



ScottishPower

Improving data quality so that 100% of ScottishPower's retail energy customers can be billed accurately

FAST FACTS

CUSTOMER

ScottishPower plc (Energy Retail division)

CHALLENGE

Improve the accuracy of billing customers for domestic energy usage through the provision of a flexible and scalable platform/environment to enable ScottishPower to highlight data quality issues and ensure that customer data is aligned across the full applications portfolio.

INFORMATICA SOLUTION

Informatica PowerCenter Advanced Edition (Data Profiler, Data Analyser, Meta Data Manager)

BENEFITS

- Replacing bill estimates with actual bills due to improved data alignment
- Reduction of customer debt risk to the business through more accurate and effective billing information
- Improved Settlement Performance and avoidance of Liquidated Damages arising from settling on estimated consumption.
- Data integration platform developed that can be extended to other areas of the information environment to deliver a more formalised and systematic approach to data management

“We aim to provide an efficient service to our customers that ensures interactions of no value to the customer are minimised. This enables ScottishPower to reduce its cost to serve and offer more competitive pricing. Informatica's data quality solution has allowed us to create an information management environment that enhances the efficiency of our customer billing operations.”

— Derek Johnston, Application Development Director, ScottishPower

ScottishPower is an international energy company, made up of four businesses: Energy Retail, Energy Wholesale and Energy Networks in the UK and PPM Energy in the US. The company provides electricity, transmission and distribution services in the UK, and operates electricity generation and gas storage facilities in the UK, US and western Canada.

Its customer supply arm, ScottishPower Energy Retail, is the gas and electricity supply division and holder of the group's supply licences. It manages pricing, selling, billing and receipting for gas and electricity supply to both business and domestic customers, and performs the customer service functions to deal with enquiries arising in the course of this business. Since deregulation of the energy market, ScottishPower's market has become increasingly competitive, meaning that the company not only has to work harder and be more effective to retain its customers, but the management of its customer data as become far more complex. In a more competitive market, customers are known to transfer rapidly between energy providers, meaning that the customer data must be accurate and closely marshalled throughout the lifecycle of the customer relationship.

Included within Energy Retail is SP Dataserve Ltd, which is the data management and metering company, managing the data processes that underpin customer registration through billing and settlement. The group has more than 5.2 million customers in the UK. The billing function is obviously a critical one for ScottishPower, but in recent years effective billing has become the fulcrum of customer satisfaction, a challenge that has been exacerbated by rising wholesale energy prices that result in increased charges to the consumer.

At the heart of this project was the company's need to reduce the 'cost to serve' each customer, the costs associated with initialising a new customer, billing them and collecting payments. As a result of the complexity of the industry processes and the portfolio of systems required to support those processes, Energy Retail employs a significant number of staff to manage exceptions that arise from the 'meter to bill' process, i.e. the steps involved in scheduling a meter reading job, taking the readings, passing those readings through industry processes and then entering those readings into the customer's account on the billing system.

For the vast majority of customers, this is a largely automated process, save for the meter reader. Due to the misalignment of data across the systems involved, there is the potential for meter readings to fail validation and consequently not make it to the billing system. Under those circumstances, the customer will be issued with an estimated bill that may not meet their expectations, thereby generating customer contact, and there is an exception that needs to be managed.

The team's brief was clear: minimise the level of exceptions, reduce the cost to serve and the retained customer base would become more profitable.

“What we have started here is an ongoing crusade for better customer data quality. We are at a relatively early stage, but already the level of inaccurate data we have been able to identify and the new processes we now apply to managing data quality are beginning to transform our ability to deal with these issues.”

— Derek Johnson, Application Development Director, ScottishPower

The Challenge

Billing accuracy and the ability to collect payments on time is paramount in the modern energy industry. Once a customer is being supplied with energy, bills are normally issued quarterly, either as estimated usage or against actual meter readings. Data accuracy is the determining factor in the estimate process, and is also an important consideration when actual meter readings are taken, so that the true amount owing can be reconciled and future estimates can be more accurate. The more ScottishPower interacts with a customer beyond issuing bills and collecting payments, the higher the cost to serve. This was the main challenge for the team – by enhancing data quality, greater accuracy could be brought to bear upon the entire billing cycle, to avoid the need for costly additional meter reading visits or other follow-up activities. The challenge is essentially about ensuring that meter readings captured during the normal scheduled survey visit are validated and passed through to the billing application for issuing.

ScottishPower's IT Business Services team use Six Sigma methodologies to justify, plan and implement IT investments, and to ensure that projects are delivered according to plan and the maximum potential benefits are realised. Six Sigma is a disciplined, data-driven approach and methodology for eliminating defects in any process - from manufacturing to transactional and from product to service.

The team applied the Six Sigma methodology to its data quality project in order not just to improve the quality of customer information but to devise an overall data quality management framework.

Six Sigma enabled the team to make the project easier to evaluate, and accurately justify the benefits that would be delivered from improved Data Quality through clearly defined key performance indicators governing the 'meter to bill' process chain.

The Solution

Having used Six Sigma to create a data quality framework, ScottishPower began evaluating solutions for creating the automated and systematic data quality management platform required.

The company had evaluated several possibilities for an earlier project with significant data migration requirements and chose Informatica PowerCenter's Data Profiler, Data Analyser and Meta Data Manager modules. Informatica PowerCenter had been chosen because of the complexity of data sources involved and the need for strong auditability.

There was therefore a good fit in terms of capability with the requirements for data quality management in this case.

Solving these data quality problems meant firstly consolidating data from 12 source systems into a common data model and then profiling the key attributes of the data to identify issues. Informatica Data Profiler enabled a rapid and accurate breakdown of the overall quality situation to enable classification and quantification of the underlying data and system issues. This enabled the company to plan and resource a remedial strategy that targeted those initiatives that would deliver maximum benefit, and then retarget those resources as the project progressed.

"All manner of data comes into our billing environment and we needed a framework that would ensure bad data was rejected before it got in," said Derek Johnston, Application Development Director for IT Business Services at ScottishPower. "So the project was tasked with firstly solving the specific problems that we had around poor quality data that already existed within our systems, and then establishing the framework by which all other current and potential data quality problems can be identified and managed."

ScottishPower has been successful in introducing a data quality platform identifying issues across 12 applications supporting the billing process. This makes the billing cycle more accurate, more efficient and reduces the need for customer contact. These benefits combine to lower the cost to serve each customer. Much of this capability is driven by the presence of a single framework for assessing, correcting and managing data quality, which gives the company a holistic view of the accuracy of customer data.

The quality framework developed enables ScottishPower to extract data to the degree to which its source systems can be trusted, analyse it for inaccuracies so that quality can be accurately assessed and then transform the data in accordance with the requirements of the applications supporting the customer billing process.

"What we have started here is an ongoing crusade for better customer data quality. We are at a relatively early stage, but already the level of inaccurate data we have been able to identify and the new processes we now apply to managing data quality are beginning to transform our ability to deal with these issues. The quality platform we have created can now be extended into other areas of the business as our needs evolve," said Mr. Johnston.

The methodology for the project began with defining data quality rules for the relevant files and tables, coding those rules, running the data, then analysing the data and creating an action plan for quality assurance. Having now completed the project, data quality levels are evaluated formally on a quarterly basis.

The Results

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“We have put in place what amounts to an ongoing production line for data quality management through the Energy Retail division. Each new data quality challenge has become easier to tackle because of the platform that has been established,” said Mr. Johnston. “We can now look to introduce appropriate data accuracy controls elsewhere in the business. It is not an overnight process, but the potential benefits are recognised at all levels.”

ScottishPower expects to derive further operational and cost to serve gains by extending the data quality initiative elsewhere in its information environment.

NUTS AND BOLTS

- Data Quality: Informatica
- Sources: 12 separate source applications covering electricity and gas supply and utilisation, MSP industry-specific billing platform, COBOL-based IBM mainframe running DB2
- Target: Oracle datawarehouse
- Platform: Sun and IBM hardware, UNIX on some servers
- Utilised IBM flashcopy functionality for Disaster Recovery process to provide access to data without impacting source application performance



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