Case Study: Data warehouse for Ministry of Health

(This initiative won a gold medal from the British Columbian Government)

About the Client: British Columbia Ministry of Health (Canada)

The mission of the Ministry of Health of the British Columbian government is to guide and enhance the province's health services to ensure British Columbians are supported in their efforts to maintain and improve their health. Several online services are available from the Ministry of Health's website including reliable health information 24 hours a day, information on drug coverage, electronic forms for health services and programs, wait times and options for surgery, hotel accommodation for patients and family members, etc.

Client Situation

HNData/BC was a data integration environment centered on a data warehouse, where data from diverse sources inside and outside the Ministry of Health can be integrated into a comprehensive and reliable picture of health, healthcare services and healthcare management across British Columbia. The scope for development included activities to design, build and test the data warehouse, data marts and the related ETL processes for the following operational, identifiable data source systems:

- Client registry
- MSP fee for services
- PharmaCare
- MedHist

Our Solution

IBM partnered with CS Solutions to design and deliver the ETL processes required for this complex environment involving multiple agencies and several data sources. CS Solutions developed an architecture that addressed the following:

- Source data acquisition micro design
- EDW physical database design
- Medhist data mart logical/physical database design
- Medhis reports
- Agile architecture that is flexible to accommodate and integrate additional data stores.
- The project started with both teams working side by side on:
- Setting up data enhancement staging area
- Specification preparation
- Data Analysis and Mapping design
- Naming standards for the architecture
- Dimensions (Shared/Non-Shared)
- Fact Tables
- Materialized Views
- Design architecture for the DW
- Development
- Quality assurance testing

Key Challenges:

The challenge was to integrate various systems running in multiple databases and platforms. Some of the data specific issues were:

- Data selection
- Data cleansing
- Error detection and correction
- Data mapping and usage
- An aggressive project timeline was a major challenge for CS Solutions and required longer work hours to make up for it.

Benefits

- Centralized data repository for all end users who want to consume client registry, MSP fee for services, PharmaCare and MedHist (medical history)
- Efficient access to transactional and history information
- Data reconciliation
- Reduction in total cost of ownership

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