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Business Intelligence and Information System Management: A Conceptual View

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Abstract. Investigating the function that business intelligence plays in the management of information systems is the point of this study. The research investigated various aspects of business intelligence and information system management, including data storage, data security, scalability, and integration with other data systems. Methods of qualitative research are utilized for the purposes of data collection and analysis. According to the findings, information system management and business intelligence should be connected with existing data architecture. This may be accomplished by merging technology, data management, and analytics into business models in order to assist management in making decisions. Lakes of data and data warehouses are two examples of the kinds of technology that are utilized for storing data. Phishing attacks and intruders are two types of security concerns that are related with the management of business intelligence and information systems. These concerns can be controlled by data masking and integration, both of which restrict access to an organization's data. Lastly, scalability ensures that business intelligence and information system management can readily use data through training and enhancing usability. This makes it possible for them to scale up their data usage. The purpose of this study is to investigate, from a theoretical standpoint, the connection that exists between business intelligence and information system management. In addition to this, it is essential to make sure that all of these components are customized and aligned correctly. Training as well as usability improvements. This research takes a conceptual approach to explain how business intelligence and information system management are related to one another. In addition to this, it is essential to make sure that all of these components are aligned and tailored correctly.

Keywords: Business intelligence; information system; Data Architecture; Data Storage; security.

1. Introduction

Information system management is a planned process encompassing data collection and dissemination of information from one access point to another to facilitate management. The process also entails storing data necessary for running a business. The latter implies that information system management is a data processing system that provides entrepreneurs with essential information for running their operations (Ali, 2018). On the other hand, Business intelligence is a process that employs technology to analyze data and disseminate information necessary for making informed management decisions (Ali & Ouda, 2019). Managers and executives utilize this technology-driven process to make daily decisions on running their businesses and managing their workers. Information system management's characteristics include processing data accurately at a sustainable speed using operational data techniques like heuristics and simulations. Secondly, information system management should be able to organize and manipulate a large quantity of information generated from external and internal sources. Business intelligence (BI) is described as computer-based approaches for detecting, locating, and evaluating business information, such as total revenue by items and/or divisions, as well as corresponding costs and revenues (Business Intelligence, 2011). Decision making in most sorts of modern organizations is well-established in the literature to be non-rational, at least when contrasted to rational grounds and prescriptive guidelines on how decisions and selections should be made (Simon, 1976). When it comes to decision support, dimensions must be carefully considered. Regardless of the systems, tools, or approaches employed in a BI solution, the ultimate decisions must be made in a context (French et al., 2000). While the system creation for management information needs has a longstanding experience, it has been relied on a diverse set of requirements a number of these requirements remain stable (developing, implementing, and adapting strategy; keeping count of own activities), while others evolve or have a turbulent life cycle: tracking tight environment; searching for threats and opportunities. The type of corporate activity influences the information environment (Skyrius et al., 2013). On the one hand, this nature is recurring and cyclical, aided primarily by the function of a management. This essence, on the other hand, is irregular and unexpected, necessitating intelligent and insightful assistance; this is a function of a BI system and related application software - predictive modeling, competitive analysis, operations and maintenance intelligence, early detection systems, and other kinds of systems that assist tracking, perception, and problem - solving skills (Nithya & Kiruthika, 2020). The advancement of technology has made many businesses aspire to manage their data sets more efficiently and control their services using technology, thereby giving them a market advantage over their competitors. Some executives and business owners want to control access to their companies' information in a timely fashion so they can make management decisions quickly. Business intelligence and information system management thus enable these entrepreneurs to process and analyze data obtained from different points in the organization. Companies that handle large amounts of data daily also use business intelligence tools to consolidate and access information simultaneously. These organizations must move large quantities of data from one point to another through information system management. They then use the data captured from different points to calculate how to run their operations. This paper thus will focus explain information system management and business intelligence and their relationship. Moreover, the paper will explore the components of business intelligence and information system management in data storage, security, scalability, and integration with other data architecture.

2. Literature Review

(Kraus et al., 2021) assert that Information system management entails data capturing which means that the system uses contextual data to influence decision-making within organizations. Data processing also

takes place after data is captured from internal and external sources of a business enterprise. Data processing entails converting the data into information that enterprises can use to not only plan but also organize and control functionalities at operational and tactical levels. In (Sun et al., 2016), Sun et al. explain that data processing uses the information captured from different sources to make calculations that are significant to running a business enterprise. Moreover, data processing involves sorting, classifying, and summarizing the data to form helpful information that executives in their operations can employ. According to (Sun et al., 2016), information system management provides accurate time information on an organization's events. Another characteristic of information system management is that it should be able to support different output formats and adhere to current regulations on computer systems (Sun et al., 2016). Lastly, the system should be flexible to accommodate additional data sizes. (Tableau, 2022) states that organizations use business intelligence to collect information from internal information technology systems and other sources to conduct inquiries, analyze company information and create visualizations of the data they collect from different sources. Organizations also create business intelligence dashboards to avail analytical results to entrepreneurs for sound decision-making and planning. Business intelligence initiatives ensure that companies only increase revenues while expanding their markets through strategic planning (Tableau, 2022). Moreover, Business intelligence provides that organizations improve operational efficiency by exhibiting competitiveness over businesses with the same products and services.

Business intelligence also encompasses data management and analytical tools that enable business managers to analyze data on company trends. The process works by storing data in a warehouse that contains the organization's entire information and records. Alternatively, the method may incorporate data marts that hold a smaller quantity of information for various organizational business units. The latter data includes the organization's history and data the company obtains from external sources (Yu et al., 2019). Business intelligence's data storage mechanisms enable businesses to integrate and consolidate information before it can be used for quality management. After data preparation, the company then conducts analytical querying of the prepared data. After that, the company uses the information encompassing key performance indicators for business management to make informed business decisions. Business intelligence also incorporates advanced data analytics, such as data mining and statistical analysis. Managers will need to do further research to get a conclusion on the behavioral pattern and client demands and requirements. Furthermore, numerous extra tasks are required to understand, keep, and gain new consumers; as a result, business intelligence through data analysis is required. Assists managers and product managers in identifying various customer groups, developing goods or services that are linked with consumer demands, defining competition and pricing strategy, improving revenue management, increasing sales, and expanding the consumer base(Ali & Ouda, 2019). As businesses continue to look for ways to enhance company performance governance, business intelligence usage is becoming more common. Furthermore, big data analytics users were five times faster than business opponents in making smart judgments and twice as likely to be in the top quartile of financial performance within their sectors as a result of the business intelligence received through big data analytics (He et al., 2017). The world currently has evolved into a small global community as a result of massive changes in technology, the information and knowledge culture emerged, and the strengths shifted from material to information to live the era of information economy, which made enterprises reliant on them due to their impact and increasing pressures in their work to enable their plans and manage their operations, particularly accounting information (Affaq & asmaa, 2021). According to recent research, Business Intelligence will have the largest influence on organizational growth (BI). It is considered that BI systems have evolved into a strategic tool for economic growth, affecting the profitability and inventive growth of many firms (Drucker, 2017). Decision support simply, which is responsive and engaged only when a problem arises, finally proven inadequate. The problem-

solving environment got IT-based assistance mostly from the resources of a standard information system, which were consequently constrained and, in most circumstances, compounded by time constraints. An alternate usage of decision support, when combined with proactive environmental monitoring, guaranteed a better grasp of the problem context, resulting in superior decision quality. BI became popular as an umbrella phrase encompassing tools and technology that enable business information consumers to keep informed of changes in internal and external contexts (Aziz, 2020). Perspectives on information system involvement in supplying the intelligent part of information demands may be loosely divided into two categories: deterministic techniques and behavioral, human-centered alternatives. The former place a premium on IT efficiency and the capacity to execute complicated analytical operations (Davenport & Harris, 2007).

The research sources only captured the significance of business intelligence and information management system in the business sphere while leaving out how the two can be applied in other systems like communication systems. Moreover, the sources did not leave room for pursuing further research on possible developments in business intelligence that can further strengthen information management systems. Lastly, the articles do not clarify the time frame when all businesses globally will embrace business intelligence to inform their decisions. Information system should benefit from business intelligence by considering the following issues: Integration with Existing Data Architecture, Data Storage, and Security and Scalability.

3. Research Methodology

The deductive research technique is critical in assisting the researchers in keeping the data within suitable boundaries. The generic information is also properly specified based on the research subject. The qualitative research design is crucial in the research process since it aids in determining the aims of the research process. This study design will assist researchers in explaining many views linked to the business intelligence and information system in order to reach their stated objectives (Sileyew, 2019). Conceptual data analysis can help authors reach their study objectives. This approach evaluates changes in obtained data, which can assist researchers understand the role of business intelligence in enhancing information system functionality. Researchers interested in increasing the performance of information systems using the secondary data gathering approach. This procedure illustrates several secondary sources of data relevant to business intelligence and information systems, such as books, journals, papers, and so on. Performing content analysis from the literature sources and other information sources, such as reports by firms and sector associations, interviewing with focus groups and articles, was one of three steps in the research design for this study. The latter was done by the researchers in order to comprehend the function of business intelligence in information systems. The creation of a conceptual model is required in the second stage to demonstrate how information systems should benefit from business intelligence while taking into account the integration with current data architectures, data storage, security, and scalability. Lastly, the researchers combined the findings from the first and second steps.

4. Conceptual View

Based on literature analysis and other information sources, a conceptual view to demonstrate the role of business intelligence in information system was suggested (see fig 1).

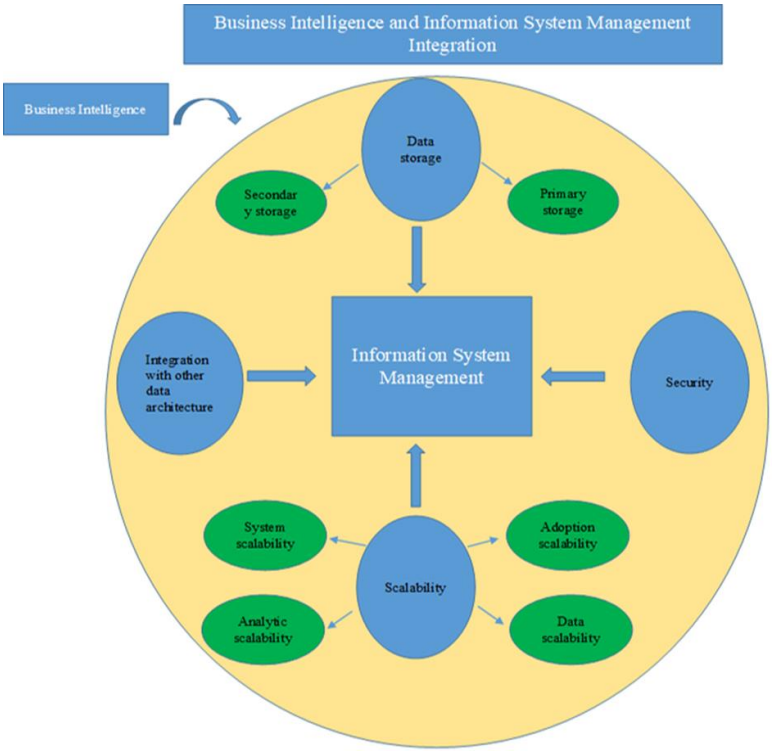

Fig. 1: Business Intelligence and Information System conceptual view

Information systems should benefit from business intelligence while considering the integration with current data architectures, data storage, security, and scalability.

4.1 Integration with Existing Data Architecture

Business intelligence (BI) employs business intelligence architecture to run its applications. BI architecture incorporates technology and data management standards that support its efforts to analyze an organization's information, which consequently helps executives make sound plans for managing their finances and employees. (Zafary, 2020) States that business intelligence architecture supports an organization's efforts and initiatives by deploying specific platforms and tools. The latter implies that BI architecture is a blueprint showing how an organization uses business intelligence initiatives. Business intelligence architecture allows businesses to avoid costly mistakes when utilizing their data. Therefore, companies with well-designed business intelligence architecture avoid pitfalls from improper data handling.

(Khan et al., 2019) state that business intelligence architecture and information system management relate to other data elements such as analytics, technology, and data management. Technology refers to the hardware and software used by organizations to support their efforts regarding business intelligence. BI technology includes ETL tools that enable executives to report data and achieve data visualization and data warehouses that can store information about an organization even for half a century. Moreover, the information stored in data warehouses is held in one place, making it easy to access when the organization needs it during decision-making. Technology is also essential for business intelligence because it enables organizations to collect and store data that specialists then analyze to create insights on how to run their operations effectively (Kraus et al., 2021).

Data lakes are also crucial aspects of BI and information system management technology. They can be used as a data repository to store raw data that organizations will use in the future. Business

intelligence tools, commonly known as BI tools, are critical in data collection and storage. Moreover, these tools enable businesses to understand their data which would otherwise be difficult to decipher and discern without these tools. Besides helping companies understand their raw data, business intelligence architecture also helps them save a lot of time. For instance, organizations and large companies use BI architecture to automate their reporting, leaving them ample time to run other business operations instead of gathering the company's data.

Businesses also benefit from business intelligence architecture as it helps them automate their decision-making process. Therefore, they can make decisions faster based on the BI architecture's data presentation, as stated by (Azeroual & Theel, 2018). For instance, when business owners want to make decisions on the products that would satisfy their consumers, they feel that they have to spend a lot of time gathering market information, client feedback, and market trends to make the right decisions. Business intelligence enables the company owner to collect all the information they require in one place and make decisions faster without sending representatives in the field to inquire about the market situation and the competitors' sales. Business intelligence architecture also enables business owners to save money by helping them identify risks and possible areas that can waste the company's money.

(Bordeleau et al., 2018) explain that entrepreneurs employ BI architecture to find new revenue channels, which improves their financial margin. The latter implies that some companies can use BI architecture to find new customers for their products, thus giving them a market advantage. Lastly, by using BI architecture to access customer satisfaction and feedback, companies can improve their services to attract a large customer base. E-commerce organizations also monitor the time taken by clients to make purchases, thereby causing changes in their service delivery methods.

4.2 Data Storage in Information system management and Business Intelligence

(Fleckenstein & Fellows, 2018) describe data storage in business intelligence and information system management as an operating computer system with memory for storing and retrieving information used by business application systems to generate enterprise functions and operational insights. Technicians can categorize the information available for storage and recovery into groups comprising data, including descriptive phases on business subjects and information related to the data phases (De Vass et al., 2018). Secondly, data storage in these systems involves assigning specific numbers to descriptive data phases and storing the numbers in the computer memory system in relation to the corresponding steps. It is essential to note that the computer system memory stores a plurality of information with a specific range of designation numbers, all assigned descriptive phases.

Data storage in business intelligence and information system management involves primary and secondary storage. Primary storage involves using semiconductor chips to store data and related programs, which are then fed into business intelligence applications for decision-making. During data processing, all computer data and instructions are entered into primary storage, after which the computer system completes processing the information (Fleckenstein & Fellows, 2018). In primary storage, the operator can access each memory component independently without affecting the other components. The latter gives primary memory the common name, Random Access Memory. However, primary storage is insufficient in some business intelligence applications and thus cannot handle the instructions and data fed into them by the information system.

On the other hand, secondary storage refers to a nonvolatile memory attached externally to the computer system. Some secondary storage devices in information systems include magnetic disks and optical technology. Secondary storage stores and retrieves a large quantity of information. There are two types of secondary storage systems: serial access memory and Random access memory, just like primary data storage. Information system management employs data warehouses for the storage of information. Data warehouses are complex computer systems business operators use to analyze an

organization's historical data, such as the company's sales and inventories. The Data warehouse also stores employee salary information (Sun et al., 2016). Management performs complex queries and analyzes information obtained from its operational systems without slowing its human resource and other operating systems.

(Nasraoui & N'Cir, 2019) affirm that a data warehouse does not store every information from a company's operational systems but only stores the overview of that content if the information is bulky. For instance, if the operating system keeps all the records of a company's sales, then the data warehouse will contain just the total number of sales made by the organization at a specific time. Notably, a data warehouse is not a relational database and requires information to be organized before storage (Nasraoui & N'Cir, 2019). The organization of information for storage at a data warehouse must support reporting and conduct queries compatible with business intelligence applications. Lastly, data warehouses can contain information even for half a century, making them extensive databases.

Business entrepreneurs also use data warehouses to enhance business intelligence which helps them answer complex questions about their company's data and make informed decisions on their businesses. Besides storing information for a long time, warehouses combine data from many databases and sources into a single set of information essential for running business intelligence applications (Niu et al., 2021). The data contained in data warehouses is also detailed and highly structured and can be employed by entrepreneurs in many ways. There are three data warehouses for business intelligence information types: on premise warehouses, which operate on physical servers. Online companies manage these cloud and hybrid data warehouses comprising cloud and on premise data warehouses.

After integrating an organization’s data, data warehouses use online analytical processing (OLAP) to handle and process complex data and queries. (Yu et al., 2019) also explain that OLAP enables operators to organize information in rows of shelves to promote easy retrieval. The latter is essential for business intelligence since it `enables an operator to find relevant answers to complex questions that affect decision making in their organizations. Data warehouses also serve as the backbone of data storage in business intelligence as they inform users on where multiple sets of data are stored and making complex queries simpler and easier to access. On the other hand, business intelligence utilizes activities like data wrangling and data analysis to compare complex information and questions in a data warehouse.

Data wrangling in business intelligence is facilitated by extracting loads of data and transforming them using technology like Chartio. The process is possible owing to data warehouses that utilize technology like OLAP to integrate and transform data, making it easier for executives to analyze when making management decisions (Yu et al., 2019). Usually, databases are not the ultimate storage components for data in organizations, and therefore organizations can use other data storage alternatives like data lakes which enable individuals to centralize their raw and unstructured data into one place and source data like spreadsheets which do not provide a bigger picture of the organization’s data.

4.3 Security in Information system management and Business Intelligence

Data protection is one of the most significant elements in computer-integrated systems like business intelligence and information system management. Since the data used by these applications move from one system to another, they are predisposed to security risks at every processing stage. (Ravasan & Savoji, 2019) note that all business operators must protect their systems against malware and any other digital security breaches within their information systems. Failure to observe the latter leaves many companies suffering from security threats through fraudulent emails, an example of phishing attacks (Ravasan & Savoji, 2019). Due to the advancement in technology that requires companies to manage large sets of data, companies are exposed to cyber threats, which forces them to improve their game by implementing comprehensive security intelligence strategies which protect them from digital attacks.

Secondly, business intelligence and opportunities in information system management come in different forms making computer systems favorable for businesses across other domains. When many companies use business intelligence applications and information systems, they generate a large quantity of data that cannot be processed by these companies manually. Resorting to the digital analysis of information creates online traffic, which exposes organizational data to threats. Thus, understanding and managing these security threats is essential for companies that want to secure their data. Business intelligence information is disclosed to security concerns because they depend on the security of third parties like the cloud data warehouses. Moving data through systems makes data vulnerable to attacks.

Another instance that may predispose business intelligence and information systems to security threats is the nature of the functioning of the systems. For instance, the systems work with data from multiple sources to maximize reporting accuracy and speed. While seeking to achieve its objectives, the business intelligence solution may ingest sensitive data that may subject it to compliance issues and other negative concerns like malpractices. Third-party providers are also factors that make the systems vulnerable to breaches. For example, business intelligence cloud-based tools risk the system since organizations using these tools rely on a third-party provider for security measures. As such, when the designs of the third-party organization are not well protected, it also affects other organizations. When these third parties fail to place strict security measures and good security culture, organizations are bound to lose their data to external threats.

Data Storage threats also exist in business intelligence and information management systems due to many endpoints at the workplace. The latter occurs whether employees use their devices or the organization's integrated computer systems. These endpoints are difficult to control. Therefore, if an intruder accesses the business intelligence tool employed by these employees using a compromised device, they can access the company’s private information. Another security risk factor is poor access control for sensitive information. This particular risk depends on the precautions taken by employees to safeguard an organization's data and information. (Liang & Liu, 2018) explain that employees with no sound data protection procedures are likely to be victims of data breaches, unlike those with policies limiting risks while using business intelligence tools.

Employees can use business intelligence tools to access only helpful data, limiting the end users of business accounts and limiting unauthorized access to sensitive information. Security flaws when using business intelligence tools are critical in creating opportunities for attackers who use the connections offered by BI tools to access sensitive information. Lastly, a lack of data source security enables attackers to access the business intelligence platform and alter the information fed into these platforms by the information systems. Intruders can also damage an organization's reputation after accessing sensitive data, mainly when employees use systems without security, such as the Internet of Things.

(Dai et al., 2019) confirm that technological advancements are making Business Intelligence systems mandatory components of business operations prompting organizations and other employees to use these systems to take the proper security measures to reduce security threats that may compromise decision-making within organizations driven by accurate data. One such precaution is using a platform known as Integrate.io to protect data pathways and processes involved in data analysis. The platform provides security features between the data warehouses and the data sources, thus protecting the data before information systems feed it into the business intelligence platforms. Integrate.io also covers information systems and business intelligence applications through data masking.

(Ali, 2018) notes that data masking removes sensitive information from a system before it reaches the target point, the BI applications. Moreover, (Ali & Ouda, 2019) point out that data masking also encrypts data to improve its privacy while using BI tools. Integrate.io, unlike many third-party organizations, Integrate.io is responsible for providing users with complex data protection through data masking and limiting access to the operating system. Integrate.io is also effective for many business

owners since it keeps these businesses in compliance with strict data regulations. A real-time example of security data scandals concerning business intelligence that occurred in the past is the attack on Yahoo, which left more than three billion user accounts compromised. The second attack was on Mariott between 2014 and 2018, which affected approximately five hundred million customers.

4.4 Scalability in Information system management and Business Intelligence

Business intelligence and information system management have four scalabilities: system scalability, adoption scalability, data scalability, and analytic scalability. (Moro-Visconti et al., 2020) describe System scalability as the ability of business intelligence applications and information systems to support a specific number of users performing a targeted number of queries against a certain number of data sources. In system scalability, the BI and the information systems should be able to accommodate the data load without interference such as crashing and to the most significant desired level by the operator. Business executives employ this scalability to bring together their workforce to improve performance at the organization. Unlike other scalabilities, system scalability requires better machines and technology to improve.

According (Nam et al., 2019), the second scalability, adoption scalability, implies that the BI and information systems can reach many users and get them accustomed to the system. However, it has challenges such as usability and training. Improving the latter encourages many users to adopt the approach as it is easier to manage, unlike when the system is complex. Data systems with difficult usability discourage users who have no time to learn new concepts making them shy from using them. When a system is easier to understand, many people want to associate with its usage (Nam et al., 2019). Companies can address complications that arise due to the usability of their plans by making data sources readily available and transparent.

The second challenge experienced with adoption scalability is training users who want to adopt the system. (Nam et al., 2019) explain that organizations can achieve training through videos and hosting classes. Experienced users can also teach other interested users how to use BI and information management systems. Data scalability, unlike adoption scalability, involves scaling for a different set of data and not users. This type of scalability works with small and big data and utilizes spreadsheets or cloud data. Data scalability enables entrepreneurs to analyze all their businesses' data to make sound financial and management decisions. Data scalability helps organizations separate their information, thereby allowing them to make strategic choices. Ideally, no organization wants to put all its data in one place. As such, they create a data lake or a data warehouse that serves to store and protect the data.

(Zhang et al., 2019) note that data scalability is also a technical challenge, like system scalability, since it requires connecting different data sets and analyzing the data from its source before integrating it. As such, connecting data in a complex way poses problems to organizations that want to work efficiently when accessing their data or feeding it into business intelligence applications. Thus, it is effective for executives to connect to data in a straightforward way rather than establishing complex procedures when they want to access company information. (Moro-Visconti et al., 2020) state that analytical scalability involves scaling for different types of questions arranged in data shelves and rows. The questions force executives to think over their choices and develop the best business ideas that help them address problems differently. The latter includes using statistical tools to create additional data views and integrating them into business intelligence dashboards. Analytical scalability also uses a visual representation to help users understand how different data sets relate. It allows them to find patterns and outliers, thereby helping them discern data representation.

5. Results and discussions

5.1 Business Intelligence and Information System Management Integration

Information system management is related to business intelligence because they supplement one another. For instance, business intelligence operations are supported by information systems through data provision. Notably, business intelligence operations use the data provided by information system management to operate and gain insights into different computer application processes that support decision-making in organizations (Ranjan & Foropon, 2021). Data used in operation by business intelligence applications is stored in transactional databases, which information systems can access to extract valuable data for decision-making. (Ranjan & Foropon, 2021) also state that the information system management function in reverse feeds the data into the business intelligence applications to generate reports. The data can also be used to create dashboards and achieve data visualization.

Business intelligence dashboards are data visualization equipment that demonstrates business analytics status and other significant aspects of a business, such as key performance indicators and crucial data points for an enterprise department. Business intelligence dashboards can pull real-time data from different sources to initiate the functioning of an information system, according to (Phillips-Wren et al., 2021). Operational data transmitted between business intelligence applications and information system management entails information about an enterprise sent from the daily operations of a business. The data includes sales made by an organization, purchase information, inventories, and financial data, among other data generated from sources within and outside an organization.

Another way in which business intelligence and information system management are related is that the operational data generated by the information system is used by business applications to create insights used by business operators to make management decisions. The latter also enables operators to comprehend business information and make informed choices about their businesses. Information system data is also essential for business intelligence applications in locating business concerns that may cripple an organization's activities (Tableau, 2022). Information system management and business intelligence thus are related as the former deliver data used to provide business insights and generate reports by business intelligence applications.

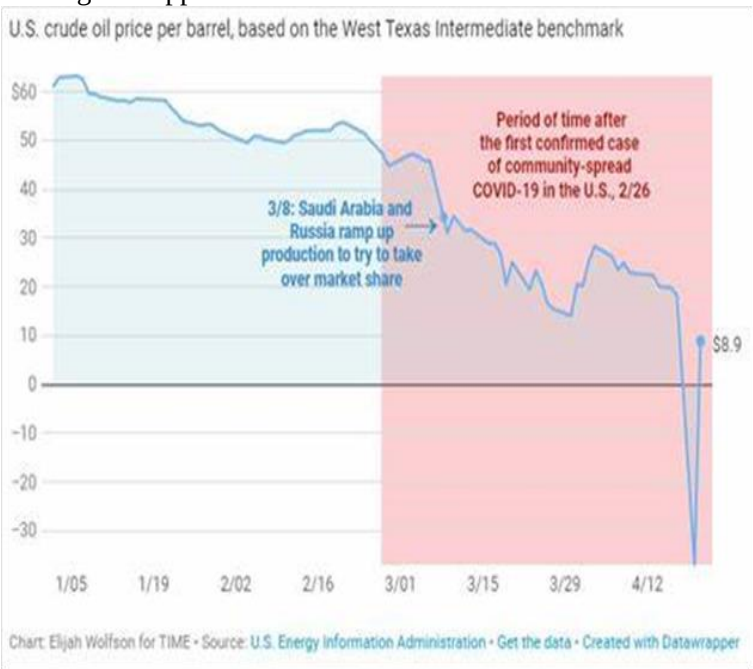

Fig. 2: the relation between business intelligence and information system (Tompkins, 2020)

Figure 2 shows different reports from business intelligence applications after receiving data from information systems. The information above enables the organizations in Russia and Saudi Arabia to gain a market advantage on oil sales owing to their information on how Covid-19 has affected the

markets. As such, without information systems, business intelligence would be impossible. Information systems form the fabric managers and executives use to create business intelligence. Ideally, information systems also ensure that business intelligence applications have the necessary data to perform their functions. (Rikhardsson & Yigitbasioglu, 2018) affirm that computer systems require constant updates to work, and business intelligence applications are no exception. As such, information systems keep business intelligence application systems up to date by extracting new data generated by the organization and feeding it into business intelligence applications. The latter ensures that business intelligence applications have the latest data necessary for updates and making accurate management decisions. Notably, information systems are essential for business intelligence applications as they provide the correct data, which the applications use to generate insights, dashboards, and reports.

5.2 Integration model

Fig 3 shows the integration model process and the relation between processes, the operational data generated by the information system is used by business applications to create insights used by business operators to make management decisions.

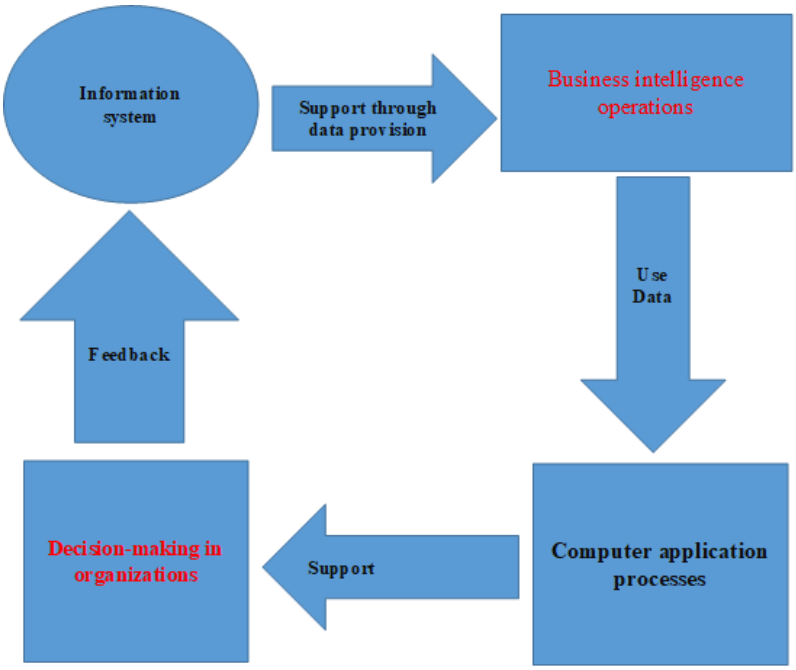

Fig.3 Integration Model

6. Conclusion

In summary, information system management is a detailed process characterized by methods such as data collection and information transmission to enhance management. At the same time, business intelligence uses technology in data analysis and information dissemination by both systems. Information system management and business intelligence are related because information systems provide business intelligence applications with relevant data for making management decisions. Business intelligence uses the data from information systems to provide insights into different computer applications. As such, without information system management, business intelligence would not exist. Information system management and business intelligence integrate with existing data architecture by

employing technology, data management, and analytics in business models to help make management decisions. Some technology used includes data lakes and data warehouses, which are also essential for data storage. Security concerns associated with business intelligence and information system management have phishing attacks and intruders, managed by data masking and integration that limit access to an organization's data. Lastly, scalability ensures that business intelligence and information system management utilize data with ease through training and improving usability.

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