

# MICROSOFT FABRIC CASE STUDY

## SUMMARY

Sircle had developed an innovative Planned Preventative Maintenance (PPM) dashboard in Power BI so their clients could analyse and action their survey results effectively. Sircle now wanted to use the power of Microsoft Fabric and AI to automate the ingestion, transformation and structuring of survey data from GoReport outputs into an Analytical Data Store (ADS) that could readily scale the provision of PPM survey analytics to a growing number of clients and expand to include Latent Defect, Manufacturing and Fire survey results.

*“We have been delighted with the advice and support INFuse provided Sircle in building Power BI dashboards and a Microsoft Fabric database. The end-to-end process was managed excellently well, communication remained strong throughout as did the engagement. INFuse has become a trusted partner of Sircle and I strongly recommend them to others who want to maximise the value of their data, both analytics and migration”*  
Anthony Walker, Director at Sircle

## ABOUT SIRCLE

Established in 1992, Sircle is one of the leading UK multi-disciplined surveyors. Sircle provides nationwide services with experienced surveyors and modern equipment. Their services range from land & building surveys to project management, with a focus on accuracy and quality. Sircle are unique in offering a nationwide service using experienced surveyors and state-of-the-art surveying equipment. This ensures their customers have consistency in the approach and quality of deliverables. Sircle work with clients across different sectors in the UK and Europe.

## THE CHALLENGE

Using the new Microsoft Fabric data pipeline functionality, automate the collection of survey results from GoReports Excel outputs, switch existing Power BI client dashboards to source from Fabric and enable a scalable, secure platform where clients can consume site surveys of any NRM3 standard type.



## CHALLENGES

- Remove manual effort needed to prepare new client Power BI reports.
- Maximising functionality of new Microsoft Fabric platform .
- Source from unstructured Excel survey output data.
- Develop scalable Analytical Data Store that could ingest any NRM3 Survey standard.
- Ensure Microsoft Licensing costs were best value for Sircle.
- Enable clients across different Microsoft Office 365 tenants could consume data safely and effectively.

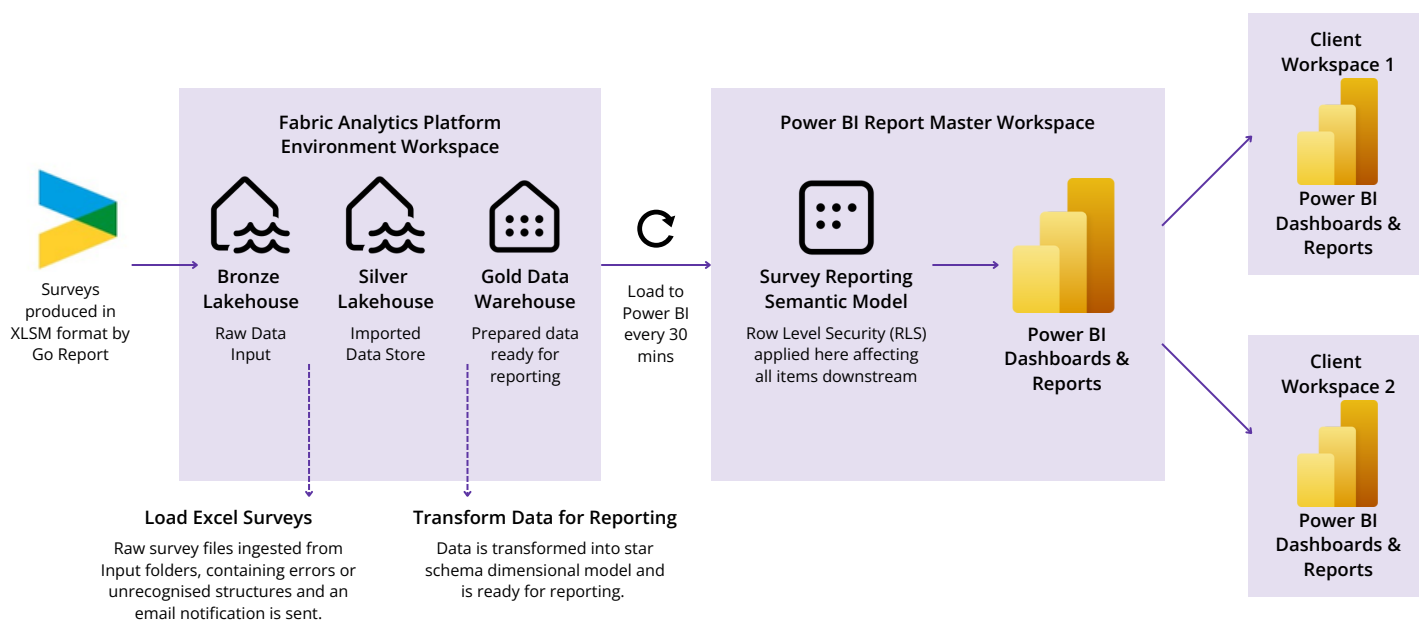
## DEVELOPMENT SUMMARY

- Enable Microsoft Fabric Development environment.
- Develop Excel file ingestion routine into Fabric's Bronze Lakehouse.
- Implement detailed audit and error handling.
- Transform and dimensionally structure data in Silver Lakehouse and load into Gold Lakehouse Analytical Data Store.
- Reengineer Power BI Planned Preventative Maintenance Data model to feed from Fabric Gold Lakehouse using import mode and row level security.
- Enable secure client access to Power BI Dashboard.

## THE SOLUTION

Building a data solution that's ready for today and for the future required a modern toolset and flexible architecture. The end-to-end all in one feature set of Microsoft Fabric presented the perfect platform to build on. We opted for the medallion architecture which allows us to deliver and report on dimensionally structured data while still keeping the full original data available in a Data Lake for future projects and analysis.

PySpark notebooks and Azure Data Factory give us the flexibility we need to efficiently extract data from XLSM files, whilst carrying out validation on the data being imported. The flexibility of notebooks enables the handling of files in different structures, for example differently formatted pages. Once data is extracted to the Data Lake it is processed into a dimensional star schema structure using SQL and stored in the data warehouse. With this in place Sircle are able to support reporting which is done in Power BI and delivered to clients securely by enforcing row level security.



## BUSINESS BENEFITS

### Leading client survey analytics

Sircle's Survey analytics provide a USP that differentiates Sircle from competitors and improves client acquisition. Fabric automation further accelerates the onboarding of new clients.

### Time saved with end-to-end automation

Hours of critical surveyor's time is saved as survey data does not have to be manually loaded and structured into Power BI Data Models.

### Affordable best of breed analytics platform

Leveraging Microsoft Fabric's scalable new analytics platform provides all the capability of the latest Azure data storage and analytics functionality, at one affordable monthly cost.

### Ongoing support and analytics evolution partner

There is an ongoing working partnership between INFuse analysts and Sircle's technical team. Work is ongoing to constantly improve the survey analytics to customers ensuring Sircle's position of thought leader in Survey analytics.

## OUTCOME AT A GLANCE

- Automated ingestion of GoReport surveys.
- Structured data validation and ingestion error handling.
- Efficient and cost effective data storage in parquet format.
- Structured best practice Kimball gold data warehouse & Analytical Data Store.
- Simple route for onboarding new client analytics.
- Secure and isolated client guest consumption enabling Microsoft "bring your own license" capability.
- 1 month agile development sprint.