

# Initial Site Selection

## *Finding the best location for a new business*

—by Fred L. Miller

## Introduction

---

This SpatialLAB is designed to serve as a guideline for an independent student project in which you will perform an initial site selection analysis for an actual client organization. In it, you will develop a profile of the organization and its objectives and analyze several available locations to recommend the best initial site for the client organization. You will then use business geographic information system (GIS) software to analyze the spatial distribution of those factors within the organization's market area.

### Location

Determined by instructor and student

### Time to complete the lab

This SpatialLAB will take many days or weeks to complete and may be appropriate as a term project. Much of the time required will depend on interactions between the lab instructor and the client organization.

### Prerequisites

An understanding of the role of customer profiling and market segmentation in strategic marketing

Some experience in the customer profiling, segmenting, and targeting tools in Esri® Business Analyst™ Desktop Premium 10

Access to a computer running Esri Business Analyst Desktop Premium 10

*Keywords: marketing; business GIS; business; environmental scanning; market area analysis; geodemographics; demographic*

## Data used in this lab

Determined by the instructor and student

# Student activity

---

## Organizational profile and problem statement

Develop a profile of the organization and its objectives and target group using the following matrix. This profile and problem statement are the portions of this report that document your understanding of the client organization and its situation. The depth of this understanding is the cornerstone of your credibility with the client, so be sure to present this information as clearly and completely as you can.

<b>Organization's name and address</b>	Addresses for single or multiple locations; current or planned locations
<b>Organization's service area and location</b>	Defined service area, area from which customers/clients are drawn, or area of interest to management; address of the client's location
<b>Trade area definition</b>	Preferred trade area definition (rings, drive time, quantitative threshold such as number of households or amount of entertainment spending, etc.)
<b>Type of organization</b>	Profit, nonprofit, community service, economic development, civic, etc.
<b>Mission</b>	The organization's core purpose
<b>Organizational objectives</b>	Specific goals the organization wishes to accomplish to achieve its mission
<b>Organization's target market (customers, clients, donors, patrons, and/or constituents)</b>	The organization's core target customers; the characteristics of the people in the target group
<b>Objectives for serving target market</b>	What the organization wants its target population to do (buy, donate, participate, communicate, etc.)
<b>Communication plans for target market</b>	How the organization plans to communicate with its target population
<b>Competitive opportunities</b>	Factors in the competitive environment that create opportunities for the organization (transportation, shopping facilities, complementary organizations, health/recreational/cultural facilities, etc.)
<b>Competitive threats</b>	Factors in the competitive environment that create threats for the organization (competing organizations, poor transportation, unfavorable environmental factors, etc.)

Table 1: Organizational profile format

## Problem statement

As this is an initial site selection exercise, the problem can be directly stated as follows:

- How do the trade areas of available locations compare with each other and the organization's target market?
- Which location should the client organization select for its initial site?

**Report Part I:** Complete your organizational profile and problem statement and integrate them into your project research report as Part I.

## DEFINE A STUDY AREA AND MAP AVAILABLE LOCATIONS

The first step in the spatial analysis of the client's marketing environment is to generate a study area matching the client's service area and geocode any available locations within that area. That market area will be captured as a study area with a new project folder and will determine the extent of the analysis.

## VISUALIZE

- 1 Run Esri Business Analyst Desktop Premium 10. When the Business Analyst *Message Center* opens, click *Default Project* to open the system with the default project map.
- 2 Review the client's service area in the *Organizational Profile*. Use the *Business Analyst » Study Area » Create New Study Area* sequence to define a study area that matches the client's service area. When creating this study area, select the *Create a new project for this Study Area* option to generate a new project folder for your data in this project.
- 3 When the study area is complete within a new project, use the *Business Analyst » Store Setup » Create New Store Layer* sequence to load a data table of the addresses in the study area that are available to the client. This data table should be a spreadsheet with fields for the name of the location and its address, city, state, and ZIP Code. As you work with the wizard, rename this layer *Available Properties*. When you have completed this sequence, these locations will be geocoded and displayed on the map.



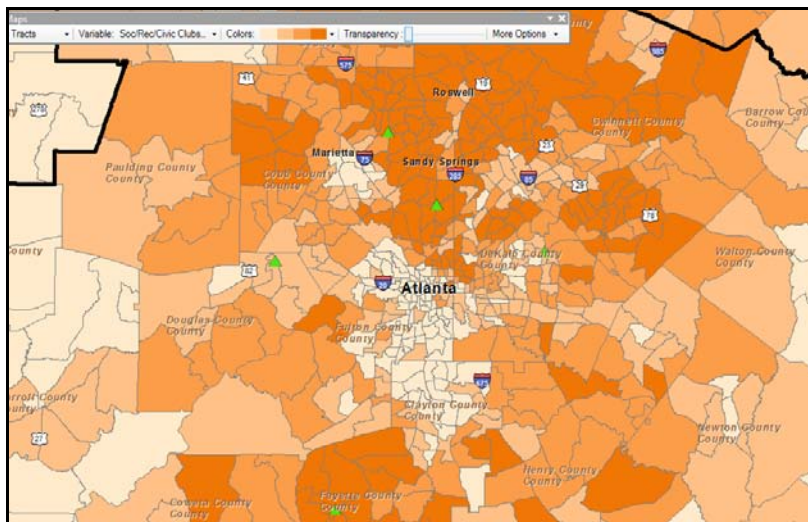
using four classes) displays two classes with values above the median values for the geographic areas mapped and two classes with values below. If you choose to use another classification scheme, explain your rationale for doing so in this portion of your report.

- 2 For measures where the distribution is relevant (e.g., gender, homeownership, education, age) consider using a chart-based mapping scheme with a pie chart.
- 3 When you have completed your color-coded map, export it (*File » Export Map*) to be included as *Map 1* in your report. You may include additional maps if you wish.

## ANALYZE

- 1 Pan and zoom around your map to look at several areas.
- 2 Note the ones that are most attractive for the client organization and describe them in this part of your report.

For example, in map 2 below, the census tracts in lighter colors have lower values for average household expenditures on recreational club fees than do the darker-colored tracts. This is useful information to an organization seeking a site for a new health club.



Map 2: Average household expenditures on recreational club fees by census tract in Atlanta, Georgia, client service area

**Report Part III:** Describe the geographic distribution of the core demographic characteristic of the organization's target market. Integrate your summary into the research project report as Part III and include the map image as *Map 1* in your report.

## CREATE A TRADE AREA AND GENERATE REPORTS

Though general market area information is important, clients are more interested in the specific characteristics of the trade area in which they are located. You will create trade areas around the available properties and generate comparative reports for them.

### ANALYZE

- 1 Review the client's preferred trade area definition. Use the *Business Analyst Trade Area* wizard (*Business Analyst » Trade Area » Create New Trade Area*) to create *Simple Ring*, *Drive Time*, or *Threshold Areas* trade areas for the client's location.

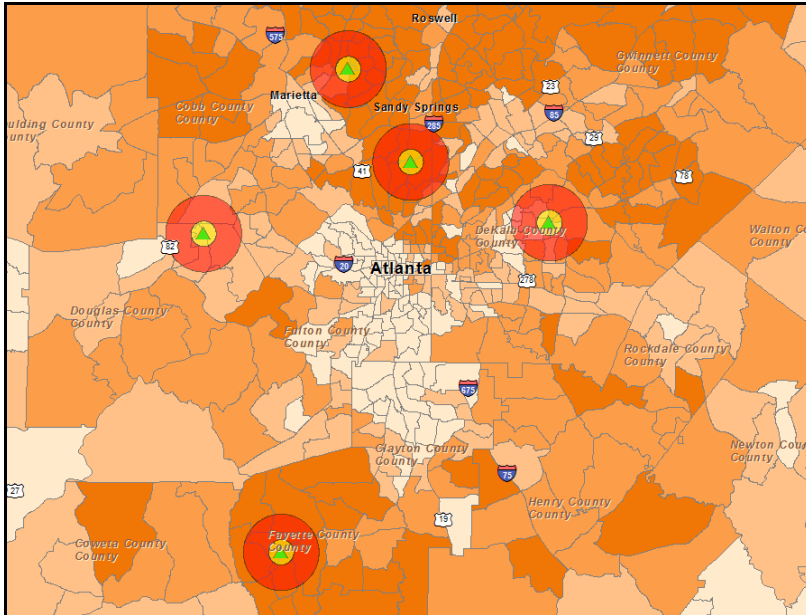
Use no more than two levels, to simplify report comprehension. In the wizard, select the *Create Reports* option and *Individual Features* as part of the process, selecting *Executive Summary Report*, *Market Profile Report*, and *Tapestry Segmentation Area Profile Report* to generate those reports.

***If the client is a retail organization, you should also order the Retail Goods and Services Expenditures report for more finely grained data on retail expenditures in each trade area.***

These reports provide basic information about the trade area you have created as well as data on household expenditure patterns for the trade area of each location. The *Tapestry Segmentation Area Profile* report identifies the most common Tapestry™ segments in each trade area. This information helps you compare trade areas with the desired lifestyle characteristics of the client's target customers. These reports help you compare trade areas with each other and with the client's target customer profile. For more detailed results, you may run other reports such as the *Retail Goods and Services Expenditures* report mentioned above.

For more information on the segments included in the *Tapestry Segmentation Area Profile* report, consult the **Tapestry Segmentation Reference Guide**. (Press the CTRL key and click the link to follow it.)

The map below displays one- and three-mile-ring trade areas for each available location.



Map 3: One- and three-mile-ring trade areas around available locations

## 2 Export this map to include in your report as *Map 2*.

Use the map and reports to explore the demographic and spending patterns of the trade area relative to the client's target customers.

**Report Part IV:** Describe the client's trade area and its demographic characteristics and relevant consumer expenditure patterns. Explain how this profile compares with the desired demographic characteristics of target customers. Integrate this discussion into the research project report as Part IV.

## ADD INFORMATION ON OTHER ORGANIZATIONS

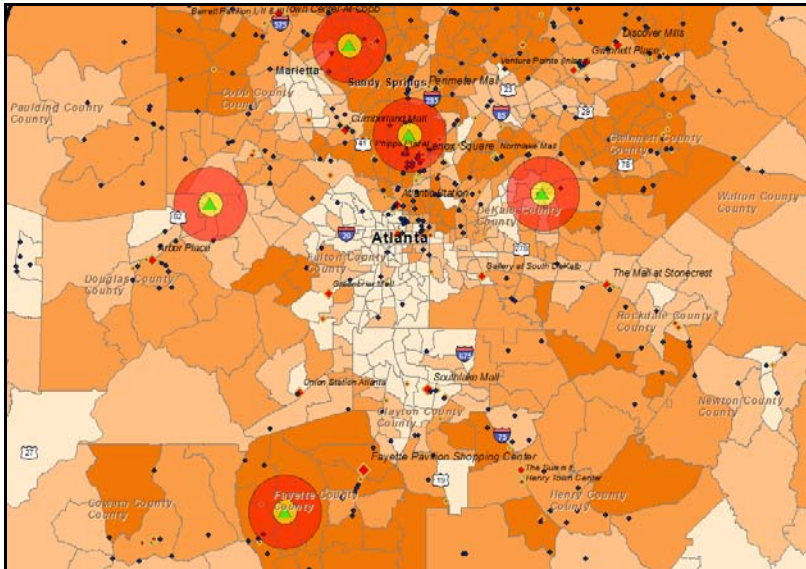
Site selection decisions are also influenced by the location of retail attractors, such as shopping centers, as well as the location of competing organizations. You will create maps and reports to use in evaluating these factors.

## VISUALIZE

### 1 Turn on the *Shopping Centers* layer in Business Analyst and adjust its symbology to *quantiles* and *three classes* based on *gross leased area (GLA)* to display shopping centers as various sizes of red diamonds.

- Competing organizations depend on the industry in which the client's organization competes. Use the Business Analyst *Business Listings* wizard (*Business Analyst » Add Business Listings*) to select business listings in the client's industry and display them on the map as blue dots.

Your map should resemble the one below in which shopping centers and competitors (in this case, health clubs) are depicted on the map. You may use this information to assess the competitive environment of the client's current and potential locations.



Map 4: Complementary and competing organizations relative to the trade areas of available locations

- Export this map to include as *Map 3* in your report.
- To acquire detailed information about the complementary and competing organizations in each location's trade areas, generate locator reports for both types of organizations. For example, if shopping centers are complementary, use the *Analysis* wizard to generate a locator report (*Business Analyst » Analysis » Create New Analysis » Site Analysis » Proximity Analysis*), which lists the shopping centers within a specified distance (usually about 1.5 times your largest trade area—in this case, 4.5 miles) from the locations under consideration. You may specify the fields to include in the report.
- Repeat this procedure for competitive organizations by running the *Analysis* wizard for the competing organizations layer you created in step 2 above.

## ANALYZE

- Pan and zoom within your map to explore the distribution of complementary and competitive organizations in the market area.



- 2 Observe their spatial relationship to each other and to major transportation networks and population centers.
- 3 Review the two locator reports for detailed information on the number and size of complementary and competitive organizations in each trade area. Based on this analysis, how do you believe that these organizations and these factors will impact each potential location?

**Report Part V:** *What types of organizations are complementary to the client organization, and which are competitors? Explain your rationale for these designations. Describe the geographic distribution of the complementary and competitive organizations and their impact on the attractiveness of regions within the market area. Integrate this discussion into the research project report as Part V.*

## RECOMMENDATIONS FOR FIRST SITE

- 1 Review your report and the maps you have designed. On the basis of your work, which of the available locations do you recommend as the client organization's first site?
- 2 Zoom to this region and export the map as *Map 4* in your report.

**Report Part VI:** *Based on the trade area reports, which locations offer the best market opportunities relative to the client's target market? How are these trade areas affected by the presence of complementary and competing organizations? Based on your analysis, which location do you recommend for the client organization's first site? Explain why you believe this site to be the best option. Integrate this discussion into the research project report as Part VI.*

# Submit your work

---

Submit the report to your client organization in a document organized as follows:

**Report Title**  
**Class**  
**Team Members' Names**  
**Date**

- I. Client organization profile and problem statement
- II. Mapping client's service area and available locations
- III. Distribution of relevant target market characteristic
  - a. Map 1: Distribution of core characteristic
- IV. Creation of trade areas for available locations, generation of reports, and comparison of site characteristics
  - a. Map 2: Trade areas for available locations
  - b. Report 1: Executive Summary
  - c. Report 2: Tapestry Segmentation Area Profile report
  - d. Report 3: Market Profile Report or Retail Goods and Services Expenditures Report
- V. Identification and mapping of complementary and competing organizations
  - a. Map 3: Complementary and competing organizations
  - b. Report 4: Locator report for competing organizations
  - c. Report 5: Locator report for complementary organizations
- VI. Recommendation of location for the client organization's first site including rationale for recommendation
  - a. Map 4: Recommended site and trade area

# Credits

---

## Images

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

---

## Project guidance and evaluation considerations

This SpatialLAB is a template for an initial site selection student research project for a client organization in a business GIS course. In it, students perform a structured analysis of the locations available for the client's first site. As the range of potential clients is great, the steps in the project are defined in general terms and require students to match the software tools with the profile and needs of the client organization.

These steps are integrated into report format, which provides structure to students' final work product. Obviously, individual instructors are free to adjust the requirements and/or template as they wish to accomplish course learning goals. In addition, instructors may wish to pair this lab with others to create a more comprehensive research project for client organizations.

The following are general guidelines to assist in the guidance of student projects and assessment of reports for each step in the research process.

### **I. Client organization profile and problem statement**

The profile should be accurate and sufficiently detailed to provide an understanding of the organization and its purpose and objectives. In addition, the definition of the client's target customers/clients should be clear, consistent with the organization's objectives, and stated in attributes that can be explored in business GIS software.

### **II. Mapping client's service area and available locations**

The description of the study area and its relevance to the client's service area should be clear and accurate. The study area should be consistent with the current or planned service capabilities of the client but large enough to reveal potentially attractive opportunities beyond the existing service area. The available locations should be provided by the client in Excel format with the fields specified in the text. Four to six locations will result in a manageable quantity of data for student teams, while more than that will create challenges.

### **III. Distribution of relevant target market characteristics**

#### **a. Map 1: Distribution of core characteristic**

The attribute chosen for color-coded mapping should be consistent with the client's target market profile. The distribution of this attribute and its relevance to the client should be described accurately relative to *Map 1* in your report.

#### **IV. Creation of trade areas for available locations, generation of reports, and comparison of site characteristics**

- a. Map 2: Trade areas for available locations**
- b. Report 1: Executive Summary**
- c. Report 2: Tapestry Segmentation Area Profile report**
- d. Report 3: Market Profile Report or Retail Goods and Services Expenditures Report**

This discussion should focus on the core trade area characteristics as captured in the reports. It should compare characteristics between trade areas as well as those used to identify the client's target customers. Relevant expenditure patterns from the *Market Profile Report* (or *Retail Goods and Services Expenditures Report*, if it is used) should also be described. In addition, the *Tapestry Segmentation Area Profile* report should be used to identify the trade areas with the most attractive lifestyle characteristics relative to the client's target market. The **Tapestry Segmentation Reference Guide**, linked here and in the references below, provides necessary background information for this comparison.

#### **V. Identification and mapping of complementary and competing organizations**

- a. Map 3: Complementary and competing organizations**
- b. Report 4: Locator report for competing organizations**
- c. Report 5: Locator report for complementary organizations**

The identification of complementary and competing organizations should be clearly explained and consistent with the client organization's profile. The distribution of these organizations should be consistent with *Map 3*, and the locator reports should be used to assess the impact of complementary and competitive organizations.

#### **VI. Recommendation of location for the client organization's first site including the rationale for recommendation**

- a. Map 4: Recommended site and trade area**

The recommended site should reflect the content of *Map 4*. The rationale for the recommendation should use the maps and reports effectively, with data from each report being used to justify the recommendation.

### **Business GIS references**

Business Analyst blog.

<http://blogs.esri.com/Dev/blogs/businessanalyst/default.aspx>

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>

Esri. 2011. *Tapestry Segmentation Reference Guide*.

<http://www.esri.com/library/brochures/pdfs/tapestry-segmentation.pdf>

Esri. 2010. *Esri Trend Analysis: 2010–2015*, an Esri white paper.  
<http://www.esri.com/library/whitepapers/pdfs/trend-analysis-2010-2015.pdf>

Esri. 2010. *Redlands Chamber of Commerce: ESRI Business Analyst Online helps attract new business to Redlands*.  
<http://www.esri.com/library/casestudies/redlands-chamber-of-commerce.pdf>

Esri. 2005. *South Bend Small Business Development Center: Identifies the best sites—quickly and accurately*.  
<http://www.esri.com/library/casestudies/southbend.pdf>

*GISCafe* newsletter—Electronic GIS newsletter (Business applications of GIS).  
<http://www.giscafe.com/>

Miller, Fred L. 2010. *Getting to Know ESRI Business Analyst*. Redlands, CA: Esri Press.

Roderick, Brent. 2009. "Discover Retail Opportunities with Esri's Retail MarketPlace Data." *ArcWatch*, August.  
<http://www.esri.com/news/arcwatch/0809/retail-marketplace-data.html>

Romeo, Jim. 2005. "Target Marketing with GIS." *Geospatial Solutions*, May: 3–5.  
<http://www.tetrad.com/pub/documents/geospatial1.pdf>

Thompson, Simon. 2010. Why GIS Is Important to Retailers (podcast).  
[http://www.esri.com/news/podcasts/podcast.html#staff\\_s-thompson-3](http://www.esri.com/news/podcasts/podcast.html#staff_s-thompson-3)

Thurston, Kathie. 2010. ESRI Business Analyst Online Successfully Fills Commercial Vacancies (podcast).  
[http://www.esri.com/news/podcasts/podcast.html#user\\_thurston](http://www.esri.com/news/podcasts/podcast.html#user_thurston)