



Future of GIS

What is GIS, why does it matter, and what does the future of GIS look like in Fauquier County? A Geographic Information System (GIS) utilizes information about space and place, integrated with software for visualization, organization, and analysis, and a person charged with coordinating its use to interpret the data, relationships, patterns and trends.



Everything we do is spatial, meaning everything happens somewhere. From the day to day decisions we make

about where to shop, where to work, or how to get home; we leverage our knowledge about space and where we are in that space to navigate to place. Think about the last time you went to the grocery store or filled your car up with gas. Why did you stop at that gas station or that grocery store? Is it on your way home from work, or is it the most convenient place to get to? Whether we know this or not, space and place play a large role in our everyday lives and the decisions we make.

Inherently, humans are spatial creatures who are constantly searching for and identifying how they fit into the space around them. Furthermore, humans are curious. We used to swing from tree tops in an effort to identify the space around us, now we swing from mice and keyboards while Google shows us the way.

Behind all of that internet searching is a GIS. A system that identifies where you currently are, what is around you, and how best to provide you information relevant to your current location or where you might be going. A similar process is performed by the GIS office to help customers identify their space. The need to know where something is and how it relates to things around it is what provides the information necessary to make informed decisions about

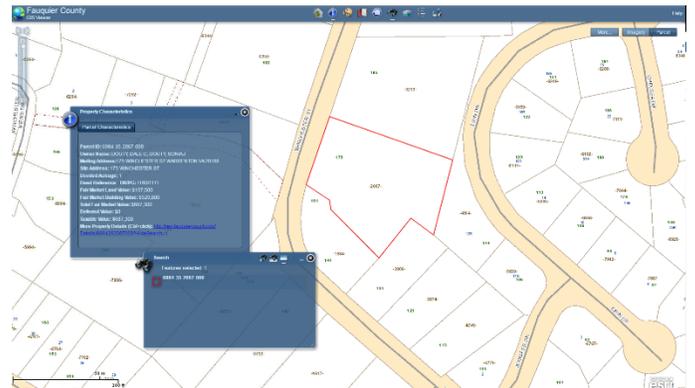
the location and formulate decision that have minimal impact on the location.

Maps produced in a GIS expedite the decision making process. We've all heard the old adage "a picture is worth a thousand words." In the GIS community that statement is worth its weight in gold. The ability to quickly identify thousands of records in a visual format quickly reduces the amount of time it takes to find patterns or trends in data, as opposed to sorting record after record.

The Fauquier County GIS Department has been providing such products and services to the county for over 15 years. This is a process that has evolved from simple points, lines, and polygons with very little attribute data to a full blown enterprise GIS incorporating orthophotography, basemap vector data leveraged from multiple local, state, and federal resources, and a spatial analysis tool box that provides limitless data analysis capabilities.

GIS is a community that is ever evolving to meet the needs of those it serves. In keeping true to that trend, the future of GIS in Fauquier County looks very bright and interactive. GIS staff have teamed with Fauquier County IT to recreate the popular "Fauquier County Map Viewer" currently displayed on the GIS homepage.

<http://maps.fauquiercounty.gov/>



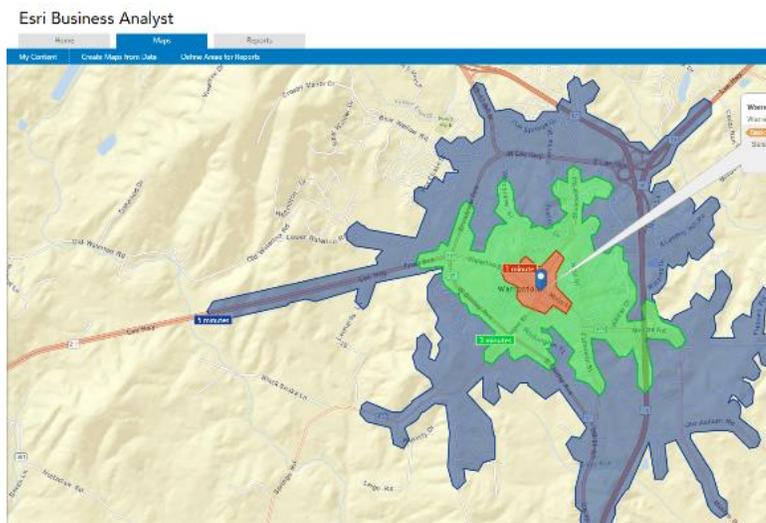
The existing service was built using Adobe Flex, a software development kit that is running towards end-of-life. In an effort to sustain and eliminate the loss of a web-based application used for identify land owner information to internal and external customers, a new ArcGIS Online web-based Tax Parcel Viewer application is currently in development and scheduled for deployment by September 2016.

GIS is fully committed to utilizing and deploying this technology to address the needs of our citizens and workforce. ArcGIS Online provides users the unique ability to create and customize web-based mobile applications on the fly to address any need necessary. Whether its parcel identification, identifying the post office nearest the user, or conducting routine property owner queries, ArcGIS Online provides an easy to use platform to make all of this happen.

GIS is very excited to introduce this product the County in the coming months and feels this technology will change how people use and view GIS data in the future.

Business Analyst Online

GIS acquired the [ArcGIS Online](#) application Business Analyst Online for use in the county’s Office of Economic Development and Community Development. The application is provided by [ESRI](#) as tool for identifying the local economy’s health.



“[Business Analyst Online](#) (BAO) is a web-based application hosted by ESRI, which provides access to up-to-date demographics, business, and market data analysis. BAO uses a number of extensive demographic, consumer spending and business data from several companies and organizations including U.S. Census Bureau, Dun & Bradstreet, Bureau of Labor Statistics, GfK MRI and Applied Geographic Solutions, Inc. for crime indices.” – ESRI.

The application’s user interface is easy to navigate with tutorials provided within the application. In addition, users can add, from their GIS data, zipped point or polygon shapefiles for running an analysis on a specific area. Users can include text, draw their own shapes for analysis areas, or create PDF’s from the map. Similar web-based mapping products exist in the market, but BAO’s reporting capability is the program’s strongest asset. Customized reports used to identify market potential based on the number of consumers, services, consumer behavior and activities of any given area can be created quickly using BAO. ESRI makes available their [Tapestry Segmentation](#) data available for running reports based on socioeconomic trends based on customer’s lifestyle and behavior.

SIC Code	Business Name	Franchise	Distance From Site in Miles	Employees	Sales (\$000)
559905	HEAVY JETS LLC CULPEPER ST WARRENTON, VA 20186		0.00 NW	2	\$1,116
829918	ALLEGRO COMMUNITY SCHOOL MAIN ST WARRENTON, VA 20186		0.01 SE	14	\$0
999977	FAUQUIER JUVENILE & DOMESTIC MAIN ST WARRENTON, VA 20186		0.01 NW	0	\$0
581212	KIDWELL CATERERS MAIN ST WARRENTON, VA 20186		0.01 SE	3	\$152
653116	HOMES BY SWEET LLC MAIN ST WARRENTON, VA 20186		0.01 SE	1	\$271
811103	PEARSON & PEARSON PC CULPEPER ST WARRENTON, VA 20186		0.01 SW	4	\$517
799704	ANDERSON CONSULTING LLC WALL ST WARRENTON, VA 20186		0.01 NW	10	\$453
641112	NORDEN EQUINE WORLDWIDE WALL ST WARRENTON, VA 20186		0.01 NW	2	\$372
811103	MCCARTHY AUGUST ATTY AT LAW WALL ST WARRENTON, VA 20186		0.01 NW	3	\$388
602101	JEFFERSON NATIONAL BANK CULPEPER ST WARRENTON, VA 20186		0.02 SW	7	\$3,136
602101	SONABANK MAIN ST WARRENTON, VA 20186		0.02 NE	4	\$0
808201	CLEANSING WATER INC MAIN ST WARRENTON, VA 20186		0.02 SE	30	\$2,442
811103	MULFORD MEDIATION MAIN ST WARRENTON, VA 20186		0.02 SE	3	\$388

Business Analyst Online (BAO) can generate 1, 3, 5 mile drive times from any location as shown in the example above. Once this is established, reports identify business locations or demographic data can be created