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Get large volumes of data under control

Store CAD drawings securely



“With ELO, we have joined together the individual components of our corporate IT. This has made processes more transparent and consistent.”

Anja Teschke,
(DBE)

With *ELOprofessional*, DBE can take control of its CAD drawings and make them available to its employees across locations. It also makes searching for the drawings much quicker.

The German Company for the Construction and Operation of Waste Repositories [Deutsche Gesellschaft zum Bau und Betrieb von Endlagern, DBE] designs, constructs and operates federal repositories for radioactive waste on behalf of the Federal Office for Radiation Protection [Bundesamt für Strahlenschutz, BfS]. The DBE currently maintains the Gorleben exploration mine. It is preparing the conversion of the Konrad mine into a final repository for radioactive waste, according to federal provisions, and operates the former repository for radioactive waste in Morsleben (ERAM).

Solution

an additional benefit



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Structured filing including references

Overview

Country: Germany
Sector: Disposal

Company

The German Company for the Construction and Operation of Waste Repositories [Deutsche Gesellschaft zum Bau und Betrieb von Endlagern, DBE] designs, constructs and operates federal repositories for radioactive waste on behalf of the Federal Office for Radiation Protection [Bundesamt für Strahlenschutz, BfS].

Challenge

The structured filing of CAD drawings including reference drawings. The location-wide availability of information and the integration of all information from applications such as SAP, MS Office and the company's own programs.

Solution

The CAD module was connected to *ELOprofessional* as well as SAP, MS Office and the company's own applications. The locations are networked over a standard line.

Benefits

Drawings are now available centrally to all employees. The CAD drawings and references are archived in read-only format. Overall, the processes are more consistent and transparent.

Criteria for the right decision

The design, construction and operation of a final repository at the DBE headquarters in Peine (Lower Saxony) involves a large volume of CAD drawings. These are to be managed, processed and further developed. The detailed references of the individual CAD drawings at the DBE, which can go down 16 to 20 levels, are particularly complex. The DBE was therefore looking for a document management system (DMS) which would primarily enable the structured filing of CAD drawings, including references. The cross-location availability of the information and the integration of all information from applications such as SAP, MS Office and the company's own programs were obviously to be included here.

The DBE decided to use *ELOprofessional* due to the possibility of connecting the CAD module to this DMS solution from Stuttgart. The DBE was primarily won over by the easy-to-use version-controlled management of drawings, including external references, and the corporate-wide availability.

Thought-out structuring

Since the 1990s, around 20,000 drawings plus additional files have accumulated at the DBE. An external drawing system previously managed these. In April 2006, the data from this system was copied to *ELO*.



The **ELO** business partner was responsible for connecting **ELO** to the CAD module. In addition to the main drawing and its references, **ELO** also archives other additional files and information automatically. This generally concerns control files such as *.stb, *.lay, *.pcp and title block content as well as the output file PLT (Patent Lay Treaty).

Together with the **ELO** business partner, the DBE then defined a structured archive of drawings in **ELO**. The drawing files which are continually being edited are thus found in CAD 1. CAD 2 contains the drawings which have been released and can no longer be modified and CAD 3 contains drawings which were converted into PDF format after release and are thus available to everyone.

When the command for archiving is issued, a drawing file is selected. In the background, the title block information is read and the external references reviewed. Here **ELO** searches for files with identical names but a different file extension (as a property) since CAD additional files all have the same file names. Before final filing, the system also checks for duplicates. During archiving, **ELO** automatically fills in the CAD mask with information from the title block of the drawings.

Protected release processes

For easy access, five buttons have been created in the **ELO** client with the following functions. The first button starts filing new drawings in **ELO**. The second button shows the user references and all other information on the drawing. The third button groups together the relevant drawing and additional files, packs these into a ZIP file and thus supports the e-mail client. The fourth button makes a copy of the selected drawing and all additional files available outside **ELO** and the fifth one enables a procedure for securing drawings during the release phase within **ELO**.

“Lots of people are involved in the release process, and this process can therefore last several weeks. During this period, it is very important to protect the drawing from further editing”, explains Anja Teschke, project manager at the DBE, in reference to the important function of the fifth button.

When it is checked out, the drawing is protected against editing in **ELO** and the other additional files are only made available as copies. When the drawing is checked in again, **ELO** carries out a collision check to avoid redundant filing. The CAD mask in **ELO** is then automatically completed upon every check-in.



Keywording with built-in logic

The ELO business partner has programmed some security questions into the keywording mask. There is therefore a mandatory field which asks for the project name to be entered correctly, for example. Anja Teschke explains the function: "If the user enters Gurleben instead of the Gorleben project, for example, ELO will not accept the word but leaves the field blank and the user can see that he needs to make a correction. This function is very important when it comes to finding all the information on a project again at a later time."

Optimum printing results

The correct printing of drawings has been adapted by the ELO business partner. To avoid incorrect plots it is important that the correct plotter is specified for printing the drawings. In the past, printing at the DBE often led to technical problems and incorrect printing since not all plot files can be printed on every plotter. Thanks to the adaptation, the system now asks for which plotter the file has been written and then provides the relevant printer.

Working across locations

One of the most important criteria when introducing ELO was also that the employees at the three locations in Morsleben (Saxony Anhalt), Gorleben (Lower Saxony) and the Konrad mine (Salzgitter-Bleckenstedt, Lower Saxony) have the same access to the desired information as the employees in Peine.

"It was important to us that the CAD drawings, including the detailed referencing, are archived as read-only – and we archived this with ELOprofessional."

"Collaboration with the ELO business partner was very intensive. The basic approach was to understand the processes at the DBE and map them accordingly."

Anja Teschke,
(DBE)

Solution

an additional benefit



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Working on drawings regardless of location

“Thanks to ELO, it is now possible to work on CAD drawings together and from any location. This means that projects can be implemented faster.”

Anja Teschke,
(DBE)

The DBE deliberately decided against replication here since the current drawing must be accessible at all three locations at any time of day. Anja Teschke justifies this decision as follows: “Replication would have had to guarantee that the files are identical at all sites 24 hours a day. However, since we have drawings that are several hundred megabytes in size, a standard line would soon be overloaded and we therefore decided to keep the data on site and only the metadata on the documents is located on the central server.”

In Peine, the Access Manager communicates directly with the relevant Access Manager at the other locations which enables real-time processing. If, for example, an employee in Gorleben creates a drawing for a vehicle and an employee in Morsleben creates a drawing for a building in parallel, the employee in Peine can see both drawings in relation to one another in the right way.

ELO has been connected to the RxHighlight viewer from Grafex for viewing purposes. As a result, employees can also view CAD drawings without the CAD program having to be installed on the relevant workstation.

More visible benefits

The ELO DMS now manages all 279.3 GB (291,604 files) distributed over all four locations. The DBE can make its documents available centrally and transparently. Employees can work on drawings regardless of location.



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Transparent and consistent processes

“The search for drawings has been speeded up considerably.”

Anja Teschke,
(DBE)

Documents and information from all corporate applications converge centrally in **ELO** and can therefore also be found very quickly. Employees particularly rate the central filing functionality. Anja Teschke comments: “Previously we had drawings, documents in paper format and documents in digital format in a number of locations. There are several servers at every office, 14 in Peine alone. It is therefore easy to imagine that documents and important information were scattered everywhere. With **ELO**, we are primarily benefitting from the fact that everything is now filed securely in one place and can therefore be easily found. Redundant data retention has been dramatically reduced. Employees forward links to documents, for example, and there are no longer any copies flying around.” Overall, **ELO** has made processes at the DBE more consistent, more transparent and more secure.