Case Study: Enterprise Data Warehouse for Academic Medical Center

Client Requirements

Client is a leading academic medical center in the United States. Client needed to build an enterprise analytics solution to deliver real-time and retrospective analytical capabilities to healthcare operations, and care and research users. The solution would enable users to manage the total cost of care, improve patient throughput, and foster translational medicine. The client also needed to implement a technology standardization and optimization strategy.

Given its expertise in healthcare BI/analytics, data modelling, ETL development and testing, CitiusTech was selected to implement a full spectrum of business intelligence capabilities. CitiusTech also leveraged IBM technologies to build the solution.

CitiusTech Solution

Requirement Analysis

CitiusTech put together a team of domain experts, BI and data warehousing specialists and IBM technology professionals to do a detailed analysis of the client’s existing data environment and develop the required analytics capabilities.

CitiusTech also defined and implemented a data integration strategy and roadmap, combining data from heterogeneous source systems and in disparate formats, by leveraging IBM BI stack and TIBCO real-time platform.

Solution Design

CitiusTech designed the solution by leveraging various IBM technologies including IBM UDMH, IBM Cognos, IBM DataStage, IBM MDM, IBM PureData for Analytics (PDA) and IBM Cognos. The solution included:

- Providing ability to drive real-time, operational/ near real-time and retrospective analytics
- Designing Atomic and Dimensional Warehouse models with IBM UDMH
- Performing data ingestion from heterogeneous source systems – EPIC, eSiMon, TeleTracking, etc.
- Data modelling for TIBCO Active Spaces
- End-to-end testing for patient services like OR turnover, organ donation, VTE, eCart, patient access and COPD
- Designing of data marts for transfer and referral, Medicare Advantage, encounters, etc.
- Testing ED patient care service/ in-house patient analysis
- QA and testing for BI deliverables such as Cognos semantic layer, dashboards, retrospective reports and ETL
- Verification of outbound files for TIBCO-optimized replacers vs. legacy services
- Providing technical oversight and consulting in the areas of requirement analysis, data modelling, test planning, quality management and knowledge management

Value Delivered

By partnering with CitiusTech, the client was able to:

- Implement an effective onshore-offshore model by leveraging CitiusTech’s global resource base and reduce overall cost
- Leverage CitiusTech’s strong healthcare knowledge and understanding of clinical data to support development of over 60 KPIs for inpatient care, ambulatory care, emergency care, transfer of care and Medicare

About CitiusTech

CitiusTech is a specialist provider of healthcare technology services and solutions to medical technology companies, providers, payers and life sciences organizations, with over 2,700 professionals worldwide. CitiusTech’s services and solutions include healthcare software development, healthcare interoperability, regulatory compliance, BI/analytics, consumer engagement, care coordination and population health management. CitiusTech helps customers accelerate innovation in healthcare through a number of solutions and accelerators for clinical quality reporting, healthcare big data, cloud computing, mobile health and predictive analytics. With cutting-edge technology expertise, world-class service quality and a global resource base, CitiusTech consistently delivers best-in-class solutions and an unmatched cost advantage to healthcare clients worldwide.

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