

Data Handling

LCBB5000

Report



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1.Introduction

As a Operation Manager and decision maker in our modern retail business company implementing the latest Business Intelligence trends, tool and applications is essential for us to stay competitive and make informed, timely decisions. The adoption of these technologies can significantly enhance customer satisfaction, the operational efficiency and the business performance of the organisation. This report critically evaluates why modern BI trends are essential for our business future and how they can assist in effective decision making.

2. Why BI trends and Applications and are the future for the business?

Business Intelligence trends, tools, and applications are essential for companies as they transform data into actionable insights, facilitating more informed decision-making. By understanding market trends and customer needs, businesses can stay competitive and improve customer satisfaction. Additionally, BI helps manage costs

and identify new revenue opportunities, enhancing overall financial performance (Selecthub, 2024).

According to Gupta (2021), business innovators can make substantial and impactful use of information through business intelligence. Utilizing tools from BI segments, organisation's can better manipulate data to gain a competitive edge. When effectively applied, this data can inform corporate decisions, enabling companies to proactively address market trends and external factors. Although many businesses collect large amounts of raw data, only a few capitalise on it to generate valuable insights and improvements, but BI empowers contemporary business leaders to make informed decisions and gain a deeper understanding of their opportunities. In the below, the reasons why BI trends and applications are the future for business will be discussed. Additionally, BI helps manage costs and identify new revenue opportunities, enhancing overall financial performance.

3.How BI Trend, Tools, and Applications can help to make timely and effective decisions?

According to Vajpai (2024), BI trends are enable rapid analysis of large data sets to identify trends and patterns. The

components of BI systems provide a clear framework for strategically selecting applications and tools to enhance business strategy. These components include data collection, data warehousing, data analysis, and data visualization, each playing a crucial role in transforming raw data into actionable insights. By systematically evaluating and integrating these elements, organizations can effectively identify the most suitable BI tools and applications to support their strategic objectives and drive business improvements. This structured approach ensures that the chosen BI solutions align with the overall business strategy, facilitating informed decision-making and competitive advantage. In the below, examples of 5 trends have been discussed to make it clear how they can help for timely and effective decisions making.

A. **E-commerce analytics software:** it provides comprehensive insights into online sales performance, customers behaviors, and marketing trends. This tool indispensable for optimizing our online presence and marketing strategies. By utilizing e-commerce analytics, we can monitor important metrics like conversion rates, average order value, and customer acquisition costs.. For example, tools like google Analytics and Shopify Analytics

offer real-time data on customer interactions, helping us understand which products are popular and which marketing campaign are most effective. This data-driven approach enables us to make informed decisions on inventory management, pricing strategies, and promotional activities, thereby increasing our online sales and profitability (Zhang, 2023).

B. Business Intelligence Tools aggregate data from various sources and transform it into actionable insights through dashboard and reports. This enhance our ability to make strategic analytics based on comprehensive data analysis. Additionally, enable us to visualise sales trends, customers preferences, and operational inefficiencies. These tools provide a holistic view of the business, allowing us to identify opportunities for growth and areas needing improvement. We can quickly generate reports on sales performance, track KPIs, and forecast future trends, making our decision making process more accurate and timely (IBM,2024).

Oracle Business Intelligence for example is a comprehensive suite designed for medium to large enterprises with complex data needs, offering capabilities in data integration, analytics, and reporting. It is known for its scalability, advanced

analytics, data visualisation, and robust support infrastructure, with features like self-service analytics, ad-hoc analysis, mobile analytics, and powerful dashboards (Oracle America, 2024).

C. **Cloud BI Solutions** offer scalable and flexible data storage and analysis capabilities, ensuring that our BI infrastructure can grow with our business needs. After securely storing the data, it can be accessed from anywhere. This flexibility supports remote work and real time collaboration among team members. Cloud computing is pivotal for the future of Business Intelligence, offering advantages in cost efficiency, flexibility, scalability, reliability, and data sharing. The integration of BI and Online Analytics Processing (OLAP) frameworks with cloud services (Software as a Service, Platform as a Service , Infrastructure as a Service) requires significant architectural considerations, such as massively parallel processing Relational Database Management Systems (RDMS) to handle the high resource demands of OLAP queries (ElMalah, 2019) .For instance, Microsoft Power BI enables users to link to numerous data sources, streamline data preparation, and conduct ad hoc analyses. Reports can be published, shared, and accessed online and on mobile

devices, guaranteeing that decision makers have real-time access to essential information (Microsoft, 2023).

D. **ETL Tools** - Extract Transform

Extract, Transform, Load (ETL) tools are essential for data integration. Ensuring that external data sources is consolidated, cleaned and made ready for analysis. The tools streamline the process of gathering data from disparate sources, transforming it into a consistent formatted loading to our BI system. This ensures that our data is accurate, up to date, and ready for analysis, which is critical for making timely and effective decisions (Sreemathy, 2021).

When selecting an ETL solution, a company must first identify the key characteristics essential for its success. The choice of an ETL solution for data integration often hinges on the features it provides. Due to their features and implementation methodologies, many tools can be categorized in multiple ways. Choosing the appropriate ETL tool is crucial for any business. The selected ETL tool should only be customized to the extent necessary. If real-time updates or stream data handling are not required, a simpler solution that meets the needs can be used. For managing large volumes of data or

streaming data, ETL tools can be developed using open-source technology (Qaiser, 2023).

E. Visual Reporting

Provide intuitive and interactive ways to present data, making it easier to understand complex information and share insights across the organization. These visualizations help in quickly identifying trends, outliers, and performance metrics, facilitating better communication and faster decision making. Implementing modern BI trends, particularly visualization reporting, is crucial for enhancing decision-making and operational efficiency in our retail company. It allows us to leverage real-time, dynamic visual reports for better data integration and empowers employees with advanced tools to contribute to data-driven decisions. This transition will modernize our reporting infrastructure, aligning with our strategic goal of developing digital skills and optimising business performance (Pennanen, Ville, 2021).

4. Conclusion

Adopting modern BI trends, tools, and applications is not just a technological upgrade; it is a strategic necessity for our business. These tools provide the data driven insights

required to make informed, timely, and effective decisions. By leveraging the tools chosen above we can enhance our operational efficiency, optimise our marketing strategies, and drive business growth. Implementing these BI trends will ensure that we stay ahead in the competitive retail landscape and continue to meet and exceed our business objectives.

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