



Shaping Healthcare Possibilities

# Leveraging unified data products for enhanced health plan analytics

A leading West Coast Blue Plan was facing challenges with its data infrastructure. Data silos created by disparate systems were hindering AI investments and affecting business outcomes.

The client partnered with CitiusTech to build a centralized enterprise data platform on Snowflake. This platform, with scalable, consistent, and sustainable infrastructure, would support current business needs and be future ready for AI and Analytics.

CitiusTech designed and built the enterprise data platform and helped consolidate Payer data by integrating data for 3Mn+ members from 20+ systems.



CASE STUDY

## BUSINESS CHALLENGE

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### Ineffective data infrastructure hinders growth

Getting a single source of truth is essential in today's digital landscape to run business efficiently and capitalize on new opportunities. However, the client's existing data infrastructure was neither sustainable nor scalable across a diverse array of data sources featuring various data formats.

Disparate, complex, and inflexible data systems required cumbersome manual processing and calculations. This led to inefficient and inconsistent analysis, especially in areas such as general liability claims and recovery. In addition, data quality issues due to duplicate records from diverse sources resulted in increased processing time and downstream impact. The lack of a single source of truth, ownership of complex data privacy issues, and poor data integrity also hindered AI investments.

The existing infrastructure also could not integrate third party data, leaving the client unable to identify and explore new opportunities.

To overcome these challenges and be future-ready for AI and Analytics, the client wanted to build a centralized enterprise data platform on Snowflake with scalable, consistent, and sustainable infrastructure. Given the strong existing partnership and value delivered, the client chose CitiusTech to make this platform a reality.



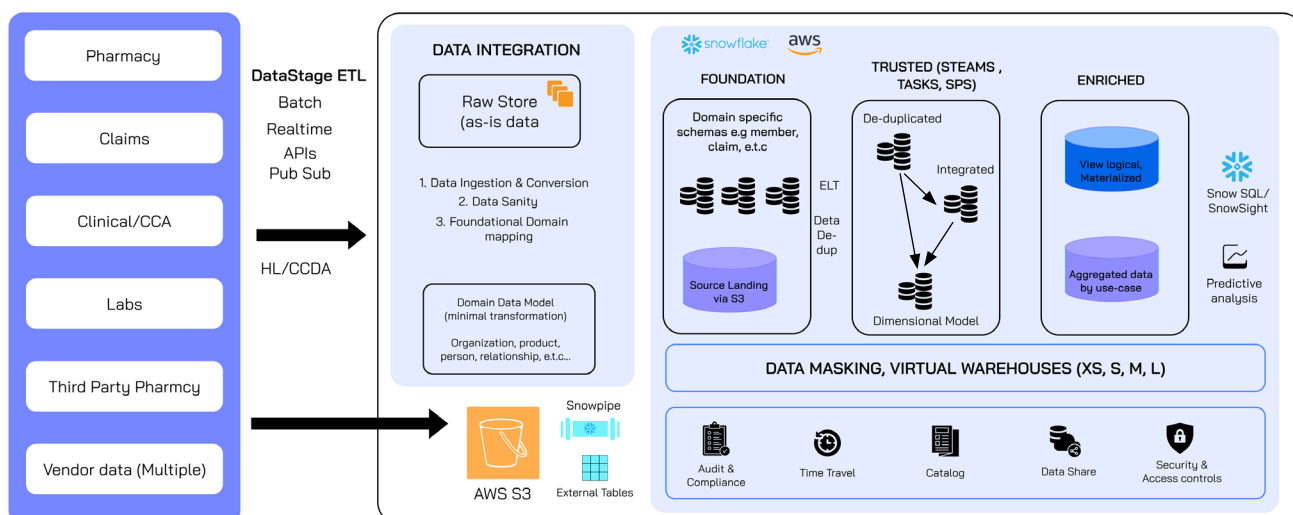
## THE SOLUTION

# Creating a single source of truth on Cloud

CitiusTech collaborated with the client to design and build the enterprise data platform using Snowflake DWH and relevant business-focused Data Marts with key components such as:

- A **Data Ingestion Framework** that enabled integration with various data sources (including COTS Data Ingestion solutions) and created an integrated data set, ensuring data quality and standardization.
- A **Claims Framework** that effortlessly handled the incremental changes and precise calculations for some claim attributes (reversals, claim adjustments, overpayments, etc.).
- A **De-duplication Framework** using a matching algorithm on key columns to identify and move the golden record to Snowflake.

The team made optimal use of Snowflake virtual warehouses and provisioned multiple data zones to ensure security policies for the requisite user base. Product-centric data marts were optimized for data provisioning, reporting, and AI-ML use cases – e.g. member, claims, provider, revenue, lab etc. Quality coding process ensured CMS compliance. In addition, the platform followed the GAAP format for claims-related financials. The team also enabled analytics use cases such as diabetic member identification from vision claims, care gaps analysis, risk adjustment, etc.



Here's the tech deep dive:

- **Schema-based DDLs** based on different sources/data categories
- Built **Foundation zone using Snowpipe**, Stage, and Copy commands. JavaScript-based SPs to apply business rule processing and move data to a trusted layer
- **Dynamic SPs to implement SCD2**. Maintained stage data and historical and current state of data using CDC
- **Pipeline orchestration** using Snowflake tasks and SPs (tree structure)
- **Data exploration** using SnowSQL and Snowsight web interface
- **Data Marts**: Domain-based logical and materialized views as enriched zone

## BENEFITS DELIVERED

### Reliable data drives better business decisions

The Cloud-native data platform became an enterprise-wide single source of truth for the client. It seamlessly ingested raw data from multiple sources for **3Mn+ members** and **500K pharmacy**, dental, and vision claim lines and also made it easier to onboard new vendors and file formats.

The de-duplication framework **reduced duplicate records by 20%**, resulting in cleaner and more reliable data for downstream analytics and reporting. The claim rule framework elevated efficiency, unlocking substantial time savings for finance reporting teams.

With CitiusTech solution, the client was able to:

**Integrate 20+**

data sources

**Identify 100+**

analytics use-cases

**Save 15%**

regression efforts





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CitiusTech is a global IT services, consulting, and business solutions enterprise 100% focused on the healthcare and life sciences industry. We enable 140+ enterprises to build a human-first ecosystem that is efficient, effective, and equitable with deep domain expertise and next-gen technology.

With over 8,500 healthcare technology professionals worldwide, CitiusTech powers healthcare digital innovation, business transformation and industry-wide convergence through next-generation technologies, solutions, and products.

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