Adaequare Business Solutions

BPDM

Business Performance Data Mart

ADAEQUARE

Table of Contents

Executive Summary

This technical white paper depicts the challenges and the corresponding solutions to make deliberate business decisions from traditional reports. These solutions include providing required inputs to the top level management to analyze the trends and define the organization's strategies.

Introduction

In this rapidly developing world, traditional reports may not be sufficient to perform analytics for future strategies to stay ahead of the other organizations in the competition. Sufficient amount of time would be required to consolidate the various reports generated from different transactional source systems. As the organizations grow, some of the decision making needs to be driven from past results.

Proposed Solution

Business Intelligence (BI) provides a solution for the organizations to construct strategic business decisions. BI uses technologies, processes and applications to analyze mostly internal structured data and business processes while the intelligence is gathering, analyzing and broadcasting information with or without support from technology and applications, and focuses on all-source information to support decision making.

Business Performance Data Mart (BPDM) is designed to accommodate the consolidated data from multiple source systems as a single access point.
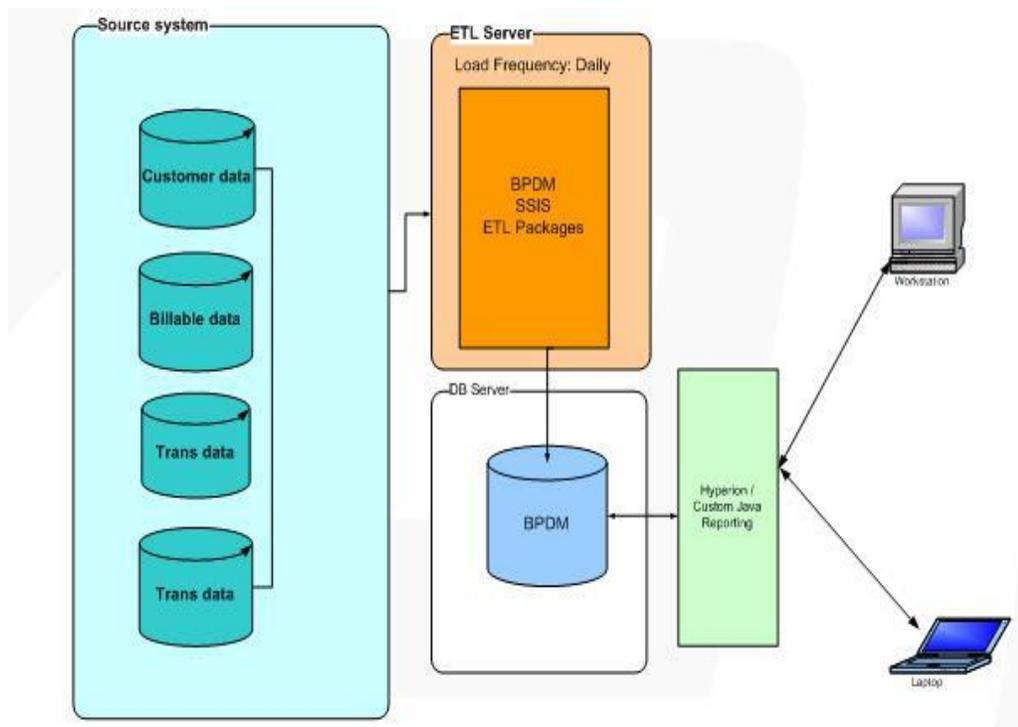
This data mart turned into an information factory to provide analysis. Data is being pumped from various source systems using Extraction, Transformation and Loading (ETL) processes on a daily basis. Data is loaded at the most granular levels to support the analytical needs. This data mart has been designed using following technologies:

Components	Technology
Database	SQL Server 2005 Enterprise edition
ETL Process	SSIS (SQL Server Integration Services)
Reporting Tool	Hyperion
Scheduling Tool	SQL Server 2005 Agent

Solution Details

The Business Performance Data Mart (BPDM) is designed to accommodate the future needs of the organization to act as a consolidated centralized repository. Transaction Data, Invoice & Credit, Product Output subject areas provide the solution to overcome the traditional reporting system of an organization.

The Extraction Transformation and Loading (ETL) Process extracts the data from different source systems and loads it into the staging database. Transformation rules are applied while loading the data into the staging database to integrate it from different platforms. To simplify the Transformation rules, common rules are applied from stage to target loading and some of the transformation rules are applied from source to stage loading. This improves the loading performance.

The ETL process consists of loading Dimensions, Facts and Aggregate Tables. The process is defined to start loading first Dimensions, Facts and Aggregates. Independent dimensions/Facts/Aggregates are configured to load parallelly.

Custom logging information facilitates to debug the ETL process to identify the cause for failure, the user, date, time, number of rows extracted, number of rows loaded, number of rows rejected.

The 'Load Validation' process is implemented to validate the loads. This process validates the extracted and then the load data raises an 'alert' if the defined threshold limit is exceeded. These alerts are configured to be received on the basis of the configured recipients.

The ETL & 'Load Validation' processes are automated to kick off sequentially one by one, at the specified time every day.

Transaction Subject Area
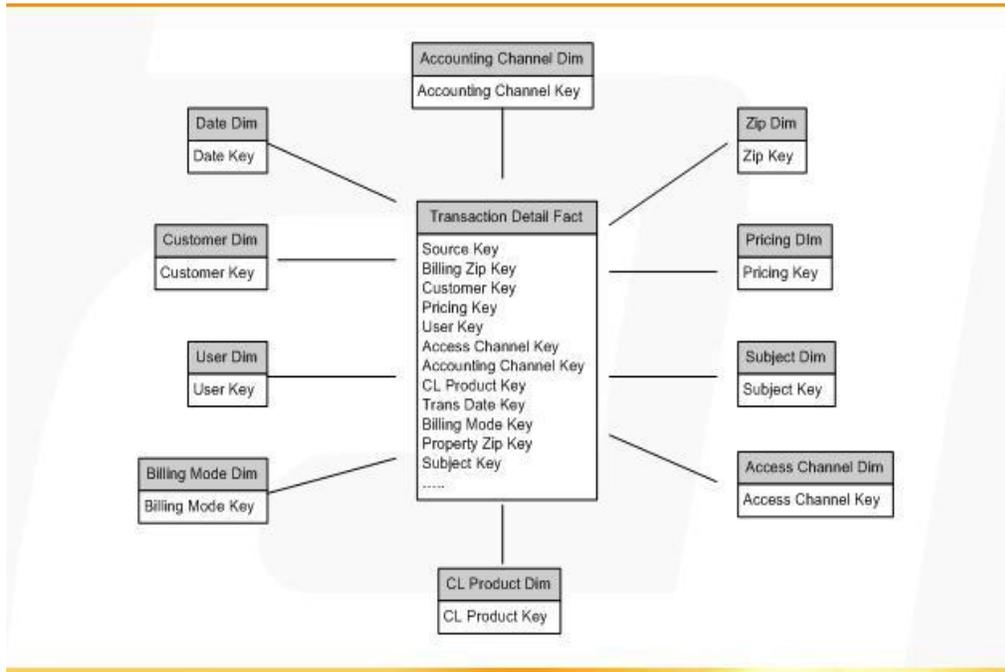
Invoice & Credit Subject Area
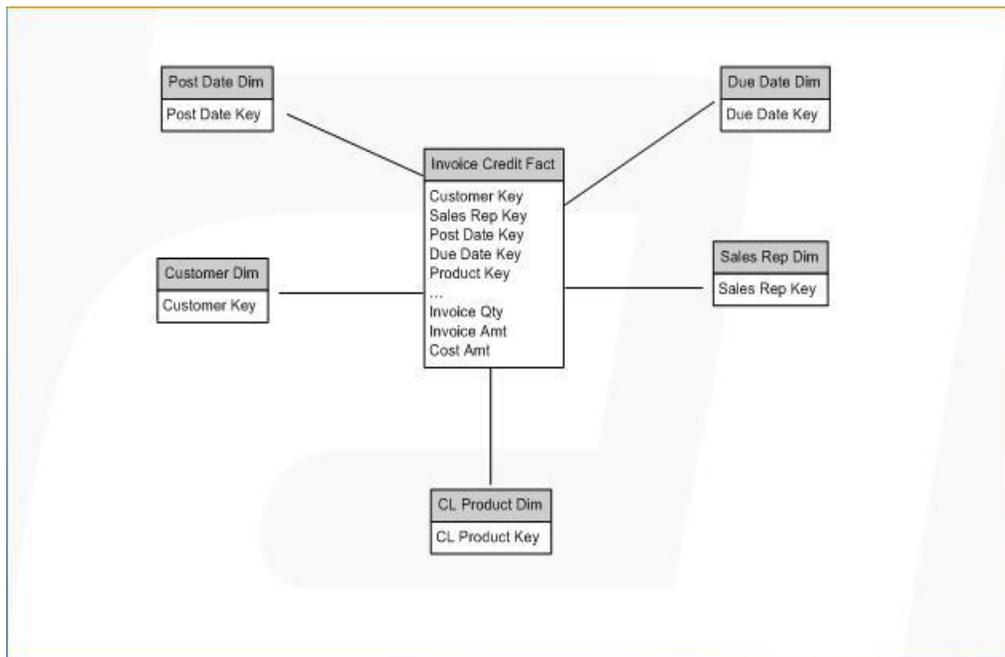
Business Benefits

Business Performance Data Mart (BPDM) acts as a single consolidated repository of all the organization's billable and non-billable transactions. Given below are the benefits of improving business:

- **Operational reporting** includes 'Monitoring Internal Transaction Activity' and 'Customer Usage of Products'. Monitoring internal transaction report provides a view of transactions run by internal users that do not generate any income. This report will help to determine if internal access is abused for personal gains. Customer usage of product report provides insight into how and where the products are used by customers. This helps to understand the current usage and the potential for new product up-sell and cross-sell with the customers.

- **Product Usage Analysis Report** provides details about revenue and number of transactions by customer and product.

- **Sales Representative Performance Analysis** provides details of revenue and number of transactions by sales representative and time.

- **Hit Rate** by Product, by Customer, by Time

- **Customer Analysis** Reports offer Customer, User, Top/Bottom Customer analysis.

- **Revenue Analysis** includes Month-To-Date, Year-To-Year, Quarter-To-Quarter and the Analysis of Average Revenue over a period of time.

- **Tax Related Analysis** Report accommodates the flexibility to apply the different tax rates on the basis of location/region.

Conclusion

Organization Business Intelligence (BI) supports business executives and allows them to take business decisions by looking at the company as a whole instead of in terms of the departments that it comprises of. It speeds up querying & reporting which is not used by the transaction processing systems. It also makes it easy to write and maintain an environment where there is comparatively little knowledge of database technology.

About Adaequare

Established in 2001, Adaequare is a CMMI Level 3 Certified software services company specializing in product development, data and test engineering. We assist IT teams in delivering high performing solutions to the business with faster time to market and high return on investment.

With a global presence across 3 different locations, we focus on medium to large businesses and encapsulate consulting, results-driven engagement and delivery model which are important to our target customers.

We work with several companies in the USA such as CoreLogic, Tria Beauty and have been either a dedicated IT partner or a preferred IT partner. We have offshore delivery centers in India that support our customers in product development, Tier 1 and 2 support and testing with over 300+ resources.