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QUALITY AS A CONCEPT
OF DEVELOPMENT

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CROATIAN QUALITY MANAGERS SOCIETY

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PREDGOVOR

Poštovane kolegice i kolege članovi HDMK, znanstvenici i stručnjaci u području sustava upravljanja, dragi prijatelji, dobro došli na 19. međunarodni simpozij o kvaliteti, pod radnim nazivom *KVALITETA KAO RAZVOJNI KONCEPT*.

U stalnom traganju za novim strategijama koje će osigurati održivi razvoj na dulje razdoblje, menadžeri svih razina, bilo da se radi o organizacijama ili jedinicama lokalne i područne (regionalne) samouprave pa i državama, modeliraju razvojne koncepte uvažavajući posebnosti. Bez obzira što je priprema za 19. međunarodni simpozij o kvaliteti započela u razdoblju ekonomskog rasta, kako u Hrvatskoj tako i u zemljama EU, potreba za osmišljavanjem i implementacijom nekog novog razvojnog koncepta ne prestaje. Naprotiv, razdoblje ekonomskog rasta i prosperiteta pravo je vrijeme za razmišljanje o budućnosti.

Hrvatsko gospodarstvo već dulje vrijeme bilježi rast BDP-a. Najveći generator rasta BDP-a u drugom kvartalu 2017. godine je potrošnja građana dok ostale sastavnice BDP-a (industrijska proizvodnja, izvoz, investicije) bilježe skromniji rast. Smanjuje se i stopa nezaposlenosti, odnosno raste broj zaposlenih uslijed otvaranja novih radnih mjesta. Turizam u 2017. godini u Hrvatskoj bilježi najbolje rezultate ikad, kako po broju dolazaka i noćenja, tako i po prihodu od turizma. Započele su neke od tzv. strukturnih reformi poput porezne reforme i reforme školstva. Razvoj infrastrukture u punom je zamahu (zračne luke, cestovna infrastruktura, morske luke i dr.). Odlazak mladih i obrazovanih ljudi u ekonomski razvijenije zemlje kao i problem apsolutnog smanjenja broja stanovnika problem su Hrvatske, ali i brojnih drugih zemalja EU. Rješavanje ovih problema podrazumijeva politički konsenzus i novi razvojni koncept.

EU također bilježi rast BDP-a. Cijena nafte na svjetskom tržištu stabilna je, na relativno niskoj razini. Proces proširenja EU novim članicama u svojevrsnoj je krizi. Problem Brexit-a i EU s „dvije brzine“ teme su koje angažiraju znatne resurse. Problem velikog broja imigranata koji traže azil u razvijenim zemljama EU i dalje je prisutan. Problem terorizma prisutan je u Europi, ali i na globalnoj razini.

Na globalnoj razini odvija se proces nove geopolitičke podjele svijeta. Rat u Siriji i Iraku nije u potpunosti završen. Sjeverna Koreja razvija atomsko i hidrogensko naoružanje što izaziva ozbiljnu globalnu krizu. Ekstremne vremenske nepogode prisutne su u mnogim dijelovima svijeta. Vjerojatno uzrokovane klimatskim promjenama, nanose znatnu štetu ekonomijama područja i zemalja gdje se događaju te uzrokuju ljudske žrtve.

Ovakav kontekst zahtijeva pažljivo promišljanje i upravljanje rizicima. Svaka zemlja, kao i nadnacionalne ekonomske i političke integracije traže nova rješenja i mogućnosti rasta i razvoja. Mišljenja smo da je jedan od mogućih razvojnih koncepata „kvaliteta“, odnosno da „kvaliteta“ sama po sebi predstavlja razvojni koncept svake organizacije, jedinice lokalne i područne (regionalne) samouprave pa i države. Iz toga proizlazi i radni naziv ovog simpozija: *KVALITETA KAO RAZVOJNI KONCEPT*.

HDMK, kao i uvijek do sada, čini napor u cilju okupljanja kritične mase znanja i kompetencije na području sustava upravljanja kako bi kroz teoriju i praktična iskustva, dalo svoj doprinos razvoju svjesnosti o potrebi modeliranja razvojnog koncepta kompatibilnog sa svim ekonomskim sustavima, u kojem bi „kvaliteta“ bila pokretač razvoja i jamstvo njegove održivosti. Tako osmišljen razvoj pospješuje konkurentsku sposobnost gospodarstva kao pretpostavku osiguravanja kvalitetnijeg života svojih građana, što je suština politike svih demokratskih sustava.

HDMK poziva vas da kao znanstvenici i stručnjaci zajedno doprinesemo ideji kvalitete kao razvojnog koncepta. S tom svrhom pristupili smo organizaciji 19. međunarodnog simpozija o kvaliteti i pozvali sve vas na razmjenu iskustva i ideja u cilju iznalaženja prihvatljivih rješenja u svrhu bolje budućnosti.

Prezentacijom znanstvenih i stručnih radova iz područja sustava upravljanja znanstvenika i stručnjaka iz zemlje i inozemstva, želja nam je ukazati da značajnija promocija kvalitete kao razvojnog koncepta u svim organizacijama i sektorima može znatnije doprinijeti razvoju konkurentnosti gospodarstva na globalnoj razini, a time i kvaliteti života ljudi. Kvaliteta kao razvojni koncept kompatibilna je sa svim gospodarskim sustavima demokratskih društava. Stoga, prema našem mišljenju, zaslužuje znanstvenu i stručnu raspravu na ovom simpoziju.

Nakon više godina, ponovo smo u Nacionalnom parku Plitvička jezera, smještenom u dvije županije, 91% u Ličko-senjskoj županiji i 9% u Karlovačkoj županiji, prirodnom biseru Republike Hrvatske, koji je UNESCO 1979. godine proglasio Svjetskom prirodnom baštinom. Očekujemo od vas, sudionika simpozija iz dvanaest zemalja svijeta, da ćete svojim sudjelovanjem dati doprinos sagledavanju kvalitete kao razvojnog koncepta i dati pozitivne primjere u sredinama iz kojih dolazite.

Želimo vam ugodan boravak na Plitvičkim jezerima, u Ličko-senjskoj županiji, u Republici Hrvatskoj.

Doc. dr. sc. Miroslav Drljača
predsjednik HDMK

INTRODUCTORY WORD

Dear colleagues, members of the Croatian Quality Managers Society, scientists and professionals in the management systems field, dear friends, it is my pleasure to invite you to actively participate in the 19th International Symposium on Quality, under the working title QUALITY AS A CONCEPT OF DEVELOPMENT.

In constant search of new strategies, which will ensure sustainable development in the long term, managers at all levels, regardless if in organizations or in local and regional self-government units, and even at the government level, model concepts of development, respecting their specificities. Notwithstanding the fact that preparations for the 19th international symposium on quality started in the period of economic growth, both in Croatia and the EU states, the need for design and implementation of a new concept of development does not cease. On the contrary, the period of economic growth and prosperity is the right time for thinking about the future.

Croatian economy has been recording a GDP growth for a while. The greatest generator of GDP growth in the second quarter of 2017 is personal consumption, while other components of GDP (industrial production, export, investments) show a more modest growth rate. The unemployment rate has also been decreasing, and the number of the employed has been increasing due to opening of new work places. The 2017 results of tourism are the best ever, both in number of visits and overnight stays and tourism revenues. Some of the so called structural reforms have been started, such as tax reform and education system reform. Development of infrastructure is in full swing (airports, road infrastructure, sea ports, etc.). Leaving of young and educated people to economically more developed countries and concerns about absolute decline of the population are Croatia's problems, equally as in numerous other EU countries. Solving these problems requires political consensus and a new concept of development.

The EU also records a GDP growth. Price of oil in the world market is stable at a relatively low level. The EU enlargement process is in a kind of crisis. Brexit and a two-speed EU are topics engaging significant resources. The problem of large number of immigrants seeking asylum in developed countries of the EU is still present. The issue of terrorism is present in Europe, but also at the global level.

A process of new geopolitical division of the world is underway at the global level. The war in Syria and Iraq has not completely ended. North Korea develops nuclear and hydrogen weapons causing a serious global crisis.

Extreme weather conditions occur in many parts of the world. Probably caused by climate changes, they result in significant damage to economies of the regions and countries where they occur and cause human casualties.

Such context requires careful thinking and risk management. All countries and supranational economic and political integrations look for new solutions and possibilities of growth and development. In our opinion, one of possible concepts of development is “quality”, meaning that “quality” in itself represents a concept of development for any organization, local and regional self-government, and even the government. The working title of this symposium is derived from this idea: QUALITY AS A CONCEPT OF DEVELOPMENT.

As always, the CQMS continues to make every effort to gather a critical mass of knowledge and competence in the domain of management systems, so that we can give, through theory and practical experience, our contribution to development of awareness of the need to model a concept of development compatible with all economic systems, in which “quality” would be the trigger of development and the guarantee of its sustainability. The so envisaged development enhances competitive ability of economy as a prerequisite for ensuring a better citizens’ quality of life, the essence of politics of all democratic systems.

The CQMS invites you, as scientists and professionals, to together contribute to the idea of quality as a concept of development. With that purpose we have started organizing the 19th international symposium on quality, and invite all of you to exchange experience and ideas with the aim to find acceptable solutions for a better future.

Through presentation of scientific and expert papers from the scope of management systems by scientists and professionals from the country and from abroad, we want to point out that a more significant promotion of quality as a development concept in all organizations and sectors may considerably contribute to development of competitiveness of economy at the global level, thereby also to the people’s quality of life. Quality as a concept of development is compatible with all economic systems of democratic societies. Therefore, in our opinion, it deserves a scientific and professional discussion at this symposium.

After several years, we are again in the Plitvice Lakes National Park, located in two counties, 91% in Lika-Senj County and 9% in Karlovac County, a natural pearl of the Republic of Croatia, in 1979 registered in UNESCO’s World Heritage List. We look forward to seeing you, symposium participants from some twelve countries of the world, who will, with your partaking, make a contribution to considerations of quality as a concept of development and present positive examples from your own surroundings.

We wish you a pleasant stay in Plitvice Lakes, in Lika-Senj County, in the Republic of Croatia.

*Assistant Prof. Miroslav Drljača, Ph.D.
President of the CQMS*

Tematska cjelina/*Thematic unit*
KVALITETA KAO RAZVOJNI KONCEPT
QUALITY AS A CONCEPT OF DEVELOPMENT

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AMORTIZATION AS A COST OF QUALITY

AMORTIZACIJA KAO TROŠAK KVALITETE

Izv. prof. dr. sc. Krešimir Buntak

E-mail: kresimir.buntak@unin.hr

Ivana Martinčević, univ. spec .oec.

E-mail: ivana.martincevic@unin.hr

Sveučilište Sjever, Koprivnica, Hrvatska/Croatia

Helena Premec, mag. oec.

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ABSTRACT

Quality is one of the most important factors that firms differ from each other and based on it create a competitive advantage on the market. The aim of every company is to produce quality products based on quality manufacturing processes and procedures. That will allow them a sustainable competitive advantage on the market, and thus meet the needs of its customers. To succeed in this goal, firms introduce a quality management system in its business, which includes a quality costs management system. The norms set of ISO 9000 are the basis for the establishment of quality systems and provide conditions for the required quality. In depreciation/amortization there is simultaneously expressed successively decrease in the value of intangible and tangible assets, but also the gradual compensation spent part of the value of these assets through the sale and payment of sold products and services whose value contains depreciation/amortization costs. The importance of the depreciation/amortization costs increases with a higher representation of fixed assets in total assets. With properly managed depreciation/amortization, it becomes a cost for quality and is one of the costs of prevention.

Keywords: quality management, quality costs, costs for quality, costs due to the (not) quality, ISO norms, depreciation/amortization.

1. INTRODUCTION

Quality costs are defined as costs incurred in ensuring satisfactory quality and as losses that appear when this quality is not achieved. Costs of quality have the same characteristics as other costs and are part of the structure of total company costs.¹ They may be in various types of costs (maintenance, production, sales, procurement, etc.) and may arise at various places in the organization (management, production, management, procurement, etc.). Costs of quality are divided into the quality of costs resulting from the overall investment in achieving the required quality and cost of (non) quality that appear when the required quality is not fulfilled. Costs of quality are divided into preventive costs that are taken to prevent deviations from the required quality and test costs incurred as a result of the tests and checks carried out to prevent preventive action to prevent the occurrence of non-compliance. Costs incurred due to (non) quality are divided into internal costs that are defined as product failures that are noticed before the product is delivered to the buyer and the external costs incurred by the defect that were noticed only when the product was delivered to the customer and when it was used.² In order for the company to become more familiar with the quality of costs incurred in the process of manufacturing their products, management introduces a quality management system which has a very important segment of quality cost tracking by which the company locates and controls these costs. Companies affected by the influence of various factors began to pay attention to the quality of products, processes, processes and organization as a whole, and they gradually started to adopt standards and quality management systems. Norm simplify everyday life and increase the reliability and effectiveness of goods and services we use on a daily basis. ISO 9000 is a standard that embraces the basics of a quality management system and defines quality terminology. ISO 9001 is a standard that sets requirements for a quality management system. ISO 9004 serves organizations as a guide to achieving quality management access. ISO 19011 includes guidelines for auditing the management system, while Standard 10014 provides guidance for achieving financial and economic benefits by applying the principles that apply in ISO 9001. Depreciation represents the calculation of the expense of long-term assets and is the process by which the value of long-term assets is allocated within the estimated useful life of the as-

¹ Miroslav Drljača, „Pojam i podjela troškova kvalitete“, Kvaliteta, Br. 3-4, Infomart, Zagreb, 2003, str. 5-8.

² Miroslav Drljača, „Troškovi – pokazatelj kvalitete“, Zbornik radova 2. međunarodnog simpozija o kvaliteti *Put je cilj, Kako do europske kvalitete*, Hrvatsko društvo menadžera kvalitete, Oskar, Zagreb, 1998, str. 75-78.

set. There are several methods, and the choice of method is implemented by management. If depreciation is properly managed, it becomes a cost to quality. The aim of this paper is to explore and define that quality management of depreciation costs increases property quality.

2. QUALITY MANAGEMENT

Quality has had different meanings for years. At the beginning of the 20th century it was an inspection. All finished products were checked and some defects corrected. In the 40s, the word quality was given a statistical connotation. Pioneers of statistical quality control have developed the idea that each production process is subject to a certain level of natural variation.³ The job of quality control managers was to detect this level by statistical methods and ensure control of the production process. To include other functions, in the 60s the quality was expanded beyond production by using the concept of complete quality control. With full quality control, the whole organization is mobilized to help produce quality products. Quality of the concept of quality has now been expanded to include error-free production, continuous improvement and consumer focus.⁴ When it comes to quality generally, the first thought is the quality of a product or service, and then the quality of overall living. From a consumer perspective, it is very important that the products are tailored to their needs and requirements, and it is measured by customer satisfaction. In order to make the company more sales, it is necessary to question the satisfaction of the consumers who, with their answers, help the company to create a quality and competitive product tailored to the wishes and needs of the customers. One of the most important tasks of contemporary management is quality management to meet and keep up with the competition that is today great. This is a step that must be taken by any company that wants to achieve some improvement, reduce costs, encourage employees to contribute to continuous improvement of their quality through conscious work so that the joint venture can achieve a more competitive market position and gain customer confidence. A large number of companies that do not manage quality, ie do not access the development and production / delivery of their products and services and do not move from customer requirements and incorporate them into all business processes while applying the principle of continuous improvement, they in fact

³ Miroslav Drljača, „Troškovi kvalitete – povijesni razvoj spoznaja i perspektive“, Zbornik radova 5. simpozija *Suvremena stremljenja u upravljanju kvalitetom*, Hrvatsko društvo menadžera kvalitete i Oskar, Zagreb, Trogir, 2003, str. 151-159.

⁴ Tonći Lazibat, *Upravljanje kvalitetom*, Znanstvena knjiga, Zagreb, 2009.

deny one of the fundamental competitive advantages that in the end, very often results in their breakdown. Quality management can be defined as a “process that recognizes and manages the activities needed to achieve the goals and quality of an organization”.⁵ It is important to emphasize that quality management does not mean a substitute for quality control and quality assurance processes but their upgrading and improvement. Quality assurance firmly incorporates quality into the company’s own strategy, ie top management is the one that brings key quality-related goals that are then accomplished at all levels of company management, and quality control extends to the full service life of the product or service. In order to gain insight into the quality of the entire company, it is necessary to conduct a quality assessment that consists of four elements: low quality costs, market position, quality culture in organization, and functioning of the company’s quality system. It is a set of management activities that determine the quality, objectives and responsibilities, and they are achieved through quality planning, monitoring, quality assurance and improvement. In order to achieve quality improvement, all the quality-related core processes need to be incorporated into each business process and the established quality assurance rules are respected by all employees.

3. BUSINESS COSTS AND QUALITY COSTS

The introduction and implementation of a quality management system should bring a number of benefits to companies. Influence is most easily seen through quality performance at operating costs, revenue, and ultimately at the company’s competitive position. Quality influences the company’s business over two key aspects:⁶

- Influence on costs: in this case, quality means the absence of errors of all types. Higher quality simply means less mistakes, less defects. Reducing the number of mentioned errors requires a lot of effort, but the end result is cost reduction.
- Influence on Revenues: In this case, quality is understood to mean those characteristics that meet customer requirements. Such features make the product viable and provide customer satisfaction. Higher quality means a greater number of features that provide satisfaction.

The cost is expressed in units of cash showing the amount of money or other assets used, services rendered or liabilities incurred in exchange for goods

⁵ Ivo Andrijanić, Krešimir Buntak i Mirko Bošnjak, *Upravljanje kvalitetom s poznavanjem robe*, Visoka poslovna škola Libertas, Zagreb, 2012.

⁶ Tonći Lazibat, *Upravljanje kvalitetom*, Znanstvena knjiga, Zagreb, 2009, p. 137.

or services received or to be received.⁷ The economic significance of the costs refers to the definition under which it is understood at the expense of knowingly sacrificing resources for achieving a certain goal.⁸ Costs in the accounting dictionary are defined as “expenditures for goods and services necessary to carry out a business process in a particular business system” and according to international accounting standards as “the amount of cash or cash equivalents that are paid at fair value but also other fees in exchange for the acquisition of property at the time of its acquisition or construction”. Expenditures represent value-added expenditures of those resources or elements of the work process that were created with the aim and purpose of the business and for their transformation into a useful, internal or marketable effect. Costs are categorized as investments in the production process and are subject to internal management reporting. Information about costs are essential in the process of planning, monitoring and controlling internal work processes.⁹ Quality costs can be defined as “costs incurred in ensuring satisfactory quality and gaining confidence in it, as well as losses that suffer when it is not achieved”.¹⁰ There are several definitions that describe the concept of quality cost, and each of them talks about how cost is most likely to occur when something is wrong or incorrect. For the term quality cost, many synonyms are used, such as cost of quality, cost for quality, low quality cost, quality of price, cost of defect, and the like. Quality costs are limited to quality-related costs and are included in various types of costs or cost centres. “Costs of quality have the same characteristics as other costs and are part of the overall cost structure. They can be found in various types of costs such as maintenance costs, production, sales and the like, and come from various locations in the organization (production, marketing, procurement, sales, etc.). Quality costs are also included in product or service calculations.”¹¹ Identifying and measuring poor quality costs is being implemented for three reasons: to qualify the size of the quality-related issue, to justify an attempt to improve the situation and to guide the improvement process and track any improvements.

⁷ Ralph S. Polimeni, Handy A. Sheila and James A. Cashin *Troškovno računovodstvo*, Faber & Zgombić Plus, Zagreb, 1999, str. 5.

⁸ Danimir Gulin, Ferdo Spajić, Stjepan Tadijančević, Vesna Vašiček, Katarina Žager i Lajoš Žager, *Računovodstvo*, Hrvatska zajednica računovođa i financijskih djelatnika, Zagreb, 2006, str. 306.

⁹ Danimir Gulin, Sandra Janković, Ivana Dražić Lutilsky, Hrvoje Perčević, Milena Peršić i Vesna Vašiček, *Upravljačko računovodstvo*, Hrvatska zajednica računovođa i financijskih djelatnika Zagreb, 2011, str. 47.

¹⁰ Miroslav Drljača, *Mala enciklopedija kvalitete: Troškovi kvalitete - V. Dio*, Oskar, Zagreb, 2004, str. 41-54.

¹¹ Miroslav Drljača, „Karakteristike troškova kvalitete“, *Kvaliteta*, Br. 7-8, Infomart, Zagreb, 2003, str. 6-9.

4. IMPACT OF MANAGING AMORTIZATION TO COST QUALITY

Amortization is the process of write-off of tangible and intangible fixed assets and represents the expense over the lifetime of use according to the adopted amortization methods. The percentage of the acquisition value of the asset that represents the expense within the accounting period is determined depending on the estimated useful life of that asset. Long-term assets that last for more than a year progressively lose their value over their lifetime.¹² Long-term intangible and tangible assets are gradually consumed by their use in the business process and transfer part of their value to the effects (products and services) for which they are consumed. At the same time, the amortization expresses the gradual (successive) decrease in the value of long-term intangible and tangible assets as well as the gradual reimbursement of the part of the value of that asset sold through the sale and collection of the goods and services sold, at which value also includes depreciation expense. The accounting aspect of amortization is the systematic allocation of the original acquisition cost arising from the acquisition of long-term intangible and tangible assets at all future periods over the estimated useful life. In these cases, the procurement costs that are allocated to the periods (amortization costs) with future revenue that a particular company strives to achieve as an economic benefit from the use of long-term intangible and tangible assets are faced. The depreciation cost is increased with a higher proportion of long-term assets in total assets. Amortization is a systematic allocation of capital property expense over a specified period for the purpose of financial reporting, tax purposes or both. Amortization is a systematic allocation of capital property expense over a specified period for the purpose of financial reporting, tax purposes or both. Thus, amortization reduces taxable profit. If everything remains unchanged, the higher the depreciation, the tax is lower.¹³ Although depreciation itself is not a cash flow, it affects on the cash flow of the company because it directly affects on the expenditure on the payment of taxes. Amortization represents process of spending the assets of company the calculation of the expense of long-term assets. This is, in effect, a process by which the value of long-term assets is allocated (transferred to expense) within the estimated useful life of the asset. There are several methods allowed, and the choice of method is implement-

¹² Vinko Belak i Nenad Vudrić, *Osnove suvremenog računovodstva*, Belak Excellence. Zagreb, 2012, str. 134

¹³ James C. Van Horne, John M. Wachowicz jr., *Osnove financijskog menadžmenta*, 9. izdanje, Mate, Zagreb, 2002, str. 17.

ed by management.¹⁴ The term amortization refers to the gradual consumption of long-term intangible and tangible assets, whereby the value consumed appears as an integral part of the value of the produced goods or services rendered. This is achieved by calculating the spent portion of long-term intangible and tangible assets as the amortization expense in the cost of production of products or the provision of services. Amortization is a systematic allocation of amortizable amount of assets over its useful life.¹⁵ The depreciation amount also depends on the method chosen for the calculation. The Act sets maximum depreciation rates that companies can recognize as an expense in the accounting period. The annual amount of depreciation will increase costs and at the same time reduce the carrying amount of the asset. The main purpose of depreciation is to provide financial resources at least in the amount to enable the replacement of existing basic assets. From the accounting aspect, when applying the most tax-accrued depreciation rates, the balance sheet does not reflect the objective financial situation of the taxpayer. The profit statement does not show an objectively realized business result. Managing depreciation costs in the right way affects the quality of organizational management. By improving quality and thus lowering costs, product value increases, expressed in terms of price and quality. It is necessary to constantly reduce the costs of poor quality (ie, quality), ie it is necessary to create the conditions in which the manufactured products meet the established standards and specifications with as little deviation. It is necessary to keep track of processes and activities at every step, so that all elements embedded in a particular product form the final product of the appropriate quality. The ultimate user, ie the consumer, seeks to deliver the highest quality product without any disadvantages in order to maintain the competitive edge. Quality is not a category that necessarily implies an increase in costs. It can, in modern business conditions, achieve significant benefits through increased market share, productivity, cost-effectiveness and profitability.¹⁶ It is not enough to improve the quality, but it is necessary to take preventive measures. It is more cost-effective to direct efforts to investigate the causes of deficiencies and their elimination at the source of their emergence (including removal of the causes itself, which is actually the best). If the appropriate preventive measures are not taken timely, there is an increasing (non) quality. With preventive management approach, it is possi-

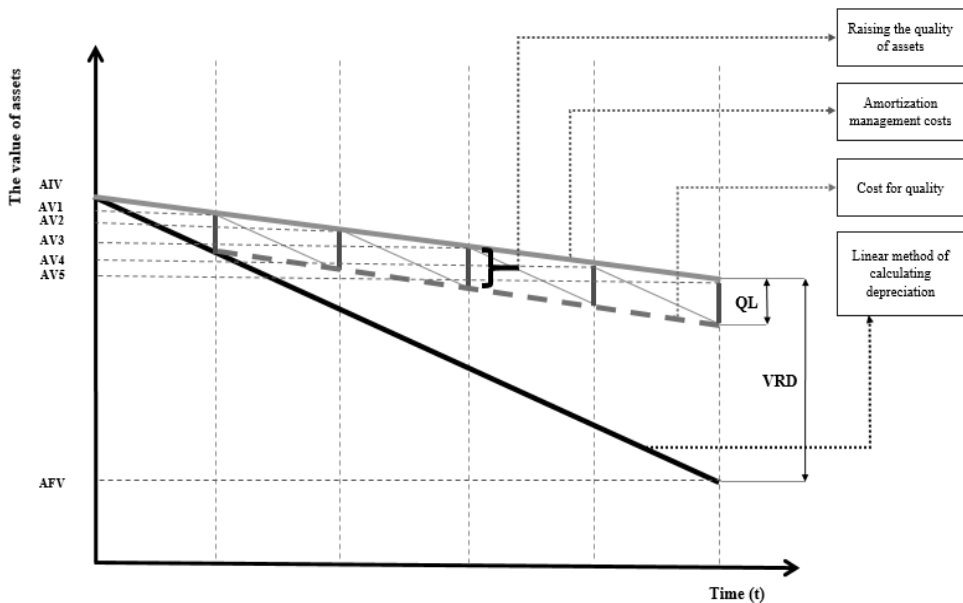
¹⁴ Katarina Žager, Ivana Mamić Sačer, Sanja Sever Mališ, Lajoš Žager, *Analiza financijskih izvještaja*, Masmedia, Zagreb, 2008, str. 127.

¹⁵ Danimir Gulin, Ferdo Spajić, Stjepan Tadijančević, Vesna Vašiček, Katarina Žager i Lajoš Žager, *Računovodstvo*, Hrvatska zajednica računovođa i financijskih djelatnika, Zagreb, 2006, str. 214.

¹⁶ Hrvoje Skoko, *Upravljanje kvalitetom*, Sinergija, Zagreb, 2000, str. 72.

ble, over time, to reduce deficiencies and quality costs by gradually approaching production in a cost-effective way. Appropriate investment in preventive, in all business processes that take place in an organization (full quality management), the total cost of quality can be greatly reduced. Graph 1 shows the linear method of depreciation calculation over a period of five years and at a rate of 20%. If we do not react and do not start investing in property, its value falls every year. The graph shows that each year we invested (raised the value) for the depreciation value (20%). The difference in the decrease is actually the difference between the costs of depreciation management and the final value of the asset it would have had if it had no preventive effect on the asset being used. In this way, we ensure the difference in asset value decline (QL), which is still called the quality leverage, and that is actually the difference between the costs of amortization management and cost of quality.

Figure 1. Amortization as a cost for quality



Source: Originally author.

Abbreviations used in figure 1:

- AIV - the asset's initial value
- AFV - the asset final value
- AV1 – asset value of the first period

- AV2 – asset value of the second period
- AV3 – asset value of the third period
- AV4 – asset value of the fourth period
- AV5 – asset value of the fifth period
- VRD - value reduction difference
- QL - QUALITY LEVER

5. CONCLUSION

Quality is a concept that each author defines differently but essentially has common points pertaining to meeting the needs and demands of consumers and achieving the company's competitive advantage. Quality is always the first thing to think about is the quality of products and services, and quality in this case implies compliance with the required requirements and suitability for use. Since man is individually, and the wishes and needs of individual consumers differ from others, the quality of a product or service depends on the perception of each customer and his attitudes and expectations towards that product. In order to make and maintain a competitive advantage today, when customers have a lot more opportunities and a wide range of services, to meet their needs and demands, making quality products more efficient in all levels of business. By introducing quality management in a company, management allows tracking the quality and cost that are related to quality, thereby maximizing savings by reducing unnecessary costs that may arise in manufacturing due to employees' neglect, poor production processes, poor quality resources, and the like. One of the quality management segments is the monitoring of the cost of quality that can arise in ensuring the required quality level (cost of quality), but also as the losses that arise when the quality is not achieved (costs due to (non) quality). If it responds in time and invests, conducts preventive measures, the value of the property will not fall as if they did not invest. It is more cost-effective to focus on investigating the causes of product or service defects and try to eliminate it as soon as possible at the source of their emergence. However, if the appropriate measures are not taken in time, more and more (no) quality is achieved. It can be concluded that a preventive approach to managing over time can reduce the quality shortfalls and costs, and thus produce production inexpensively. If we invest properly in the preventive, ie if we fully manage quality in all business processes that take place in an organization, the total cost of quality can be greatly reduced. The introduction and implementation of a quality management system should bring a number of benefits to companies. Impact can be most easily observed through

the performance of quality on operating costs, revenues and, ultimately, on the company's only competitive position. According to the criterion of the natural type of cost, among other things, this includes depreciation. Amortization represents the calculation of the expense of long-term assets. This is, in effect, a process by which the value of long-term assets is allocated (transferred to expense) within the estimated useful life of the asset. There are several methods allowed, and the choice of method is implemented by management. Proper amortization management has a major impact on cost of quality.

Sažetak:

AMORTIZACIJA KAO TROŠAK KVALITETE

Kvaliteta je jedan od najvažnijih čimbenika po kojima se poduzeća razlikuju jedno od drugog te na temelju nje stvaraju konkurentsku prednost na tržištu. Cilj svakog poduzeća je da kvalitetnim proizvodnim procesima i postupcima proizvodi kvalitetne proizvode. To će im omogućiti održivu konkurentsku prednost na tržištu, a samim time i zadovoljenje potreba svojih potrošača. Kako bi uspjeli u ovom cilju, poduzeća u svoje poslovanje uvode sustav upravljanja kvalitetom koji podrazumijeva sustav upravljanja troškovima kvalitete. Norme niza ISO 9000 osnova su za uspostavu sustava kvalitete te osiguranje uvjeta za traženom kvalitetom. Kod amortizacije se istodobno izražava sukcesivno smanjenje vrijednosti dugotrajne nematerijalne i materijalne imovine, ali i postupnu nadoknadu utrošenog dijela vrijednosti te imovine kroz prodaju i naplatu prodanih proizvoda i usluga u čijoj vrijednosti je sadržan i trošak amortizacije. Značaj troška amortizacije raste s većom zastupljenošću dugotrajne imovine u ukupnoj imovini. Ukoliko pravilno upravljamo amortizacijom ona postaje troškom za kvalitetu i spada u troškove preventive.

Ključne reči: *upravljanje kvalitetom, troškovi kvalitete, troškovi za kvalitetu, troškovi zbog (ne) kvalitete, ISO norme, amortizacija.*

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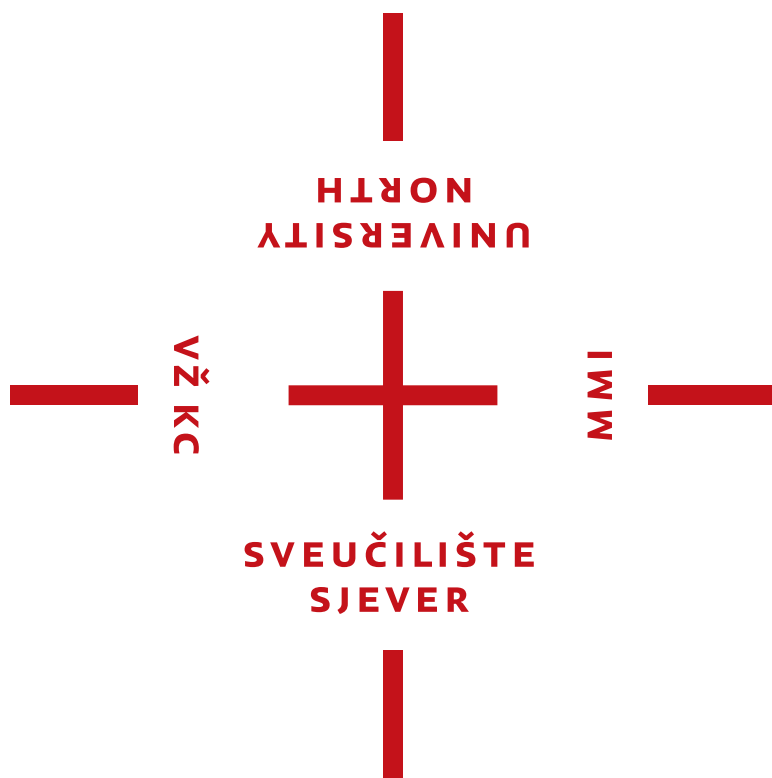
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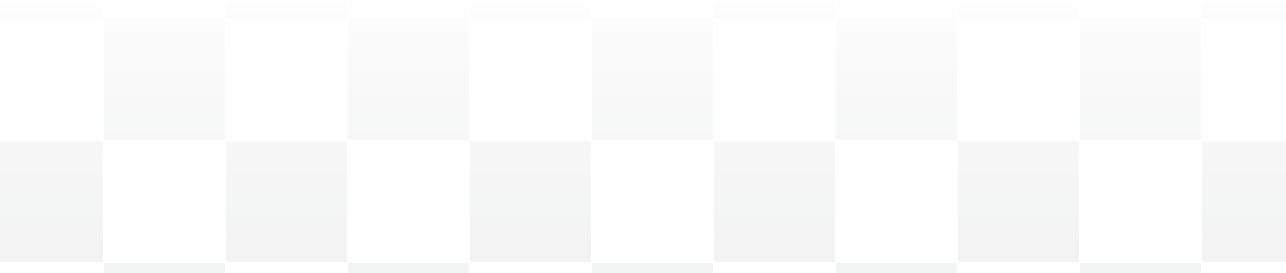
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