



## MS POWER BI MANUFACTURING CASE STUDY

# ENHANCED MANUFACTURING ANALYTICS PROVISION WITH MICROSOFT POWER BI



### SUMMARY

Kyocera's UK subsidiary, SGS Tools, had relied on a range of solutions to provide manufacturing performance analytics to the business and group. These were based around a legacy of SQL database extracts, MS Access reports and manual spreadsheets. Kyocera SGS were keen to leverage the analytical power and rich visualisations available with MS Power BI. They turned to INFuse data to establish a scalable automated data warehouse platform and develop a core of effective Power BI dashboard manufacturing insights from which to develop their own rich content.



### ABOUT KYOCERA SGS

Kyocera SGS Precision Tools is an ISO-Certified leader in round solid carbide cutting tool technology, servicing the world's most advanced and demanding precision industries. Kyocera acquired SGS in 2016. The Kyocera Corporation is a Japanese multinational ceramics and electronics manufacturer headquartered in Kyoto, Japan.



### THE CHALLENGE

Establish a best practice Data Warehouse with automated ETL that can be easily expanded over time to hold Works Orders & production information. To then develop an efficient Power BI Manufacturing Efficiency data model for this functions and develop an effective Power BI Manufacturing Dashboard from which SGS can develop further analytical content as required. .

### AT A GLANCE

#### Drivers

- Limited legacy reporting functionality.
- High manual effort to collate reporting output.
- Only limited in house MS Power BI development skills.
- Disparate islands of reporting content.
- Reporting out of alignment with Kyocera's 365 modern workplace cloud strategy.
- End of life data supply chain concerns (MS Access).

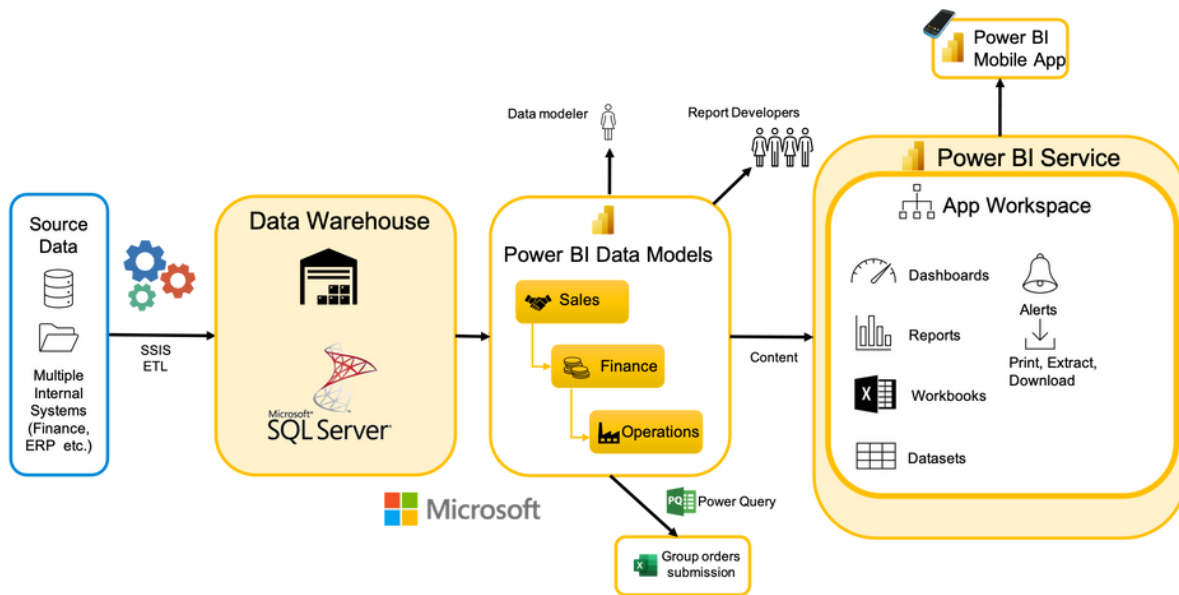
#### Existing Setup

- Microsoft SQL Server.
- MS Access.
- Multiple flat file outputs.
- MS Excel used to deploy information.



## THE SOLUTION

INFuse worked with SGS IT & their Production Manager to review the existing provision of manufacturing efficiency information - this was a highly manual process for SGS to produce and validate a monthly spreadsheet of Manufacturing Efficiency information. INFuse worked with SGS to wireframe the Power Bi Dashboard design whilst INFuse data engineers created an automated ETL process to structure the required source data into a star schema Manufacturing SQL data mart. The Power BI Model and Production Stats' dashboard was then created from this and included visuals for; orders raised, produced, on time, overdue, recovery & CNC value, production turnover value and on time delivery analytics by product type over weeks, rolling months, and YTD. This information could be drilled down to individual work orders. The dashboard was then rigorously tested before adoption by SGS.



## BENEFITS

### Enhanced production insight and performance

The rich analytical dashboard provides enhanced insight to make informed decisions to maximise manufacturing efficiency

### Collaborative Partnership

SGS can effectively generate their own Power BI content with the support of trusted specialist MS Analytics partners

### Company wide analytical alliance

Data Warehouse data supply chain will ensure one version of commercial truth across SGS as it grows.

### Scaleable & portable Infrastructure

Ability to upscale or change data sourcing between selected ERP Apps as SGS app usage evolves.

### Staged Investment

Agile Analytics approach ensures rapid business return on investment whilst minimising impact on SGS resource.

### Rich visualisation engines

Full utilisation of Gartner's best-of-breed agile analytics functionality: MS Power BI and aligns to the group's MS 365 workplace roadmap.

## OUTCOME AT A GLANCE

### New Analytics Setup

- SQL Star Schema Warehouse
- SSIS Automated data loading
- Functional Power BI Models
- Power Query - MS Excel output
- Power BI Service
- Power BI Dashboards

### Delivery Timescales

- SQL Server Production Data Mart and ETL - 2 Weeks
- Power BI data model and creation, Production Stats' dashboard development & testing - 6 Weeks