



**Varazdin Development and Entrepreneurship Agency**

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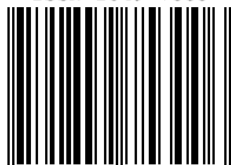
# **Economic and Social Development**

33<sup>rd</sup> International Scientific Conference on Economic and Social Development –  
"Managerial Issues in Modern Business"

Editors:

**Tomasz Studzieniecki, Melita Kozina, Dunja Skalamera Alilovic**

ISSN 1849-7535



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## **Book of Proceedings**

Warsaw, 26-27 September 2018

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**Publisher ■ Design ■ Print ■** Varazdin Development and Entrepreneurship Agency, Varazdin, Croatia / Faculty of Management University of Warsaw, Warsaw, Poland / University North, Koprivnica, Croatia / Faculty of Law, Economics and Social Sciences Sale - Mohammed V University in Rabat, Morocco

**Printing ■** Online Edition

**ISSN 1849-7535**

The Book is open access and double-blind peer reviewed.

Our past Books are indexed and abstracted by ProQuest, EconBIZ, CPCI (WoS) and EconLit databases and available for download in a PDF format from the Economic and Social Development Conference website: <http://www.esd-conference.com>

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## IMPLEMENTATION OF THE SIX SIGMA METHODOLOGY IN A-ROSA HOTEL

**Elizabeta Mitreva**

*Faculty of Tourism and Business Logistics, University “Goce Delcev” – Stip, Macedonia  
elizabeta.mitreva@ugd.edu.mk; elizabeta.mitreva@gmail.com*

**Elena Lazarovska**

*Faculty of Tourism and Business Logistics, University “Goce Delcev” – Stip, Macedonia  
elena.172715@student.ugd.edu.mk*

**Oliver Filiposki**

*Faculty of Tourism and Business Logistics, University “Goce Delcev” – Stip, Macedonia  
oliver.filiposki@ugd.edu.mk*

### ABSTRACT

*This study shows a complete analysis of some business processes in a hospitality services company, the Hotel resort “A-ROSA”, Germany. The company is working to continuously improve business processes by developing the Total Quality Management (TQM) philosophy in order to meet the needs and expectations of customers, while making the company profitable. In the paper, the Six Sigma Methodology is applied in order to find an optimal solution for the execution of the business processes and common satisfaction of all parties involved. Other tools and techniques have also been applied such as: Pareto diagram, Ishikawa diagram, Trend Map, etc. The practice of the Six Sigma methodology has strengthened the company's brand and increased the number of tourists and customers.*

**Keywords:** *Six Sigma Methodology, Continuous Process Advancement, TQM Philosophy, Pareto Diagram, Ishikawa Diagram, Trend Map*

### 1. INTRODUCTION

For a hospitality services company, such as the Hotel resort “A-ROSA” in Germany strengthening the brand and increasing the number of tourists and customers, using some of the leading methodologies such as Six Sigma is a must. To execute the Six Sigma methodology in the hospitality services means to make progress in all business processes, i.e. performing of services without error. This concept differs from others because of the following (Mitreva et al., 2014):

- all employees are entirely focused on meeting the needs and expectations of the guests;
- managers are changing their way of thinking, their new paradigm is to work smarter not harder;
- It allows quick return on investment.

### 2. METHODS IN THE RESEARCH

#### 2.1. The core of the Six Sigma methodology concept

Six Sigma for many authors is the advancement of processes by finding and eliminating errors, as well as detection of the causes of errors or defects in the processes, with a separate analysis of the output parameters that are important for customers or users (Markarian, 2004a; Kivela, & Kagi, 2009). Six Sigma is a method for all processes, products and companies. It was first developed in Motorola in 1986, whose products are known as the market brand. The application of six sigma today has become a worldwide trend driven by Motorola's economic achievements, oriented towards enhancement of the processes and product quality (Kumar, 2008). Allied Signal Company announced the effect of \$ 800 million realized in the period 1995-1997 as a

result of the developments based on the principle of 6 sigma (Sulaiman, et. al. 2006). In the third quarter of 1997, General Electric (GE) generated an effect of \$ 600 million (an increase of 13.8% to 14.5%) thanks to the implementation of the 6 Sigma strategy. In 1999 it secured an effect of \$ 2 billion, which made the company to emphasize that 6 sigma is a vision of quality expressed by only 3.4 defects per million opportunities for each product or service. In 2000, Ford Motor Co. announced that it was the first "automaker" in the automotive industry to use the six sigma method to enhance business processes and the quality of its products (Krishna, et. al. 2008; Shaheen, et. al. 2015). The measure of perfection of any process is its dispersion. Processes are executed in different ways, according to technological patterns who are influenced by: man, materials, machines, methods, internal and external factors. If the unauthorized deviations are identified at early stage, the costs for additional work on the process is reduced. When defects pass the entire business process cycle, they are complemented by new defects, so that the possibility of modification, customer attrition and hesitation towards the product increase with geometric progression. All this falls under the low quality price (Koshki, et. al. 2014). Therefore, one of the tasks is to fight the deviations of the process and to keep the deviations within minimum limits by applying the 6 sigma methodology (Mitrev, et. al. 2016a; Mitrev, et.al. 2016b). The emphasis on the 6 sigma approach is not so much on the number of defects per million opportunities but the application of the methodology for systematically reducing the dispersion of the process itself. Processes are executed in different ways according to the technological schemes, and they are influenced by: employees, material, technology, methods, internal and external factors. If deviations from the original are identified earlier, the costs for additional processing and development of defective products are reduced (Oyewole, 2013). The concept 6 of the sigma is a conception of continuous improvement and is closely related to the financial performance of the enterprises (Manual, 2006; Markarian, 2004b). The condition for successful implementation of the 6 sigma program is the existence of modern management, especially strong leadership. Leadership includes initiative from the top, attachment to the approach 6 sigma with active participation in it, consent of all employees, brainstorming, proactive work style, teamwork, training, support for successful actions and achievements (Mitrev, et. al. 2016a; Mitrev, et.al. 2016b).

## **2.2. How to apply the 6 sigma method**

The basic concept of the six sigma is defined in Motorola, according to the classical pattern of continuous upgrading and improvement of quality by applying the PDCA cycle (Deming cycle) (Mitrev & Filiposki, 2012). Today, most commonly used is the DMAIC cycle, (Define - Defining or Determining, Measure - Measurement, Analyze - Analysis, Improve - Improvement or Advancement, and Control - Control or Management) (Miles, 2006; Mwijarubi, 2015). Apart from this methodology, the IDDOV cycle is used. This cycle consists of the following stages: identification, definition, design, optimization and validation and is intended for creating a new product or process (Sokovic et. al. 2005). Both methodologies define the steps to run the six sigma improvement program and help the team in focusing on meeting the primary goal (Aliyu, 2017; Lahap, et. al. 2014).

## **3. IMPLEMENTATION OF THE SIX SIGMA METHODOLOGY TO THE HOTEL RESORT "A-ROSA" IN GERMANY**

The management of the company A-ROSA is experienced on business and organizational plan, with the main goal of transferring to the employees the new dynamic way of work, standards, culture, access and responsibility towards the work. The beginning is difficult, but the effects and results have increased satisfaction of all stakeholders. The main activity of the company is directed towards the hospitality services, so for these reasons, precisely in these processes, the

Six Sigma methodology is applied through the DMAIC (Define, Measure, Analyze, Improve and Control) steps.

### 3.1. Steps in implementing the Six Sigma methodology

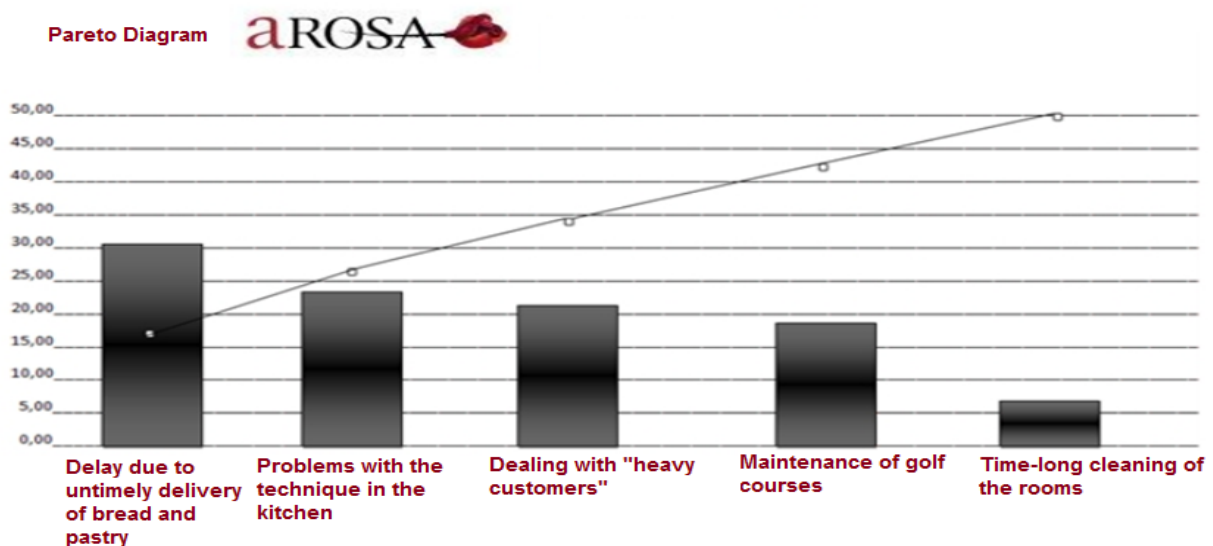
#### 3.1.1. Define the problem (Define)

The process itself began with detection of the problem, measuring its depth based on the collected databases. Errors are recorded in tables and diagrams and are subject to analysis by managers. Based on the information obtained from the daily reports, the responsible manager can easily detect the complaints made by the client, and depending on the type of problem, they are being identified, defined and recorded in the checklist, Table 1.

*Table 1: Checklist of delays and errors in the process of service*

Location	Delays and errors in the process of quality service	Nov.	Dec.	Jan.	Feb.	Mar.	April.
aROSA	Delay due to untimely delivery of bread and pastry	////	///	///		/	//
	Problems with the technique in the kitchen	/	//		//	//	/
	Dealing with heavy customers	/	///		//		/
	Maintenance of golf courses	//		//		//	/
	Time-long cleaning of the rooms	/	//	//	/		

Based on the total operational errors, as well as complaints from the clients, the Pareto diagram is being prepared from the checklists. This diagram should show which complaints are of the most frequent and important and in which direction the management team should move and seek a solution to overcome the problem, Fig. 1.



*Figure 1: Pareto diagram in relation to the frequency of irregularities in operation*

From Fig. 1 it can be seen that the number of complaints is the highest in the delays by deliverer's of bread and other bakery products. The first pillar of the diagram shows the delays of bread and other bakery products for the use in the hotel. The hotel complex does not produce its own and depends on the delivery by the suppliers. The proposal of the management team is to employ people with the necessary skills and to supply equipment for their own production for internal use. The second pillar of the diagram shows complaints due to frequent break-down of the kitchen equipment (malfunction of the ice machine, refrigerators, and stoves). The proposal of the management team is solving the problem by replacing existing ones with new technical equipment. The third pillar of the diagram gives the frequency of complaints by "VIP" clients in relation to hotel services, especially during the seasonal months or holidays when the hotel operates at full capacity. The guests' revolt arises as a consequence of the strict rules and regulations of the hotel regarding the code of conduct of the guests. The fourth pillar of the diagram gives the frequency of problems related to the current maintenance of golf courses as a result of the widespread area and the need for daily maintenance and irrigation. The proposal for a management solution is to increase the number of staff for horticulture (especially in the golf course and for organizing golf tournaments) and purchase of more mowers. The fifth pillar of the diagram gives the frequency of problems related to the equipment and cleaning of the rooms due to lack of necessary staff (housekeeping attendants). The management solved this problem by employing seasonal workers. By analyzing the operations that give the highest number of irregularities in the process, the management should find appropriate solutions to solve the problem without allowing disruption to the company's image.

### *3.1.2. Measuring (Measure) the quality of services by using methods and techniques for operation with no mistake*

Statistical Process Control (SPC) is a methodology for reducing process variability as part of the TQM strategy for the continuous improvement of quality. The essence of statistical process control is to ensure process stability and predictability. The use of SPC in the hotel is one of the requirements of ISO 9001: 2008 and its use has helped in the process of selecting data that is of great importance to the management. The use of tools and techniques for operation without mistake has helped to maximize knowledge in order to avoid inconsistencies, as well as analysis of the current problems. The quality system in which the concept of statistical process control (SPC) is not developed and applied, will not provide sufficient guarantee for sustainable development. For all of this, highly trained teams are essential. By applying some SPC tools to the Hotel "A-ROSA", the following has been achieved:

#### **A) Measuring customer satisfaction from hotel services**

Paying attention to the needs and expectation of the guests and the management's effort to satisfy them will enable increased satisfaction and competitive edge over others (Qin, et.al. 2009; Wihuda, et.al. 2017; Vaijyanthi, et.al. 2014). Visitors experience different levels of satisfaction or dissatisfaction after every service they receive at the hotel, depending on whether their expectations are met or not. The collection of data on the quality of services by measuring the satisfaction of the guests should show which measures should be taken by the management for their improvement. As sources for measuring guest satisfaction, in this study are used reviews of the guests left on the website of the hotel and the customer satisfaction survey, which is carried out daily on checking-out at the hotel. In Fig. 2 are given summary results in terms of measuring guest satisfaction / dissatisfaction with regard to the hotel services.

*Figure following on the next page*





Figure 2: Measuring guests' satisfaction in terms of services provided at the hotel

From the received data and comments by the guests, analyzed as positive and negative reviews, it turned out that the positive reviews are in relation to the interior of the rooms, kindness of the personnel, hygiene, comfort, location, the view. While the negative comments refer to the insufficient equipping of the rooms and their size, as well as the amount of prices regarding restaurant services and quality of food. Marketing management in charge of customer relationships should regularly monitor guests' complaints and strive to build lasting relationships through increased positive communication, increased competitiveness, profitability and value of shares. By using some of the SPC tools in the hotel "A-ROSA", the following was achieved:

#### B) Measuring the sources of information of the guests regarding their choice of the hotel

Figure 3 shows the Trend Map for the more significant sources of information to the guests regarding their choice of hotel. The conducted guest satisfaction survey showed that guests are informed about the hotel via web portals, friends and family, as well as social networks, newspapers and magazines.

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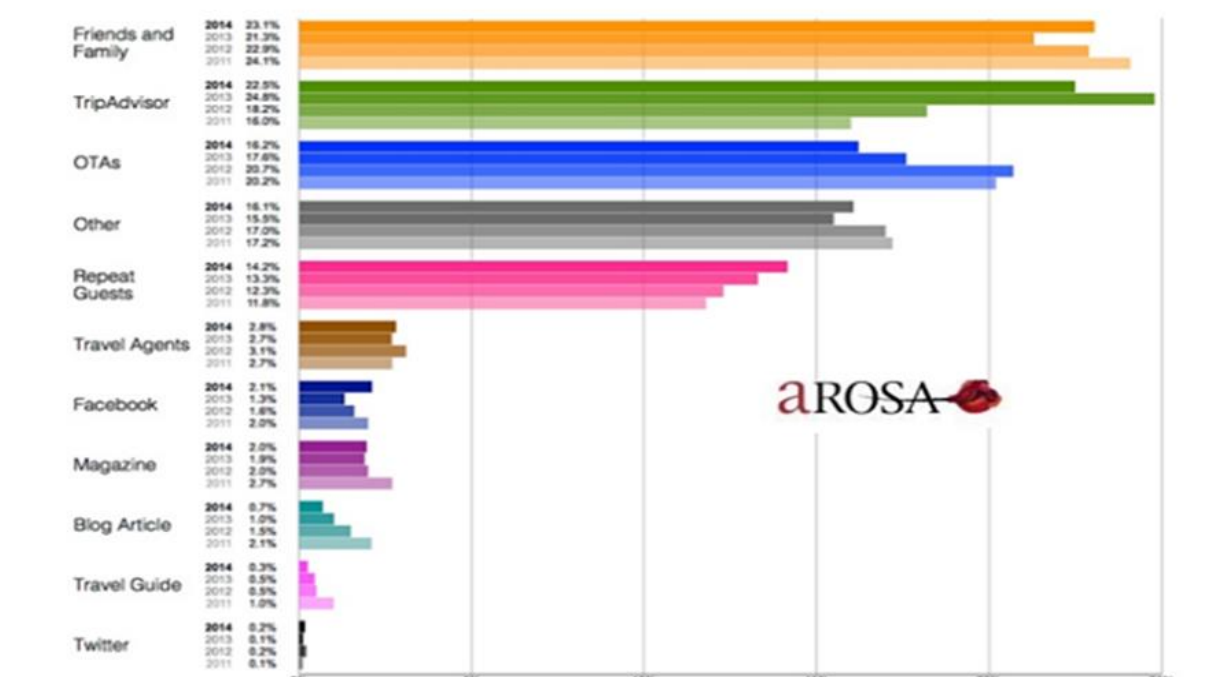


Figure 3: Trend Map for more significant sources of information of the guests regarding their choice of a hotel

The hotel works continuously on its promotion, but it has been shown from the conducted research that guests receive information about the hotel most often through exchange of personal experiences or viral marketing. The users of hotel services share their personal experience of staying in the hotel, and their impressions are passed on to relatives and friends who are further potential guests. We should not neglect the number of loyal and regular guests who visit the hotel for years. From Fig. 3 it can be seen that the information provided by Trip Advisor is highly rated as a portal to share the experiences gained. On the other hand, other sources that are less listed on the Trend Map are also of great importance, such as travel agencies, travel guides, newspapers and magazines. While in the domain of using the Internet and social networks like Facebook, Twitter, Blog Article, the smallest results are achieved, which can disturb the management in terms of the awareness and the great attention that social networks have today. The marketing sector in charge of promoting the hotel, should give a stronger emphasis on promoting through these tools that can really be of great benefit because of their constant contact with a large number of potential users. By using some tools in the hotel "A-ROSA", the following was achieved:

#### C) Measuring the business results of the hotel

A-ROSA is a hotel tourism complex that is progressing rapidly, transforming itself into a major regional brand. Fig. 4 shows the earnings and profits earned by the hotel in relation to its largest competitor in the region - Hotel AJA - through monitoring of profits in recent years.

Figure following on the next page



Figure 4: Earnings and profits of the hotel complex A-ROSA in relation to a competitor through monitoring the profit in the recent years

There is no doubt that the hotel A-ROSA jumps with its competitive advantage (more than 18%) in recent years compared to its competitors. The management of the hotel is of the view that it will continue to create values in all segments, to maintain the great leadership role and to strengthen the dominant power in the region and beyond. When conducting a survey based on the statistics of the hotel in relation to the other partners of the chain of the A-ROSA group, increased making in relation to the other hotels in this brand in Germany can be seen, Fig. 5.

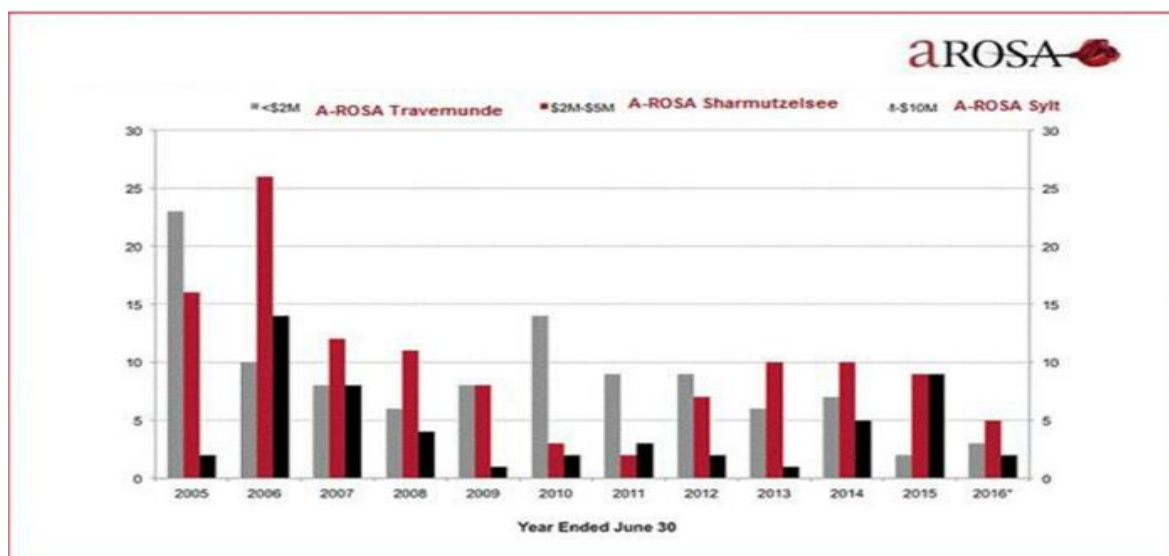


Figure 5: Earnings and profits of the hotel complex A-ROSA with respect to other hotels of this brand in Germany

From the collected statistics in recent years and subsequent analysis, it turns out that the hotel A-ROSA (red) shows positive results and successfully exceeds its partners from the chain of

the A-ROSA Group in terms of the achieved success. This is due to the good organizational set-up and functionality of the management team dominated by the team spirit, the positive attitude towards employees and their contribution to building a business culture at a high level. Such an advantage is a great incentive and serves as a motivation for achieving higher results in future.

### 3.1.3. Analyzing (Analyze) the causes of the problems

The Ishikawa diagram is an opportunity for managers to see the cause-and-effect relationships of some of the factors that cause problems. The application of the Ishikawa diagram helps managers of the A-ROSA hotel complex to make a detailed analysis of the problems and factors that influence the quality of the service. In order to find and identify the factors that lead to these defects and delays Fig. 6 is highlighting the more important causes that lead to consequences.

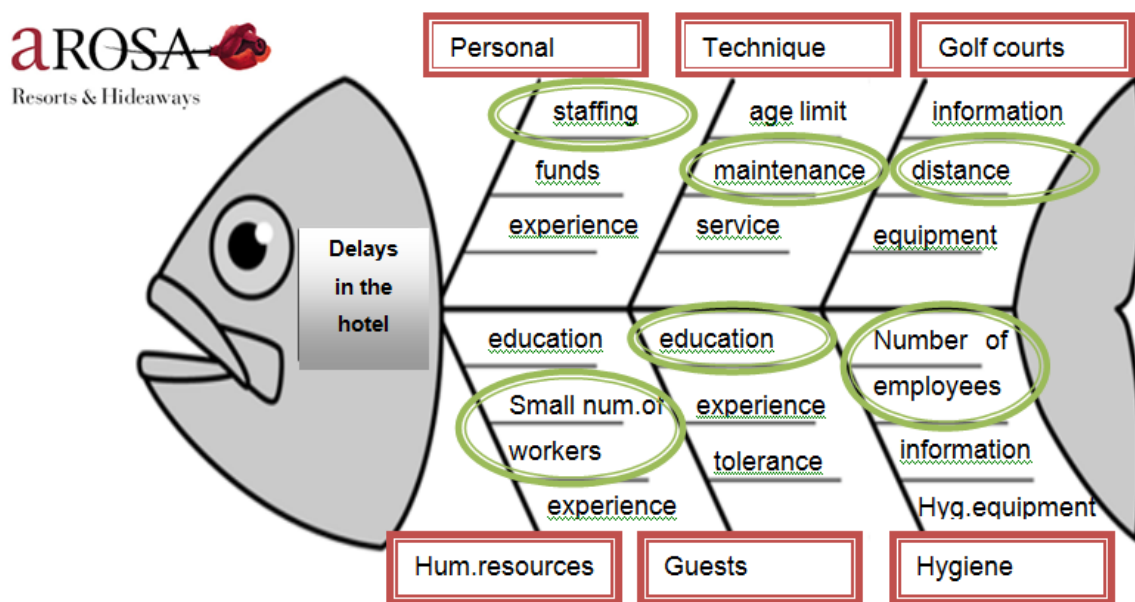


Figure 6: Ishikawa diagram for the important causes that lead to work irregularities

The reasons that lead to the appearance of complaints and delays relate to: poor training of staff, defectiveness of technique, maintenance of golf courses, lack of human resources, handling of "VIP" guests and hygiene. Analyzing these factors and penetrating deeply into it looking for the source of the problem, has helped management in finding solutions.

### 3.1.4. Improvement (Improve)

By applying the Six Sigma methodology, a new approach was introduced in the work of the hotel complex, business culture was improved, the image of the company got improved, and new standards were set up with which employees were trained to respond to new challenges, thereby improving the quality of services.

### 3.1.5. Control of the implemented corrective measures for improvement (Control)

The control showed whether the measures undertaken contributed to the elimination of errors, whether continuous monitoring of business processes was ensured. Business processes are re-monitored, data is recorded in the checklists and frequency is monitored. Other irregularities as a result of the steps taken are possible with the control mechanisms. The results are visible, which is the main feature of the Six Sigma methodology.

The control found that in some processes the work was improved and complaints and delays were reduced, and in some processes there were almost no irregularities in the operation as a result of the successfully implemented steps of the Six Sigma methodology.

#### 4. CONSLUSION

From this study we can conclude that the quality of hotel services is a strategic goal of the company, and the adoption of the philosophy of TQM, Six Sigma methodology and internal standardization is the real key to success. A successful company cannot achieve results without these three key elements. Management and employees have adopted this concept in a very simple way. Namely, the company cannot survive on the market without quality control at all stages of the process, without applying ISO standards, without the full commitment of the management and employees. Standardization is a way of delivering quality. The importance of the development of the hotel industry, which is based on the quality of the services, is taken as the imperative in paper. These imperatives are created by the new class of tourism managers and professionals in the hotel industry which contributes to improving the quality of services and satisfying the needs of the users, as well as building profitable relationships on the road to perfection.

**ACKNOWLEDGEMENT:** *This study is a part of the research project "Model for improving the performance of business processes within the hospitality industry", (Ref. No. 0201-545/9).*

#### LITERATURE:

1. Aliyu, F. L. (2017). *Determinants of Customer Satisfaction of Banquet Services in Hotels in Kaduna Metropolis, Nigeria* (Doctoral dissertation, Kenyatta University).
2. Kivela, J., & Kagi, J. (2009). Applying six sigma in foodservice organizations. *Turizam: međunarodni znanstveno-stručni časopis*, 56(4), 319-337
3. Koshki, N., Esmaeilpour, H., & Ardestani, A. S. (2014). The study on the effects of environmental quality, food and restaurant services on mental image of the restaurant, customer perceived value, customer satisfaction and customer behavioral intentions:(Case study of Boroujerd's restaurants). *Kuwait Chapter of the Arabian Journal of Business and Management Review*, 3(10), 261.
4. Krishna, R., Sharan Dangayach, G., Motwani, J., & Akbulut, A. Y. (2008). Implementation of Six Sigma approach to quality improvement in a multinational automotive parts manufacturer in India: a case study. *International Journal of Services and Operations Management*, 4(2), 264-276.
5. Kumar, U. D. (2008). Six Sigma—*Status and Trends*. In *Handbook of Performability Engineering* (pp. 225-234). Springer, London.
6. Lahap, J., O'Mahony, B., & Dalrymple, J. (2014). *Six Sigma as a source of service delivery improvement methodology for the Malaysian hotel sector*. *Theory and Practice in Hospitality and Tourism Research*, 15.
7. Manual, D. (2006). Six Sigma methodology: reducing defects in business processes. *Filtration & separation*, 43(1), 34-36.
8. Markarian, J. (2004). Six Sigma: quality processing through statistical analysis. *Plastics, Additives and Compounding*, 6(4), 28-31.
9. Markarian, J. (2004). What is six sigma?. *Reinforced Plastics*, 48(7), 46-49.
10. Miles, E. N. (2006). Improvement in the incident reporting and investigation procedures using process excellence (DMAI2C) methodology. *Journal of hazardous materials*, 130(1-2), 169-181.

11. Mitreva, E. & Filiposki, O. (2012). Proposal methodology of the subsystem - internal standardization as part of TQM system. *International Journal for Quality Research*, 6 (3). pp. 251-258. ISSN 1800 – 6450.
12. Mitreva, E., Cvetkovik, D., Filiposki, O., Metodijeski, D., & Gjorshevski, H. (2016a). Implementation of the methodology for flawless operation at a frozen food company in the Republic of Macedonia. *Calitatea-acces la succes (Quality-Access to Success)*, 17(153), 92-98.
13. Mitreva, E., Cvetkovik, D., Filiposki, O., Taskov, N., & Gjorshevski, H. (2016b). The Effects of Total Quality Management Practices on Performance within a Company for Frozen Food in the Republic of Macedonia. *Tem Journal*, 5(3), 339-346.
14. Mitreva, E., Taskov, N. & Crnkovic, S. (2014). Application of methodology for business process improvement in specialized diagnostic laboratory. *Quality - Access to Success*, 15(141), pp. 91-95.
15. Mwijarubi, M. (2015). Service quality in tourist hotels in Tanzania: *The case of Dar Es Salaam* (Doctoral dissertation, Mzumbe University).
16. Oyewole, P. (2013). The role of frequency of patronage and service quality of all-you-can-eat buffet restaurant: A perspective of socio-economic and demographic characteristics of African American consumers. *International Journal of Hospitality Management*, 34, 202-213.
17. Qin, H., & Prybutok, V. R. (2009). Service quality, customer satisfaction, and behavioral intentions in fast-food restaurants. *International Journal of Quality and Service Sciences*, 1(1), 78-95.
18. Shaheen, I., & Naseem, N. (2015). A Review of Customer Satisfaction, Employee Satisfaction and their impact on Firm Performance. *Studies*, 4(1).
19. Sokovic, M., Pavletic, D., & Fakin, S. (2005). Application of Six Sigma methodology for process design. *Journal of Materials Processing Technology*, 162, 777-783.
20. Sulaiman, S., Omar, N., & Abdul Rahman, I. K. (2006). Assessing value creation through NAFMa: selected case studies of Malaysian firms. *Asia-Pacific Management Accounting Journal*, 1(1), 99-111.
21. Vaijayanthi, P., Shreenivasan, K. A., & Senthilnathan, R. (2014, November). An empirical study of service performance, customer satisfaction, and purchase intention in the food services sector. In *Science Engineering and Management Research (ICSEMR), 2014 International Conference on* (pp. 1-6). IEEE.
22. Wihuda, F., Kurniawan, A. A., Kusumah, A. I., & Adawiyah, W. R. (2017). Linking empowering leadership to employee service innovative behavior: A study from the hotel industry. *Turizam: međunarodni znanstveno-stručni časopis*, 65(3), 294-313.