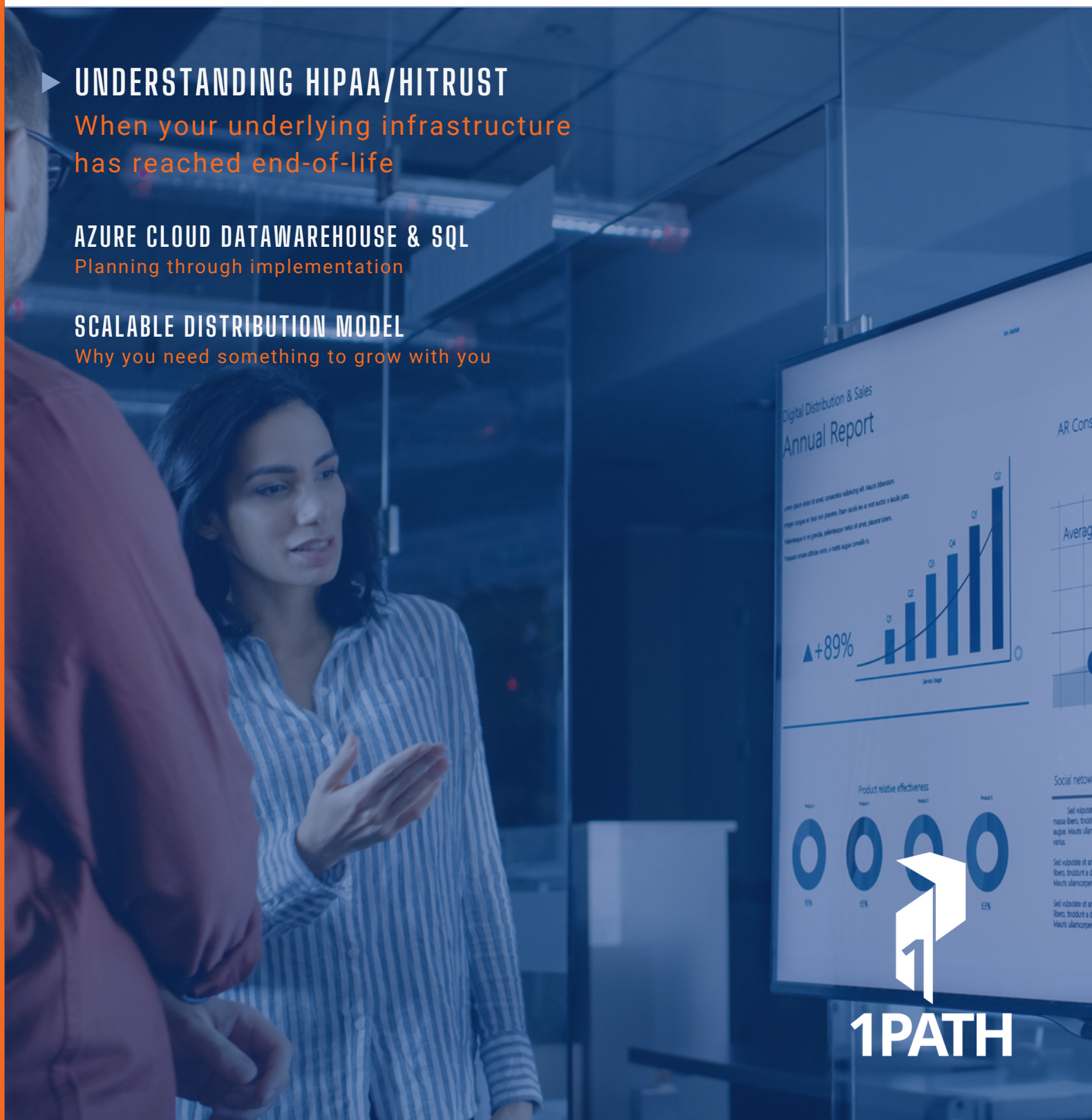
Actuarial Science Consulting Firm

Microsoft Azure Case Study



UNDERSTANDING HIPAA/HITRUST

When your underlying infrastructure has reached end-of-life

AZURE CLOUD DATAWAREHOUSE & SQL

Planning through implementation

SCALABLE DISTRIBUTION MODEL

Why you need something to grow with you

1PATH

MODERNIZING ANALYTICS STACK WITH AZURE

The client is a boutique consulting firm offering actuarial analysis for big pharma, retirement, and insurance concentrating in health and welfare. They regularly work with many large institutions to help identify specific areas for improvement.

Up until recently, they have been utilizing an analytics architecture to accomplish data engineering and analytics workloads that has gone end of life. In addition, their methodology for data ingestion and analysis, while secure and well-known, was slow and cumbersome from an operations execution perspective.

After working with 1Path, their analytical analysis is completed faster, which has resulted in expedited turnarounds on consulting projects requiring actuarial analysis. In addition, the firm has been able to create new revenue streams from both existing and net new clients.

The Problem

Underlying infrastructure is end of life, presenting a security risk in a HIPAA/HITRUST environment. Constantly requesting additional storage space for both data ingestion and data analytics locales. Lack of a proper archive policy for both the ingested customer files for analysis and the analytics databases compounded these problems. Due to the HIPAA/HITRUST nature of the client, any move to a new platform would require considerable security policy adherence. Analytics and Query performance were consistently challenging due to a lack of available compute. Cost management was also a major consideration due to relatively flat cost structure of legacy analytics stack. Ingestion of new significantly larger client datasets was futile for loading, storage, and analysis in the analytics stack. Ongoing production could not be interrupted during the transition to a new data environment. Client preferred analogous tools in the new environment to ensure a low learning curve for analysts and minimum impact to operations.

The Solution

Implemented an Azure Cloud Datawarehouse (Azure Dedicated SQL Pool fka Azure SQL DW) and Azure SQL Databases. Azure Cloud DW is a highly scalable distributed model which has increased analytical workload performance. The client has the capability to dynamically shift compute resources between and amongst users to shift more compute to users requiring it and less compute to lower utilizers, effectively allowing for “on the fly” query prioritization. Running analytical workloads on the larger datasets could only have been achieved on Azure Cloud DW. Addressed multiple security policy requirements with built-in Azure Advanced Security and Encryption. Implemented Azure cloud data pipelines that are virtually the same in “look and feel” as legacy.

The Results

After implementing these modernization steps, ingested data sets have increased in size by 10x. Due to instant scalability and flexibility of the cloud DW and cloud ETL pipeline, increasing compute capabilities is something that can be completed in minutes and not hours, resulting in higher productivity levels for the consultants.

"Our evolving data driven business model necessitated the need for a nimble, scalable, and powerful data management and analytics environment. The construct employed has enabled our success in achieving automation, efficiencies, and resultant work product not previously possible. It seems that we've only scratched the surface of our future state."

- Austin Blume, Managing Director