appropriate profile base, as you will be using *Tapestry Segmentation* household data throughout the profiling and segmentation application.
- 7 When the window resembles the one below, click *Next*. If you receive a *Spatial Index* notice, click *Yes*.

- In the next window, enter **Minneapolis-St. Paul CBSA Profile** as the name of the new **Segmentation Profile**. Click **Finish**.

The system calculates the customer profile and displays it in a window similar to the one below. This is an XML file, which can also be displayed in Microsoft Excel if you wish.



Segment...	Segment Name	Count	Perc...	Total Volu...	Average Volumetric
1	Top Rung	5392	0.418	5392	1
2	Suburban Splendor	50721	3.932	50721	1
3	Connoisseurs	10891	0.844	10891	1
4	Boomburbs	94480	7.324	94480	1
5	Wealthy Seaboard Suburbs	7674	0.595	7674	1
6	Sophisticated Squires	147226	11.413	147226	1
7	Exurbanites	41332	3.204	41332	1
8	Laptops and Lattes	5052	0.392	5052	1
9	Urban Chic	8528	0.661	8528	1
10	Pleasant-Ville	3736	0.290	3736	1
11	Pacific Heights	0	0	0	0
12	Up and Coming Families	103607	8.032	103607	1
13	In Style	73297	5.682	73297	1
14	Prosperous Empty Nesters	19699	1.527	19699	1
15	Silver and Gold	1050	0.081	1050	1
16	Enterprising Professionals	45806	3.551	45806	1
17	Green Acres	49998	3.876	49998	1
18	Cozy and Comfortable	73887	5.728	73887	1
19	Milk and Cookies	16387	1.270	16387	1
20	City Lights	0	0	0	0
21	Urban Villages	0	0	0	0
22	Metropolitans	51055	3.958	51055	1

Review the contents of this window. Each of the 65 *Tapestry Segmentation* segments is listed, as well as the number of households in the *CBSA* within each segment. The *Percent* column reports this number as a percentage of all households in the *CBSA*. As this is not a customer profile, there is no volume measure such as sales, orders, or store visits included. Thus, the *Total Volume* column simply repeats the *Count* column. This profile is now ready to be used as a base profile in subsequent segmentation analysis.

CREATE A CUSTOMER PROFILE WITH ADDRESS CODER

Address Coder is a stand-alone application that creates profiles from tables of customer data. Its functionality has been integrated into the business GIS, and you will use it to create a profile from a table of Living Green Club members and generate a series of reports on them.

- Close the *CBSA Profile* in the *Segmentation* window. Click the drop-down menu on the toolbar, click *Target Marketing*, and then click *Next*.
- Click *Create Customer Profile* and click *Next*. Click *Use Address Coder* and click *Finish* to open the *Address Coder* wizard.

The window closes, and the main *Address Coder* wizard opens.

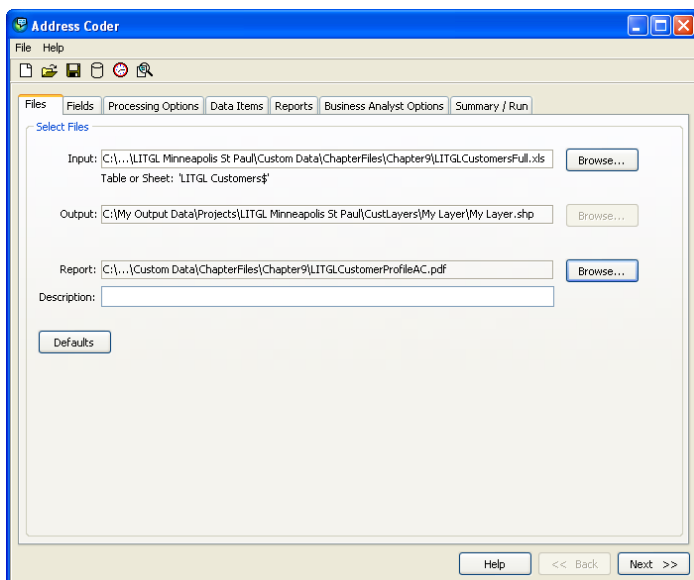
- Click the *Browse* button to the right of the *Input* box and navigate to *C:\My Output Data\Projects\LITGL Minneapolis St Paul\Custom Data\ChapterFiles\Chapter9*.

- 4 In the *file type* drop-down menu at the bottom right of the window, select *Microsoft Excel 97-2003 (*.xls)* as the file type. The file *LITGLCustomersFull.xls* will appear in the window.
- 5 Select this file and click *Open* to select this as the input file.

In the *Select Sheet* window, select the '*LITGL Customers\$*' option and click *OK*. This file contains a list of more than 1,800 Living Green Club members, including some from each of the three stores. As this is a hypothetical list, it contains no names or ZIP Codes.

The *Output* destination folder is fixed. The *Report* file should be saved to the *C:\My Output Data\Projects\LITGL Minneapolis St Paul\CustomData\ChapterFiles\Chapter9* folder.

- 6 To specify this location and file name, click the *Browse* button to the right of this box, navigate to this folder, and enter *LITGLCustomerProfileAC.pdf* as the *Report* destination file. Your window should resemble this one:

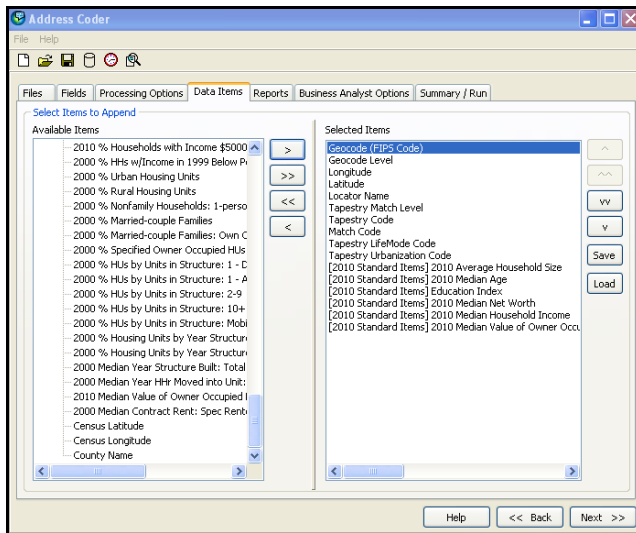


- 7 When it does, click *Next* to advance from the *Files* tab to the *Fields* tab. The *Fields* tab designates the fields in the Microsoft Excel file to be used for geocoding the addresses.
- 8 Accept the defaults and click *Next* to move from the *Fields* tab to the *Processing Options* tab. Accept the defaults on this tab as well and click *Next* to move to the *Data Items* tab. The *Data Items* tab allows you to select attributes to be appended to each customer record in the output data file.

9 Expand the lists of attributes in the left window and move the following attributes to the right by selecting them and clicking the single right arrow key.

- *Tapestry Code*
- *Tapestry LifeMode Code*
- *Tapestry Urbanization Code*
- *CY Average Household Size*
- *CY Median Age*
- *Education Index*
- *CY Median Net Worth*
- *CY Median Household Income*
- *CY Median Value of Owner Occupied Housing Units*

10 When the window resembles the one below, click *Next* to move to the *Reports* tab.

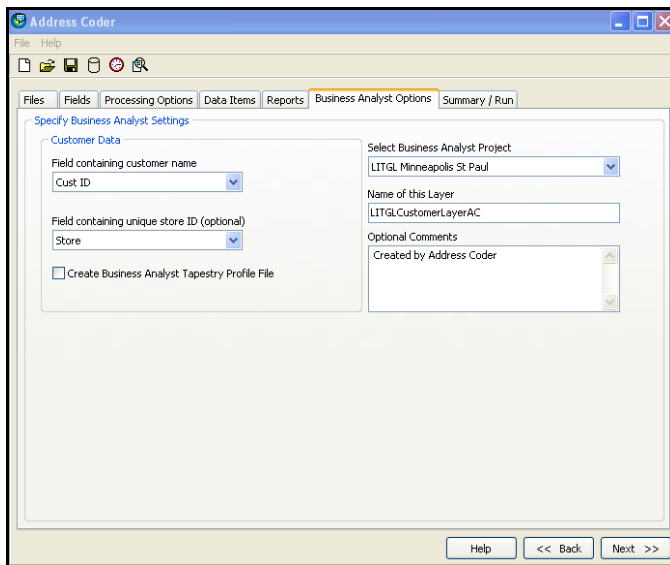


11 On the *Reports* tab, select the *Demographic Profile*, *Geographic Summary*, and *Tapestry Profile* reports; accept the default values for all other selections; and then click *Next* to move to the *Business Analyst Options* tab.

12 Select *Cust ID* for *Field containing customer name*, *Store* for *Field containing unique store ID*, and *LITGL Minneapolis St Paul* as the business GIS project.

13 Enter *LITGLCustomerLayerAC* as *Name of this Layer*, and then uncheck the *Create Business Analyst Tapestry Profile File* option.

- 14 When the *Business Analyst Options* tab resembles the one below, click *Next* to advance to the *Summary/Run* tab.



- 15 A *Summary* window that displays the settings appears. To run the analysis with these settings, click *Run*.
- 16 When *Address Coder* finishes its processing, it opens another instance of *Business Analyst Desktop Premium* to display the new customer layer. Close this instance before moving to the next task.

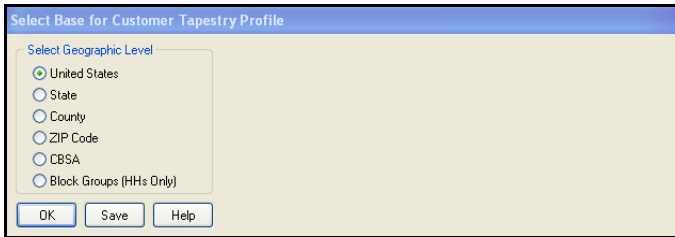
The window displays processing progress until a window opens that asks for the Base you wish to use for the Customer Tapestry Profile. Select the United States option.

This will create comparisons between *Living in the Green Lane's* customer base and the population of the United States. In later reports, you will make similar comparisons with the population of the Minneapolis-St. Paul CBSA. The latter is more useful in understanding local customer characteristics and the former for identifying expansion opportunities at the national level.

The last option creates a profile based on only those block groups in which at least one customer resides, the most limited geographic area available.

COMPLETE THE ANALYSIS

- 1 Click *OK* to complete the analysis.



The software completes the analysis, opens an Adobe Reader window for the selected reports, and displays a message indicating that Address Coder will close (unless you specify otherwise) after processing to return to the business GIS.

- 2 Accept the default by clicking *OK*. Address Coder closes and returns you to the business GIS, where the customer layer is displayed on the map.
- 3 Select the *Adobe Reader* window and scroll through the reports. You will find a comprehensive set of demographic data on the customer base and a report on the geographic distribution of customers.

Toward the end of the list, you will find the customer *Tapestry Profile* report, which should resemble the one below:

Tapestry Description	Customers		Penetration		Custom Base		Index
	Number	%	Por.100	Number	%		
4 Boomburbs	283	15.5	0.01	2,664,345	2.3	681	
6 Sophisticated Squires	278	15.3	0.01	3,195,509	2.7	556	
13 In Style	245	13.4	0.01	2,903,888	2.5	541	
7 Exurbanities	233	12.8	0.01	2,935,451	2.5	509	
2 Suburban Splendor	225	12.3	0.01	2,039,505	1.7	707	
12 Up and Coming Families	106	5.8	0.00	4,094,371	3.5	166	
16 Enterprising Professionals	95	5.2	0.00	1,963,790	1.7	307	
18 Cozy and Comfortable	54	3.0	0.00	3,289,642	2.8	105	
24 Main Street, USA	47	2.6	0.00	3,014,852	2.6	100	
19 Milk and Cookies	45	2.5	0.00	2,291,626	2.0	126	
9 Urban Chic	43	2.4	0.00	1,549,176	1.3	178	
30 Retirement Communities	39	2.1	0.00	1,697,607	1.5	147	
3 Connoisseurs	19	1.0	0.00	1,616,908	1.4	75	

This report lists the number of customer households in each *Tapestry Segmentation* segment and the percentage of all customers in that segment. The *Number* and *%* (percent) columns to the right display the same values for the population of the United States. The *Index* column reports the relative presence of a segment within the customer base compared with that segment's presence across the United States. Numbers greater than 100 indicate that a segment is more prevalent within the customer base than within the nation. Index values below 100


indicate the reverse. Thus, the segments with the highest index values above 100 represent concentrations of segments in the customer base compared with the general population.

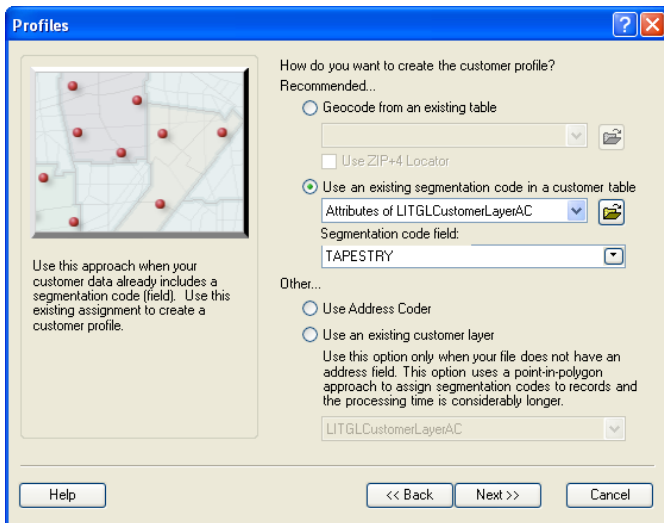
This report also indicates the concentration of *Living in the Green Lane's* customers by *Tapestry Segmentation* segment. Note that the top five segments account for almost 70 percent of customers and the top 10 almost 90 percent. This means two things.

First, *Living in the Green Lane* can concentrate its marketing efforts on a relatively small number of segments that represent a relatively large number of its customers. Second, these segments are good candidates for selection as target groups for future stores. To make that determination, their purchasing behavior must be considered as well as their numeric size. The business GIS provides other tools to include this crucial factor in the analysis.

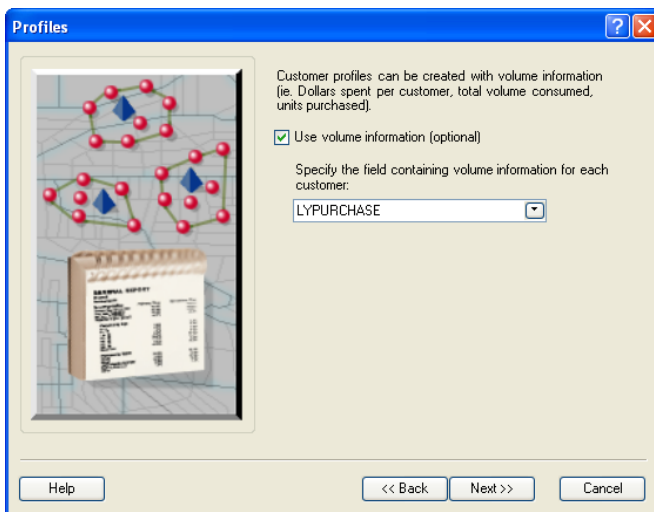
CREATE A PROFILE FROM A CUSTOMER LAYER

While Address Coder is a useful tool, it is also possible to create a customer profile directly from a customer layer. You will do so by adding the customer layer you created to the *table of contents* and creating a profile with volumetric information from it.

- 1 Click the *Add Data* button  on the main menu bar. Navigate to *C:\My Output Data\Projects\LITGL Minneapolis St Paul\CustLayers\LITGLCustomerLayerAC* and select the *LITGLCustomerLayerAC.shp* file to add it to the project's *table of contents* and display *Living in the Green Lane's* customers on the map. Note how they are concentrated around the three stores.
- 2 Click the drop-down menu on the toolbar, click *Target Marketing*, and click *Next*.
- 3 Click *Create Customer Profile*, and click *Next*.
- 4 Select the *Use an existing segmentation code in a customer table* option; designate *Attributes of LITGLCustomerLayerAC* as the *table* and *TAPESTRY* for *Segmentation code field*; then, when your screen resembles the one below, click *Next*.



- 5 In the next window, select the *Use volume information* option and use the drop-down menu to select *LYPURCHASE* as the *volume* field. When the window resembles the one below, click *Next*.



- 6 In the next window, enter *LITGL Customer Profile* as the name of the *Segmentation Profile* and then click *Finish*.

The software generates the profile using the data in the customer layer and opens a window displaying the contents of the .xml file that contains the profile. This is similar to the one you produced before with Address Coder. Note, however, the additional attributes that report total and average household purchases from *Living in the Green Lane* for each customer segment.

- 7 Click the *Total Volume* column header twice to sort this field in descending order. The table should now resemble the one below, with data sorted by total volume. The *Average Volumetric* attribute reports average purchases at *Living in the Green Lane* per household in each segment.

The Percent column in this table represents percentage of total volume (purchases) by each segment, not the percentage of customers, which was the case in the nonvolumetric table you developed above.

Segment...	Segment Name	Co...	Percent	Total Volume	Average Volumetric
4	Boomburbs	283	16.472	3060231	10813.54
6	Sophisticated Squires	278	16.174	3004898.98	10808.99
2	Suburban Splendor	225	16.012	2974663.06	13220.72
13	In Style	245	12.970	2409588.23	9835.05
7	Exurbanites	233	12.846	2386479.26	10242.4
12	Up and Coming Families	106	6.203	1152326.93	10871.01
16	Enterprising Professionals	95	4.575	849921.55	8946.54
30	Retirement Communities	39	2.266	421023.3	10795.47
9	Urban Chic	43	2.257	419257.26	9750.17
18	Cozy and Comfortable	54	2.165	402190	7447.96
24	Main Street, USA	47	1.944	361083.32	7682.62
19	Milk and Cookies	45	1.492	277251.94	6161.15
28	Aspiring Young Families	17	0.846	157162.93	3244.88
14	Prosperous Empty Nesters	11	0.516	95840.95	8712.81
39	Young and Restless	13	0.487	90470	6953.23
36	Old and Newcomers	14	0.429	79721	5634.36
3	Connoisseurs	19	0.373	69218	3643.05
29	Rustbelt Retirees	5	0.293	54495	10899
17	Green Acres	11	0.276	51321	4665.55
65	Social Security Set	7	0.242	44954	6422
5	Wealthy Seaboard Suburbs	3	0.184	34223.67	11407.89
1	Top Flung	7	0.171	31823	4546.14
32	Rustbelt Traditions	4	0.137	25436	6359

You wish to include among *Living in the Green Lane's* target segments those that constitute at least 4 percent of the company's volume and have high average annual purchasing levels.

- 8 Use the table below to record the segment ID, percentage, and average volumetric values for target segments that account for 4 percent or more of *Living in the Green Lane's* customer base.
- 9 When you have completed the chart, close the profile window.

Question 1: Which seven segments account for 4 percent or more of *Living in the Green Lane's* customers, and what is the average annual spending by each segment? Answer this question by completing the following table:

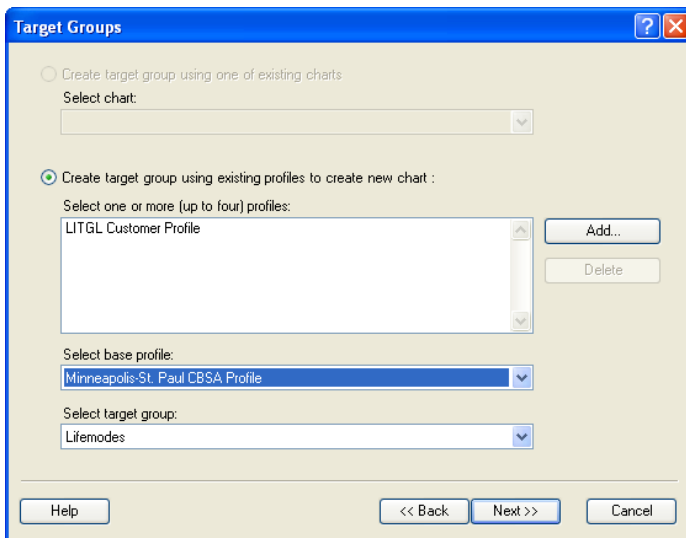
Segment ID	Percent of Volume	Average volumetric

Table 1: Segments accounting for 4 percent or more of *Living in the Green Lane's* sales volume

CREATE TARGET GROUP FROM PROFILE INFORMATION

You have used several alternative techniques to develop profile information for use in your segmentation analysis. Specifically, you have created profiles for *Living in the Green Lane's* loyalty club customers and the Minneapolis-St. Paul CBSA. You will now use this information to select *Living in the Green Lane's* target segments for future marketing and expansion initiatives.

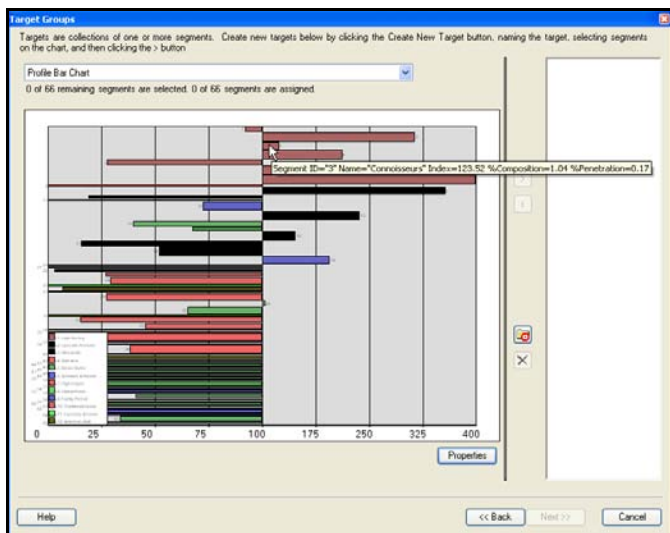
- 1 Click the drop-down menu on the toolbar, click *Target Marketing*, and then click *Create Target Groups* to open the *Target Groups* wizard. Select the *Create target group from a chart* option and then click *Next*.
- 2 In the resultant window, select the *Create target group using existing profiles to create new chart* option. Click the *Add* button and add *LITGL Customer Profile* to the profile box. Select *Minneapolis-St. Paul CBSA Profile* in the base profile box and *Lifemodes* as the target group. When your window resembles the one below, click *Next*.



In the resultant window, you will name your target group and select the Tapestry Segmentation segments that will comprise it. You will do so using two graphic aids and the table you completed above.

- 3 Drag the corners of this window to increase its visibility. The window displays a bar chart of *Tapestry Segments*. The meaning of the chart is discussed below, but you wish to set the width of each bar proportional to the segment's composition of *Living in the Green Lane's* customer base.
- 4 Click *Properties* and click the *Scaling* tab. In the top part of the dialog box, click the *Percent Composition* option. In the *Chart Axes* box at the bottom of the window, select the *"Index" & "% Composition Volume"* option—a setting that will affect the *Game Plan Chart*—and then click *OK*.

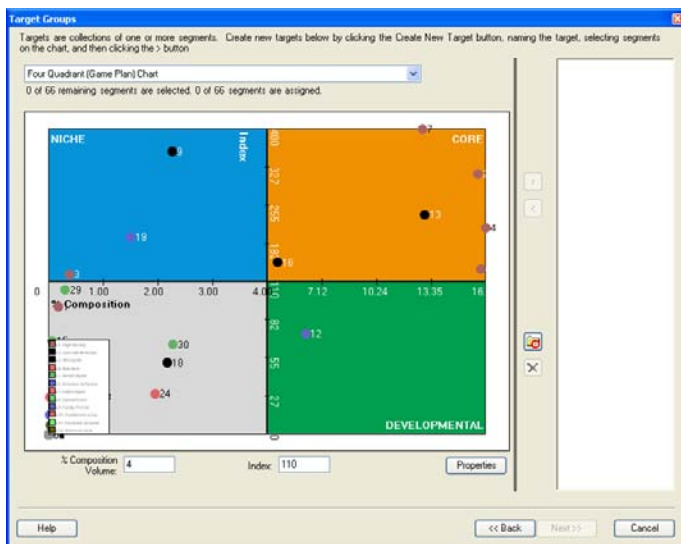
The chart now resembles the image below, though the colors may differ. Move the cursor over one of the bars in the chart to view the callout box, which displays data for that bar as illustrated below.



Each bar in this chart represents a *Tapestry Segmentation* segment. The color of the bar indicates the *Life Mode* group to which it is assigned. The length and direction of each bar reflect the index of the Tapestry Segmentation segment in *Living in the Green Lane's* customer base. The central point is 100. Bars extending to the right represent segments that are more prevalent in *Living in the Green Lane's* customer base than they are in the general CBSA population. Bars extending to the left indicate the reverse. The width of each bar represents the percentage of *Living in the Green Lane's* customer base within this segment. Thus, longer and broader bars extending to the right are the most attractive segments numerically.

You could add segments to the target group from this window, but you will view another chart before doing so.

- 5 Click the drop-down arrow in the field at the top of the window and select *Four Quadrant (Game Plan) Chart* as the chart type. The chart will change to one that resembles the image below. In this chart, segments are represented as circles whose colors represent the *Life Mode* groups to which they belong.
- 6 Move the cursor over a segment circle to see the callout box that displays segment data, as illustrated below. To make the placement of segments exactly match the figure, change the x-axis to **4** and the y-axis to **110** in the boxes at the bottom of the chart.



This chart is divided into four quadrants, each representing a segment with different characteristics. The chart is defined by two values: *% Composition Volume* and *Index*. *% Composition Volume* is the volume of each segment's purchases as a percentage of *Living in the Green Lane's* customers' total purchases. The x-axis value of 4, which you can adjust if you wish, indicates that segments representing 4 percent or more of the total sales are in the right two quadrants, while those below that are in the left two quadrants.

The second defining value is *Index*. Recall from the reports you created earlier that *Index* compares a segment's percentage of *Living in the Green Lane's* customer base with its percentage of the general population in the base profile area—in this case, the Minneapolis-St. Paul CBSA. Segments with values over 100 are more prevalent in the customer base than in the general population. The reverse is true for segments with *Index* values below 100. The y-axis value of 110, which you can also adjust, indicates that segments with *Index* values above 110 are in the top two quadrants, while those with *Index* values below 110 are in the bottom two.

Clearly, then, by changing the values in the x-axis and y-axis settings, you can change the values that define each of the four quadrants.

The *Game Plan Chart* uses these values to define three groups of customer segments:

Core segments are those with values above the boundary in both measures. Thus, they represent a substantial percentage of *Living in the Green Lane's* total sales and are more prevalent there than in the general CBSA population.


Developmental segments are those that represent a substantial portion of total sales but are less prevalent in that customer base than in the general CBSA population. Although significant in number, they are not as attracted to *Living in the Green Lane's* stores as are *Core* segments.

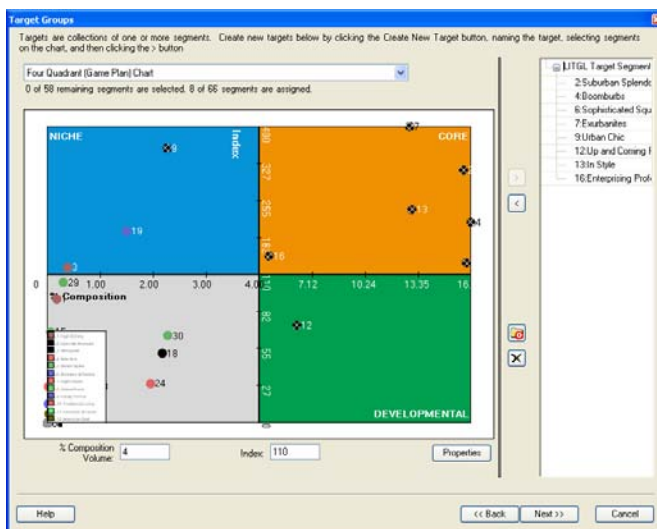
Niche segments are more prevalent in *Living in the Green Lane's* customer base than in the general CBSA population. However, they do not comprise a substantial percentage of the total sales. *Niche* segments might present attractive opportunities if they are present in a market area but should not have the priority of *Core* customer segments.

Question 2: Based on the designated settings, which Tapestry Segmentation segments are in Living in the Green Lane's Core target group? Developmental target group? Niche target group? Why should the segments in the Core group be a higher priority than those in the Developmental or Niche groups?

CREATE A NEW TARGET GROUP

Take a moment to identify the *Core* and *Developmental* segments in the chart and compare them to those in your table. You would like to formally identify the seven segments in your table as a custom target group. You also wish to include the *Niche* segment with the highest index value in that target group based on its high *Index* value. In the chart, that is segment 9: *Urban Chic*. Using this chart, you will create a target group that includes these segments.

- 1 Click the *Create New Target* button  at the right of the chart and, at the top of the box on the right, enter **LITGL Target Segments** as the name of the group.
- 2 Press the **CTRL** key, which enables the selection of multiple symbols, and click the dots that are in the **CORE** and **DEVELOPMENTAL** segments as well as segment 9 in the **NICHE** quadrant to select them.
- 3 Click the right arrow key to move these segments to the right box, where they will appear under the new group name. When the window resembles the one below, click **Next**.



- 4 In the resultant window, enter **LITGL Target Segments** as the name of the new target group and then click **Finish**.

The software creates the new target group and displays a window to indicate that this procedure was successful. Though not displayed on the map, the *Target Group* definition is ready for use in further segmentation analyses. Close the window and save your work.

Question 3: *How does the LITGL Target Segments group differ from the Core, Developmental, and Niche groups you identified in question 2? What is the advantage of a customized target group versus the default system?*

You have completed the profiling and target group definition tasks in this SpatiaLAB. These profiles allow you to understand your core customers more fully and will provide resources for segmentation strategies for *Living in the Green Lane*.

Submit your work

Submit answers to the following questions in a Microsoft Word document:

Question 1: *Which seven segments account for 4 percent or more of Living in the Green Lane's customers, and what is the average annual spending by each segment? Answer this question by completing the following table:*

Question 2: *Based on the designated settings, which Tapestry Segmentation segments are in Living in the Green Lane's Core target group? Developmental target group? Niche target group? Why should the segments in the Core group be a higher priority than those in the Developmental or Niche groups?*

Question 3: *How does the LITGL Target Segments group differ from the Core, Developmental, and Niche groups you identified in question 2? What is the advantage of a customized target group versus the default system?*

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

Contextual information

This SpatialLAB is written for business students in an integrated business GIS course at the undergraduate or graduate level. It may be used to replace the exercises in chapter 9 of *Getting to Know ESRI Business Analyst* in labs with Business Analyst Desktop Premium 10 installed. The emphasis is on using the *Target Marketing* tools in this system to develop customer profiles with and without sales data. Students use these profiles, in turn, to identify the default groups of target customers for *Living in the Green Lane* and create a customized target group of *Tapestry segments* for the firm. This lab could be used as a stand-alone exercise in a retailing, marketing research, or consumer behavior class or in conjunction with the *Customer Segmentation* SpatialLAB for a more comprehensive customer profiling and targeting project.

This lab demonstrates how to geocode customer records, use them to create demographic and lifestyle profiles with and without sales data, and designate groups of target customers based on profile data. The profiles and target groups developed in this lab also support the development of penetration and growth strategies in the *Customer Segmentation* SpatialLAB.

Upon completion of the lab, students may be required to submit answers to several questions based on their observation of the maps and reports they have created. Alternatively, students may be required to submit a project report covering their work in this lab and the *Customer Segmentation* SpatialLAB.

Analysis and visualization tools

Business Analyst Desktop Premium 10 and the *Living in the Green Lane Minneapolis St Paul* project file are required to complete this exercise.

Data information

All the data for this exercise is provided by Business Analyst Desktop Premium 10.

Data sources

Esri® Business Analyst data

Answer key

Question 1: Which seven segments account for 4 percent or more of Living in the Green Lane's customers, and what is the average annual spending by each segment? Answer this question by completing the following table:

Table 1 Segments accounting for 4 percent or more of Living in the Green Lane's sales volume

Segment ID	Percent of volume	Average volumetric
04: Boomburbs	16.5%	\$10,814
06: Sophisticated Squires	16.2%	\$10,809
02: Suburban Splendor	16.0%	\$13,221
13: In Style	13.0%	\$9,835
07: Exurbanites	12.8%	\$10,242
12: Up and Coming Families	6.2%	\$10,871
16: Enterprising Professionals	4.6%	\$8,947

Question 2: Based on the designated settings, which Tapestry Segmentation segments are in Living in the Green Lane's Core target group? Developmental target group? Niche target group? Why should the segments in the Core group be a higher priority than those in the Developmental or Niche groups?

The Core group is composed of segments 02: Suburban Splendor, 04: Boomburbs, 06: Sophisticated Squires, 07: Exurbanites, 13: In Style, and 16: Enterprising Professionals. The Developmental group includes only 12: Up and Coming Families. The Niche group includes 03: Connoisseurs, 09: Urban Chic, and 19: Milk and Cookies. Segments in the Core group account for a high percentage of total customer purchases and are more prevalent in the firm's customer base than they are in the population as a whole. This combination makes them a very desirable group of customers.

Question 3: How does the LITGL Target Segments group differ from the Core, Developmental, and Niche groups you identified in question 2? What is the advantage of a customized target group versus the default system?

The Living in the Green Lane Target Segments group is composed of segments 02: Suburban Splendor, 04: Boomburbs, 06: Sophisticated Squires, 07: Exurbanites, 09: Urban Chic, 12: Up and Coming Families, 13: In Style, and 16: Enterprising Professionals. This collection merges the Core, Developmental, and Niche groups from the default classification but excludes the 03: Connoisseurs and 19: Milk and Cookies segments from that selection. This classification concentrates these key segments into a single target group and enables the researcher to exclude groups deemed less significant to the firm.

Additional notes

1. Though this lab can be integrated with the *Customer Segmentation* SpatialLAB to create a complete project, it is not necessary for students to complete that lab to work with this one. Should you wish to use this lab as a stand-alone exercise, you may choose to have students submit answers to the lab's questions or complete a project report only on this lab. If you choose this option, that report should have as its objective the development of demographic and lifestyle profiles as well as a customized target group based on them.
2. Students use both *Address Coder* and *Target Marketing* tools to create customer profiles in this lab. Draw their attention to the full range of functions; offered by *Address Coder*, which also performs a spatial overlay function; creates a business GIS customer layer; and produces several reports on the geographic distribution, demographic, and lifestyle characteristics of customers.
3. In this lab, students create a customer profile without sales data and another with sales data. Be sure they are aware of the differences between these approaches and the value of adding sales data to the analysis. In the profile tables, the meaning of the percentage field changes between the two approaches. When sales data is used (the volumetric table) it reports the percentage of sales generated by each segment. When it is not, it reports the percentage of customers within each segment. This is an important distinction as students interpret these tables.
4. The *Game Plan Chart* is an instrumental tool in defining important target groups. It is important that students understand the role of the axes, measures, and values used to define the quadrants. The designated combination *Index & % Composition Volume* includes a measure based on numbers of customers (*Index*) and a measure based on sales volume (*% Composition Value*). The other available combinations focus either on number of customers (*Index & % Composition*) or sales volume (*Index Volume & % Composition Value*). These combinations can be confusing, so be sure students understand the differences between them and the balance of the designated selection.
5. Similarly, the exact meaning of the *Core*, *Developmental*, and *Niche* segments varies with the selection of axes measures. The description in the lab is based on the designated settings of *Index & % Composition Volume*. Encourage students to explain the *Core*, *Developmental*, and *Niche* classifications based on these axes and their designated values. This will help them understand the distinctions they are making more fully.
6. In addition to the default classification, students are instructed to create a customized target group of segments in this lab. This allows them to review all the data about Tapestry segments within the customer base, weigh the importance of offsetting characteristics, and choose the exact combination of segments they deem most valuable as target customers. Encourage students to perform this evaluation on the segments selected for the *LITGL Target Segments* group here. Based on the profile reports, are there other collections of target segments they deem more appropriate?
7. Instead of a project report consisting of answers to lab questions, you may wish to have students complete a more comprehensive report covering this lab or both this lab and the *Customer Segmentation* SpatialLAB. If so, you may wish to use the following structure and guidelines for that report. Feel free to adjust this format to your preferences or class requirements.

Report format

Each of your reports should be about six to eight pages in length and should follow this format:

- I. Introduction**—A summary of the circumstances addressed by the research project
- II. Problem statement**—A statement of the problem addressed by the project
- III. Data information**—A statement of the sources and dates of all data used in the analysis
- IV. Analytical methods**—A description of the analytic procedures used and how they will help solve the problem
- V. Research results**(the largest section of the project)—To include
 - A. Presentation of the results of the analysis
 - B. Exhibits such as the required maps, charts, and tables and any others you wish to include to clarify your report
- VI. Conclusions and recommendations**—Recommended response to the problem based on the results of the analysis

Business GIS references

BusinessGeoInfo newsletter.

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

Directions Magazine (Articles on business applications of GIS).

<http://www.directionsmag.com/>

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

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

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<http://www.esri.com/library/whitepapers/pdfs/demographic-update-methodology-2010.pdf>

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Thompson, Simon. 2011. The Geography of Retail Operations (podcast).

http://www.esri.com/news/podcasts/podcast.html#staff_thompson_operations

Thompson, Simon. 2010. Why GIS Is Important to Retailers (podcast).

http://www.esri.com/news/podcasts/podcast.html#staff_s-thompson-3