8.7.2. Business Intelligence (BI) System

Management information system, knowledge discovery, data mining and business intelligence are the synonymous in the field of enterprise information system. But many of the researchers opinioned and emphasized that there is difference one concept to another concept in terms of process and implementation. As per this book is concerned all the above concepts may be similar in the conceptual meaning, but there is difference in the process and purposes. However, all these concepts over the period of time has been supporting to the decisions makers and changing its role in the entire organizational perspective.

What is Business Intelligence?

Business Intelligence (BI) is all about converting a large amount of corporate data through processing and analysis into useful information and knowledge; thereby triggering some profitable proactive business action and decisions. BI is the knowledge or information extracted from the large pool of enterprise database. Let's see some of the definitions given here under.

This BI has been made-up of various set of components, such as business models, database model, extraction, transformation, and loading tools. To design and implement the BI system a skilled and professional personnel are required. The BI system architecture is shown in the Fig. 8.8, to understand the process and elements.

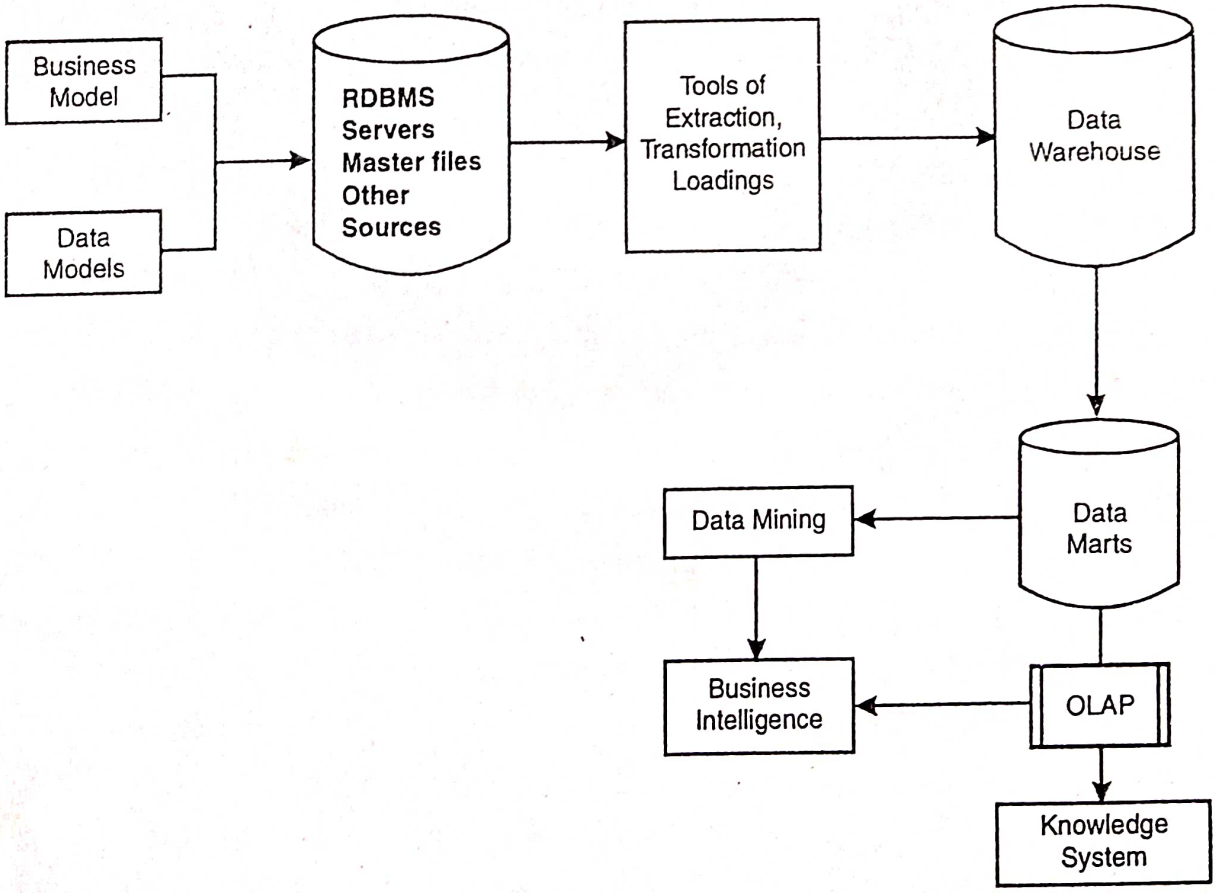

Fig. 8.8. BIS Process and Elements.

As the figure shows the process and contents of extraction, transformation and loading of the data from various tools can be creating the data warehouse. For the data warehouse

the data marts, OLAP, data mine are generate the knowledge system and business intelligence. Let's refer all the process contents from the following lines.

1. **Business Model and Data Model :** Business model explain the business process, flow of communication, and connection in between the processes and activities of the enterprise. Data model is representing the relationship between the data and specifications. It explains the data structure. The data model is formed as physical data model, logical data model and relational data models. Every data model has contain two things, that is one 'entity' and second 'dimensions'. How data 'entity' and 'dimensions' are related with data model? Fore example, a company product sale at different cities in a month is the entity and if you aggregate the all the sales data by city wise, and product wise refers the dimensions. It is also called as multidimensional database.
2. **Source Data Forms :** Two types of data sources formed the database, such as internal and external, both sources are formed as RDBMS, DBMS etc.
3. **User ETL Tools :** User ETL tools means, extracts, transformation and load the data to create the enterprise data warehouse.
4. **Data Marts :** It is the sub-set of database, which is split from the whole data warehouse. Data marts are splitting into different functional databases such as marketing, finance, production etc.
5. **Data Mining and OLAP :** Both data mining and OLAP techniques by which the data has been analysis and extracted the business intelligence and knowledge. Today's organizations are very much advancing towards developing a both knowledgebase system and business intelligence system for all the needs and intelligence decision-making.