



Bridging the Information Gap

Tacoma, Wash., uses Autodesk for improved data sharing and efficiency — and provides more information for the public.

With more than 200,000 residents, Tacoma is the third-largest city in Washington. The city uses technology to improve services it provides to citizens, and Tacoma's Public Works is a great example of that.

The department deployed an integrated geospatial solution that allows the department to share data across its numerous divisions, with other city departments and the public.

Tacoma Public Works uses geospatial data for many tasks, including issuing building permits, managing wastewater and maintaining streetlights. The Public Works department relies on Autodesk® products for CAD/GIS integration and to scan and digitize data so it can be stored and manipulated in the system. The products have helped the department improve its work processes by linking its engineering design and GIS data. And because the products are built with

open, standards-based technology, they integrate easily with other GIS tools and geospatial formats.

A centralized geospatial database stores all geographic information, allowing Tacoma's Public Works divisions — and other city departments — to access and update geospatial data. Those updates are immediately available to users in other divisions and departments, as well as the public.

Data Done Right

Tacoma Public Works relies on Autodesk products to meet its GIS and engineering design needs — and to provide a new level of information and insight to city workers and citizens.

For instance, using AutoCAD® Map 3D® software for GIS has enabled the department to incorporate CAD data with its mapping data. The department also uses AutoCAD® Raster Design to capture

and digitize a wide array of building information and integrate that information with GIS maps. Users can then go to the GIS maps and find information associated with a particular location, including scanned images of building plans, certificate of occupancy, variance data and code violation information. City workers can also access all the data related to a piece of property, all from one GIS map. Drawings, maps, orthographic imagery and other sources can all be combined into a comprehensive view using the various Autodesk components.

Public Also Benefits

Tacoma's award-winning Web site, govME, or "government Made Easy," gives citizens access to interactive maps that provide them with more information on things like parcels, zoning, code violation, wetlands, contours and more than 300 other layers.

"We're serving citizens online rather than in line," said Gary Cantu, IT supervisor of Tacoma Public Works. "We're trying to allow the customer the ability to work 24/7 from their environment — their homes and offices — rather than taking time out of their busy day to come down to the city and stand in line to get information." With Autodesk MapGuide® software, Public Works easily publishes GIS data to Web-based applications.

On govME, the public can view scanned images, including sewer drawings, plat drawings, and construction and building plans. "Now those have all been scanned into our e-Vault system," said Cantu. "They're all readily available online from gMap, govME's interactive MapGuide application."

Better Information Sharing

Tacoma also has worked to ensure city-wide access to geospatial data, regardless of its format. "What we've found is GIS isn't one size fits all," said Cantu. "There are plenty of tools in the tool bag."

In 2003, the city invested in an Oracle® database to centrally store spatial data. Now many departments use their own GIS tools to access the same data, modify it when needed, and save it all in the same central location, where it's readily available to users in other departments. Because Tacoma Public Works has integrated engineering data with GIS, other users can access this data using their own GIS tools.

Prior to that, employees often didn't know where the information resided, and if it would be in a format they could read. "Now with all the data stored in

one central location, all that needs to be known is what is needed, and regardless of what GIS tool is being used, the data can be viewed or edited, with the proper permissions," Cantu said.

For example, Tacoma Public Works updates the centrally stored spatial data to reflect a new plat that was approved, complete with streets and sidewalk. After the changes have been saved back to the database, Planning can update that same data showing a change to the zoning. After that's been saved, Power can add power lines and transformers. Other departments now have the ability to make changes, increasing the amount of information available for everyone without making a special request, and using the same GIS tools they've already invested in.

Changes are immediately viewable through the Autodesk MapGuide interface so field crews and the general public will always see real-time, updated information. And it's all done with a minimum of effort. "Now you have all the departments using the GIS tools that they have invested in for licensing and training," said Cantu. "And they are able to use those same GIS tools to view and update that data, and can still cohesively share the information."

Building Trust

Trust between departments was a big factor in setting all this up. For years, city departments have been responsible for gathering and maintaining their own data. At first, they weren't always eager to share their data with other departments. "There's a real level of trust that needs to be established before other departments are willing to share their

information and be assured that it's going to be secured, and only the right people will have access to it," said Cantu.

Tacoma Public Works has been overcoming this challenge by starting small and showing results. Other city departments soon were impressed with how easily their data could be moved into the central database. Then it was a matter of showing them how rapidly their information could be displayed on the Web via Autodesk MapGuide. The other departments quickly saw the benefits.

Cantu said built-in security allows selective data sharing, which eases concerns about losing control of data. "At the server level, we are able to build in securities so some information may only be available to certain individuals or certain departments or to city staff only. Then other information would be made available to the public," Cantu said. "It's very important to our city manager that the citizens of Tacoma have easy access to reliable GIS information, while staying mindful that for public safety, we don't share some information."

Autodesk technology helps Tacoma Public Works improve its internal workflows by integrating design and GIS data. Easy integration with other GIS tools has also provided big benefits to the department, the city and the public. Tacoma's enlightened approach to managing spatial information eliminates duplicate data entry and provides more comprehensive collection and processing of this vital resource. Web applications can be quickly customized and updated, and both internal and external customers have better access to accurate data.

Autodesk®

8201 Greensboro Drive, Suite 200
McLean, Virginia 22102
United States (USA)
Ph: 703-827-7200
www.autodesk.com