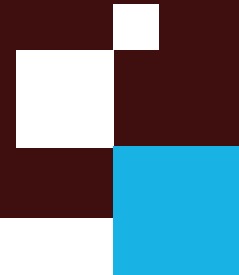# Research and Analytics Platform for a Leading Pharma Organization

Client Requirement

Client is a leading biopharmaceutical company, providing therapeutic solutions and medicines. As part of its patient-centric strategies, the client wanted to develop an integrated platform to support research analytics, patient engagement, real world evidence, commercial analytics and data-driven insights across the pharma value chain.

Given its expertise in healthcare data standardization, advanced analytics, BI/DWH and cloud computing, CitiusTech was selected to implement the research and analytics platform. Client leveraged CitiusTech's analytics capabilities to build a unified environment for storage and aggregation of healthcare data, advanced analytics and visualizations.

CitiusTech Solution

CitiusTech put together a cross-functional team of product, implementation and DevOps experts to build the platform using a phased approach. The research and analytics platform enabled key stakeholders to answer analytics questions via out-of-the-box dashboards and exploratory tools. The platform was designed to make data and analytics outcomes available to HEOR, R&D, commercial, regulatory and safety functions. It also enhanced collaboration across key stakeholders, researchers and data scientists.

Based on the client's technology landscape, CitiusTech built the research and analytics platform on Microsoft Azure stack. The solution design included:

- Azure Blob storage to store claims and EMR data from Truven, IMS, Health Verity and other sources
- Optimal configuration of HDInsight cluster
- Configuration of ADF activity to run MapReduce program on HDInsight cluster
- Observational Medical Outcomes Partnership (OMOP) Data Adaptor for consuming clinical and claims data into OMOP model
- CitiusTech's BI-Clinical platform for healthcare BI / analytics used for observational research use cases like cohort builder, cost comparison, etc.
- MapReduce program to convert uncompressed source files and convert .SAS into .CSV

CitiusTech

- Observational Health Data Sciences and Informatics (OHDSI) tools to perform for healthcare data analytics

- Natural Language Processing (NLP) for research analytics

- Microsoft PowerBI for reporting and visualization

- Descriptive statistics on an on-demand basis. e.g., metadata analysis, treatment cost burden, stratification of patient cohorts etc.

- Open source tools such as R, H2O for model development and deployment in real-time

- Designing treatment recommendation engine based on evidence-based approaches

- Adherence to industry standards - CRISP DM for Data Science

Value Delivered

By partnering with CitiusTech, the client was able to:

- Build a unified environment for data storage, research, analytics and reporting

- Provide secure access to interactive analytics reports to multiple stakeholders

- Develop a flexible, scalable solution that could adapt to changing business needs

About CitiusTech

CitiusTech is a specialist provider of healthcare technology services and solutions to healthcare technology companies, providers, payers and life sciences organizations. With over 4,000 professionals worldwide, CitiusTech enables healthcare organizations to drive clinical value chain excellence - across integration & interoperability, data management (EDW, Big Data), performance management (BI / analytics), predictive analytics & data science and digital engagement (mobile, IoT). CitiusTech helps customers accelerate innovation in healthcare through specialized solutions, platforms, proficiencies and accelerators. With cutting-edge technology, world-class service quality and a global resource base, CitiusTech consistently delivers best-in-class solutions and an unmatched cost advantage to healthcare organizations worldwide.

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