

Data Handling and Business Intelligence

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Introduction

Business Intelligence is defined as the “set of strategies and technologies for analysing business information and transforming it into actionable insights that inform strategic and tactical business decisions” (CIO, 2023). It is an important component of the Decision Support System and makes use of structured and unstructured data that can provide valuable knowledge for the business decision making process. According to Connolly et al (2008) it is a concept that has gained popularity recently along with the technological development and has started to take shape through different semantics, objects and predictive models. There have been generated different trends that help the organisations to predict capabilities and transform data into actions.

Business Intelligence Trends

There are different business intelligence trends that have been adopted by the organisations in order to create competitive advantage and increase business efficiency. **Data discovery** is one of the most important business intelligence trend and is a business user oriented process that collects data and evaluates it through pattern detection. It can be used different sources for the data collection capturing a 360° scanning of the business such as customer satisfaction, value perception and so on. Data discovery can be divided in data preparation, visual analysis and guided advanced analytics. Generating trends based on the collected data helps the business to understand the data and can contribute to the business decisions making process. Irrelevant data refers to data which does not provide any insights or is not understood and which then is not used by the business. In contrast data that has certain significance can create value and help the business to take advantage of market and business opportunities (Pierson, 2021).

Mobile business intelligence is another trend that has great importance for the modern business activity. Society has started to use smartphones on a daily basis and are becoming a commodity. Business are incorporating the technology also as it allows high degrees of flexibility. Mobile BI is the system which gives access of the business data through mobile devices such as tablets or mobile phones to support business decision making or other activities required by the business to perform. This trend has been emphasised along with the smartphones development which had opened a new era of mobile computing. A large number of business are making use of the Mobile Business Intelligence systems because of the practical aspects given and the variety of the benefits. It has been observed that it helps the business processes, it increases employee productivity and it leads to

an overall faster and with more results activity as it can access data from any location at any time. Some business are reluctant to use the mobile business intelligence and prefer to use other systems, but other business are finding the mobile business intelligence apps more straightforward and faster (Peters et al., 2016).

Data literacy is an ability rather than a tool or a process and it is defined as “the fluency with which individuals and organisations can comprehend and communicate data” (Collibra, 2022). Organisations are looking at exploring and benefiting from the flux of data related to the business activity in order to obtain meaningful information and knowledge. That is why the data-driven organisations have a great interest to be highly literate in “speaking” data in order to be able to handle it, to process it and read it, to produce written reports and to communicate to the relevant parties from the organisation. Data literacy helps with the understanding of siloed data and data analysis. The set of skills for data literacy involves ability to read charts, graphical representations, data constructs, data sources and its understanding and ultimately provide concise conclusions and creating valuable knowledge.

Analytical Databases are another important business intelligence trend and it refers to “the specialised databases which are optimised for analytics and which can be available as software or as data warehouse appliances” (Ng, 2013). In the early years of Business Intelligence data collection was not the focus of the businesses and existing data was very limited and sparsely populated in data warehouses. Technology development in software and hardware have improved data and software consumption, infrastructure and the levels of connectedness. Whilst in the initial stages of analytical databases there were limited functions such as OLAP being able to capture static snapshots of specific data, along with the technological development data is now more complex and is determined by volume, variety and velocity. Some databases have distinguished from others through the popularity and appliances on the most current business, operations typically over the internet such as technology behind ATMs, online banking, cash registers and specific to e-commerce activity (IBM, 2023).

Artificial Intelligence represents the most revolutionary technological development as it is able to generate instant action and generate results within minutes and is used by many industries. The Artificial Intelligence programs and applications are important to reduce the human effort and human error, but it needs to follow the organisational principles and ethics also. Business collect more and more data at a greater rate. As a business intelligence trend the artificial intelligence is used as a tool in many business operations such as provision of customer service, selection of candidates in recruitment, interactive training programs, estimation of the market demand, planning,

problem solving and so on. It has an array of applications and an array of benefits as it can reduce time and cost for business operations through usage of automated process in finances, human resources, operations. Therefore it can be used for shortlisting and hiring process, forecasting markets, assessing customer behaviour and trends, continuous customer assistance through chatbots. Artificial intelligence it is also used for counteracting any external attacks for the internal systems and ensures high levels of cybersecurity (Gupta, 2022).

Conclusion

It can be concluded that the business intelligence trends are the modern way to do business and that it can impact the competitiveness of the business environment. With the popularity of the internet data collection is easily facilitated through the use of social media platforms and data collection is not a difficult or it does not involve a high number of resource like in the past. Data storage is not a major problem anymore either as there are available different computing infrastructures that are providing data warehouses at accessible costs depending on the business needs. The access to the data and knowledge is not as difficult as it was either through the help of artificial intelligence and mobile business intelligence. Artificial intelligence is important to increase efficiency of work but also for task innovation and fruitful outcomes. Being informed is crucial for any business and business intelligence supports the business to obtain and manage the information better.

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