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Development on Business Intelligence

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Abstract:*In today's challenging business environment, it is a vital for organization to access useful information and knowledge. Business Intelligence (BI) is an umbrella concept for tools, techniques and solutions that helps managers to understand business situation. And BI tools can support informational knowledge needs of organizations. With respect to increasing trend of BI researches in BI concepts and applications, in this paper, recent researches and papers of academic journals in this field is systematically review to classify and prioritize the concepts and approaches of business intelligence. Nowadays, companies generate vast amounts of data streaming from siloed sources. And the data remains useless unless it gets properly structured and lucidly visualized. That's the primary task of qualified Business Intelligence developers - to provide businesses with insights and a bird's view on both the market trends and their current business situation.*

Keywords - *Business Intelligence; Business Intelligence cycle; Business Intelligence developers; Importance of Business Intelligence; Review Study;*

I.   INTRODUCTION

Business intelligence (BI) has two basic different meanings related to the use of the term intelligence. The primary, less frequently, is the human intelligence capacity applied in business affairs/activities [1].In [2] BI development can be successfully applied across a variety of domains. For example, if you are a big retail chain, you may have thousands of stores with dispersed data and can't see clearly what is actually going on. You may overlook that a certain product sells once in seven months yet calls for effort and money to be kept on the shelf. Or you may have failed to predict that champagne was going to be out of stock soon – and now unhappy customers are buying it from your competition. So, you are losing money, simply, because you didn't have all the inventory data collected and shown on a dashboard. BI development targeted at extracting, transforming and loading processes (for a data warehouse) and extracting, loading, and transforming processes (for a data lake). Analyzing data sources, building an orchestrated ecosystem of platforms to extract data from different sources, and creating the design of a data warehouse or a data lake [3].

In [4] modern businesses, increasing standards, automation, and technologies have led to vast amounts of data becoming available. Data warehouse technologies have set up repositories to store this data. Improved Extract, transform, load (ETL) and even recently Enterprise Application Integration tools have increased the speedy collecting of data. OLAP reporting technologies have allowed faster generation of new reports which analyze the data.

The paper explores the concepts of BI development technology requirements, Business Intelligence cycle.

Business Intelligence mainly focuses how to collect, organize and interpret the data to relevant department to make an effective decision under the uncertainty to obtain the organizational goal.

1. **Business intelligence cycle**
- Its **life cycle** includes several important stages:
- Direction- determining the direction of development and goals.
- Collection – gathering data and information from all relevant sources.
- Processing – transforming raw data into a format, ready for analysis.
- Analysis – interpreting the processed data.
- Dissemination – communicating the newly-found insights to people.

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2.   Development on Business Intelligence

A business intelligence strategy is your Blueprint for deciding how you will use data in your company. You need a strategy because merely choosing the right technology, and implementing a software p latform is not enough to realize a return on investment. To create a strategy, you must determine three things. How will you deploy the software platform? How will you manage the data for analysis? And how will you enable your people to make informed, data-driven decisions? A business intelligence strategy will help your company reap the rewards of having actionable insights. Examples include access to sales performance benchmarks, human resources salary forecasts, and ensuring your shipping department knows what to ship each day.

3.   Why do we need to Develop Business Intelligence?

Business intelligence **can help companies make better decisions by showing present and historical data within their business context**. Analysts can leverage BI to provide performance and competitor benchmarks to make the organization run smoother and more efficiently.

4.   Responsibilities Business intelligence Developers

The project scope defines the degree of involvement for a certain role, as engineers with similar technology stacks and domain knowledge can be interchangeable. Developing BI interfaces requires deep experience in software engineering, databases, and data analysis. So, partially, data engineers that have software development background and experience with BI can lead the process of the interface development. This allows them to understand business requirements, implement proper data models, and data representation solutions.

So, the responsibilities of s BI developer are:

*   setting business requirements for BI tools.
*   translating business requirements into technical ones.
*   leading BI software development, deployment, and maintenance.
*   report curation and data modelling.
*   participation in data warehouse design.
*   documenting contents in a data warehouse and meta-data storage.
*   creating technical documentation for BI tools.

5.   Future role of business intelligence

Business intelligence is continually evolving according to business needs and technology, so each year, we identify current trends to keep users up-to-date on innovations. Data visualization will be even more essential to work together across teams and departments. This article is just an introduction to the world of business intelligence. BI platforms adapt to new technology and the innovation of its users.

II.   FIGURES AND TABLES

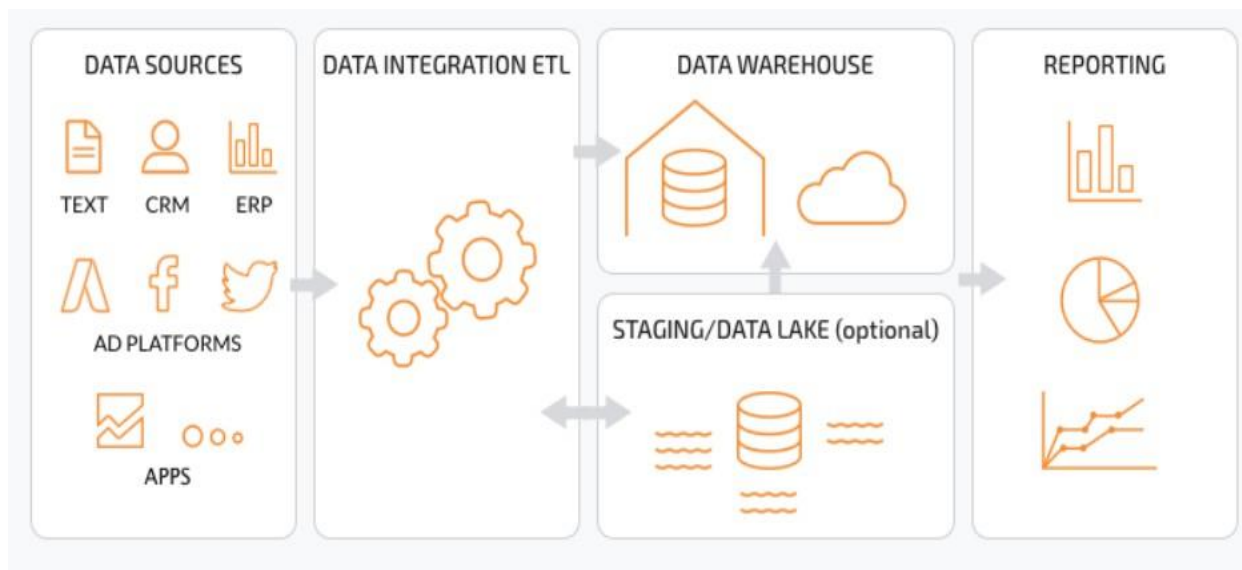Fig 1: Business Intelligence Life Cycle

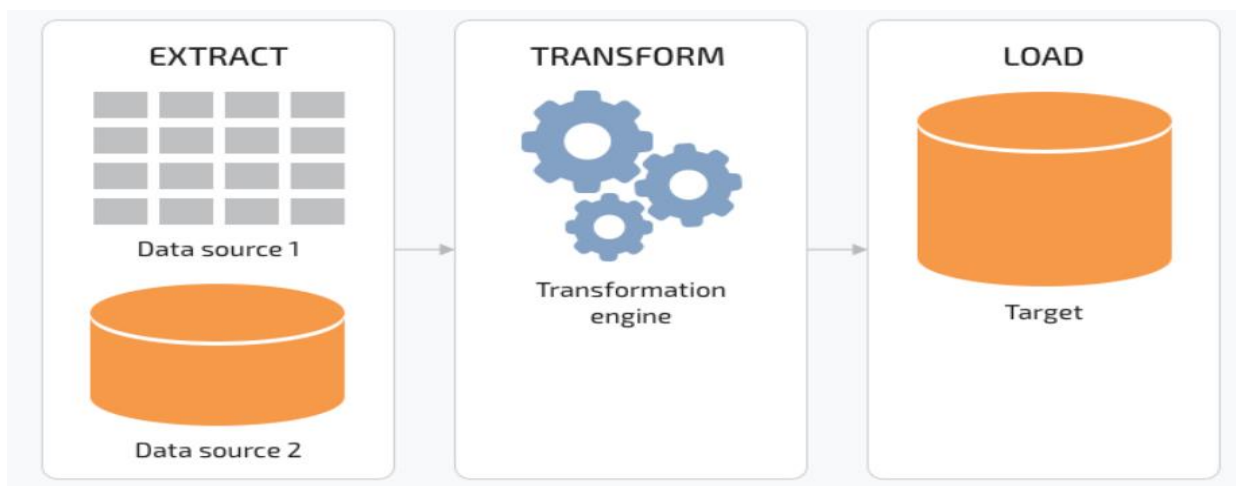Fig 2: Infrastructure of Business Intelligence

Fig 3: How to built and use BI solutions.

III.   CONCLUSION

Even though the concept of BI just emerged several decades ago, it now is becoming a major concern for enterprises regardless of its size to take it into consideration whether they should invest in this system or not in order to satisfy the customer needs and wants. Nowadays, BI establishes a real business value of data asset and provides remarkable improvement in recognizing and taking advantage of business opportunities.

Business intelligence is a managerial concept which refers to a set of programs and technologies that provide capabilities of gathering, analyzing and accessing data of organization's processes. BI helps to organizations which having comprehensive knowledge about business affecting factors, such as standards in selling, production and internal organization's processes. The ultimate goal of business intelligence systems in any organization is to help making optimal decisions as soon as possible and in all organization's levels. In this paper, an attempt has been made to express BI concepts and Development on BI. Classifying definitions and different managerial approaches supports creating positive thinking in organizations, extolling levels of attention assigning

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tasks, etc.

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