Fintech Proof of Concept

NTT DATA & Reportix – Advanced XBRL data management

Background

In this Proof of Concept (PoC) we wanted to explore how innovations in Extensible Business Reporting Language (XBRL) processing technology could have the potential to reduce the time and cost spent on technology and data related change significantly, whilst making the data available to end users more rapidly and with greater flexibility.

It is estimated that 70%-80% of regulatory data collected are provided using the XBRL standard. It is now the de facto international data standard for reporting of accounting, finance, tax, risk, climate change disclosures and increasingly enterprise reporting, and in use in over 75 countries around the world.

The Bank collects and analyses a large quantity of regulatory data from financial institutions such as banks, building societies, credit unions, insurers and mortgage companies. New regulatory reporting requirements are being provided by the Bank as XBRL based open data taxonomies. The Financial Conduct Authority (FCA), in their RegTech call for input in July 2016, evidenced feedback recommending the adoption of technologies such as XBRL to improve regulatory reporting. Analysis of data received in XBRL is vital for upholding the Bank's mission, covering front line supervision to wider micro and macro prudential supervision.

The Bank's Technology Delivery Division is responsible for the safe and effective operation of the systems used to collect and analyse data, and for ensuring on-time, trusted and cost-efficient delivery of services. This PoC was specifically designed to explore concepts that potentially allow the Bank to reduce the cost of technology and data change significantly, leverage the standard to its full potential, drive resource efficiencies and improve speed and flexibility of access to data.

The Proof of Concept

In the fourth cohort of the Fintech Accelerator, the Bank selected NTT DATA & Reportix for the PoC. NTT DATA & Reportix demonstrated a complete and ready to go offering for the PoC. The Bank worked with them to explore three outcomes:

1. Substantial resources are required for project implementations of large reporting packages that are published on a regular basis, e.g. twice a year or annually such as CRDIV and Solvency II. We wanted to analyse these figures to see if efficiencies could be realised. Could the solution demonstrate a potential reduction in technology change effort of at least two thirds?

2. It is important to the Bank that any solution demonstrates the ability to leverage the investments being made by the Bank in its data architecture programme. Was it possible to demonstrate that this solution had the potential to leverage the data architecture investments being made by the Bank, as we look towards the future?

3. Could the solution empower end users by providing faster and flexible access to data via a self-service model? In addition to the first two outcomes, was it possible to demonstrate that the end users have the potential to interact with the data flexibly using different tools, and the ability to combine and compare with other data sets (including structured, unstructured, non-XBRL)?

The Bank defined a 'minimum viable product' requiring the nine deliverables below, meeting the success criteria, and delivered within an ambitious timeline of 20 working days:

1. Set up the infrastructure and basic solution on cloud infrastructure;

2. Implement the EBA CRDIV and UK Banking XBRL Taxonomies;

3. Implement the FSA001 XML data collection;

4. Process, validate and store fictitious data for six reporting periods for two fictitious companies from a total of 22 reported files;

5. Export data (for use in other systems / software tools);

6. Enable search by firm, reporting period and report type;

7. Enable viewing of data for each of these data sets in standard form / template view;

8. Enable selection of data for a given firm in an unfixed data centric view based on dimensional attributes; and

9. Demonstrate how new data can be derived from data sets / combined with other data sets.

The PoC successfully delivered on each of the above deliverables in less than 20 days and therefore successfully met the three success criteria summarised below.

Success Criterion 1: Demonstrate the potential for the solution to reduce the effort associated to change by at least two thirds.

One of the ways this was demonstrated was by the fact the PoC was delivered in under 20 days.

Success Criterion 2: Demonstrate the potential for such a solution to leverage investments being made by the Bank in its data architecture.

This was demonstrated by the fifth deliverable, where the extracted data was in a format that could be stored and consumed by other Bank solutions.

Success Criterion 3: Demonstrate end-users can access the data as they would normally, but now have the potential to interact it with it in different ways with different tools.

This was demonstrated by the sixth, seventh, eighth and ninth deliverables. End-users were provided with the means to view data in the standard template views or query – via a simple search – and the ability to perform advanced queries on the data by traversing the underlying data point model.

Reflections and next steps

Regulation requires ongoing change. The data and technology implementation elements of regulatory projects are key to realising simpler, faster and cheaper solution implementations that enable better holistic data management, reduction in total cost of ownership and provide greater flexibility to end-users; unlocking the true value of the data held within organisations.

In a data age, having the right data model, data standards and a standardised format to structure your data can provide greater flexibility to access, interact, interrogate and analyse the data as evidenced by this solution. Such an approach sets a solid foundation for holistic data management and robust yet flexible analytical solutions. We believe there is no 'one size fits all' for different types of data collections / reporting. The data the Bank is collecting are increasingly granular, multi-dimensional and require both form and data centric approaches to view and interrogate. It is important that our approach to storing, managing and making the data available for analysis adapts to these changes.

We think tools masking the perceived complexity of XBRL and leveraging the power of the standard to act as a data management layer or 'middleware' for data are the necessary evolution of its potential analytical applications, and it is encouraging the software market is evolving to meet this need.

The NTT DATA & Reportix solution demonstrated it has the potential to reduce the cost of technology and data change. It also demonstrated certain steps traditionally carried out in solution development cycles during a project implementation would no longer be required and that it was possible to use the standard 'natively' without the need for transformation.

Based on the results of this PoC, the Bank may consider a second PoC to explore the analytical capabilities of an XBRL solution in greater detail, to understand if it could meet the demanding analytical needs of end users. We are also keen to understand integration with specific data storage and collection technologies in the Bank's data architecture.