

Canadian Hardware Heavyweight Builds Market Intelligence

ArcGIS Solution Decreases Marketing Costs and Increases Sales

For a direct mail campaign to succeed, it must be targeted. It takes research, careful planning, and customization to ensure that the right message reaches the right individuals—those most likely to become repeat buyers. Nobody understands this better than Canada's largest hardware, home renovation, and gardening products retailer, RONA.

RONA is headquartered in Boucherville, Quebec, with administrative centers across Canada in Surrey, British Columbia; Calgary,

Alberta; and Toronto, Ontario. The company was founded in 1939 by a group of independent Montreal-area hardware retailers to compete with larger wholesalers to get the best prices from manufacturers. Today, there are more than 800 corporate, franchise, and affiliate stores of various sizes and configurations across the country. All these stores are serviced by RONA's Geomatics and Market Intelligence department.

Tightening Up Direct Mail

Like many successful companies, RONA reaches out to customers with direct mail that is delivered right to a customer's door. After some initial research, RONA discovered that a high volume of flyers was being sent to areas that was not necessarily translating into sales. Since paper and direct-mail campaigns are expensive, a more targeted approach to flyer delivery was required.

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↑ RONA is one of Canada's leading hardware retailers, with more than 800 stores across the country.

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PLRB Releases New Esri Mapping Service

Mobile Real-Time Weather Information Available to Claims Adjusters

Esri announced that the Catastrophe Services Department of the Property Loss Research Bureau (PLRB) has released a mobile version of PLRB Map, a mapping service that provides real-time severe occurrence data and information to members of the PLRB, an association of 900 property and casualty insurance companies. This new service—created by GeoDecisions, an Esri Gold Tier partner, on the Esri ArcGIS platform—provides improved access to interactive maps across organizations, from mobile workers in the field to analysts in the central office.

“PLRB has employed Esri mapping technology for two decades,” said Hugh Strawn, vice president of PLRB’s Catastrophe Services. “It forms the core of our Catastrophe Services Department products and services that we provide 24/7 for the member companies.”

“Utilizing the ArcGIS platform has permitted PLRB to leverage the distribution of real-time, as well as historical, data with the members’ claims departments. The interactive PLRB Map service helps move critical research functions from the adjuster’s desktop to the mobile device,” Strawn continued. “It enhances the efficiency of the adjuster in the field by pulling in relevant information ranging from address-specific PLRB data files to postcatastrophe satellite images through the power of GIS technology.”

PLRB provides services to insurance companies and underwriting organizations that join the association. The new PLRB Map provides these members with a daily map service detailing severe weather, seismic, and technological occurrences that are likely to generate catastrophe claims for member company insurers. Having access to the location of these incidents can help insurers understand potential claims exposure following the events.

“A portfolio’s location and how a pending storm system, for example, may affect it are critical information,” Brian J. Smith, GeoDecisions’ director of commercial solutions, said. “Providing this service through PLRB Map helps [PLRB] members understand this information quickly and use it in the field as a real competitive advantage.”

The latest PLRB Map incorporates Esri’s ArcGIS Online, a cloud-based, hosted website that allows organizations to create interactive maps and applications and easily share them with others. Incorporating this solution makes it easy for PLRB to provide the detailed information its members need to make the best decisions during the claims management process and ultimately deliver great customer service.

Said Mark McCoy, insurance solution manager at Esri, “We are pleased to work with industry leaders like PLRB. Our partnership with GeoDecisions has helped deliver the best technology possible to this outstanding organization. Using Esri technology, PLRB has access to so much more data, which helps shorten the time it takes to get people back on their feet.”

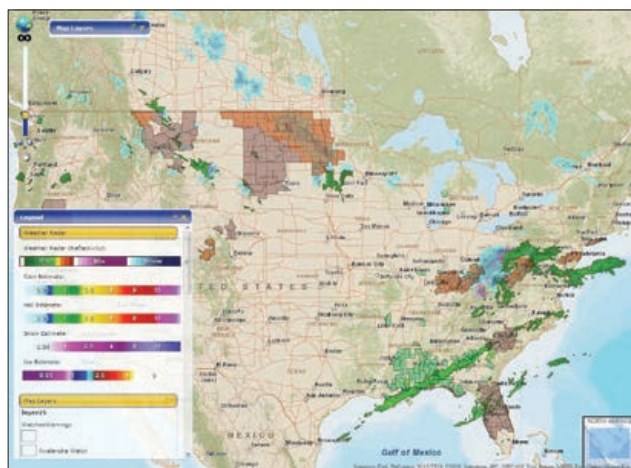
For more information on how Esri helps insurers understand the importance of location, visit esri.com/insurance.



↑ Real-time weather data, like snowfall, can be displayed on a map to understand where inclement weather is taking place.



↑ Satellite information can display both current and historical information.



↑ Real-time national weather services can be displayed on a map.

Interstate Batteries Improves Delivery with Esri Technology

Interstate Batteries, a \$1 billion, privately held company, has kicked off a project to integrate enterprise routing into its corporate marketing system, Market IQ. Based on Esri's ArcGIS for Transportation Analytics, Market IQ will now provide routing data, sales orders, and marketing information to more than 300 independent and company-owned distributor partners to enhance delivery of Interstate Batteries (IB) products to dealers around the United States. The enhanced solution will allow IB partners to more strategically plan sales opportunities and optimize deliveries while reducing costs and wear and tear on vehicles.

Interstate Batteries will incorporate many different conditions to route finding including height, weight, and road restrictions for hazardous material.

"Esri was the only company that was able to accommodate the specialized routing we require to allow our partners to deliver batteries safely and efficiently," said Mike Darr, program manager for Interstate Batteries' Market IQ program. "And it easily integrates into our existing system, which is already based on Esri technology—ArcGIS for Server."

Each of IB's partners works directly with the Market IQ system, which is an intuitive, Microsoft-based application. Working through the new map-based interface, dealers will be able to more efficiently input and visualize orders by day, week, or month and optimize deliveries to better serve customers. The system's flexibility will enable distributors to adapt their plans and routes to their own specific needs. For example, if a distributor has a specific time window available within

a delivery route, he will be able to easily add to or edit the route to service new prospects or perform other activities.

"Interstate Batteries has been very forward thinking in how it is opening up data to its dealers. This innovative company is delivering the understanding and resources the distributors need to create more healthy business conditions," said Simon Thompson, director of commercial industry at Esri. "Location analytics tied with logistics is enabling local business growth that benefits everyone in the communities Interstate Batteries serves."

For more information on how Esri helps businesses understand and grow their markets, visit esri.com/business.

About Interstate Batteries

Interstate Batteries delivers Outrageously Dependable portable power solutions. The Dallas-based company distributes automotive batteries, franchises and operates retail All Battery Center stores, recycles batteries, and provides motive and critical power products through its PowerCare division. Interstate sells products throughout North America, Australia, the Caribbean, and Latin America. Interstate employs more than 1,700 team members throughout North America. For more information, visit interstatebatteries.com.

Esri and GeoDecisions Empower Insurance Claims Workers

Esri, the world-leading provider of location analytics and GIS software, and GeoDecisions, an Esri gold-level partner, have aligned to empower insurance organizations with performance optimization from the office to the field. Working together, the two companies are creating solutions that allow insurers to track events, such as inclement weather and other natural disasters, so they can better serve their clients in their time of need.

"The location of a portfolio and how a pending storm system, for example, may affect it is critical information," says Brian J. Smith, director of commercial solutions, GeoDecisions. "GIS and location analytics help insurance companies understand this information and apply it as a real competitive advantage."

Together, Esri and GeoDecisions are offering integrated solutions based on the ArcGIS platform that assist in catastrophe analysis, exposure modeling, and claims management. Insurance companies can use a map-based interface to see their up-to-date portfolios and the

location of pending weather systems. This server-based solution helps them forecast the impact on their company's portfolio.

"We value our longstanding relationship with GeoDecisions, which has been built over several successful years of partnership," says Mark McCoy, insurance industry manager, Esri. "The solutions we are bringing to market together will help insurers make better decisions and help businesses and the community rebuild faster after an event."

About GeoDecisions

GeoDecisions is an information technology company specializing in geo-spatial solutions. It delivers strategic GIS and IT solutions and applications to empower clients to make smarter, more informed decisions. Visit www.geodecisions.com for more information.

Wendy's, Arby's, Culver's

Restaurants Use Esri Location Analytics to Optimize Site Locations

More and more restaurant and franchise owners are discovering the power of GIS to find the best sites for their restaurants. Owners of successful franchises have relied on GIS technology to discern markets for many years. The technology provides tools that help organize information by using location as the common identifier for data. By understanding where franchises, the competition, and customers are located, franchisers can make informed decisions, improve communication, and share their knowledge with others.

Better Trade Area Assessment

Arby's Restaurant Group, Inc., the second-largest quick-service sandwich chain in the United States, uses the Esri Location Analytics solution Business Analyst to guide business decisions. Arby's, based in Atlanta, Georgia, uses the solution to more accurately assess restaurants and trade areas for projects such as growing the chain and remodeling or relocating restaurants. Business Analyst merges Esri's vast demographic and business data with detailed maps and allows organizations like Arby's to perform spatial analysis. Using the solution, Arby's can now update the locations of its restaurants and business development activity on designated market area (DMA) maps, which describe the activity taking place in individual markets.

Since Business Analyst can be easily deployed across the enterprise as a web-based solution, on desktops, and even from iPhones and iPads, Arby's can make these maps accessible to its staff. Development teams working in the field are able to quickly access the maps and easily discover the information they need through the Arby's intranet.

This quick ability to synthesize data has made it possible for the teams to more easily and quickly monitor the business climate around each restaurant. This provides an opportunity for the organization to model different market scenarios to better serve existing customers and attract new ones.

Using one platform instead of several different solutions, as Arby's has done in the past, helps it better manage and analyze business data. With an enterprise system, Arby's can scale to meet the changing business landscape with tools that make it competitive in the marketplace.

"Esri's Business Analyst has saved our GIS analyst countless hours and has had a positive impact on the Business Development department," says Dave Conklin, senior vice president, Business Development, Arby's.

Site Selection and Predictive Modeling

Wendy's, the world's third-largest quick-service hamburger chain, is integrating Esri Location Analytics with the restaurant's corporate IT systems. The web-based solution will be part of the company's reporting system for new locations, assisting in site selection and market analysis.

"Demographic data and location analytics are critical components when making investment decisions to build new restaurants," says Dennis Hill, vice president, real estate. "With Business Analyst, everything we need—including mapping, analytics, and modeling—can be done on one platform that is scalable across our organization."

The Wendy's chain includes more than 6,500 franchise and company-operated restaurants in the United States and in 27 countries and US territories worldwide.

The new location analytics solution replaces a current system in use at Wendy's. Implementation was completed by Esri partner GIS, Inc., located in Birmingham, Alabama. The new solution includes server GIS applications; Esri demographics data; and customized analytics developed specifically by GIS, Inc., to streamline and enhance Wendy's site screening and market assessment process. Staff can easily view sales records, customized demographics, and other business reports on existing restaurants through an intuitive mapping interface. The system also enables Wendy's to perform predictive modeling and assess potential restaurant cannibalization for new and existing sites by simply clicking on the map.

Building a Better Franchise

With almost 500 restaurants that stretch from Wisconsin's heartland east to South Carolina and west into Texas and Utah, Culver's is continually looking at possible new sites. The first Culver's restaurant opened in 1984. Cofounders Craig Culver and his wife, Lea, oversee almost 500 restaurants in 20 states through Culver Franchising System, Inc. Although the success of Culver's stems a great deal from the delicious food it serves, the company also relies on Esri Location Analytics software and data to ensure the locations its new franchisees are selecting will be successful. Using location analytics, new sites can be easily compared and contrasted.

"We chose Esri because it has the best information available for what we need to know," says Dave O'Brien, real estate manager at Culver's. "Using Business Analyst, we are able to easily compare and contrast new sites by analyzing the demographics of our existing restaurants and then pinpointing new areas that are similar."

O'Brien uses a combination of software to provide an in-depth view of the market at analysts' desks as well as an easy way for anyone in the company to incorporate the information they find into the tools they need to do business. Business Analyst, including the Tapestry Segmentation module, provides in-depth customer analytics.

Business Analyst Online is used for creating boardroom-quality maps and easy-to-understand reports that are used by the franchise partners. "We are a family company, and this is apparent in all our daily efforts," stresses O'Brien. "We want our franchise partners to succeed. Without them—the local owners and operators in their own communities and hometowns—we would not exist."

Today, GIS is seen as a strategic business solution that helps businesses continue to grow. The company is expanding into the state of Florida, a new area for development. "GIS is a tool to help us make even better decisions as we continue to expand," says O'Brien. "GIS doesn't replace anything we have now, including people. Instead, the software has become a necessary tool that complements our existing business process."

Esri Maps for Office Makes Spreadsheet Data Stand Out

By Karen Richardson, Esri Writer

Mike Cooper, a market manager for Western Europe and the Middle East at Leica Geosystems, is making maps in Microsoft Excel spreadsheets to help his sales force and distributors across Europe. Because he works in the GIS industry, he has an in-depth knowledge of it, but he never considered himself a technical user. In other words, while he spends a lot of time looking at and analyzing data on his desktop, it wasn't until he began using Esri Maps for Office that he produced maps to improve his business.

Cooper is in charge of market development for Leica's Zeno GIS series, which offers automated Global Navigation Satellite System

(GNSS) postprocessing and seamless integration with GIS. As Cooper was traveling Europe supporting distributors and talking to potential customers, he needed a way to easily show access to Europe's SmartNet—an integrated GNSS network—that can be accessed by Leica Zeno. "While we certainly have information available on each country's network availability, I wanted to be able to show people quickly where SmartNet was available," said Cooper. "This kind of information just lent itself to a map."

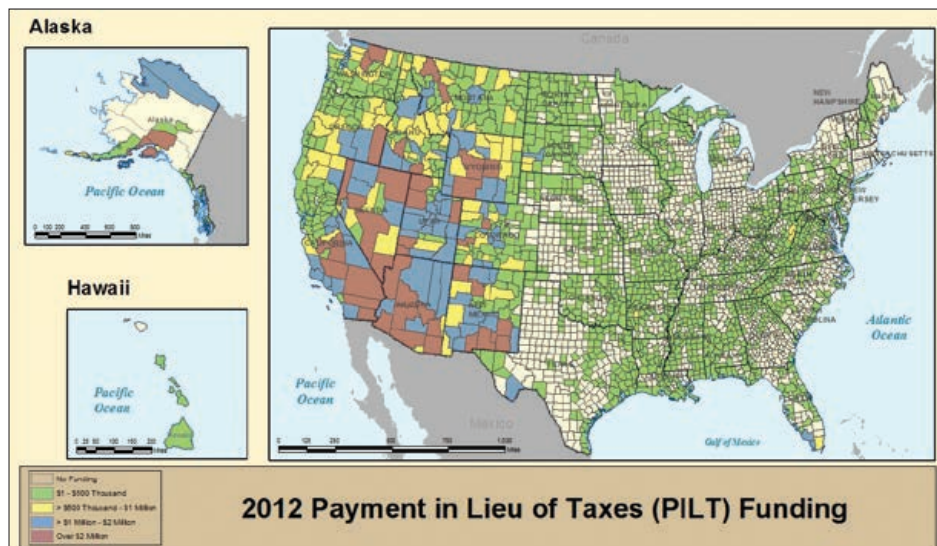
Cooper loaded the data into Excel and using Maps for Office created a map displaying Europe and the availability of different networks. "I've done this type of mapping before, but it always took time and some creativity to get what I needed," said Cooper. "Using this, I honestly created a map within minutes. Nothing could have been easier." Now Cooper can update the information from Excel whenever a status changes and the updates posted to the map service he created for his distributors, customers, and potential customers to view and share on ArcGIS Online.

A New Chapter

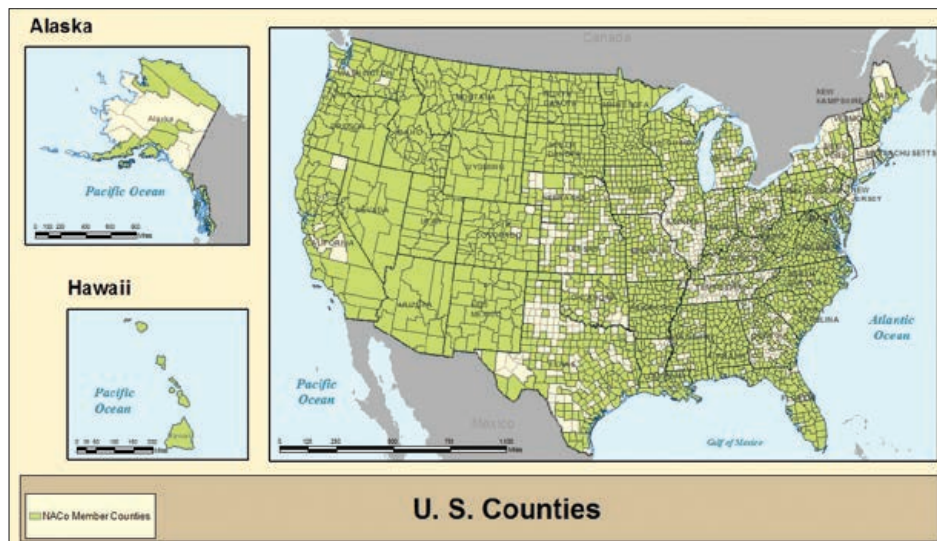
Staff members at the National Association of Counties (NACo) are also making maps in Excel spreadsheets to improve communication with the federal government. Maps get the organization's points across effectively so federal agencies quickly see NACo as a partner they can depend on to provide information that supports better decisions.

NACo is the only national organization that represents county governments in the United States. The organization was founded in 1935 and provides essential services to the nation's 3,069 counties. In addition to advancing issues with a unified voice before the federal government, NACo improves the public's understanding of county government, assists counties in finding and sharing innovative solutions through education and research, and provides value-added services to save counties and taxpayers money.

When Matt Chase was selected as the new executive director in July 2012 to promote counties and county issues, he didn't have a technical background in GIS. That, however, didn't stop him from using interactive maps on his iPad during executive board meetings.



↑ Counties That Take Advantage of Payment in Lieu of Taxes Funding



↑ A Look at the Number of Counties That Belong to NACo

Make Maps Directly in Excel

Bert Jarreau, NACo's chief innovation officer, and his staff have been using Esri Maps for Office to create maps in Excel that support Chase's endeavors. Like Chase, Jarreau did not have a background in mapping or GIS.

"It's been trial and error for us," said Jarreau. "We've been creating the how-to book as we go along—understanding what a basemap is and which ones should be made available for our staff once they are unleashed to create their own maps. It's been such an eye-opening experience to discover what we really have available in our data. We can't wait to train the rest of the staff so they can use this powerful tool."

From Health Care to Membership Data

America's county governments deliver health care directly through public hospitals, clinics, nursing homes, and other settings, as well as protect the public's health through local health departments. Counties also contribute to the nonfederal share for certain Medicaid services and provide health benefits to the nearly three million county workers and their retirees nationwide.

Jarreau's team created an interactive map that displayed where hospitals and nursing homes were located in each county. With this interactive map, Chase was able to explore data with executives from the United States Department of Health and Human Services, which facilitated better discussions about health care initiatives.

Another map was created to show which counties were represented at NACo annual conferences. This data had been collected over a number of years, but there had never been a way to understand the trends in the data before. By mapping the information, staff were able to see how the makeup of attendees had changed over time.

The annual conference map also showed how many counties took part in various NACo programs, such as dental discount cards, and federal funding, such as payment in lieu of taxes (PILT). PILT is a federal program that compensates county governments for tax revenue that is lost because land is owned by the federal government. An example is a national park. While county governments still maintain the expense of infrastructure and services for these areas, they don't receive a benefit from taxes for their programs.

"This was really educational for our members," said Jarreau. "While many had thought participation in PILT was more of a western phenomenon, there were actually a lot of eastern and southern counties that also were part of the program. This is just one of the things we discovered when we were able to look at the data on a map. We can't wait to see what else we uncover."

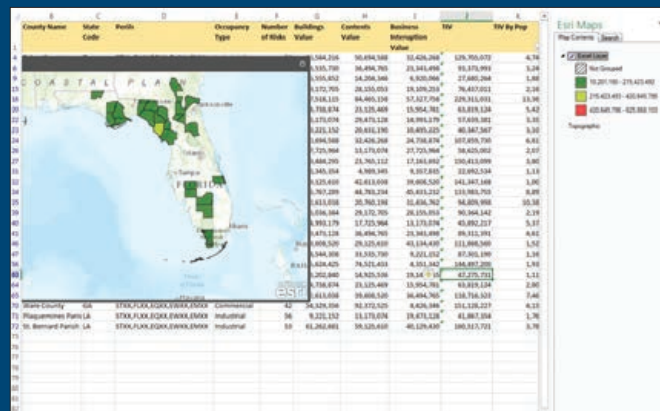
For more information, contact Bert Jarreau, chief innovation officer, NACo, at bjjarreau@naco.org.

Esri Maps for Office is a downloadable add-in for Microsoft Office 2010 that helps organizations make better decisions through location analytics. Interactive maps can be added to Microsoft PowerPoint presentations or shared through Esri's cloud mapping platform, ArcGIS Online. Maps shared through ArcGIS Online are accessible throughout an organization and available for embedding into mobile or web applications.

Through tight integration of Esri Maps for Office with ArcGIS Online, users can access a variety of background maps, including street, satellite, and topographic maps. These maps can also reuse and incorporate any other map their organization provides access to, as well as tens of thousands of maps published by Esri's worldwide user community.

Creating interactive maps of Excel data is simple. Maps can display locations (e.g., addresses, sites by map coordinates, facilities, businesses, opportunities, distribution points) and geographic data, such as color-coded maps of enrollment by state.

All that's needed to get started using Esri Maps for Office is an ArcGIS Online paid or trial subscription, along with Microsoft Office 2010 or later. Esri Maps for Office is available as a free download to organizations with ArcGIS Online subscriptions.



↑ Total insured value per person is displayed for the state of Florida.

For more information on Esri Maps for Office, visit esri.com/maps4office.

Location Intelligence in Mobile Work Force Management

By Randy Frantz, Telecommunications Industry Manager, Esri, and Wolfgang Hall, Logistics Industry Manager, Esri

Let's face it: dispatching can be stressful. Mobile work force managers and dispatchers juggle urgent work orders with unforeseen disruptions due to weather or driver- and vehicle-related emergencies.

Some of today's dispatch systems could be compared to an air traffic controller equipped with a monocular and megaphone to keep airplanes on time and from flying into each other. Air traffic control is sophisticated. Information from many sources is combined into a common operating picture to show traffic, weather, and multiple radar feeds. In contrast, some operators in fleet dispatching still use spreadsheets while exchanging information with field-workers via trunk radio or text messages. Even in systems equipped with automated vehicle tracking, the dispatchers lack full 360-degree vision, since they only have access to one slice of information.

The Challenges

Among the daily challenges mobile work force managers and dispatchers face are responding quickly to urgent calls, efficiently planning and executing routing, and ensuring driver safety. Less frequent but even more demanding activities include coordinating emergency response during severe weather or other catastrophic events.

The use of GPS for vehicle tracking and simple mapping tools has helped a great deal over the last decade to support fleet management. Despite these advances, operators still face an information gap when it comes to combining position information for work orders and field-workers with the location of nonmoving assets. Traditional automatic vehicle location (AVL) systems have a rich set of fleet-reporting functions but cannot be combined easily with infrastructure data such as fiber-optic cables and towers. Operational visibility is even more clouded when fleet data needs to be combined with other real-time

information such as lightning strikes or power outages. How can these simplistic systems be improved to provide effective and comprehensive situational awareness inside a modern application?

In the past, the information gap was remedied by deploying costly custom-developed systems that only large telecommunication organizations were able to stomach. One of the world's largest telco organizations spent several years and millions of dollars to combine data from many sources to build up its own custom dispatch system. It now provides location visibility for tens of thousands of field-workers and also integrates work orders and emergency calls. While this homegrown set of tools provided many of the expected benefits, the technology is aging after nearly a decade of operation. Today the system is ready for a major and expensive overhaul.

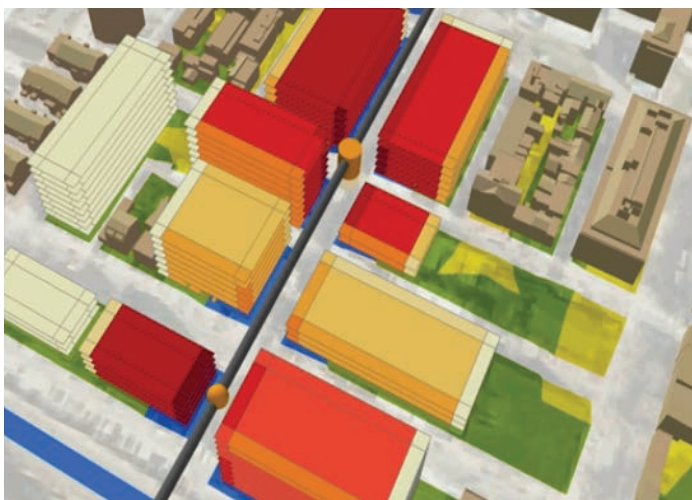
Because of the high development and maintenance cost associated with a custom system, most organizations would rather deploy a commercially available platform that can be implemented quickly and much more cost efficiently. A growing number of work force managers are seeking a more comprehensive solution with less customization.

Location Analytics to the Rescue

Over the last two years, thought leaders in the industry have looked beyond simple dispatching tools to compare their needs with available technology that provides extensive situational awareness in military operations or response to catastrophic events. These mission-critical applications use a variety of intelligent location analytics tools found in a GIS. This quest was further helped by the ability to move from managing static location data to real-time data integration. This drastically changed the world of mobile work force management systems.

Today's GIS can incorporate real-time information from many different vendor-neutral sources while converting and standardizing the various input formats. This is steps ahead from the previous challenge of combining input from multiple real-time sources into one system. Different departments may now use mobile devices from different manufacturers even though the mobile device industry is lacking in standards for mobile location communication—a problem that has led to a nightmare of hundreds of proprietary message formats in the industry.

Standardization through GIS gives organizations a choice to quickly upgrade from one device to another or to combine multiple data inputs from different departments or organizations. Location-enabled mobile devices include trunk radios, smartphones, laptops, or GPS in-vehicle receivers. The devices typically transmit their location in real time across wireless networks to the GIS. In addition, a growing number of real-time data providers offer interfaces to GIS. This includes AVL companies, radio-frequency identification (RFID) data vendors, supervisory control and data acquisition (SCADA) or other sensor network providers, as well as weather services.



↑ The ability to combine asset and infrastructure data allows managers to know who to send and exactly where when the time comes.



↑ Using GIS for routing can provide different scenarios after filtering through a mountain of data to give the best scenarios.

Spatial Filtering Finds Relevant Information

Having access to all the incoming information can be a blessing and a curse. A gap in incoming events will provide a distorted picture. On the other hand, dispatchers can easily drown in a flood of information: a mobile work force management system may receive hundreds or even thousands of events per minute. It is essential to filter out the clutter and focus on the relevant messages and alerts.

GIS platforms are designed to handle large volumes of location data and work extraordinarily well at displaying only essential information. The spatial tools include intelligent location analytics for filtering and advanced geofencing. Running events through this real-time processing framework allows dispatchers to only focus on critical alerts and situations.

Mobile work force managers have various needs when displaying operational data. Ideally, an operator can toggle map layers on and off, for example, to show or hide facilities, fiberglass lines, tower locations, storms, lightning strikes, and so on. The operator may choose to see only one type of vehicle or only certain alert situations. GIS can also provide a heat map that shows wireless signal strength and will allow operators to manage potential communication gaps effectively.

The ability to combine real-time fleet locations with asset and infrastructure data enables managers to send the right person to the exact equipment location, even if the asset is hidden or buried underground. This advantage becomes very important in emergency situations when fast response time is a must. Multiple layers of information are stacked on top of each other to form a map that provides an immediate view of critical situations at a quick glance. Another advantage of using a GIS over simple mapping tools is the user's ability to provide automatic analysis across multiple layers of information and the capability to quickly add map layers from many public and commercial online sources.

Data Is Secure in a GIS

Another consideration for implementing GIS is the ability for organizations to deal with sensitive data that cannot be stored in third-party systems. Data security can be a motivator for keeping data stored on premises rather than using a service provider or the cloud, and such storage may also speed up replay of multiple real-time feeds at once for a clear analysis of past events. GIS will allow organizations to choose what data should be stored on premises or what nonsensitive data can be made available in the cloud.

To truly offer operational awareness, a mobile work force management solution has to be able to integrate with multiple external systems including work order management, enterprise resource planning, and customer information systems. Advanced work force management systems will allow the optimization of work order routing, including multiple stop scheduling and adherence to appointment times.

Many IT organizations value the use of GIS as an enterprise platform that enables quick integration with these different systems. A majority of telecommunications companies already maintain their infrastructure and assets in GIS, and most are already integrated with other enterprise systems. Using the enterprise GIS platform for integration with real-time systems bridges existing system-to-system communication gaps and leverages the existing investment in IT technology.

Criteria for MWMS Success

The mobile work force management system (MWMS) market is ever evolving. Unreliable wireless communication still causes problems in rural areas. On the other hand, accurate GPS locating can be a tough challenge in urban canyons. Advances in technology and the use of intelligent location technology will help with these challenges, and the next generation of tools will address more accurate indoor locating and increased worker safety via smart mobile technology for environment and health monitoring.

No matter how sophisticated systems will become in the future, the success of mobile work force management systems will still be measured using these three criteria:

- Does the system provide a simple and reliable method to get all relevant data from multiple sources into the system?
- Does the system allow adequate optimization, filtering, processing, and alerting to automate management tasks?
- Can the user interfaces easily present all relevant information in an intuitive way across mobile, desktop, or web applications?

In meeting all these criteria, GIS has and will continue to provide a significant leap for effective mobile work force management. It is going to be exciting to see what other new management technologies will emerge over the next few years using GIS technology as a launchpad.

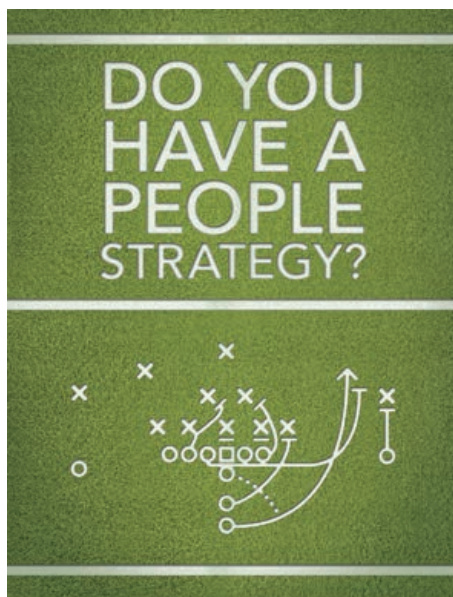
Find out more at esri.com/logistics.

Do You Have a People Strategy?

GIS Staff Development Helps Achieve Business Goals

By Suzanne Boden, Esri Training Services

Lately, there's been a steady stream of articles telling how tech workers can ride the employment roller coaster and, specifically, which skills GIS professionals need to survive in today's business climate. The last five years have seen major shifts in expectations, and these have had a huge impact on organizations and their leadership. Many organizations are looking for ways not only to meet these expectations but also to create new products and services that reach new customers.



Grow Your People, Grow Your Business

According to the 2012 Employee Job Satisfaction and Engagement study by the Society for Human Resource Management, employee development is an important way to increase job satisfaction and reduce staff turnover. Higher job satisfaction is associated with increased productivity and higher customer satisfaction.

Despite the amazing technology that permeates modern life, humans remain indispensable. No gadget has yet invented a new gadget. No computer has ever created a

web map all by itself, contributed to a white paper, or put together slides for an executive presentation (although Watson, IBM's cognitive system, may be honing its PowerPoint skills as you read this).

Higher job satisfaction is associated with increased productivity and higher customer satisfaction.

Organizations that work at motivating and retaining employees have leaders who understand that people are their most important asset. Employees execute day-to-day operations, engage with customers, and come up with the new ideas that move a business forward.

Esri Training Services has been preaching the value of staff development for some time. Note that staff development includes—but is not limited to—training. Fundamentally, staff development is a people-centric approach to achieving strategic business goals.

Staff Development Planning Process

Like anything done well, staff development requires planning. Planning should encompass support not only for current projects and initiatives but also for future projects and initiatives. Your planning process should start with strategic alignment. Directly connecting staff development with the achievement of strategic goals will earn executive buy-in and budget approval.

During this phase, identify strategic business goals. These goals are often articulated in your organization's mission statement. Next, assess how your organization's GIS program supports these strategic goals. Which staff roles create, manage, and use the GIS infrastructure and applications? What GIS roles are in place to support the applications that support the strategic goals?

Next, analyze the available educational resources and delivery methods to select those that will be most appropriate for the GIS roles just identified. Timelines, priorities, and budgets can be discussed and documented in a staff development plan. This plan should answer the following questions:

- What knowledge and skills are required for each role?
- Based on current and future plans, what are staff development priorities?
- What resources are available to develop the required knowledge and skills?
- What's the budget?

Time for Action

Once the plan is formulated, it is time to execute it. However, that is not the end of the process. It's important to periodically review the progress that has been made and the plan itself. Events like the retirement of a key staff member, reassignment of roles, creation of a new role, or the introduction of a new technology component may necessitate modifying the plan. It's critical to ensure that your plan remains aligned with your organization's strategic goals by adjusting it as needed. If not, your plan becomes irrelevant.

What are the results of all this planning? With an approved budget in place, your people develop the right skills at the right time. Staff members who possess the knowledge and skills they need perform day-to-day operations efficiently. Projects are completed successfully. Just as important, you can demonstrate that your team functions as a strategic asset. Your organization's leaders can appreciate the value of the GIS program. And finally, your employees will feel valued and excited about contributing to new projects.

Contact an Esri training specialist who can partner with you to help determine the best options for equipping your staff with the knowledge and skills they need to help your GIS program succeed.

For more information, call 1-800-447-9778, ext. 5757, or send an e-mail to gistraining@esri.com.

Location Matters in Today's Retail Landscape

By Simon Thompson, Director, Commercial Solutions, Esri

Succeeding in retail has never been easy, but the combined tidal waves of the "new normal" and ever accelerating technology change and consumer information have many wondering if success for traditional retail is even possible today. We are awash with data and information—really big data that is enabling consumers to comparison shop, leaving some brick-and-mortar store owners disenfranchised. But it doesn't need to be like this.

Consumers are not just receivers of information; they are information generators. They are barometers that will enable you to better match merchandise to local communities and optimize store floor space, staff, and products and improve your day-to-day operations so you profit today and secure tomorrow's growth. How? Just add location.

Location Matters

An obvious truth that's often overlooked is that national market share is the sum of local market shares. Every location has different sales, costs, profit drivers, and a set of customers with differing demographic characteristics and desires. So every customer is the starting point for business analytics, and everything he or she does—every interaction with your network of stores, every online search, every social interaction—and every offer and marketing contact has a location too.

Location matters. Not just because of the mass adoption of smartphones, location-aware applications, or the explosion of location-based big data. Location matters because it ties many of your business units together and makes it possible to solve problems that had no solutions before. It lets you ask new questions and gain new insight and understanding. Location analytics, viewed by many as the next big thing in business intelligence, is lifting the fog of war between the connected consumer and retailers.

Want to know where and why stock is turning over quickly and might lead to out-of-stocks? Just add location. Want a better reading of your competitive climate? Just add location. Location analytics lets retailers explore, model, evaluate, investigate, and understand the localized market. It keeps stock at the right level so you don't sell short nor discount value and drive profits down.

"Consumers are not just receivers of information; they are information generators."

Simon Thompson, Director, Commercial Solutions, Esri

What Is Location Analytics?

Graphs and tables are the bread and butter of retail operations. Business intelligence extended this with dashboards of key performance indicators (KPIs), dials, charts, and gauges that turned data reports into cockpits from which many attempted to fly by wire. But even with all this, the window on the real world was missing. Maps let you know where you are and what's ahead. When you can interact with that map, you are more able to understand the patterns that you are seeing. Not only can you discover where stores, customers, the competition, and manufacturing and distribution plants are located, but you can see where geographic features like mountains, rivers, and freeways are having an effect on your business. Gaps in coverage leap off a map and are readily discernible.

It's no surprise that the back page weather map is much more popular and understandable than all those individual statistics in the spreadsheets that accompany them. The detail we look at for separate cities is also the origin of national trends and patterns of variation. A hot spot here, a cold spot there. It's incredibly easy to compare and contrast different places and understand what changes are taking place and the degree and rate of change that occur over time and space.

Location analytics goes beyond simply viewing information in immensely powerful, simple maps. It's the analytics tools and techniques that tap into your data and bring out the whole story. It's being able to ask questions of your data, to tie that data and your graphs and charts to ideas, hunches, and discoveries that can change the way you do business and the business you do.

The Truth Is Out There

Imagine you need to ascertain the true trade area of a store because of competition or cannibalization. With location analytics, you can easily answer that question and much more. You can find out exactly where revenues are coming from for every dollar of revenue or fraction of a percent of your customer base. Location gets you hyperlocal. It turns generalities into details, so you differentiate the whys from the what. Next step: figure out the how. Using location analytics, you can optimally calculate the number of sites needed to cover a new market and maximize revenues and profitability. At the same time, you can modify the formats, size, and operating parameters to explore different scenarios of how much business would be generated at one location versus another. Not only can you model, analyze, and shift information, you can actually find the locations for those best sites and the optimal network of stores and merchandise.

When you understand location, you can take advantage of dissecting those variables that make each place unique. What does this mean to today's retailer? It means that you can discover and deliver the right products to the right people at the right time, every time.

For decades retailers have relied on segmentation and personas to divide and group their customers and markets to more precisely target their best customers and prospects. Segmentation systems

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Business Sense

Simon Thompson
Director, Commercial Solutions, Esri

This issue of *Esri News for Business* focuses on retail organizations. Today's retailers are operating lean organizations—closely matching merchandise to local communities; keeping profits low; and configuring store floor space, staff, and products so there is very little fat. Sales revenues are needed to not only pay the cost of a retailer's day-to-day operations but finance future growth as well.

Turning over stock quickly and ensuring there isn't a surplus propels profitability. How do retailers operate smartly in such a competitive climate? Many successful operators use location analytics to make sure their supply chain is in balance with changing customer dynamics so they can fight successfully for the limited space in many consumers' shopping carts.

Using location analytics, retailers can investigate and understand the localized market they are selling into so as to maximize their earnings. The technology allows them to keep stock at the right level so they don't sell short nor create a secondary discounted market that brings the value of their products down.

Location analytics also helps supply chain managers, risk managers, and business owners in general identify and mitigate risks, such as severe weather or political instability, to their supply chain. Understanding location ensures that the most logical cost savings distribution network can be created and optimized.

Location Matters in Today's Retail Landscape

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operate on the theory that people seek others with similar tastes, lifestyles, and behaviors—"like seeks like." These behaviors can be measured, predicted, and targeted. Segmentation is coarse at a time when profitability is linked to microsegments, and marketers are striving for mass customization. Location is a way to build a better understanding of consumer behavior to model customer diversity, habits, and sentiment from the perspective of the retailer using all the information you have on them—from loyalty cards and check-in to social media likes and followers to offers and coupons. With location as the steel thread that connects all these online and offline behaviors, the anonymous shopper becomes a known consumer.

Beyond Alphabet Soup

The line between mobile shopping, search, comparison shopping, and check-ins is already blurred. Mobile social media or "mocial" marketing has evolved into "SoLoMo"—social, local, and mobile marketing all mashed up into one big concept that uses location to improve customer intimacy and connect the customer's activities to individual locations. If you want to stop sales from leaking out of your store as the wandering customer compares prices online, you need to know the customer is in the store in the first place! SoLoMo does that, and location analytics takes location and puts it to work, making it a powerful weapon in your arsenal of marketing and business tools.

Today, it's possible to have a segment of one, yet aggregate individuals into thousands of hyperlocal groupings that reflect your customers better. Location and location analysis enable retailers to differentiate merchandise assortments and tailor them precisely to local tastes and market potential. In the limited space that's every consumer's shopping cart, location is enabling brick-and-mortar retailers to successfully fight for every dollar and maximize the value of every transaction. In today's competitive marketplace, location's a winning strategy that you can't afford to overlook.

For more information, visit esri.com/retail.

Six Reasons Why the Public Hates Your Web Mapping Application

By Eric Edmonds, Director of Marketing and Sales, GEO-Jobe GIS Consulting

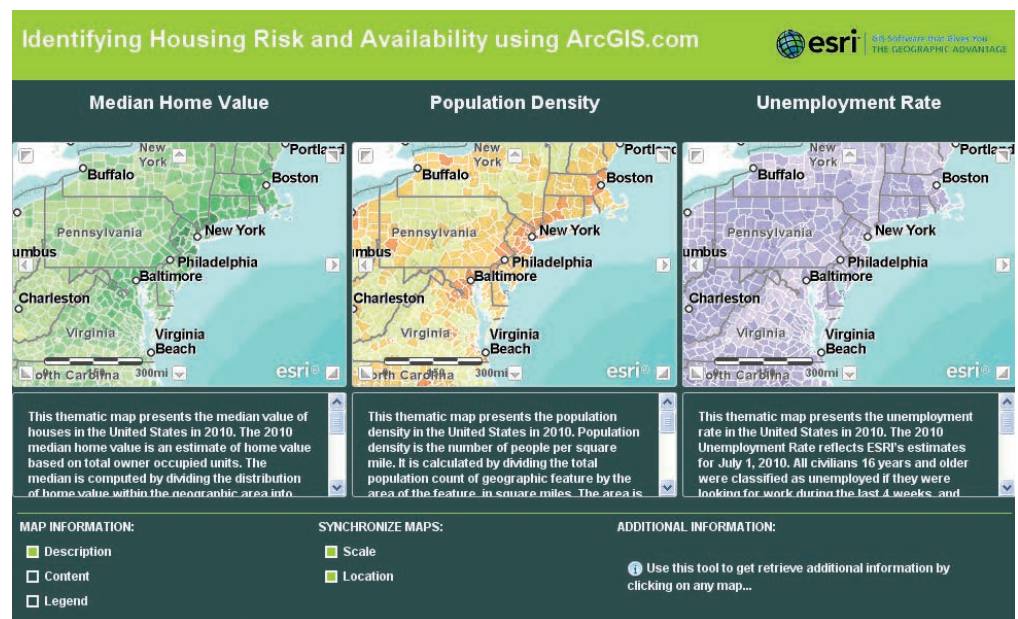


This article provides a few important conditions for successful, public-facing web mapping applications.

I spent a recent weekend researching property search applications across several states. As a marketing and sales person, I was enthused by the amount of opportunity I saw for my consulting firm, but as a geographer, I was disheartened by what I found. I have outlined six of the most popular issues that haunted my research.

1. It is slow to load—You created or purchased a web mapping application 10 years ago that has not been updated. Back in the day, you thought you broke the sound barrier when your basemap loaded in under a minute. It's 2013, and no one is interested in technology that makes them wait; look at updating your server or finding an inexpensive cloud hosting solution that offers the competitive speed the public desires. It also wouldn't hurt to rewrite your code for simplicity and efficiency.
 2. It is ugly—Your app's got no alibi; it's ugly. People have an emotional response to what they see. A web mapping application that breaks all the rules of graphic design looks cheap and thrown together. Reminds me of some local business commercials (and a lot of lawyers and used car salespeople I would never use). Many developers don't consider design and color in their application. Remember, we are dealing with public perception here, so a more attractive and simple-looking application with less functionality is more likely to be successful. If you can't find a graphic designer, try grabbing some design ideas from more popular applications. Also research some standard color schemes.
 3. You can't print from it—Adding printing functionality is much easier than it used to be. Contact us if you can't figure it out. People enjoy printing. It makes them feel secure about their document management. As a developer, be ready for your clients to request it.
 4. Your data is incomplete and outdated—This really grinds my gears! Your web mapping application is only as good as your data. Don't publish a solution to the public that has bad data. Also don't be surprised your clients aren't keeping up with manual updates. Get something like AutoExchange to push updates to the server and make it easier for the public to get the latest GIS data. Be a trusted source for the public by making sure your data is precise and punctual.
 5. It can't be figured out in five seconds—Is your application trying to do too much? The public should understand what your application's purpose is in five seconds. If there is too much functionality, try scaling down and producing multiple, single-purpose applications. Remember to use the MU Test to keep them simplified during any rewrites.
 6. It is not mobile friendly—You have to optimize your web mapping applications so that they work on tablets and smartphones. Make sure you test it across several mobile operating systems and networks.
- Your to-do list grows every day, so make it a priority to update the applications you made 5–10 years ago. It will help foster the use of public-facing web mapping applications and might even get you more business and/or traffic. You can discuss more with me at Twitter by messaging me at [eric_edmonds](#), or use [#MapThis](#).

↓ Is your public-facing web page appealing?



In the past, RONA had been working with an external firm that provided a global view of the entire distribution network so that delivery areas could be planned strategically. While this approach facilitated a targeted distribution plan, working with an external firm had its own set of challenges. The process was difficult to manage, and there were costly delays. As a result, RONA decided to take matters into its own hands and develop an internal application that would optimize flyer delivery.

After assessing many solutions available, RONA decided to implement its own mapping system, based on ArcGIS and Microsoft Access. To analyze customer information, many different datasets from Statistics Canada are used. Statistics Canada is Canada's central statistical office that conducts a country-wide census every five years and produces statistics that are made available to individuals and organizations throughout the country. RONA also combined city maps and information from a popular national loyalty rewards program, AirMiles, to generate a nationwide snapshot of customers.

The system RONA developed allows staff to closely monitor customers through individual profiles linked to specific trade areas. By displaying information visually and effectively analyzing relationships between

people, places, and behavior, new patterns and trends were revealed that would not have been evident using traditional business systems.

RONA also leveraged Esri's ModelBuilder, a graphic modeling framework used to design and implement advanced geoprocessing procedures and workflows, to develop analysis tools that provide market intelligence at the touch of a button. For example, users can analyze store market areas to see where markets overlap, find out which customers subscribe to newsletters, pinpoint neighborhoods that contain a high concentration of customers, and then print off data in usage reports.

"We continuously scan Canada's markets, and using GIS lets us quickly develop distribution strategies for new, expanded, or relocated stores," said Simon Génèreux, manager, Geomatics and Market Intelligence, RONA. "As a result, we're distributing 10 percent fewer flyers, which is saving us thousands of dollars per year."

Up to 100 Percent Cost Savings

Data can be extracted and shared with RONA's suppliers and distributors. Within minutes, RONA can determine the quantity and version of flyer that is needed for each trade area and provide this information to suppliers. A distribution module is directly integrated with ArcGIS so that a supplier can strategically plan the most effective flyer distribution runs using easy-to-understand map views. Flyer orders are then placed directly through the application.

With a more targeted approach to marketing, RONA is better able to serve its store network of 800 stores located across the country. By leveraging a customized ArcGIS application, staff can analyze geographic areas and match the best flyers to the correct stores. This has virtually eliminated accidental shipping of promotional flyers to areas where the promotion was not occurring.

RONA's Geomatics and Market Intelligence department now finds it easier to create and adhere to annual budgets because it can see at a glance the precise number of flyers that will be distributed in the coming year. The company has saved money by eliminating promotional flyers in underperforming zones and by focusing its energies on areas of high customer concentration. By no longer relying on an external company to conduct data analysis, RONA has also been able to save costs. In fact, by bringing the flyer distribution process in-house, RONA has reduced its external consulting budget by 100 percent.

As an added benefit, the flyer distribution department can now effectively justify every promotional move it makes through the ability to directly link sales results to specific geographic regions. It is also leveraging lessons learned from its flyer delivery application and applying the same strategies to decide where to locate new stores based on the market potential of various neighborhoods.

RONA has learned to effectively use GIS to profile customers and develop its flyer distribution strategy. As a result, the company has optimized marketing and advertising actions by zeroing in on profitable distribution areas and eliminating areas that were yielding poor results. It has also saved time and money by providing suppliers and distributors with precise, actionable data.

For more information, contact Simon Génèreux, manager, RONA Geomatics and Market Intelligence, at Simon.Genereux@rona.ca.



↑ → Combining all information into one platform, including city maps and loyalty reward program data, allows staff to make sound decisions.

Where Did Ray Barone and Cliff Huxtable Go?

Change has been the constant for the US demographic landscape recently. A major demographic difference since Census 2000 is the change to household composition. Traditional households of “dad, mom, two kids, and a dog” are no longer the norm. Household types are changing, so the household types portrayed in *Everybody Loves Raymond* and *The Cosby Show* are transitioning to entirely different kinds of households.

Diverse describes the composition of American households. Husband-wife families remain the dominant household type; however, their share of all households continues to slip—from 52 percent in 2000 to 48 percent in 2010. From 2000 to 2010, the real increase in family households was in single-parent families, up by 22 percent, and multigenerational households, up by 30 percent. Increasing social acceptance of singles adopting children, as well as single parenthood resulting from divorce or having children but never marrying, may account for some of the increase in single-parent families.

Household size tended to increase in areas that gained population from immigration. For example, multigenerational households are part of the tradition in Hispanic and Asian neighborhoods. Parents go out to work while grandparents stay home to care for the little ones. These seniors may be language isolated, with low cultural assimilation rates. Increased numbers of multigenerational households may also be attributed to the Great Recession. Young people had to move back home when they either lost jobs or couldn't find employment, or early retirees ran through their savings and moved in with their children and grandchildren.

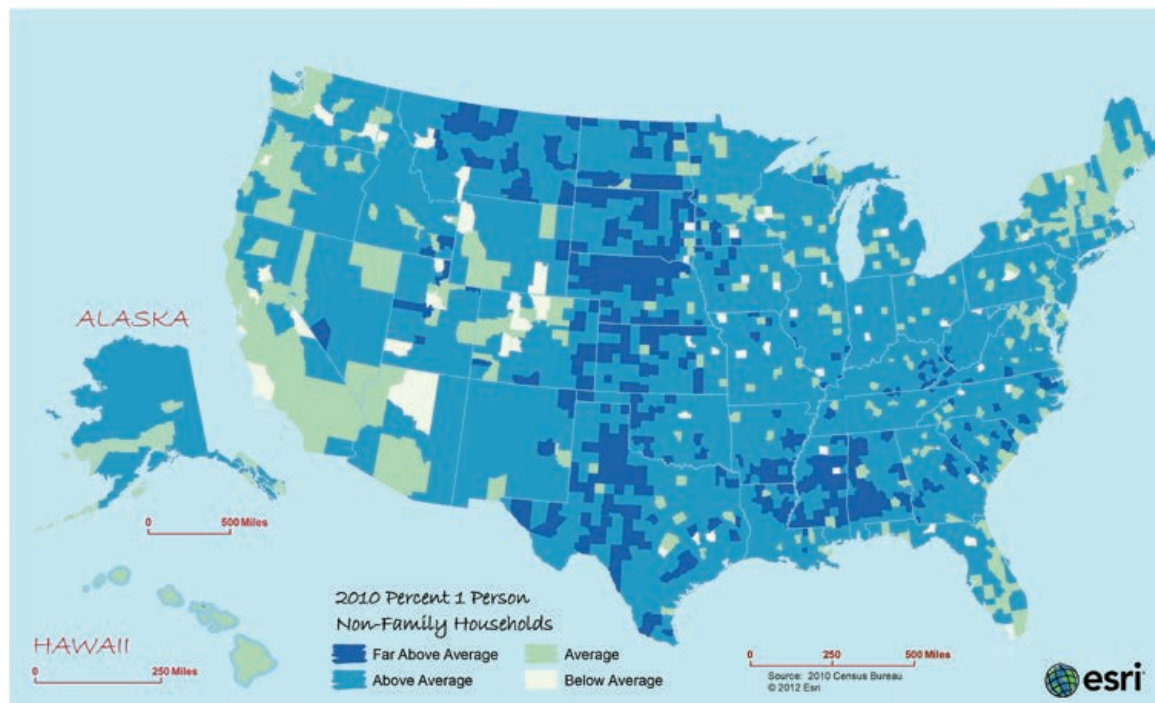
Husband-wife families increased by less than 4 percent in 10 years, and husband-wife families with children declined. All family households grew by 8 percent during 2000–2010, and nonfamily households by

16 percent. The fastest-growing nonfamily households, however, are unmarried partners. At 80 percent, single-person households retain the highest proportion of nonfamily households; however, the increase was less than 15 percent in the past decade. Nontraditional family types are the growing segments of households. The average household size changed little from 2000 to 2010—2.59 to 2.58—with no obvious change in 2012.

These household composition changes present myriad opportunities for businesses. For example, Hispanic and Asian populations with traditional large, multigenerational households may require dwellings with architectural features that can accommodate each generation. On the other hand, the need for smaller quarters or more apartments for one-person households provides additional opportunities for residential developers and home remodeling companies.

In the consumer product industry sector, differences in household size provide savvy companies with abundant opportunities to market their products to a wider, more diverse group of consumers. For example, the convenience of prepared, supersize, or smaller packaging of food products answers the needs of various household sizes. Catering to different ethnic and cultural needs can also add market share by versioning these same products to fit the needs of different racial and ethnic populations.

For more information about Esri's Updated Demographics data, visit esri.com/demographicdata.



← According to data from Census 2010, above-average rates of one-person households are found in the Plains States, Texas, and across part of the Deep South. This map of the United States by county illustrates the locations of these households.



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