



Strategic Plan in a Greek Manufacturing Company: A Balanced Scorecard and Strategy Map Implementation

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Abstract

This paper aims to translate the strategy of a Greek manufacturing company into objectives and measures that can be clearly communicated to all units and employees. For this purpose two basic strategic tools are implemented, the Balanced Scorecard (BSC) and the strategy map. Based on the statements about mission, vision, and values of the company, and the strategic analysis, we formulate the strategy on four axes. The company's strategy map is constructed using the four axes as strategic themes, and the four traditional perspectives of the BSC. Twenty eight objectives and thirty six measures are used, and nine departments are engaged to monitor the performance of objectives in order the company to achieve the determined targets. Finally, ten strategic initiatives are proposed that company must carry out to achieve the targeted performance of strategic objectives and measures.

Keywords: Strategic plan, Balanced Scorecard, Strategy Map, Strategic themes

1. Introduction

Successful strategy execution has two basic rules, understand the management cycle that links strategy and operations, and know what tools to apply at each stage of the cycle (Kaplan and Norton, 2008b). Based on the six-stage management system described minutely by Kaplan and Norton (2008), our work attempts to translate into objectives and measures the strategy of a tobacco manufacturing company situated in North-East Greece. Specifically, in this paper we focus on the first two stages using the Balanced Scorecard (BSC) and the strategy map tools for translating the strategy.

The strategy map provides a powerful tool for visualizing the strategy as a chain of cause-and-effect relationships among strategic objectives. Categorized into strategic themes, the objective chains start with *financial* objectives and then link down to objectives of *customer* perspective. The chain linkage continues with objectives of *internal business process* and eventuates in *learning and growth* perspective. Once the strategy map is developed, it is linked to the Balanced Scorecard. With the help of BSC performance metrics (measures) and targets are determined for each strategic objective. BSC also assists to identify the proper initiatives in order to achieve the strategic objectives.

1.1 The Six-Stage Management System

The six-stage of the management system proposed by R. Kaplan and D. Norton are shown in Figure 1. At the start of the process (Stage 1 – Develop the Strategy) the managers develop the strategy using appropriate strategy techniques such as the SWOT Analysis, the Five Competitive Forces (Porter, 1980: pp. 3-33) and the Value Chain Model (Porter, 1985: pp. 33-63). In the following Stage 2 – Plan the Strategy the organization plans the strategy using the two basic tools, the strategy map and the BSC. These tools enable an organization to describe and illustrate, in clear and general language, its objectives, initiatives, and targets; the measures used to assess its performance (such as market share and customer surveys); and the linkages that are the foundation for strategic direction (Kaplan and Norton, 2000).

The integrated strategy map and BSC are linked and diffused to all organizational units (Stage 3 – Align the Organization). In this stage, personal objectives and incentives of employees are aligned to strategic objectives. The Stage 4 – Plan Operations, where all organizational units and employees are already aligned with the strategy and operation planning, begins using the appropriate tools (quality and process management, reengineering, process

activity-based costing). In Stage 5 – Monitor and Learn the enterprise monitors and learns about problems, barriers, and challenges. Finally, in Stage 6 – Test and Adapt managers use internal operational data and new external environmental and competitive data to test and adapt the strategy, launching another loop around the integrated strategy planning and operational execution system.

1.2 The Present Work

Our work focuses on the Stage 2 of the above mentioned management system and presents an attempt of strategy translation in a Greek manufacturing company. The strategy translation became with the help of two basic tools, BSC and strategy map. The development of strategy (Stage 1) is demanded as precondition for the Stage 2. The strategy development is a process that is mainly constituted of three elements (Kaplan and Norton, 2008b):

- 1 The enterprise identity determination (mission – values – vision),
- 2 The key issues the company faces (strategic analysis), and
- 3 The strategy formulation.

Regarding the first subject of strategy development, the company's statements of mission, vision and values, are the following:

Mission

“To create and generate values

- For shareholders
- For customers
- For society, the environment and employees”

Vision

“To be among the leaders of Greek industry and to have a continuously growing presence in international markets”

Values

- Total dedication to consumers and their needs;
- Respect for the environment and its protection;
- On-going efforts to achieve and ensure maximum quality standards at all levels;
- Harmonious merging of social intervention and modern terms of human resources organization and marketing;
- High corporate social responsibility.

In order to identify the key issues, the company proceeded to strategic analysis using one of the most known tools for this intended purpose, the SWOT analysis. Perhaps the earliest and most fundamental of all strategy analysis tools, the SWOT analysis identifies the company's existing strengths and weaknesses, its emerging opportunities, and the worrisome threats facing the organization (Kaplan and Norton, 2008: p. 49). The results of SWOT analysis, in relation with company's statements about mission, vision and values, led to strategy formulation. The direction of the company has decided to develop the strategy in four major axes:

- 1 High Quality Products to the Customers
- 2 Development of Intellectual Capital
- 3 Provision of Innovative Products
- 4 Environment Protection

The strategy translation uses also these axes as strategic pillars for the strategy map and BSC development. Firms in the same business often have the same mission; they may also have the same values; they might even share a vision. However, it is unlikely that even two companies in the same business will have the same strategic objectives. Indeed, if a firm's strategy can be applied to any other firm, it is not a very good one (Collis and Rukstad, 2008).

In the next pages we particularize the formation of these four strategy axes, which are reported as “strategic themes”. In each strategic theme (of strategy map), there are objectives that start from *financial* perspective and link down to objectives of *customer*. The chain linkage continues with objectives of *internal business process* perspective and eventuates in *learning and growth* objectives. The total strategy map is given in Figure 2, where the four perspectives and the four strategic themes are included. The integration of each strategic theme is followed by the quotation of measures and targets for each objective, as well as the corresponding initiatives for the achievement of the mentioned objectives. The basic elements of BSC (objectives, measures, targets and initiatives) are selected and integrated through interviews with company's managers and the use of decision making tools (Brainstorming and Analytic Hierarchy

Process – AHP) (Anagnostopoulos et al., 2006).

In the following sections the four themes are expanded through the four perspectives.

2. High Quality Products to the Customers

In strategic theme of HIGH QUALITY PRODUCTS TO THE CUSTOMERS, and beginning from the *financial* perspective of strategy map (fig. 2), there is a single objective; “Increase Earnings”. Table 1, provides ten objectives that belong to the specific theme and twelve measures as well. For “Increase Earnings” objective, the measure of “Earnings before Interest and Tax – EBIT” is reported. EBIT is a frequently used performance measure for earnings determination of various companies, worldwide. Thus it is preferred for the measurement of the relative objective (Increase Earnings of HIGH QUALITY PRODUCTS TO THE CUSTOMERS strategic theme). We must emphasize that this measure of *financial* perspective and also the measures of the same perspective in the other tree strategic themes, are performing like drivers to the main performance measure of “Economic Value Added – EVA” (fig. 2). Studies suggest that EVA is an effective measure of the managerial decisions quality as well as a reliable indicator of a company’s value growth in the future. In summary, constant positive EVA values over time will increase company value, while negative EVA implies value depreciation (Roztocki & Needy, 1999).

Concerning the *customer* perspective, two objectives are reported: “Increase Customer Satisfaction” and “Retain & Increase Market Share”. By means of appropriate strategic objectives, measures, targets and initiatives the customer value proposition is represented in the *customer* perspective through which the firm/business unit wants to achieve a competitive advantage in the envisaged market segments (Figge et al., 2002). For “Customer Satisfaction” is proposed the measure of “Customer Satisfaction Index”, while for “Retain & Increase Market Share” are determined two measures, “Customer Devotion Index” and the “Percentage of Market Share”. The cause and effect relationship among these objectives and also between them and the objective of *financial* perspective (Increase Earnings) is obvious (fig. 2). The two indexes/measures pertain to statistical procedure outcomes (via appropriate statistical tools) and answers from ad hoc questionnaires. The third measure in this specific theme and perspective (Percentage of Market Share), concerns the change of share (%), which in turn comes from the qualitative characteristics contribution of company’s products.

In *internal business process* perspective we meet a group of five objectives that could be denominated with the general title of “Quality Improvement”. The objectives are the “Decrease of Errors that Reach the Customer”, the “Decrease of Error Retrieval Time”, the “Direct Response to Customer Complaints”, the “Blends Stability”, and the “High Quality of Raw Materials”. The first four objectives correspond to the measures “Complaints Percentage”, “Time from Error Localisation to Correction”, “Time from Complaint Expression to Regulation”, and “Blends Suitability”, respectively. Complaints Percentage is measure of high importance for the company. It is significant to identify, through this measure, the errors that the customers reach, and try to reduce them. Most unhappy customers do not bother to publicize their experiences. They don’t even bother to complain. Instead, they stop buying and spread bad news in their social networks. These small revenges represent a great loss of lifetime value that is invisible to the firm but has substantial implications for the bottom line (Ariely, 2007). “Time from Error Localisation to Correction” is also a main measure. An increase in productivity is the alpha and omega in manufacturing firms. The goal is high availability, better quality, lower costs, higher system utilization, and, in the end, increased profitability (Baron, 2005). For “Blends Suitability” measure, there is a panel of tobacco experts that is assigned with the task of selecting excellent tobaccos worldwide. The main issue for this team is to retain the perfect quality of purchased tobaccos and to keep them up till the blending procedure.

The measures “Supplier Quality Management System” and “Supplier Appropriateness” belong to the fifth objective of *internal business process* perspective (Table 1). The company’s suppliers must have been approved by any accredited quality assurance organization. Purchased parts that do not conform to specifications can impact every aspect of the company’s business. Both the buyer’s approach and specification management are keys to controlling supplier quality. Competitive cost, service, delivery time and product quality are fundamental criteria of the supplier evaluation (Hrgarek & Bowers, 2009). As it was expected the group of Quality Improvement objectives is directly associated with Customer Satisfaction in *customer* perspective (fig. 2).

The strategic theme of HIGH QUALITY PRODUCTS TO THE CUSTOMERS (as well as the rest of themes) eventuates in *learning and growth* perspective, where two objectives are proposed: “Increase of Educational Effectiveness” and “Knowledge Management Improvement”. The measure of “Educational Effectiveness Index” for “Educational Effectiveness” objective and the “Use of Systems percentage” measure for “Knowledge Management Improvement” are respectively introduced. “Educational Effectiveness Index” refers to the increase in educational effectiveness that is determined after the completion of sophisticated training programmes and relative comprehension tests for trainees’ acquisition of knowledge and capabilities certification. With the help of this index, company can also ascertain the trainer competence and the program effectiveness. The percentage of systems use shows the exact utility of current systems (via their use) and relative reports (users’ complaints, errors frequency etc). The percentage of systems use can also reveal, except the need of updates and improvements, the requirement of a system replacement or the application

necessity of complementary systems.

The linkage (cause and effect relationship) of these two objectives with the group of Quality Improvement objectives (*internal business process* perspective) is illustrated in Figure 2.

2.1 High Quality Products to the Customers: Authorities, Measurement Frequencies and Targets

Table 2 lists the “Authorities”, “Measurement Frequencies” and “Targets” of HIGH QUALITY PRODUCTS TO THE CUSTOMERS strategic theme. Authorities are the Departments (Dpt.) of the company that are assigned to measure the relative objectives effectiveness, and report periodically the measurement results to the manager of the particular strategic theme. The “Measurement Frequencies” are the periods of time that an objective must be measured (or the minimum period that an objective can be measured) by authorities. Finally, “Targets” are the desirable results of each objective after a specific period of time –at least 3 years to close the loop of “Six-Stage Management System” (fig. 1).

For example the objective “Increase Earnings” (*financial* perspective) has the measure of “Earnings before Interest and Tax (EBIT)”. The department that is assigned to measure this objective is Financial Services (FS) and it must determine this performance every year. The target for this objective indicates that EBIT must increase up to 10%.

3. Development of Intellectual Capital

The second strategic theme is the DEVELOPMENT OF INTELLECTUAL CAPITAL, where five objectives and seven measures are reported (Table 3). Since this theme is characterized as an “internal nature theme”, there is not any objective in the *customer* perspective.

This theme starts, like the previous one, with the *financial* perspective of strategy map (fig. 2), where the objective “Cost Reduction” is presented, with measures of “Total Cost per Employee” and “Cash-to-Cash Cycle” (Table 3). “Total Cost per Employee” is a widely used measure, and companies’ efforts direct to minimize it. “Cash-to-Cash Cycle” measured as the sum of day’s cost-of-sales in inventory, day’s sales in accounts receivable, less day’s purchases in accounts payable. While many companies will find it difficult to have zero or negative cash-to-cash cycles, the goal of reducing the cash cycle from current levels (Table 4) can be an excellent target for improving working capital efficiency (Kaplan and Norton, 1996: pp. 58-57).

In strategy map we can also see that *financial* perspective is directly linked to (cause and effect relationship) the objectives of *internal business process* (the particular theme doesn’t contain any objective in *customer* perspective), namely “Employee Attrition” and “Increase Employee Utilization”. The “Employee Attrition” is measured by “Percentage of Employee Turnover”, while “Employee Utilization Increase” by measures of “Manufacturing Cycle Effectiveness – MCE” and “Employees Productivity / Employees Cost” ratio. Employee attrition is a risk during all organizational change, but investing in training is an important step for keeping turnover to an acceptable level. An effective training program sets clear expectations and gives to employees the tools they need. It also shows to employees that company willing to invest in their professional development and wants them to succeed (Ely, 2008). A measure used by many organizations attempting to move to just-in-time production flow processes is MCE defined as the ratio of “Processing Time” to “Throughput Time” (Kaplan and Norton, 1996: p. 117).

The two Internal Business Process objectives are associated with the respective objectives of *learning and growth* perspective, “Cross Training” and “Improve Employee Satisfaction”. The measure for the first one (Cross Training) is “Percentage of Man-hours in Cross Training” and “Employee Satisfaction Index” is the measure for the second objective (Improve Employee Satisfaction). Employees’ training is central to company’s strategy and one of the main concerns in mission statement, “Create and Generate Values for Employees”. A headline employee satisfaction index will usually be the outcome that receives most attention and will be essential for organizations utilizing BSC. It is essential that the headline measure is a composite index rather than a measure based on a single overall satisfaction question, since the latter will suffer from a much higher level of random error and this will damage the reliability of future tracking. The index should be a weighted average, produced by using the relative importance of the requirements to weight the corresponding satisfaction scores. This reflects the way that employees make their satisfaction judgement in the real world – placing more emphasis on their most important requirements. The information age environment for both manufacturing and service organizations requires new capabilities for competitive success. The ability of a company to mobilize and exploit its intangible or invisible assets has become far more decisive than investing and managing physical, tangible assets (Kaplan and Norton, 1996: p. 3).

3.1 Development of Intellectual Capital: Authorities, Measurement Frequencies and Targets

Table 4 – similar to Table 2 – itemizes for DEVELOPMENT OF INTELLECTUAL CAPITAL strategic theme, the targets for each measure and the measurement frequencies as well. In the same table, the company’s departments that are assigned with the progress of objectives are also reported. The percentage of “Employee Turnover” measure for example, must be monitored and measured every three months by Human Research department, and at the end of the current management cycle must have a decrease of 20% (Table 4).

4. Provision of Innovative Products

The third Strategic Theme of strategy map (Figure 2) is the PROVISION OF INNOVATIVE PRODUCTS. In this theme are presented seven objectives and nine measures that are monitored by four departments. This theme also indicates that company's proposed strategy is the differentiation.

Table 5 (and Figure 2 also) shows the specific theme, beginning with the *financial* perspective where the single objective of "Increase Earnings" is mentioned, that can be measured by "Income from State-of-the-art Products / Total Income" ratio. It is known and easy to understand, the market of tobacco products experiences worrying times. Tobacco products face legislative barriers that restrict the promotion and advertisement by mass media (TV, periodicals etc). The campaigns against smoking, from governmental and non-governmental organizations become more intensive, influencing significantly the consumers' (smokers') purchasing will. An equally significant issue is the continuous increase in taxes of tobacco products. The innovation process, the long wave of value creation, is for many companies a more powerful driver of future financial performance than the short-term operating cycle. For many companies, their ability to manage successfully a multiyear product-development process or to develop a capability to reach entirely new categories of customers may be more critical for future economic performance than managing existing operations efficiently, consistently, and responsively (Kaplan and Norton, 1996: p. 28).

Therefore, the answer of above mentioned barriers and future economic performance can come from State-of-the-art Products development. The proposal of a new Research and Development department creation (R&D dpt.) and the corporation with the Institute for Biomedical Research and Biotechnology (IBRB) will help company to develop products (cigarettes) that reduce the destructive consequences of smoking addiction (mainly by developing special types of filters). The outcome from any strategy formulation approach is to develop a direction that differentiates the company's position and offering from those of its competitors so that it can create a sustainable competitive advantage that leads to superior financial performance (Kaplan and Norton, 2008: pp. 56-57).

The achievement of financial objective comes from the successful outcome of two Customer objectives (in this theme). The Customer objectives are the "Increase Market Share" and "Diversify Customer Portfolio". The measure of first objective is the "percentage of Market Share", while the second one can be determined by three measures, "Customer Satisfaction Index", "Number of Relative Articles", and "Percentage of State-of-the-art Projects". Market share reflects the proportion of business in a given market (in terms of customers, dollars spent, or unit volume sold) that a business sell (Kaplan and Norton, 1996: p. 68). The "Customer Satisfaction Index", like previous indexes (see "High Quality Products to the Customers" strategic theme), pertains to statistical procedure outcomes (via appropriate tools) and answers from ad hoc questionnaires. The "Number of Relative Articles" measure is the minimum amount of articles that must be published by R&D dpt. and IBRB, in the three year period to complete the six stages.

Regarding the *internal business process* perspective, two objectives are reported, "Minimize Market Entrance Time (for State-of-the-art Products)" and "Increase Research Range", with measures of "Time from Product Development Approval to Market Entrance" and "Number of State-of-the-art Projects", respectively. These two measures are essential for the production of state-of-the-art products and their variety. The actions of the internal business process of this theme can be transmitted to the customers (mainly with the use of coupons – see next theme) in order to increase the customer satisfaction (to drive to the *customer* perspective objectives).

Finally, the proposed objectives for the *learning and growth* perspective are "Training in Filter and Cigarette Planning" and "Training in New Analytical Methods". The measure for these two objectives is the "Percentage of Man-hours". The company can develop knowledge and skills among its employees through training and development programs, along with career planning that gives employees experiences in various tasks, businesses, regions, and functions. Instilling values is more complex. It requires a combination of taking good inputs through careful recruitment and selection programs – in addition to extensive training and communication of corporate mission and values – to inspire the behaviors that the corporation desires (Kaplan and Norton, 2008: p. 152).

4.1 Provision of Innovative Products: Authorities, Measurement Frequencies and Targets

Table 6 presents the objective "Authorities", the "Measurement Frequencies" and the "Targets" for each measure in PROVISION OF INNOVATIVE PRODUCTS strategic theme. Market share can be measured by marketing department (MKT dpt.) every year and eventually (at the end of the six-stage cycle) state-of-the-art products must possess the 15% of the Greek cigarette market.

5. Environment Protection

The last strategic theme of strategy map is the ENVIRONMENT PROTECTION. This theme points out six objectives and seven measures (Table 7). The first objective (*financial* perspective), "Increase Earnings" can be measured by "Increase Earnings by Waste Trading" and "Cost Reduction of Waste Management" measures. The waste trading refers to the byproducts usability, after some stages of elaboration (or directly), and residuals of raw materials (papers, polypropylenes, tobacco dust etc) as well. These materials are sold (or can be sold) causing significant incomes. The

Cost Reduction of Waste Management, is the exemption from the use of landfill expenditure (the most popular solution in waste management), by recycling them or donating them to interested organizations. Recycling waste is part of the green process that brings several benefits (i.e. the waste is not dumped in a landfill, recycling costs are often much lower than landfill fees etc).

Similarly to previous three strategic themes, there is a cause-and-effect relationship among the objectives (through four perspectives). Thus, first objective of *customer* perspective, “Customer Enlightenment”, is going to drive to the second one, “Customer Satisfaction” which in turn is linked with “Increase Earnings” (of *financial* perspective). The measure for “Customer Enlightenment” is “Percentage of Informed Customers”, while for “Customer Satisfaction” is “Customer Satisfaction Index”. The measure of “Customer Satisfaction Index” can arise from the already mentioned procedure of questionnaires and the second measure (“Percentage of Informed Customers”) can be emerged mainly by the use of coupons, i.e. paper insets that contain valuable information for customers. Customers must be informed about the company’s activities regarding environment protection (see next perspective). This information can drive to their satisfaction and eventually to the financial performance.

In relation to *internal business process* perspective, two objectives are reported, “Increase Recycling” and “Waste Exploitation,” having measures of “Waste to Landfill / Total Waste” ratio and “Percentage of Useful Waste in Secondary Activities”, respectively. Today many companies have accepted their responsibility to do no harm to the environment. Products and production processes are becoming cleaner; and where such change is under way, the environment is on the mend. In the industrialized nations, more and more companies are “going green” as they realize that they can reduce pollution and increase profits simultaneously (Hart, 1997).

Finally, in *learning and growth* perspective is proposed the “Increase Employees’ Environmental Conscience” objective and the measure of “Percentage of Man-hours in Material Management & Environment Issues Training”.

Multiple tool sets have evolved including the triple bottom line (people, profits, planet) and full life cycle analysis. By considering the actual cost of a product through its entire lifecycle, many companies have unearthed savings from environmental action. Whether the cost savings are driven by reduced risk, better use of materials, or higher retention of employees, environmental issues must be considered with a broader mindset than the traditional cost/benefit mindset. The cost/benefit mindset assumes that environmental measures always incur additional cost, an assumption that leads to inaction. Many companies are discovering that by adopting environmental values, they are reducing costs (Freeman et al., 2008).

5.1 Environment Protection: Authorities, Measurement Frequencies and Targets

Table 8 – similar to Tables 2, 4, and 6 – itemizes measure targets and measurement frequencies for ENVIRONMENT PROTECTION strategic theme. Company departments that are assigned with the progress of objectives are also reported in Table 8. The Production department (PR dept.) has the authority to measure the performance of “Waste to Landfill / Total Waste” ratio every month. This measure must achieve a decrease of 50%, at the end of the six-stage cycle.

6. The Strategic Initiatives

The integration of above mentioned Tables 1 to 8 completes the BSC, that accompanies (or is accompanied by) the strategy map (fig. 2).

The elements that haven’t reported yet are the strategic initiatives. Strategic initiatives are action programs aimed at achieving targeted performance for the strategy map objectives. Initiatives cannot be looked at in isolation; they must be viewed as a portfolio of complementary actions, each of which must be successfully implemented if the company is to achieve its theme targets and overall strategy target (Kaplan and Norton, 2008: p. 11). The complete portfolio of strategic initiatives defines the resources and actions required to implement the strategic themes. The themes’ *learning and growth* objectives, for example, involves developing new skills for employees, introducing new information systems and aligning employees’ personal goals and incentives to motivate them to achieve a process objective of investing more time with high-potential customers (Kaplan and Norton, 2006). When the BSC is used as a cornerstone of a company’s management system, the various initiatives can be focused on achieving the organizational objectives, measures, and targets (Kaplan and Norton, 1996: pp. 230-231). The main strategic initiatives and explicit funding for their portfolios are:

- 1 Planning of research procedures regarding the determination of Customer Satisfaction Indexes (questionnaires, sampling points, methods for data analysis etc).
- 2 Cautious planning of communication means (coupons and sell spots) with customer and how messages must be transmitted (simple and comprehensible messages).
- 3 New Research and Development (R&D) department that will undertake the related with new products planning and development procedures (in collaboration with IBRB or other organizations). This department will also be assigned with “Waste Exploitation” issue.

- 4 New service department of Customer Relationship (CR) that will decisively contribute to customers' satisfaction and to perfect relationship with them. This new department will also contribute to company's efforts for continuous quality improvement in products and procedures.
- 5 Quality Control Department Activities Expansion, for raw materials superior quality assurance via indispensable measurements.
- 6 Assistance to IBRB in order to increase the research range and accelerate the procedures of state-of-the-art products insertion to the markets.
- 7 Application of cross-training planning.
- 8 Application of training planning regarding the filter and cigarette characteristics.
- 9 Application of training planning in relation to materials management and environmental issues as well.
- 10 Explicit actions in the direction of employees' satisfaction (financial and non-financial measures).

The above mentioned initiatives concern primarily the part of programs and actions planning, which managers must develop, as well as the financial part for the integration of predetermined objectives. To summarize, strategic initiatives are the short-term actions that launch an organization on a trajectory toward achieving its vision. The company screens and selects strategic initiatives by assessing their impact on achieving the targeted performance for strategic objectives and measures. Each strategic theme requires complete portfolios of strategic initiatives if its ambitious performance targets are to be achieved (Kaplan and Norton, 2008: p. 114). Examining the ten proposed initiatives it is noted that five of them (50%) are related with research, planning and training, and they can be transacted by existing staff and at relatively low cost. Three of these "low cost" initiatives (the 30% of total initiatives) are dedicated to training planning and application ("Cross-Training", "Filter & Cigarette Designing", and "Material Handling and Environmental Issues"), while the remaining two "low cost" initiatives are referred to research procedures and planning of communication means ("Customer Satisfaction" and "Coupons & Sell Spots"). The two of "high cost" initiatives involve the creation of new departments – Research & Development" and "Customer Relationship"– with estimated annual cost of €370,000 and €150,000 respectively. The rest three of "high cost" initiatives (the 30% of total initiatives) refer to the expansion of two already existing services –"Quality Control" and "IBRB"– with estimated annual cost of €100,000 and €70,000 respectively and also to financial measures for employees' satisfaction (annual cost: €500,000). Thus the total estimated annual cost for implementing the ten proposed initiatives is €1,400,000. The BSC and strategy map integration as well as the initiatives completion, signal the second stage integration (of closed-loop management system, see fig. 1) and the start point of third stage ("Align the Organization").

7. Conclusion

This paper aims to translate the strategy of a manufacturing company by focusing on the first two stages of the six-stage strategic management system proposed by R. Kaplan and D. Norton. Based on the statements about mission, vision, and values of the company, and the strategic analysis, we formulate the strategy on four axes. The company's strategy map is constructed using the four axes as strategic themes and the four traditional perspectives of the BSC. Twenty eight objectives and thirty six measures are used, and nine departments are engaged to monitor the performance of objectives in order the company to achieve the determined targets. Finally, ten strategic initiatives are proposed 10 that company must carry out to achieve the targeted performance for strategic objectives and measures.

The final step to integrate the second stage of the six-stage closed-loop (not discussed here) is the cost of the short term programs (initiatives). Executing strategy requires that the portfolios of initiatives be executed simultaneously in a coordinated manner. This requires explicit funding for the portfolios of strategic initiatives (Kaplan and Norton, 2008: p. 11). The high importance subject of initiative portfolios funding is the cornerstone for strategic planning integration and the continuation to closed-loop cycle termination.

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Table 1. Measures of “High Quality Products to the Customers” Strategic Theme

Perspective	Objective	Measure
Financial	Increase Earnings	Earnings Before Interest and Tax (EBIT)
Customers	Increase Customer Satisfaction	Customer Satisfaction Index
	Retain & Increase Market Share	Customer Devotion Index
		Market Share (%)
Internal Business Process	Decrease of Errors that Reach the Customer	Complaints (%)
	Decrease of Error Retrieval Time	Time from Error Localisation to Correction
	Direct Response to Customer Complaints	Time from Complaint Expression to Regulation
	Blends Stability	Blends Suitability
	High Quality of Raw Materials	Supplier Quality Management System
		Supplier Appropriateness
Learning & Growth	Increase of Educational Effectiveness	Educational Effectiveness Index
	Knowledge Management Improvement	Use of Systems (%)

Table 2. Authorities, Measurement Frequencies and Targets of “High Quality Products to the Customers” Strategic Theme

Perspective	Measure	Authority	Measurement Frequency	Target
Financial	Economic Value Added (EVA)	FS	1 year	+10%
	Earnings Before Interest and Tax (EBIT)	FS	1 year	+10%
Customers	Customer Satisfaction Index	MKT	6 months	+10%
	Customer Devotion Index	MKT	6 months	+10%
	Market Share (%)	MKT	1 year	20%
Internal Business Process	Complaints (%)	CR	1 month	-50%
	Time from Error Localisation to Correction	CR	1 month	-50%
	Time from Complaint Expression to Regulation	CR	1 month	-50%
	Blends Suitability	TC	1 month	100%
	Supplier Quality Management System	QC	1 year	90% min
	Supplier Appropriateness	QC	1 year	100%
Learning & Growth	Educational Effectiveness Index	HR	1 year	+10%
	Use of Systems (%)	IT	3 months	+20%

FS : Financial Services - MKT: Marketing - CR: Customer Relationship Dpt. - TC: Tobacco Services
 QC: Quality Control - HR: Human Research Dpt. - IT: Information Systems Dpt.

Table 3. Measures of “Development of Intellectual Capital” Strategic Theme

Perspective	Objective	Measure
Financial	Cost Reduction	Total Cost per Employee
		Cash-to-Cash Cycle
Customers	-	-
Internal Business Process	Employee Attrition	Employee Turnover (%)
	Increase Employee Utilization	Manufacturing Cycle Effectiveness - MCE
		Employees Productivity / Employees Cost
Learning & Growth	Cross Training	% Man-hours in cross training
	Improve Employee Satisfaction	Employee Satisfaction Index

Table 4. Authorities, Measurement Frequencies and Targets of “Development of Intellectual Capital” Strategic Theme

Perspective	Measure	Authority	Measurement Frequency	Target
Financial	Total Cost per Employee	FS	6 months	-10%
	Cash-to-Cash Cycle	FS	6 months	-10%
Customers	-	-	-	-
Internal Business Process	Employee Turnover (%)	HR	3 months	-20%
	Manufacturing Cycle Effectiveness - MCE	PR	3 months	+50%
	Employees Productivity / Employees Cost	PR	1 month	+10%
Learning & Growth	% Man-hours in cross training	HR	6 months	+20%
	Employee Satisfaction Index	HR	1 year	+20%

FS: Financial Services - HR: Human Research Dpt. - PR: Production

Table 5. Measures of “Provision of Innovative Products” Strategic Theme

Perspective	Objective	Measure
Financial	Increase Earnings	Income from State-of-the-art Products / Total Income
Customers	Increase Market Share	Market Share (%)
	Diversify Customer Portfolio	Customer Satisfaction Index
		Number of Relative Articles
		Percentage of State-of-the-art Projects
Internal Business Process	Minimize Market Entrance Time (for State-of-the-art Products)	Time from Product Development Approval to Market Entrance
	Increase Research Range	Number of State-of-the-art Projects
Learning & Growth	Training in Filter and Cigarette Planning	% Man-hours in Plan Training
	Training in New Analytical Methods	% Man-hours in New Analytical Methods Training

Table 6. Authorities, Measurement Frequencies and Targets of “Provision of Innovative Products” Strategic Theme

Perspective	Measure	Authority	Measurement Frequency	Target
Financial	Income from State-of-the-art Products / Total Income	FS	1 year	+20%
Customers	Market Share (%)	MKT	1 year	15%
	Customer Satisfaction Index	MKT	1 year	+10%
	Number of Relative Articles	IBRB & R&D	6 months	9
	Percentage of State-of-the-art Projects	IBRB & R&D	1 year	+50%
Internal Business Process	Time from Product Development Approval to Market Entrance	R&D	1 year	-30%
	Number of State-of-the-art Projects	R&D	1 year	5
Learning & Growth	% Man-hours in Plan Training	HR	6 months	+20%
	% Man-hours in New Analytical Methods Training	HR	Annually	+20%

FS: Financial Services - MKT: Marketing - R&D: Research & Development - IBRB: Institute for Biomedical Research and Biotechnology - HR: Human Research Dpt.

Table 7. Measures of “Environment Protection” Strategic Theme

Perspective	Objective	Measure
Financial	Increase Earnings	Increase Earnings by Waste Trading
		Cost Reduction of Waste Management
Customers	Customer Satisfaction	Customer Satisfaction Index
	Customer Enlightenment	Percentage of Informed Customers
Internal Business Process	Increase Recycling	Waste to Landfill / Total Waste
	Waste Exploitation	Useful Waste in Secondary Activities (%)
Learning & Growth	Increase Employees’ Environmental <i>Conscience</i>	% Man-hours in Material Management & Environment Issues Training

Table 8. Authorities, Measurement Frequencies and Targets of “Environment Protection” Strategic Theme

Perspective	Measure	Authority	Measurement Frequency	Target
Financial	Increase Earnings by Waste Trading	FS	6 months	+10%
	Cost Reduction of Waste Management	FS	6 months	-10%
Customers	Customer Satisfaction Index	MKT	6 months	+10%
	Percentage of Informed Customers	MKT & PR	6 months	100%
Internal Business Process	Waste to Landfill / Total Waste	PR	1 month	-50%
	Useful Waste in Secondary Activities (%)	R&D	6 months	+30%
Learning & Growth	% Man-hours in Material Management & Environment Issues Training	HR	3 months	+20%

FS: Financial Services - MKT: Marketing - PR: Production - R&D: Research & Development - HR: Human Research Dpt.

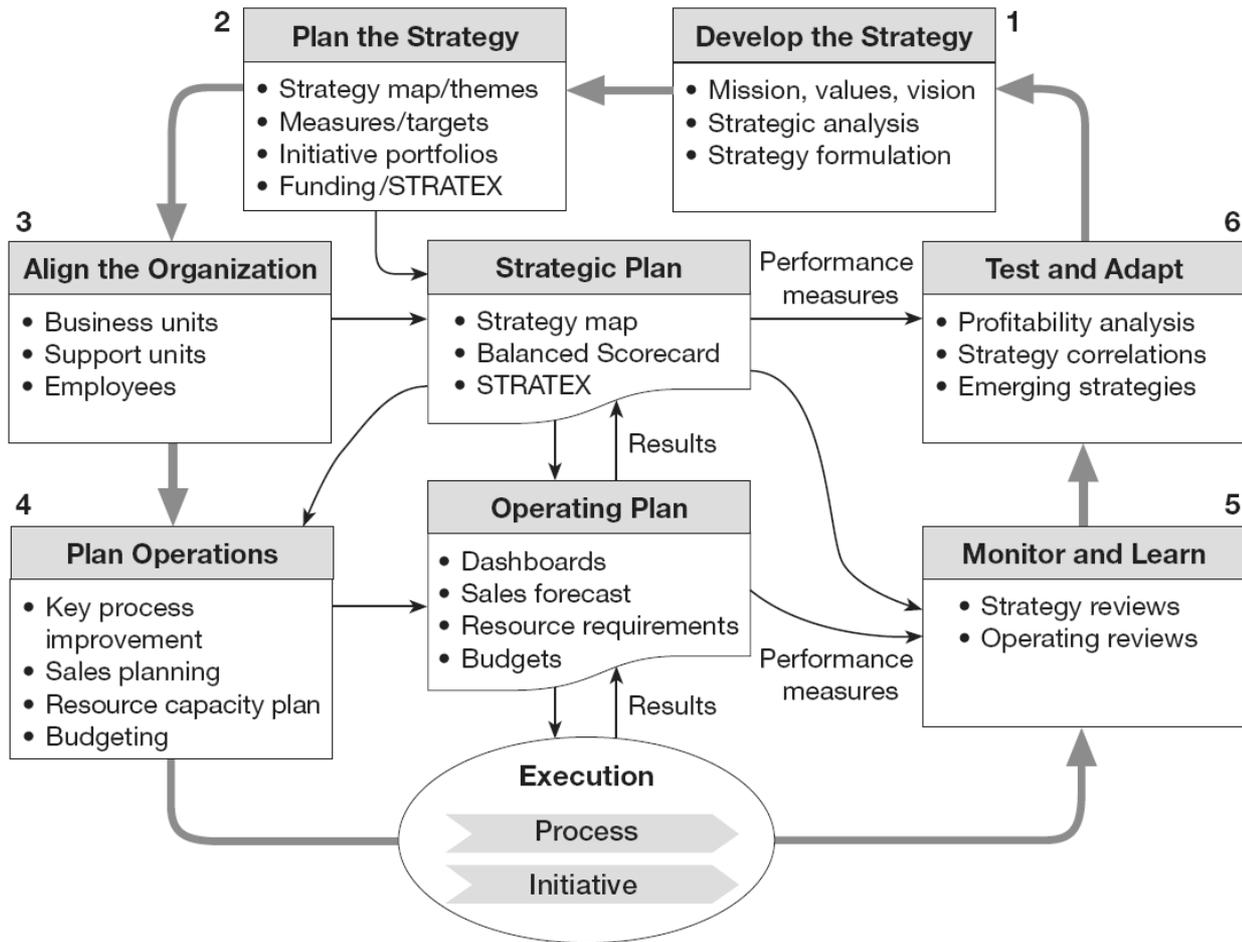


Figure 1. The Six-Stage Management System (Source: Kaplan and Norton, 2008).

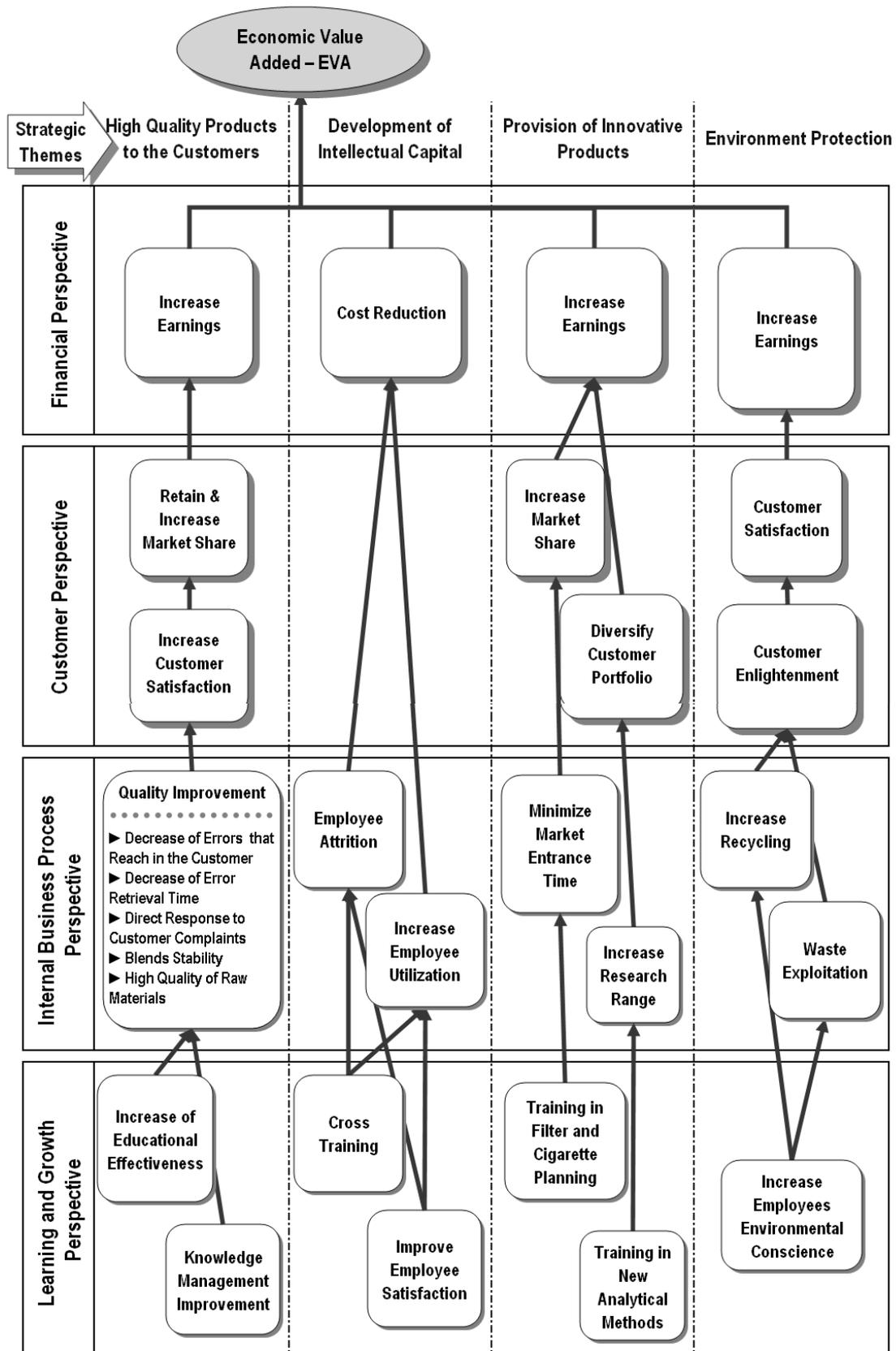


Figure 2. The Company’s Strategy Map