

Financial Services

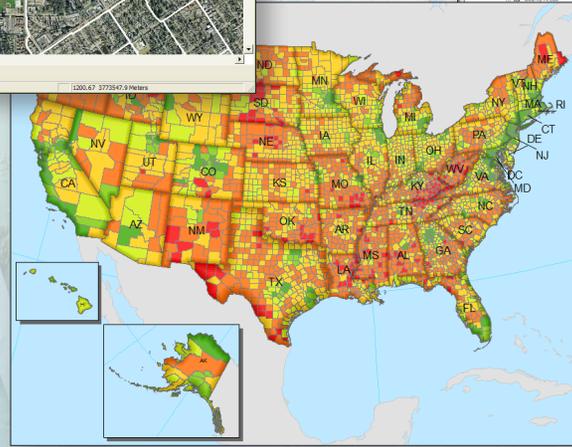
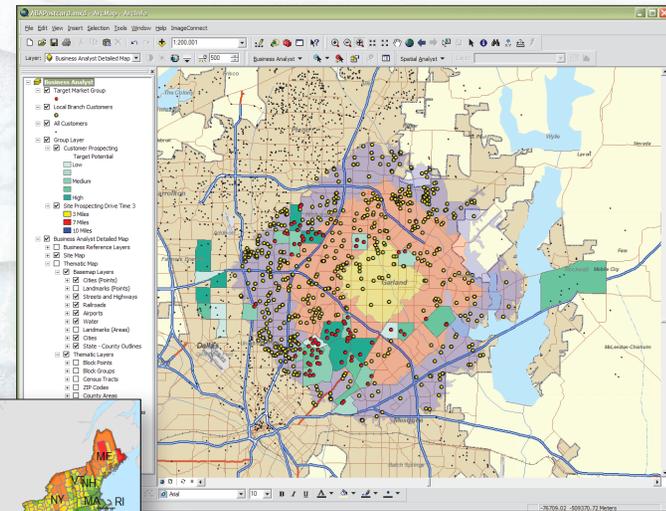
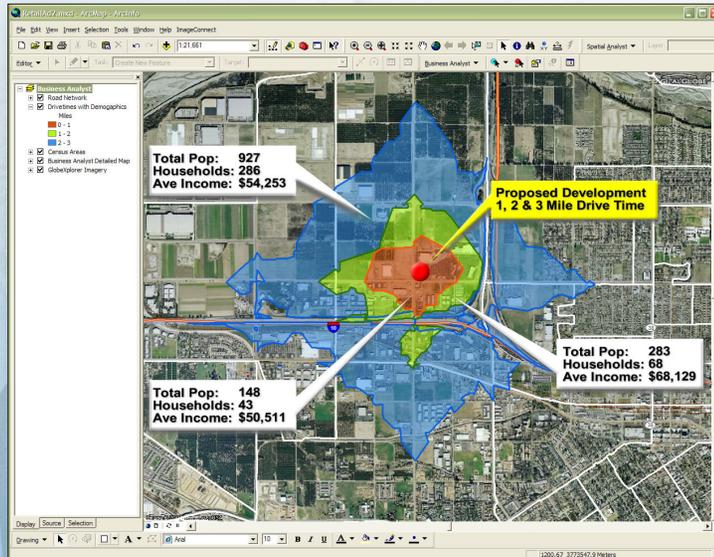


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What Is GIS?

Making decisions based on geography is basic to human thinking. Where shall we go, what will it be like, and what shall we do when we get there are applied to the simple event of going to the store or to the major event of launching a bathysphere into the ocean's depths. By understanding geography and people's relationship to location, we can make informed decisions about the way we live on our planet. A geographic information system (GIS) is a technological tool for comprehending geography and making intelligent decisions.

GIS organizes geographic data so that a person reading a map can select data necessary for a specific project or task. A thematic map has a table of contents that allows the reader to add layers of information to a basemap of real-world locations. For example, a banker might use the basemap of Eugene, Oregon, and select datasets from the U.S. Census Bureau to add data layers to a map that shows residents' ages, income, and employment status. With an ability to combine a variety of datasets in an infinite number of ways, GIS is a useful tool for nearly every field of knowledge from risk management to site selection and from archaeology to zoology as well.

A good GIS program is able to process geographic data from a variety of sources and integrate it into a map project. Many countries have an abundance of geographic data for analysis, and governments often make GIS datasets publicly available. Map file databases often come included with GIS packages; others can be obtained from both commercial vendors and government agencies. Some data is gathered in the field by global positioning units that attach a location coordinate (latitude and longitude) to a feature such as a pump station.

GIS maps are interactive. On the computer screen, map users can scan a GIS map in any direction, zoom in or out, and change the nature of the information contained in the map. They can choose whether to see the roads, how many roads to see, and how roads should be depicted. Then they can select what other items they wish to view alongside these roads such as bank branches, neighborhoods, retail sites, and public facilities. Some GIS programs are designed to perform sophisticated calculations for tracking storms or predicting consumer spending patterns. GIS applications can be embedded into common activities such as verifying an address or routing vehicles.

From routinely performing work-related tasks to scientifically exploring the complexities of our world, GIS gives people the geographic advantage to become more productive, more aware, more responsive citizens of planet Earth and better businesses, too.

GIS for the Banking and Financial Services Industry

Banking is a personal business, where people are more than numbers, records in a database, or account codes. ESRI's GIS software helps banks and financial institutions see people for what they are: valuable assets with needs, demands, and preferences that should be met by any successful bank.

In this highly competitive business, ESRI counts 20 of the top 25 financial institutions in the United States* as customers. They turned to ESRI's GIS software to unlock the geographic component of their data for better market understanding of risk analysis and business planning. Armed with detailed customer information and new methods of linking clients to preferences and services, they can now focus their resources on designing products and services specifically tailored to fit their customers' needs.

ESRI GIS software helps these organizations be more successful and productive in business areas such as

- Sales and Marketing
- Risk Management/Analysis
- Regulatory Compliance
- Business Continuity Planning
- Asset and Facilities Management
- Operation Management

Whether an organization is looking to position the right products and services to customers, find new branch/ATM locations, improve workplace safety, or build comprehensive business continuity plans, GIS helps them achieve these goals.

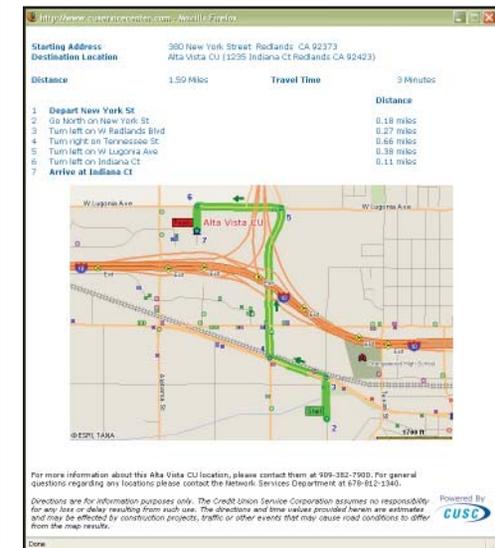
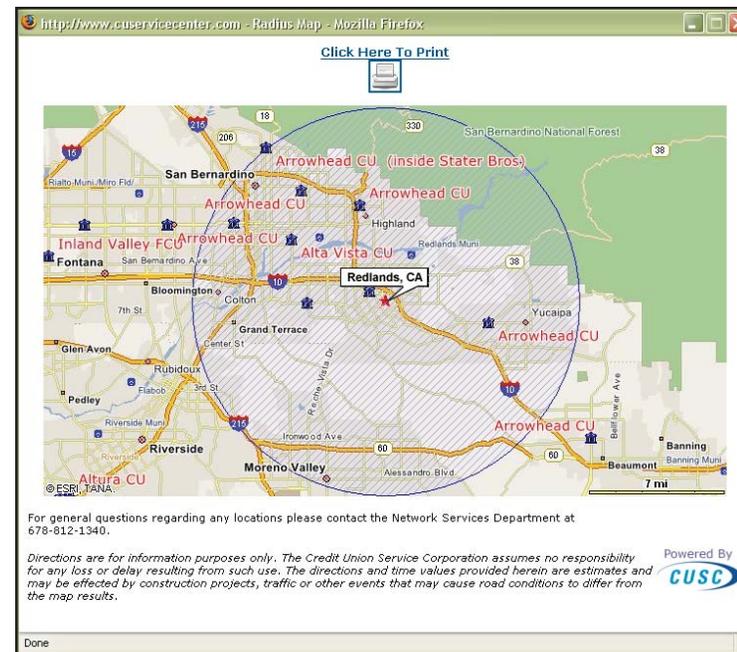
Included are a few stories from organizations that have realized the business value in implementing a GIS to better understand and serve their customers, internally and externally.

*Based on asset size

Finding, Reaching Service Centers

Credit Union Service Corporation Routes Customers with GIS

Credit Union Service Corporation (CUSC) is the largest shared credit union branching network, representing 55 percent of all United States locations and 68 percent of credit unions participating in shared branching. CUSC is the only shared branching network representing credit unions, leagues, credit union service organizations (CUSOs), the Credit Union National Association (CUNA), and CUNA Mutual. The CUSC network, which has been in place since 1992, is designed to offer credit union members convenient access to their accounts by making available numerous locations and extended hours. CUSC's Next Generation Network offers credit unions lower cost, better transaction functionality, and greater information capacity, making it possible for more credit unions to offer shared branching to their members.



CUSC's mapping and routing application allows customers to log on to the Web and enter a location as specific as a street address or as general as a ZIP Code, along with a search radius, to find nearby service centers. Once the customer enters this information, a list of service centers, including address, operating hours, distance from the user, and a phone number for each location, is returned. The customer can then pick a service center from the list and get turn-by-turn directions to that location.

CUSC, which is headquartered in Duluth, Georgia, needed to provide credit union members with an easy, fast, Web-based way to locate participating credit unions on a map and get driving directions from their current location.

"We were looking for a way to provide all users of our network with a tool that would give them door-to-door directions from any address in the U.S. that they specified to one of our many service centers," says Chris Meadows, network technician, CUSC. "We could have done this with an existing online map service, but we wanted to have control over the presentation of our maps and the materials that were displayed. We wanted to have our maps and map service local to our Web server."

To accomplish this, CUSC selected RouteMAP IMS to have the software in-house and because of its easy-to-use application program interfaces, which were key factors in the decision.

Some application customization was employed to give the routing user interface the same look and feel as other credit union Web pages and to modify how maps look and their locations on the screen.

"The primary benefit derived from this project is the ability to give all users of our network door-to-door directions to various service centers," says Meadows. "Of course, being able to control what the output looks like means we don't have to rely on another organization to decide what should and what should not go on or around our maps."

CUSC's RouteMAP IMS application allows customers to log on to www.cuservicecenters.com and enter a location as specific as a street address or as general as a ZIP Code, along with a search radius, to find nearby service centers. Once the customer enters this information, a list of service centers, including address, operating hours, distance from the user, and a phone number for each location, is returned. The customer can then pick a service center, provide any valid starting address, and get turn-by-turn directions to that location. In addition, a customer can also select a state from CUSC's national map or view recent credit union branch openings.

"Now we are able to provide our customers with an easy-to-use interface that generates door-to-door directions to any of our more than 2,000 service centers across the country," says Meadows. "This service has proven time and time again to be a very large benefit to our network and valuable tool used by many."

For more information, visit www.cuservicecenters.com.

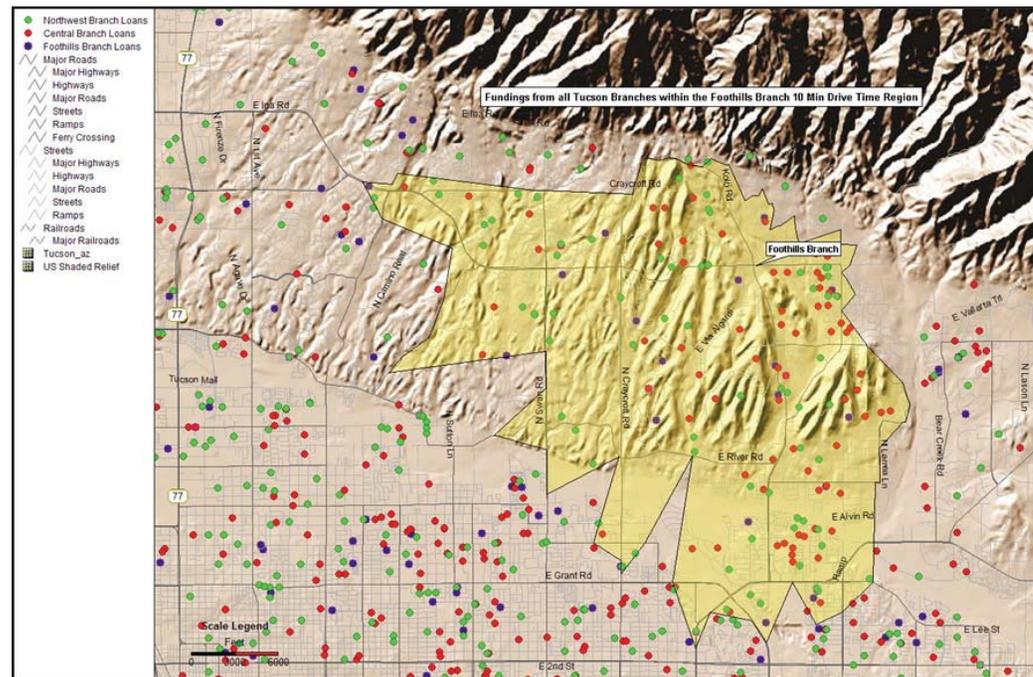
(Reprinted from the Winter 2006/2007 issue of *ArcNews* magazine)

First Magnus Financial Corporation Gets a Clearer Picture of Coverage Using BusinessMAP from ESRI

Largest Privately Held Mortgage Bank Analyzes the Business of Loans with Desktop Mapping

Growing from a small company to a large corporation in commercial business is no easy feat, especially in the competitive mortgage banking industry.

One organization, First Magnus Financial Corporation (FMFC), headquartered in Tucson, Arizona, knows this firsthand. Starting out as a small retail mortgage bank in 1996 with only a handful of employees, FMFC has grown into the largest privately held mortgage bank in the United States and ranks in the top 20 of the largest mortgage bankers overall.



Using BusinessMAP, First Magnus found that branches outside of the Foothills Branch trade area were originating more loans in the 10-minute drive time region than the Foothills Branch.

Today, with more than 5,500 employees serving all 50 states in multiple channels of loan origination, including retail, wholesale, joint ventures, and Internet lending, FMFC continues to stay at the top of its industry.

First Magnus understands that a relationship exists between geography and business growth; it is important to provide service near the people who need it. Over time, Charter Funding (renamed to First Magnus Home Loans in December 2006), the Arizona retail division of First Magnus, established multiple branches throughout Tucson to make it convenient for customers to do business. Though it quickly established itself as one of the top mortgage banks in Tucson, First Magnus wanted to improve coverage even more. Management set a new goal to eventually provide branches and/or satellites within a 10-minute driving distance from the city's primary population areas of Tucson.

First Magnus also wanted to learn what percentage of borrowers were within a 10-minute driving distance from the branch that originated their loans. If a branch originated most of its volume beyond a 10-minute driving distance, the company wanted to find out if it made sense to reduce costs by closing the branch and distributing operations among one or more of the other branches. As part of this analysis, First Magnus also had to consider whether the adjacent and, in some cases, overlapping 10-minute driving distances of surrounding branches were close enough to provide adequate service in the vacated region of the closed branch.

After carefully reviewing the software packages available, the Arizona division chose ESRI BusinessMAP to help view and analyze its business. "The deciding factor for us was that BusinessMAP provided better desktop mapping tools than other solutions on the market," says Michael Gaylord, Special Projects, First Magnus.

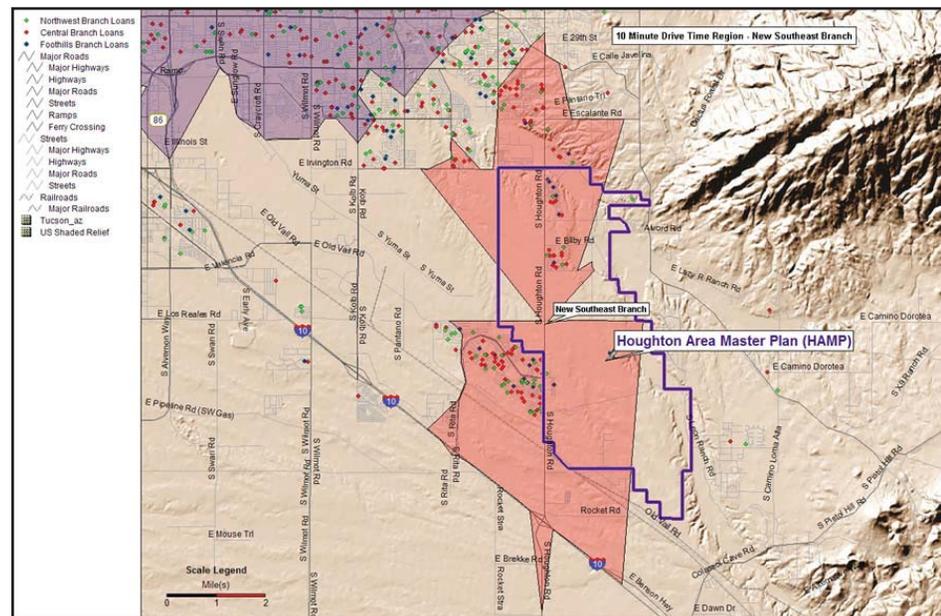
An affordable out-of-the-box mapping application, BusinessMAP lets FMFC see its business information on maps, giving the company a better understanding of its customers and competitors.

Introducing computerized mapping and analysis into FMFC has been easy because complete datasets are included with the software. There is no need for First Magnus to find additional geographic or demographic data. Datasets such as street maps for the United States and Canada, census demographics, and business locations come with the software and make it easy to begin mapping right away.

Thanks to the BusinessMAP Drive-Time and Ring Study analyses, First Magnus now uses more sophisticated analysis tools. First, FMFC geocodes its branches on the map. Then, a drive-time zone is created around each location. A drive-time zone shows how many households can visit a particular location within certain time constraints such as 5- or 10-minute drive times. Next, loans are geocoded based on their property addresses. Management can quickly see where branches are located in relation to these addresses. They are also able to see if there are areas in Tucson that are not included in any of the branches' drive-time regions.

To make it easier for staff members who are not familiar with mapping to better understand the information, FMFC uses shaded relief maps. Once part of the optional datasets which can be purchased such as Europe and U.S. topographic maps, the shaded relief data is now included in BusinessMAP.

For instance, a drive-time zone for a Tucson branch spreads northwest, southeast, and south, but not north or northeast. Looking at the shaded relief of this location, the site was found to be butted up against the south/southwest edge of the Catalina Mountains.



Using the Free Hand drawing tool in BusinessMAP, First Magnus was able to draw in boundaries of a proposed development and successfully analyze opening up a new branch to service the area.

In another scenario, the company was considering opening a new branch in southeast Tucson. The initial analysis showed that it might not be a good site since the drive times were restricted by an Air Force base to the west and what appeared to be vacant land to the east. However, First Magnus was aware of a major development under way, the Houghton Area Master Plan (HAMP), on the vacant land. HAMP is a 17-square-mile planned community where several thousand people will eventually live. Although the drive-time region did not extend east on the map since construction was just beginning on the infrastructure, First Magnus decided to open a branch inside the development to provide service to the people who would be living there. Using the Free Hand drawing tool in BusinessMAP, First Magnus later drew the boundaries of HAMP, which revealed that the new branch being opened was right in the middle of the development. For future new housing developments, First Magnus will draw the boundaries first to increase the probability of selecting a strategically located site every time.

After using BusinessMAP to analyze the proximity of the primary population areas to the 10-minute drive-time regions of the Tucson retail branches, First Magnus found that they blanketed most of the metro area but were short on coverage in the far northwest, far east, south, and southwest.

Using BusinessMAP to see how well branches are performing has also been insightful. This analysis has revealed not only that one of the branches originated a large percentage of its total volume outside its 10-minute drive-time region but also that the two nearby branches originated more loans within it. Providing justification to close a high-cost, lower-volume branch was achieved using maps displaying loan originations, location of alternate branches in the area, and housing density. The analysis led to the conclusion that because of low housing density in the region, the branch in question could be closed without losing coverage in the area.

FMFC is just beginning to delve into the many advantages of desktop mapping. "BusinessMAP has been a tremendous tool for us to analyze our current business strategy in southern Arizona," says Gaylord, "and we are excited about utilizing this tool on an expanded basis."

(Reprinted from the May 2007 issue of *ArcWatch*)

ESRI Data Products: A Valuable Resource for Banks

Today's banking institutions must meet their customers' needs at all touch points: on the phone, at the traditional teller window, at the ATM, at the point of sale, and at the new Internet storefront. Fast-paced technological change is responsible for new market segments and, consequently, new challenges for banking and financial institutions. Which customers contribute to profitability? Which don't? Who has potential to do more business? Who doesn't? How does a bank acquire new customers while retaining established ones? How do banks promote online services without making them seem like substitutes for personalized service, all while adhering to government regulations? Those banking and financial institutions that can rise to the challenge of broadening and deepening their relationships with customers will be the winners in the current highly competitive, merger/acquisition environment.

One element remains constant at the core of all banking business: data is plentiful; customer knowledge is scarce. Mining for the right information requires skill and experience that banks may not have. Customer records enriched with demographics and consumer spending, geographic, and segmentation data enable the enterprise to make smarter strategic decisions. The more banks understand about who their customers are and how they live, the more they understand about their needs and how best to serve them. And the better customers can be served, the more they can be acquired, developed, and retained, leading to greater profitable relationships.

Banks keep very detailed customer records, but these records exist in independent business systems that are organized around products rather than around the customer. In the United States, business systems are tied together and organized around the customer household in the Marketing Customer Information File (MCIF), and similar record keeping standards exist globally. These customer-centric files give banks a distinct advantage over other business sectors that don't have that data and/or are not as efficient in the collection of customer data for marketing purposes.

Customer data that includes address and contact information, the financial products and services used, and associated detailed account and financial information is the starting point for more informative and profitable customer analysis. GIS spatially enables the customer database to create greater efficiency, indicate new profit centers, and lower investment risk.

ESRI's Community Coder enriches the customer database with powerful additional data to help banks understand who their customers are and what they need. Based on where the customer lives, Community Coder adds accurate demographic data to each customer record including age, income, family type, education, employment, housing, race, ethnicity, and more. Further, ESRI's Community Tapestry lifestyle data combined with Community Coder adds the power of lifestyle segmentation to each customer record, essentially telling a bank or financial institution which consumption category the customer falls within. Summary demographic reports are included in Community Coder. A bank's own customer databases enhanced with ESRI's geopositional technology tells it both where the customers are and what they "look like." ESRI offers a wide range of enhancement data and automated reporting that identifies new marketing opportunities and quantifies risk.

ESRI technology also makes it easier for banks to comply with federal and state regulations. For example, federal mandates require banks and financial institutions to demonstrate that they serve all population segments in their delineated communities. Demographic data provided by Community Tapestry can be used to craft racially and ethnically appropriate product strategies and target messages to any demographic and psychographic segment, including minorities, and households within any income group. These demographic data variables can also help in institutional planning, such as anticipating workforce requirements to serve minority populations and multilingual needs, before specific branch locations are approved or opened.

Consumer spending data from ESRI informs many different companies and industries how households in their various market segments consume services. This reveals buying habits for various categories of general merchandise and services. For financial institutions, ESRI offers basic reports as well as the MarketBank premium market potential data from ESRI partner RPM Consulting. These reports specifically identify the amount of disposable income available to purchase financial products and services. ESRI quantifies the financial goods and services so it is possible to perform analysis that identifies new potential markets, markets that are underexploited, and markets that are saturated and mature. This data is available from ESRI in a database format and via online Internet subscription reports from Business Analyst Online Consumer Spending Reports. Business Analyst Online reports include total dollars spent and average per household spent for financial products and services such as savings accounts, mortgages, and auto loans. A spending potential index compares the amount spent in any specific geographic area with the U.S. average. This allows immediate identification and ranking of areas based on potential and the rapid construction of marketing and service plans to respond to the need or opportunity.

Market potential can be looked at from many perspectives. *Market reports* highlight the number of adults and households that would be expected to consume financial products and services such as online banking, home mortgage loans, and mutual funds. A *market potential index* measures the relative likelihood of adults and households in a specific geographic area to exhibit certain consumer behavior patterns compared to the U.S. average. Once again, this type of information is available in many different formats and applies to many different activities. Banking institutions can combine their own internal databases, which may contain the exact age, income, race, and educational and marital status of a customer, with richer segmented data like Community Tapestry. Combining and analyzing the two datasets allows the bank to see how well they are performing in any particular market or geographic region compared to the local average or estimated market potential. Scoring the return on investment or potential allows the bank to identify specific areas in which it is prudent to invest more resources or identify areas that are not achieving full potential to recommend downsizing or redirecting resources to more closely balance expectations and achieve targets. Market potential analysis can be performed for any savings, investment, credit, or loan product to generate a map of hot spots in which the bank is performing well and cold spots of lower potential and profitability.

Just knowing exactly where customers are is important, as this unlocks the power of spatial analysis and lifestyle segmentation. At its most basic use, ESRI's Community Coder geocoding software pinpoints the exact address or latitude-longitude coordinate for any customer information. In the United States, the Federal Information Processing Standards (FIPS) codes and other market or demographic segmentation codes can be appended to the customer records and stored within the bank's own customer files. Internationally, the United Nations Classification of Individual Consumption According to Purpose (COICOP) code provides a common statistical methodology to look at expenditure and potential on a pan-European or global basis. This allows the bank to immediately have access to how the customer performs compared to others in their ZIP Code or market area. Access to this information is always available and does not require connection to the GIS software or any other database. Combining geographic information with demographics and consumer expenditure data allows banks to see how their customers compare to the average member of the community. The banks can generate an understanding of the typical customer and compare that with their ideal. By gaining a more insightful understanding of who their customers are and how they compare to others in the same area or those who use different financial services, the bank is better able to balance and focus resources on profitable opportunities.

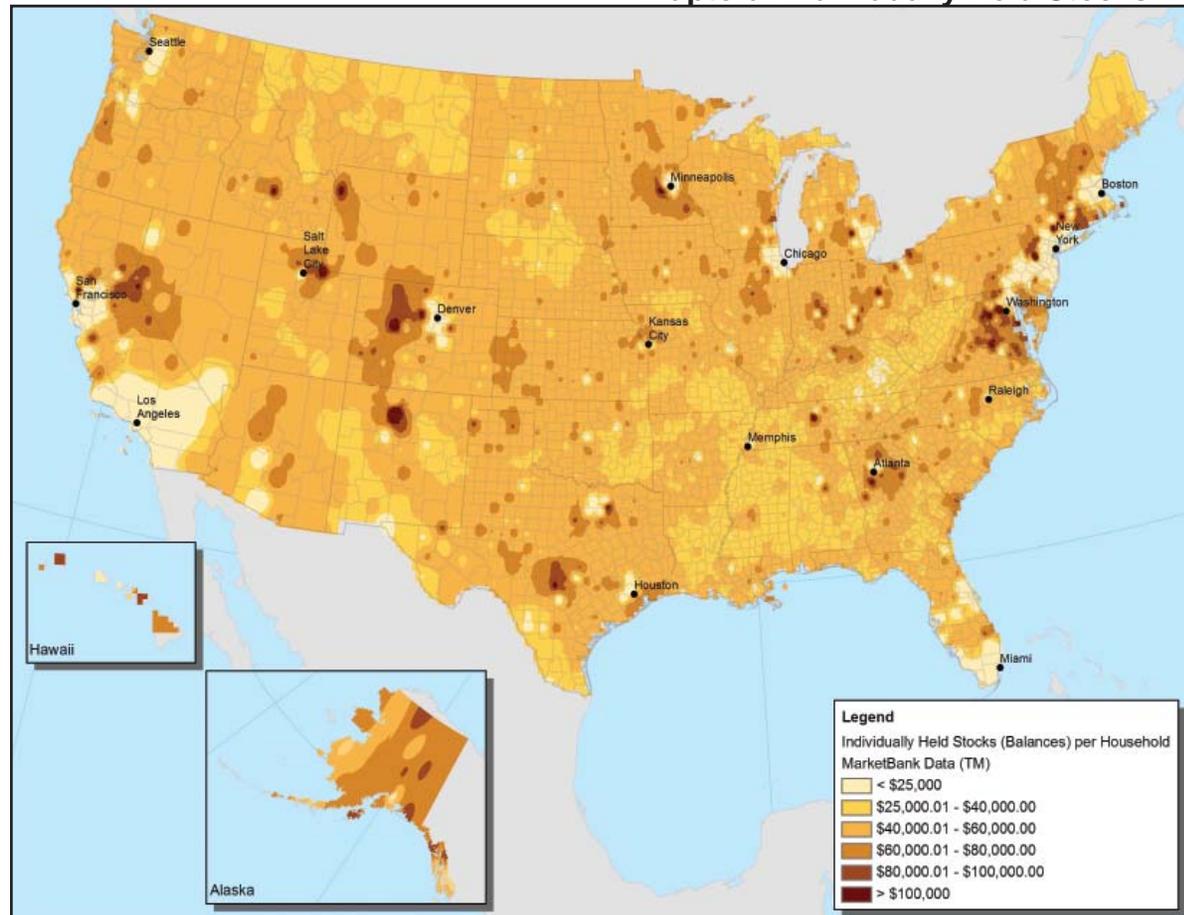
Geocoding can also be used to identify where different types of customers are physically located and where they perform various activities. This knowledge not only helps banks determine where to locate branches and ATMs but also better understand the demand for assorted services. A bank can create an "ant farm" of the typical ways customers use their network of branches, ATMs, and financial service packages. To create the ant farm, the bank geocodes transactions and business use—where transactions take place, at what time of day, what volumes occur, and by whom. All these transactions create a pattern of use that highlights concentrations and flows to and from services, reflecting the true usage and demand for the services rather than some theoretical potential. This is immediately more intuitive and understandable than color-coded ZIP Codes, business graphics, or endless tables of data.

For example, the population surrounding a specific branch may be more mature or elderly: customers who prefer more traditional service and want to do business with the bank in person. In that case, perhaps the bank can more profitably promote other services ahead of Internet banking.

Understanding where customers live and where they perform specific activities, such as cash withdrawals or deposits, allows a banking institution to more appropriately align services and resources with need and market demand. A customer can be encouraged to purchase and use services because the bank is in a convenient location and going there will not impact heavily on the customer's day-to-day routine. Rather than requiring customers to go to their home bank or take time out from work to visit an alternative location, a bank, credit union, or other financial service organization can be seen as bringing the services to customers to fit into their lifestyle. This can open up new market opportunities and generate new revenues, yet these are difficult to identify by traditional market analysis tools.

That is why segmentation is so valuable. Segmentation data breaks down and identifies customers into different consumer types based on important demographic and socioeconomic characteristics. By applying a segmentation code to customer records, new insight can be gained into which customers would be receptive to up-selling and cross-selling opportunities. Analysts can identify the customer segments that might respond best to promotions or be receptive to niche products. In addition, customer segmentation can identify the preferred media through which to reach and retain these customers.

Maptoid: Individually Held Stocks



This map shows the balance for individually held stocks per household. The darker the brown color, the higher the potential.

ESRI's segmentation system, Community Tapestry, divides all U.S. neighborhoods into one of 65 segments based on demographic and socioeconomic attributes. Other datasets with different classifications are available across the world and are supported by ESRI software and analysis. Community Tapestry "slices of America" can be used at the detailed neighborhood level or grouped together to form a picture at various levels of detail. For a broader view of markets,

the Community Tapestry segments are grouped into 12 LifeMode summary groups based on lifestyle and affluence while the 11 Urbanization groups are coded according to population density and affluence. This means that financial institutions can search and identify customers based on their geographic concentration or distribution as well as the spread across different segments and lifestyles.

By applying Community Tapestry segmentation models, a bank can learn that specific customers may not respond well to direct mail promotions but that they customarily read the newspaper's financial section, prefer to use a financial planner, and contribute regularly to a retirement program. For more information about Community Tapestry, visit www.esri.com/tapestry.

Armed with detailed customer information and new methods of linking clients to preferences and likely activities, banks can be much more successful in designing products and services that best fit their most profitable customers' needs. GIS solutions from ESRI help a bank keep their best clients, reach them in a more effective and appropriate way, and find more like them. In this highly competitive business environment, banks need every advantage they can get. A thorough knowledge of customers' needs and requirements gained from GIS analysis underlies the geographic advantage.

(Reprinted from the Fall 2006 issue of *BusinessGeoInfo*)

Using Community Tapestry to Cross-Sell to Your MCIF

By Dan Primavera

Financial institutions understand the Master Customer Information File (MCIF) contains valuable information about their customers. Using one of the humblest data elements in MCIF, the customer's street address, financial service marketers can yield a bonanza of information. The street address permits financial institutions to append a Tapestry code to each customer record based on the neighborhood in which he/she lives.

Community Tapestry is ESRI's lifestyle segmentation system that provides an accurate, detailed description of America's neighborhoods and classifies them into one of 65 Tapestry segments. These segments are based on demographic variables such as age, income, home value, occupation, household type, education, and consumer behavior characteristics. Thus, banks create customer profiles based on Tapestry codes, allowing them to answer questions such as Who are our customers? What do they buy? How should we reach them?

Tapestry profiles typically identify 6 to 12 key customer segments. Once identified, these segments can be located geographically for de novo applications to create proximity marketing campaigns around each branch and advertise financial products to those customer segments that are most likely to utilize them.

The example below shows a Tapestry profile and grid for an MCIF for a local branch with 1,294 household relationships. Of the 65 possible Tapestry segments, 11 segments were identified as being important to this bank branch.

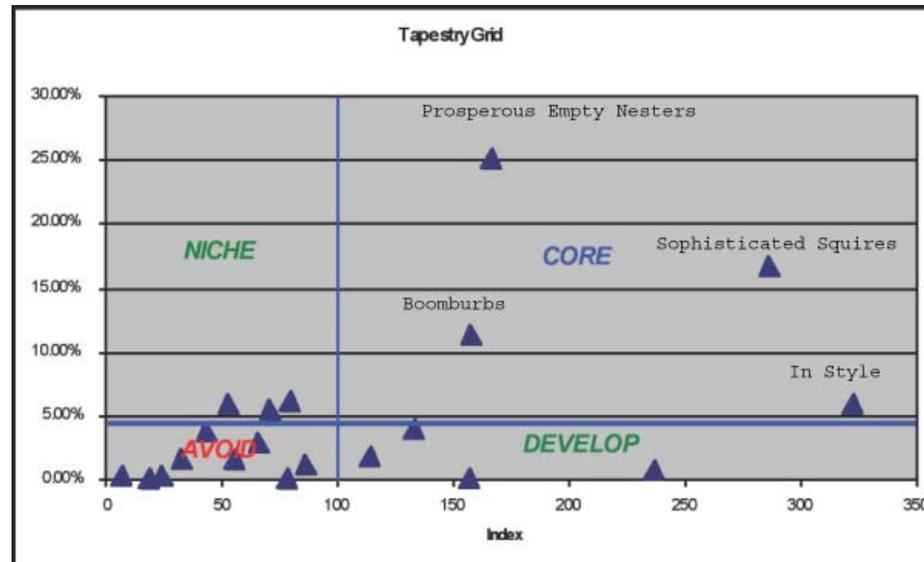
Tapestry Segment	Customer Households	Customer %	Branch Area Households	Branch Area %	Index*	Tapestry Quadrant
4 Boomburbs	147	11.36%	2,050	7.24%	157	Core
6 Sophisticated Squires	218	16.85%	1,666	5.88%	286	Core
13 In Style	77	5.95%	523	1.85%	322	Core
14 Prosperous Empty Nesters	325	25.12%	4,278	15.10%	166	Core
7 Exurbanites	11	0.85%	102	0.36%	236	Develop
10 Pleasant-Ville	24	1.85%	463	1.63%	113	Develop
24 Main Street, USA	51	3.94%	841	2.97%	133	Develop
35 International Marketplace	3	0.23%	42	0.15%	156	Develop
28 Aspiring Young Families	79	6.11%	2,179	7.69%	79	Niche
43 The Elders	77	5.95%	3,211	11.33%	53	Niche
49 Senior Sun Seekers	72	5.56%	2,248	7.93%	70	Niche
1 Top Rung	2	0.15%	56	0.20%	78	Avoid
12 Up and Coming Families	38	2.94%	1,270	4.48%	66	Avoid
15 Silver and Gold	22	1.70%	1,503	5.31%	32	Avoid
16 Enterprising Professionals	2	0.15%	234	0.83%	19	Avoid
19 Milk and Cookies	17	1.31%	434	1.53%	86	Avoid
21 Urban Villages	6	0.46%	1,973	6.96%	7	Avoid
47 Las Casas	6	0.46%	553	1.95%	24	Avoid
57 Simple Living	21	1.62%	828	2.92%	56	Avoid
58 NeWest Residents	49	3.79%	2,498	8.82%	43	Avoid
20 City Lights	0	0.00%	720	2.54%	0	n/a
52 Inner City Tenants	0	0.00%	659	2.33%	0	n/a
TOTAL	1,294	100.00%	28,331	100.00%	100	

**An index is tabulated to represent a value of 100 as the average demand. A value of more than 100 represents high demand and a value of less than 100 represents low demand. In this example, Boomburbs, with an index of 157, implies that customer households in Boomburb neighborhoods are probably 57 percent more likely to be customers than other households in the branch market.*

The Tapestry grid graphically shows us the key segments. Core segments need more of the same marketing. Niche segments need product options that better meet their specific needs. Develop segments need to hear more about the product or service, in other words, more marketing. Avoid segments still constitute a portion of the customers, but scarce product and marketing dollars are best spent elsewhere.

The Core segments, and their cross-sell opportunities ranked by average opportunity, are as follows (the higher the index, the better the opportunity):

Cross-Sell Opportunities**	Boomburbs	Sophisticated Squires	In Style	Prosperous Empty Nesters
Average monthly credit card expend.: \$701+	238	190	156	148
Have second mortgage-equity	180	187	129	161
Have home mortgage	192	165	135	141
Have home equity line of credit	159	158	148	164
Have 401(k) retirement savings	194	152	142	137
Have mortgage refinance	236	135	127	124
Have money market account	172	151	134	164
Have IRA retirement savings	170	136	136	154
Have overdraft protection	172	140	119	130
Own annuities	138	119	135	169
Own securities	148	140	131	138
Have personal line of credit	141	153	121	133
Have auto loan for new car	164	145	126	109
Own CD	135	105	139	113
Have savings account	131	119	120	110
Have education loan	168	95	99	91
Have personal loan	88	104	75	82



**ESRI used data from Mediamark Research Inc. (MRI) to compute the MPI indexes.

The final step in the process is to take action.

The marketing department can create specific marketing programs for each of the segments in your branch market area. The content of the campaign should focus on the financial products that are preferred by the customers in MCIF. In conclusion, we see that one data element, the customer's street address, from the MCIF combined with GIS technology can yield significant marketing intelligence.

(Reprinted from the Fall 2006 issue of *BusinessGeoInfo*)

Five Steps toward Spatially Aware Financial Institutions

Enterprise-Wide Benefits and Beyond

By Grant I. Thrall and Simon Thompson

GIS and spatial technology has a long history of adoption in the banking industry. Banks and financial institutions have diversified and now offer extended services and customer offerings. GIS is now recognized as the must-have tool for improving customer geodemographic and market analysis to maximize asset return and improve the accuracy of investment forecasts of the customer segment or market area. GIS is now also considered to be invaluable to institutional operations and core financial services planning. Those that invest in greater use of geospatial technology and analysis have the potential to lower exposure to risk; reduce operations costs; and increase profits per customer, branch, territory, or region.

Regulatory requirements mean that many financial institutions are already paying to spatially enable their data. In the United States, the Community Reinvestment Act and other legislation requires financial institutions to produce periodic reports that are geographically focused. These depict where deposits are received and where loans are made, applied for, or denied. By converting this textual information into interactive maps and spatial analysis, banks and other financial institutions can improve understanding of their customer base, identify untapped submarkets, and better align or balance business resources to commercial opportunity.

Many organizations have made compliance reporting a focal point for greater profit focus and improved risk management. The geographic data that is vital for compliance documentation can also supplement and improve a financial organization's territory management strategy and customer profiling projects.

Five key strategies for improved business performance with GIS follow:

1. Improve trade area understanding.

Turn intuition and observation into evidence and qualified scorecards.

2. Respond more effectively to market trends.

Get insight into what is happening within and between different market segments and how that impacts segments and the operational network.

3. Define core target segments and underexploited niches.

"Slice and dice" customer interaction by geography and territory to define submarkets and expose potential areas of operation or risk. Prioritize and market these opportunities.

4. See the big picture yet understand detail.

Gain the geographic advantage by understanding the hierarchy of markets and the way these interact across branches, regions, or the nation. Explore and examine competitive influences and identify business expansion applications.

5. Apply geospatial intelligence across multiple business functions.

Leverage the investment in data or customer transactions, demographic profiling, and economic and social change to provide greater intelligence for decision making and business planning.

Financial institutions have invested in ESRI technology for many different business functions—from traditional hard-copy reports and maps to gaining key business insight via dashboard and executive information systems (EIS) or more traditional market and customer analytics. Geography lies at the heart of many financial transaction and commercial activities. Banks and financial service companies must track and understand their income-producing assets (IPA) if they are to maintain profitability and a strong competitive position. A geospatially extended approach to information analysis and business decision making is a clear way to gain a concise picture of these assets and transactions. Those that have already adopted and deployed GIS technology are now enjoying a competitive advantage over those that remain fixed on a pure textual and nonspatial database analysis.

(Reprinted from the Fall 2006 issue of *BusinessGeoInfo*)

Visualization Helps Customers Make More Informed Decisions

SNL Financial's Information Portal for Banking and Financial Services Built with GIS

Highlights

- Business intelligence clients required spatial analysis.
- GIS delivers a market analysis and visualization portal.
- Banking and financial services clients benefit from online mapping service.

Information is power in today's business environment now more than ever. The right information, however, can be the business advantage that puts a company ahead of the competition. Savvy business owners understand this and look for specialists to aggregate the data they need every day to make sound decisions.

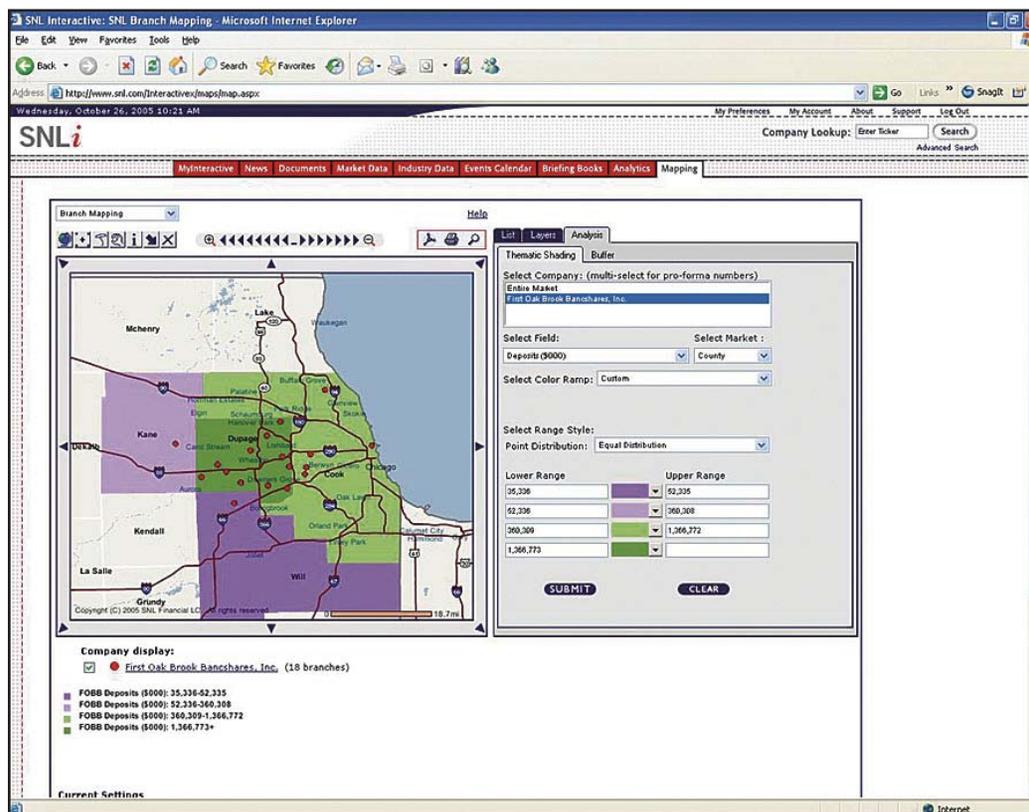
SNL Financial of Charlottesville, Virginia, is a leading provider of business intelligence for users in some of the United States' top companies and financial institutions. SNL collects, standardizes, and disseminates specialized business information for the banking, financial services, insurance, real estate, and energy industries through a Web portal called SNL Interactive (SNLi).

SNLi (www.snl.com/interactive) features in-depth news, data, and analytics for a comprehensive view across each of the target industries for which SNL provides business intelligence. This includes real-time news updates, industry newsletters and news archives, specialized documents, and other business tools.

As a result, leading investment banks; investment managers; corporate executives; ratings agencies; government agencies; consulting firms; law firms; and media, including the *New York Times*, *USA Today*, and the *Wall Street Journal*, rely on SNL Financial for the best possible information on the companies in these sectors.

SNL Financial is always seeking to balance its clients' demands for high performance and customizable functionality with effective design and usability. A key challenge is distinguishing the needs of a small group of important clients from those of its customer base as a whole.

Some clients began requiring detailed GIS and analytical functionality. SNL recognized it could do this by integrating an easily customizable Web mapping server that supported the open development standards employed in the rest of the SNL site.



SNL's customers can see and use high-quality maps for making business decisions.

SNL Financial chose ArcIMS software as the basis for SNLi Mapping, a part of SNLi that provides an online information resource, available 24 hours a day, seven days a week, for the business sectors covered by SNL. More than 12,000 financial clients subscribe to these Web services and make heavy use of the market indexes, rates and yields, event calendars, corporate summaries, mergers and acquisition details, etc., provided within SNLi.

ArcIMS allows SNLi Mapping to offer intuitive market analysis and visualization tools. Subscribers can identify locations of assets, perform competition searches, and generate other in-depth or ad hoc analyses as needed.

SNLi Mapping is intuitive to even non-GIS-savvy users thanks to online tutorials that walk clients through the mapping process. The system uses a number of geographic and demographic datasets from ESRI, including community, demographic, and national data layers that act as a map backdrop.

Federal Deposit Insurance Corporation (FDIC) bank branch data was geocoded by ESRI Business Partner Tele Atlas North America, Ltd. Users can plot their company branch locations, display competitive branches, and retrieve market information by clicking on any area of the map. More advanced functions include the ability to add or modify layers of information, create radial rings around a branch to understand market potential, and thematically map an area or market territory based on demographic characteristics.

SNLi Mapping has proved popular with subscribers, and SNL is delighted with the success of the online mapping service. "Most of our customers are not familiar with mapping as a tool," says Sara Hyland, project manager, SNL Financial. "Clients find visualizing demographic data on a map to be very useful. By combining and overlaying other data layers, the information they need really pops out at them."

SNLi customers are now able to make more informed decisions when evaluating mergers and acquisitions because of SNLi Mapping. They are able to perform their own market analysis and integrate demographic data with geographic information, such as major cities or interstate highways, and company footprints. Many often use SNLi Mapping for presentation purposes because the mapping capabilities ArcIMS offers are of such high quality and offer easily accessed, detailed data. "Having all this information integrated really makes it easy for them to understand market valuation and why a particular location or company may be more attractive than another," says Hyland.

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