



CASE STUDY

How an enterprise software business broke down their data silos

An enterprise software provider approached Agile to help eliminate their data silos.

The client's global operations served customers across a whole host of sectors, industries and geographies, which meant that their data came from a vast number of scattered sources.

The process of data consolidation was so time-consuming and impractical as to be impossible. If the business wanted a global consolidated report it took a project team months to collate the necessary data, build the report and generate the relevant information.

That timescale meant that the analytics could not keep up with the pace of business change, making truly data-driven decisions unachievable.

The Solution

The client established that they needed a single centralised Data Model which would conform multiple data sources and be capable of processing and loading data in high volumes. They approached Agile for their technical expertise on the method and technologies required for the build.

The Enterprise Data Model (EDM) was designed to simplify the process of linking and conforming data, and would be particularly relevant for this client, because giving the business a consolidated and trusted data product containing multiple sources would allow users to spend more time on analytics and sharing insights, rather than manually wrangling data to create reports.

The EDM was developed as a layer of data products using Data Vault 2.0 Methodology, which stores data from multiple operational systems and offers the flexibility and scalability to integrate and conform new data sources into existing entities within the vault.

A dimensional model Information Layer was developed over the Raw Vault to allow ease of use for query or BI tools and allows business users to layer logic over the core data model and build out shareable data products, offering the flexibility to keep pace with the dynamic business needs.



The Approach

Our initial discovery outcomes led us to recommend the following data flow architecture:

- ▲ Use of existing standard ingestion processes to ingest data from source systems, stage this in S3 raw format and load to a raw layer in Snowflake
- ▲ Use of ELT pattern to develop layers of the EDM data product using Snowflake and dbt, which included central Raw Data Vault and Information Layers as well as allowing business teams to create specific data products in their own area supplemented with reference data and business logic.

The client agreed to take our recommendations to the proof-of-concept stage, where we demonstrated the layers of transformation for a particular use case using mock data that mirrored the business' data, and used this to test the data models within the Raw Vault and Information Layers.

We used dbt's inbuilt lineage and automated testing capability to provide assurance of the reliability and observability of the transformation steps and resulting data product.

After the success of the proof of concept we initiated a programme of work to build key concepts and business domains containing multiple source systems into the EDM delivering incremental value at each stage of the delivery.

The Results

The initiative helped the client successfully remove data silos, meaning that the business could deprecate legacy manual processes and focus on the use of central data products to respond quickly to demand for analytics.

- ▲ The EDM was constructed with dbt, with integrated Git functionality and streamlined the process of moving towards production - new models are deployable within minutes
- ▲ dbt's built in testing prevents 'bad' data from influencing the model protecting data quality
- ▲ Users were empowered to develop business layers and make modifications as required, they can operate with greater efficiency than if layers were prescribed or fixed

Are your data silos holding back your business intelligence and analytics or compromising your data quality?

Agile helps businesses unlock the full commercial value of their data with advice support and technical delivery services.

Our partnership with modern data management platforms positions us to implement the most effective strategies for clients to release maximum return on their technology investment.

As a Select Tier services Partner to Snowflake as well as a dbt Partner we are ideally placed to help businesses achieve a full breadth of analytics across all their data sets and tap into the opportunities held within these complex structures.



Get in touch

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