

The Importance of Business Intelligence on Decision Making Process

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Abstract

Business Intelligence is the solution for rapid increase in the graph of data volumes. It has also raised the demand of tools which can support the organizations with all the functions included in analyses of existing high volume of data. In order to improve the corporate decision making capacity, enterprises learn to make use of systems like Business Intelligence Systems. Integration of BI system to give appropriate evaluation is matter of high concern in Decision making and Business management process. This paper deals with study of relationship among different aspects of BI like Business Intelligence functions, decision making benefits and other organizational benefits. It discussed unified approach to Business Intelligence (BI) and Knowledge Management (KM) in order to enhance corporate decision making efficiency and capacity. This article is trying to provide a thorough analysis of the differences between Business Intelligence and Knowledge Management. Business Intelligence emerging a novel trend like fast analytics and data science.

Keywords- Business Intelligence (BI); Knowledge management (KM);

1. Introduction

With the rapid proliferation of markets, cut-throat competitions and increasing demands of consumer, it has become necessary for large companies as well as start-up for large companies make use of tools with appropriate technologies which would help in collecting, integrating, storing, editing and analysis of existing data. Business Intelligence systems could be a solution here. Business management is the act of organizing masses to accomplish the desired goals and objectives of a business. Traditionally, systems like Management information system, Decision support system or Executive Information System were prepared to fulfil the purpose of data analysis [1]. In recent years using Business management system companies respond quickly and flexibly in order to organize data intelligently and clearly. This system has not grown-up in making customer and supplier relationship more profitable but also resulted in beneficiaries' satisfaction in terms of decision making, getting faster result and continuously developing them.

BI system is advantageous for both larger companies as well as start-up companies. It is due to the availability of large number of software vendors (SAP, Oracle, IBM, SAS) that are significantly important for such companies [14].

Employing such productive systems and implementing quality scheme on it can result in relatively more benefits and long term stability. To conclude, Business Intelligence System supports in spotting, digging out and gathering required data which not only contribute in better business decision but also supports corporate to keep a leading rank in the market.

2. Business Intelligence (BI)

In 1970s, BI was derived from decision support system. In 1990's, the term BI was introduced by Gartner group analyst Howard Dresner. Business Intelligence was defined as a series of technological system or application systems consisting of Data mining, Data warehouse, Data backup and above all recovery components which contributes to profitable business opportunities. In other words, BI supports latest information technologies along with providing pre packaged application solution. BI is benefited simultaneously for providers and information receivers. This is reason why BI has become so widespread in business functions and research activities. It is also capable of handling large amount of data helping in identification and evolving new opportunities for the business. But again there are different approaches which make its acceptance unclear.

3. Purpose of Business Intelligence System

According to Tony Banham, the purpose of BI system is to utilize all the gathered data which ultimately would be beneficial for executives in making better business decision. BI process consists of three tasks:

1. Firstly, it is necessary to gather important data about the business.
2. Secondly, data collected in analyzed for extracting necessary information from it which is otherwise turned into knowledge.
3. Final and third task is utilizing the relevant and newly generated knowledge for improving the business [14].

For its utilization in complex analysis, ETL (Extract, Transform and Load) function allows joining of multiple sources of data in well-organized and structured database. This process is performed

periodically that means daily, weekly, or monthly based on the needs of the companies. ETL is also referred as offline as its database is hardly updated and revised at an interval batch basis (Fig 1).

Offline ETL has some drawbacks as well, but serves its purpose well:

Data can be weeks old and is not fresh in the data warehouse. In spite, its use for strategic functions but it is not at all adaptable to tactical use.

The target database is in an inconsistent state following the load because the source database typically should be temporary inactive throughout the extract method. With this result, the applications must be shutdown, often for hours.

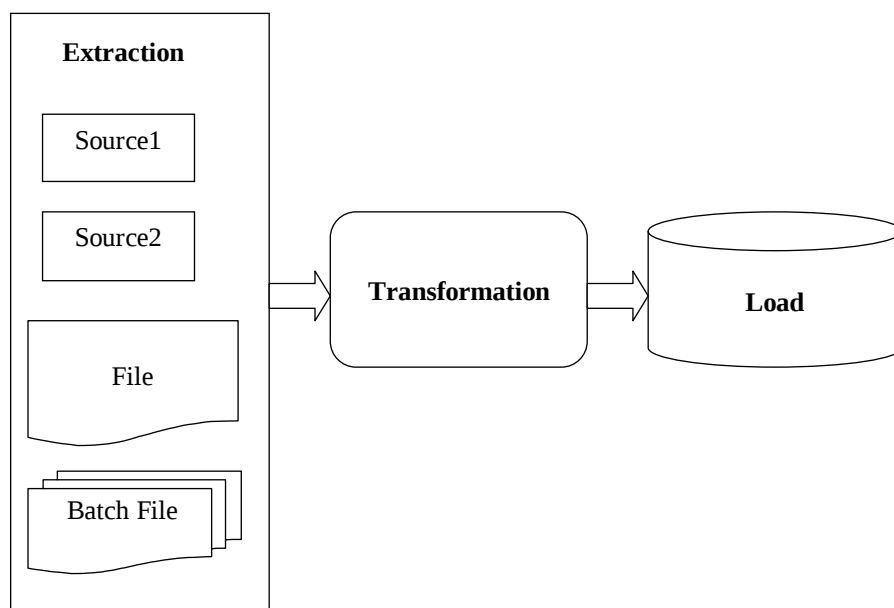


Fig 1: ETL Model Representation

4. BI and Knowledge Management (KM)

1. Both rely on IT i.e. on internet, computer, hardware, software, network communication technology and database storage.
2. Application of both operations is same as the achievement of their functions depends on information and knowledge
3. KM's objective is knowledge and is linked with humans having good knowledge. BI also focuses on technology, applied effect of which is again applied on user's skills [12].

Related Work of the relationship between Business Intelligence and KM

Herchel and Jones discussed that BI aims at explicit knowledge when KM has tacit as well as explicit knowledge system. Both business operations work well in fluctuating learning, making and understanding decision. Another article by Cook and Cook considers KM and BI are derivatives from enterprise management theory [3]. Kadayam thinks KM and BI as an intergraded concept [5]. He says that increased development of technology is bridging a gap between KM and BI which will enhance the value, movements and investment returns of intelligence.

Due to broader view and understanding of BI, huge number of architectures for BI system is depicted in literature. The following processes are applied to the concepts of every individual which are defined and referred in terms of BI:

- Data Collection
- Data Integration
- Storage of Data
- Processing of Data
- Presentation of Data

5. Major Requirements of BI

Three major requirements are as follows:

- Willingness to make thing in Question which are challenging. There is a greater opportunity for BI systems to employ right conditions in order to successfully plan and challenge the things being used for long time and are in question. It also makes it possible to analyze the structure changes and create newer combination of information.
- Willingness to think contemporarily, BI offers another opportunities which helps in creating newer and innovative insights. There must be complete clarity of ideas for all those which might be seen unrelated and irrelevant. Because these can be non-beneficial initially but can be prove to be advantageous in the later half.
- Administrative attention to be successful. They have providing two ways but again this would be a failure if the management support acceptance and willingness to participate in such functions is negligible. There is a huge variety of BI tools which have opened a gateway in providing lots of relevant information required for business performance and decision.

6. Business Intelligence Tools

BI tools will help for making the right decision. Business Intelligence Tools are very unique and offers with a many of relevant information regarding your organizational performance and decisions. It includes:

SAP BI: It provides various latest analytical solutions including real time Business Intelligence machine learning, planning & analysis and predictive analytics. It offers data visualisation and analytics applications, reporting and analysis, mobile analytics and office integration.

MicroStrategy: Another BI tool which provides high speed dash boarding and data analytics is MicroStrategy. It helps to recognize newer opportunities hence improving productivity.

Sisense: It is highly recommended to manage large and complex datasets along with analysing and visualising this data without support of IT department involvement. It also referred as user friendly tool.

SAS Business Intelligence: It has proved to lay great BI platform offering advanced predictive analytics. This tool provides a greater platform for business intelligence.

QlikSense: QlikSense can be used from any device at any time. It is a product of Qlik, a company also known for another business intelligence tool called QlikView.

Yellowfin BI: It is consolidation of visualisation, collaboration and machine learning giving BI tool and 'end-to-end' analytics platform.

Microsoft Power BI: This tool web based application having excellence in data visualisation. It promotes users in integrating their apps and delivering reports and real time dashboards.

Oracle BI: Oracle BI is another technical tool rendering all BI capabilities (proactive intelligence, dashboards, alerts and ad hoc etc.). It is also referred in terms of enterprise portfolio of applications and technology for BI.

Conclusion

Business management maximizes the productivity and provide best service to enterprise customers. BI is used to analyzed and utilized a variety of data, information and knowledge by decision makers of companies, and enhancing the quality and speed of making and enhance competitive advantage. It is the act of organizing masses to accomplish the desired goals and objectives of a business. The purpose of this article is to analyse the relationship between Business Intelligence functions, Decision making and organizational benefits. This research is trying to provide a theoretical analysis of the

differences between Knowledge Management and Business Intelligence. BI Tools provide a lot of useful information and unique feature in context to performance and decisions of business system.

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