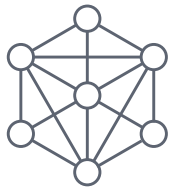


Data Management Solution for Survey Data Reporting Automation

Private Equity Company

Built a unified data warehouse for survey data and automated the data pipelines and reporting process

Private equity company needs data management solution for survey data reporting automation

Picture this…

You're looking to design and implement a Unified Data Warehouse solution that automates the data ingestion process and enables faster and more accurate analysis of the Technology and Security Survey data regularly conducts Technology Surveys every year and Security Surveys every quarter for all its 40+ portfolio companies to identify and address any gaps or risks in the Technology and Security areas. These surveys have more than 100 questions for every response and are manually analyzed. However, the current process of downloading and analyzing the survey data in Excel Sheets and Power BI is inefficient and prone to errors. It also hampers the ability to perform historical analysis of the survey data over time. To overcome these challenges

You turn to Accordion.

We partner with your team to Built a unified data warehouse for survey data and automated the data pipelines and reporting process, including:

1) Analyzing the data structure of the source Survey Response data and the transformation logic in the existing Power BI dashboards
2) Designing and spun off a new data warehouse on Azure to extract, transform, load, and store the survey data
3) Building automated pipelines to ingest data to create a single central repository of the data on Azure SQL Server using Azure Data Factory and Logic Apps
4) Transforming the raw data and built data models that can serve any reporting needs
5) Reconfiguring existing Power BI dashboards to point to the new reporting views from the newly developed Data Warehouse

Your value is enhanced.

The automated data warehouse eliminated the manual process of updating the BI dashboard and reduced the refresh turn-around time (TAT) from 1 day to 10 minutes. Scalable architecture which can include more portfolio companies and future annual survey data without changing the architecture. You have provided flexibility to design & implement new KPIs/Metrics and questions and push them on the dashboards seamlessly. You have ability to compare and analyze historical and current data (YoY, QoQ, MoM, etc.) which was not possible earlier and also flexibility to run surveys in subsequent years from the database of questions for the survey that was create. Ease of decision-making related to technology risks or gaps in the portfolio companies.

DATA MANAGEMENT SOLUTION FOR SURVEY DATA REPORTING AUTOMATION

KEY RESULT

- Reduced the dashboard refresh time (TAT) from 1 day to 10 minutes.

VALUE LEVERS PULLED

Survey data reporting automation for a private equity firm

Data Management Solution for Survey Data Reporting Automation

Situation

- Client regularly conducts Technology Surveys every year and Security Surveys every quarter for all its 40+ portfolio companies to identify and address any gaps or risks in the Technology and Security areas
- These surveys have more than 100 questions for every response and are manually analyzed. However, the current process of downloading and analyzing the survey data in Excel Sheets and Power BI is inefficient and prone to errors. It also hampers the ability to perform historical analysis of the survey data over time. To overcome these challenges, partnered with the client to design and implement a Unified Data Warehouse solution that automates the data ingestion process and enables faster and more accurate analysis of the Technology and Security Survey data

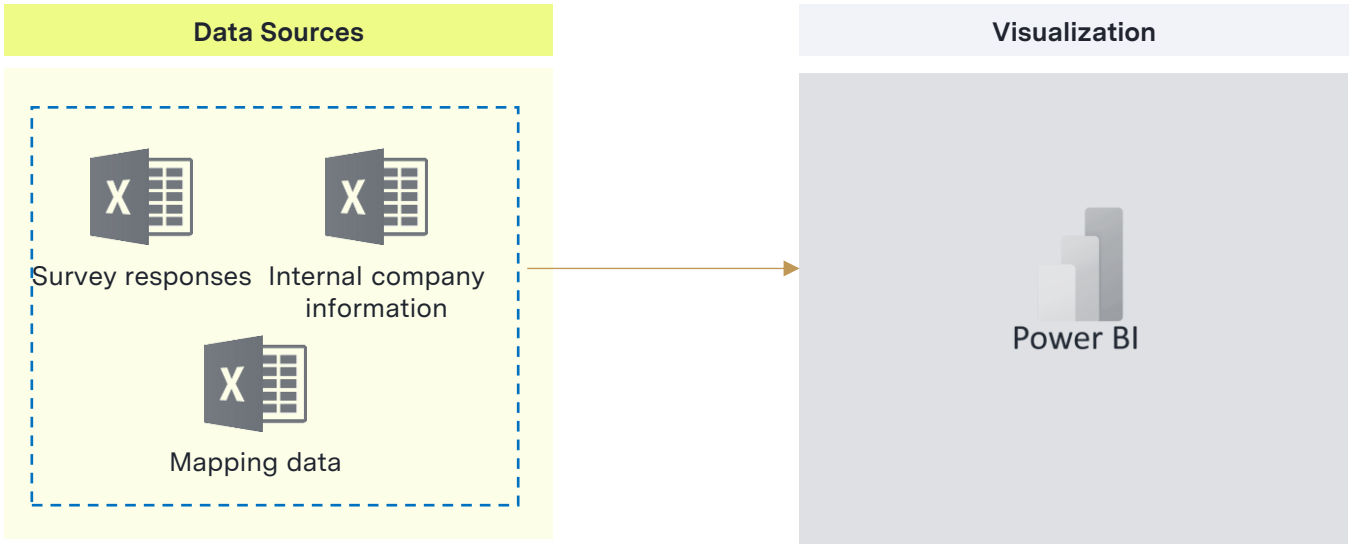
Accordion Value Add

- Analyzed the data structure of the source Survey Response data and the transformation logic in the existing Power BI dashboards
- Designed and spun off a new data warehouse on Azure to extract, transform, load, and store the survey data
- Built automated pipelines to ingest data to create a single central repository of the data on Azure SQL Server using Azure Data Factory and Logic Apps
- Transformed the raw data and built data models that can serve any reporting needs
- Reconfigured existing Power BI dashboards to point to the new reporting views from the newly developed Data Warehouse

Impact

- The automated data warehouse eliminated the manual process of updating the BI dashboard and reduced the refresh turn-around time (TAT) from 1 day to 10 minutes
- Scalable architecture which can include more portfolio companies and future annual survey data without changing the architecture
- Flexibility to design & implement new KPIs/Metrics and questions and push them on the dashboards seamlessly
- Ability to compare and analyze historical and current data (YoY, QoQ, MoM, etc.) which was not possible earlier
- Flexibility to run surveys in subsequent years from the database of questions for the survey that was created
- Ease of decision-making related to technology risks or gaps in the portfolio companies

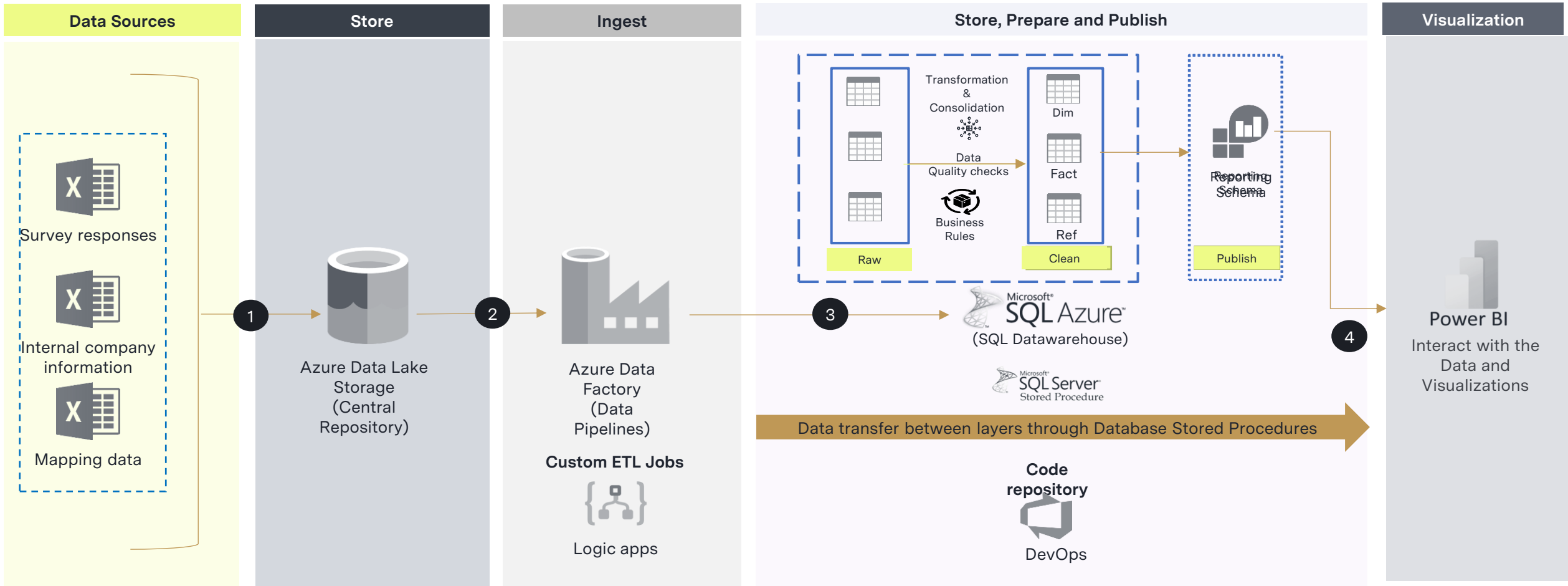
Prior BI architecture



Observations on Prior Architecture:

1. Accuracy issues arising from manually holding current data sets in Excel/data model while layering multiple annual surveys results on top of each other (data not in one place)
2. Managing data in separate Excel files for each year may lead to scalability challenges as the volume of data grows over time
3. No established system for historical data maintenance. Typical challenges with Excel catalog (needing to still upload/maintain in a data model for Power BI use, versioning, etc.)
4. Redundant columns within the data models, potentially leading to increased model size
5. Need for manual interfacing (both downloading from survey and uploading into something usable in Power BI)

Implemented BI architecture



1. The source Excel files (Technology Survey Responses, Company Info, Mapping data) are placed into the Data Lake storage
2. Collate, ingest, and transform the data from the Data lake using Azure Data Factory to the SQL Database. Set up automated error notification emails using Logic Apps
3. Using Raw and transformed data, Dim, Fact tables and Reporting tables are developed based on business requirement, creating one hub for all the data
4. Reconfigured the Power BI dashboard from existing Excel Sheets to the new Data Warehouse

Prior vs. New BI architecture

Advantage	Prior BI Architecture	New BI Architecture
Data Update Process	Manual	Automatic
Data Refresh (TAT)	1 day	10 minutes
Historical Data Tracking & Analysis	×	✓
Scalability	×	✓
Data Quality & Consistency	×	✓
Data Modelling	×	✓
Cost Efficiency	×	✓
Source/Version Control	×	✓
Ability to handle changes in Survey Questionnaire	×	✓