

APPLICABILITY AND USEFULNESS OF THE BENCHMARKING TOOL IN BUSINESS PRACTICE

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Abstract

The best lesson a firm can learn to maximize profits and survive in the marketplace is to continually benchmark itself against its main competitors. Benchmarking is the comparison tool used in business, being a good support for choosing the best practices and solutions, this practice of using the benchmarking tool, being more and more advanced and adapted to new market trends. Thus, the research objective of the paper is, on the one hand, the analysis of specialized works that address the usefulness of the benchmarking concept, the report and the relationship that this concept has with feasibility studies, but also other aspects specific to the use of benchmarking in a transition economy and in a crisis situation, as well as the presentation of benchmarking indicators specific to different fields, and on the other hand, the applicability of the benchmarking tool on a company will be considered to analyze the efficiency and profitability obtained in relation to the methods and techniques applied for this purpose.

Key words: *strategies; performance; management practice; managerial decision; benchmarking; benchmarking techniques.*

JEL Classification: *M21, M40.*

I. INTRODUCTION

In the business world we always talk about an economy in transition, constantly growing and oriented towards making things, products, services as good as possible. The benchmarking approach through new aspects must be taken into account by any company, understood and applied to achieve competitive products and reinvigorate industrial production.

The organization selected for benchmarking is usually perceived as having some superior characteristics from which the organization would like to learn. Therefore, the organization tends to modify its processes and performance after benchmarking from the superior organization by incorporating best practices that are learned from other organizations. After benchmarking, an organisation can be equipped with new technologies, production tactics and better organisational techniques that will lead to an improved level of service delivery. Therefore, the firm's main goal is to learn and borrow so that it can modify practices already in use in its departments and production areas. Benchmarking acts as a benchmark through which measurements can be made so that when applied to work processes, it will yield results that have a greater superiority than before and an organization that will need to excel will need to go beyond the benchmarks (Ettorchi-Tardy, Levif and Michel, 2012).

Benchmarking gives the firm an external focus and forces the organisation to look at what its competitors are doing. Done correctly, the study forces the organization to focus on its competitive advantage, while bringing other processes up to the level of its competition. In other words, benchmarking raises the standard of competition in an industry and weeds out companies that do not or cannot maintain a competitive advantage.

When referring to the analysis of economic and financial performance, it is important to also take into account the causes, as they have a considerable contribution to the emergence and evolution of results, making the link with the long-term objectives that the firm is pursuing (Mironiuc, 2006, p. 341). So, by applying the benchmarking tool, best practices can be found, evaluating the effort and the resources needed to achieve the desired goal, being a continuous process of evaluation and comparison, to improve performance.

In addition to this tool, firms should use indicators, KPIs, which help in measuring the success achieved by a firm over time, thus remeasuring the success achieved by the organization or a particular department within it (Barca, smarters.ro, 2021).

II. LITERATURE REVIEW

Benchmarking is a way to help companies compare themselves with each other in order to learn from others, thus giving the opportunity to identify problem areas within the company, solve them and improve the business framework, the purpose of applying the tool is not to get to the same level, to match another company, but to manage to surpass it. Companies will then have the opportunity to find profitable ways that have already been tried and tested by others, helping managers to make decisions based on facts rather than opinion or intuition (Kegan & O'Kelly, 2004, pp. 12-14).

Benchmarking is recognised as an essential tool for continuous quality improvement. A large number of publications by various authors reflect the interest in this technique (Norailis & Nor Asiah, 2015, pp. 787-790).

The American Center for Productivity and Quality indicates that benchmarking should include identifying, understanding, and adapting outstanding processes and practices in any organization that is relevant to the firm's bottom line anywhere in the world so that the firm can improve its bottom line processes and practices. This means that the benchmarks that the organization should adopt are best practices as standards that will help in the exercise of operational control. Organisational performance is then continually assessed to the point where it reaches the level of best practice through the use of benchmarking. One of the significant roles of benchmarking for a firm is that it provides them with a tangible method by which they can assess their performance (Belardi & Willmington, 2022).

The essence of benchmarking is the process of identifying the highest standards of excellence for products, services or processes and then making the necessary improvements to achieve these standards - commonly called 'best practice'. Over 70% of Fortune 500 companies regularly use benchmarking, including AT&T, Ford, Eastman Kodak, IBM, Ford Motor Company and Weyerhaeuser. Changes occur once the process has begun and will continue to change and shape the organization as long as individuals continually strive to improve it.

Benchmarking is primarily an improvement tool, done by comparing against other organizations recognized as the best in the area. The philosophy of benchmarking is that one should be able to recognize one's shortcomings and recognize that someone else is doing a better job, learn how it is done and then implement it in one's own business (Mihalciuc, 2009). This attitude needs to be introduced into the organization and only then can the organization fully benefit from the benchmarking study. Benchmarking forces an external focus to become competitive and often points the way to innovative thinking.

Benchmarking is a term that has been present in the business world since 1979 and continues to be present today, the use of this tool helps any firm to discover where it ranks, what it still needs to work on, how it can change the main mistakes and how it can move forward, so that it can aim to outperform its main competitors, not necessarily match them (Hadad & Passos, 2013, pp.577-581). Also, benchmarking, through its applicative role, is useful for firms in various industries to continuously compare themselves with their main competitors operating in the same industry, with the aim of maximizing profit and in order to be resilient in the market (Savanam, 2010, pp. 882-885). Thus, the main competitors will be those firms that have achieved the best results in the field and have resorted to implementing the best practices, which will provide them with sustainability, in that the leaders of the firms will know where they stand in comparison to others, being able to set the tasks and goals to be achieved for their own company. This approach is part of the benchmarking techniques, being an increasingly present tool in the activity of companies and expressing "the craftsman's habit of comparing different dimensions with a benchmark marked on his workbench" (Scurt, Russu and Popescu, 2016, p. 9).

By its usefulness and applicable importance, benchmarking is a quality tool that can only bring benefits to the company if it is used properly and is sufficiently studied, which gives it a number of characteristics such as: a tool to visualize the strengths and weaknesses within the firm, being able to note and discuss with specialists, practices that need to be improved; a tool that contributes to increasing the profitability of the firm, through the use of comparisons made (through costs, processes, strategies and key performance indicators) (Porter., 2012, pp. 5-7), in order to improve the strategy and the way the business operates, either by developing new products and services or improving the quality of current products and services. Of course, this tool will be successful provided that the company is ready for change and development, and the involvement of the members of the organisation is key to any process, goal or vision.

In order to make benchmarking as useful as possible, it is necessary to collaborate with other areas, such as quality management, technological innovation or marketing. This approach is of practical use in identifying possible collaborations with various specialists in related fields for benchmarking studies.

Quality, delivery times and costs are the main drivers of competitiveness, which can be achieved by addressing total quality competitiveness, improving performance standards and using benchmarking. As far as total quality is concerned, it involves permanent efforts, being given a long, uninterrupted path with the aim of making the business profitable and achieving the highest standards, both through internal effort, based on continuous improvement, and external effort, based on the search for the best methods (Scurt, Russu and Popescu, 2006, pp. 60-61).

In terms of benchmarking and innovation, the aim is to assess one's own strengths and weaknesses and then compare them with those of leading companies. This approach can be done on the basis of questionnaires that include various directions of analysis (objectives/contribution of innovation activity, level of expenditure, internal/external factors that can influence, types of approaches, impact of factors, quality techniques) and the importance of each one (either by weighting, marking or ordering), then centralising to form a final idea about innovation (Belardi & Willmington, 2022).

Benchmarking and the marketing concept is based on competitors within the industry and rivalry between existing firms, thus taking into account the threat from new market entrants, bargaining power of buyers, threat from substitute products and services and bargaining power of suppliers.

Benchmarking improves the quality of feasibility studies by benchmarking against best practice. When a company wants to invest, it looks at the cost of available capital to use, whether owned or borrowed, and the expected return. Any investment must cover costs and more. Therefore, benchmarking can highlight hidden or unaccounted costs that help in making the investment decision, calculating more accurately the costs and profit (Scurt, Russu and Popescu, 2006, pp. 72-75).

Today's economy is one that needs to relate to transition and the environment, whether tumultuous, turbulent or not, in order to function and succeed in applying best practices encountered. This can of course create difficulties, restrictions and problems of adaptation, such as problems with the economic environment, difficulties with the political environment, problems with the cultural environment and the availability of information.

As unplanned change is often not successfully implemented, it causes crisis. It can be said that benchmarking has an important place in management strategy in such situations. For businesses to provide effective responses to crises that can threaten their existence, the right solutions must be known. Implementing crisis management in the management of the organisation is one of the main correct solutions. It is essential for companies to continuously compare themselves with themselves, the environment and key competitors. Business can take action by realising in advance that general economic, financial or sectoral crises are coming. Or, the business will determine its methods to deal with possible crises (Kuluale, 2021).

III. STAGES IN THE EVOLUTION OF THE BENCHMARKING CONCEPT

Historically, benchmarking is thought to have originated after World War II in Japan through the practice of "shukko", which is a way of approaching competitiveness, encouraging employees to learn the internal business processes of the organisation, to bring in new processes/practices to help their own organisation move forward.

A phasing of companies that have used benchmarking, as well as various benchmarking events and publications, can be seen in Figure 1.

All the characteristics that have properly appreciated the benchmarking tool, in terms of usefulness and how it can be used, have contributed to the evolution of the concept over time, as can be seen in Figure 2:

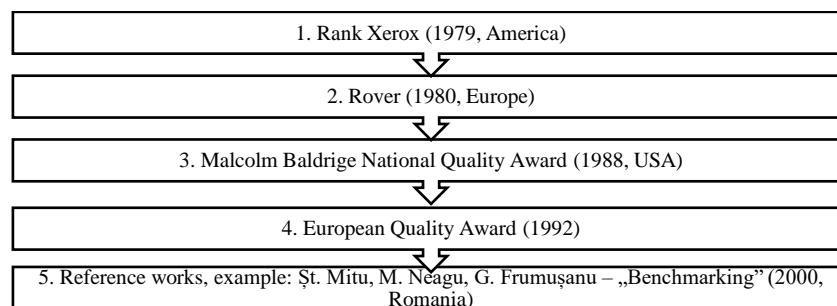


Figure 1. – Evolution of the use and emergence of the benchmarking concept

Source: Own processing after: Scurt, V., Russu, C., Popescu, I., Benchmarking Teorie și aplicații, Editura Economică, București, 2006, pp. 17-18

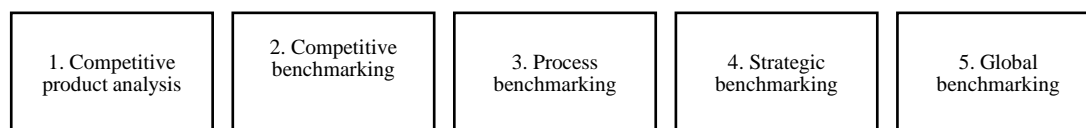


Figure 2 – Evolution of the benchmarking concept

Source: Own processing after: Kegan, R., O’Kelly, E., Applied benchmarking for competitiveness, Editura Oak Tree Press, Ireland, 2004, pp. 25-26

If we follow the stages shown in Figure 2, the first phase is about comparing characteristics that concern the operation and performance of products, followed by the second phase about analyzing and comparing own costs with competitors' costs for manufacturing, the third phase is about diversification, for example one can also learn from the experience of organizations in other business areas that are not direct competitors, the fourth phase is about evaluating and implementing other organizations' strategies, and the last phase is about analyzing differences between organizations worldwide (Kegan & O'Kelly, 2004, pp. 25-26).

Benchmarking is important for the quality of the firm's management, which also gives rise to the existence of organisations that offer benchmarking services. An overview of the best known and leading organisations providing benchmarking services is shown in Figure 3.

Benchmarking networks are those associations organised with the aim of facilitating the exchange of data and information in order to help each other in the search for best methods and practices. "The Benchmarking Network Royal Mail is the UK network, The Benchmarking Network Service for the US, the Global Benchmarking Network for the world, and the World Class Standards Network for Europe.

The European Organisation for Quality (EOQ) presents benchmarking in three variants: performance (using official data and consulting firms); strategic (analysing non-competing world leaders, with the aim of guiding new strategies); process (analysing the performance of leading companies, regardless of the field) (Scurt, Russu and Popescu, 2006, p. 20).

Another overview of the types of benchmarking in practice covers four categories, namely: benchmarking: internal - internal information is compared where similar functions exist; competitive - the results of direct competitors are targeted; functional - leading firms are compared even those that are not direct competitors; and generic - business functions/processes unrelated to industry differences are targeted (Harper, 2019). Another classification also considers industry group benchmarking; best practice studies; cooperative benchmarking; competitive benchmarking (Harper, 2019).

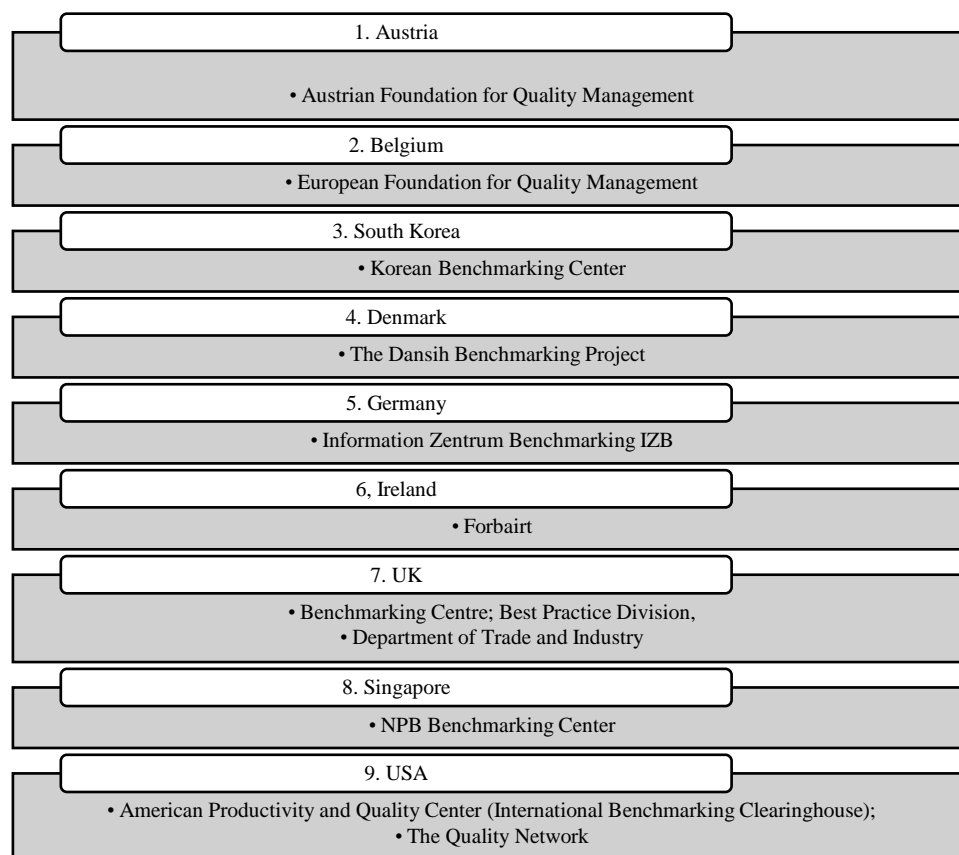


Figure – 3 Benchmarking organisations

Source: Own processing after: Scurt, V., Russu, C., Popescu, I., *Benchmarking Teorie și aplicații*, Editura Economică, București, 2006, p. 43

Certainly other typologies of benchmarking can be distinguished, because as time goes by we evolve, or tend to evolve as much as possible and want to improve as much as possible, because we are oriented towards perfection in all aspects (Falon, 2022).

IV. METHODS AND TECHNIQUES USED IN BENCHMARKING

The methods of approach are those chosen by the European Organisation for Quality, and include the ways in which different companies such as Rank Xerox, Alcoa, Ameritech, Rover, Quality Center and American Productivity have contributed to the development of benchmarking.

Rank Xerox approached benchmarking through the 6-step problem-solving algorithm, according to the structure shown in Figure 4:

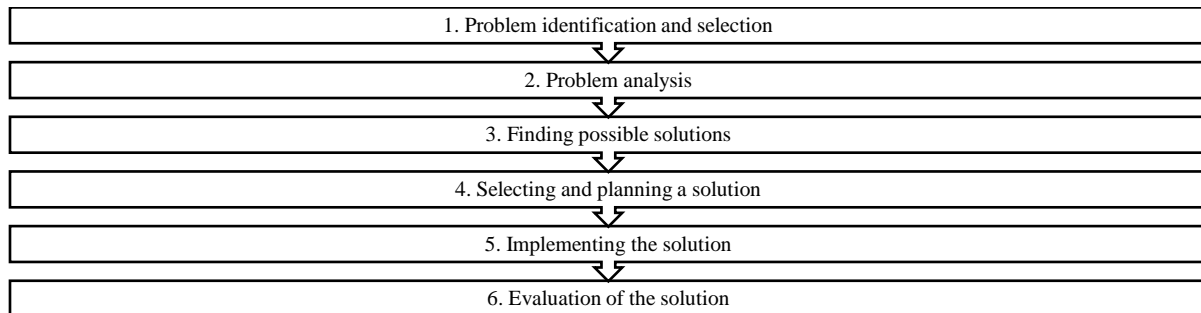


Figure – 4 Benchmarking organisations

Source: Own processing after: Scurt, V., Russu, C., Popescu, I., Benchmarking Teorie și aplicații, Editura Economică, București, 2006, p. 23-25

Alcoa approached benchmarking through the 5-step algorithm, according to the structure in Figure 5.:

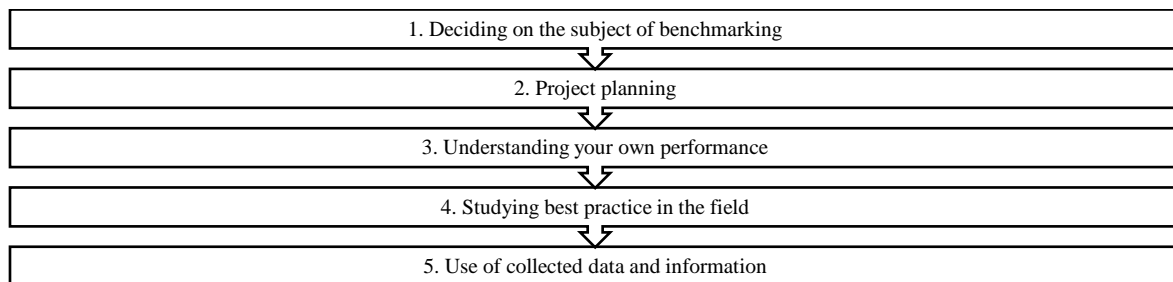


Figure – 5 Alcoa's approach to benchmarking

Source: Own processing after: Scurt, V., Russu, C., Popescu, I., Benchmarking Teorie și aplicații, Editura Economică, București, 2006, p. 23-25

The following will briefly outline the phases and steps of the other companies listed above. Thus, Ameritech uses an algorithm with four phases and eight steps; Rover uses the Rank Xerox methodology; American Productivity and Quality Center (APQC) proposes benchmarking in four phases (Plan-Collect-Analyze-Adapt) (Scurt, Russu and Popescu, 2006, p. 33).

For each of the four phases (Planning, Collecting, Analysing and Adapting), certain techniques used can be identified, as detailed in Table 1.

Table 1. Techniques used in the phases of the benchmarking process

Phases of benchmarking	Techniques used	Example
Planning phase	Diagnostic techniques	Identifying strengths and weaknesses
	Techniques to stimulate creativity	Brainstorming (A. Osborn); Philips 66; Sinectica (W. Gordon); Sinapsa (G. Aznar); Delphi (O. Helmer, W. Gordon).
	Classification techniques based on the "80/20 distribution law"	The case of unbalanced allocations.
Collection phase	Statistical-mathematical techniques	Identification and selection of partners; it comprises three stages: statistical observation, processing of statistical data and use of various sources of information.
	Data collection techniques	Directive or extended investigation techniques; Systematic investigation techniques.

Analysis phase	Decision optimisation techniques	Under conditions of certainty: electre (a technique of prioritization and choice in the presence of multiple points of view) and decision simulation (creation of a decision model to identify and establish logical relationships between variables defining a typical decision situation) (Mihalciuc, 2018, pp. 361-374; Mihalciuc & Grosu, 2019, pp. 194-209). Under uncertainty: the pessimistic technique (Abraham Wald), the optimistic technique (Leonid Hurwicz); the equilibrium technique (Bayes-Laplace); the regret minimisation technique (Leonard Savage). At risk: the decision tree technique.
	Techniques for managing, programming, controlling and evaluating complex processes	Critical path (identification of activities that influence the total process time); PERT (Program Evaluation and Review Technique), a development of the "critical path" model (Stroud, isixsigma.com).
	Adaptation phase	
	Sampling and recording techniques	Quota sampling, volunteer sampling technique, street surveys, network surveys, etc.
	Statistical research techniques	Qualitative research, quantitative research.

Source: Own processing after: Scurt, V., Russu, C., Popescu, I., Popescu Ioan, Benchmarking Teorie și aplicații, Editura Economică, București, 2006, pp. 22-37.

A number of other tools can also be used in benchmarking such as: cause-effect diagram, Pareto diagram, matrix diagram, Lobster questionnaire (Scurt, Russu and Popescu, 2006, pp. 37-40). The cause-effect diagram, introduced by K. Ishikawa, represented by an arrow, which has the effect at the right end and the causes are marked on the arrows, the structure of the diagram is tree-like. The Pareto diagram aims to deal with the problems successively, starting with the most important and ending with the last, where the data are arranged in equal volume columns in descending order from left to right, then parallels are drawn to the diagonals of each rectangle, and the area between the diagonal and the cumulative curve shows the relevance of the diagram. A small area means a "Pareto flat". The matrix diagram reveals and visualises the intersections between several sets of factors by highlighting the main factors, distinguishing four types of diagrams, where in the L matrix relationships are established between two sets of factors, in the Y matrix three sets of factors are linked two by two, in the X matrix one set is allowed to be linked to two others, and in the C matrix relationships can be established between three sets at once. As far as the Lobster questionnaire is concerned, it is a suitable tool for self-assessment of the practices used by the organisation to analyse its progress and how close it is to the desired goal.

The benchmarking methodology requires certain steps, which are briefly presented in Table 2.

Table 2. Steps in benchmarking methodology

No. Steps	Steps taken	Actions taken
Step 1	Planning the study	Corporate or divisional management teams usually decide what will be evaluated, and the decision about what to evaluate should be driven by the organisations 'critical success factors', they should look at processes that are aligned with the strategic direction of the company.
Step 2	Proper training of the benchmarking team	Benchmarking team members are trained and will develop a plan that includes the designation of team members' roles and responsibilities, project milestones, and a realistic completion date, usually four to six months for completion. The process or processes to be evaluated are then defined; a thorough understanding of the process being evaluated is considered to be the most powerful factor in success. Defining the process involves identifying customers, defining the start and end points of the process, designing a flow chart, determining critical success factors and deciding on critical performance measures (Khurru, Bhutta, Faizul Huq, 1999).
Step 3	Identification of partners	The team identifies potential benchmarking partners, such as those companies that are considered by the wider business community to be "world class" in the process.
Step 4	Information collection and analysis	Data is collected, analysed and turned into information to be benchmarked against your own people, the purpose of collecting data in a benchmarking study is much more than understanding which companies excel at certain processes and by how much.
Step 5	Adapting and improving	The final benchmarking stage involves adapting best practices, not to be confused with copying other companies' best practices and implementing specific improvements. Learning best practices must be adapted to an organisation's culture, technology and human resources. For this phase, action planning or goal setting is appropriate, some improvements will be immediate or short-term, requiring little or no additional resources, and others will be long-term and require considerable resources (Khurru, Bhutta and Faizul Huq, 1999).

Source: Own processing after: Scurt, V., Russu, C., Popescu, I., Benchmarking Teorie și aplicații, Editura Economică, București, 2006, pp. 40-67.

Benchmarking helps companies choose the best products, practices and services they can use by comparing application models from similar industries with comparatively higher returns.

V. APPLICABILITY OF THE BENCHMARKING TOOL AT SC GAMA SRL

SC Gama SRL is engaged in the construction of agricultural machinery and owns a fleet of machinery, being a field with a multitude of technological processes, resulting from the type range and the variety of machine types, such as the production of semi-finished products and general assembly.

A number of important factors can be distinguished, such as the experience and qualifications of the workforce, which are factors specific to an agricultural machinery and equipment manufacturing enterprise. In terms of financial funds, a disadvantage would be the lack of technological progress and the need to replace certain machinery, as this company is not aware of the absence of more advanced, advanced technologies, which makes the process more difficult through additional costs, with a negative impact on the company's profitability. Thus, the company under study needs to adopt new changes and restructure in order to be on the right track.

The company's objectives include increasing turnover, increasing market share, increasing product quality and increasing labour productivity. The first two objectives were set and chosen because the company is currently working below the profitability threshold. For the other objectives, which are chosen, the increase in labour productivity achieves a social objective concerning the wage with the aim of profitable activities, which in combination with the increase in product quality will bring about a good market position for the products and services offered. In order to take performance to another level, the social objectives include providing satisfactory wages and working conditions for employees, controlling environmental pollution, cooperating with the authorities, satisfying customers through quality, price and durability of products.

In order to achieve the objectives, the strategic options to be considered must be precisely defined, based on the proposed objectives, such as: product and technology innovation; creation of new strategic partnerships; entry into new markets; organisational improvement; management reorganisation; computerisation of activities. The company's management should link all these strategic options to be reported to the market to be addressed, together with the possible scenarios to be followed, in order to get a clear picture of the combination of the two reports, using the matrix shown in Table 3.

Table 3. Market/technology matrix for SC Gama SRL

		Scenario 1	Scenario 1
		Modernized technology	New technology
Unchanged market	Unchanged technology -	A new balance is struck between price and quality	New technology replaces old
The amplified market	The product is remarketed, sold in a different way	Product modernisation, sales growth	Expanding production by modernising production capacity
New market	The product gets new uses to attract customers	Products need to be upgraded	Products need to be diversified. The emergence of new products

Source: Own processing after: Scurt, V., Russu, C., Popescu, I., Benchmarking Teorie și aplicații, Editura Economică, București, 2006, p. 159.

Thus, Gama needs to look at how it can compete with its main competitors and what innovations it can bring. As far as innovations are concerned, these can be seen as improvements in technology, new approaches to the market, changes in products, changes in distribution channels or new concepts of purpose.

The needs of the market can be pursued both nationally and internationally, to cover as wide a sphere as possible, to be as capable as possible of expanding abroad. In the following we will analyse the available sources of information, marking with (+) the accessible and useful sources and with (-) those that were not accessible and not useful, according to the centralisation in Table 4.

Table 4. Information sources/Reference guide

Possible source of information	Accessibility		Useful	
	Yes	No	Yes	No
1	2	3	4	5
Internal information				
Market researchers	+			-
Persons involved in competition analysis	+		+	
Experts		-		
Managers	+			-
Persons collecting information	+			-
Studies elaborated by people within the company		-		
Information obtained from a benchmarking network		-		

Benchmarking specialist meetings		-		
Internal industry-specific intelligence bodies		-		
Persons responsible for external links		-		
Information of public interest				
Specialist books	+		+	
Articles	+		+	
Documents accessible electronically	+			
Reports from industry trade associations		-		
Special studies associations		-		
Previous research	+		+	
Consultants - intermediaries	+		+	
Consultants - commenting on findings		-		
Consultants - data validation and interpretation		-		
Expert consulting firms		-		
Academic experts		-		
Experts research organisations		-		
Research and investigations				
Promotional materials	+		+	
Technical and commercial offers		-		
Post/Mail		-		
Phone		-		
Visits		-		
Benchmarking partner meetings		-		
Consignments for preliminary documentation	+		+	

Source: Own processing after: Scurt, V., Russu, C., Popescu, I., Benchmarking Teorie și aplicații, Editura Economică, București, 2006, p. 161

By applying the benchmarking tool the company will be able to provide a wealth of data and information on the work of industry leaders as well as key methods of improving technology. It is believed that all this can be made possible by a continuous effort of all employees and people involved in this purpose, an advantage that depends largely on the quality of human resources and the skill of the internal technical department.

In the following, all the possible scenarios we can consider should be compared, analysing all the information we have, according to the dominant characteristics and optimal trade-offs. After displaying all the data available, the "association grid", "weighted voting" and "choice by criteria" will be used to determine the optimal scenario for the company under study, a process that requires a lot of care and effort to analyse all the details in order to arrive at the most suitable scenario for the company.

An overview of the refinement scenarios through benchmarking can be seen in Table 5.

Table 5. Creating scenarios in the benchmarking tool

Creating scenarios	Scenarios content
Scenario A	It is intended to use for machine tools the combination, support centre + machining centre, prismatic parts, a scenario which is based on the achievements of other leading competitors who have succeeded worldwide in this field and with this strategy. This scenario is a variant for precise machining that helps and subsequently brings savings.
Scenario B	The introduction of flexible cells for processing prismatic parts helps the cell control system to improve.
Scenario C	Increased machining speed is being used, with advances being seen in areas such as spindle technology, drive systems, positioning accuracy, guide way design, control software enhancements, reduction of tool changeover times as well as the duration of positioning movements. There are many examples of companies that have brought this innovation and succeeded in improving their business.
Scenario D	Special machines are replaced by processing centres. There are examples of companies (XXX) which, before the use of certain changes, stopped using special machines and lost all production, whereas now only 20% is lost.
Scenario E	It is proposed to analyse the price-quality ratio and to choose the best one according to the customers' preferences, an analysis which consists in highlighting the technical characteristics, related to the main spindle speed and motor power, the mass and dimensions of the parts for processing those which can offer the shortest production time at the highest quality at the most advantageous price.
Scenario F	It is proposed to implement a high-performance software in order to use the equipment at a higher level and reduce unfinished production. An example is the company YYY which manufactures for ZZZ and they have seen a 25% saving with this method, offering advantages such as: immediate access to production data, machine status, easy identification of main problems and faults and solutions to correct any problems.

Source: Own processing after: Scurt, V., Russu, C., Popescu, I., Popescu Ioan, Benchmarking Teorie și aplicații, Editura Economică, București, 2006, pp. 162-166.

Tables 6, 7, 8, 9 and 10 will present the analysis of the scenarios using the association grid, the weighted vote and the election criteria. Thus, using the scores: -3, -2, -1, 0, 1, 2, 3, the practices will be judged, two by two, in comparison with the current situation of Gama, using objective criteria such as the current financial situation, the existing infrastructure, the interest of the beneficiaries; but also some subjective criteria based on the experience of the researcher. Each scenario should be seen in terms of the adaptability and adoptability available to Gama without losing sight of reality, with each scenario focusing on the best practices encountered in this field to date. A number of steps need to be taken, such as the procurement of machinery, high-performance equipment, the use of software products, as well as training employees and changing their mindset.

Table 6. Classification of scenarios with the association grid

Scenarios		A	B	C	D	E	F	Negative values
Turning and machining centre	A	0	-1	-2	-1	1	-1	5
Flexible cells	B		0	-1	-1	1	-1	3
Increased processing speeds	C			0	2	2	1	0
Processing centres	D				0	1	-1	1
Price-quality ratio	E					0	-3	3
Powerful software	F					0	0	0
Positive values	=	0	0	0	2	5	1	
Negative values	=	5	3	0	1	3	0	
TOTAL	=	5	3	0	3	8	1	

Source: Own processing after: Scurt, V., Russu, C., Popescu, I., Benchmarking Teorie și aplicații, Editura Economică, București, 2006, p. 167.

The weighted voting analysis aims to present scenarios to several specialists, as well as the strategic options to which our benchmarking study and the outcome of the diagnostic analysis relate, and each must give marks to their top three personal choices. Three points will be awarded to the first-place choice, two points to the second-place choice and one point to the last-place choice. To calculate the result there are two options, addition or multiplication (Scurt, Russu and Popescu, 2006, pp. 167-168).

Table 7. Scenario ranking using weighted voting

Specialist	Speciality	Scenarios					
		A	B	C	D	E	F
1.	Machine building technology	2	1			3	
2.	Machine building technology		2	1		3	
3.	Machine tools	2				3	1
4.	Machine tools	3			2		1
5.	Enterprise design	1	2			3	
6.	Enterprise design		3	2			1
	Sum (S)	8	8	3	2	12	3
	Votes (V)	4	4	2	1	4	3
	S x V	32	32	6	2	48	9
	Ranking	2-3	2-3	5	6	1	4

Source: Own processing after: Scurt, V., Russu, C., Popescu, I., Benchmarking Teorie și aplicații, Editura Economică, București, 2006, p. 168.

Scenario analysis based on choice criteria helps to relate scenarios to certain criteria using a rating scale, and based on those criteria, each scenario is given a score, then the highest score is calculated.

Table 8. Scenario classification - criteria of choice

Scenario	Criterion				
	Investment effort	Necessary infrastructure	Increasing flexibility	Improving quality	Increased productivity
A	2	3	2	3	2
B	1	1	3	3	3
C	2	3	2	3	2
D	1	1	3	2	2
E	3	3	2	3	2
F	1	1	3	2	3
Weight	0,2	0,3	0,2	0,2	0,1

Source: Own processing after: Scurt, V., Russu, C., Popescu, I., Benchmarking Teorie și aplicații, Editura Economică, București, 2006, p. 168.

Table 9. Ranking scenarios

Scenario	Sum	Total %	Ranking
A	12	2,5	2-3
B	11	2	4
C	12	2,5	2-3
D	9	1,7	6
E	13	2,7	1
F	10	1,8	5

Source: Own processing after: Scurt, V., Russu, C., Popescu, I., *Benchmarking Teorie și aplicații*, Editura Economică, București, 2006, p. 168.

Analysing the data in the three tables, where we find the application of the three tools used to decide which is the most appropriate scenario for Gama, we came to the conclusion that scenario E is the right one.

Table 10. Ranking obtained with the three instruments

Scenario/Order of classification	The tool applied		
	Association grid	Weighted voting	Selection criteria
A	2	2-3	2-3
B	3-4	2-3	4
C	6	5	2-3
D	3-4	6	6
E	1	1	1
F	5	4	5

Source: Own processing after: Scurt, V., Russu, C., Popescu, I., *Benchmarking Teorie și aplicații*, Editura Economică, București, 2006, p. 168.

One can also choose to use a software application to carry out an economic-financial analysis in benchmarking, as it will require a very large volume of calculations to be carried out and done as quickly as possible. A working guide, a user's guide, could be drawn up to start with, to make the software easier to use. The main advantage is that the calculations can be carried out extremely quickly, with the possibility of having several variants, thus having a greater number of possible results, because this is how the best variant can be arrived at. Another advantage is the price, as a software application shortens the whole benchmarking process and makes it more economical. A very useful method is also Excel, which offers a wide range of simplified calculations that help us to save time and make calculations as accurate and precise as possible.

The most suitable scenario for Gama is considered scenario E, which is to be implemented and observed to see what kind of improvements it brings.

Benchmarking is a solution that helps companies to increase their profitability through the multiple options they offer and subject them to analysis.

VI. CONCLUSION

The current obsession of companies trying to maintain a dominant and successful position in the market is motivated by their desire to achieve certain performances, achievements and successes. In other words, the path to success for any firm is to achieve a certain level of performance that ranks the company among the best, the top in its field.

In today's ever-growing companies, and in a society where development is necessary to improve as much as possible, the means of advancement are quite varied, and the need to keep up with the biggest companies is felt by all competitors in this game. Thus, a very effective tool for analysing data, information and possible opportunities for advancement is benchmarking, a tool that has been in use for more than 30 years and which helps companies to compare themselves not only with national companies, but also extends internationally. Another significant advantage is that it is possible to compare companies operating in different fields of activity, but with an analysis of their own situation.

In this fast-moving economy, a company's sources need to be as diversified and well analysed as possible in order to produce the highest profits. All of this depends of course on the technique applied, but also on the people within the company and their desire to progress towards working in an organisation that is as profitable as possible, offering quality services and products that fully satisfy customers. Any tool used to increase the quality level of products and services offered must be well analysed and studied in order to be implemented correctly and produce relevant conclusions.

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