Business Intelligence Tools for a Digital Services Company in Peru, 2022

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ABSTRACT

The objective is to propose the use of the business intelligence tool Microsoft Power BI to contribute to the best decision making in the digital services company; there are deficiencies in the ERP integrator system currently used in the company, impairing decision-making in management and corresponding headquarters. The research is of an applied type, considering as a sample those involved in the operation of the ERP integrator system. The analysis of the ERP integrator and business intelligence Power BI software was used, obtaining as results that the use of ERP integrator stores a large magnitude of data that is not easily understandable, complex reading of reports, and lack of statistical graphs. Business intelligence Power BI was applied as a solution tool, obtaining tables designed with complete and correct data, extraction of tables for their subsequent relationship, and understandable statistical graphics; Power BI allows collaborators greater understanding when reading results.

KEYWORDS

Business Intelligence, Decision Making, Digital Services Company, Enterprise, ERP, Management, Power BI, Reports, Statistics

INTRODUCTION

Organizations currently have abundant data but lack the knowledge of effectively managing it. Consequently, key performance metrics and information resources remain obscured amidst a deluge of numbers and disassociated systems. In addition, most organizations boast many dispersed systems, each with their own distinct data sources, making it difficult to circulate up-to-date information between departments and business units. Recognizing these challenges, Business Intelligence is presented as a viable solution to establish market superiority in the immediate, intermediate, and long-term future. This necessitates adjusting and realigning internal corporate structures and processes to correctly interact with their environment. To this end, companies now use various tools and products to gain insight into internal operations. The radical growth of new computer-generated 'intelligence' forms is one of the two information technology (IT) revolutions today.

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In Peru, the full incorporation of Business Intelligence into corporate culture has yet to be achieved. Given the frequently fluctuating and changing environment in which we operate, there are many potential issues companies are likely to face. These include increased competition for technological services, prices beyond the financial capability of many, and heightened competitiveness. For firms to remain successful, they must implement BI systems to help them confront this ever-evolving business landscape. Companies in the IT sector, such as the service company examined here, require up-to-date BI tools to navigate this volatile business climate.

In the city of Trujillo, one company dedicated to digital and technological services is the company under study. It is a family business that offers consulting services, IT sales, machine leasing, among other services, and collaborates with strategic partners such as Ricoh, Cisco, Dell, Zebra, among others. The head office is on a central avenue in Trujillo, and there are branches in other Peruvian cities, such as Lima, Arequipa, Piura, and Cajamarca. In recent years, it has maintained its lead against the competition, but distinct problems have become evident to the managers. They have has observed that the company presents reports with incomplete or false values, since there is a lack of historical data or sometimes the data have not been updated. That is why they do not know the sales trend compared to previous years and cannot assess whether there has been an improvement in recent years or a decrease compared to other years. The lack of quantitative data has caused a serious deficiency in the sales area, rendering the organization incapable of making informed decisions. Such an inability to decipher and manage based on data can be severely detrimental to the efficacy of the organization. Due to a lack of familiarity with Business Intelligence tools, and the financial restraints to implement them, the management team could not exploit these resources.

This study is of an applied nature and endeavors to propose the use of Business Intelligence software (Microsoft Power BI), to develop command panels (e.g., Dashboards), to better organize information for improved decision-making in the digital services company of Trujillo province in 2022.

The study is based on theories and concepts of Business Intelligence (BI) and how it changes the organizational ability to understand business, take advantage of new opportunities and change its business processes, improving its competitiveness and efficiency. Business Intelligence provides digital services corporations with the ability to access and analyze pertinent data, aiding decision-making. Through this technology, entrepreneurs possess the capacity to evaluate strategic scenarios, contemplate alternative solutions, and devise measures to be taken within a reasonable timeframe. Additionally, it allows these companies to grow, organize, enhance their competitiveness, and further comprehend their business sector.

The rest of this article is organized as follows. First, we analyze empirical cases to determine the investigations carried out to date, and later, a thematic analysis of the theories related to Business Intelligence, followed by the methodology used. The current state-of-the-art is also presented of the organization under study, where a cross-comparison was made with the theories and the investigations in previous studies, concluding with novel findings of how BI can support organizations.

BACKGROUND

Considering previous studies that support the study of the variable, García (2020) mentions that a characterization of the use of computer systems for business management and management in Cuba is presented, showing the current strengths and weaknesses. A chronological journey is presented regarding tools for business intelligence and data analysis in the world, identifying the most used. The BIMAS system, an executive system for planning strategies and monitoring their execution, developed by DESOFT, is presented with proposals for its future evolution. It concludes the lack of demand for this type of solution in the country and the need to have them to increase the effectiveness and efficiency of business management.

According to Basauli (2020), Business Intelligence is the analysis of information from an organization to turn it into knowledge. In this sense, some tools allow data management, processing,

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