International Journal of Scientific & Engineering Research, Volume 5, Issue 4, April-2014
ISSN 2229-5518

Cable Factory Balanced Scorecards System

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Abstract— The success of companies lies mainly in designing a competitive strategy and on the practicality of its implementation. Studies have shown that 9 out of 10 companies fail to implement their strategies. This paper concentrates on developing a Balanced Scorecard system for a cable factory startup that is having problems achieving its goal and monitoring its employee performance. A total of 12 strategic objectives were created to keep the Cable Factory on the right track. Each of these strategic objectives has one operational objective to ahievie to startup targets.

Index Terms— Customer Perspective, Dash Board, Financial Perspective, Internal Process Perspective, Key Performance Indicators, Learning and Growth Perspective, Strategy Map.

1 Introduction

A cable factory startup is having difficulties in achieving its goals and monitoring the employee performance as there is no visual system that shows the objectives and the progress. A Balanced Scorecard System was developed in order to keep the company on focused towards its objectives and optimize its performance.

2 Literature Review

2.1 Balanced Scorecards

Balanced Scorecard is a strategic planning and management system that is used extensively in business and industry, government, and nonprofit organizations worldwide to align business activities to the vision and strategy of the organization, improve internal and external communications, and monitor organization performance against strategic goals. It was originated by Drs. Robert Kaplan (Harvard Business School) and David Norton as a performance measurement framework that added strategic non-financial performance measures to traditional financial metrics to give managers and executives a more 'balanced' view of organizational performance. While the phrase balanced scorecard was coined in the early 1990s, the roots of the this type of approach are deep, and include the pioneering work of General Electric on performance measurement reporting in the 1950's and the work of French process engineers (who created the Tableau de Bord – literally, a "dashboard" of performance measures) in the early part of the 20th century.

The balanced scorecard has evolved from its early use as a simple performance measurement framework to a full strategic planning and management system. The "new" balanced scorecard transforms an organization's strategic plan from an attractive but passive document into the "marching orders" for the organization on a daily basis. It provides a framework that not only provides performance measurements, but helps planners identify what should be done and measured. It enables executives to truly execute their strategies.

This new approach to strategic management was first detailed in a series of articles and books by Drs. Kaplan and Norton. Recognizing some of the weaknesses and vagueness of previous management approaches, the balanced scorecard approach provides a clear prescription as to what companies should measure in order to 'balance' the financial perspective. The balanced scorecard is a management system (not only a measurement system) that enables organizations to clarify their vision and strategy and translate them into action. It provides feedback around both the internal business processes and external outcomes in order to continuously improve strategic performance and results. When fully deployed, the balanced scorecard transforms strategic planning from an academic exercise into the nerve center of an enterprise.

Kaplan and Norton describe the innovation of the balanced scorecard as follows:
"The balanced scorecard retains traditional financial measures. But financial measures tell the story of past events, an adequate story for industrial age companies for which investments in long-term capabilities and customer relationships were not critical for success. These financial measures are inadequate, however, for guiding and evaluating the journey that information age companies must make to create future value through investment in customers, suppliers, employees, processes, technology, and innovation."

The balanced scorecard suggests that we view the organization from four perspectives, and to develop metrics, collect data and analyze it relative to each of the following perspectives.

2.2 Learning & Growth Perspective

This perspective includes employee training and corporate cultural attitudes related to both individual and corporate self-improvement. In a knowledge-worker organization, people -- the only repository of knowledge -- are the main resource. In the current climate of rapid technological change, it is becoming necessary for knowledge workers to be in a continuous learning mode. Metrics can be put into place to guide managers in focusing training funds where they can help the most. In any case, learning and growth constitute the essential foundation for success of any knowledge-worker organization.

Kaplan and Norton emphasize that 'learning' is more than 'training'; it also includes things like mentors and tutors within the organization, as well as that ease of communication among workers that allows them to readily get help on a problem

International Journal of Scientific & Engineering Research Volume 5, Issue 4, April-2014
ISSN 2229-5518

when it is needed. It also includes technological tools; what the Baldrige criteria call "high performance work systems."

2.3 Internal Process Perspective

This perspective refers to internal business processes. Metrics based on this perspective allow the managers to know how well their business is running, and whether its products and services conform to customer requirements (the mission). These metrics have to be carefully designed by those who know these processes most intimately; with our unique missions these are not something that can be developed by outside consultants.

2.4 Customer Perspective

Recent management philosophy has shown an increasing realization of the importance of customer focus and customer satisfaction in any business. These are leading indicators: if customers are not satisfied, they will eventually find other suppliers that will meet their needs. Poor performance from this perspective is thus a leading indicator of future decline, even though the current financial picture may look good.

In developing metrics for satisfaction, customers should be analyzed in terms of kinds of customers and the kinds of processes for which we are providing a product or service to those customer groups.

2.5 Financial Perspective

Kaplan and Norton do not disregard the traditional need for financial data. Timely and accurate funding data will always be a priority, and managers will do whatever necessary to provide it. In fact, often there is more than enough handling and processing of financial data. With the implementation of a corporate database, it is hoped that more of the processing can be centralized and automated. But the point is that the current emphasis on financials leads to the "unbalanced" situation with regard to other perspectives. There is perhaps a need to include additional financial-related data, such as risk assessment and cost-benefit data, in this category.

2.6 Stepts to Create a Balanced Scorecards

- Strategic objectives for each perspective using brainstorming and SWOT analysis techniques.
- Set operational objective(s) to reach the strategic objective.
- Set key performance indicators (KPI's) to measure performance.
- Set a target for each strategic objective.
- Create a strategy map.
- Provide results and insights.

2.7 Strategy Map

Strategy maps are communication tools used to tell a story of how value is created for the organization. They show a logical, step-by-step connection between strategic objectives in the form of a cause-and-effect chain.

After setting the Strategic objectives a strategy map was created as shown on figure 1.

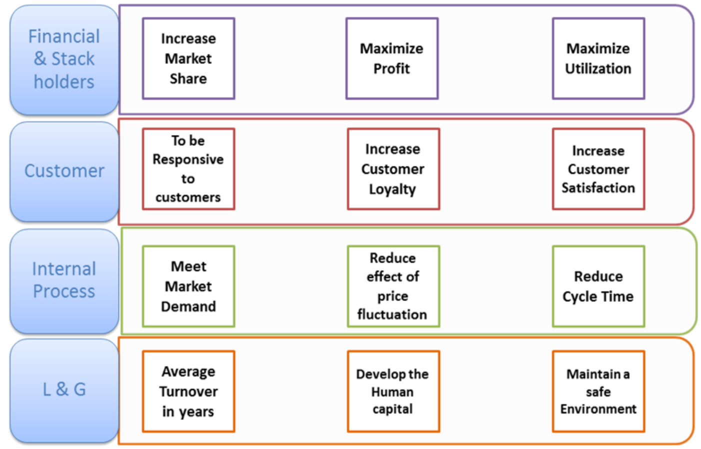

Figure 1: Strategy Map

3 Key Performance Indicators

3.1 Financial KPI's

The following table illustrates the strategic objective, KPI, target, and operational objectives in the financial perspective.

Table 1: Financial KPI's

Financial Code	Strategic Objectives	KPI	Target	Initiative
F1	**Increase Market Share**	% of Market Share	Achieve 25% market share	Reward system for innovation + KEMA certification + Use quality tools
F2	**Maximize Profit**	% of Profit	Achieve 25% (Feasibility Study)	Sales Promotion
F3	**Maximize utilization**	% of Utilization	Achieve 90% utilization of assets	Identify bottle necks

F1: Increase market share by creating a reward system for innovations, KEMA certifications and use quality tools. The target will be achieving 25% of market share and will be measured by percentage of market share.

Table 2: F1 Measurement

Year	2013	2014
% Market Share	51.1%	85.7%
Target	90.0%	90.0%

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International Journal of Scientific & Engineering Research Volume 5, Issue 4, April-2014
ISSN 2229-5518

F2: Maximize profit by sales promotions and applying IE Tools. The target will be achieving 25% and will be measeured by percentage of profit.

Table 3: F2 Measurement

Year	2013	2014
Revenue	513,223	7,304,279
Cost	840,834	4,549,249
Profit	-327,611	2,755,030
% of Profit	-63.8%	37.7%
Target	0.0%	25.0%

F3: Maximize utilization will be by using simulation programs and Process Studies to find bottle necks and competitive salaries. The target will be achieving 90% utilization of assets by measuring the percentage of utilization as follows:

Table 4: F3 Measurement

Year	2013	2014
% of Utilization	50.0%	85.7%
Target	90.0%	90.0%

3.2 Customers KPI's

The following table illustrates the strategic objective, KPI, target and operational objectives in the customer perspective:

Table 5: Customer KPI's

Customer Code	Strategic Objectives	KPI	Target	Initiative
C1	**To be Responsive to customers**	Average time to deliver	50% of delivery time	be creative in delivery + rewards for short timing in delivery + Train workers
C2	**Increase Customer Loyalty**	# of Repurchases	80% returned Customers	CRM (customer relationship management)
C3	**Increase Customer Satisfaction**	Average % of customer Satisfaction	aim for 100% customer satisfaction	Offer gifts + Train workers to "Satisfy the customer" + Conduct surveys and track results

C1: To be Responsive to customers will be by being creative in delivery and offering reward for short timing in delivery. The target will be achieving 50% of delivery time. The company KPI will be the average time to deliver as follows:

Table 6: C1 Measurement

Year	2013	2014
Total time to deliver (hr)	100	200
Average time to deliver (hr)	20	100
% of Average time	20.0%	50.0%
Target (Red Flag)	50.0%	50.0%

C2: Increase customer loyalty will be by CRM (customer relationship management) and offering quantity discount. The target will be 80% returned Customers. The measurement will be by # of repurchases as follows:

Table 7: C2 Measurement

Year	2013	2014
Total Customers	100	200
# of Repurchases	50	110
% of Repurchases	50.0%	55.0%
Target	80.0%	90.0%

C3: Increase customer satisfaction will be by offering gifts to the customers, Train workers to "Satisfy the customer" and conduct surveys and track results. The target will be 100% of satisfied customers. The measurement will be the percentage of satisfied customers through surveys as follows:

Table 8: C3 Measurement

Year	2013	2014
Average % of customer Satisfaction	90.0%	60.0%
Target	100.0%	80.0%

3.3 Internal Process KPI's

The following table illustrates the strategic objective, KPI, target and operational objectives in the internal process perspective:

Table 9: Internal Process KPI's

Internal Code	Strategic Objectives	KPI	Target	Initiative
P1	**Meet market demand**	% of Demand met	90% of Fulfilled needs	Forecasting
P2	**Reduce effect of price fluctuation**	Difference in profit	5% Difference in profit	Become a service provider
P3	**Reduce cycle time**	% Cycle Time Reduced (Cables)	Reduce cycle time by 10%	Automated Inventory Management System

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International Journal of Scientific & Engineering Research Volume 5, Issue 4, April-2014
ISSN 2229-5518

P1: The target will be 90% of Fulfilled needs. The measurement will be by % of demand met as follows:

Table 10: P1 Measurement

Year	2013	2014
Market demand	10	15
# demand met	5	12
% of Demand met	50.0%	80.0%
Target	90.0%	90.0%

P2: Reduce effect of price fluctuation will be by determining the best time to buy and become a service provider. The target will be 5% difference in profit. The measurement will be difference in profit as follows:

Table 11: P2 Measurement

Year	2013	2014
Profit	100	110
Profit difference	120	130
Difference in profit	20.0%	18.2%
Target (Red Flag)	5.0%	5.0%

P3: The target will be reducing the cycle time by 10%. The measurement will be the percentage of cycle time reduced as shown below:

Table 12: P3 Measurement

Year	2013	2014
Current Method (Per hour)	300	310
New Method (Per hour)	310	312
% Cycle Time Reduced	3.3%	0.6%
Target	5.0%	10.0%

3.4 Learning and Growth KPI's

The following table illustrates the strategic objective, KPI, target and operational objectives in the learning and growth perspective:

Table 13: Learning and Growth KPI's

L&G Code	Strategic Objectives	KPI	Target	Initiative
L1	**Average turnover in years**	% of Turnover	5% of turnover employee	Implementing new benefits and total rewards strategy annually + Employee Satisfaction
L2	**Develop the Human Capital**	# of certifications	90% of workers Achieved 3 Certificates	Performance evaluation + Training
L3a	**Maintain a safe Environment**	# of accidents	Not more than 1 accident	Educate the workers and provide safety kits
L3b		# of safe actionable without authority	100 safe actionable without authority	Educate the workers

L1: Average turnover in years by Implementing new benefits and total rewards strategy annually and employee satisfaction. The target is achieving less than 5% turnover. The measurement will be by percentage turnover yearly as follows:

Table 14: L1 Measurement

Year	2013	2014
# of Employee	20	20
# of Turnover	0	1
Average Turnover	0%	5%
Target	5%	5%

L2: Develop the human capital development by Performance evaluation and training. The target is 90% of workers achieved 3 certificates. The measurement is the number of certifications as follows:

Table 15: L2 Measurement

Year	2013	2014
Total # of Workers	100	100
Total # of Workers Achieved 3 Certificates	50	80
% of workers Achieved 3 Certificates	50.0%	80.0%
Target	90.0%	90.0%

L3a: Maintain a safe Environment by Educate the workers and provide safety kits. The target is not more than 1 accident. The measurement is the # of accidents as follows:

Table 16: L3a Measurement

Year	2013	2014
# of accidents	2	3
Target (Red Flag)	3	4

L3b: Maintain a safe Environment by Educate the workers. The target is 100 actionable without authority. The measurement is the # of safe actionable without authority as follows:

Table 17: L3b Measurement

Year	2013	2014
# of safe actionable without authority	60	110
Target	120	130

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International Journal of Scientific & Engineering Research Volume 5, Issue 4, April-2014
ISSN 2229-5518

4 CONCLUSION

Total of 12 strategic objectives is enough to keep the Cable Factory on the right track. Each of these strategic objectives has its own operational objectives to keep the company moving towards its goals. It is important to know that these strategic objectives are not for long-term planning. More strategic objectives could be added in the future.

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