LARGE FINANCIAL INSTITUTION: DATA INTEGRATION/ REPORTING

◾ INTRODUCTION

Cogent Data Solution's provide data integration and business intelligence services to expand financial risk analysis for a large financial services organization.

◾ CHALLENGES

At a large financial services company, the risk management department's reporting application was highly limited due to data and architecture restrictions, poor data quality, change management limitation, and inadequate analytical reporting capabilities. This caused frustration among management and business users conducting risk analysis and executive level reporting functions. Due to this, various manual and stove-pipe reporting processes such as excel spreadsheets, paper-based reporting, and end user queries across multiple data sources were developed.

■ OPPORTUNITY

Design and develop a sophisticated data mart and BI application to allow improved risk management around market and interest rate risks (such as growth, spread, duration, etc.); position; profit and loss) and activity reporting for the company executives and trading desk.

■ CDS SOLUTION

Implement a flexible data architecture and comprehensive reporting application that allows better risk management and more streamlined processes.

■ DETAILS ON THE PROJECT

CDS's Solution Architect and Project Manager headed a hybrid team of consultants and client employees to deliver an improved data mart and enhanced business intelligence reporting capability. Cogent Data solutions redesigned the previously utilized data model to enhance reporting capabilities. The improved model used a dimensional approach with type 1, type 2 and type 3 slowly changing dimensions and a core set of fact tables connected to the dimensions via point-in-time surrogate keys. This permitted the showing of "as-was" and "as-is" data without capturing a redundant snapshot of all data attributes daily. On top of that, cross-domain analysis no longer had to rely on recursive, complicated queries navigating across a chain of tables. The reporting database was separated from the source database. Developed ETL processes were created to move the data from the source's de-normalized structures into the target's multi-dimensional structures. Data quality checks for attaining unreasonably large numeric amounts and missing invalid foreign key relations to reference data were created as part of the ETL process.

CDS implemented a new Cognos application. CDS made sure that all existing reports are migrated from the legacy system. The Cognos application delivered reporting Templates and Wizards for Cognos Web users for user-friendly ad-hoc analysis functionality. CDS built an executive dashboard to supplement and finally replace the current Excel-based management reporting packages. CDS consultants worked side-by-side with end users and subject matter experts (SME's) to design a scheme of highly easy-to-use and navigable shortcut folders that permitted users to locate and retrieve reporting objects in an easy and timely manner.

CDS followed the client's rigorous SDLC methodology, passing through several corporate quality control checkpoints and delivered around 55 various artifacts on the client's Share Point portal. In addition, a parallel project to upgrade the Teradata database required consistent coordination and quick reaction time by project team members through development, test and UAT phases. Lessons learned and knowledge transfer were accomplished before the project end.

■ RESULTS

The solution provided by CDS made accessing data more flexible and usable for the risk management department. It also cut down report processing times by 67%. Executive level dashboards are readily available for end-users to quickly drill down / roll up from valuation analytic summaries to detailed instrument position data and then across to detailed activity views. All of this supplements the corporate goal of quick, easy-to-use management analysis.

The project team implemented more than 800 columns across 46 tables mapped to 600 reporting objects. More than 100 dashboards and reports were created. The solution loads more than 150 million data records every night to a 20+ terabyte. Teradata data warehouse.

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