

GTG's GISmo Improves Efficiency in the City of Greensboro

City of Greensboro, North Carolina



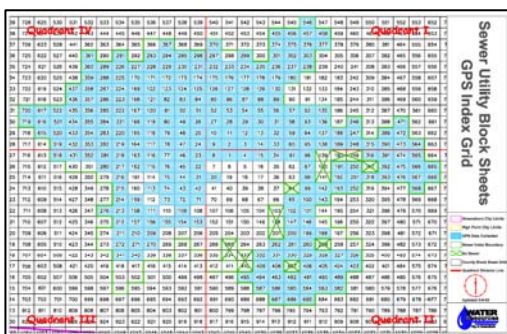
GIS technology has a language of its own, and those who speak the language often struggle to find words to convey their enthusiasm to the rest of the world.

That common struggle didn't stop Allan Williams, director of Water Resources for the City of Greensboro, N.C., from finding the perfect phrase to describe Geographic Technologies Group's GISmo™ when he first saw it deployed on his laptop.

"He said it was wicked cool," said Carol McDowell, the utility design engineer for the department.

GISmo, a desktop application based on ESRI's MapObjects™ technology, was part of the plan GTG developed and implemented in Greensboro. It gives users the ability to map and analyze GIS data from existing sources.

"I love this thing," Williams said. "To have all this information this usable is just fantastic. All the theoretical predictions of what we would eventually be able to do are now evident, and clearly the process we have gone through is worth it. Our long journey is already showing some real dividends."



GPS Data Collection

The department's journey began in 2001 when the staff began mapping the location of its water and sewer infrastructure.

"We realized quickly that with one crew working on it, the process of inventorying our assets would take forever," McDowell said. "Only about a third was digitized; the rest we were doing manually. We began to look at outside resources." Through the engineering firm McKim & Creed, Greensboro found Geographic Technologies Group.

"Their basic question to us was 'what do you want to see in a map?'" McDowell said. "I thought they had a really good grasp of how we wanted the end product to look, and I knew GTG would adhere to ESRI standards, which was a key request of the city GIS Department. It was also evident that they knew how to make data user friendly and functional."

GTG developed a complete needs assessment for the department and established that GISmo would be a key solution for users in the office and in the field.

They then began the process of locating and identifying more than 54,000 features of the water and sewer systems and mapping the connectivity of the infrastructure. "The key to the integrity of the data stream is that all of the assets are correctly inventoried," McDowell said.

"Our truck maintenance and operations people carry 250 maps of each of the water and sewer systems which show all of the valves and pipes," she said. "When this project is finished, the paper will go away and the maps will all be available on the laptops that they will carry with them into the field."

The project was the first time GTG implemented GISmo on tablet PCs. Currently, four department area coordinators are "test driving" GISmo on their Toughbooks.

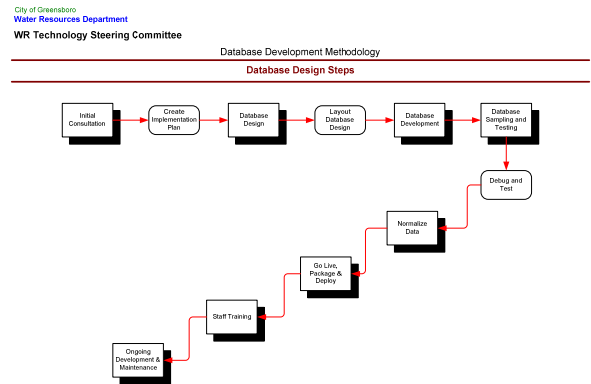
"Everyone who sees it wants it," McDowell said. "They ask me constantly when it will be installed on their PCs. I'm working hard to meet everyone's needs."

GTG also developed two customized tools for the Greensboro Water Resources Department.

The first allows the staff to select any point on a water or sewer line to see where the flow originates and which points would be affected if the valve were shut off. "This will really help us make better decisions," McDowell said.

The second will give the field crews the ability to easily supply information and feedback to GIS database managers.

"When the application is ready, our guys in the field will be able to pull up a map on their laptops, convert the screen to an image file, and send us notes on what they are seeing. For example, if a fire hydrant is broken, they can circle it, type a message in free text, save it with a preset naming convention, and automatically download it to a central folder, which GIS will then process," McDowell said. "It's an effortless way for us to keep our information current, and it will help us set priorities for maintenance and capital improvement projects."



Database Development Workflow

One of the most valuable outgrowths of the Water Resources Department's GIS program has been stronger relationships with other city departments, she said. The department developed a partnership with the Greensboro Fire Department to locate and identify 13,000 fire hydrants. "We use the Fire Department's numbering system, so when they call us about a problem, we know exactly where the hydrant is, and we can do flow analysis to determine where the problem is. We work closely to make sure all of our information is always up to date so we can solve problems quickly and help the Fire Department protect the community."

"From the beginning, we did not want to be our own island in the GIS process. We want whatever we do to benefit everyone else; we don't want to alienate anyone from our data."

McDowell said the Water Resources Department is planning to broaden the scope of the project to meet the needs of internal users and to meet state requirements for data collection.

"The response internally has been great. The users are very pleased and are excited about what's coming up. They want more GIS layers, more aerial photography, more of everything. GTG has been diligent about finding solutions to every problem we've encountered. They will do whatever it takes and stay as long as needed to help us work through things."

McDowell also feels GTG has helped Greensboro become one of the most progressive GIS users in North Carolina, easily positioned to comply with the state's requirement that local governments must digitize 10 percent of its data each year.

"Our field applications are great, our Web browser works well, and we've got lots of layer options for our users. We're well ahead of the game," she said.

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