

Customer Briefing Note 017

Data Quality Management

Edge Background

Edge is our flag-ship web-based software solution for retail water and waste services suppliers in the UK.

Edge has been designed and built from first principles to provide a complete “Business in a Box” for both established and new entrant Licensed Providers.

The Edge system allows seamless operations across the UK – in both the Scottish and English markets.

Edge runs on the Microsoft “Azure” cloud platform, and provides unrivalled flexibility, security and availability.

Deployment of Edge is quick and easy, whether you are a new start or the largest water company in the country.

Data Quality Management Background

Data quality is essential for the effective operation of all competitive markets and the UK Water / Waste Water market are no exception.

The history of both the Scottish and the English Water markets is one of vertical hierarchy monopolies, where Wholesale and Retail functions operated within the same business. Accordingly, data quality was never a priority and as a result it is generally poor.

In Scotland, the competitive water market was launched in 2009 and this resulted in a splitting of the Scottish Water business into a Wholesale business and a new Retail business called “Business Stream”.

The Scottish Regulator (WICS) (<https://www.watercommission.co.uk/>) and the Market Operator (CMA) (<http://www.cmascotland.com/>) along with the Wholesaler and Retailers have spent nearly 10 years working on the improvement of data quality in the Scottish market. It is much improved from the early days, but there is still areas where improvements can be made.

The English competitive water market was launched in April 2017 and is considerably larger than the Scottish market, with over 20 wholesalers and even more retail companies.

Prior to market opening the regulator (Ofwat) (<https://www.ofwat.gov.uk/>) and the Market Operator (MOSL) (<https://www.mosl.co.uk/>) encouraged the water companies to put data quality as an important priority that would be essential to effective market operation. This was met with mixed results, with some companies making great efforts and other paying it lip service.

Accordingly, market data quality in England is very mixed, with pockets of good data quality and a lot of poor data quality. This has been challenging for all market participants, Wholesalers and Retailers alike.

Types of Data Quality

When we talk of Data Quality within the context of a competitive market it is important to understand that there are two distinct components. These are:

- Data Accuracy
- Data Consistency

Data Accuracy means that the data held in a system is correct. For example, the meter installed at a property is recorded as having correct Make, Serial Number, and Size etc. This can be confirmed by making a site visit and physically checking the meter. Data inaccuracies are sometimes called Data-World Divergence.

Data Consistency on the other hand means that the data is consistent across the three different entities of the competitive market. For example, the data held on the Wholesaler system is the same as that held on the Retailer system and is the same as that held on the Market Operator (MOSL) system. At the start of the competitive market it is likely that all the data was aligned and therefore consistent (it might not have been accurate!). However, as time goes on there is an increased opportunity for data mismatches to occur. This can happen for various reasons, from system failures, transactions getting lost or data script updates being made on one system but not on another. We refer to this phenomenon as Data-Data Divergence and it can be illustrated as shown in Figure 1.

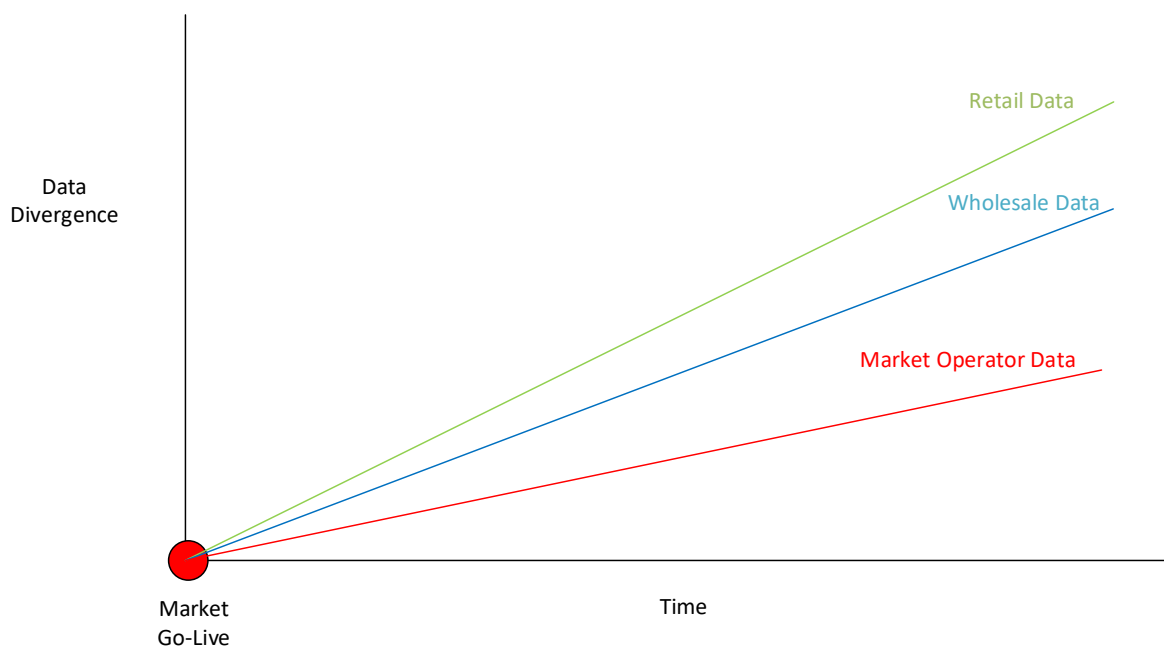


Figure 1 - Data-Data Divergence

In Figure 1 we can see that the data was consistent (not necessarily accurate) when the market was opened but gets progressively mismatched over time.

Data Quality Audits

Periodically the Market Operators (MOSL and the CMA) will conduct a Data Quality Audit. This generally happens once per year.

The Market Operators ask the market participants (Wholesalers and Retailers) for extracts of data from their respective systems. The data extracts are then compared with data held on the Central Systems (the Market Operator system). This provides an indication of the degree of data mismatch (Data-Data Divergence) that is prevalent in the market.

Edge Data Quality Management

The Edge system provides a powerful data quality reporting tool that quickly identifies mismatches between the Retailer system (in this case Edge) and the Market Operator system (MOSL or the CMA)

Edge can do this because it loads the Market Data Set (MDS) data from the Market Operator systems on a daily basis. See also CBN0xx

Edge then does a comparison of data held on the MDS against data held on Edge (Our Data) and this allows mismatches to be quickly identified and fixed.

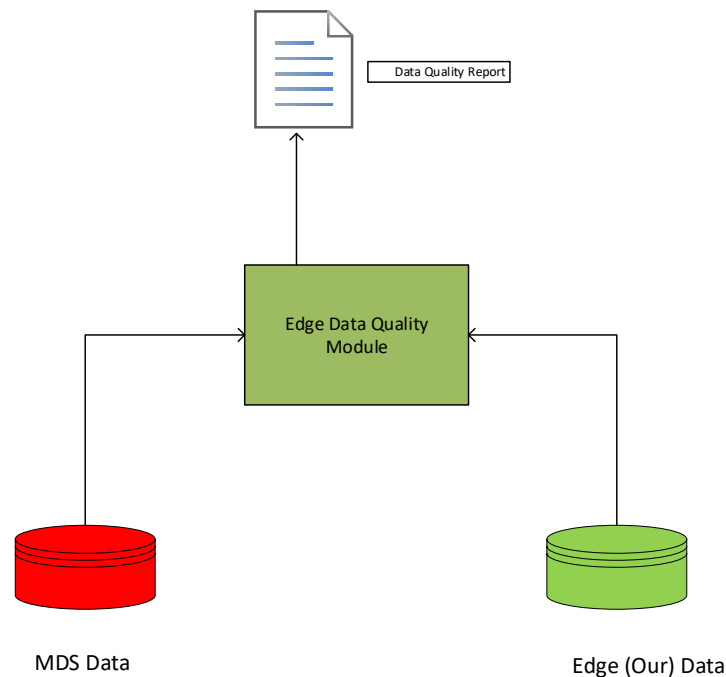


Figure 2 - Edge Data Quality Reporting

Note that the accuracy of the data cannot be confirmed using this approach, only data consistency.

However, by maintaining data consistency between Edge and the Market Operator systems, Edge is more likely to create accurate customer bills. Furthermore, settlement charges from the Meter Operator are likely to be more accurate.

Related Customer Briefing Notes (CBN's)

You may also be interested in these related CBN's

- CBN001: "Edge Overview"
- CBN002: "ADC Billing"
- CBN003: "Volumetric Adjustment"
- CBN004: "Metered Billing"
- CBN005: "Block Tariffs"
- CBN006: "Consolidated Billing"
- CBN007: "Published Tariffs"
- CBN008: "Manual and Automated Billing"
- CBN009: "Bill Output Formats"
- CBN010: "Market Transactions and Data Items"
- CBN011: "Integrated Transaction Management"
- CBN012: "Bitemporal Updates"
- CBN013: "Market Data Set"
- CBN014: "Market Pricing"
- CBN015: "SPID Transfers"
- CBN016: "CRM Module"
- CBN017: "Data Quality"
- CBN018: "Meter Reading Management"
- CBN019: "Sub Meters and Complex Metering"
- CBN020: "Meter Exchange Management"
- CBN021: "Trade Effluent"

Further Information

If you require further information on any aspect of the Edge solution, please contact us at:

Email: enquiries@cloudwater.co.uk

Phone: 01413438992