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Introduction

The fields of business intelligence have drastically changed in recent years. Modern analytical techniques and visualization approaches with aid of new tools have significantly changed business intelligence approaches. With daily business activities and other operations, large volumes of the information in form of qualitative as well as quantitative data are created day by day. Business intelligence techniques are frequently employed with these big datasets to generate hidden insights. Visualization is also a major part of business intelligence that is used for summarizing and creating dashboards for big data files. A drastic change in business intelligence trends are found in recent years (Pribisalić, Jugo, and Martinčić-Ipšić, 2019). The changing trends in business intelligence are helping business organizations to capture hidden insights and patterns that are hidden in a dataset. The newer available BI tools are highly automated and can be customized as per the needs of an individual.

This report demonstrates the top 5 current BI trends used in business organizations. Visualization and analytics are two major trends that are frequently used with BI tools. However, there are numerous BI trends are available nowadays and to use these BI techniques different tools and techniques are used. The top 5 major trends in BI are discussed in this report.

Trends in Business Intelligence

BI has numerous tools. The picture shown below demonstrates the importance of each BI trend in business organizations.



Figure 1: Significance of BI Trends

1. Data Quality Management

Data quality analytic trends are greatly improved in the past few years. The creation of business intelligence, which allows analysts to analyze and derive hidden insights from the datasets that can be collected from different sites, came with several errors and poor-quality reports: in form of ambiguous data types and disparities increased the time of the data-driven process. Hence, large business organization implements data quality management to derive and store only significant insights that are extremely useful for business processes.

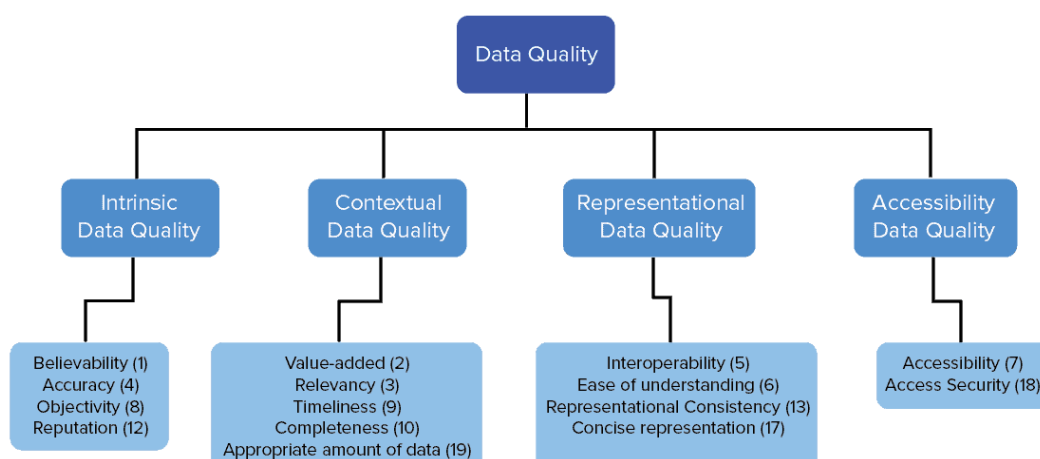


Figure 2: Data Quality Management

In recent times, the majority of businesses decide to create a data quality management (DQM) strategy, methodologies and departments because they are aware of how poor data quality affects analysis and subsequent decision-making processes. DQM is regarded as the most important element in assuring effective data analysis since it serves as the foundation for all other factors. As per the Mirchandani, and Gaur, 2019 an average loss of \$15 million in a year is bearded by the business organization due to poor data quality management. The major consequences of poor data management results are poor reliability and accuracy. It is important to select appropriate KPIs in a business dataset to avoid the poor quality of data analysis.

2. Data Visualization and Discovery

Visualization and data discovery are always major parts of BI. The fact that data discovery tools depend on a process and that the resulting insights will have economic value is a crucial factor to take into account. It necessitates the use of data preparation, visual analysis, and guided advanced analytics to grasp the relationships between the data. The Research Center underlines that "the increasing demand for data discovery tools shows a tremendous change in the BI sector towards higher data consumption and the extraction of insights." For the visualization of the dataset, there are numerous online as well offline tools that can be used. The most business organization prefers data visualization tools that are simpler, flexible, and capable of generating insights with lesser computation time. Tableau and the Power BI tool are two commonly used BI visualization tools. It is easier to interpret the data from an interactive chart as compared to interpreting or summarizing the information from a tabular dataset and hence, the visualization trend is frequently used in BI.

3. Artificial Intelligence

The application of AI techniques is manifold and can be used in various sectors. The quality of the result produced by the application of AI for various purposes is highly accurate and reliable and hence, AI is frequently used in BI techniques in recent times. AI techniques are mainly employed for the automation of the business process. The fundamental objective of employing AI in industries or business industries is to enable robots to perform the task or actions that completed by the human beings (Davenport, 2018). Despite the legitimate warnings of some reputable scientists and tech entrepreneurs, AI is not yet on the verge of destroying us. AI is frequently portrayed in films as the greatest enemy or friend of the human race. Business entities

are transitioning from static, passive reporting of past events to proactive analytics with live dashboards that enable businesses to observe what is occurring at all times and provide alarms when something is not functioning as it should (Cioffi, et al 2020). Solutions like an AI system built on the most cutting-edge neural networks, which learn from past trends and patterns, offer high accuracy in anomaly identification. Any unexpected incident will be promptly recorded in this manner, and the user will be notified by the system.

4. Forecasting and Prescriptive Analytics

Modern analytical techniques and tools are majorly used by business entities to forecast future patterns by using the records of the dataset and the analysts suggest business strategies based on the forecasted pattern. The techniques used for measuring the future pattern from a dataset are known as predictive or forecasting techniques. Prescriptive techniques are BI methods that assess future trends and suggest significant recommendations based on the obtained results. Predictive techniques are greatly used in the business sector for capturing the future aspects of major KPIs. With the use of predictive techniques, an estimated value of future sales or demand can be predicted, and hence, these BI techniques are trendy in recent times (Ratra, and Gulia, 2019). Numerous sorts of industries are using predictive techniques on large scales. Hotel industries use the predictive technique to predict the expected consumers in a night and in Airlines, this technique is used for forecasting the estimated sales of tickets. In recent times, prescriptive techniques are quite popular and can be used on large scale in the future days also.

5. Collaborative Business Intelligence

In an organization, proper and frequent communication is required between employees and managers to resolve competitive issues. Collaborative BI is a new trend in the field of business intelligence and is quite popular in recent times. Collaborative BI is the integration of online BI tools and collaboration tools. The purpose of building such a tool is to produce a platform for enhanced collaboration and tackling new challenges. The collaborative BI tools are capable of providing an easier sharing platform and automated reports.

Conclusion

The objective of producing this report is to present the top 5 BI trends that are frequently used for BI tasks. BI trends such as data visualization, DQM (Data Quality Management), and predictive techniques are extremely popular BI techniques. Collaborative BI is new technology and is also quite popular in the BI field.

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