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Integration of business intelligence with corporate strategic management

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ABSTRACT Integration of business intelligence and corporate strategic management has a direct impact on modern and flexible organizations. This integration helps decision makers to implement their corporate strategies, adapt easily to changes in the environment, and gain competitive advantages. This paper extends the studies in this domain, and clarifies the relationships between business intelligence and strategic management. It highlights also the role of business intelligence in corporate performance management and strategic intelligence. This paper proposes a BSC-BI framework that facilitates the integration of business intelligence with a balanced scorecard methodology. The BSC-BI framework implementation is demonstrated using a case study on the telecom field.

KEYWORDS Balanced scorecard, business intelligence, competitive intelligence, corporate performance management, corporate strategic management, strategic intelligence

1. INTRODUCTION

Dresner introduced business intelligence in the year 1989, as an umbrella term that "describe a set of concepts and methods to improve business decision making by using fact-based support systems" (Power, 2007). Business intelligence is an environment in which 'marrying' business knowledge and data mining provides great results (Anand, Bell, and Hughes, 1995; Cody, Kreulen, Krishna, and Spangler, 2002; Weiss, Buckley, Kapoor, and Damgaard, 2003; Graco, Semenova, and Dubossarsky, 2007). Alnoukari considers business intelligence as "a framework that helps organizations managing, developing and communicating their information and knowledge. Thus, it can be considered as an imperative framework in the current knowledge-based economy arena" (Alnoukari, 2012). Other researchers consider business intelligence as an umbrella that combines: architectures, tools, data bases, applications, practices, and methodologies (Turban,

Aronson, Liang, & Sharda, 2007; Cody, Kreulen, Krishna, & Spangler, 2002; Rouhani, Asgari, & Mirhosseini, 2012). Weiss et al. 2003 define business intelligence as the "combination of data mining, data warehousing, knowledge management, and traditional decision support systems" (Weiss, Buckley, Kapoor, & Damgaard, 2003). Business intelligence systems can have multiple benefits including: faster access to information, particularly big data complexes, increasing revenue, better customer satisfaction and generating or improving competitiveness of enterprises (Brinkmann, 2015).

Knowledge management emerges in part from the thinking of the "intelligence approach" to business (Marren, 2004). Dedijer thinks that "intelligence" is more descriptive than knowledge. "Knowledge is static, intelligence is dynamic" (Marren, 2004). Intelligence is "the ability to apprehend the interrelationships of presented facts in such a way as to guide action towards a desired goal"

(Alnoukari, 2012). The main challenge in any business intelligence solution is in its intelligence ability. This can be found in the post data mining phase where the system has to interpret its data mining results using a visual environment (Alnoukari, 2012). The capability of any business intelligence (BI) solution can be measured by its ability to derive knowledge from data (Azevedo & Santos, 2009). The challenge in any BI solution is to meet with the ability to identify patterns, trends, rules, and relationships from volumes of information which are too large to be processed by human analysis alone (Alnoukari, 2012). In summary, BI is "the use of all the organization's resources: data, applications, people and processes in order to increase its knowledge, implement and achieve its strategy, and adapt to the environment's dynamism" (Alnoukari et al., 2008). Competitive advantage has shifted from companies that focus on implementing new technologies to those that employ technology to share, manage, and increase the level of knowledge inside the organization (Brinkmann, 2015). BI and analytics evolution started by DBMS-based and structured content, evolved into web-based and unstructured content, and currently is based on mobile and sensor contents (Chen, Chiang, & Storey, 2012).

The business intelligence solution has three layers (Azvine, Cui, & Nauck, 2005; Baars, & Kemper, 2007; Shariat, & Hightower, 2007). Each data layer is responsible for storing structured and unstructured data for decision support purposes. Structured data are usually stored in operational data stores (ODS), data warehouses (DW), and data marts (DM). Unstructured data are handled using content and document management systems. Data are extracted from operational data sources, e.g. SCM, ERP, CRM, or from external data sources, e.g. market research data. Data are extracted from data sources that are transformed and loaded into DW by ETL (extract, transform and load) tools. The analytics layer provides functionality to analyze data and provide knowledge. This includes: OLAP, data mining, and aggregations. Data mining is a core component of this layer. Data mining is the search for relationships and distinct patterns that exist in a set of data, but they are "hidden" among the huge amount of data (Jermol, Lavrac, and Urbancic, 2003; Turban, Aronson, Liang, & Sharda, 2007). The data mining application

has important results in many areas (Alnoukari, and Alhussan, 2008; Watson, Wixom, Hoffer, Anderson-Lehman, and Reynolds, 2006) including: marketing (direct mail, cross-selling, customer acquisition and retention), fraud detection, financial services (Srivastava, & Cooley, 2003), inventory control, fault diagnosis, credit scoring (Shi, Peng, Kou, & Chen, 2005), network management, scheduling, medical diagnosis and prognosis. There are two main sets of tools used for data mining (Corbitt, 2003; Baars & Kemper, 2007): discovery tools (Wixom, 2004; Chung, Chen, & Nunamaker jr, 2005), and verification tools (Grigori, Casati, Castellanos, Dayal, Sayal, & Shan, 2004). Discovery tools include data visualization, neural networks, cluster analysis and factor analysis. Verification tools include regression analysis, correlations, and predictions. Knowledge discovered from data mining can enhance and improve an organization's decision making capabilities (Kerdprasop, & Kerdprasop, 2007). The third layer is the visualization layer realized by BI applications or portals.

Strategic management is a framework for decisions and actions that results in the formulation and implementation of plans to achieve a company's objectives and setting long term directions (Kruger, 2010; Fries, 2006). Porter (1979) summarizes strategic management basic elements as: strategy process, strategy content and strategy context. These elements provide four essential steps for strategic management. Environmental scanning includes both internal and external scanning. Strategy formulation includes corporate's vision and mission, corporate objectives, strategies and policies. Strategy implementation drives the strategy into action, and finally strategy evaluation and control lead monitor actual performance against desired performance, and the needed corrective actions (Porter, 1979). A strategy is a fundamental framework through which an organization can maintain its continuity in the market, and maintain its adaptability to environment changes to gain competitive advantages (Fries, 2006; Porter, 1996). Traditionally, strategy can be seen as a coherent and integrative view for decision making, or long term objectives with action plans and priorities for the corporate resource allocation. It can also be seen as a response to external opportunities and threats and internal weaknesses and strengths as well as a logical system that differentiates between managerial tasks at the corporate different

levels: corporate, business and functional (Global Intelligence Alliance, 2004).

Lastly, different research tackles the use and importance of business intelligence in the strategy development process, and its effect in improving corporate performance in order to gain strategic capabilities (Brinkmann, 2015; Zoumpatianos, Palpanas, & Mylopoulos, 2013; Seitovirta, 2011; Alnoukari, 2009; Bogdana, Felicia, & Delia, 2009; Albescu, Pugna, & Paraschiv, 2008; Elbashir, Collier, & Michael, 2008; Pirttimaki, 2007; Fries, 2006; Viitanen & Pirttimaki, 2006).

One of the new terms that best describes the alignment between strategic management and business intelligence is strategic intelligence. It can be defined as "a systematic and continuous process of producing needed intelligence of strategic value in an actionable form to facilitate long-term decision making" (Global Intelligence Alliance, 2004). Strategic intelligence focuses mainly on supporting strategic decision making by introducing intelligence to the strategic values. It provides a big picture about the business environment and benchmarks corporate operations. Strategic intelligence can contribute in strategic management by collecting, analyzing and distributing of information (Seitovirta, 2011). Kruger considered strategic intelligence as a combination (in terms of information) between business intelligence, competitive intelligence, and knowledge management and it acts as a powerful input to strategic management. Strategic management can assist in identifying opportunities, and add value to the organization's decision making capabilities (Kruger, 2010).

Strategic management requires many in-depth analyses including: impact analysis, what-if analysis, business driver analysis, and critical strategic themes analysis. Different roles were identified for strategic management, such as defining and providing a forecast for the competitive environment, underlying management assumptions which may impact strategic thinking, identifying and assessing the company weaknesses against the market opportunities and threats, implementing and adjusting the strategy in response to the changes in the competitive environment, and determining when the strategy is no longer sustainable (Global Intelligence Alliance, 2004). Thus, strategic intelligence covers many concepts from business intelligence, competitive intelligence and competitor intelligence.

The aim of this paper is to make a significant contribution to the research in this domain. First, it extends previous business intelligence studies by providing a framework that can integrate research solution with strategic management using an exploratory approach. Our systemic overview builds on prior research within this domain, but recognizes the evolution of business intelligence to include analysis and strategic management. This study builds on previous research that highlights the use of business intelligence solutions for achieving organizational strategies (Alnoukari, 2009).

2. THE INTEGRATION BETWEEN BUSINESS INTELLIGENCE AND STRATEGIC MANAGEMENT

Business intelligence as a strategic framework is becoming increasingly important in strategic management and in supporting business strategies. It can be considered as one of the most important technologies that allows managers and end users to convert masses of non-transparent data into useful information that provide companies with huge capabilities. These technologies help coordinating projects, and schedules, and provide the roadmap to align with the corporate strategy. Business intelligence as an analytical tool changes internal and external data into an appropriate knowledge that supports the decision making process. Business intelligence combines operational data with the analytical tools to provide corporate planners and managers with competitive information. For this reason reserachers consider business intelligence as a competitive differentiator (Brinkmann, 2015). Strategic management addresses the IT role in the strategy formulation and implementation processes (Tang & Walters, 2006; Shadid, 2012; Zoumpatianos, Palpanas, & Mylopoulos, 2013). Strategic management theories are largely geared towards gaining competitive advantages. Porter proposed a five-forces model of competition, value chain and generic competitive strategies between many of very influential strategic analysis models (Porter, 1979).

Flexible organization is based on IT alignment with business strategy. As a result of acceleration in the rate of innovation and technological changes, markets evolve rapidly, products' life cycles get shorter and innovation becomes the main source of competitive advantage (Järvinen, 2014). IT alignment with the business strategy to enhance corporate

strategy was highlighted by many researchers (Boddy, Boonstra, & Kennedy, 2005; Sabherwal & Chan, 2001). The strategic alignment model was one of the first models that described in an explicit way the relationship between business strategies and IT strategies (Grembergen, Haes, & Guldentops, 2004). The strategic alignment model is based on the strategic fit that recognizes the need to position the firm in an external marketplace where growth can take place, and the functional integration, which addresses how to best structure internal systems to execute the business strategy of the firm (Katz, 2002). IT alignment is not only formulating IT strategy to fit business strategy. It has to consider external forces and the environmental uncertainty. Therefore, organizations seek flexibility to meet market demands. Flexibility-based perspectives were evolved from Schumpeter's concept of creative destruction (Drnevich, Hahn, & Shanley, 2006). Operationalization of these perspectives in strategic management can be achieved through dynamic capabilities and real option views. A dynamic capabilities view refers to a firm's abilities to maintain and adapt its internal resources to environmental changes to maintain sustainability of the competitive advantages. It refers to the capability of acquiring new modes of competitive advantage. It involves continuous searching, innovation and adaptation of firm resources and capabilities to uncover and tape new sources of competitive advantages. The real options view is effective in dealing with issues of uncertainty. It allows the firm to defer investment decisions until uncertainties are resolved (Drnevich, Hahn, & Shanley, 2006).

Business intelligence facilitates the transition into flexible organizations as it is becoming a source of competitive advantages and differentiation (Herring, 1988; Pérez-Valls, Ortega-Egea, & Úbeda, 2006). There are many reasons for organization to adopt business intelligence in order to improve organizational strategy. It is considered as an extension to corporate strategy activities (Herring, 1988; Viitanen & Pirttimaki, 2006). Zoumpatianos et al. (2013) argue that a complete business intelligence problem begins with the modeling and analysis of corporate strategies and objectives (Zoumpatianos, Palpanas, & Mylopoulos, 2013). Business intelligence dashboards and reports can easily provide strategic management with important strategic information such as trends,

production evolution over time, historical evolution of market share, demads forecast, and market segmentation (Fries, 2006). Data analytics and data mining could be used effectively to build future business strategy, and could reveal hidden reasons for some deficiencies as well as possible high-yielding new investments. Corporations need to be sure that they are receiving the right information related to their long-term strategy. In conclusion, business intelligence helps organizations in supporting their strategic decision making process, including corporation SWOT analysis and strategic planning (Herring, 1988; Zoumpatianos, Palpanas, & Mylopoulos, 2013). All the mentioned benefits should provide organizations with sustainable competitive advantages.

Zoumpatianos et al. (2013) propose an integrated system based on SWOT analysis findings and a query engin that can monitor and evaluate the corporate strategic objectives and goals. A data warehouse based query is used to coninously monitor the corporate strategic acheivement. This system can provide answers to a trend query like the following: "Will the current sales trend that we observe up to now, within a time window W, in the market segment S help us to achieve the goal of increasing our market share by 5%?" Zoumpatianos et al. (2013) argue that this system is able to find objectives trends and monitor the expected and unexpected threats and opprtunities in the data warehouse as well as their causes (Zoumpatianos, Palpanas, & Mylopoulos, 2013).

Corporate performance management is considered as one of the strategic management tool that includes: planning, measurement and analysis steps. Business intelligence contributes to corporate performance management and especially to measurement and analysis practices by enhancing access to performance information, and supports decision making in each step of the corporate performance management cycle. The effectiveness of business intelligence implementation would affect the effectiveness of corporate performance management related planning and analytic practices (Richards, Yeoh, Chong, & Popovič, 2014). Bogdana et. Al (2009) propose a framework for integrating corporate performance management with business intelligence. The framework integrates corporate objectives using scorecards and dashboards using business intelligence tools at a strategic level, with the

aim to support business measurement at the tactical and operational level (Bogdana, Felicia, & Delia, 2009). Corporate performance management is thus considered as the combination of business intelligence, scorecards, and profiling.

Vuksic et al. (2013) demonstrated using a case study on the Croatian telecommunications industry the importance of implementing corporate performance management and business intelligence initiatives together in order to achieve better firm performance. They demonstrated the importance of the alignment between corporate performance management and business intelligence initiatives in order to resolve any data problems by creating one integrated data architecture; which would make business more effective (Vuksica, Bacha, & Popovic, 2013).

Business intelligence tools could be integrated into an operational process, or monitor the output of a process or series of processes (Elbashir, Collier, & Davern, 2008). Business process outputs are often linked to business objectives that are usually aligned with an organization's strategy. The main role of business intelligence is to provide the information on the accomplishment of the corporate objectives, thus allowing the managers to analyze performance gaps, and improve their understandings of organizational outcomes (Watson, et al. 2006). According to the performance gaps, managers can take corrective actions. They might update the related objectives, or take special steps to improve the processes to better achieve the objective. In conclusion, business intelligence could be integrated in some situations into a process to automate certain type of decisions, or could be used in other situations to provide the needed information to monitor the output of a process (Elbashir, Collier, & Davern, 2008).

Business process management and business intelligence are highly connected for the purpose of improving corporate performance (Vuksica, Bacha, & Popovic, 2013). Although business process management focuses mainly on business process while business intelligence focuses on business performance, they can together provide better results for corporate performance management. Business intelligence improves corporate effectiveness by focusing mainly on sales, marketing and customer information, while business process management improves corporate effectiveness by focusing mainly on improving corporate processes as they generate most of the cost of any business. Business intelligence provides the business process management with the detailed data needed for information consistency and data quality. Thus the integration of business intelligence and business process management initiatives are vital for improving corporate effectiveness (Vuksica, Bacha, & Popovic, 2013).

The most important component for the success of any modern organization is its ability to take the benefits of all the available information, internally and externally, using structured data management systems (business intelligence) or unstructured content management systems (knowledge management). Both hybrid technologies, business intelligence and knowledge management, are widely known as competitive intelligence (Albescu, Pugna, & Paraschiv, 2008). Competitive intelligence is the analytical process of collecting, selecting, and interpreting all the information related to business competitors in order to emphasis their positions, capabilities, performances and results and in the market. The Society of Competitive Intelligence Professionals defines competitive intelligence as:

> "timely and fact-based data on which management may rely on decision-making and strategy development. It is carried out through industry analysis, which means understanding the players in an industry; competitive analysis, which means understanding the strengths and weaknesses of competitors; and benchmarking i.e. the analysis of individual business process of competitors" (Olszak, 2014)

The core advantage of any competitive intelligence system is to extract the knowledge needed about competitors' opportunities and threats. In this context, competitive intelligence provides external environment scanning, whereas business intelligence provides internal environment scanning. The cross analysis of information provided can be used efficiently in many strategic analysis tools including: SWOT analysis, industry analysis, and competitor analysis (Albescu, Pugna, & Paraschiv, 2008). Different types of tools can be used to build competitive intelligence including: data mining, text mining, web mining, dashboards, balanced score cards and others (Olszak, 2014).

The integration of business intelligence and competitive intelligence can be used to formulate a corporate mission, long term objectives, strategies and policies. Business intelligence technology can be used effectively to provide corporate performance results (Figure 3). Corporate performance management is used to evaluate program or project evolution, and also to monitor and control them.

3. BSC-BI: A FRAMEWORK FOR BUSINESS INTELLIGENCE INTEGRATION WITH STRATEGIC MANAGEMENT

Balanced scorecard is an important managerial tool that helps organizations to articulate their strategy into actionable initiatives and projects. In addition, it provides the roadmap for strategy implementation, execution, monitoring and control (Olszak, 2014). Balanced scorecard is an important tool that helps top management to indicate the right strategic decisions to take. Balanced scorecard translates corporate vision and strategy into action, information, and intelligence (Fries, 2006). Balanced scorecard considers that corporations have four main perspectives: financial, customer, internal business processes, and learning and growth. Financial measurements are the most important driving factors for top management to evaluate the company's position in the market. Customer measurements such as customer focus and satisfaction are used to evaluate the company image. Internal business process measurements allow managers to monitor and evaluate business processes whether they cover all required and predefined customer needs. Employee learning and growth measurements are mainly used to evaluate the company commitment to its long term strategy in terms of its human resources. Knowledge management is the main pillar in building such corporate capacity. Business intelligence reports can track the number of relevant trainings undertaken by each worker. Results of such reports can be matched with the predefined corporate objectives via balanced scorecard (Fries, 2006).

Most strategic analysis tools, such as scenario analysis, SWOT analysis and demands forecasts, can be easily supported by a combination of data mining tools such as regression analysis, decision trees, and neural networks. Many types of analysis such as customers' buying behaviors, inventory slow turn, and product market share could support discovering internal strengths and weaknesses. Data mining helps detect new customers or competitors. Such data provide inputs for opportunities and threats. In conclusion, business intelligence, and especially data mining can reveal important inputs to SWOT analysis. OLAP (Online Analytical Processing) functionalities facilitate detecting problem areas, and focus more on the problem's root causes. Neural networks could detect the relationship between trends and huge amount of external data. Forecasting can be more accurate to define more possible scenarios. Decision trees could classify relevant future situations in order to be able to calculate the risk of any scenario. All these business intelligence tools, techniques and applications could contribute efficiently to the design of a scenario analysis. They can specify the realistic and relevant scenarios in many cases. Business intelligence results should be matched against predefined and measurable objectives. KPIs (key performance indicators) are used for the analysis of reaching goals and objectives (Fries, 2006). Business intelligence reporting tools and OLAPs contribute to strategic management as they measure the organization's performance. Balanced scorecard can be introduced to indicate weather business intelligence reporting matches critical performance indicators.

Figure 1 presents an overview of the corporate challenges of an organization on the basis of its business strategy using the four strategic themes, based on the balanced scorecard methodology. Although strategy plays an important role in modern organizations, it is a process in nature and has become more customer-focus. Modern organizations are seen as knowledge-based enterprises in which proactive knowledge management and strategic business intelligence are important for competitiveness (Brinkmann, 2015). Strategic business intelligence technologies support or change the enterprise's strategy in which they are utilized to increase the reaction time to environmental changes and to assist the company to achieve its capability (Alnoukari, 2009).

Business intelligence integrates information utilities and a decision support system that can help organizations to manage, develop, and communicate their intangible assets such as information and knowledge. Thus, it can be considered as an imperative framework in the current knowledge-based

economy arena (Alnoukari, 2009). Business intelligence implementation and enhancement will evolve as the organization becomes more competent in process and technology. Changes in the positioning in the market and the organization's strategy will be implemented more effectively in such flexible and modern organizations (Brinkmann, 2015). Business intelligence should be embedded within the organization and its objectives and strategies, and their benefits should be clarified and communicated.

The BSC-BI framework clarified in Figure 1 is based on previously suggested frameworks (Brinkmann 2015; Gonzales 2011, Albescu et al. 2000). It combines and integrates an organization's success factors in order to maximize both its users' and corporate performance. The framework incorporates different types of business intelligence techniques including: planning, predictive, explorative, and standard applications in order to provide the main requirement and installation to back up an efficient strategic and operational reporting. Business intelligence excellence can be achieved when organizations properly define their strategies, implement learning for their people, put their processes in track, and provide the needed technologies. Business intelligence excellence would have significant results on business impact, value and effectiveness (Brinkmann, 2015).

BSC-BI effectively integrates business intelligence technologies into the strategy development process. The main strategic
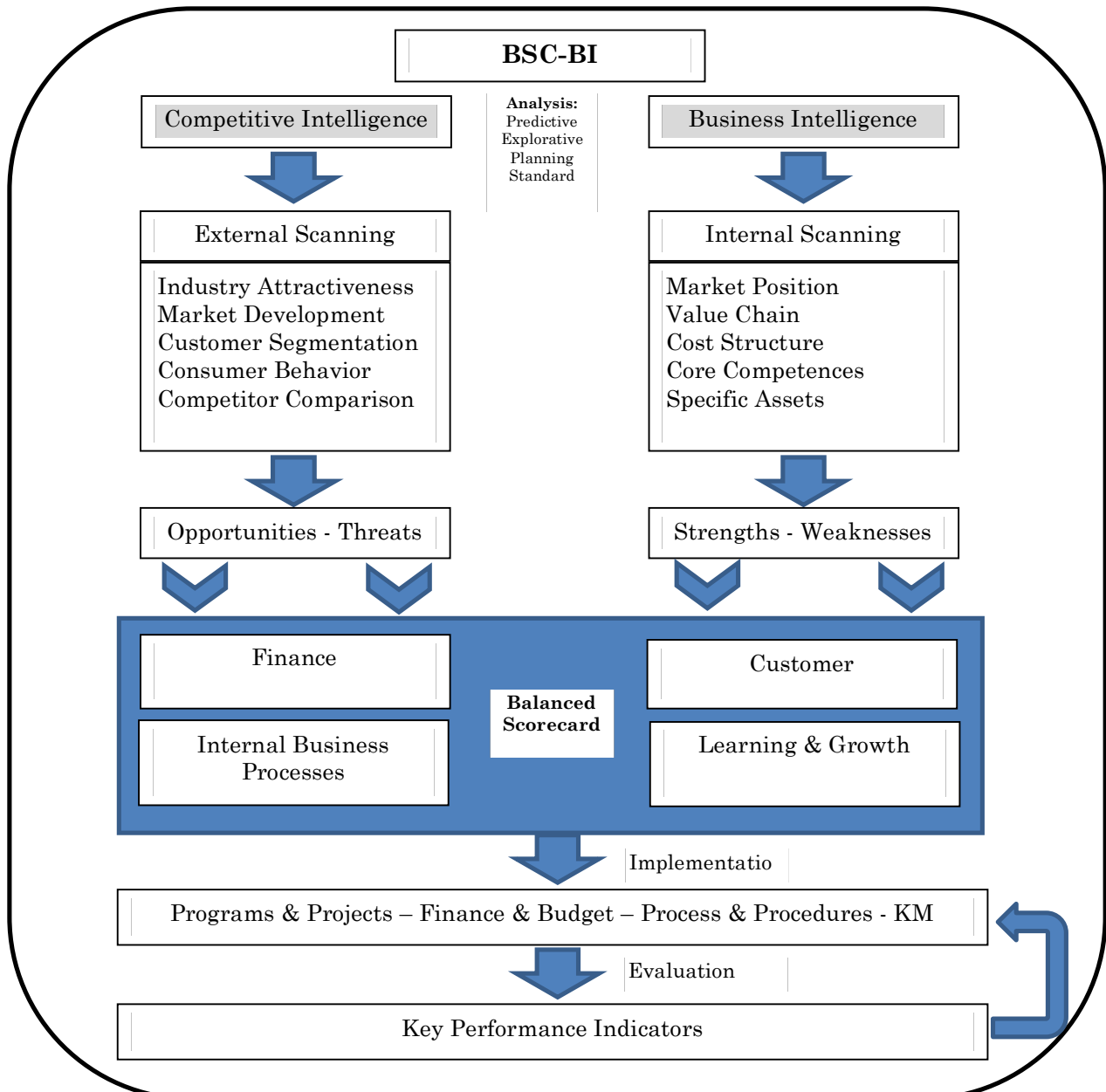

Figure 1 BSC-BI Framework, the integration of strategic intelligence with balanced scorecard methodology

themes are incorporated and improved in order to strengthen the organization's long term success. This could be achieved when the strategic themes tend to deliver greater value to customers at lower cost. When these themes are properly implemented, organizations increase their profitability results. Therefore, strategic themes could be used to observe markets and competitors, and enable top management to continuously adjust their strategies when the environment changes.

The use of business intelligence for corporate objective-setting is based on the tools that provide historical data that directly inform the setting of objectives for subsequent planning periods. Business intelligence tools conduct internal environmental scanning activities, whereas competitive intelligence tools are used to conduct external environmental scanning activities as part of the planning practices. The BSC-BI framework is able to test past activities against planned results and use the findings for setting objectives. Cause-effect analysis tools help to find the processes that most significantly impact organizational outcomes, thus allowing for process improvement.

4. BSC-BI FRAMEWORK IMPLEMENTATION – SYRIATEL CASE STUDY

Syriatel is one of the largest telecommunications companies in Syria. The company started using the balanced scorecard approach in 2008. The company relies on setting general goals approved by the board of directors, to construct its strategic objectives. These objectives are created to achieve sustainability, excellence in services, optimal performance, and building people. The strategic objectives are linked to the corporate objectives, then build up the unit objectives at each department, then cascading them to the employee-objective level.

Most successful companies seek to change their strategies to move from the current position in the market to a better one. This transition usually requires taking administrative procedures. It is customary to take these procedures after the measurement and evaluation. The evaluation process is based on answering several questions, including:

- What is the current position of the company in the market?
- What daily operations are implemented to achieve the desired goals?
- What is the future plan to achieve more of the desired goals?

The corporate strategic plan is built according to the organizational structure. Syriatel strategic objectives are managed using a system named the Objectives Cascading Management System (OCMS).

The company's departments share most of its corporate objectives, each department has a set of units, and each unit comprises sections that include a group of staff objectives. The strategic plan is built on a set of objectives to
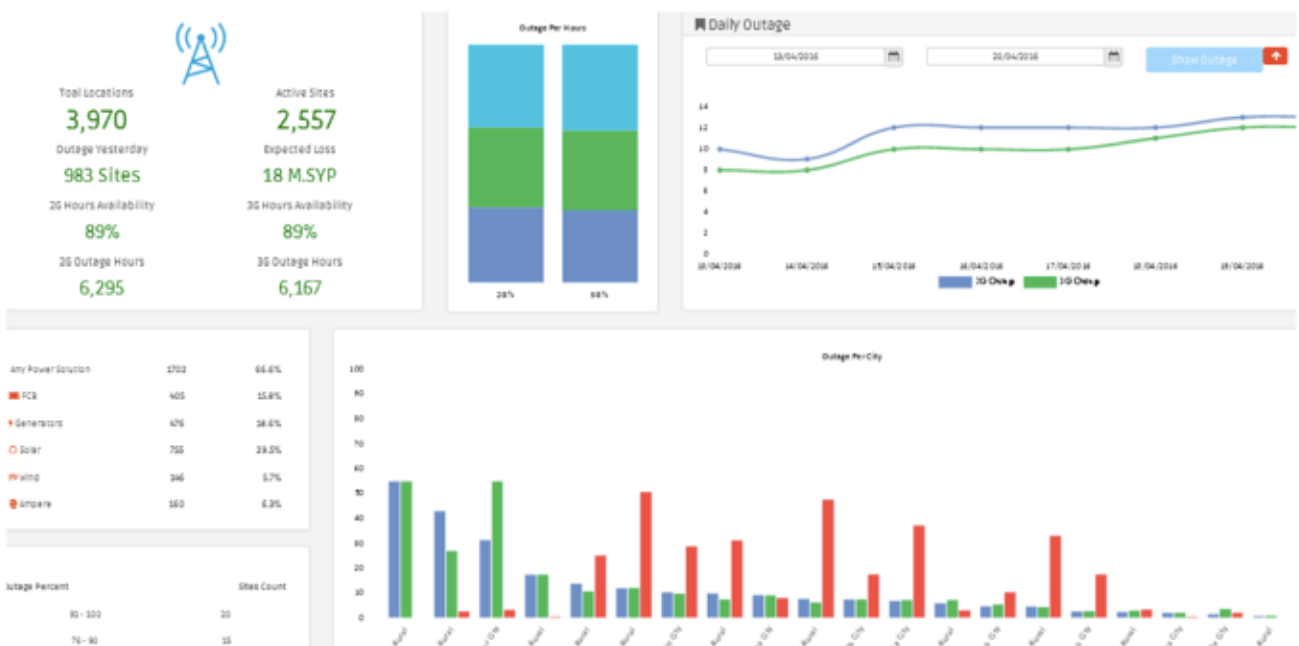

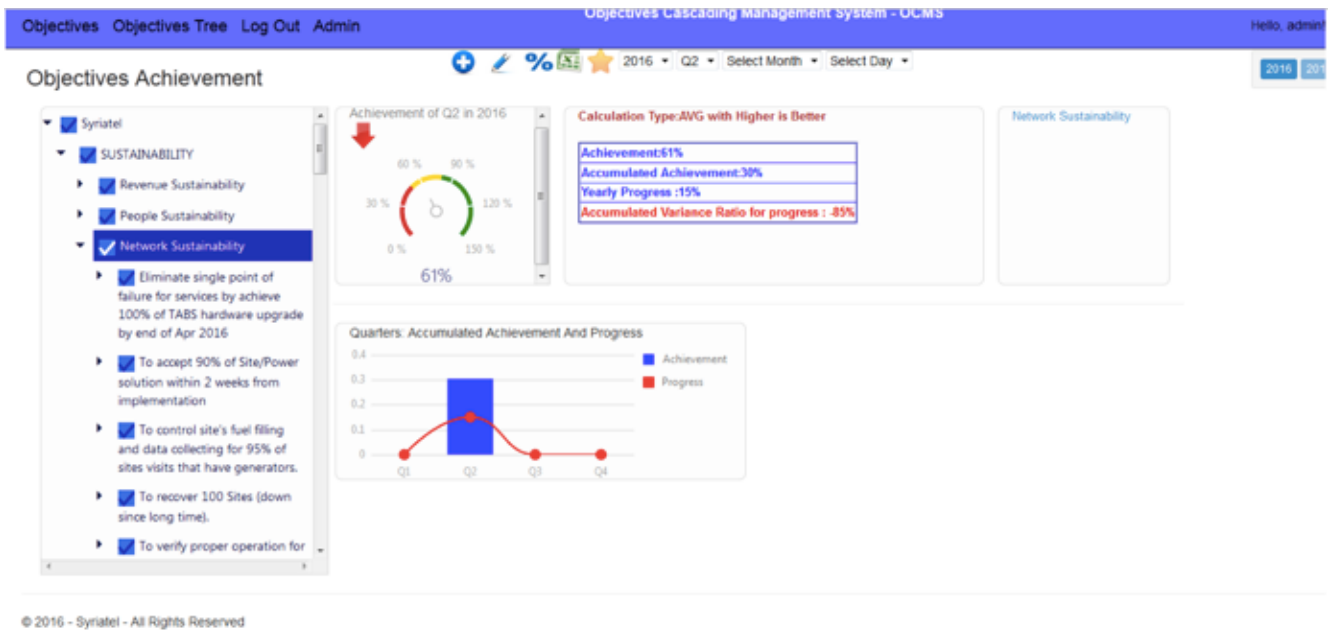*Figure 2* BI dashboard for the power source losses in all sites.

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Figure 3 Corporate objective created using the BSC-BI framework.

be achieved at all levels. These objectives are SMART, this means that the set of objectives should be specific, measurable, achievable, realistic, and set within a specific time. Each department sets its objectives, which are combined with the objectives of its units, and achieve hierarchically the goals of all subdivisions. Key Performance Indicators (KPIs) are used to measure objective performance.

Business intelligence is a crucial system in the company. It helps to identify problems and weaknesses. Applying the BSC-BI framework provides the company with the capability to integrate between business intelligence and its strategic management system (OCMS). One of the fruitful results of this integration is identifying the losses that result from the interruption of electric current for each of the company sites, and the alternative solutions used to reduce this interruption (Figure 2). The system registers the sites where frequent feeding breaks occur, and exceeds the predefined number of hours, then classifies it as a new weakness point at the corporate level according to predefined performance indicators.

Then, the system registers a set of actions to follow up in order to achieve the goals that have been generated, and monitor them periodically. In addition, it identifies the KPIs to help monitor the level of performance until achieving the set objectives completely (Figure 3).

As a results of applying a BSC-BI framework, the number of stop hours decreased in all sites from 59,000 hours during

February 2016 to less than 3,000 hours during August 2016. This decrease helps in achieving the company's "network sustainability" KPI.

5. CONCLUSION

Business intelligence activities and their intentional use are considered to constitute a relatively young discipline. They have connections with several functions in organizations, especially finance, marketing, and strategic management.

It was clear that business intelligence has does much more than simply refining raw data into reports and dashboards that could be provided to top management with the ability to take the right decisions. Information and knowledge provided could have a direct impact on several factors related to intangible assets such as know-how, innovativeness, and market properties. Business intelligence tends to provide the basis for continuous and proactive control, and for the optimization of a company's short- and long-term success in a dynamically changing business environment.

Business intelligence has a direct impact on business strategies, and provides top management in modern and flexible organizations with the needed tools and technologies to formulate corporate strategies, implement, and monitor them using corporate performance management tools.

In this article, we explored the relationships between business intelligence, competitive intelligence, and strategic management. Then we explained the impact of business intelligence on corporate performance

management, operational business process, and strategic intelligence.

We proposed a new framework "BSC-BI" that uses business intelligence and competitive intelligence capabilities to build corporate SWOT analysis, and develop corporate objectives using the balanced scorecards methodology.

Validating the BSC-BI framework was done using a case study on one of the biggest mobile telecom company in Syria. Direct results were achieved using this framework that integrates business intelligence tools with a balanced scorecard methodology used for strategic planning.

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