# Technology Advisory Case Study

**Industry:** Insurance

**Services:** Data Analytics, Data Engineering, Big Data Processing, Cloud Computing

**Technologies:** Databricks, Apache Spark, Azure Data Lake, SQL, Python

# Situation

A recent insurance organization was generating massive amounts of data from multiple sources, and its current systems often struggled to process and analyze it efficiently. The team at MarksNelson, a Springline company, needed to create a scalable, cloud-based data platform that could handle the company's large datasets, while giving it advanced analytics and integrating seamlessly with its existing business intelligence tools.

# Solution

The team implemented a medallion solution based on Azure Databricks, leveraging its Apache Spark engine for distributed data processing. This allowed MarksNelson to ingest, clean, and transform large volumes of structured and unstructured data quickly and reliably. The solution included:

- Automated ETL pipelines for continuous data ingestion and transformation with bronze, silver, and gold stages
- Integration with Azure Data Lake for secure, scalable storage
- SQL and Python-based analytics and notebooks for data exploration and reporting

# Results

The Databricks-based solution delivered:

- Faster data processing, cutting batch processing times from hours to minutes
- Scalability on demand, handling terabytes of data without performance issues
- Improved collaboration among teams through a unified platform
- Lower operational overhead by consolidating tools and automating workflows

This approach gave the organization a modern, flexible data platform capable of supporting advanced analytics and machine learning at scale.