Water utility keeps data flowing and transparent with erwin® Data Modeler by Quest® and through collaboration with Sandhill Consultants

Sandhill Consultants is a global organisation that delivers data modelling, data management and data intelligence solutions, backed by implementation, educational and professional support services, to customers across industries.

Country: **United Kingdom**

Industry: **Technology consulting**

Website: **www.sandhill.co.uk**

Bringing technology managment back in-house

The water utility's complex, geographically distributed operations rely on a large arsenal of software applications and technology services. The company runs more than 200 business applications and databases. Some of these — like the Oracle, SAP and SQL Server systems — are business-critical and impact almost everybody in the organisation. Others are more specialised. For example, it might provide a record of spills or sewer and main repairs in certain areas. However, all these software tools contain information that matters to decision-makers and service managers.

When technology management once again became an internal function after decades of outsourcing, the utility had to build a new IT organisation. At the time,

About this case study

When its IT management came back in-house, a U.K. water utility needed to understand how its business systems operated and connected to one another, how they generated data, and what the data flows were.

Solution

The company worked with the technology partner, Sandhill Consultants, to implement erwin Data Modeler by Quest. The data architecture and data teams use the solution to create and refine an enterprise logical data model, reverse engineer applications, visualise data flows, grow expertise and help IT become a mature data management organisation.

Benefits

- Data visibility across all software applications
- More mature data management organisation
- Enhanced skills for data team members

Solutions at a glance

- **erwin® Data Modeler by Quest®**

the company lacked visibility of its data landscape. Nobody had a companywide view of all data assets that the business owned, the relevance of this data, where it originated, which network paths it travelled or how different data types connected.

A solution to enable data and application transparency

The company's lead data architect knew of an approach to address the company's data quandary. He explains, "I knew that erwin® Data Modeler by Quest® was easy to learn and use. It's highly intuitive and visual. I had used the solution elsewhere to create data models quickly and put them to productive use."

The lead data architect also had a long-standing relationship with a technology partner who could deploy erwin Data Modeler and collaborate with the utility to resolve its data concerns. "I've always had an excellent experience with Sandhill Consultants," he says. "Their insightful guidance once again helped me work more effectively with erwin Data Modeler and make sense of our data."

Developing an enterprise data model

When the utility's data team began working with erwin Data Modeler, which they deployed on-premises, its first effort involved the creation of an enterprise logical data model for the company's entire software environment. David Curle, regional sales manager at Sandhill Consultants, explains, "In erwin Data Modeler, we helped our customer create a conceptual model that had several main subject areas to prepare the ground for a logical data model. That, in turn, evolved into a canonical data model, providing a common data dictionary and helping us prepare and streamline the utility's integrations."

Clear visibility of 200+ software systems and their data flows

Working with erwin Data Modeler to create a unified data model delivered the transparency that the utility's IT was lacking. "By creating a logical data model with erwin Data Modeler, we gained one common view of data across the organisation and more than 200 software systems," the lead data architect says. "In the next step, we will be able to logically map and understand all data flows, helping us efficiently design and reliably deliver data-driven services."

The immediate stakeholder benefiting from the data architecture team's work with erwin Data Modeler is the strategy and architecture group working on technology roadmaps and transformations. The teams responsible for application development maintenance, database management and enterprise information management also see gains. The data modelling initiative provides them a reference framework that enables them to perform their work and achieve their desired results in the company's complex technology landscape.

The utility's data team continues to refine and evolve the data modelling effort to make more extensive use of organisational and industry expertise. The data model supports the company's application map, application catalogue and reference architecture. In addition, it draws on the proven data models that leading consultancies like Sandhill designed specifically for the utilities industry. It also reflects the best practices of the Data Management Body of Knowledge created by the Data Management Association (DAMA).

Reverse engineering helps understand the data landscape

Understanding the utility's data sources and applications after many years of outsourced IT management requires extensive research. To that end, the data architecture team relies on erwin Data Modeler to completely understand how certain software systems function before proposing any optimisations. "Our utility customer uses erwin Data Modeler to reverse engineer applications in order to document the structure of their databases and their relationships in the company's technology environment," Curle says. "In turn, that enables data architects to identify patterns and create logical connections that serve their requirements better."

Growing team skills with integent visualisations

Sandhill finds that data analytics is a quickly evolving discipline for many customers, including the water utility. Younger team members in particular are looking to advance their skills whenever they have the opportunity while they perform demanding work within the company's data landscape. erwin Data Modeler plays an important role in helping IT associates become more proficient in the absence of comprehensive documentation. The utility's lead data architect notes, "It can be difficult to clearly understand and describe where data originates, how it flows and how it connects to other data streams. In erwin Data Modeler, we create diagrams and visualisations to resolve conceptual challenges and thereby make our efforts much easier. That also greatly helps data scientists grow their expertise."

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The utility's analysts find that working in a visual style is faster and more immediate than lengthy verbal explanations. When it becomes challenging to think about constraints and other conditions that come into play not because of the internal structure of a database, but because of its relationships with other systems, visualisations are particularly valuable for the data team.

Data transparency becomes pervasive

As members of the data architecture team refine their diagrams and conceptualisations in erwin Data Modeler, their skills evolve and they can make a greater impact. Most directly, that growth may translate into team members gaining a better understanding of how relational data works or how to best write a SQL query in the utility's technology context.

Through frequent interactions and collaborations, the data team's insights are well-received in the larger IT organisation. "We are assisting the water utility in becoming a mature organisation with a higher level of data intelligence by working with erwin Data Modeler," Curle adds. "The solution helps the company improve its overall data governance and management."

The journey toward a mature data management organisation

Since the utility began working with erwin Data Modeler, the data team has improved many processes and begun creating documentation to capture its insights. The lead data analyst says, "In terms of the DAMA Data Management Capability Maturity Model, we are making rapid strides with erwin Data Modeler, from being fairly immature to achieving continuous improvement".

The data architecture team's work with erwin Data Modeler continues. Much reverse engineering is yet to be done. Company executives are asking for more granular definitions in the enterprise logical data model and data dictionary. Using erwin Data Modeler is helping the team build a staging database for data migration from its current Enterprise Asset Management software into a new solution. The lead data architect concludes, "We look forward to working with erwin Data Modeler as Quest enhances the solution with additional capabilities. Certainly, we will also continue to benefit from Sandhill Consultants' advice and guidance."