

Data Handling & Business Intelligence

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Assesment 1

Explaining at least 5 current Business Intelligence Trends and why businesses are required to implement BI trends

Introduction

Business intelligence can be described as an integration of business analytics and data mining as well as data visualisation to help companies to make more data-driven decisions (Gad-Elrab, 2021). BI is also an important framework in businesses as it helps provide insights concerning the competitors within an industry that helps in making more informed and dedicated decisions. Furthermore being that the number of companies using BI has increased with over 33% of large businesses using BI in making decisions its significance is being seen (Gitnux, 2023). Furthermore in another research, the self-service business intelligence trend of BI is of high significance for 60% of research and development departments (Makarova, 2023). This means that for research to be carried out effectively there is the need for BI. Furthermore, being that the global business intelligence market is expected to grow to \$33.3 billion by 2025 (Akash, 2022), ***having data quality management, Self-service business intelligence and data visualisation*** as the main top trends, that up to 54% of business have agreed that the cloud-based BI have helps in their existing initiative, its significance has been seen (Rayaprolu, 2023). In this report, an analysis of five current BI trends will be analysed alongside reasons why companies have to implement the trends.

Business Intelligence trends

Self-service business intelligence

This is an approach that is used during data analytics that helps companies to have cases and explore sets of data even if they are not well equipped with BI functionalities as well as data

mining and statistical analysis (Rinkenberger, 2020). With this tool it allows the users to filter, sort, have visuals and analyse data without involving a company BI and IT teams. According to statistics the Self-service BI market size was valued at \$4.73 billion in 2018 (AMR, 2023). However, it is expected to reach \$14.19 billion by 2026 growing at a CAGR of 14.8%. With these trends, employees as well as executives find it easier to access and get business insights from the data that has been gathered by the BI systems. With this, a company get more informed decisions resulting in positive business outcomes leading to high client satisfaction.

Data quality management

Data quality management is the process and practice that includes constant management of high-quality information flow throughout the company (Abbas, 2020). Data quality management locates poor-quality data, cleans it and converts it into useful data alongside other BI platforms. Businesses need this quality management system as, being that a lot of data enters organisations, it could be duplicated, inconsistent or data that is outdated. If such data is not accurate and it's not updated, it could become challenging to make informed decisions for the company, which could cost the business a fortune. According to statics the global market for data quality was estimated to be \$1.4 Billion in 2022, with projections to reach \$5.4 billion by the end of 2023 growing at a CAGR OF 18.70%, shows that with more updates, its benefits are continuing to be seen by many businesses hence its increase in adoption (Research and Markets, 2023).

Data visualisation

Data visualization is the presentation of data using various graphics such as plots, infographics, animations and charts (Mohammed and ElDahshan, 2022). With this, it helps in simplifying complex information relationships and develops insights that are data-driven in simpler formats. Through its application in business, it is mainly used in idea generation, illustration of ideas, and data visualisation of the different partners and relationships that exists within variables in a company. According to statistics, the global data visualisation market size was valued at \$7.4 billion and is projected to reach \$19.5 billion by 2031 with a CAGR of 10.2% from 2022 to 2030 (Fortune Business Insights, 2022). With a percentage of up to 24% of companies using big data analytics, with a projection of growth in the market size, means that many companies will eventually enrol. However, factors such as high cost and security issues make it difficult for smaller companies to adopt it hindering its growth.

Artificial intelligence

AI is a science that is designed to make machines execute that which is done by complex human intelligence (Verganti and Iansiti, 2020). AI has revolutionised the way people interact with analytics and management of data while still considering improvements in security issues. With issues such as Covid 19 completely changing the business landscapes, historic data is no longer the major drive for AI-based solutions. According to statistics, the global market size was valued at \$69.25 billion with expectations that it will grow to 18712.2 billion by the end of 2022 with a CAGR of 39.1% (Prudence Research, 2023). This is considered that with 77% of companies using AI, 42% of them exploring AI for future implementation while 35% are already using AI (Zauderer, 2023) many more companies will eventually use AI is that it is a cheap method of production despite that it takes a lot of money to install that makes it a challenge for smaller business to adopt AI.

Collaborative BI

In today's work environment, managers and employees need to collaborate to ensure that projects have been delivered successfully. With collaboration, the company improves its decision-making by 25% (Pigment, 2023). This created the need to have tools that help in ensuring that the employees and managers can easily collaborate. This was furthermore impacted by Covid 19 where up to 90% of employees transited to remote working. Hence it increased the demand for Collaborative business intelligence. With collaborative tools, it is easier to share reports by automating the generation of reports. Furthermore with collaborative decision making high efficiency is experienced. In a report published in 2022, the industry was valued to be \$27.11 billion in 2022, which is projected to grow to 54.27 billion by 2023, growing at a CAGR of 9.1%. With this, it shows that more companies are continuing to realise its significance hence the increase in enrolment.

Why businesses are required to implement BI trends

In the current industries, the competition level has raised which means that companies have to go to extra efforts to remain competitive. Furthermore, with the large amounts of data that are available, companies can use this to their advantage. BI plays a significant role in taming data that is unstructured and presenting it visually in the forms of graphs, maps and charts that makes it to be simpler to understand. With this, the productivity of the company will increase. According to research, it states that business intelligence has been a helpful tool in improving decision making with up to 80% of the companies using BI reporting an improvement in operations efficiency, growth in revenues by 12 and a 23% cost reduction in terms of production cost (Solomons, 2023).

With BI, companies will be able to understand their clients' way better. With tools that can help analyse patents, this will help in doing more personalised advertisements. This is focused on a report (Boudet, 2019) that states that personalisation in marketing increased efficiency by 10-30 times. Furthermore, another study (Haider, 2018) states that up to 76% are influenced to purchase if the advertisement is more related to their needs.

With the data that is gotten from the tools, which is more sorted and related to the business functionalities, this leads to the development of stronger marketing efforts and also improving the competitive advantages. The data also plays a role in helping the company to realise the trends in the market and hence align their activities. For instance, this will also help in locating times when demands are high so the company can make more production and also when demands are lower for the company to lower the units it produces to avoid overstocking. In conclusion with the above, BI generally contributes to increasing the revenue of the company as well as the performance of the company which impacts client satisfaction which is the necessity for a company to succeed in a market.

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