BUSINESS INTELLIGENCE TOOLS FOR DATA VISUALISATION

Markova A.A.

Belarusian State University of Informatics and Radioelectronics, Minsk, Republic of Belarus

Pavlova A.V. – Associate Professor, Rogachevskaya A.I. – Senior Lecturer

Annotation. This article focuses on company data (e.g. financial metrics) that can be used as a business tool while implementing MS Power BI for analytics and forecasting. With MS Power BI, it is possible to export, filter, and create different visual graphical presentation reports by using company's raw data without altering the original source data. The benefits are significant because by using BI tools the company's management can create customized reports quickly and with little effort. Data does not need to be manually updated any more to get real-time information. After implementing the MS Power BI solution, the case company has been able to analyze, present and review its products and services and develop a new product and service offerings to meet the ever-changing needs of its clients.

To increase business performance we should know the areas in the business enterprise to which resources should be allocated. This can be achieved by using existing data sources stored across multiple platforms. And it is often a very difficult and laborious task. The results will also demonstrate that by examining "big data," the information gathered can be used for business analytics and presentation. The research document will also show how BI as a tool can work in collaboration with the financial accounting reporting system to conduct business analytics and to do real time presentations. Though the data sources are located in various file locations. Typical BI tools like marketing, performance and key performance indicators are so called traditional BI styles, where the system is used to perform recurring analyses from specific data. In the early stages, these tools were limited and could not be customized according to the needs of the company. But nowadays they have been further developed that enables the user to select, filter, compare, visualize and analyze data in different ways. It also enables the user to present the data visually according to their needs. These systems also require an IT team to maintain the system with the users who conducted the analysis and reporting. The MS Power BI solution is a very good example of the type of BI tool that allows users to choose where to load data from, and how to filter and present the data.

The Big Data era has proved the availability of a great amount of massive datasets that are dynamic, noisy and heterogeneous in nature. The level of difficulty in transforming a simple user into someone who can access and analyze that data is even more burdensome now. Taking into consideration all the aspects given above, modern visualization and exploration systems should effectively and efficiently handle the following aspects:

− Real-time Interaction. Efficient and scalable techniques should support the interaction with billion objects datasets, while maintaining the system response in the range of a few milliseconds.

− On-Fly Processing. Support of On-Fly visualizations over large and dynamic sets of volatile raw (i.e., not preprocessed) data is required.

− Visual Scalability. Provision of effective data abstraction mechanisms is necessary for addressing problems related to visual information overloading.

On the technical side, raw data is collected from the business's activity. Data is processed and then stored in data warehouses. Once it's stored, users can then access the data, starting the analysis process to answer business questions. Used effectively, the right data can help with anything from compliance to hiring efforts. The MS Power BI can quickly and easily pull data from live database environment without affecting the main source in case the user makes a mistake during the filtering and reporting phase. Also, the reports can easily be filtered without the software knowledge. MS Power BI offers an easy solution to

traditional data filtering and reporting. Business Intelligence software are the tools that make it possible to create a value from big data.

References:

1. What is Power BI? Microsoft.com [accessed 20 April 2018]. Available at: https://powerbi.microsoft.com/en-us/what-is-power-bi/

2. Improving company performance through implementation of Business Intelligence tools/ Edgar Kajava [et al.] // 2018