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A Study on the Aspects of Business Intelligence System in Data Mining

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ABSTRACT: The term business intelligence (BI) represents the tools and systems that play a key role in the strategic planning process of the corporation. These systems allow a company to gather, store, access and analyze corporate data to aid in decision-making. Generally these systems will illustrate business intelligence in the areas of customer profiling, customer support, market research, market segmentation, product profitability, statistical analysis, and inventory and distribution analysis to name a few. Most companies collect a large amount of data from their business operations. To keep track of that information, a business and would need to use a wide range of software programs, such as Excel, Access and different database applications for various departments throughout their organization. Using multiple software programs makes it difficult to retrieve information in a timely manner and to perform analysis of the data.

KEYWORDS: business intelligence, aspect of BI, terms of mining in BI.

I. INTRODUCTION

Business intelligence (BI) mainly refers to computer based techniques used in identifying, extracting and analyzing business data, such as sales revenue by products and/or departments, or by associated costs and incomes. BI technologies provide historical, current and predictive views of business operations. Common functions of business intelligence technologies are reporting, online analytical processing, analytics, data mining, process mining, complex event processing, business performance management, benchmarking, text mining and predictive analytics.

II. DATA WAREHOUSING

Data Warehouse is one of the most valuable things for Business Intelligence System or Data warehouse rises and effective use can help decision-making intelligently that can improve the operations of Business Intelligence System or Data warehouse rises notably. It provides a collection of integrated data for on-line analytical processing (OLAP)[1]. A data warehouse is “a subject-oriented, integrated, nonvolatile, and time-variant collection of data in support of management’s decisions”.

- Subject-oriented
- Integrated
- Time variant
- Non-volatile

III. DATABASE DESIGN

Database design is the process of producing a detailed data model of a data base. This logical data model contains all the needed logical and physical design choices and physical storage parameters needed to generate a design in a data definition language, which can then be used to create a database. A fully attributed data model contains detailed attributes for each entity.

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- Determine the relationships between the different data elements.
- Superimpose a logical structure upon the data on the basis of these relationship^[2]

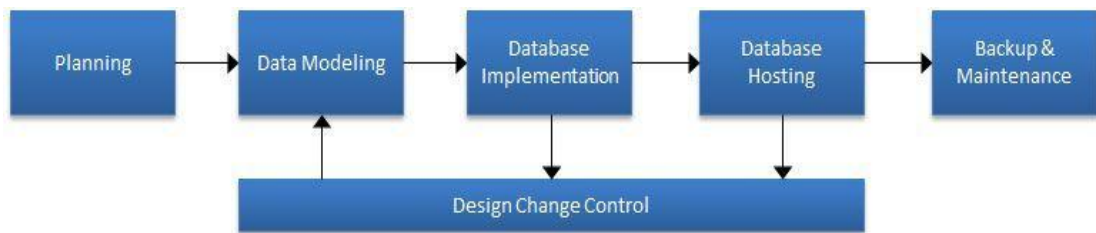


Figure 1. Database in business intelligence

This figure represents the over all process of business intelligence. Proficiency in the design, implementation, performance tuning of different types of databases, and in performing data mining tasks on various types of data. Competence sufficient to participate in the design and implementation of large, distributed database systems and business intelligence systems.

IV. NEED FOR FRAME WORK

A Business Intelligence framework can help you to structure the process of improving your business intelligence and helps you to implement your Business Intelligence strategy in a very cost effective way. Business Intelligence projects will be more successful, cost less and deliver more value to your business users. In addition a BI-framework makes it possible that every user – once logged on to the BI-system – sees instantly the information that is relevant for them.

Frame work consist of five key concepts:

- very high reusability achieved by object orientation & inheritance
- outstanding usability
- device neutral – portal, desktop, Smartphone, tablet
- high flexibility and role based
- vendor & tool independent

The framework connects these elements to each other. It will help you to implement your Business Intelligence strategy both easier and quicker^[3].



Figure 2. BI Intelligence Framework

This figure represent the frame work contains their elements of BI function has pervaded almost every level of the application stack leaving customers wondering about data consistency, security and application performance. It reduces the amount of data flowing over the network. • It exposes less data to less secure areas outside the firewall. • It lowers the risk of data inconsistency wrought by separate engines applying separate algorithms for common business measures.

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V. BI USED IN ARCHITECTURE

In this section an architecture that allows an effective usage of DM in BI systems is presented. A prototype of a BI system is implemented. The underlying relational database refers to a higher education institution and almost all the business processes of this higher education institution are supported by an information system build upon relational databases (Pereira et al., 2007). At the moment the BI system delivers information about students. Examples of business questions that are put to and answered by the system are presented. The answers to these questions are obtained by the means of OLAP tools and reporting^[4]. In a near future, DM will be integrated. This research studies the viability of implementing an architecture that conducts to an effective usage of DM in BI, allowing to bring DM to the front line business personnel and decision makers.

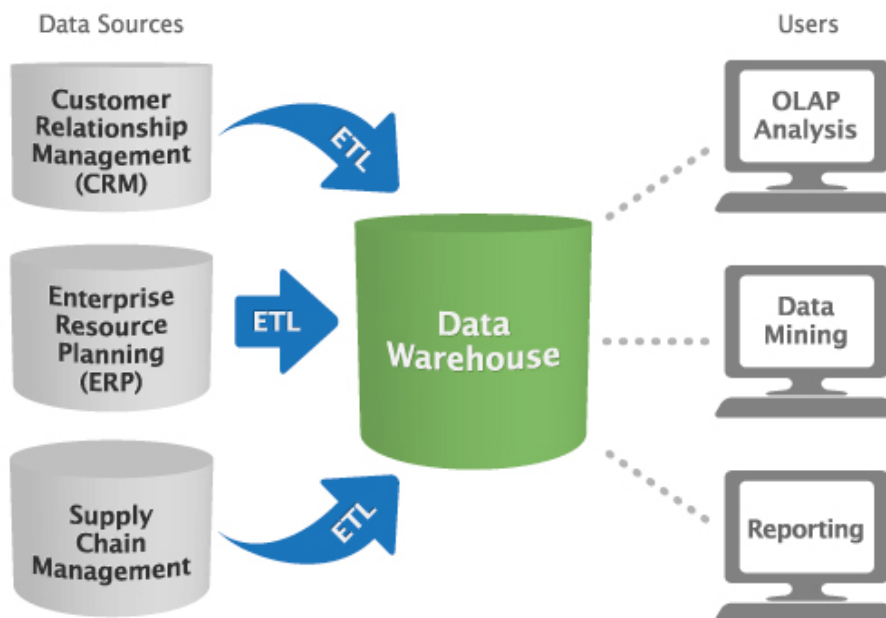


Figure 3. BI Architecture

This figure represent all design decisions must ensure that customers can incrementally grow their BI infrastructures – from small to large, from departmental scope to enterprise scope, from isolated islands to consolidated applications, and from reporting to dashboards to OLAP to ad hoc analysis to alerting to Mobile apps. This allows our customers to initially buy just the functionality they need, and to incrementally grow their BI solution as their requirements naturally expand. We have designed our plug-n-play components so that each added component brings new functionality to all pre-existing components and builds on pre-existing content so that no rework is required.

VI. REASON AND TOOLS FOR BI

This is especially true when firms are able to extrapolate information from indicators in the external environment and make accurate forecasts about future trends or economic conditions. Once business intelligence is gathered effectively and used proactively then the firms can make decisions that be firms.

Here 10 benefits of a tools using bi compel to our team used in now a days system.

1- BI tools increase prediction accuracy



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- 2 – BI Tools gather information faster
- 3 – BI tools allow users to access key business metrics and reports at anytime, anywhere
- 4 – BI tools skilfully help you understand your customers
- 5 – BI tools identify cross-selling and up-selling opportunities
- 6 – BI tools save training costs
- 7 – BI tools are a superior way to manage inventory and manufacturing costs
- 8 – BI tools boost efficiency
- 9 – BI tools enforce the power of teamwork
- 10 – BI tools help you see the bigger picture (even on small screens)

VII. CONCLUSION AND FUTURE WORK

In this research work ,it can be concluded the review of BI that are Quickly Identify and Respond to Business Trends, Empowered Staff Using Timely, Meaningful Information and Trend Reports, Easily Create In-Depth Financial, Operations, Customer, and Vendor Reports, Efficiently View, Manipulate, Analyze, and Distribute Reports Using Many Familiar Third-Party Tools, Extract Up-to-the-Minute High-Level Summaries, Account Groupings, or Detail Transactions, Consolidate Data from Multiple Companies, Divisions, and Databases, Minimize Manual and Repetitive Work.

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BIOGRAPHY

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