
Case Study: Asset Management - Utility Company



The Customer

This utility company is the largest water and wastewater company in England and Wales, covering 27,500 square kilometres, which represents 18 per cent of the area of England and Wales.

They provide water and wastewater services to more than five million domestic and commercial customers in the East of England. The company has over 140 water treatment works and more than 37,000 kilometres of water mains. Also their wastewater network includes 43,751 kilometres of pipes connected to 1,106 wastewater treatment works.

The Challenge

With over 140 Water Treatment Works and over 1000 Wastewater Treatment Works, the utility company maintained a very broad range of assets and had massive amounts of asset data to manage. For example, compressors, building supplies, spare parts, tools and specialist items like portable traffic lights for road works when they need to put in a new pipeline or repair a leak.

The utility company had hundreds of thousands of assets that needed to be managed, but without data quality management plans in place the asset data had become both degraded and unusable.

Subcontractors were used by the company to service the Water Treatment Works. Assets were provided to these subcontractors to carry out the work and due to poor data management, these assets were then often lost, costing the utility company time and money.

The problem wasn't record keeping as each item sent out was recorded, but it was recorded differently by each person in the utility company and in the many subcontractors who input data. The difference in the descriptions used for these items meant that over 140,000 assets were scattered among various subcontractors and became virtually untraceable.

This resulted in both inadvertent and fraudulent use of the utility company's assets by subcontractors who then used these assets for different jobs not related to the company. For example when the utility company directed a subcontractor to send a portable traffic light to Site A, they could not find it. It had either been mistakenly put to use on another company's site or it just got lost in the system.

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This massively slowed the pace of work as the utility company then had to find another subcontractor (perhaps further away) and source more parts and machinery for that job through them. This was needless time and money wasted.

The Solution

A master data description file was needed by the company to enforce, both in-house and on to all of their subcontractors.

A list of acceptable master data items descriptions, standardized lists of categories such as unit of measure, colours and methods of recording dimensions were documented and put into use. By using new master data descriptions it was possible to test and monitor data in an ongoing manner, keeping firm track of the company's assets.

Even with a master data description file in place, manual data inputting would still cause too many problems as there is no real visibility of what is being input and what is being changed. Therefore an automated system was needed to rule out as much human error as possible.

Utilizing robust Data Quality methodology, key patterns and master data were identified and extracted electronically.

By profiling the data, it was noted that abbreviations and non-standard references to many classifications such as colours and product names could be systematically corrected.

Standardization of units of measurement and the positions within the description of specific classifications regularised much of the data structures.

It was then possible to profile the data structures for recurring core categories and inherent embedded classifications in an automated and much more highly effective manner using pattern frequency techniques.

This reduced massively the amount of data that needed to be interacted with manually. This also reduced the confusion that had occurred with staff using multiple recording systems of changes in MS Excel.

As a result the project was completed well within the time allocated to the project, which would have been unlikely to occur as a manual procedure. The methodology could also be used on an ongoing basis.

Applications:

Business Intelligence

Data Cleansing

Data Quality Management

Deduplication

Master Data Management

Product Data Management

Purchasing Data Consolidation

Single View of Customer

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The Benefits

Dataactics enabled the utility company to regain control over their process management.

- Ability to effortlessly track every asset
- Knowing that vital assets are available when needed ensures the smooth running of projects and the whole organization
- Large reduction in the fraudulent use of the company's assets
- Ability to audit subcontractors at will
- Ability to plan for projects more efficiently by knowing all the right parts are in the right place at the right time
- Risk management – the company can now fully predict the cost and time of each project more accurately
- Faster response to customers – higher service levels
- Much better utilization and 'sweating' of company assets

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