National Conference on Recent Advances in Computer Science and IT (NCRACIT)
International Journal of Scientific Research in Computer Science, Engineering and Information Technology
© 2018 IJSRCSEIT | Volume 4 | Issue 1 | ISSN : 2456-3307

Relevance of IT in Business Intelligence

Dr. Vipul chalotra[1], Mr. Ajay Kumar[2], Mr. Kaku Ram[2]

[1]Assistant Professor, Department of Commerce, GDC (Boys) Udhampur, Jammu and Kashmir, India
[2]Assistant Professor, Department of Business Administration, GDC (Boys) Udhampur, Jammu and Kashmir, India

ABSTRACT

IT has a vital impact on business in the contemporary era. Business cannot think of performing today without computers and IT. The IT mode has paved the way for new routes and mechanisms of doing on-line businesses. Business intelligence refers to how smoothly a business is remitting its services and products to the entire globe. The business world is encompassed with modern IT scenario emphasizing the new horizons of doing business. Business however had performed better and faster due to growth and development of IT perspectives. Perhaps business had now become part and parcel of IT, as it can't think of operating without computer applications. The services of business had enhanced for example in India OLA cabs, OYO hotels, tetra packs, banking (online banking), medical services, on line booking of tickets for railways, airways, movies etc all are performing better due to the emergence of IT. So, business intelligence refers to transferring business from traditional to modern perspective of doing on-line business due to the boon of computers and IT applications.

Keywords: Business, Business Intelligence, IT and Computer Applications.

I. INTRODUCTION

Business Intelligence (BI) comprises the strategies and technologies used by enterprises for the data analysis of business information and status. Business Intelligence technologies provide historical, current and predictive views of business operations. Common functions of business intelligence technologies include reporting, online analytical processing, analytics, data mining, process mining, complex event processing, business performance management, benchmarking, text mining, predictive analytics and prescriptive analytics. Business Intelligence technologies can handle large amounts of structured and sometimes unstructured data to help identify, develop and otherwise create new strategic business opportunities. They aim to allow for the easy interpretation of these big data. Identifying new opportunities and implementing an effective strategy based on insights can provide businesses with a competitive market advantage and long-term stability. Business intelligence can be used by enterprises to support a wide range of business decisions - ranging from operational to strategic. Basic operating decisions include product positioning or pricing. Strategic business decisions involve priorities, goals and directions at the broadest level. In all cases, BI is most effective when it combines data derived from the market in which a company operates (external data) with data from company sources internal to the business such as financial and operations data (internal data). When combined, external and internal data can provide a complete picture which, in effect, creates an "intelligence" that

cannot be derived from any singular set of data. Amongst myriad uses, business intelligence tools empower organizations to gain insight into new markets, to assess demand and suitability of products and services for different market segments and to gauge the impact of marketing efforts.

Often Business Intelligence applications use data gathered from a data warehouse (DW) or from a data mart or data base, and the concepts of BI and DW combine as "BI/DW" or as "BIDW". A data warehouse contains a copy of analytical data that facilitate decision support.

The term "Business Intelligence" was at the very first seen in the Richard Millar Devens' in the 'Cyclopædia of Commercial and Business Anecdotes' from 1865. Devens used the term to describe how the banker, Sir Henry Furnese, gained profit by receiving and acting upon information about his environment, prior to his competitors. "Throughout Holland, Flanders, France, and Germany, he maintained a complete and perfect train of business intelligence. The news of the many battles fought was thus received first by him, and the fall of Namur added to his profits, owing to his early receipt of the news." (Devens, 1865). The ability to collect and react accordingly based on the information retrieved, an ability that Furnese excelled in, is today still at the very heart of BI. The term was further used by another person basically a researcher Peter Luhn in 1958. He employed the Webster's dictionary definition of intelligence: "the ability to apprehend the interrelationships of presented facts in such a way as to guide action towards a desired goal".

Business intelligence as it is understood today is said to have evolved from the decision support systems (DSS) that began in the 1960s and developed throughout the mid-1980s. DSS originated in the computer-aided models created to assist with decision making and planning. From DSS, data warehouses, Executive Information Systems, OLAP and business intelligence came into focus beginning in the late 80s.

In 1989, Howard Dresner (later a Gartner analyst) proposed "business intelligence" as an umbrella term to describe "concepts and methods to improve business decision making by using fact-based support systems". It was not until the late 1990s that this usage was widespread.

Critics see BI as evolved from mere business reporting together with the advent of increasingly powerful and easy-to-use data analysis tools. In this respect it has also been criticized as a marketing buzzword in the context of the "big data" surge. In order to develop good Business Intelligence respective search engines are required to be pioneered and proper adhere ration to the research in term to develop business intelligence software's required to be propounded.

II. COMPONENTS OF BUSINESS INTELLIGENCE

Business intelligence is made up of an increasing number of components including:

- Multidimensional aggregation and allocation
- Denormalization, tagging and standardization
- Real time reporting with analytical alert
- A method of interfacing with unstructured data sources
- Group consolidation, budgeting and rolling forecasts
- Statistical inference and probabilistic simulation
- Key performance indicators optimization
- Version control and process management

III. KEY ELEMENTS IN BUSINESS INTELLIGENCE

A. Data Discovery

Data discovery is a buzzword in Business Intelligence for creating and using interactive reports and exploring data from multiple sources. The market research firm Gartner promoted it in 2012. Data discovery is a user-driven process of searching for patterns or specific items in a data set. Data discovery applications use visual tools such as geographical maps, pivot tables, and heat maps to make the process of finding patterns or specific items rapid and intuitive. Statistical and data mining techniques can be employed to accomplish these goals. Data discovery is a type of business intelligence in that they both provide the end-user with an application that visualizes data using dashboards, static and parameterized reports, and pivot tables. Visualization of data in traditional BI incorporated standard charting, key performance indicators, and limited graphical representation and interactivity. Business Intelligence is undergoing transformation in capabilities it offers, with a focus on end-user data analysis and discovery, access to larger volumes of data and an ability to create high fidelity presentations of information.

B. Data Warehousing

To distinguish between the concepts of business intelligence and data warehouses, Forrester Research defines business intelligence in one of two ways:
Using a broad definition: "Business Intelligence is a set of methodologies, processes, architectures, and technologies that transform raw data into meaningful and useful information used to enable more effective strategic, tactical, and operational insights and decision-making prospective. Under this definition, business intelligence also includes technologies such as data integration, data quality, data warehousing, master-data management, text- and content-analytics, and many others that the market sometimes lumps into the "Information Management" segment. Therefore, Forrester refers to data preparation and data usage as two separate but closely linked segments of the business-intelligence architectural stack.

Forrester defines the narrower business-intelligence market as, "...referring to just the top layers of the Business Intelligence architectural stack such as reporting, analytics and dashboards".

C. Comparison of Business Intelligence with Competitive Intelligence

The term business intelligence is sometimes a synonym for competitive intelligence (because they both support decision making), Business Intelligence uses technologies, processes, and applications to analyze mostly internal, structured data and business processes while competitive intelligence gathers, analyzes and disseminates information with a topical focus on company competitors. If understood broadly, business intelligence can include the subset of competitive intelligence.

D. Comparison Of Business Intelligence With Business Analytics

Business intelligence and business analytics are sometimes used interchangeably, but there are alternate definitions. One definition contrasts the two, stating that the term business intelligence refers to collecting business data to find information primarily through asking questions, reporting, and online analytical processes. Business analytics, on the other hand, uses statistical and quantitative tools for explanatory and predictive modelling.

In an alternate definition, Thomas Davenport, professor of information technology and management at Babson College argues that business intelligence should be divided into querying, reporting, Online analytical processing (OLAP), an "alerts" tool, and business analytics. In this definition, business analytics is the subset of Business Intelligence focusing on statistics, prediction, and optimization, rather than the reporting functionality.

E. Applications of Business Intelligence in an Enterprise

Business intelligence can be applied to the following business purposes, in order to drive business value.
Measurement – program that creates a hierarchy of performance metrics and benchmarking that informs business leaders about progress towards business goals (business process management).

- Analytics – program that builds quantitative processes for a business to arrive at optimal decisions and to perform business knowledge discovery. Frequently involves: data mining, process mining, statistical analysis, predictive analytics, predictive modeling, business process modeling, data lineage, and complex event processing and prescriptive analytics.
- Reporting/enterprise reporting – program that builds infrastructure for strategic reporting to serve the strategic management of a business, not operational reporting. Frequently involves data visualization, executive information system and OLAP.
- Collaboration/ platform – program that gets different areas (both inside and outside the business) to work together through data sharing and electronic data interchange.
- Knowledge management – program to make the company data-driven through strategies and practices to identify, create, represent, distribute, and enable adoption of insights and experiences that are true business knowledge. Knowledge management leads to learning management and regulatory compliance.

IV.CONCLUSION

The needs and benefits of the implementation of business Intelligence are sometimes driven by competition and there exists a need to gain an advantage in the market. The effective implementation of a Business Intelligence is the acquisition of other organisations that enlarge the original organisation it can sometimes be beneficial to implement DW or BI in order to create more oversight.

Companies that implement Business Intelligence are often large, multinational organisations with diverse subsidiaries. They may go through the implementation of a Business Intelligence Competency Center (BICC).

A well-designed BI solution provides a consolidated view of key business data which is not available anywhere else in the organisation, giving management visibility and control over measures that otherwise would not exist. In addition to the above, business intelligence can provide a pro-active approach, such as alert functionality that immediately notifies the end-user if certain conditions are met. For example, if some business metric exceeds a pre-defined threshold, the metric will be highlighted in standard reports, and the business analyst may be alerted via e-mail or another monitoring service. This end-to-end process requires data governance, which should be handled by the expert. So, business intelligence has resulted in improved services in terms of imparting banking (online banking) services, medical services, on line booking of tickets for railways, airways, movies etc.

V. REFERENCES

[1] www.google.com last seen on 13/03/2018.

[2] www.yahoo.com last seen on 14/03/2018.

[3] businessperspectives@co.in last seen on 14/03/2018.