

# Finding Market Opportunities

## *Understanding the market environment spatially using online analysis tools*

—by Fred L. Miller

## Introduction

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This SpatialLAB is designed to serve as a guideline for an independent student project in which you will perform an environmental scanning analysis for an actual client organization. In it, you will develop a profile of the organization and its objectives as well as an understanding of what environmental factors create threats and opportunities for it. You will then use online 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 environmental scanning in marketing strategic planning

Some experience in thematic mapping and map management in the Business Analyst Online<sup>SM</sup> (BAO<sup>SM</sup>) system

Access to a web browser and an Esri® Business Analyst Online subscription

*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

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## Organizational profile and problem statement

Develop a profile of the organization, its objective, 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 environmental scanning exercise, the problem can be directly stated as follows:

- How favorable is the client's environment overall?
- Where are the most favorable regions in the market area?

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

## GEOCODE THE CLIENT ORGANIZATION AND SELECT A MARKET AREA

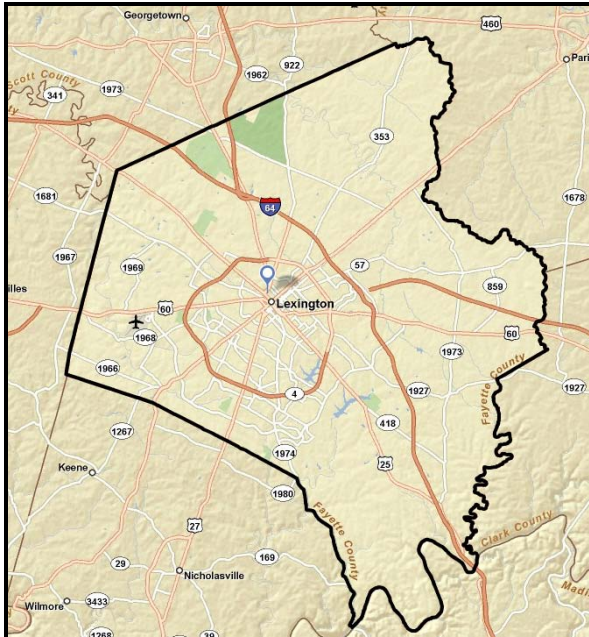
The first step in the spatial analysis of the client's marketing environment is to place the client's actual or planned location(s) on a map and define the geographic area to be used for the analysis. That area may be the defined service area of the organization, the area from which it draws customers/clients, or some other geographic area defined by its managers.

## ANALYZE

- 1 Open a browser to <http://bao.esri.com> and sign in with your BAO ID and password.
- 2 Click the *Select Location* tab and then *Find Location*. Enter the current or planned address of the client organization and click *Go* to geocode it and locate it on the map. Repeat as necessary if the client has multiple locations.
- 3 Use the *Select Geographies* function to define a market area for the client organization. Explore some of the alternative geographies available to observe their differing coverage and extent. Select the appropriate market area for the organization as defined in the client's profile.

## VISUALIZE

You now have a spatial representation of the client's location(s) and market area similar to map 1, which displays the location of a community service agency in Lexington, Kentucky. This will be the context in which you will evaluate the client's competitive environment.



Map 1: A community service organization's location and the Lexington, Kentucky, area it serves

**Report Part II:** Define the location and market area of the client organization, including the geographic area it covers and the rationale for focusing on this area. Integrate your summary into the research project report as Part II.

## DISPLAY DEMOGRAPHIC CHARACTERISTICS

One of the key tools in environmental scanning is color-coded mapping related to the key characteristics of the target market. Spending patterns and *Market Potential Indexes* may also be included to expand the scope of this tool. In this task, you will identify the attributes most relevant to the client organization's target market and map their distribution in the market area.

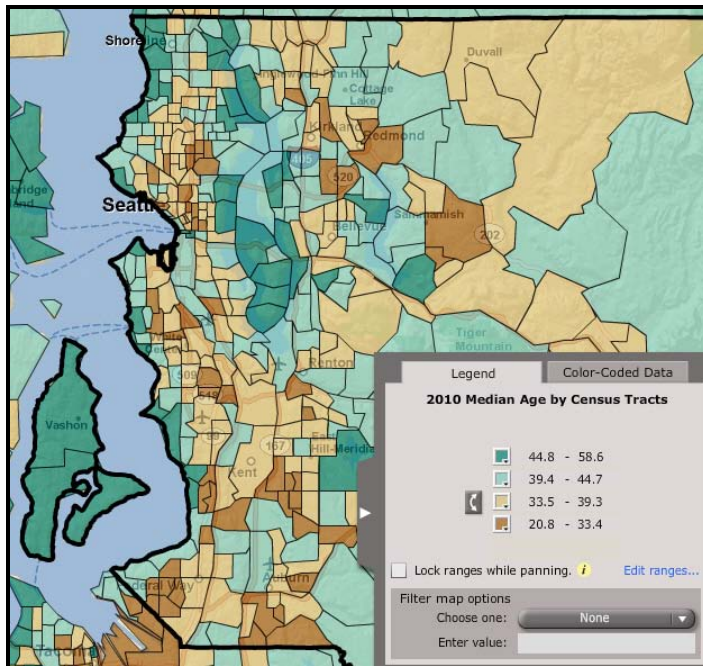
### ANALYZE

- 1 Click the *Research Market* tab and the *Create Color-Coded Map* option to access the relevant commands.
- 2 Consider the characteristics of the client organization's target market and review the data elements available in the Business Analyst Online system. Select a group of four to five variables relevant to this target market definition. Include at least one variable for relevant spending patterns and, if available in your BAO subscription, at least one *Market Potential Index* measure appropriate for the target market.
- 3 Create color-coded maps with a *quartile classification system* for each data element you select. Use the *Screenshot* tool (camera icon) to capture images of two selected maps to include in your report as *Map 1* and *Map 2*.

### VISUALIZE

- 1 Pan and zoom around either map to look at several areas of geography. Look for concentrations of attractive characteristics around the market area.
- 2 Note those concentrations and use the maps to describe them in this part of your report.

For example, in map 2 (below), the census tracts colored tan and brown have lower values for median age than do the darker-colored tracts. This indicates a concentration of younger people in the central part of the market area. This is useful information to an organization targeting younger (or older) consumers.



Map 2: Median age by census tract in Western King County, Washington

**Report Part III:** Describe the geographic distribution of the core demographic characteristics of the organization's target market. Integrate your summary into the research project report as Part III and include the two map images as Map 1 and Map 2.

## IDENTIFY THE BEST OPPORTUNITIES

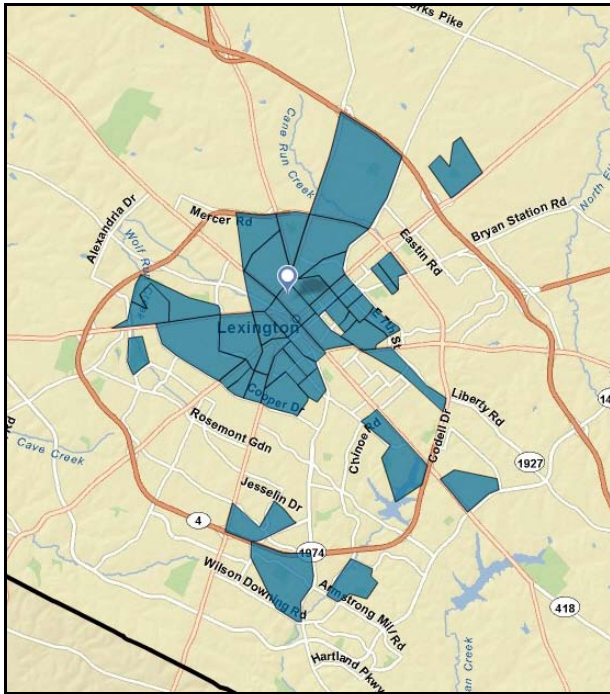
Color-coded maps are excellent tools for exploring population characteristics in a market area one at a time. Frequently, however, the target population for an enterprise is defined in terms of several such characteristics. The *Smart Map Search* tool enables you to seek regions within a market area that meet all these criteria and are therefore of the greatest interest to your client.

## ANALYZE

- 1 On the *Research Market* tab, click *Smart Map Search*. Use the resultant wizard to select the data attributes used to identify the client's target customers/clients. Use the wizard criteria definition screen to establish the maximum and/or minimum thresholds for each of these attributes. Note as you do so that Business Analyst Online reports the number of geographic areas that meet all the criteria you are defining. Click *Show results on map* to update the map with the results of your query.
- 2 Use the *Screenshot* tool (camera icon) to capture images of this map to include in your report as *Map 3*.

## VISUALIZE

The map you create will be similar to map 3, which displays block groups in the Lexington, Kentucky, area that match the characteristics of the target clients for the community service agency mentioned in map 1 above. This agency is charged with improving wellness and dietary practices of city residents, and it wishes to serve those whose consumption of fresh fruits and vegetables is too low. These areas are displayed on the map. Your map will display a distribution of the regions in the market area that best match the characteristics of the client's target audience.

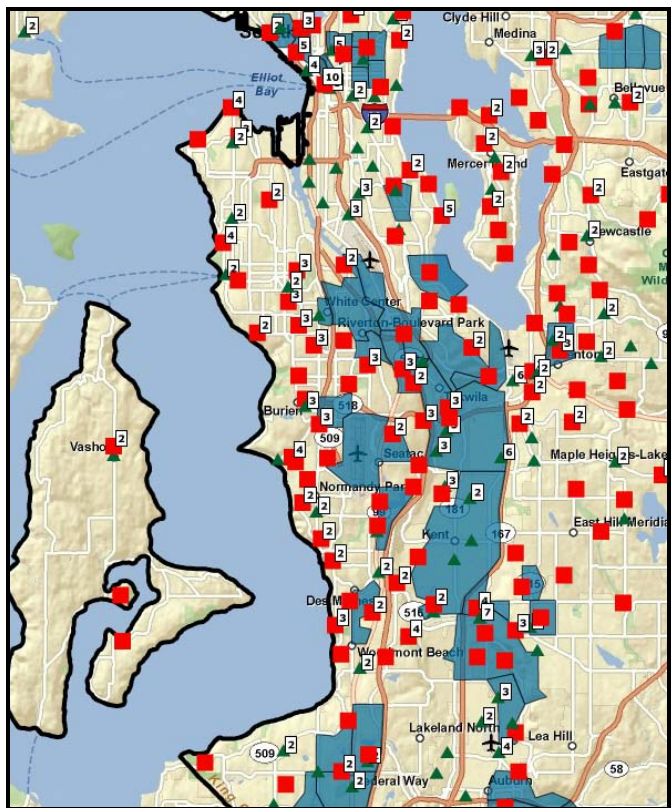


Map 3: Block groups in Lexington, Kentucky, selected by Smart Map Search

**Report Part IV:** Describe the Smart Map Search attributes and thresholds you specified and explain your rationale for your selection. Describe the geographic distribution of the most attractive regions in the market area. Integrate this discussion into the research project report as Part IV.

**ADD INFORMATION ON OTHER ORGANIZATIONS**

In addition to identifying clusters of attractive potential customers, environmental scanning must include some consideration of competing and complementary organizations. For example, in map 4 below, red squares represent local parks with bike paths—attractive factors for a bike shop—while green triangles are competing bike shops, a negative factor.



Map 4: Parks, bike shops, and selected block groups in Western King County

**ANALYZE: LOCATE COMPLEMENTARY AND COMPETING ORGANIZATIONS**

- 1 Based on the profile of the client organization, determine what types of other organizations would be attractive to its customers/clients. What types of organizations are its competitors?
- 2 Using the *Search* tool in Business Analyst Online, select complementary organizations and symbolize them with red squares.
- 3 Select competitors and symbolize them with green triangles. Use the *Screenshot* tool (camera icon) to capture images of this map to include in your report as *Map 4*.



## VISUALIZE

- 1 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. Based on these observations, how do you believe that these organizations and their locations will impact the client organization?

**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.*

## ENVIRONMENTAL SCANNING CONCLUSIONS

- 1 Review your report and the maps you have designed. On the basis of your work, how attractive is the market area as a whole for the client organization?
- 2 Describe two regions within the area that are particularly favorable.
- 3 Use the *Screenshot* tool (camera icon) to capture images of these maps to include in your report as *Map 5* and *Map 6*.

**Report Part VI:** *How attractive is the market area as a whole to the client organization? Explain your conclusion. Describe two regions in the area that are particularly favorable and that you have captured as *Map 5* and *Map 6*. Explain why you believe these regions to be favorable. Integrate this discussion into the research project report as Part VI.*

# Submit your work

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Submit the report to your client organizations in a Microsoft Word document organized as follows:

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

- I. Client organization profile and problem statement
- II. Client location(s) and definition of market area; geographic area and rationale
- III. Distribution of relevant target market characteristics
  - a. Map 1: Distribution of first characteristic
  - b. Map 2: Distribution of second characteristic
- IV. Selection of most attractive regions of the market area; attributes, threshold, rationale
  - a. Map 3: Geographies in market area selected by Smart Map Search
- V. Identifying and mapping complementary and competing organizations
  - a. Map 4: Complementary and competing organizations
- VI. Conclusion: Favorability of the client's overall environment; locations of the most favorable regions in the market area
  - a. Map 5: First favorable region
  - b. Map 6: Second favorable region

## Credits

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### 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

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## Project guidance and evaluation considerations

This SpatialLAB is a template for an environmental scanning student research project for a client organization in a business GIS course. In it, students perform a structured exploration of the market environment for the client. 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 the report format, which provides structure to students' final reports. 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 on *market area analysis* and/or *site selection* 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 customer/clients should be clear, consistent with the organization's objectives, and stated in attributes that can be explored in the business GIS software.

### II. Client location(s) and definition of market area; geographic area and rationale

Current or planned location(s) of the client should be in clear address format for geocoding. The geographic area chosen as the market area should be reasonable relative to these locations. It 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.

### III. Distribution of relevant target market characteristics

#### a. Map 1: Distribution of first characteristic

#### b. Map 2: Distribution of second characteristic

The attributes chosen for color-coded mapping should be consistent with the client's target market profile. The distribution of attributes should be performed with maps of different scale and, as a consequence, different geographic units as well. The distributions should be described accurately relative to *Map 1* and *Map 2*.

### IV. Selection of most attractive regions of the market area; attributes, thresholds, and rationale

#### a. Map 3: Geographies in market area selected by Smart Map Search

The rationale for the selection of attributes and designation of thresholds in the Smart Map Search tools should be clear and reasonable. They should also be consistent with the client's target market profile. The description of the distribution of these areas should be consistent with *Map 3*.

## **V. Identifying and mapping complementary and competing organizations**

### **a. Map 4: Complementary and competing 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 4*, and the assessment of the impact of this distribution should be consistent with that distribution and the client's profile.

## **VI. Conclusion: Favorability of the client's overall environment; location of the most favorable regions in the market area**

### **a. Map 5: First favorable region**

### **b. Map 6: Second favorable region**

The regions selected and displayed in the map should represent a favorable balance of positive demographic factors and complementary organizations with relatively few negative factors and competing organizations. Though it will be very difficult to determine if students have accurately identified the two optimal regions in the market area, it will be possible to determine if they have identified regions that are, on balance, favorable to the organization.

## **Business GIS references**

Business Analyst Resource Center.

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

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

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