

## Venturing to map expansion plans

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Tyler Vick believes drawing a map is often the best route to make sense of reams of complex data.

He's a principal with FLO Analytics, a subsidiary of environmental engineering firm Maul, Foster & Alongi that specializes in data analysis using geographic information system (GIS) technology. The company, which has offices in Portland and Seattle, creates detailed maps illustrating various factors considered by municipalities, school districts, land trusts and private companies seeking sites for future development or conducting land use studies and property inventories, among other uses.

"It very much became a communication tool," Vick said. "A picture is worth a thousand words resonated with MFA early on."

MFA leaders started FLO Analytics in 2012 after firm leaders realized the demand for GIS maps that staffers were producing for environmental consulting work could be used more broadly, MFA President Jim Maul said. As the technology continues to evolve, the firm is finding even more applications for the data-derived maps, he said.

"What it does is it allows you to pull in these different elements of the problem and create an output that's easy to understand," Maul said. "One of the things people wanted was data-driven decision-making."

It quickly became apparent that the technology is useful for public and private entities seeking to expand, FLO Analytics principal Steve Taylor said. Distilling a survey of numerous potential sites onto a map based on certain priorities helps clients make informed decisions about purchasing properties for future development, he said.

"At least they know where they need to be looking," he said.

FLO Analytics staffers have created maps for school districts seeking optimal sites to build a new school using projected enrollment and population growth pattern data. Another application is cataloging ideal properties for grocery stores like New Seasons Market to expand based on neighborhood demographics and proximity of competitors. The firm has also worked with electricity and wastewater management companies that own vast swaths of infrastructure to track maintenance of pipes and power lines as well as analyze where to expand those services in the future.

"So much of that is understanding your assets," Vick said.

The technology has been particularly useful for school districts to track where students live within boundaries and anticipate surges in enrollment at certain schools based on population growth and development trends in the surrounding neighborhoods, Vick

said. In a land use study for Bellingham Public Schools, in Bellingham, Wash., FLO Analytics staffers created a map pinpointing the location of each student household and predicted how that population would shift in 10 years based on residential development patterns in the city and its comprehensive plan. The district used this information to plan where to expand, Vick said.

The firm will do a similar study for the Central Valley School District in Spokane Valley, Wash., which is planning to build a new high school.

FLO Analytics has also worked with the Ridgefield School District, in Southwest Washington, to analyze voter turnout in certain parts of the district after a bond measure failed in 2007. The data helped target outreach to voters living in a portion of the district that extends into Vancouver, Wash., during the campaign for a bond measure that passed in 2012.

"It just painted a very compelling picture, and I think that's what we're all about with FLO," Maul said. "(Out of) all this complexity, the result is something that's simple to understand."

Seeing the demographics of the district illustrated was eye-opening for Art Edgerly, a former Ridgefield School District superintendent who advocated for the bond.

"It was a great opportunity to learn about your school district," he said. "What we were really seeking was some strong data (and) demographics of the regional school district. We needed information. To have that data collected and analyzed was really important."

The data analysis work by MFA and FLO was also helpful for long-range facilities planning, Edgerly said.

"It was really a way for us to collaborate with them and get a good picture of what the Ridgefield School District would look like in the future, so we could plan accordingly," he said. "It really provides a road map for the (school) boards and superintendents."



Tyler Vick is a principal with FLO Analytics, a Northwest firm specializing in data analysis using geographic information system technology. (Sam Tenney/DJC)