IMPLEMENTING E-GOVERNMENT IN THE NETHERLANDS

“INSTEAD OF THREE WEEKS OF PROGRAMMING IT NOW ONLY TAKES 5 MINUTES WITH GEO WEB PUBLISHER™ AND THE FLEXIMAP IMPLEMENTATION”

The city of Eindhoven, population 200,000, is the 5th largest city in Holland. It is a thriving metropolis with a unique combination of high-tech companies and agricultural enterprises. The city has always been a pioneer in providing government information to its citizens and uses Bentley’s solutions to assist in expanding that charter.

Eindhoven needed to publish geospatial data to the Internet quickly, easily and in a form that the citizenry could use. They also required that the web administrator be able to add new spatial data and make updates without having to be a geospatial expert.

IMPROVING THE PROCESS
Large volumes of spatially oriented information are available in the city’s Oracle data store, but the data is not easily accessible to the general public. Previous efforts to publish engineering-quality data on the Internet led to expensive and inefficient workflows. Data pre-publishing was cumbersome and required many complex steps, including time-consuming translation of highly-precise engineering data to Internet flash formats. The process required a new, streamlined approach to ensure the creation of a fast, easy-to-use public web portal.

Eindhoven turned to Bentley to create a unique solution that allowed them to convert and publish large amounts of graphical information on their external Internet site. Bentley created a solution that could quickly read and publish raster and vector information via the web. This new approach places MicroStation® data inside the city’s Oracle Spatial data store, and relies on Bentley Geo Web Publisher and Fleximap to read and publish the data on the public Internet web portal. Fleximap (now called Bentley Geo Web Services) is solutionsware that extends the capabilities of Bentley Geo Web Publisher.
In addition to providing an improved Internet workflow, the Bentley solution offers a more powerful and more usable intranet application for internal, interdepartmental use. The large, complex spatial database is now available to all city employees, allowing them to query, analyze and create maps from the city's spatial data store.

All functions in the final implementation are entirely configurable. Users may navigate through the map, retrieve information, view an overview map, redline on the map, or submit queries based on their particular needs.

Geo-specialists are able to determine individual user requirements and configure the system capabilities to meet those specific needs. Likewise different data types are custom created based on user demands. For example, maps may be presented as flash or jpg objects, while text and other administrative information are provided as XML via the customized content management system.

IMPROVED PUBLISHING

The city estimates that the new application saves significant time and effort in producing high-quality web-based maps. In fact, they stated, “With Geo Web Publisher and FlexiMap, enriching the e-government Internet site with spatial information is five minutes work, instead of (taking) three weeks (of) programming.” The new system organizes the geospatial information into real-life categories like streets, sewers, buildings and park boundaries, enabling the web editor to access and publish information without searching for graphic elements in multiple files. Additionally, the Bentley solution provides an easy to access link between the geospatial and associated tabular data, further streamlining the web publishing workflow.

The e-government implementation consists of three phases – first, MicroStation drawings are incorporated into the Oracle Spatial data store; second, the municipal data store is made available to the users; and finally, Geo Web Publisher is used to format and publish the rich spatial information on the external internet site.

AN INTEGRATED APPROACH

Eindhoven takes advantage of many elements of the Bentley Geospatial product portfolio. Besides Geo Web Publisher, the municipality also works with MicroStation for engineering and mapping capabilities and Interplot as part of the publishing workflow.

Also, ProjectWise® and Digital Interplot™ were used to implement a managed environment throughout the entire organization.

The municipality of Eindhoven has a vision of an integrated spatial information architecture that mirrors the geospatial vision of Bentley. This vision includes the ability to work with objects by using MicroStation in combination with XFM and the ProjectWise Oracle Spatial Connector for Oracle to simplify and streamline data management workflows.

CREATING A TWO-WAY COMMUNICATIONS TOOL

The ultimate requirement for the system is to use the e-government web portal as a two-way communications tool. Any implementation has to allow both parties – the government and the citizens – to communicate over the web.

Citizens need be able to request licenses for property changes from the city, and the city officials need to be able to create and send maps, documents, license approvals and other information to the citizenry.

This final step was accomplished using the sophisticated Bentley information management and powerful web publishing software. Combining these two technologies allowed Eindhoven to create a flexible and usable geospatial publishing system.