

Tyne Road Tunnels solution

Background

Like many businesses, they faced the challenges of spending too much time making reports and not enough time doing the analysis. The switch to Open Tolling added to their difficulties as this was a step into the unknown, with new processes and procedures required overnight. The large amount of data recorded in different systems made it hard to track and report on things with significant manual effort.



Within this company, the data team who are responsible for producing regular reports and insights for the company, was burdened with the task of manually generating dashboards and conducting analytics. This process was time-consuming and required a lot of effort, which affected the team's productivity and efficiency. Given the volume of data recorded, keeping track in a logical and orderly way could be problematic and, in this case, on such a scale it was a complex problem to solve. To give some context, the client deals with monitoring and reporting traffic flow through a two-lane vehicular toll tunnel, so having access to data about faults or traffic events is vital.

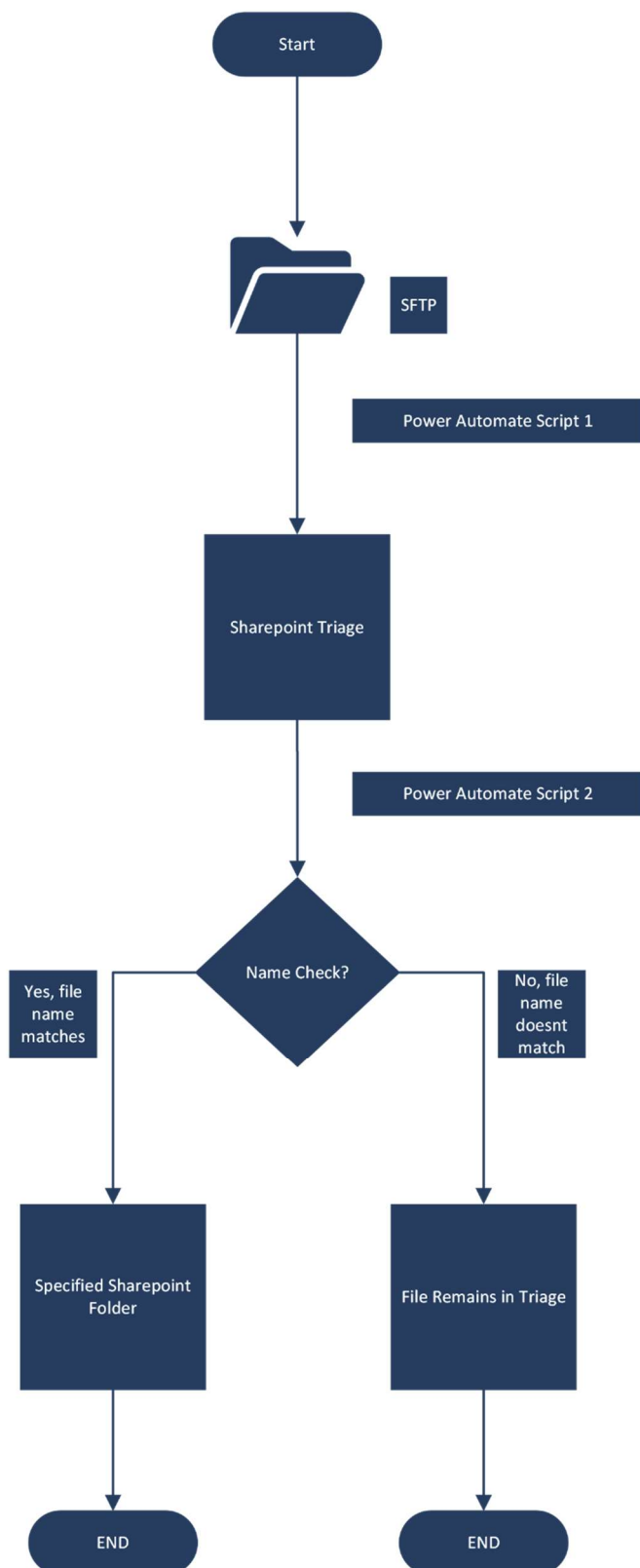


Many organisations start their journey with Geordie Consulting by using Power BI, which is a low-cost or even “free” tool to create and test a proof of concept. Often, the initial Power BI solution must rely on existing data feeds and the native features of Power BI. The success of that first solution then helps an organisation to decide how much they want to invest in Power BI and the broader Azure Analysis/Data suite (now Fabric).

The Benefits of Power Automate

Power Automate is a cloud-based service from Microsoft that allows users to create automated workflows between apps and services for various purposes, such as synchronising files, receiving notifications, gathering data, and more, using a low-code, user-friendly interface. Power Automate works on an if this then that engine, which makes it easy to create and understand these flows, as well as to pass them on to another staff member if needed. Core elements of Power Automate are included within the O365 subscription

Automation of Ingestion



As an organisation dependent on service providers, the main data used is accessed in terms agreed by contract. One primary provider shares files through a SFTP gateway. A Power Automate Flow which is triggered by monitoring the SFTP for new files being added, automatically transfers files from the gateway to a SharePoint online. A subsequent flow processes the files in triage, using a Microsoft List to determine locations. This flow is triggered by a new file being created in the Triage SharePoint site. The reasoning behind utilising two separate flows rather than one flow is that it allows for monitoring the different stages of the flow and makes it easier to identify what causes a failure if there are any issues. This two-flow approach allows for consistent processing of different files, with only one line in the list needing to be updated for any changes or additions to the files or locations. A final flow deletes old files. Each file location refreshes its dataflow. This can be done by schedule or “on update”.

We use a separate flow to track the successes/failures and record them in another list, where we can see the status of each flow in one place. We also added a counter to check how many failures there are, and this would trigger another refresh if there were some failures. If there were too many failures, it would alert defined individuals and stop. This lowers the support effort and reduces the demand for extra subscriptions/licenses.

This solution operates independently, making sure that any report is available before the workday starts, so there is no holdup in performing analysis activities or getting crucial information.

Benefits

The solution uses Power BI Premium per User subscriptions and the organisation's existing O365 E3 subscriptions.

Note: a single Power Automate Premium subscription was used to connect to the 3rd party gateway (the reason for using a single script to import data into the environment).

“Working with Geordie Consulting has most definitely saved work days and allowed our data analysts to spend more time analysing rather than producing reports.

It has reduced stress, and workload and also has helped to identify issues/anomalies which would have been difficult if done manually. It has also given the business a better understanding of the data and systems. “

- Lead Analyst

By employing Power BI, SharePoint, and Power Automate, they have freed up people 6 hours a day equating to an approximate £1,890 saving in monthly costs. This saving is on paper as the main benefit is the availability of the team for ad-hoc requests or analysis rather than “churn”. The implementation of the new system has significantly reduced undetected errors and mitigated the effects of staff absences.

- Ⓞ **80%** increase in productivity
- Ⓞ **60%** increase in efficiency
- Ⓞ Project costs recovered in under **18 months**



Geordie Consulting is a Power Platform Consultancy based in the heart of Newcastle-upon-Tyne, UK. We support our global clients in harnessing the full power of their data through semantic modelling, reporting, process mining, apps, and automation. We also offer comprehensive training to empower your teams to confidently use, maintain, and develop your organisation's data capabilities.