



GABY – Bavaria brings many environmental disciplines onto one platform

Capgemini and con terra delivered a new applications platform for the Bavarian State Environment Agency

Capgemini created a generic platform, together with con terra, for the Bayerische Landesamt für Umwelt that stores and visualizes geology, pedology and hydrology data for analysis.

The Situation

In 1998, the Bavarian State Geological Agency (Bayerische Geologische Landesamt, now called the Bayerische Landesamt für Umwelt, or BayLfU), began planning to establish a Bavarian soil information system within five years. In this early project phase, sd&m AG (now the Technology Services unit we call *Custom Solution Development* in Capgemini in Germany) developed technical prototypes for the agency along with partner company con terra.

The Solution

In consortium with the experts for geographical information systems at con terra, Capgemini developed and implemented a client-server architecture using a new basic technology with Corba, Oracle, ArcIMS (2011 modernization on the ArcGIS server) and ArcSDE. A dynamic, configurable meta model and configurable interfaces that can be as complex as desired as well as comprehensive geographic functionality form the core of the system. In 2007, the system was expanded to include the Bavarian Water Atlas and became known as the Generic Application Platform of Bavaria, or Generische Anwendungsplattform Bayern.

The Result

The GABY application platform was successfully put into operation on schedule on 1 September 2003. In 2004, it won the BayernOnline prize for E-Government and in 2011 it won the international SAG Award¹. With just under one million data objects, GABY is currently the most extensive geoscientific and hydrological database in Bavaria. The system functions as an information platform for all eligible parties interested in geographic information from the Bavarian Environmental Administration Department.

How BayLfU and Capgemini have worked together

As far back as the initial project phase in 1999, Capgemini and con terra were appointed to carry out a fundamental study and to design technical prototypes. As a result, they proved their technical competence as well as their ability to bring complex subject-matter knowledge. With the completion of the critical project phase in 2001, when BayLfU had to withdraw from contracts with a competitor and Capgemini and con terra executed the go-live on schedule in September 2003, Capgemini demonstrated itself to be a reliable partner for project success. This is reflected in the GABY project organization structure established since then: All project levels are staffed equally with team members from BayLfU, con terra and Capgemini – from development and project management, to the chief technical design team. It's a partnership that has proven itself over more than ten years.

In addition to the technical and functional enhancements made between 2004 and 2006, the system was expanded by Capgemini in 2007 to include the Bavarian Water Atlas. The whole system now facilitates comprehensive research and maintenance of geological, pedological, hydrological and water management properties with spatial references which can be visualized in various scale levels using map views.

In addition to XML interfaces for importing and exporting data, GABY comprises a contract management system for the exchange of sample and analysis data with a laboratory information system. A GeODin server, an application for visualizing soil profiles, as well as the water supply application, which stores Bavaria-wide data on water protection areas and water intake are also connected to the GABY system. Capgemini produced a kit made up of surface components and programming interfaces for the BayLfU developers. This enables the agency to create maintenance screens and functional logic efficiently by itself.

Users of the water atlas or soil information systems gain access using Java Webstart technology, made available by the application on a website in the government intranet of Bavaria. This means GABY is automatically installed on the client computers with one click, avoiding any elaborate software rollout. The system is used by approximately 900 experts annually.

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In collaboration with



About the BayLfU

The Bayerische Landesamt für Umwelt (BayLfU) [Bavarian State Environmental Agency] is Bavaria's central agency for environmental and nature protection, geology and water management and an agency within the Bavarian State Ministry for Environment and Health. The BayLfU develops objectives, strategies and does planning for the sustainable use and safeguarding of the environment.

¹ Special Achievements in GIS Award from Esri Inc., USA

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