



Millennium Research Group and Thoughtcorp implement an Enterprise Data Warehouse

Business Situation

Millennium Research Group, a Decision Resources, Inc. company, is a leading provider of strategic information to the healthcare sector. The company anticipated double digit growth and needed to build a reliable and scalable solution for their reporting and analytics business.

Solution

Design a Data Warehouse that would allow MRG to consolidate data and:

- Store all project data in a single warehouse
- Enable reporting and OLAP analytics

Benefits

- Increased and improved access to critical business and sales information
- Decrease operational costs in managing disparate Access databases
- Increase in revenue from the ability to offer customers consolidated information

Millennium Research Group, a Decision Resources, Inc. company, is a leading provider of strategic information to the healthcare sector. Focused solely on the medical device, pharmaceutical and biotechnology industries, MRG provides its clients with the benefits of its specialized industry expertise through published reports and customized consulting services.

A leading source of competitive intelligence, MRG is now the largest provider of medical device market research in the world. Located in Toronto, Canada, MRG covers global markets and has pioneered reporting of numerous emerging products.

The Business Problem

MRG collects survey data and sells reports based on that data. The current IT environment at MRG is a mixture of approximately 30 Microsoft Access databases – each corresponds to a logical grouping of survey data and is referred to as a “Project”. Individual Projects contain survey data regarding specific medical devices – e.g. cardiology device. MRG’s clients purchase the survey data in the form of reports or queries – for example, the company Boston Research may need to know the total number of its devices being actively used across all Projects (i.e. total of all types of devices made by Boston Research). Another query or report might be on the market share for all of Boston Research medical products, etc.

Currently, the Access databases do not exceed the 2 GB mark, with an average of 5 concurrent users for most databases and up to 20 concurrent users for a few specific databases. An in-house, custom solution called Data Miner provides MS Access Pivot Table functionality for reporting needs. There are currently nearly 400 users of the existing reporting infrastructure, including about 60 users who are active on a monthly basis. In total there are approximately 20 client companies with about 20 users each.

MRG is anticipating that the number of Projects will double in the next 2 years, and needs to build a reliable and scalable solution for their reporting and analytics business. The additional high level business drivers for this solution are:

- MRG’s Clients seek the ability to access their report data from anywhere and at any time.
- New Projects and teams that support/use them will be added.
- Reduction/elimination of data inconsistencies - a scalable solution that assures data integrity is required.
- The analytics required will include self-serve ad-hoc reports/queries.
- The number of data records will increase from the current 2 Million up to 10 Million – aggregation of these records needs to be about 1 second.
- The total number of users will increase from about 400 up to 3000, with up to 50 concurrent users.
- Simultaneous data entry and mining will need to be supported.

As a result of these business drivers, MRG decided to implement an Enterprise Data Warehouse (EDW), with an OLAP solution, based on Microsoft SQL Server 2005.



The Solution

With its vast experience in data warehousing and MS SQL Server, Thoughtcorp was MRG's choice to take on the development and implementation of the solution.

Prior to the new solution, MS Access Database was the medium used by the MRG researchers to collect and analyze the necessary data. Every "project" had its own database and was not connected with any other project.

Thoughtcorp consultants managed a client project team to devise a data warehouse solution for MRG. The team consolidated all project data into a global cube, offering the client a global perspective about the medical device marketplace. With the design and development of the data warehouse model and ETL process, Thoughtcorp leveraged an extensive background in architecting solutions that would be highly scalable for future business process expansion or improvement.

Innovative and stand-out features of the solution include:

- All project data now resides in a single data warehouse, leveraging the platform benefits of SQL Server 2005, including performance, scalability and reliability.
- The use of database Views transforming relational data into dimensional format which provides an economical solution for enabling reporting and OLAP analytics out of the Repository.
- The use of a multi-dimensional data format, such as the data within an OLAP Cube, which provides the business the following required features:
 - The solution provides flexibility – ability to access the data through Standard Reports or Report Builder accessible via the Web.
 - It provides the ability to data mine across all dimensions of the data model.
 - The solution also provides a validation framework for monitoring data quality and integrity.
 - Ease of Report Creation
 - Demonstrates high performance –consistently fast access to business data, daily loading of 12 GB of data within an hour timeframe.
 - Lends itself to a phased implementation in order to contain risk and maintain business continuity.

The Result

MRG had several measures of success in the development of the new solution to better manage its information. Namely, a decrease in operational costs in managing all its disparate Access databases; an increase in revenue opportunity by offering MRG's client's customers consolidated information about the marketplace; and finally, an increase in employee retention as the new technology introduced growth opportunities for MRG employees.

The Thoughtcorp-led project team managed all project activities to ensure these measures were met and exceeded. A highly collaborative atmosphere was achieved with MRG's internal IT team resulting in fine details being considered in the primary design factors of the solution. Thoughtcorp also worked closely with the MRG business team to develop and fine-tune the business process to ensure the long term operational success of the data warehouse solution.

Launched in January 2008, much of the success of the data warehouse solution for MRG could be attributed to Thoughtcorp's experience and expertise in this area and the collaborative efforts of a highly effective project team that always put the client's needs first. Timely decision-making and continuous, consistent communication to all project stakeholders ensured the client was informed and included at every milestone.