



Northern Ireland Water

Gaining the tools to analyse, manage and improve asset data

Key points

- Provides efficient asset data management tools to the asset information team
- Avoids the need to hire additional staff to input and manage asset data
- Improves efficiency by supplying maintenance teams with more accurate information

Summary

To support a province wide asset survey and improve day-to-day data management, Northern Ireland Water needed to be able to create, edit, analyse and audit its asset records more easily.

Northern Ireland Water and AMT-SYBEX worked together to develop a set of Bulk Upload and Data Integrity (BUDI) tools based on AMT-SYBEX Affinity Systemreach software.

The new tools simplify and automate the process of gathering, validating, reviewing and uploading asset data from each site – significantly reducing manual workload for the asset information team, and creating a more comprehensive and accurate record of the company's assets.

Overview

The Challenge

To improve business efficiencies and asset data quality, Northern Ireland Water was about to embark on a large-scale survey of above-ground assets at 3,500 sites across the province. For the asset information team, this posed a major challenge: without proper tools for data entry and management, even the day-to-day workload of creating and updating asset records was very time-consuming. To process the huge volumes of data that would be collected by the survey, the team needed to take an entirely new approach.

Asset Survey

NI Water needed a solution to enhance asset data input for 3,500 sites. The solution was delivered in the form of tools built on Affinity Systemreach software.

The Solution

After a full competitive tendering process, Northern Ireland Water worked with AMT-SYBEX to develop a set of Bulk Upload and Data Integrity (BUDI) tools that would substantially automate and streamline the process of gathering, validating, uploading and monitoring asset data. The joint project team delivered the new tools, which are built on Affinity Systemreach software, on schedule and slightly under budget.

The Benefits

- Reduces additional asset data management workload and avoids the need to hire a substantial number of additional data entry staff.
- Automatically validates data at the point of collection, saving time and improving data quality.
- Dramatically simplifies the creation and management of complex hierarchical asset records.
- Increases the auditability of data and processes, making it easier to demonstrate regulatory compliance.
- Lays the foundations for a more comprehensive and accurate record of the company's assets, which will ultimately help to enhance maintenance processes and increase operational efficiency.

Northern Ireland Water (NIW) is a government-owned company that provides water supply and wastewater treatment services to customers throughout the country. NIW employs approximately 1,200 people at offices across Northern Ireland.

NIW owns and manages reservoirs, treatment works, pumping stations and water mains that supply approximately 795,000 domestic, agricultural, commercial and business properties with 619 million litres of water every day.

NIW also owns and manages wastewater treatment works and wastewater pumping stations dealing with 134 million cubic metres of wastewater per day.

“Our business is focused on delivering the best possible value to our customers by providing safe, reliable and cost-effective water and wastewater services,” says Sean O’Boyle, Asset Information Development Manager at Northern Ireland Water. “In practical terms, this means that the maintenance of our assets is of paramount importance. On a day-to-day basis, many of our core business processes revolve around the inspection and maintenance of thousands of assets across the country.”

Challenges of Asset Record Management

Northern Ireland Water’s maintenance processes are driven by a central asset management system, utilising Ellipse, which provides a hierarchical view of the company’s sites and assets down to the level of individual components. However, such a large-scale asset survey was not envisaged when Ellipse was originally implemented, and the asset information team now required a more convenient way of creating, editing and analysing asset records.

“Keeping asset information up to date is vital. On a day-to-day basis, maintaining the asset records was a laborious, manual task,” explains Raymond Nicell, Asset Information Maintenance Manager. “Each record had to be created individually, field by field, by our team, turning asset data entry into a labour-intensive and extremely time-consuming job.”

“We wanted to build as comprehensive and accurate record of our assets as possible. However, we knew that it would create practical challenges with the creation of thousands of new asset records.”

Sean O’Boyle
Asset Information Development Manager
Northern Ireland Water

Increasing Asset Data Requirements

The problem became particularly acute when Northern Ireland Water decided to conduct a full survey of all the assets at 3,500 of its sites across the country. This survey would be known as the Asset Data Acquisition and Improvement (ADAI) project.

“We welcomed the ADAI project because we want to build as comprehensive and accurate a record of our assets as possible,” comments Sean O’Boyle. “However, at the same time, we knew that it would create practical challenges, because filling the gaps in our asset data would require the creation of thousands of new asset records. With our existing data entry processes, we would have needed to employ a substantial number of new staff just to get this data into our system. We needed to find a better way.”

Choosing the right partner

The asset information team created a very detailed specification for a new set of Bulk Upload and Data Integrity (BUDI) tools that would provide a standardised, automated process for collecting, checking, editing and uploading data into Ellipse. They then issued a request for proposals to a number of leading vendors, and conducted a rigorous competitive selection exercise. After a number of rounds of evaluation, AMT-SYBEX was selected to help design and deliver the new tool-set.

“AMT-SYBEX had expertise in working with large volumes of data and complex asset hierarchies, and the proper technical skills to deliver a substantial Ellipse integration project.”

Brendan McMenamín
IT Service Delivery Manager
Northern Ireland Water

“The level of detail in our specification for the BUDI tools meant that we had a very clear idea of what we were looking for,” says Brendan McMenamín, IT Service Delivery Manager. “We needed a partner that had experience of working with utilities companies, that had expertise in working with large volumes of data and complex asset hierarchies, and that had the proper technical skills to deliver a substantial Ellipse integration project. AMT-SYBEX met all these requirements, and we quickly built a very strong relationship with their delivery team.”

Affinity Systemreach

The project harnessed Affinity Systemreach, a solution from AMT-SYBEX that enables the rapid development of enterprise portals and web applications that interact seamlessly with underlying systems such as Ellipse. Using this solution, the joint project team was quickly able to create a comprehensive set of tools for viewing asset records in real-time, collecting and uploading new data into Ellipse, and defining business rules for automatic data validation.

“We involved the end-users in the development process, and we put a lot of effort into strenuous user acceptance testing,” comments Brendan McMenamín. “As a result, we know that the tools work properly in the real world, and we have had a lot of positive feedback from the users since the go-live.”

Cost Savings

“We’ve been able to create thousands of new asset records, utilising the existing digitising staff in the Ellipse asset records team. As a result the cost savings over the next 3-4 years will be substantial.”

Raymond Nicell
Asset Information Maintenance Manager
Northern Ireland Water

Simple, streamlined processes

When a new asset record is created, users can simply copy and paste or drag and drop elements from existing records, which dramatically accelerates the process. Data can also be uploaded in bulk from spreadsheets, allowing the team to update hundreds or even thousands of records in a matter of minutes.

“The results speak for themselves – the ADAI project has been underway for several months now, and we’ve received data from nearly 300 sites,” says Sean O’Boyle. “The data is collected on site and automatically validated, so basic errors are caught and corrected at the point of entry. We then review the data centrally as a further quality assurance measure before it is loaded into Ellipse. The whole process is radically more efficient and easier than before.”

Raymond Nicell agrees: “We’ve been able to create thousands of new asset records, utilising our existing staff. With the old processes it would have required a substantial number of extra staff to process the same data entry workload.”

Service Delivery

“We now have the tools we need to do a really effective job of gathering and managing high-quality asset data. This should help us deliver higher levels of service and better value to our customers.”

Sean O’Boyle
Asset Information Development Manager
Northern Ireland Water

Facilitating compliance and delivering value to customers

The new tools also make the asset records much easier to analyse, and provide a full audit trail that shows where the data has come from. This should help Northern Ireland Water demonstrate compliance with regulations and good data governance.

“From our perspective in the asset information team, we now have the tools we need to do a really effective job of gathering and managing high-quality asset data,” concludes Sean O’Boyle. “And looking at the bigger picture, the more complete and accurate our asset records are, the more effectively we will be able to support our maintenance and operations teams in managing our water and wastewater infrastructure. Ultimately, this should help to increase efficiency throughout the business and help us deliver higher levels of service and better value to our customers.”

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