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APPLICATION OF BIG DATA TECHNOLOGY

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Annotation. Big Data technologies make it possible to process a huge amount of unstructured data, analyze it, systematize it and identify patterns where a person would not have found them. This article discusses the advantages and limitations of using Big Data technologies, with particular emphasis on assessing the degree of their impact on innovation management and economic efficiency today.

Keywords: Information, Big data, services, SQL,Hadoop, Sap Hana

Today, data volumes are increasing at a rapid pace. In order to somehow gain competitive advantages, respond faster to market changes and significantly improve efficiency, it is necessary to analyze and process a very large amount of different information. To interact with huge amounts of data, programmers needed to improve the tools to work on the analysis of all this data. Thus, in the early 2000s, the concept of Big Data appeared, which at first was of interest only to a very narrow circle of specialists. Now everyone who is interested in the field of IT knows this word.

Big Data is becoming an increasingly popular and strategically important area of IT development. Global information has always been of exceptional importance. The results of processing a huge amount of information are used to identify trends and patterns. For large companies, statistics and data analysis have always been at the heart of doing business in large markets, but with the advent of a huge amount of information, an analytical approach has become much more in demand. The purpose of the study is to identify the advantages and limitations of using Big Data technologies, with particular emphasis on assessing the degree of their impact on innovation management and economic efficiency today [1]. The object of the study is Big Data. The subject of the research is Big Data application technologies. The hypothesis of the study is that the application of Big Data technologies will be successful if the problems of solving the processing of large volumes of unstructured data are analyzed, and their systematization is ensured when working with huge amounts of information.

The objectives of the study are:
- To identify the emergence and development of the use of Big Data technologies;
- Conduct an analysis of the application of Big Data technologies;
- Conduct a comparative analysis of the traditional database and Big Data;
- Consider the scope and use of Big Data;
- Learn Big Data collection methods.

In today's world, one of the key aspects of IT development is Big Data.

This concept refers to the processing of information of different composition and huge volume, very quickly updated, located in various sources to increase efficiency, create new products and increase competitiveness. Following from this, Big Data is, firstly, a set of technologies, tools, methods and

approaches designed to solve the problem of processing large amounts of data, and secondly, Big Data is understood as the amount of data that cannot be processed by generally accepted ones, then eat in the traditional way. Big Data technologies make it possible to process a huge amount of unstructured data, analyze it, systematize it and identify patterns where a person would not have found them. The main thing to note is that the volume of data processed through Big Data is constantly increasing, as is the processing speed. The process of development of this direction corresponds to the modern world, fast-paced and innovative [2].

Examples of using Big Data:

- For any large company, Big Data allows you to analyze income and expenses, as well as detail the details of the production chain and logistics.

These factors help to improve the demand forecast for the product, reduce costs and downtime.

– In medicine, Big Data can help with the analysis of drug use statistics, improving the efficiency of service delivery.

- Banks, working with transactional information, use distributed computing, which is useful for detecting fraud and improving the operation of services.

- Government agencies analyze big data to improve the safety of citizens and improve urban infrastructure, improve the work of housing and communal services and public transport.

These are just some of the areas where the demand for big data analytics is growing. Interested parties include not only technical areas, but also media, marketing, sociology, hiring, real estate. Following from this, Big Data is already an established field of technology, even despite its relatively young age, which is gaining popularity in almost all areas of business and plays a large role in the development of the company. Big Data technologies:

The technologies used for processing and collecting Big Data are divided into three groups:

– Services;

- Equipment;

- BY.

There is still no universal toolkit for working with big data, but, despite all the difficulties, Big Data provides invaluable knowledge for various industries. Commonly used data collection methods include the following:

Table 1.

Method	characteristic
SQL	A programming language that allows you to work with databases
NoSql	Contains a series of approaches designed to implement a database
MapReduce	The basic principle of operation is to sequentially process data in two ways Redusy and map. Map takes preliminary data. Reduse aggregates them.
Hadoop	It is used for search and contextual mechanisms of highly loaded sites- Facebook, eBay, Amazon and etc.
Sap Hana	Provides high query processing speed another distinctive feature is the Sap hana tab simplifies the system landscape, reducing the cost of supporting analytical systems

Big Data problems. Usually there are 3 main groups of Big Data system problems volume, processing speed and unstructuredness: V-Volume, Velocity and Variety.

Certain conditions are needed to store huge amounts of data, and this is a matter of space and capabilities. Speed refers not only to the slow processing of information that is caused by old methods of processing, but also it is also a matter of interaction - the faster the process, the greater the return, the more productive the result. The problem of heterogeneity and unstructuredness appears due to the fragmentation of sources. We need certain analytical systems and tools for efficient processing and merging of data.

Another problem may be the analysis algorithm and the choice of data for information processing, since there is no specific understanding of what information should be collected and stored, and which can be excluded. There is also an obvious shortage of qualified specialists in this field [3].

Conclusion.

Based on the foregoing, we can draw the following conclusions: Big Data technologies involve working with huge amounts of information. There is no universal method for processing Big Data, but it is possible to use various methods to partially solve this problem. The successful application of the concept of Big Data in any enterprise can seriously increase work efficiency and stimulate the creation of a new product. The development of Big Data processing technologies is a very promising area of activity.

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ПРИМЕНЕНИЕ ТЕХНОЛОГИЙ BIG DATA

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Аннотация. Технологии Big Data дают возможность обработать огромный объем неструктурированных данных, проанализировать их, систематизировать и выявить закономерности там, где человек бы их, не обнаружил. В этом статье рассмотрена преимущества и ограничения при использовании технологий Big Data, сделав особый акцент на оценку степени их влияния на управление инновациями и экономическую эффективность на сегодняшний день.

Ключевые слова. Information, Big data, services, SQL,Hadoop, Sap Hana