Final Portfolio Project

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In recent years, the advent of technology has enhanced the capability of companies to leverage the use of business intelligence and business analytics to foster operation efficiency and competitive advantage in the marketplace. Business intelligence (BI) is the technological-driven procedure the involves analyzing data and developing actionable info that helps a company’s executive, supervisors, and workers to make supported business decisions (Rikhardsson & Yigitbasioglu, 2018). BI technologies comprise various components such as dashboards, data discovery tools, data warehouses, and cloud data services. On the other hand, business analytics entails using statistical techniques and technologies in exploring historical data to help in gaining new business insights that play an increasing role in augmenting strategic decision-making (Vidgen, Shaw, and Grant, 2017). The analytics helps the management have a clear insight into the corporate goals and objectives, thereby aligning business operations towards accomplishing the intended corporate vision and mission.

**Organizational Proposal**

Texas Holdings, LLC is a multimillion-dollar company that has specialized in the oil industry for decades. The owner and CEO purchased seventy-five percent of an east Texas town, including a dairy farm; however, the purchase converted the operation into an expansive, competitive livestock operation. The company would greatly benefit from implementing business intelligence and business analytics to improve the overall success of the venture. Many factors determine the success of livestock ranching. As with any business, the management makes numerous decisions that impact the daily operations, and some will affect the company’s growth. In this case, accurate data promotes the ability to develop supported findings to address business challenges while augmenting competitive advantage.

Business intelligence proposes a broad range of applications, systems, and tools for the mining, conversion, assimilation, visualization, analysis, understanding, and presentation of data to support improved decision making. Business intelligence and analytics are used to attain many benefits, such as improved forecasting, increased sales, optimized operations, and reduced costs. A robust data management system is essential in concert with data governance to obtain substantial business intelligence and analytics value. Database management involves collecting, validating, storing, protecting, and processing pertinent data to ensure that it is accessible, reliable, and readily available to the data users within the organization. Examples of data collected for analysis can include detailed livestock records, health statistics of each animal, movement history, calving history, breeding status, expected progeny differences (EPD), cattle operations, and feeding history. Additional data collection and analysis help in forecasting in financial management, feed management, and vegetation management.

Data governance is key to the success of practical business intelligence and analytics. Texas Holding, LLC can leverage the existing data scientists employed by the company to team with the ranch management team. Combining both areas of expertise will ensure a successful business intelligence and analytics program that will provide the solid competitive edge the company has achieved as a leader in the oil industry.

**Business Intelligence/ Analytic System in Texas Holding**

Implementing business intelligence/ business analytics would allow Texas Holding, LLC to make an informed decision, improve accuracy and operational efficiency through historical data and statistical tools to make discoveries that would accomplish strategic corporate goals and objectives. Besides, BI/BA execution in the company would help the ranch management comprehend various operational aspects that would help leverage data to augment business decisions. For instance, BI/BA technologies would allow the Texas Holding Management to collect and analyze health statistics, movement history, breeding status, and other operational information, including the financial forecasting necessary to promote financial decisions that would augment business sustainability. The diagram below illustrates the BI/BA system for Texas Holding Corporation.

**System Diagram**

The system diagram below illustrates the BI architecture and graph for the recommended business intelligence system for Texas Holding LLC.

***Texas Business Intelligence Architecture***

User Interface,

Portal, Dashboard, browser

Data Sources

Performance & Strategy (Business User Group)

Business Analytic environment (Software Application)

Technical Staff building the data warehouse

Organizing, summarizing

Data warehouse

Access

Manipulation & results

Intelligence system components

Data warehouse environment (Database)

**Description**

Texas Holding LLC’s business intelligence system has three environments that would aid the company to realize the intended goals and objectives associated with the enhanced operational efficiency. The first environment will comprise the data warehouse, including the data sources and the technical staff that will help the company build a data warehouse. The data warehouse environment will also include the process of organizing and summarizing the data as well as intelligent system components. The second environment is the business analytic comprising different attributes such as the data warehouse, access, manipulation, and results. The other feature in the business analytic environment is the user interface that constitutes the portal, dashboard, and browser. The last environment in the BI system is the performance and strategy environment that will include the management and executive (business users group) using the business analytic to gain business insights. The ideas gained are necessary for propelling business strategic goals and objectives and corresponding sustainability in the competitive dairy farming marketplace.

***Business Intelligence Diagram***

From the system diagram above, Texas Holding data sources will comprise internal and external data sources, including sales data, financial information, and HR data, among other internally generated information. External data, in this case, will comprise the competitors, customers, and market information trends necessary in making supported market decisions and enhancing the development of the strategic marketing plans. The second level will comprise performance management involving data mining, predictive analytic, and benchmarking processes, while the business performance and operation overview entail historical, current, and predictive information. The last level entails the decision-making level whereby the company management would use the available data to make on-time and exceptional business decisions.

**The rationale of the Business Intelligent /Business Analytic System Implementation**

Business intelligence/ business analytic implementation at Texas Holding LLC would enhance the company’s ability to illuminate and identify different business areas that would require improvement through actionable information obtained from the technological process. BI, in this case, will augment the ability of Texas Holding management to identify critical institutional patterns and trends obtained from historical data necessary in promoting the ability to make a supported decision using the present and historical data (Ashrafi, Ravasan, Trkman, & Afshari, 2019). The second reason why Texas Holding should implement the BI/BA system is to leverage data to attain the compliance levels effectively while fostering the ability to intensify the company’s reporting, analyzing, and planning processes. The third reason why Texas Holding should implement BI/BA systems is to facilitate the company’s ability to have accurate reporting and making better decisions that would propel business growth and attainment of the corporate vision and missions. Moreover, Texas Holding would leverage the BI/BA systems to improve data quality, enhanced employee satisfaction, operational efficiency, and corresponding client satisfaction. Overall, implementing a BI/BA system at the company would help increase the competitive advantage, essential in promoting competitiveness and commanding a significant market share necessary to promote future business sustainability.

**Enterprise Risk Management Consideration**

Callahan and Soileau (2017) defined enterprise risk management as a plan based on the institution’s strategy focused on identifying, assessing, and preparing for hazards and dangers, among other possible disasters that interfere with the company’s operation. Enterprise risk management facilitates a company’s management to administer risk that would affect the company operation leading to loss of finances while ensuring that a company manages risks within the reasonable and defined risk appetite. In implementing the business intelligence and business analytic application, Texas Holding LLC management must make various considerations related to enterprise risk management. In the process, risk management is necessary to facilitate the capability of the company to handle risks associated with the installation of the software as part of the company’s operation process.

**Risk Coverage and Business Strategy**

The first ERM that Texas Holding management would consider while implementing the BI/BA system is the business strategy and risk coverage. The ERM functions in the context of the business strategy and the associated risks achieved by determining the goals and the objectives, essential in articulating the business risk appetite. For instance, the company should consider the operational, compliance/ regulatory requirement, financial, and capital adequacy needed to smooth the incorporated Texas Holding LLC. The risk coverage pertains to determining the level of risk that the company would be willing to take in executing the strategy, becoming a significant enterprise risk management consideration.

**Culture, Governance, and Policies**

The second ERM consideration that Texas Holding LLC should consider is the aspect of the culture, governance, and policies that govern the livestock sector, essential in implementing the BI/BA system to aid in the effective decision making and heightened operations of the business. The issue culture entails what the staff does when their supervisors are not watching, which forms one of the good ERM competencies worth consideration. Policies also play an imperative role in expressing a company’s risk appetite. The guidelines describe what a company would be willing to undertake or not undertake concerning the execution of the proposed BI/BA system necessary to improve the company’s decision-making while promoting the accuracy of adopted decisions.

**Monitoring Process**

The third ERM consideration in implementing the BI/BA system at Texas Holding LLC is the monitoring process, whereby the management must continuously consider the neeed for monitoring the systems and the associated risk. The administration should investigate the possible gaps that would culminate in issues on the business operations while devising strategies to examine the changing risk environment. The monitoring process would help the company institute measures that would effectively manage the potential risks enhancing business continuity irrespective of possible disruptions associated with the risk of the implemented system.

**Information Systems Security Considerations**

The proposed BI/BA system implementation at Texas holding would require the company to ensure information system security by considering varying factors. Siponen and Baskerville (2018) noted that information security is a broad subject in IT that focuses on enhancing data protection, computers, networks, and the users from varying attacks either digitally or physically. With the advent of technology, information security has become one of the central business concerns to ensure the company’s protection of the information store. Texas Holding will make varying considerations to augment the development and adoption of the actions that would influence information security while ensuring that the company does not fall victim to sensitive information to the unauthorized personnel who often use the information for malicious gain.

**Data Integrity**

The first information system consideration that Texas Holding would consider while implementing the new BI/BA systems s data integrity entails the overall information accuracy, consistency, and completeness of the data. Data integrity forms the primary aspect of information security that illustrates data compliance, enhancing the ability to make accurate decisions that would positively impact the company. Besides, data integrity increases the stability of the store information while promoting the validity and reliability of the data. Ensuring data integrity as part of information system security consideration would enhance and guarantee the traceability of information, increasing the effectiveness of data and augmented data protection.

**Data Confidentiality**

The second aspect of the information system security that Texas Holding will consider is data confidentiality. Livraga and Viviani (2019) noted that data confidentiality is an imperative information security aspect that enhanced the protection of collected information from unintentional, unauthorized access, and unlawful disclosure of the information. As part of information security, data confidentiality revolves around the privacy of the information that includes the authorized view, sharing, or using the information. Data confidentiality is paramount because it ensures that correct information access by the authorized users only, averting the possibility of the unauthorized user accessing and using the information for malicious gains. In most cases, other companies in the same sector could use the information to gain the upper hand in the marketplace and compromise/sarbotage a company’s quality production.

**Data Availability**

Data availability is another information system security consideration that Texas Holding requires considering in managing the proposed BI/BA systems, focused on intensifying the company’s decision-making process using accurate and complete data. Data availability entails the capacity to ensure that a business’s info requires decision-making is accessible when need irrespective of whether the business experiences an operational disruption.

**Information Systems Privacy considerations**

Information system privacy is another tenet of information security that deals with evaluating whether a third party can access information. Similarly, data privacy consideration also fosters the ability to accomplish data integrity, confidentiality, and availability. In this case, Texas Holding will engage various measures to facilitate information system privacy. For instance, that company could use a restricted system where each employee access only the needed information to facilitate their operation and execution of their specific duties. The process would see the staff at the company accessing different information, thereby increasing the privacy of the store information in the proposed corporate systems that would enhance undertaking accurate decisions with a capacity to propel business growth. Besides, the company could institute a password policy that would ensure that the staff does not share their passwords, averting possible internal privacy issues that would arise if another company employee has access to sensitive and unintended information. The password policy would include a two-way authentication procedure, whereby an employee accesses a system after a password and user name authentication and biometric authentication. For instance, the system configuration would require that an employee be required to use their face recognition or fingerprint authentication, enhancing the privacy of data collected and storing information by Texas Holding.

**Change Management considerations**

In operating a business, change administration is one of the imperative processes during business operation. Based on the American Society for Quality (2021), change management entails the process and the technique used by a company to describe and execute changes needed to enhance internal and external procedures. Change management facilitates the attainment of the required benefits to a company by instituting minimal disruption to company operations. The newly incorporated Texas Holding LLC, focused on livestock, keeping a business away from the initial gas and oil exploration would require implementing numerous changes that would facilitate the attainment of the new business success. The execution of the BI/BA systems will enhance the ability to obtain frequent insights for the company’s benefit, requiring the institution of changes to augment the realization of the expected benefits to the company.

In implementing the new data analytic technological systems, the company management must consider various changes ranging from the execution of duties to incorporating data in all departments to augment the attainment of accurate decisions. In this case, the company management must consider that all employees in the livestock raring company would require the knowledge and skills to operate the new BI/BA systems to heighten their ability to make sound decisions to propel robust corporate growth. Besides, executing the new proposed system in the company would shift some roles initially performed by the employees into automated processes, leading to changes in the job execution process and the entire corporate operation. Indeed, making change management considerations would heighten the Texas Holding LLC’s ability to align the company goals and objectives with the proposed BI/BA systems, which is necessary to facilitate corporate growth while addressing market competition issues.

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