

Spatially Analyzed Prime Location

Jeremy J. Young

University of Redlands

## THE SECOND CHAPTER OF YO-WAY EATERY

## Abstract

This paper discusses the process of creating a new GIS application and the benefits that result in spatially analyzing data. Using BAO, ESRI Tapestry segments, the course book *Geo-Business* by James B. Pick, and a Harvard Business Review article for research I determined where the second location should be for a new business known as Yo-Way Eatery. By spatially analyzing data, a location is determined by meeting strict sets of criteria. Once these criteria were met the location was found and presented to the company according to the data analyzed. The process of creating a new GIS application involves planning, analysis, design, implementation, and maintenance phases. Each of these phases has importance to the discovery of the second location and together they create a spatially analyzed location for Yo-Way to take advantage of. Maps are provided through BAO to give a representation of the research found to show relevance of the chosen variables. Without a doubt, not using GIS to determine the new second location for Yo-Way is not recommended, and with the help of spatial data the company will be able to choose their next location with the upmost confidence.

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Yo-Way is a gourmet sandwich eatery located in Gardena, California and is currently a start-up family owned company that is in its second year of operation. This family business takes pride in making custom sandwiches from fresh produce, fresh exotic breads, and by using famous meat/cheeses from a company known as Boar's Head. Their popularity on Yelp has been the forefront of their success in marketing their vision. So far this sandwich eatery has done rather well considering that they have not claimed a loss thus far in their adventure for success as a business. With confidence looming, Yo-Way has decided to look for a new location to open a second facility. Using spatial analysis through geographic information systems (GIS), Yo-Way will be able to have confidence when choosing which location would benefit the company the most. Although to get the most efficient results the company will need to plan, analyze, design, implement, and maintenance their GIS application.

When planning this application the company will identify the sources of GIS data used which include: planning where to open the location by looking into opportunities for greater; amounts of profit, new marketing, target market sales and must also consider if this can be done without GIS. Analyzing these areas through GIS using ESRI's Business Analyst Online (BAO) the company will look into where the most revenue is spent during the lunch hour on food, health conscious tapestries, potential foot traffic of large businesses, and a drive time analysis of gyms. The impact of analyzing these categories will assist in knowing which area is most strategic to create the greatest amount of business and profit. Designing will include organizing the research to show how this data will impact the identification of the new prime location. Implementation will include committing to a new location and getting the business up and running for sandwich production. Maintenance will be a very important phase of this use of the GIS application because being aware of any data that is changing around the new location will become crucial to

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remaining competitive in this market (Pick, 2008). Each of these phases will be discussed throughout the paper. Overall, if each of these phases can be done, the most efficient location can be located and the adventure to maximize profit can be created with confidence.

The planning phase is one of the most important phases because it is the foundation of the new initiative and justifies the need for the use of GIS. By using GIS, Yo-Way will find out why looking into areas that can create more opportunities for profit can be beneficial to consider when opening up their second location. It can be useful to consider whether or not a location close to the freeway is better than a location close to a gym and this can be done by planning which areas have the most opportunity for more marketing. For example, Yo-Way takes pride as being a healthier alternative for food and if they can plan to use GIS to find a location close to a gym, the company will be able to market directly to their target customers. Using this plan the company can increase the amount of sales they receive from these individuals. Nevertheless, the company will need to consider whether or not these answers can be achieved without spatially analyzing this data. However, this information cannot be answered without GIS and by using BAO these attributes will be spatially analyzed to find a prime location that Yo-Way can use as its second location in southern California.

Analyzing where the most money is spent during the lunch hour on food, health conscience tapestries, potential foot traffic, and a drive time analysis of gyms will assist in the discovery of Yo-Way's second location. Since Yo-Way's busiest time is the lunch rush this factor must be realized to formulate the criteria accordingly. By analyzing where the most revenue is generated during the lunch hour on food, the company will increase chances of more capital spent at their new location. For example, currently there is only a fraction of capital generated in the first location than in their competitor's location in the lunch hour; if this can be

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changed, when considering the second location more money will be able to be spent by consumers. If there can be a location that is close to large businesses the company can also increase the amount of customers who are within walking distance or driving distance to the new second location. Using drive time analyses in BAO will assist in determining whether or not these could be potential criteria to meet for the new location. Nevertheless, drive time analysis can also assist in determining where gyms are located and if there could be potential areas of interest. By meeting these criteria, this will impact Yo-Way by increasing the amount of customers, sales, and customer service; Yo-Way will be catering to their target market and individuals who are short on time during their lunch breaks.

In the design phase Yo-Way will need to research the specified points in order to make sure that they are relevant to the discovery of a second location for the business. While researching the criteria desired it was found that some variables are more important in others and this helped establish where it is best to start looking for a new location. For example, when looking at how much capital is spent during the lunch hour on food it was discovered through GIS that certain areas in Orange County spent more money on food than in other areas in Los Angeles County and this assisted in finding a general region of interest for the second Yo-Way location. This depiction can be further examined in Map 1 in the appendix at the end of this reading. Noticing this fulfillment of the criteria concerning where the most profit would be helped with designing where the best area would be to open up the next facility. Moreover, finding an ESRI tapestry known as Trendsetters, helped design the application to find a location that has the most trendsetters as possible. Trendsetters are described by ESRI as, “attentive to good health and nutrition (LifeMode Group: Uptown Individuals Trendsetters, 2014).” This is the perfect tapestry to represent the target audience that Yo-Way desires because again the eatery

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takes pride as a healthier alternative when considering food and these people will enjoy healthier food more than others eateries that are less healthy to consume. To reference the findings of the tapestry and its location within the specific region refer to Map 2. Also in the design of the application Yo-Way will use data that shows where the nearest 24 hour fitness gyms are and how far they are from the new potential second location. This will assist in the marketing of their product once the second location is established and can be referenced in Map 3. The final criterion that was researched for the design of the application included the potentiality of having foot traffic available close to the business. The more people that are within walking distance whether they are a part of a large corporation or a college could increase the amount of people coming into Yo-Way to enjoy gourmet sandwiches. The potential second location has a college within five minutes of walking distance and this discovery can be referenced in Map 4. By specifying these specific points in the design phase the process of re-planning and re-analyzing the data used to fulfill the criteria is better determined to see its relevance in the discovery of the second location. The next step requires the creation of the business through the implementation phase.

Implementing this use of GIS through spatial analysis requires Yo-Way to commit to a new location site which is in Orange County and this decision of the exact location is backed up by research of spatially analyzing specific criterion to fulfill. Since the main criteria are fulfilled, which include highest generated revenue for food at lunch, dense area of trendsetters, close to 24 hour fitness gyms, and an increase in foot traffic potential, Yo-Way can make their decision with confidence and precision. Now that the area of southern California has been spatially analyzed using BAO and has determined the best area would be in Orange County it is up to Yo-Way to gather up the capital to open up and stock their second location. Since this information was

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gained by using software as a service BAO, there is no need to pay others to create a program or use a program to find out how to analyze this data. Implementing the ideas generated through spatially analyzed data is the only way for businesses like Yo-Way to find new locations to expand their business and without it; businesses would make ill-advised decisions that could prevent their companies from expansion/growth. Once the data is relied upon and implemented by opening up the new facility, Yo-Way will be responsible to maintenance the spatial and attribute data that changes around them in order to remain competitive as a business.

Without proper maintenance and up-keep the data used to determine the second location of Yo-Way could change and may need to be updated. Updating this data could determine whether or not the spatial data used is still fulfilling the criteria that Yo-Way desired when opening up their second location. For example, what was once an area that generated high amounts of revenue during the lunch hour might not generate high revenues after a few years of production and this could affect sales. Furthermore, another example would be if other areas had increasingly growing populations of trendsetters and if they were now meeting the criterion more than the second location currently does. Information like this can be helpful determining where customer's buying powers are drifting and assist in staying competitive. For example, using Michael Porter's five forces to remain competitive, a business must always be aware of the bargaining power of customers. These contending forces determine the profitability and are an important factor in strategy (Porter, 1979). The bargaining power of trendsetters and areas that spend the most at lunch are important factors to constantly maintenance in order to remain competitive. If, by chance, these criterions begin to change, the process of determining a new location through GIS should begin again at the planning phase. Although some changes might now be instant, there could be analyses done in BAO that determine what the results will be

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occurring in the next five years. Looking into the future to assist in maintenance is recommended and can lead to the increase in the stability of remaining competitive at Yo-Way's second location.

Overall, throughout the entire process of locating where the new second location will be for Yo-Way each phase has its benefits. Although some may be more crucial than others like the planning, analyzing, and maintenance, together they create a spatially analyzed area that represents a prime time location to open for business. In the appendix each map created in BAO helps narrow down the results of the spatial research. Moreover, in Map 1 you can see how there is more capital generated on food at lunch in Orange County than there is currently at the first location of Yo-Way; and also more generated than their main competition, Mike's Deli. In Map 2 the amount of trendsetters within this region outnumbers the amount in Yo-Way's first location. Map 3 helps identify how close gyms are within this region and these could be great places to market the new arrival of a healthy gourmet sandwich eatery. Nevertheless, Map 4 depicts how close Vanguard College lands to the new location number two and also how there are parks within ten minutes of walking distance. Knowing that these criteria are met and that each will increase the possibility of an increase in sales/profits helps with the identification of the new second location thanks to spatially analyzing data through GIS.

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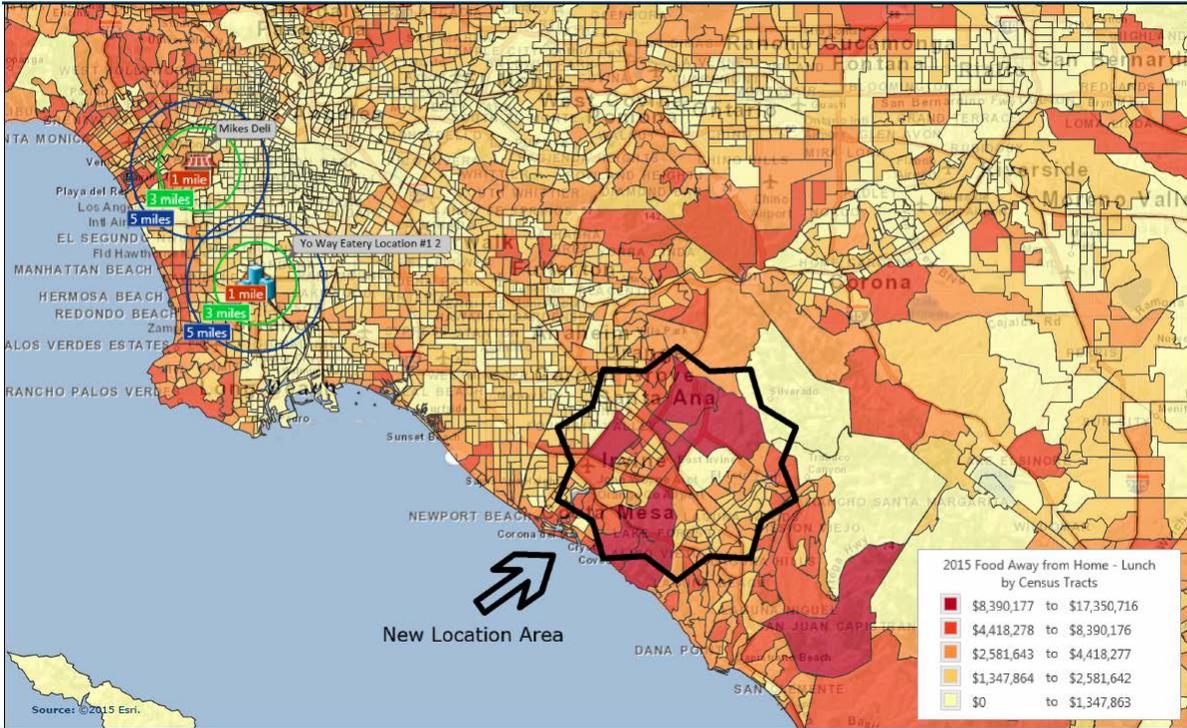
Appendix

Map 1



Most Revenue Spent On Food During The Lunch Hour

2015 Food Away from Home - Lunch by Census Tracts



December 13, 2015

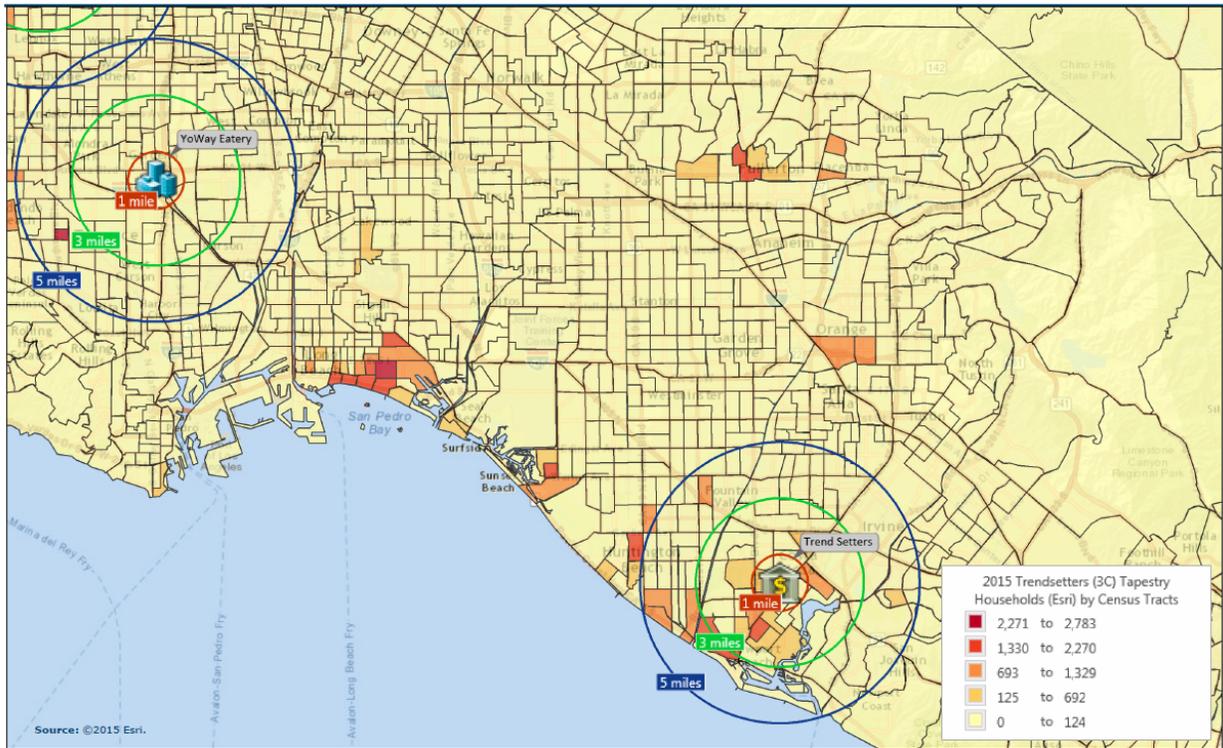
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Map 2



The Trend Setters

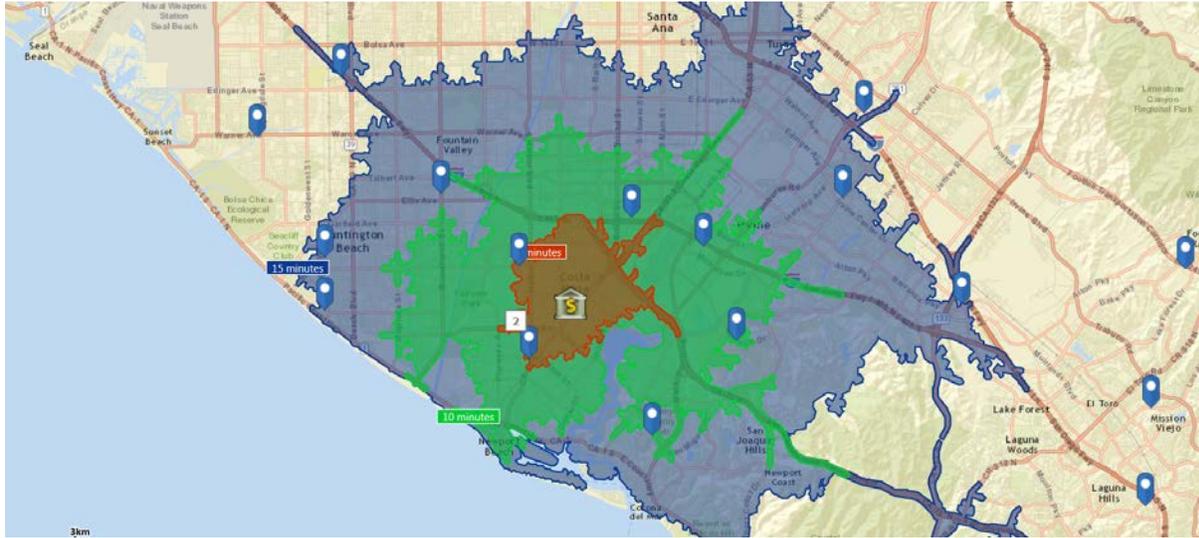
2015 Trendsetters (3C) Tapestry Households (Esri) by Cens...



December 13, 2015

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Map 3



Map 4

