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## ASK THE EXPERT

By Barbara Dendy, Information and Administration Manager, McCallum Sweeney Consulting

### Mapping Your Company's Future

**GIS technology is a powerful visualization tool that produces hard evidence for your search, but preparing the data is not always easy.**

**Q. How should I be using GIS mapping data in my site search, and what kinds of data can I use?**



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**The Expert Says:** A geographic information system (GIS) analyzes data linked to geographic features, enabling the user to perform complex location inquiries. The results can then be displayed in a comprehensible map format. Because GIS is primarily a quantitative tool, it's useful for producing objective and defensible results.

Given a set of measurable search criteria, GIS can be used to quickly identify potential areas of interest throughout the world, reducing the decision-making time frame. Requests for proposals can be expeditiously sent to qualifying communities after a GIS analysis.

A sample list of attraction and aversion search criteria you can include in your GIS search might look like the following:

**Site Attractions:** Within 10 miles of an interstate highway; within 45 miles of an airport with at least 200,000 passenger boardings per year; 90% high school diploma attainment among adults; average manufacturing wage below \$15 per hour; an existing manufacturing labor force of at least 10,000 within a 25-mile commuting radius.

**Site Aversions:** Within an area at high risk of natural disasters; 25-mile proximity to union chapters of greater than 500 members; areas with high unionization rates or recent elections certifying unions at companies within the target industry; air quality non-attainment areas; within 60 miles of federal class I land such as national parks; areas with major operations by an industry competitor.

Of course, your attractions and aversions will be different from the above, depending on your industry and your needs.

Once a GIS analysis is performed using any number of criteria, the results will indicate the locations that should be your areas of interest, subject to further investigation. It's important to remember, however, that GIS is a tool used in the process, not a decision-making instrument.

Data that is used in a GIS site-search screening can come from various sources (e.g., local, state, and federal governments; GIS data vendors; proprietary databases). Screenings may involve a localized area or may encompass entire nations.

Data for the areas of interest are not always in a usable GIS data format. The data often must be located and prepared in-house for use. The process to prepare the data is typically very labor intensive, and the search criteria data consistently needs to be updated. A spreadsheet or an electronic calendar containing the data category, update intervals, source, or any other relevant information is helpful to keep track of your data inventory.

If a data vendor needs to be contacted, make sure that they offer data that is compatible with your GIS software. Also, find out what their data sources are (in-house development, other sources of data manipulation, etc.), how precise the data is spatially, how often the data is updated, and if the pertinent information you need for your analysis is included with each record.

If all the data for the location analysis is found and up to date, then the finished product—a map or group of maps—will display the requested site-search criteria in a way that is easily comprehended. The hard work is not making the map, but preparing the data.

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