

San Luis Obispo is one of California's oldest communities. It is the San Luis Obispo County seat and home to California Polytechnic State University.

About two years ago, the city's public works department lost its custom software developer and the utilities department began a transition from its long-term platform toward a more GIS-friendly system.

The city wanted to leverage its existing GIS databases and move to an enterprise platform that would consolidate asset databases across departments and deploy an enterprise maintenance management system (MMS).

San Luis Obispo hired Woolpert to implement Cityworks software and address and centralize

system. Woolpert migrated two decades' worth of data into the Cityworks platform.

By installing an enterprise MMS, San Luis Obispo discontinued its individual, departmental asset management silos in favor of an integrated system that can be used by all city departments.

Nance said the city emphasized a need for service requests management, and the wastewater department was concerned with managing assets.

"With one central database, you kill two birds with one stone," he said.

Nance and Boerman noted that the Cityworks implementation was a transition that varied by department.

The wastewater department was accustomed to and had routinely used the Hansen system,



By Jonas Svoboda

Software implementation helps California city with maintenance & asset management

the city's MMS needs.

The company also introduced the city to its infrastructure optimization (IO) add-on to the MMS, which could help the city develop a maintenance prioritization strategy by determining the probabilities and consequences of failure based on specific factors.

Making the Transition

Bud Nance, wastewater collection supervisor for San Luis Obispo, has been with the city for 28 years. He said the utilities department had been using a work order management system for 25 years, while public works employed a data collection service for file management.

"When we made the transition, it originally was only going to be utilities moving over to Cityworks, but we asked public works if they wanted to come along," Nance said. "We made this big transition—a citywide upgrade."

Woolpert began the Cityworks MMS implementation in July 2012 and went live in January 2014. Ongoing integrations have followed, as has the implementation of the IO pilot program.

Mychal Boerman, utilities services technician for San Luis Obispo, said work flows for the water department had not changed since the mid-1990s and were in need of an upgrade.

"It gave us a chance to start fresh and see how we track things, because it's just a more efficient way to track the work," Boerman said. "We needed something mobile in field that uses GIS as part of our mobile work order management."

The new MMS was configured to extract data generated by the departments and categorize it into usable reports, which helped public works and utilities department managers identify threats and evaluate the status of mission-critical assets.

For its wastewater system, San Luis Obispo wanted to standardize its operations into one

while the water department relied more heavily on an office white board for its projects.

Boerman said the city has water line from the 1930s and plans from the 1920s, and had a tracking system to match.

"Before, it was like a game of telephone—getting word something needed to be fixed and passing the information along," he said. "Now, the department can give people data and the needed statistical analysis regarding meter infrastructure, hydrants, etc."

Boerman said GIS capability also has made San Luis Obispo technicians want to use the system.

"It's great for the guys to be able to look at a tablet out in the field and look down at the valve identified on the tablet," Boerman said. "They make better decisions as operators, and are able to get work done more quickly."

Nance agreed.

"Everything from managing when work orders are due to managing capital improvement projects is covered in Cityworks," Nance said. "The depth of what we can do now is unreal."

Boerman added that the new system also "shows the cold hard facts" on what the city is doing well—and not doing well.

Those results can be shared with the city council to illustrate where work needs to be done



The database software helps San Luis Obispo's utilities department operate more efficiently.

or staffing should be adjusted, leading to more cost-effective decisions.

"We're not making the assumptions we used to make," Boerman said. "Before, you used to have a gut feeling about something, but this can prove whether it's correct. It can see if we're spending money in the right ways."

Having this accurate data also helps the city report its findings to the state, which has been crucial during the California drought.

"The system shows us where and when we've made contact with the community regarding the drought. There are custom fields in Cityworks that Woolpert trained us to set up that have allowed us to track our findings and gather additional information as regulations change," Boerman said. "We find out how effective our communication with the public is, and how efficient we've been in helping them correct violations. It's a good documenting tool for us."

The IO solution was introduced as a pilot implementation, allowing the city to explore the capabilities of the tool without buying the full implementation. This way the city could see which aspects of the asset management tool could meet its needs.

Part of that program involved identifying the probability of failure based on asset condition. If an asset is defective, there is a higher likelihood of failure.

Although all assets are important, some assets of the same type are more important than others, i.e., a water line feeding a hospital versus a water line that leads to a cul de sac.

These priorities are tailored to the needs of the client, and work orders can be aligned through the IO tool. The objective is to eliminate extraneous work and expenses, allowing each department to properly focus the available budget on the most critical assets.

"We've got the data and are just putting it into the program," Nance said of the IO tool. "It will manage business risk exposure, probability of failure and consequence of failure. If there's a break under a railroad track or a main highway or a creek bed, the impact varies."

Woolpert has 13 professionals who are Institute of Asset Management (IAM) certified.

"We go in and understand the high-level goals and objectives of the client—be it a city, airport, county, etc.—so we can make it work for them," said Dave Feuer, a Woolpert project director who is IAM certified. "We adapt the system to them, and don't make them adapt to the system. It's still a change, but it's within familiar parameters."

Looking Ahead

Nance said the implementation has "absolutely" made city processes more efficient.

"It was in the best interest of the city to go to Cityworks; to go into a shared database," Nance said. "And we'll continue to enhance it and to make it our own."

Boerman said the program was easy, yet could meet San Luis Obispo's needs.

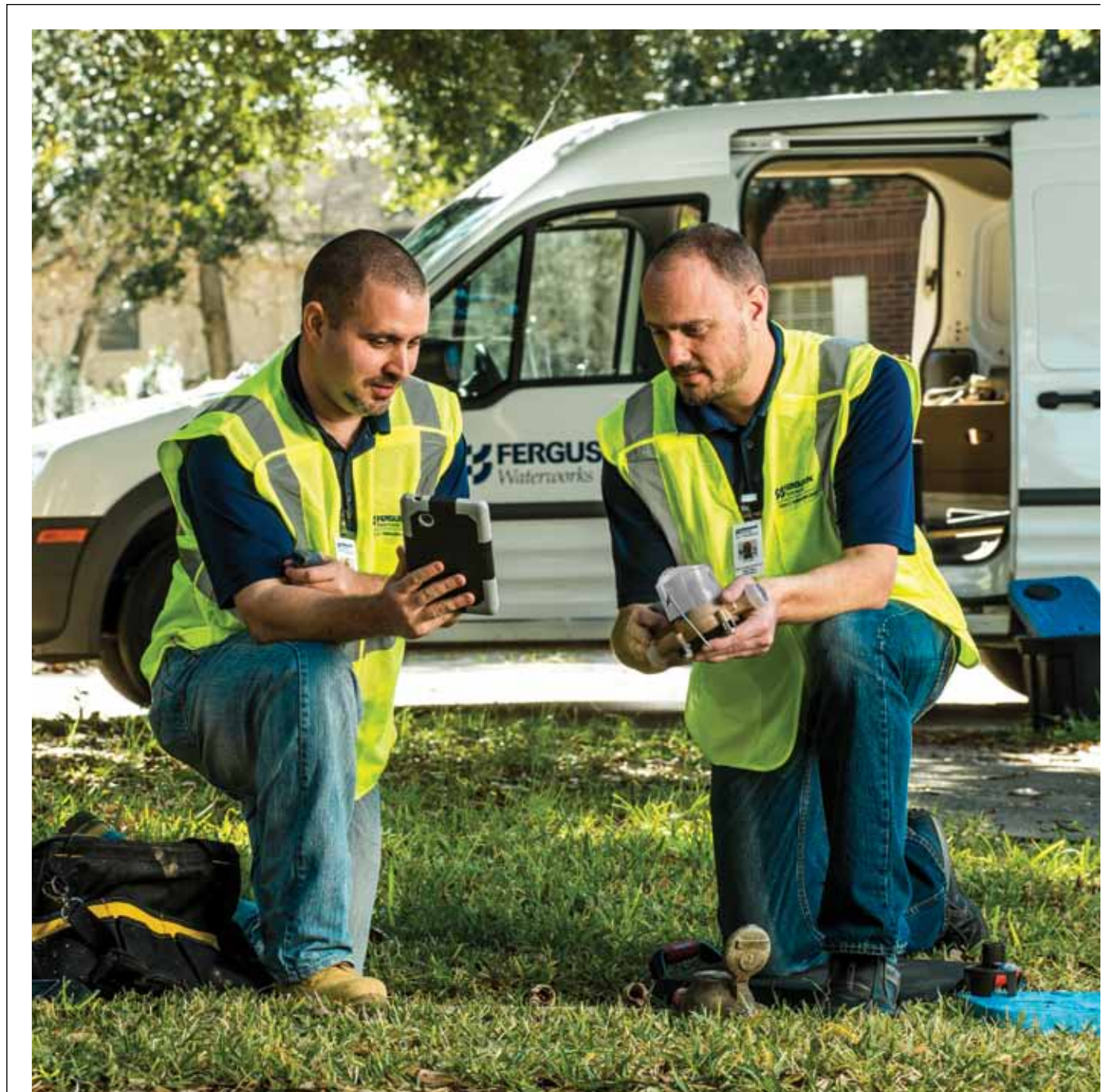
"It's worked for our conservation department for water distribution and wastewater, and allowed us to schedule the work using GIS," Boerman said. "There are reporting tools built in, which we hadn't thought much about at first, but now we've used a

great deal for issues such as monitoring our work order management for drought response."

The city's decision to adopt a progressive, strategic approach to managing the city's public works and utilities assets has positioned it to adapt to the future—whatever that may hold.

"We're still just tapping into all the different things we can do with this system," Boerman said. "But we're off to a really good start." **wwd**

Jonas Svoboda is a project manager with Woolpert's Information Technology and Management Consulting market. Svoboda can be reached at jonas.svoboda@woolpert.com or 720.279.3744.



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