Application of the Balanced Scorecard in the Veterinary company and Supplies Pa'lante S.P.R of R.L. of C.V

Aplicación del Balanced Scorecard en la Veterinaria e Insumos Pa´lante S.P.R de R.L. de C.V

BENITEZ-LOPEZ, Guillermo†*, CRUZ-CHÁVEZ, Margarita and VALDEZ-PEREZ, María de los Ángeles

Instituto Tecnológico Superior de Naranjos, Ingeniería en Logística

ID 1st Author: *Guillermo, Benítez López* / **ORD ID**: 0000-0003-2006-9876, **CVU CONACYD ID**: 468967

ID 1st Coauthor: *Margarita, Cruz-Chávez* / **ORC ID**: 0000-0001-7394-795, **CVU CONACYD ID**: 774907

ID 2nd Coauthor: *María de los Ángeles, Valdez-Pérez* / **ORC ID**: 0000-0002-0242-0055, **CVU CONACYD ID**: 167124

Abstract

The objective of the application of the Balanced Scorecard methodology in the Veterinary and supplies PA`LANTE S.P.R. OF R.L. DE C.V. In the area of production and repair of trailers is to identify exactly what should be monitored to introduce a reliable measurement strategy that provide information on performance and understand why they are giving certain results, the methodology is to align the companies towards the achievement of business strategies, through tangible objectives and indicators as it converts the vision of companies into action through a coherent set of indicators grouped into four business perspectives that are: Financial, Clients, Internal Processes and Training and Growth since this methodology suggests that these perspectives cover all the processes necessary for the proper functioning of a company. The contribution of the methodology is to determine what factors are influencing the area of production and repair of trailer that are affecting the production times considering the last three quarters of the year 2018.

Balanced Scorecard, Indicators, Perspectives

Resumen

El objetivo de la aplicación de la metodología Balanced Scorecard en la Veterinaria e insumos PA`LANTE S.P.R. DE R.L. DE C.V. en el área de producción y reparación de remolques es de identificar exactamente lo que se debe de monitorearse para introducir una estrategia de medición confiables que brinden información sobre el desempeño y entender por qué están dándose ciertos resultados, la metodología consiste en alinear a las empresas hacia la consecución de las estrategias del negocio, a través de objetivos e indicadores tangibles ya que convierte la visión de las empresas en acción mediante un conjunto coherente de indicadores agrupados en cuatro perspectivas de negocio que son: Financieras, Clientes, Procesos Internos y Formación y Crecimiento ya que esta metodología sugiere que estas perspectivas abarcan todos los procesos necesarios para el correcto funcionamiento de una empresa. La contribución de la metodología es de determinar qué factores están influyendo en el área de producción y reparación de remolque que estén afectando los tiempos de producción considerando los últimos tres trimestres del año 2018.

Balanced Scorecard, Indicadores, Perspectivas

---

* Correspondence to Author (email: guillermo.benitez@itsna.edu.mx)
† Researcher contributing as first author.

Introduction

The objective of the application of the Balanced Scorecard methodology in the Veterinary and inputs PA`LANTE S.P.R. OF R.L. OF C.V.

In the area of trailer production and repair, it is to identify exactly what should be monitored to introduce a reliable measurement strategy that provides information on performance and understand why these results are taking place, the methodology consists in aligning companies towards the achievement of business strategies, through tangible objectives and indicators as it converts the vision of companies into action through a coherent set of indicators grouped into four business categories that are: Financial, Clients, Internal Processes and Training and Growth since this methodology suggests that these perspectives cover all the processes necessary for the proper functioning of a company.

What is intended to solve is to eliminate the downtime of manufacturing and / or repair of trailers because the company does not have defined its procedures or has a planning of its processes varying the service offered to customers and the central hypothesis is to know if Applying the Balances Scorecard methodology to the production area will reduce production and repair time by integrating the strategies to the company's general objectives through the application of balanced indicators.

The article is divided into five sections, the first is where the description of the Balance Card Scorecard model is made, in the second section it is shown how the model was implemented in the areas within the company, in the third part it shows the results that are they obtained inside the company and finally the thanks and conclusions.

Description of the method

Balanced Scorecard Model

The Balanced Scorecard is an excellent tool for measuring performance, as a route for linking what happens in a corporation with its long-term strategy and direction, facilitating its communication, implementation, monitoring and control (Logicalis Analytics Blog, 2016).

According to Alveiro Montoya (2011) The Balanced Scorecard is a management system that requires the commitment and participation of all servers to achieve the expected success and benefits in the organization.

In reference to the concepts of the two authors above, it is interpreted that the balanced scorecard tool will benefit from having a good organization and control that will help to adequately measure each established indicator in order to determine if they are meeting their expectations and detect what is failing, to thus to be able to look for strategies that help correct and perform better their processes.

"It is more practical to consider the different management systems, within a planning model that allows aligning the different interests of the organization" Soler González R. H & Guerrero Aguilar M. (2013).

According to Kaplan & Norton (2016), The Balanced Scorecard is a management system that can motivate innovative improvements in such crucial areas as product development, processes, customers and markets.

Matrix of the Balanced Scorecard

The objective of this is to show in an integral way to the company's management the results that are being achieved period by period, in each of the perspectives identifying each of the objectives, indicators, periodicity of the measurement, responsible, etc.

So also the generation of a "traffic light" that given certain parameters in each of the indicators of each perspective, will show when entering the results of the period:

- Green: Everything is being fulfilled in order.

- Yellow: Precautionary zone, the strategy must be modified, adapted or changed.

- Red: Severe alarm, shows that the strategy is definitely not working.

This aims to show in a "Balanced Scorecard" all the information of the company in said period and make decisions based on results (Manzano, 2013, p.71).

The four perspectives of the Balanced Scorecard

The BSC is a management tool that converts the company's vision into concrete actions through a set of indicators divided into 4 business categories, which are the following:

–   Financial: This category within the objectives of the Balanced Scorecard aims to meet the expectations of shareholders, its main focus is to create value for them through performance indicators that reflect the operational behavior, growth and sustainability of the company.

–   Focus on the client: In this section of the dashboard it is important to focus on what the company needs to accomplish to ensure customer retention and the acquisition of future customers to provide profitability to the organization.

–   Internal processes: In this category, the strategic objectives that are directly related to the key processes of the organization on which it depends on meeting the expectations of both shareholders and customers must be identified.

–   Learning and growth: Through this it is that the question is answered: "What can we do to learn and improve as a company?" It is in this area that the company must pay special attention to obtain long-term results.

It is considered that in the 4 items all the processes that the company requires for proper operation are included and must be taken into account to define the key indicators of the company.

The balance between these categories is important since it is what gives the balance between internal processes that have to do with collaborators, innovation, training, etc., as well as external ones that are related to shareholders and customers (Oscar Pérez, 2015).

(Ramírez, 2013) Represents the Balanced Scorecard for a period according to the following table 1.

Financial		
Sales growth		
Overseas Sales		
Sales other sectors		
Cost effectiveness		

Client		Internal
Delivery Fulfillment		Defect removal effectiveness
Customer errors		Productivity
Timely solution		Profile Compliance
Customer satisfaction		Average costs
New explorations		

Innovation and Learning
Innovation Index
Period Certifications
Employee Satisfaction
Total personal rotation

Table 1 Balanced Scorecard representation for a period
Source: Ramírez, 2013

This view allows to know the behavior of all the indicators of the 4 perspectives for a specific period.

What is the Balanced Scorecard for?

Gómez J. (2016). He says that in the field of decisions called the Balanced Scorecard or Integral Scorecard seeks to monitor the performance of the organization as a whole through key indicators that summarize whether the company is on track or not.

Its success lies in several aspects. In the first place, the BSC helps not to get lost in an infinity of indicators that do not help to make good decisions. Secondly, the BSC shows a good photograph of the company in such decisive fields as financial and commercial performance; also, in critical issues for the future performance of the company such as employee leadership or the development of information systems.

Third, the BSC allows managers to track the results of strategic planning. Finally, the main attribute of the BSC is that it allows a clear communication of the objectives and decisions of senior management with the rest of the organization.

Methodology to develop

Implementation of the Balanced Scorecard Model stages

The following table 2 shows the stages of the Balanced Scorecard model that were determined as the factors that should be monitored and measured in the Veterinaria e Insumos Pa´lante S.P.R de R.L. from C.V. since they are influencing the production and repair times of trailers. With the implementation of these four perspectives, the Veterinary helped to have indicators that provide reliable and quantifiable information on the performance in the area of trailer production and repair, knowing and understanding the factors that are affecting its productivity; in order to make corrections and relevant strategies so that it does not affect the profitability of the veterinary.
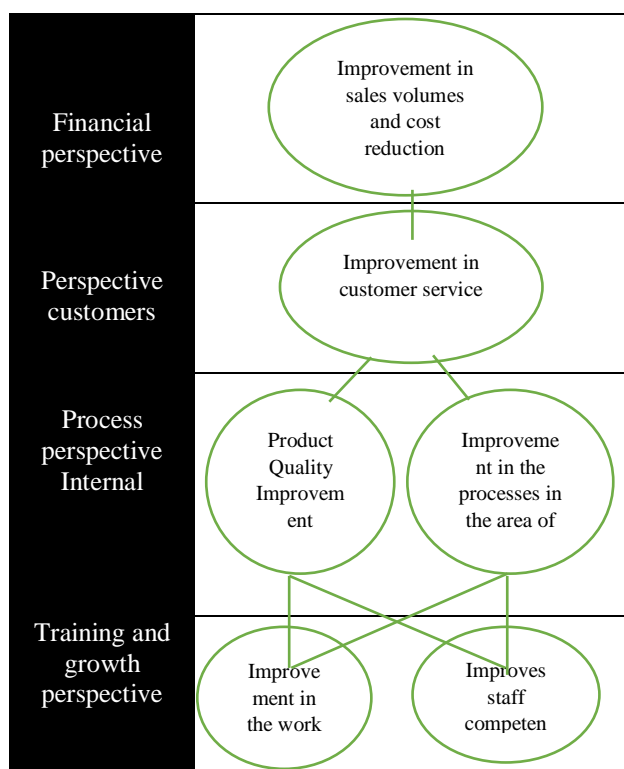

Table 2 Strategic plan applied to the trailer area

Balance Scorecard Control Board

The following table 3 shows the control dashboard or Balance Scorecard showing the four perspectives that must be contemplated for the implementation of the methodology, the strategic objectives that were determined with their respective indicator for the measurement of each of they and the percentage that is contemplated based on the results of each indicator, to determine the corresponding color based on the results obtained.

Prospects	Strategic objective	Indicators	Traffic light		
			Red	Yellow	Green
Financial	Increase sales volumes and cost reduction	Performance			
Customers	Improve customer service.	Give on time			
Internal process	Improve product quality.	Product quality			
	Improve processes in the area of trailers.				
Learning and growth	Improve staff competence	Incentives to motivate the employees of the organization			

Traffic light			
Color	Red	Yellow	Green
% Of compliance	0 - 69	70 - 84	85 - 100

Tabla 3 Control board

Results

Application of Performance Indicators

In this final stage was the application of the Balanced ScoreCard methodology, taking into account three quarters of the year 2018 that were the months from July to September, which are the months where the company has more requests for trailer orders. The following table 4 shows the customer delivery compliance indicator.

$$Customer\ delivery\ fulfillment: \frac{deliveries\ completed}{total\ deliveries\ period} = \frac{9}{9} = 100\%$$

Indicator Name	Customer delivery fulfilment	
Formula	EC/TEP*100	EC: Deliveries completed PET: Total deliveries period
Unity	Percentage	
Periodicity	3 Quarter	
Goal	OK: IND >=80% ALERT:60%<= IND< 80% UNACCEPTABLE:IND < 60%	

Table 4 Customer delivery compliance indicator
Source: Own Elaboration

BENITEZ-LOPEZ, Guillermo, CRUZ-CHÁVEZ, Margarita and VALDEZ-PEREZ, María de los Ángeles. Application of the Balanced Scorecard in the Veterinary company and Supplies Pa'lante S.P.R of R.L. of C.V. Journal- Business Administration -Marketing; Accounting. 2019

As can be seen in the previous table of the indicator of compliance of deliveries to the client, to measure the customers perspective the result that I throw is acceptable since it complies with the percentage range which resulted in 100%, this means that it reached the goal of said KPI's fulfillment of deliveries to the trailer customer, resulting in the green color of the Balanced Scorecard (BSC) traffic light or integral control panel (CMI).

Table 5 shows the indicator that was developed in the area of trailers using the time of actual hours worked in the processing (HP) of the trailer in days between the total hours for the preparation and completion of the trailer (HPOT).

As shown, the result is based on the alert percentage due to the fact that 49 hours were allocated for the preparation of the trailer and the rest was time invested in other activities.

Indicator Name	Productivity of the trailer area	
Formula	HP/ HPOT *100	HP: Hours produced HPOT: Potential hours of productive capacity according to available resources
Unity	Percentage	
Periodicity	Days	
Goal	OK: 85%>= 100% ALERT:70%<= IND< 84% INACCEPTABLE:IND < 69%	

Table 5 Trailer Area Productivity Indicator
Source: Own Elaboration

$$\text{Area productivity } \frac{\text{Hp in a trailer}}{\text{hpot}} * 100 = \frac{49HR}{60HR} * 100 = 82\%$$

In the following table 6 this indicator was used to measure the financial perspective in this area of trailers taking into account the current quarterly sales of the months July - August 2018 and the quarterly sales of previous months which resulted in a 10% result that means which is unacceptable because current trailer sales fell compared to the previous quarter.

Indicator Name	Sales growth	
Formula	100*(VP- VPA)/VPA	VP: Sales Period VPA: Sales previous period
Unity	Percentage	
Periodicity	Quarter	
Goal	OK: IND >=40% ALERT:20%<= IND< 40% INACcEPTABLE:IND < 20%	

Table 6 Sales Growth Indicator
Source: Own Elaboration

C. From towing sales $= 100 * (VP - VPA)/VPA = 100 * (9 - 10)/10 = 10$

Table 7 shows the indicator for the measurement of the learning and growth strategy for the trailer area which consists of how many employees are satisfied divided by the total employees in this case only those of the trailer area were considered which I throw as a result 66.7% this is interpreted as unacceptable to the goal set.

$$\text{Satisfaction of employees} \frac{ES}{TE} * 100 = \frac{2}{3} * 100 = 66.7\%$$

Indicator Name	Employee satisfaction trailer area	
Formula	ES/ TE *100	EN: Satisfied employees TE: Total employees
Unity	Percentage	
Periodicity	Trimester	
Goal	OK: 85% >=100% ALERT:70%<= IND< 84% INACCEPTABLE:IND < 69%	

Table 7 Indicator of employee satisfaction in the area of trailers

Conclusions

The project carried out to the company Veterinaria e Insumos PA`LANTE S.P.R. from R.L. of CV, was carried out with the objective of applying the methodology of the Balanced Scorecard model in the production area in order that the veterinarian would have indicators that help him measure and quantify productivity and thus be able to integrate the strategies to the general objectives of the company. The process analysis can lead to redesign actions to increase efficiency, reduce costs, improve quality and shorten times by reducing production and delivery of the product or service. Based on the results obtained in this study, it was possible to identify the factors that are influencing and affecting the production time.

Recommendations

Management is recommended to assign specific tasks to its workers, in order to eliminate downtime in the production area since they are not only dedicated to the repair of trailers but are assigned to other activities within the organization. It is also recommended to apply monthly the logistic management indicators (KPIs) proposed to measure efficiency and finally apply the methodology in all areas of the company as it would help to measure the performance and performance of the organization as well as to develop strategies competitive.

References

Alverio Montoya C. (2011) El balanced Scorecard como herramienta de evaluación en la gestión administrativa. *Revista Visión de futuro*, vol.15 (núm. 2), pp1-26.

Arbaiza L. (2017, mayo). El nuevo Balanced Scorecard en la administración. Recuperado de https://www.esan.edu.pe/.../2017/05/.../el-nuevo-balanced-scorecard-en-la-administrac...

Ballou, R. (2004). *Logística: Administración de la cadena de suministro* (5ª Ed.). Reason educación, México.

Chopra, S. & Meindi P. (2008). *Administración de la cadena de suministro: Estrategia, planeación y operación.* (3ª Ed.). Pearson Educación.

Fernández, Gómez, and Máximo Gentil. Diseño de la metodología del Balanced Scorecard como herramienta de evaluación estratégica en la Pyme Campo Verde SAS de Santander de Quilichao [recurso electrónico]. Diss. 2019.

Gómez J. I. (2016) *¿Para qué sirve el Balanced Scorecard (BSC)?*. Recuperado de https://www.dinero.com/.../para-que-sirve-el-balanced-scorecard-bsc-por-jorge.../240...

Kaplan R. & Norton D. (2011). *Poniendo el Balanced Scorecard en acción.* Recuperado de https://www.falconi.com/wpcontent/uploads/2015/11/artigo_05.pdf

Logicalis Blog de Analytics, (2016). Balanced Scorecard: lo que no sabías y lo que no te habían contado. Recuperado el 22 de Noviembre de 2018 de, http://blog.es.logisticalis.com

Manzo, J. L. (2013). *Balanced Scorecard, herramienta de medición en una empresa PYME de la industria de la construcción.* Tesis de maestría no publicada, Instituto Tecnológico y de Estudios Superiores de Occidente, Jalisco, México.

Mora L. (2008). *Indicadores de la gestión logística.* (2ª Ed.). Bogotá. Ecoe Ediciones.

Puentes, H. J. y Salcedo H. D. (2010). *Aplicación del Modelo de Gestión Balanced Scorecard en el Multiplex Americas de Cine Colombia S.A.* Tesis de licenciatura no publicada, Universidad Libre, Bogotá, Colombia.

Ramírez, J. P. (2013). *Implementación de Balanced Scorecard en una Empresa de Desarrollo de Software – Caso Quipux.* Tesis de maestría no publicada, Universidad de EAFIT, Medellín, Colombia.

Soler González R.H, & Guerrero Aguilar M. (2013) Balanced Scorecard y las Normas de Integración PAS 99: 2006 *Revista ciencia UNEM,* (núm. 10), pp75-81.