BusinessGeoInfo

Esri • Fall 2010

GIS for Commercial Business

A Life-Changing Technology

Esri Business GIS Summit Spurs Investments

"GIS changed my life," says Charles A. "Mac" McClure III, CCIM, FRICS, CRS.

The Texas real estate businessman told the story of how he became enamored of GIS technology to more than 150 attendees at the seventh annual Esri Business GIS Summit in San Diego, California. The summit was held July 11, the day before the start of the Esri International User Conference. The agenda was packed with presentations and papers that focused on how companies around the world use GIS to save time and money, improve customer service, and make better decisions.

As chairman of the board of McClure Partners, a full-service real estate brokerage and development company based in Dallas, Texas, McClure discussed how he relies on GIS to open franchises in high-risk segments of the U.S. market. By understanding local marketing and demographic data, along with geographic aspects such as competition, streets, and service areas, McClure has successfully opened a number of Chili's franchises in locations others deemed unprofitable. GIS has also helped McClure successfully invest in locations for Aaron's Inc., a furniture and electronics lease ownership company. McClure applies the same techniques and models used for finding Chili's franchises to open Aaron's stores in areas that have historically been written off due to low income and unemployment. Bringing in new businesses like this revitalizes communities and brings growth to economically stagnant areas. "Giving people the opportunity to own items they need, from washers and dryers to nice, quality furniture, helps them take care of their families," says McClure. "They have a sense of pride that translates into taking care of their homes, cleaning up streets, and making their neighborhoods better places to live."

Continuing the thread of helping communities while creating healthy businesses, Manny Rios, senior vice president, P&C Underwriting at United Services Automobile Association (USAA), took to the stage. USAA provides financial services, including insurance coverage, banking, and investment assistance, to military personnel and their families. Rios discussed how GIS has assisted the organization in delivering financial well-being to its members by understanding and communicating environmental risks near members' insured properties, such as their homes. "Something as simple as letting people know they live in a

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In This Issue

Improving Market Research in Commercial Real Estate

Edens & Avant owns, operates, and develops community-oriented shopping centers in primary markets throughout the East Coast. More than 130 centers in 14 states make up its portfolio. The company's clients include regional and national retailers such as Fresh Market, Whole Foods, Publix, Starbucks, and Target. The success of the company's shopping centers is based on generating the best mix of retailers and creating high-profile developments that are optimally aligned with neighborhood need and market opportunity. Edens & Avant is headquartered in Columbia, South Carolina, and has regional headquarters in Boston, Massachusetts; Washington, D.C.; Atlanta, Georgia; and Miami, Florida.

> "Without GIS, our projects wouldn't have been as successful."
> —David Beitz, Director of GIS, Edens & Avant

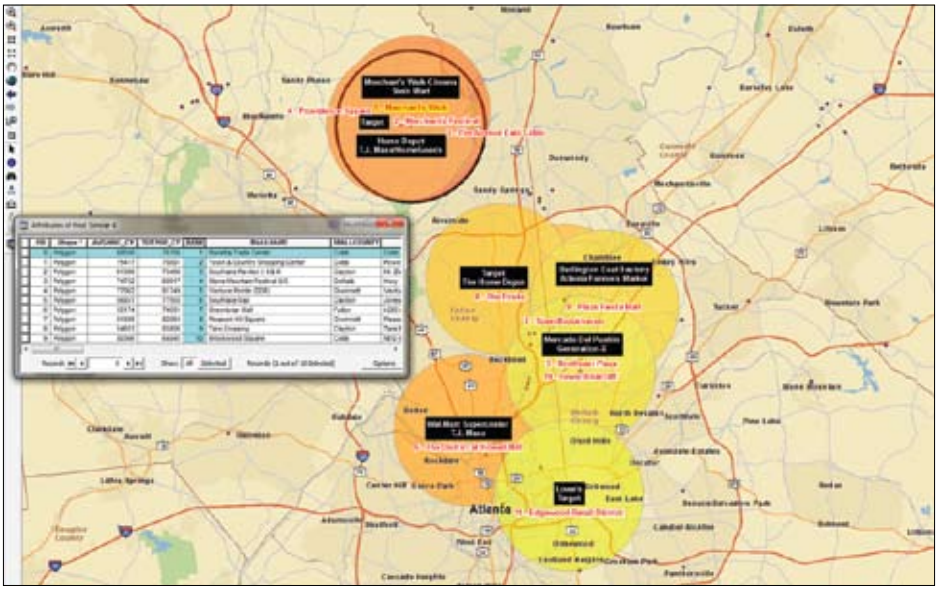
Seeing a Place through Data

Edens & Avant required a system to research markets and locations as well as a platform to quickly market that information to prospective retailers. Whether a retailer is looking to open a new store, add a second store, or move across town, the company has to be ready with a strong case for the retailer to move into an existing shopping center or a new development. Purchasing one-off reports to research each shopping center becomes inefficient when dealing with hundreds of locations that have rapidly changing information like demographic data.

In addition, instead of banking on the promise of growth driven by the housing boom—the standard model a few years ago—developers must now create projections based on less robust growth and more conservative economic projections. "Healthy shopping centers are the ones that are located in markets with a diverse workforce and good balance of daytime-to-household population," says David Beitz, director of GIS, Edens & Avant. As a result, the company needs to analyze, aggregate, and display accurate demographic information on a daily basis.

Better Decisions through Mapping

Edens & Avant uses Esri Business Analyst software on the desktop and online to help its clients make the most informed decisions.



The Find Similar feature in Business Analyst is used to identify new markets that are similar to markets in which retailers are already successful.

Combining city data with updated information through Bing Maps and Esri demographic data ensures that Edens & Avant has the most current information for its clients.

Clients can see and understand all information available for each shopping center location, including address, major roads, competition, population density, and growth. Business Analyst Online (BAO) is used to generate a customized six-page report annually for each shopping center that is then used by investment leasing and development group agents so they can better visualize and understand their markets. The software helps identify new markets that are similar to those in which the retailers are already successful. If staff members need customized reports or maps, they can request them from the GIS group.

Integration with Bing Maps provides monthly updates to aerial, road, and hybrid (aerial with labels) maps. "Using Business Analyst and Bing Maps, we are able to find locations fast," says Beitz. "Being able to view aerial images allows us to give a better context to our clients about location. This is particularly helpful when looking at larger areas."

Business Analyst streamlines operations. The company looks carefully at optimizing its shopping center portfolio by selling properties in secondary and tertiary markets and buying properties in primary markets with dense populations in core-based statistical areas (CBSAs). Business Analyst is used to look at daytime population, income changes, and population changes, among other information. "It is very important to know the demographics in order to find areas that will perform best in this new economic climate," says Beitz.

Results

Business Analyst allows Edens & Avant to research markets and assist in quickly leasing space by providing spatial information via maps and reports that uniquely characterize neighborhoods and are specific to each retailer.

Edens & Avant can now serve its clients' needs internally without outsourcing to third parties. The ability to also combine city building permit data ensures that Edens & Avant has the most current information for its clients. As a result, two planned grocery-anchored shopping centers are going forward in areas where population has doubled even though residential construction recently slowed down. Being able to find and track this growth with Business Analyst allowed the company to minimize the carry time of the land and provide the shopping center sites based on the retailers' timelines. Concludes Beitz, "Without the information to support these decisions and an accurate and appropriate way to communicate it, these projects wouldn't have been as successful."

For more information on how commercial real estate companies use GIS, visit esri.com/re.

Business Sense

Simon Thompson
Commercial Business Industry Manager, Esri

Localization, Not Just Location

Doing business locally is the new kind of normal. Think of how people around the world were affected after a volcano erupted in Iceland this past spring. Besides news stories of travelers stranded by cancelled flights that cost the economy $4 million a day, this event had a significant effect on how goods and services were being delivered in many countries—even those outside the no-fly zone. Reduced air cargo capacity led to higher shipping costs and rotting produce in warehouses. Growers could not meet suppliers' demands, and consumers had to forego products. Merchants who were dependent on specialized, seasonal, or perishable goods suffered significant loss of income. Food exports from Africa and the Caribbean were among those worst hit, with reports of Kenyan farmers forced to dump stocks of fresh food and flowers destined for European consumers. The Gulf of Mexico oil spill has also affected shrimpers and local economies in the region and will have implications for the national seafood market for some time to come.

These types of events make people stop and think. We've become heavily reliant on products brought to us through the globalized supply chain, but when that supply chain is broken, we have fewer choices and limited alternatives. Maybe it's time to think differently and act locally. We can be smarter about how we do business. Let's understand not only whether a business is in the right place but also whether it's the right business for that market.

How can we do this? Tools are available that help retailers improve their localization and reap bigger benefits from doing so. Understanding what an area can support economically, the types of people in the area, and the predominant lifestyle or culture of the area helps companies increase gross margin, reduce inventory, enhance customer loyalty, and improve balance sheets.

A great example is Business Analyst Online (BAO) for iOS, which is available on your iPhone or iPad. This application is free and lets you profile a market, understand the facts, and compare the marketplace to other cities and communities anywhere in the United States. It's easy to use, contains authoritative data, and helps you make a decision immediately. Using the built-in GPS, you can analyze where you are now or search any address across the country.

This information is more than just a "nice-to-have" gimmick. From working with the International Economic Development Council's (IEDC) Entrepreneurial and Small Business Development Strategies, we know that this information is vital to writing effective business plans. Besides the "where," any investor wants to know the "how"—how your product or service is aligned with your market segment and neighborhood. The IEDC lists different elements including demographics as well as the psychographics that influence consumer behavior. All the variables, such as age, family status, household income, education level, lifestyle, interests, and activities, can be found in the BAO for iOS app.

To download the free BAO for iOS app, search for BAO on iTunes, or go to esri.com/baoforios.

Green Building 2.0

By Chris Pyke and Anthony Guma, Research Program, U.S. Green Building Council

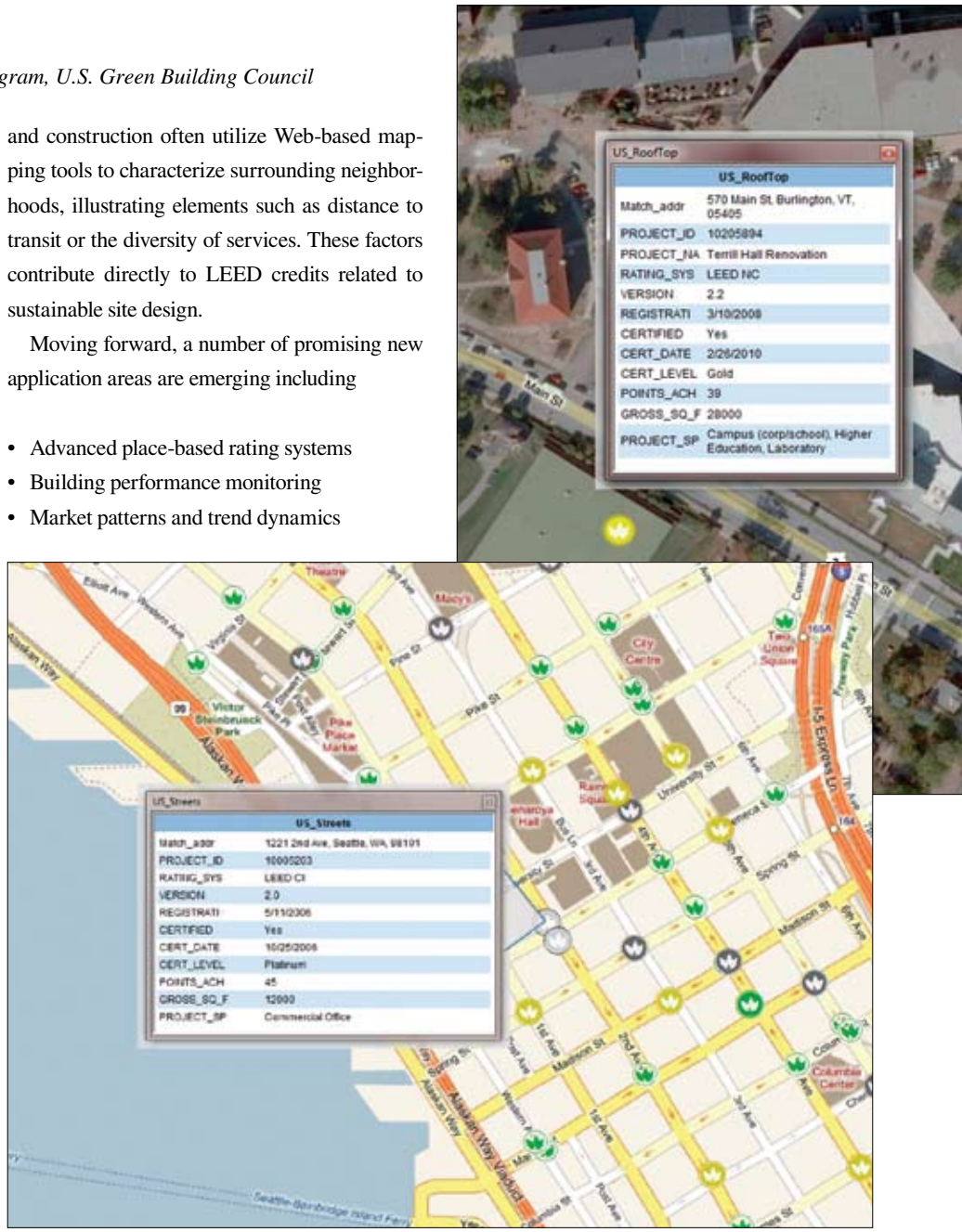
Over the past 10 years, green building has gone from the fringe to the mainstream of the building industry. In many major cities, new commercial buildings have "gone green" by adopting strategies such as integrative design, energy modeling, commissioning, enhanced energy efficiency, renewable materials, attention to daylight and views, water conservation measures, and on-site renewable energy generation. These green building strategies can dramatically reduce energy consumption, greenhouse gas emissions, and water use while creating more comfortable and satisfying indoor environments.

The U.S. Green Building Council (USGBC) helps advance this vision with its Leadership in Energy and Environmental Design (LEED) rating system. LEED helps identify and prioritize best practices related to location and planning, sustainable sites, energy and atmosphere, water efficiency, materials and resources, and innovation in design. The initial release of LEED version 1.0 a decade ago focused on new commercial construction. Today, LEED 2009 encompasses a family of systems that reach across the life cycle of built environments including neighborhoods, commercial buildings, health care facilities, schools, homes, and existing facilities (among many others). LEED provides a consensus-based national benchmark for green building practice linked to rigorous third-party review and certification.

Geospatial technologies are emerging as important new tools to inform and advance green building practice. For example, GIS-based tools are often applied by teams planning and evaluating neighborhood patterns and design. Criterion Planners & Engineers developed the LEED-ND Connections using its INDEX software and ArcGIS. The tool helps estimate the "walkability" of LEED-ND projects based on data on streets, pedestrian routes, bicycle routes, transit accessibility, building entrances, and a variety of other factors. At the scale of individual buildings, project teams using LEED for building design and construction often utilize Web-based mapping tools to characterize surrounding neighborhoods, illustrating elements such as distance to transit or the diversity of services. These factors contribute directly to LEED credits related to sustainable site design.

Moving forward, a number of promising new application areas are emerging including

- Advanced place-based rating systems
- Building performance monitoring
- Market patterns and trend dynamics



A map-based interface provides details on LEED-certified buildings.

Advanced Rating Systems

LEED 2009 represents an important step forward in the design of green building rating systems. LEED 2009 is an "impact-driven" system. It consists of a combination of mandatory prerequisites and elective "credits." Projects must satisfy all prerequisites and a certain number of credits to achieve certification. The number of points allocated to each LEED credit reflects its relative value for reducing a set of 13 environmental impacts developed by the U.S. Environmental Protection Agency. Examples of these categories are greenhouse gas emissions, fossil fuel use, and water consumption. LEED 2009 uses an analytic framework that estimates building-related impacts and applies this information to allocate points to each credit in the rating system. The credits that address the most important impacts receive the greatest number of points.

ArcGIS.com contains information about the location and details of LEED-certified data.

Today, USGBC uses ZIP Code-based approaches to customize LEED 2009 rating system requirements for different regions. GIS provides the potential to create customized rating systems for specific building types in specific locations. For example, one can readily envision GIS-based systems that allow project teams to identify and prioritize green building strategies based on important factors such as regional electricity generation mix, availability of public transportation, water supply characteristics, and waste management practices. Combinations of these factors vary significantly between regions of the country; between neighborhoods within a city; and, in some cases, block by block. Changes in the relative importance of these factors can be used to identify and prioritize individual green building strategies.

Building Performance Monitoring

Green building is not a singular event in the life of a building or community. Rather, it is an ongoing process of continuous improvement and transformation. Today, this is reflected in a coordinated set of rating systems that address neighborhoods, building design and construction, and building operation and maintenance. One of the most pressing challenges is to coordinate and leverage flows of information from phase to phase. Traditionally, divisions between disciplines and ownership have led to discontinuities and the loss of information between phases. However, an increasing emphasis on delivered operational performance has inspired many to look for ways to understand performance throughout the life cycle. This means creating information systems that can seamlessly pass data from planners to designers to engineers to facilities managers and back again. GIS-based solutions have begun to address this issue, particularly at the intersection between design and facilities management. For example, Esri partner and USGBC member Spatial Systems Associates has used ArcGIS to develop a suite of tools for facilities management, some of which help streamline documentation required for the LEED for Existing Building Operations and Maintenance rating system.

Market Patterns and Trends

USGBC's Research Program is applying ArcGIS and Business Analyst to understand spatial patterns in green building certification. The Research Program is helping others extend this work by sharing spatial data on LEED-certified and -registered projects on ArcGIS.com. This will provide a platform for analyzing market conditions and making decisions toward most effectively meeting the demand for green real estate at a specific location. Real estate professionals can overlay LEED project data on other sources of supply and demand indicators to determine the size and character of the market for sustainable space. These types of GIS-based analyses offer the potential to map a wide variety of relationships to understand current patterns and create market forecasts and scenarios.

GIS is rapidly becoming part of the future of green building. Green building practitioners are beginning to recognize the need to move information technologies to the front of the sustainable design process. This means informing design with quantitative analysis and planning for the collection of data that will enable rigorous study. We believe that information technologies such as GIS will ultimately become new prerequisites for green building. Milestones in the transition to a new spatially aware, analytically driven green building practice will include clear processes to define performance metrics throughout the life cycle of built environments, application of fundamental geodesign principles, and explicit strategies to monitor performance over time. The result will be higher-performance, more sustainable built environments that are informed by place and context, engineered to maximize benefits for people and the environment, and operated to achieve continuous improvement. GIS will contribute to this process by leveraging and extending its traditional strengths as a platform for data integration, interoperability, quantitative analysis, and visual communication.

About the USGBC Research Program

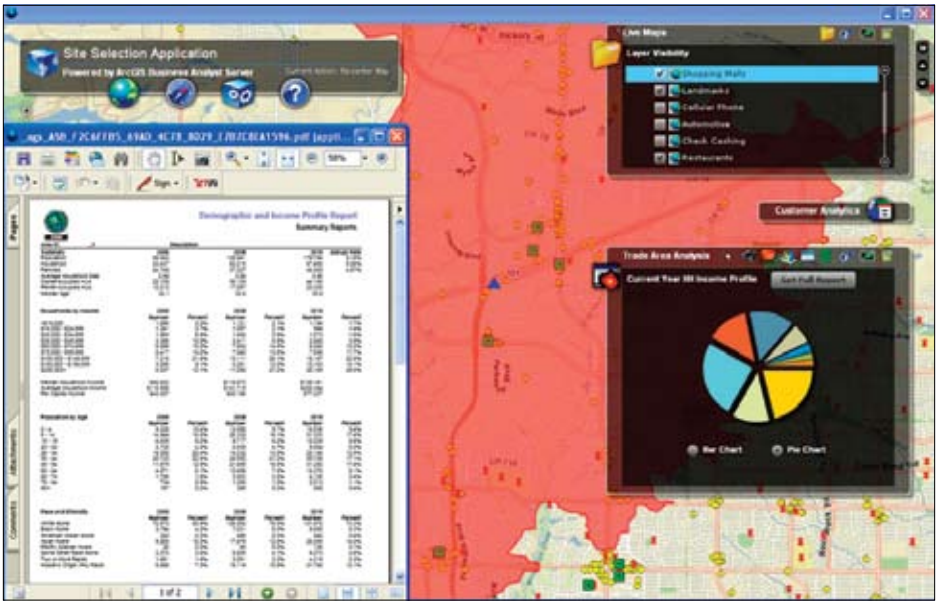
The U.S. Green Building Council is a Washington, D.C.-based 501(c)3 not-for-profit organization. USGBC's Research Program seeks to advance green building practice through applied research and innovation. Research Program priorities include (1) developing advanced green building rating systems, (2) studying building performance and occupant experience, and (3) analyzing market trends and dynamics. The Research Program pursues these issues with in-house analysis, commissioned research, and collaborative projects. For more information, contact Dr. Chris Pyke, director of research, U.S. Green Building Council, at cpyke@usgbc.org or 202-445-0041.

Think Localization

GIS Helps Retailers Better Understand Local Markets

"Retail localization" is a phrase that is being bandied about more and more in commercial business. What exactly does it mean? If done correctly, retail localization means delivering the right type and volume of products or services to customers within a particular location by understanding the nuances of that area. This recently happened in Esri's hometown of Redlands, California, where the chamber of commerce used Esri Business Analyst Online (BAO) software and data to provide demographic information about the surrounding communities that prompted the Dussin Group to open an Old Spaghetti Factory restaurant in a vacant building.

Markets vary by what is already available; what they can support economically; and the predominant "flavor," or lifestyle, of the area. GIS technology can be used to better understand the specific demographics and preferences in individual market areas by visualizing that data in an easy-to-understand format: a map. Instead of sifting through reams of tabular data, being able to see where particular types of people are located makes business decisions more accurate. GIS can be applied to retail localization in four areas of commercial business: real estate, merchandising, marketing, and the supply chain.



Esri Business Analyst GIS software and data provide in-depth knowledge to understand even small nuances among different neighborhoods.

Localization, Not Just Location, Is No. 1 in Real Estate

Using GIS for retail localization positively affects commercial real estate by optimizing the placement of stores for the best market reach, helping evaluate sites, and improving market analysis. It is important to have the right type of operation in the correct location. Understanding the market means knowing whether an organization should enter, exit, or expand in it.

Real estate is a no-brainer for GIS; looking at geography means looking at location. Viewing available sites, along with other information such as income, households, and supply and demand, gives the best overall view of the health of a particular market. A great example of this is Edens & Avant, an owner and developer of shopping centers on the East Coast. The company, headquartered in Columbia, South Carolina, helps clients such as Fresh Market, Whole Foods, Starbucks, and Target develop innovative shopping centers. The company uses Esri Business Analyst to look at existing population and demographic information for individual areas by displaying all the information clients need on a map. This makes decision making an easy-to-understand, comprehensive process.

One project, a 61,725-square-foot shopping center development, went forward only because Edens & Avant was able to determine that a large residential base was already in place to support it. Using GIS to analyze demographic information, the company found that the population in targeted areas had grown by 50 percent over the past decade. As a result, the new center was leased and opened on time. David Beitz, an executive with Edens & Avant, explained to me that without the information to support this decision and an appropriate way to communicate it, the project wouldn't have been as successful.

Customers Are Their Locations

Merchandising is another area where GIS can assist in localizing business—and not just for retail operations. Banks need to understand the loan products they are selling to customers. Realtors need to match the needs of home shoppers to the available housing inventory in an area. Insurers need to understand what risks are in an area to create the best policies. If a company does this correctly by understanding the profile of the people in an area and what their needs are, demand can be met. This is achieved by understanding the demographic makeup of an area; you aren't necessarily going to sell a house with a pool to someone who doesn't like to swim.

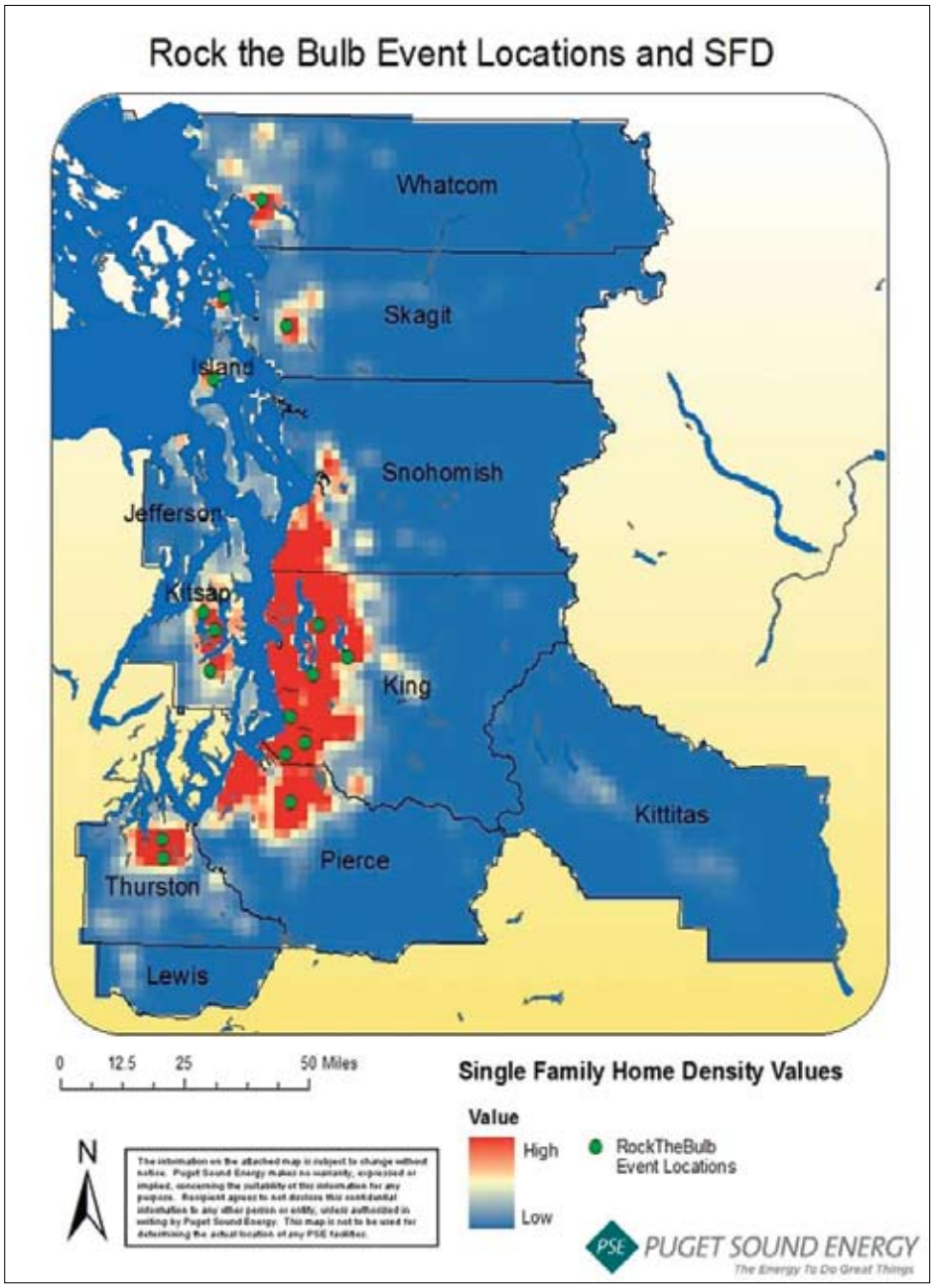
One major manufacturer does this very well by using Business Analyst to place its products. Since the products are used for competitive sports, company staff members look at demographic information, the sales history of their stores, and other factors including where schools with competitive sports teams are located. This allows the company to match the correct product

to each storefront, all the way down to the colors that are needed for the local teams.

A "Lightbulb" Moment

The third aspect of localization where GIS can help is in marketing. Think about the coupons the checkout clerk gives you after you purchase groceries or the offers you receive in the mail. These are great examples of localizing the marketplace all the way down to a personal level; they vary from town to town and consumer to consumer.

Puget Sound Energy (PSE), Washington State's oldest utility, put GIS into practice with a marketing program called Rock the Bulb. The utility targeted customers who regularly buy incandescent lightbulbs with the objective of helping them choose compact fluorescent lamp (CFL) bulbs instead. Using ArcGIS Desktop, PSE honed in on the locations of hardware stores and big-box home improvement stores and their proximity to existing customers. If the right threshold was met, an event where customers were asked to trade their old lightbulbs for new ones was staged. Using this data in planning and budgeting, PSE was able to estimate the number of participants that would attend the energy efficiency events.



Puget Sound Energy uses GIS to help reach the right customers with marketing programs.

Have Your Cake and Eat It Too

Retail operations are also very important when we think about localizing our business strategies. Sometimes we tend to forget about the distribution and supply chain, which is the ability to get products where they need to go at the right time. Having the right products and services in the right location can ultimately mean the difference between success, survival, and insolvency.

What's so wonderful is that GIS can help even the most localized business. Productos Ramo S.A., a snack food company in Colombia that produces a well-known product called Chocoramo, a square of cake coated in chocolate. You can't travel to the area without seeing Ramo's freight bicycles on almost every street, delivering Chocoramo and other snacks to small neighborhood stores.

GIS is used to create optimum delivery routes for the company's 700 freight bicycles and trucks. It has also been used to implement a customer survey to find out exactly how many cakes are needed to match demand by customers and where they should be delivered. In addition, the technology is used to produce sales maps to show company executives exactly how many and where products are delivered. By using GIS to implement a door-to-door survey and deliver the appropriate number of cakes to each city, the company has increased the clients in each of its sales and distribution zones by 10 percent. In Bogotá, Colombia, alone, for example, Ramo has found 8,000 new customers. Instead of guessing or extrapolating how many products might be needed in each zone, the company was able to find the exact amount of product to meet customer demand. You can't get much more localized than that.

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ArcGIS Is Now Online

Online Content, Applications, and Sharing Are a Seamless Part of the User Experience

Using the new ArcGIS.com Web site is just one of the many new ways Esri software users can obtain quick and easy access to geographic content via the Web.

Having access to maps, apps, and developer tools is critical to any GIS project and can save valuable time and money. The growing number of ArcGIS online capabilities provides a framework for delivering cloud-based GIS, which supports collaboration between groups or communities, regardless of the client application being used.

Users can add their own data on top of detailed, ready-to-use global basemaps.

Access from a Browser

Recently launched, ArcGIS.com is a central Web gateway into the ArcGIS system and ArcGIS online content. Users can find, share, organize, and use maps, apps, and other resources published by Esri and the user community. Users can also build communities around common interests by creating specific groups, then organize and share their content through these groups to better collaborate with each other. Users can also post comments and rate their favorite maps and apps so that others can narrow their search to most-viewed, highest-rated, and favorite content.

In addition, ArcGIS Explorer Online is a new browser-based ArcGIS application that you can use to open and view GIS content. ArcGIS Explorer Online can be accessed through ArcGIS.com and doesn't require a download. You can access ArcGIS online content directly from within ArcGIS Explorer Online to create maps that can then be shared and consumed by users, including those with iPhones. Also accessible from ArcGIS.com is the new Web Mapping application, which provides a quick and easy way to create maps online. It uses Esri's basemaps as a starting point. Users can search ArcGIS online content or other GIS servers and the Web to find additional layers and create mashups. These mashups can also be shared and consumed by others, including users of the ArcGIS for iPhone mapping application.

Access from ArcGIS Desktop

With the release of ArcGIS 10, ArcGIS Desktop is tightly coupled with ArcGIS online content and capabilities. Users can browse, use, and share content directly from the ArcGIS Desktop ArcMap application. This includes content that is publicly available (e.g., basemaps published by Esri) as well as user content that has been published and shared. Once an ArcGIS Desktop user has authored a map that includes ArcGIS online content, the map can be uploaded by creating a layer package. Uploading a layer package allows other users to find and consume the authored map.

Access for Mobile Users

Mobile users will also be able to browse and consume ArcGIS online content. They can do this through the ArcGIS for iPhone application, built with the ArcGIS API for iPhone. The application provides instant access to ArcGIS online maps and lets users search for content, select maps, and add them to their favorites. Using native iPhone motions, users can browse ArcGIS online maps; perform queries; and search, identify, and perform GIS analysis based on the information that was authored as part of the map. Field-workers can also use the iPhone application to collect and update features, then post their updates to an on-premises server. An application and API for Android are planned for a later release.

Access for Developers

In addition to the mobile software development kits (SDKs), developers can use ArcGIS Web Mapping APIs for JavaScript, Flex, and Silverlight/WPF with ArcGIS online content to quickly build Web mapping applications.

To share your content and browse and use existing content, visit arcgis.com.

Flexible Licensing for ArcGIS Server in the Cloud

A new, easier way to deploy ArcGIS Server is being offered. Called ArcGIS Server with Cloud Infrastructure, the license is a preconfigured deployment of ArcGIS Server in a cloud environment. Users can license ArcGIS Server with Cloud Infrastructure for 1, 3, or 12 months and renew their licenses indefinitely without incurring added costs or paying maintenance fees. There's no need to install or maintain software or manage cloud accounts; Esri takes care of everything.

ArcGIS Server with Cloud Infrastructure includes

- ArcGIS Server Advanced Enterprise running on a 4-core Windows Server 2008 64-bit platform with a 2.0 GHz processor per core, 15 GB of memory, and 500 GB of storage
- Documentation including a deployment guide, best practices, and online help
- Software updates during the term of the license
- Esri's world-class technical support services

"ArcGIS Server with Cloud Infrastructure is a one-stop shopping experience for end users interested in deploying GIS applications and services in the cloud," says Jack Dangermond, president of Esri. "You no longer have to worry about keeping your server software up-to-date or making sure you're running your applications on the right hardware. We take those concerns out of the mix so that you can concentrate on being innovative and productive."

ArcGIS Server with Cloud Infrastructure has no setup fees. With the flexible licensing options, organizations can pay as they go to support hosted applications on a proven high-performance cloud infrastructure. This solution provides virtually instant deployment of ArcGIS Server and will benefit startup organizations, enterprise development efforts, governments, emergency management agencies, and other organizations with mission-critical projects.

ArcGIS Server with Cloud Infrastructure is currently available to U.S. customers only.

For more information, visit esri.com/amazon.

The Power of Business Analyst Online Now Available on the iPhone

The new, free BAO for iOS app, available for download from the Apple App Store, provides access to 2010 demographic and business data and analysis from Esri Business Analyst Online (BAO) on the go.

BAO delivers powerful market analyses through a Web browser. Users generate on-demand reports and maps to get a detailed, comprehensive view of the demographic makeup of various populations and their lifestyles and buying behaviors. This revealing information allows users to find their best locations, customers, and products/services. With the BAO for iOS app, they can now get this valuable information through an iPhone, iPad, or iPod touch.

The BAO for iOS app provides the demographic and market information needed to instantly evaluate an area on-site.

It helps answer three key questions about a location:

- **What types of people live there?**
  Get a demographic and market snapshot of a location (e.g., population, age, income, education, homeownership, and consumer spending).
- **How do they differ from the people in another location?**
  Compare the demographic and market data for two locations or one location versus the entire United States.
- **Is it a good location based on specified needs?**
  Set the desired criteria and find out how the location measures up.

In addition, subscribers to the BAO Web application can access the full set of BAO reports and maps through BAO for iOS. A subscription to BAO allows users to access even more data, such as market potential, retail marketplace, and consumer spending, along with more analysis functionality, such as the ability to customize drive times and rings and create color-coded maps.

Instantly get the demographic and market information of a location with BAO for iOS.

For more information and to download the app, visit esri.com/baoforios.

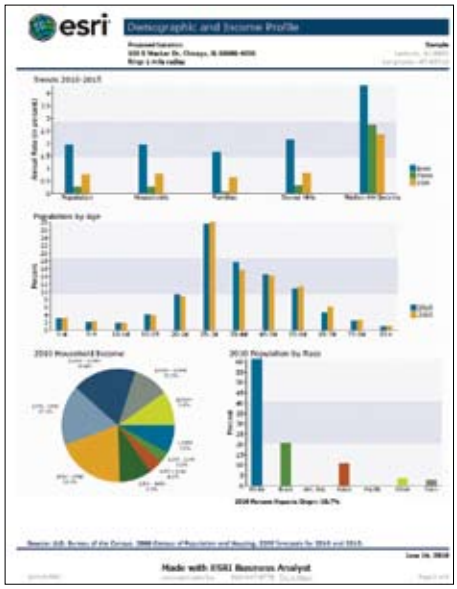
Perform Accurate Market Analyses

Business Analyst Online Includes the Latest Demographic, Consumer Spending, and Business Data and New Tools for Even More Insight

The latest release of Esri Business Analyst Online (BAO), Esri's on-demand market analysis Web application, now includes Esri's 2010/2015 Updated Demographics, as well as 2010 Consumer Spending, Market Potential, and Tapestry Segmentation data. Thousands of newly released data variables are available in more than 50 reports and maps through the BAO application. These reports and maps can be generated on demand to help users better understand their markets, analyze population growth and decline, identify business opportunities, study competitive penetration, and locate underserved areas.

Through BAO, users can access current-year estimates and five-year projections for a wide variety of demographic variables along with spending, market, and segmentation data to incorporate into their market analyses, allowing them to make the best decisions for their organizations. For example, real estate developers can research an area's predicted population growth to determine where to locate profitable development projects. Local governments can view current and projected demographics for population segments to assess whether services are properly located. Retailers can analyze projected spending patterns of consumers to refine merchandise offerings and better target marketing promotions.

Esri's 2010 data is also available for purchase individually in a variety of file formats and is included with Business Analyst 10 (for desktops and servers).



Business Analyst Online Reports Add-In Now Available

A new tool, the Esri BAO Reports Add-In, allows ArcGIS users to create reports for their map layers and attach demographic data as attributes of those map layers for use in their everyday mapping workflows.

The downloadable add-in extends Esri's ArcGIS desktop products with demographic reports and data from BAO. GIS professionals can now obtain and consume Esri's latest demographic, consumer spending, and business data to create presentation-quality reports in PDF and Excel formats for trade areas and sites that they have defined in their desktop products. In addition, add-in users have access to BAO, where they can search for businesses, thematically map areas, create trade areas, compare sites, and generate customized reports.

The BAO Reports Add-In is downloadable from the ArcGIS Resource Center. ArcGIS Desktop users can get a free seven-day trial, after which they can purchase a subscription to continue accessing the reports and data. For more information and to download the add-in, visit www.esri.com/baoaddin.

Smart Map Search Tool Helps Users Quickly Find Locations That Meet All Their Needs

BAO also includes a new unique tool, Smart Map Search, that helps users in a variety of industries—from commercial business to government to health—more efficiently make location-related decisions. Another key enhancements is the ability to create custom PDF maps.

Smart Map Search greatly reduces the time it takes to answer critical questions such as Where should I open my next site? Where is the supply/demand gap in my city? and Where are the vulnerable populations? Users select up to five demographic, consumer, or business criteria that matter most, such as per capita income greater than $40,000 or median age greater than 35, and Smart Map Search will identify areas on the map that meet all the criteria. No longer will users have to perform analysis for each criterion separately and compare the results on individual maps.

BAO now includes thousands of new data variables regarding retail activity and consumers' spending habits. This detailed data can be incorporated into color-coded maps for an even more precise understanding of customers, prospects, and the market. Variables have been added in the following categories:

- Market Potential—Measures the probable demand for a product or service (More than 2,000 items are updated annually and grouped into 37 categories of goods, services, and attitudes.)
- Consumer Spending—Visually compares and ranks geographic areas against one another with consumer spending averages and indexes
- Retail MarketPlace—Measures supply and demand and the supply-demand gap to illustrate where consumers' needs are being met or where there might be new opportunities

Offering more than 2,000 data variables, including current-year estimates and 2015 forecasts, the Updated Demographics data can also help identify areas of high unemployment, adjustments in the housing market, changes in income, and increased population diversity.

In addition to the standard site maps available, users can now easily create PDFs for Bing business search results as well as any map including color-coded maps and Smart Map Search results.

For more information on BAO, visit esri.com/bao.

Digging through Demographics for Better Reporting

The *Philadelphia Inquirer*'s John Duchneskie says that finding a meaningful story can sometimes be more difficult than you would think. As the graphics editor for the daily newspaper serving the metropolitan area of Philadelphia, Pennsylvania, he works with the writing staff to investigate stories. Every day, the paper is tasked with finding news that will hook readers and keep them coming back for more.

"Reporters are very good," says Duchneskie. "They can go anywhere and find someone to interview that will corroborate a story they are reporting. Part of my job is to make sure that there is really something to a writer's hunch and not just an anomaly."

Each afternoon, Duchneskie sits in a news meeting discussing the planned investigations and which stories will be considered. During one meeting, Jane Von Bergen, an *Inquirer* business writer, had an idea for a new look at unemployment. Unemployment is an area of focus that Von Bergen looks at constantly. Von Bergen was interested in using Route 202, a main highway linking Pennsylvania and New Jersey, as a "clothesline" for individual vignettes about people who have been affected by the most recent recession. Unemployment in four counties in the area exceeds that of the national average. Seven counties recorded increases larger than the national increase of 1.2 percentage points over the past year.

"In fact, all 11 counties have posted higher unemployment rates than the previous year," says Von Bergen.

When the recession first began in March 2008, jobless rates ranged from 3.6 percent in Chester County to 6.6 percent in Philadelphia. By March 2010, the unemployment rate for the three metropolitan divisions in the Philadelphia-Camden-Wilmington metropolitan statistical area was 10.4 percent (Bureau of Labor Statistics).

Duchneskie brought his laptop into the meeting loaded with ArcGIS software and data—including roads, county boundaries, unemployment and demographic information—that would be relevant to the story. He hooked the system up to an overhead projector so Von Bergen and her editor could see the information. They started discovering trends, selecting areas, and querying data to see what was happening where. "Looking at the mapped unemployment data, we didn't see any real patterns that jumped out at us along Route 202," Duchneskie says. "What did jump out at us was the Main Line. The entire area had a high increase in the percentage of unemployment claims. Right away, we could tell this was where the real story was."

The Main Line is an unofficial region of suburban Philadelphia made up of affluent towns first built along the old main line of the Pennsylvania Railroad. The railroad was the largest railroad by traffic and revenue in the United States

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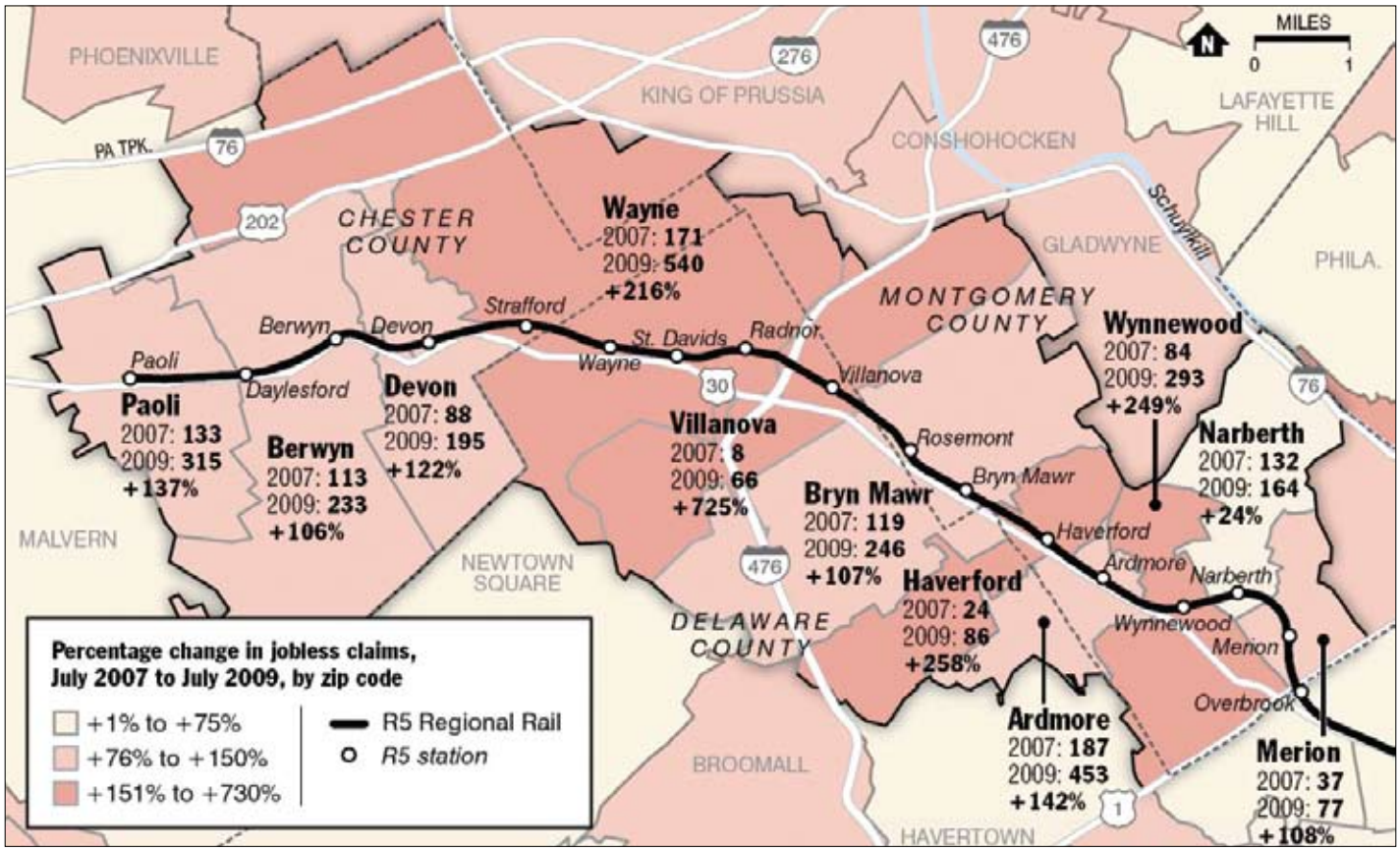
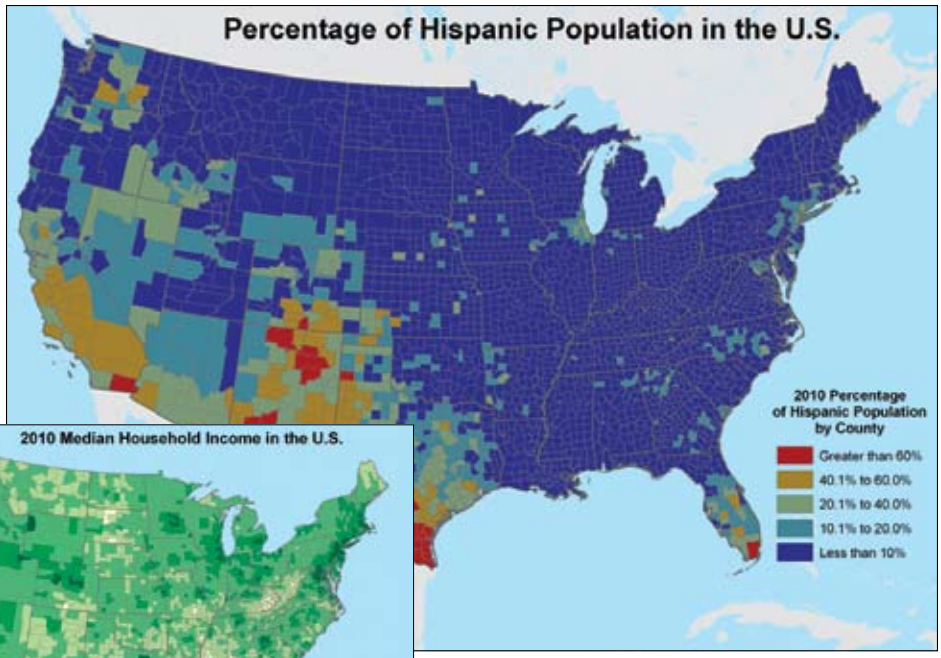


Though Philadelphia's wealthiest suburbs are faring better than other regions in the area, unemployment has risen dramatically along the Main Line.

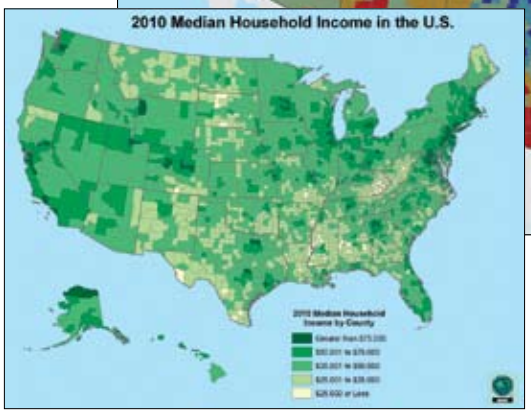
Esri's 2010/2015 Updated Demographics Data

Recovery Slowed by Lackluster Income, Cautious Spending, Rising Unemployment, and Low Housing Prices

Retail customers continue to battle the lingering effects of the recession—unemployment, stagnant household incomes, and lower housing prices. "Christmas in July" sales, expanded layaway options, and an earlier back-to-school season are among the campaigns retailers are launching to entice reluctant consumers back into their stores to shop. How can retailers learn about the demographic data trends that will affect their businesses? Esri's 2010/2015 Updated Demographics data reveals intriguing information about the demographic landscape in the United States.



Growth of the Hispanic population is the greatest in counties in Texas, California, and New Mexico.



Median household income declined in 98 percent of U.S. counties.

Esri's 2010/2015 Updated Demographics data offers more than 2,000 data variables, including current-year estimates and 2015 forecasts for 11 different U.S. geographies from national to block group levels. This data can help identify areas of high unemployment, adjustments in the housing market, rising vacancy rates, changes in income and consumer spending, and increased population diversity. Agencies, businesses, and organizations can use the data to analyze trends, identify growth, and reveal new market opportunities.

"The challenge of successfully weathering the current economy underscores the importance of having access to accurate information. Current data can track critical changes and preclude the cost of being wrong," says Lynn Wombold, Esri's chief demographer and manager of data development. "Esri pays close attention to economic and social trends and how they influence the needs of businesses, consumers, and citizens."

Income

U.S. households are still feeling the pinch of the recession. The median household income for 2010 is $54,442, down slightly from $54,719 in 2009. In 98 percent of U.S. counties, median household income has declined. Average household income dropped even more, falling from $71,437 to $70,135.

Housing

The first quarter of 2010 saw foreclosures jump by 16 percent over the comparable period in 2009. Short sales are still impacting the market in some areas. Housing unit vacancies rose by 7.4 percent, pushing the overall U.S. vacancy rate to nearly 12 percent.

Population

The U.S. population continues to change and diversify. Population growth and change slowed in most markets due to fewer births and the inability to move. Ten states, including Florida and Michigan, lost population from 2009 to 2010; more than half of all U.S. counties also lost population.

Diversity

The most diverse states in 2010 are California, Hawaii, New Mexico, Texas, and Nevada. At 50.5 million, Hispanics now comprise 16.2 percent of the total U.S. population. From 2000 to 2010, this segment grew at an annual rate of 3.5 percent. The Asian population rose and now stands at 14.1 million, comprising 4.5 percent of the U.S. population. This segment grew at an annual rate of 3.2 percent from 2000 to 2010. Now numbering 9.3 million people and 3 percent of the U.S. total, the 2010 multiracial population also expanded and grew at an annual rate of 3.1 percent from 2000 to 2010.

Esri's 2010/2015 Updated Demographics data is available as database variables and in Esri Business Analyst products (online, on desktops and servers, and in an iPhone app); see www.esri.com/software/businessanalyst. For more information about Esri's 2010/2015 Updated Demographics data, visit esri.com/datawhatsnew or call 1-800-447-9778.

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Digging through Demographics for Better Reporting

throughout most of the twentieth century and, at one time, was the largest publicly traded corporation in the world.

Towns that shoulder the Main Line include Bryn Mawr, Merion, and Overbrook, locations not normally associated with a discussion about unemployment claims. Gladwyne has the 14th highest per capita income in the country among places with a population of 1,000 or more. The eastern section of Villanova was ranked 39th in the Elite 100 Highest Income Neighborhoods in America, with a median household income of $366,904 (The Higley 1000).

Data displayed to investigate this trend included the rail line, Route 202, boundaries of the counties and towns, ZIP Codes within counties, and the information about the percent change in the jobless rate from July 2007 to July 2009. Duchneskie used data included with ArcGIS and brought in jobless rate information from the local government. He geocoded the jobless rate information to the ZIP Codes and counties so it could be displayed by location on the map. Viewing the data, the reporters and editors saw there was an interesting pocket of change in employment in this area.

Their finding that this pocket ran along with the Main Line was intriguing. Duchneskie outlined towns along the main railroad line, and places typically containing homes with higher-than-average incomes lit up—Merion, Radnor, Wayne, Bryn Mawr, Devon. Continuing claims for unemployment benefits rose 50 percent from July 2007 to July 2009 in Philadelphia, according to state statistics. In the Main Line region, however, unemployment claims rose as much as 730 percent. As a whole, the region's claims rose 143 percent.

Finding this trend shifted the story's focus away from the highway to the railway. Once Von Bergen had a geographic focus, she went looking for real people to tell the story. She found them in a church support group for the unemployed—former bankers, executives, marketing managers, top sales representatives, and international investment directors; people with Main Line addresses and occupations that historically would not be thought to be affected by a recession.

"This is another marker that, unlike previous economic downturns that affected blue collar and young workers, this recession is affecting bankers and managers," says Von Bergen. "Subsequently, we may be seeing a recovery taking a longer time than previously thought."

Using ArcGIS to analyze the data to catch patterns and trends saved the newspaper time and resources. The team was able to collaborate on its investigation while still in the office. Once it had a clearer picture of the story, the team was able to pinpoint exactly where the photographer and reporter should focus their investigation.

Looking at data holistically using a map gave a new perspective to the data and allowed the *Inquirer*'s journalists to visualize true patterns in the data. "Without seeing the data in that manner, through the geography of it, we wouldn't have picked up on this trend," says Duchneskie. "We would have missed an important story."

Understanding Spatial Statistics and Geostatistics

Lauren Scott, Ph.D.

Where do statistics, spatial statistics, and geostatistics fit in GIS projects? Dr. Lauren Scott, a product engineer on Esri's geoprocessing team and an expert in the use of statistics in a geospatial context, answers that question and others in an interview conducted by Matt Artz, Esri's GIS and science marketing manager and editor of the GISandScience.com blog.

At Esri, Scott is responsible for software support, education, documentation, and development of spatial statistics tools in ArcGIS. She received her Ph.D. in 1999 from the Joint Doctoral Program at San Diego State University and the University of California, Santa Barbara. She holds an M.A. and a B.A. in geography from California State University, Fullerton.

Artz: How do traditional statistics, spatial statistics, and geostatistics differ from each other?

Scott: Traditional, or nonspatial, statistics are typically used in two different ways. In the first case, we have a large set of data values that we want to understand, and we can use descriptive statistics to try to summarize them. In the second case, we may have a set of samples and we want to know how reflective those samples are of the broader population.

Artz: Where do spatial statistics come into play?

Scott: Spatial statistics were designed specifically for use with spatial data—with geographic data. These methods actually use space—area, length, proximity, direction, orientation, or some notion of how the features in a dataset interact with each other—right in the mathematics. That's really what makes spatial statistics different from traditional statistical methods.

Artz: Are there different types of spatial statistics?

Scott: Yes, there are many different types. There are descriptive spatial statistics similar to descriptive traditional statistics. For example, if we have lots of points on the map, we might want to know where the center of those points is located. (The equivalent traditional statistic would involve computing the mean for a set of data values.) We might also want to know how spread out those points are around the center. (This is similar to computing the standard deviation for a set of values.)

Other statistical methods involve spatial pattern analysis: We try to identify if there is any structure to the data we're looking at—for example, are features clustered? Are they dispersed? Are high values all found together? Are there "hot spots" in the data? Spatial pattern analysis tools can help us identify anomalous or unusual spending patterns; find unexpected areas with high disease rates, crime, or fire incidents; or track diffusion of some environmental contaminant. There are really lots of applications.

Then there are spatial statistics, concerned with identifying and measuring spatial relationships. Imagine we are looking at a hot spot map for 911 calls. We might be curious about why we are seeing so many calls, or hot spots, in certain locations. We can use regression and spatial regression analysis to examine relationships and identify the factors promoting the spatial pattern we're observing—factors that would help us explain why 911 rates are so high.

Artz: And how would you define geostatistics?

Scott: Geostatistics are a type of spatial statistics. Kriging, for example, is a very powerful geostatistical technique that goes beyond interpolation, looking not only at nearby features to predict values where you don't have sample data but actually utilizing spatial relationships to give you stronger, more accurate predictions.

Traditionally, geostatistics have been used to analyze geologic and environmental data—for example, rainfall or elevation—the goal being to create a surface from sampled data points. These methods are widely used in the petroleum and mining industries. But geostatistics are ideal for analyzing and predicting the values associated with nearly any kind of spatially continuous phenomena.

Artz: How has Esri addressed geostatistics and spatial statistics in its product offerings?

Scott: Many people have probably heard of the ArcGIS Geostatistical Analyst extension, a specialized set of geostatistical tools. It's most useful if you're working with sample data taken from a continuous phenomenon such as rainfall, temperature, geology, or soils and your goal is to create a surface—a probability surface, a prediction surface, or an error surface. However, as the product has been enhanced over the years, its capabilities now extend beyond creating surfaces, and the tools are valuable for a large variety of applications.

All ArcGIS users also get the Spatial Statistics Toolbox with tools for analyzing spatial distributions, patterns, processes, and relationships as part of the core software at all license levels. These statistical tools let you do a number of things, including determining central tendency or identifying the overarching directional trend, identifying hot and cold spots or spatial outliers, assessing overall patterns of clustering or dispersion, and modeling spatial relationships. I'm so happy with how many people now use these tools! When I first started developing the Spatial Statistics Toolbox as a set of sample scripts, I didn't really envision how successful they would become.

Artz: Are there other statistical tools that users can leverage inside ArcGIS?

Scott: Certainly. Esri Business Analyst has statistical methods for identifying market share, service areas, sales territories, and potential customers. It also comes with lots of data to use with those methods. The ArcGIS Spatial Analyst extension includes statistical methods to help classify remote sensing data, so statistical tools are found

throughout the ArcGIS family of products. And the geoprocessing framework in ArcGIS is also very much extensible, so it's pretty easy to connect to traditional statistical packages. You can also create your own custom tools; these custom tools work just like any other out-of-the-box geoprocessing tool in ArcToolbox.

For people who already use SAS software, both SAS and Esri provide a product called the SAS Bridge, which makes it easy to work in both software environments at the same time. We also have some sample scripts available for people to download from the Geoprocessing Resource Center for using R, an open source statistical package, within the ArcGIS framework.

Artz: Why should people consider using spatial statistics?

Scott: When we analyze our data outside its spatial context—when we remove space and time from our data—it's like we're only getting half the story. Things happen in space and time, and if we ignore that, our analysis is going to be incomplete. This is an important difference between traditional statistics and spatial statistics; traditional statistics often make the assumption that data is free of something called spatial autocorrelation.

Artz: What is spatial autocorrelation?

Scott: It's a big word, but it's a very simple concept: spatial autocorrelation just means that there is spatial structure in your data. That structure might be clustering, or some kind of dispersion, but in any case, the distribution of your features, or of the data values associated with your features, is not random. Jobs, houses, manufacturing, shopping opportunities—these are not randomly sprinkled across the landscape; they cluster together into cities and districts and land-use zones. Spatially autocorrelated data violates the assumptions for some traditional statistical methods, so it is often seen as a nuisance by traditional statisticians.

GIS analysts and spatial statisticians, however, get excited when they see spatial autocorrelation in their data—when they observe clustering in the landscape—because it's evidence that underlying spatial processes are at work. And that's exciting! Something out there is causing this clustering or structure, promoting different types of relationships and spatial patterns; often, understanding that "something" is what we are most interested in. Why are people persistently dying at a younger age in this part of the country? What might be the factors explaining why kids in this school district consistently turn in high test scores?

Spatial processes are often invisible, but by using tools in the Spatial Statistics Toolbox to measure the strength and scale of their outcome—spatial clustering or dispersion, hot spots, or spatial outliers—we learn more about them and get a much better understanding of our data.

Artz: You talk to a lot of GIS people about statistics. What do you think is most often misunderstood about spatial statistics?

Scott: In the GIS community, the thing that's probably most often misunderstood is just that it's hard! People hear "statistics" and they immediately have bad memories of a class they took in high school, and they just shut down. And I think that's too bad, because to me, while traditional statistics are interesting, spatial statistics are really fascinating! And they aren't that difficult. Some spatial statistics reflect very simple concepts, but they can still be used in very powerful ways.

Artz: Can you give me an example of a statistical tool that's simple yet powerful?

Scott: The simplest tool in the Spatial Statistics Toolbox is the mean center tool. It works by taking all your x-coordinates and computing the average. It then takes all your y-coordinates and computes the average for those. The mean center is that average x- and y-coordinate location. How much more simple can we get than that? But you can use this tool in powerful ways. For example, we looked at population data by county for California over the last 100 years. We were interested in finding the population center and seeing if it changed over time, so we computed a weighted mean center. In the early part of the century, the population center was near San Francisco, a reflection of the growing banking industry there. Each decade, the population center moved south, at first very quickly, reflecting growth in Southern California associated with the oil industry, Hollywood, aerospace, and everything else going on there. The southward shift in the population center slowed down, however, toward the end of the century.

The simplest tool in the Spatial Statistics Toolbox allows us to visualize a complex spatial trend; how quickly the mean center moves, and where it moves, provides interesting information about the spatial processes promoting this southern shift in population.

Artz: But some of the tools are not as straightforward as mean center?

Scott: True. Most GIS tools are fairly straightforward; you just fill out the parameters and go. For some of the spatial statistics tools, however, you do have to think a little bit more about spatial relationships, the scale of your analysis, study area boundaries, and so on. But we try very hard to include good strategies in the ArcGIS documentation that explain the proper use of the tools and help you decide on the right parameters for your particular analysis.

Artz: Where can people learn more about using statistics in their GIS projects?

Scott: In the book *The Esri Guide to GIS Analysis,* Volume 2, by Andy Mitchell, every chapter corresponds to a tool in the Spatial Statistics Toolbox. This is a great resource for people who are starting with little or no knowledge of spatial statistics. We also have some free webinars and tutorials available through the Esri Virtual Campus and the ArcGIS Geoprocessing Resource Center. Your blog, GISandScience.com, contains quite a few resources for learning about spatial statistics and spatial analysis in a more general sense.

Matt Artz also is the editor of GIS.com. Contact him at martz@esri.com.

Bringing Value to Customers

USAA Champions GIS through Its Enterprise

The seventh annual Esri Business GIS Summit kicked off on Sunday, July 11, 2010, with presentations, sessions, and a social for a crowd of enthusiastic attendees. Esri's Karen Richardson sat down with one of the keynote speakers for the summit—Manny Rios, a senior vice president for Property and Casualty Underwriting at United Services Automobile Association (USAA)—to discuss his vision of GIS.

Esri: Please tell me a little bit about USAA.
Rios: The company started humbly in 1922, when 25 U.S. Army officers in San Antonio, Texas, established their own auto insurance association, USAA, because auto insurers considered military service personnel too great a risk. Today, USAA is a fully integrated financial services provider, offering a wide range of investments, banking, insurance, and financial advice to all who have ever honorably served and their families.

> "You truly realize the relationship between a big ocean and a tiny house when seeing them on a map."—Manny Rios, USAA

USAA strives to understand and anticipate the needs of its members and continually develops innovative solutions to make their lives easier. Throughout its history, the association pioneered the use of direct mail, automated policy administration systems, and 1-800 and satellite communications. Today, USAA is a leader in mobile phone applications for banking, insurance, and investment transactions and in 2009 became the first to permit customers to deposit checks with a smartphone camera.

Esri: So, the use of GIS technology is one of your next big things?
Rios: Absolutely. We're always looking for new ways to enhance member service, increase operational efficiency, and bring more value to our membership.

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  Why GIS Is Important to Retailers
  Simon Thompson discusses how GIS gives retailers a more comprehensive understanding of their business and customers.

  Esri Business Analyst Online Successfully Fills Commercial Vacancies
  This interview is conducted with Kathie Thurston of Redlands, California, Chamber of Commerce.

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Esri: How did you learn about GIS?
Rios: I first learned about GIS technology early in my career as an underwriter. The idea of being able to see the precise location of homes and their proximity to hazards such as flood zones or wildfires was an exciting prospect. I was introduced to a whole new way of using technology to understand risk management.

Throughout my career, I learned that GIS is best comprehended with images. Visuals are more compelling storytellers than spreadsheets or databases. You truly realize the relationship between a big ocean and a tiny house when seeing them on a map.

Prior to joining USAA, I served as chief underwriter at a property insurance Internet startup company, and location is everything when you're only writing property insurance.

Esri: How did your understanding of GIS translate when you came to USAA?
Rios: I like to motivate people and teams to take GIS to the next level with a focus on member safety and loss prevention.

USAA seeks to help members anticipate and prepare for the natural perils they may face around the country. Helping our members understand what they're up against and giving them the tools and information to help them make informed decisions was the answer.

USAA's underwriting departments quickly adopted and consistently demonstrated the effectiveness of GIS. I spoke in terms of the immense benefits GIS would provide *when* implemented, not *if* implemented.

Esri: During your keynote, you spoke of GIS as being like kids' building blocks—I think everyone can relate to that analogy.
Rios: I have blocks from more than 30 years ago and, you know, if you buy blocks off the shelf today, you can use them with the ones you had back then. That's the thought around our own GIS strategy. It's an infrastructure that stands the test of time, just like blocks, and today's are *really* cool! One block at a time, we've built momentum for GIS applications and garnered leadership support at USAA.

Esri: You do quite a bit of work with other organizations including the Institute for Business and Home Safety, Federal Alliance for Safe Homes, and International Association of Fire Chiefs. Can you talk about the work you are doing?
Rios: USAA is assisting in the development of programs that help manage and minimize catastrophic loss. Additionally, USAA now has a stake in making a broader difference through my service on the board of the National Alliance for Public Safety GIS Foundation. GIS technology represents a leap forward in community preparedness to help solve some of our country's greatest emergency preparedness challenges.

Coordination among safety organizations and emergency responders before, during, and after a crisis is paramount to reducing risk and ensuring safety and property protection. GIS can help public safety organizations and emergency responders capture, manage, analyze, and view geographic images and data and thus greatly improve their preparation and response.

Esri: What words of wisdom can you leave with other managers and leaders in organizations interested in spearheading an effort to engage with GIS technology?
Rios: It's essential to help the leaders in your organization understand that GIS gives you precision.

I strongly advise patience in building momentum. The more people hear over time, the more they start to connect the dots. Then all of a sudden, they're saying, "Hey, *when* is this new solution going to be done?" as opposed to "Will it get done?"

A Life Changing Technology

continued from cover

high wind area and should invest in a certain type of shutter to protect their windows can make a home and, ultimately, a family safe, and that is our ultimate goal," says Rios.

Rios considers GIS one of the next big technologies at USAA and discussed his methods of proselytizing about it throughout the company. Although the organization had experience using GIS before Rios came on board, with his vision, geographic data and analysis are now being used throughout the company to increase operational efficiency and help pinpoint the most appropriate services for USAA's customers.

Rios says his eye-opening moment was understanding the concept that visuals are more compelling storytellers than spreadsheets or databases, especially in a business as location oriented as insurance. "You truly realize the relationship between a big ocean and tiny house when seeing them on a map," he explains. (Read the complete interview, starting on page 1.)

Simon Thompson, Esri's director of global business, summed up the summit by explaining that "GIS brings together two important aspects of business—people and place. Every business has a persona, and using this technology, we can go beyond traditional segmentation to pick out individuals from the crowd. GIS ensures that people have the products and services they need, no matter the place."

Learn to Create and Share Online Maps in Minutes Using Esri's Make a Map Application

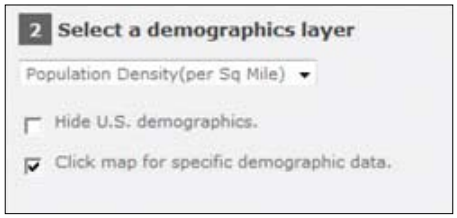
Online maps have become increasingly popular, appearing everywhere on the Web. They can be used to help people understand where something is as well as what it is like there. Now, Esri has made it easy to add a map to your Web site, blog, or favorite social networking site using the Make a Map application. In just a few minutes, you can create embedded HTML code to include a personalized, interactive map that visitors to your site can use to pan, zoom, and even click on to get demographic information.

You can choose from seven demographic maps or hide the demographic data to show just a locator map with your own point of interest marked.

Step 1: Enter the location you want shown on your map and click the Locate button. You can enter a full street address (1600 Pennsylvania Ave, Washington, D.C.), a ZIP Code (90210), a city name (New York City), a famous landmark (Lincoln Memorial), or even a famous building (Sears Tower).

Entering the Location of Your Map

Step 2: Choose the demographics layer you'd like to see on the map from the drop-down menu, or check the Hide U.S. demographics box if you want to make just a locator map. When you show a demographics layer, you can also check the Click map for specific demographic data box if you want the map to show information about the population and demographics layer selected when people you share the map with click it.



Selecting the Data to Show on Your Map

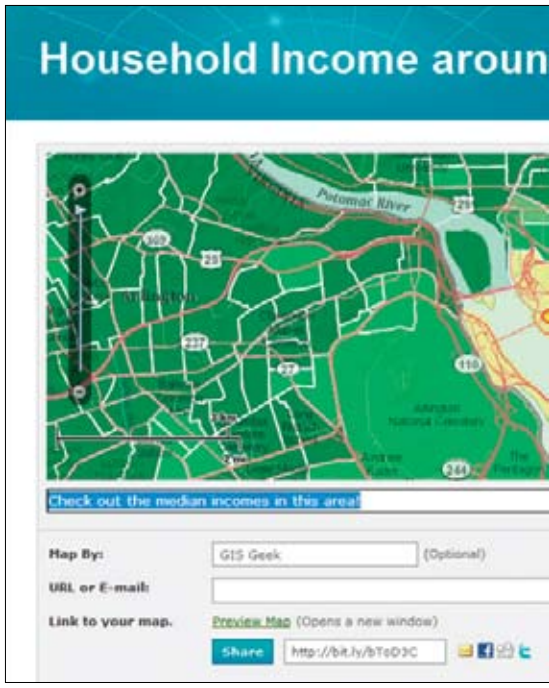
Step 3: Now you get to choose the size of the map. Enter the width and height in pixels and click Resize to redraw the map. You can also resize the map by dragging the handle that is in the bottom right-hand corner of the map. Decide if you want a scale bar—so people you share the map with can measure things on it—and check or uncheck the box to include or remove it.

Resizing Your Map

Step 4: You have two options for sharing your map. Use Option A if you want to embed the HTML on your Web site or MySpace page. Use Option B if you want to share your map via e-mail, Facebook, Digg, or Twitter.

Option A—If you want the map on your Web site, just copy and paste the HTML code from the box. If you haven't embedded HTML code in your Web site before, you might benefit from searching the Web for help. Some Web sites to visit include ehow.com, about.com, and webmonkey.com.

Sharing via Option A: HTML Code That You Can Embed in Your Own Web Site



Customizing Your Pop-up Map and Generating the Link to Use

Option B—If you want the map to pop up in a separate window, you can click Share a link. Add a title and caption for your map and decide if you want to add your name and e-mail as a link. Click Preview Map to see the window that will pop up containing your map, then click Share to generate the URL. Click one of the four icons next to the link to send it to your e-mail or Facebook, Digg, or Twitter page.

Sharing via Option B: A Link You Can Post via E-mail, Facebook, Digg, or Twitter

Make a Map Applications

Esri will continue to develop Make a Map and has already used the concept to let people make maps of their own place history to examine the links between health and the environment.

People have long known that the environment impacts personal health. Smog, lead, radiation, pesticides, and hazardous waste are all

well-known environmental health concerns. We also know that each of these factors varies as you move around the country. Oregon is known for a pristine coastline and Los Angeles for gridlock. For those of us who visit and live in different areas of the United States, an eye-opening use of Make a Map comes in the form of the Explore Your Place History application.

Other Ideas for Using Make a Map

- As you write on your blog about something that happened in a specific place, add a map to provide a way for users unfamiliar with the location to see where it is.
- Spur thought about the significance of place by highlighting a specific demographic layer on two maps of two different areas.
- After you take a trip and post your photos, include small maps of the places you visited.
- Add a map of your local neighborhood to your wall so your friends can learn more about the place where you live.

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Think Localization

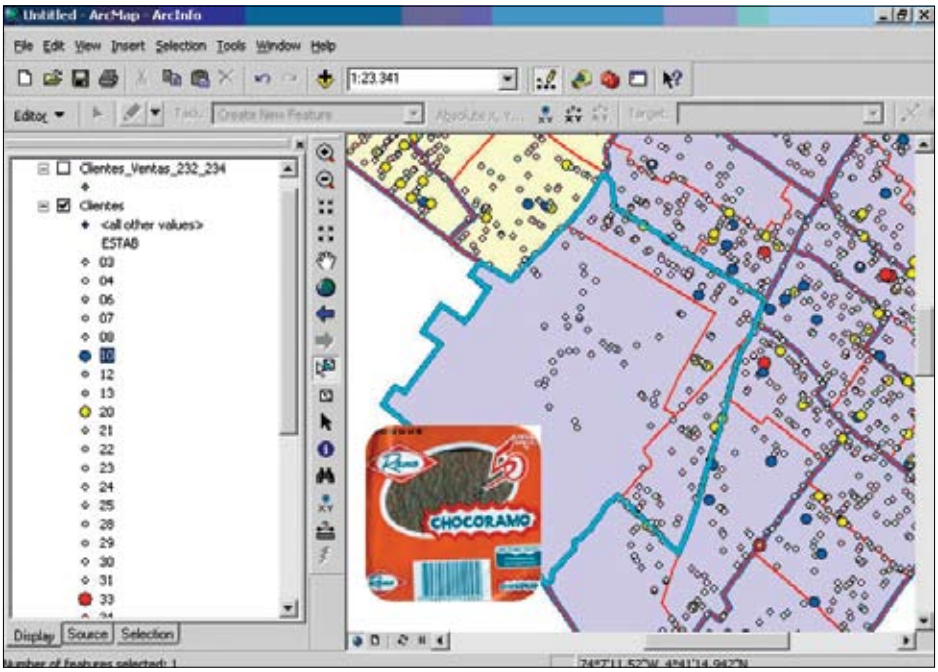
Becoming a More Self-Sufficient Marketplace

Doing business locally is becoming a new kind of normal. In today's economic climate, retailers can't afford to guess. They can't expect to apply the same sales models to different geographic markets. They need to understand the differences, even subtle ones, between each marketplace if they are to thrive. Air carrier delays and cancellations from the recent volcano eruption in Iceland are translating into higher costs for shipped products. If prices go higher, fewer people may be interested in buying. If I am a shipper, I'd better ensure that I don't ship more goods than can be sold at my locations. If I am a local businessperson, I will recognize this and look for a more local product to fill the gap where shipped products have become too expensive or even unavailable.

Speaking of goods becoming unavailable, in the case of the Gulf of Mexico oil spill, we will see repercussions on local markets for the rest of the year. Here in the United States, the shrimp comes from Louisiana. Now that this year's shrimp harvest has been decimated, Americans may have to find some other type of fish to eat. Smart retailers will recognize this vacuum and meet my need with other products.

Events such as these make people stop and think about the fact that we've become heavily reliant on many different products brought to us through the globalized supply chain. Maybe it's time to think differently and act locally. We need to understand not only whether a business is in the right place but also whether it's the right business to do at those locations.

For more information about using GIS in business, visit esri.com/business.



GIS helps even local businesses understand exactly how many products need to be delivered and to which street corners.

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