CASE STUDY

MODERNISING QUEENSLAND GOVERNMENT AGENCY'S DATA WAREHOUSE

Mission

In a strategic move to enhance operational efficiency, a prominent Queensland Government Agency embarked on a mission to revamp its outdated operational system.

- Reconstruction of Government Agency's data warehouse.
- Migration from their legacy on-premises SQL Server solution to Azure Cloud-Based Modern Data Warehouse Architecture.
- Align their aging operational system to the new data landscape

SMILE IT
Forward Thinkers

Email: contact@smileit.com.au
Phone: 1300 766 720
Address: 60 Enterprise Pl, Tingalpa, QLD

Data Warehouse Architecture

The agency adopted a robust and best-practice approach, organized into a three-tier pattern:

Raw Data Layer

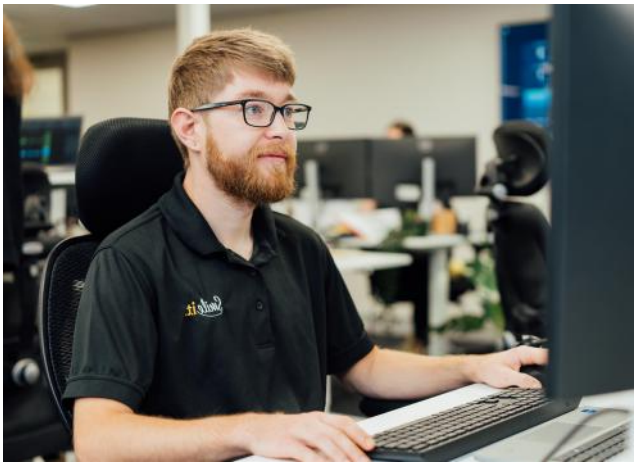
Data originating from various source applications is preserved in its pure, unaltered form.

Lightly Curated Layer

This layer is a comprehensive historical Data Lake with vital support for Slowly Changing Dimensions (SCD) and date tracking.

Highly Curated Layer

This segment housed meticulously engineered data marts and datasets, catering to the specific needs and demands of the organisation.



Project Skills

The agency had enlisted a high-end consultancy firm to steer the data warehouse project. However, following an unsuccessful attempt, they opted to utilise their in-house resources, seeking external expertise such as SmileIT key areas:

Azure Data Warehouse Engineers

These experts played a crucial role in the migration from the legacy on-premises SQL Server to the Azure Cloud-Based Modern Data Warehouse architecture.

Data Architects

Designed the overarching data architecture, fostering close collaboration between data modelers and data warehouse engineers to align it with the three-tiered structure.

Data Modellers

Crafted detailed entity relationship diagrams, data modelers facilitated effective communication across business subject matter experts, stakeholders, and technical specialists.

Technical Business Analysts

Bridged the gap between business requirements and technical specifications. Their output included highly detailed Source-to-Target mapping, outlining data movements, transformations, and rules.

In addition, the project benefited from Data Analysts who crafted SQL queries and sifted through extensive datasets to unearth valuable patterns. These insights played a pivotal role in refining data, implementing necessary transformations, and enforcing data rules to enhance the overall data quality.

Smile IT Supporting Skills

Data Warehouse Design

Includes: Data Lake Design, Dimensional Modelling, OBT's, Data Vault and Relational Constructs.

Data Modelling

ERD Diagramming

Tech Business Analysis

Includes: Specifications, Source to Target Documentation, Data Migrations, Reporting, Data Analysis, Data Wrangling and Data Management.

A collaborative effort involving agency resources and external specialists transformed the data warehouse, aligning it with best practices and paving the way for a more efficient, data-driven future for the Queensland Government Agency.

This case study demonstrates the successful modernization of government infrastructure, highlighting the potential of cloud-based data warehousing in the public sector.