THE BENTLEY SISNET GIS REDUCES COSTS AND IMPROVES OPERATIONAL EFFICIENCIES AT FERNWÄRME WIEN

PROJECT SUMMARY

Organization
Fernwärme Wien GmbH

Solution
Utilities/District Heating

Project Objectives

- Migrate from legacy mainframe system to a modern, Web-based GIS
- Plan, analyze and report on a district heating network with a total length of more than 1,000 km, 252,000 residential customers and 5,200 business customers
- Support a variety of user communities with read-only access to GIS data for e.g. sales, marketing, operations

Products Used
MicroStation®, Bentley® PowerMap, Bentley® sisNET, Bentley® sisFLOW, Bentley® sisVIEW, Bentley® sisIMS

FAST FACTS

- Fernwärme Wien has now implemented a Bentley sisNET-based GIS that has saved money and brought new efficiencies to the wide range of user communities that need access to GIS data for the smooth running of a large district heating operator
- Fernwärme Wien takes advantage of Bentley's ELS to speed the deployment of new Bentley software and to optimize the cost of software ownership
- Browser-based access to the comprehensive GIS data in the operations group improves response times when system outages have to be repaired
- Bentley sisFLOW supports workflows extending to the mobile workforce which has immediate access to the GIS data store via Bentley sisVIEW

Thanks to the powerful GIS-based AM/FM system Bentley sisNET, Fernwärme Wien GmbH, a subsidiary of Wien Energie GmbH, has their business under full control. The excellent availability of all network and infrastructure data is an important factor for the planned extension of this highly efficient district heating system.

Fernwärme Wien, one of the largest operators of district heating infrastructure in Europe, provides about 30 % of the heat required by the 1.6 million inhabitants of the Austrian federal capital. More than 252,000 residential customers and 5,200 business customers are supplied with heat for heating and a supply of hot water via a network of more than 1,000 km in length. More than two thirds of the heat is produced in plants with combined heat and power generation (CHP), and around a quarter of the required heat is supplied by waste incineration plants. Due to its positive environmental track record, the district heating supply in Vienna will be extended significantly. For an even better use of waste heat during the summer, district heating is expected to be used increasingly for district cooling services.

Bentley sisNET has been used at Fernwärme Wien for more than ten years and it replaced the legacy mainframe AM/FM system. Bentley sisNET was chosen for its state-of-the-art capabilities and because Bentley sisNET is based on flexible and competitively priced platform products such

"Our experiences with Bentley sisNET are all positive. Bentley has met all the requirements for what was a complex and mission-critical project."

ABOUT BENTLEY

Bentley Systems, Incorporated is the global leader dedicated to providing comprehensive software solutions for sustaining infrastructure. Architects, engineers, constructors, and owner-operators are indispensable in improving our world and our quality of life; the company's mission is to improve the performance of their projects and of the assets they design, build, and operate. Bentley sustains the infrastructure professions by helping to leverage information technology, learning, best practices, and global collaboration – and by promoting careers devoted to this crucial work.

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as MicroStation, Oracle database and standard PCs. The new GIS was gradually extended to support the company's entire heating infrastructure. Today, all infrastructure data are available via a company-wide web application based on Bentley sisIMS to support business processes and to improve decision making.

Peter Nebuda of Fernwärme Wien explains, "An operation of our size relies on very accurate GIS data to empower the multiple departments which use that data in their day-to-day activities. Bentley sisNET is an essential part of our operational workflows and it allows us to run our organization more effectively'

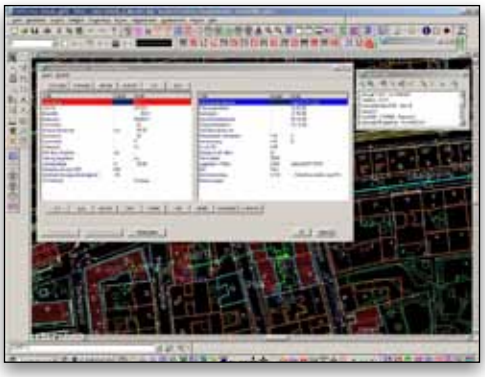
Bentley sisNET documents the complete heating distribution network including all heat transmission stations. All of the data are now available instantaneously companywide. The data are used to provide statistics and to perform analyses for network planning, engineering, sales, and to support operations when troubleshooting the network. Field technicians access the data through Bentley sisVIEW. Bentley sisNET data is also used by the thermal-hydraulic calculation application.

Operations technicians using Bentley sisIMS can react quickly with instant access to up-to-date views of the network – and this is critical during restoration of service after an outage. Customer service representatives in the technical service center can quickly recognize which customers are affected by a network shut-down and can promptly initiate the required communications and repair activities.

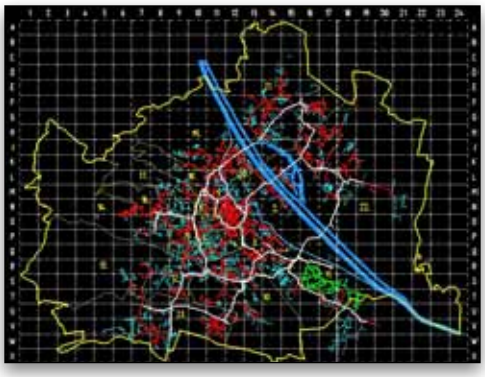
The data is also used by commercial departments including sales and marketing, and now that the data is accurate and the entire network is modeled in Bentley sisNET, the GIS is used by senior management for reporting and long-term planning.

The project will now extend to leveraging the GIS data in wider enterprise workflows through integration with the Siebel CRM system, integration with the SAP asset management system, and integration with the company's document management system.

A section of the Fernwärme Wien district heating network including connected buildings.



Bentley sisNET displays the attributes of a section of district heating piping.



Bentley sisNET displays a high-level view of the Fernwärme Wien district heating network in Vienna.

Bentley Sustaining Infrastructure