

MOGUĆNOSTI IMPLEMENTACIJE TQM SISTEMA U SERIJI STANDARDA ISO 9000

POSSIBILITY OF TQM SYSTEM IMPLEMENTATION IN ISO 9000 SERIES

Mr Branko Prodanović

“Kosvig” Zubin Potok

Stručni članak

DOI 10.7251/OIK1403003P, UDK 005.6:006.83(100)ISO 9000

Professional paper

REZIME

Uslovi poslovanja neumitno uslovljavaju primenu standarda u poslovanju. Sam proces standardizacije je sveobuhvatan i veže sve segmente poslovanja. Uslovljenost primene standarda diktirana je sve različitim potrebama okruženja, s jedne strane, kao i težnjom za efikasnijim i efektivnijim poslovanjem koje se stavlja kao imperativ u savremenom poslovanju, s druge strane. U radu će biti predstavljena komparativna analiza osnovnih principa poslovanja i pojedinih standarda.

Ključne reči: kvalitet, menadžment, proces, organizacija, lider.

UVOD

Prethodne verzije serije ISO 9000 uglavnom su se zasnivale na iskustvu, idejama i konceptima proverenim u praksi. One su potom, od strane eksperata iz svih delova sveta okupljenih u Tehničkom komitetu (Technical Comitee, TC 176), bivale pretočene u elemente koji su se činili neizostavnim u strukturi sistema kvaliteta. Ovaj pragmatični pristup se pokazao ispravnim, tako da su ovi standardi postali najšire prihvaćeni i korišćeni u istoriji Međunarodne organizacije za standardizaciju (International Standards Organization, ISO).

Sa ovim pragmatizmom nastavilo se i pri reviziji standarda i kreiranju nove verzije, ISO 9000:2000. Međutim, dovoljno vremena je proteklo da bi se, na bazi iskustava, profilisali i formulisali osnovni principi na kojima

ABSTRACT

Business conditions inevitably impose the application of standards in the business. The standardization process itself is comprehensive and binds all business segments. Conditioning on the application of standards is dictated by the increasingly differing needs of the environment, on one hand, and by the requirement for more efficient and effective business which is set as an imperative in modern business, on the other hand. The paper shall present a comparative analysis of basic business principles and specific standards.

Keywords: quality, management, process, organisation, leader.

INTRODUCTION

Previous versions of the ISO 9000 series were primarily based on experience, ideas and concepts proven in practice. The experts from around the world gathered in the Technical Committee (TC 176), and transformed such aspects into elements that appeared to be indispensable in the structure of the quality system. Such pragmatic approach has proven to be appropriate, therefore causing these standards to become the most widely accepted and used in the history of the International Standards Organization (ISO).

Such pragmatism continued with the revision of standards and creating a new version, ISO 9000:2000. Therefore, profiling and formulating of the quality management basic principles were based on the experience

počiva menadžment kvalitetom. Umesto formulisanja teorije, a potom njenog korišćenja u praktične svrhe, principi menadžmenta kvalitetom profilisali su se kroz praksu.

Poslovni sistem koji ima za cilj da ostvari profit, opstane i obezbedi razvoj na domaćem i svetskom tržištu kao imperativ mora uzeti kvalitet. Sistem kvaliteta je proces koji karakteriše kraj prošlog i početak ovog veka donoseći novi odnos prema kupcima, okolini, a, pre svega, u procesu rada u organizacijama, stavljajući jasno do znanja čime je i čime će uspešno poslovanje u budućnosti biti determinisano. Kvalitet je daleko najvažniji uslov uspešnosti i dugovečnosti svakog tržišnog subjekta, te zbog toga i ne može imati alternativu. Serija standarda ISO 9000:2000, koja se zvanično pojavila 15. decembra 2000. godine, a u maju 2001. godine izašla je zvanična verzija ove serije standarda na srpskom jeziku, obuhvata sledeća 3 standarda: ISO 9000:2000, sistem menadžmenta kvalitetom - osnove i rečnik: sadrži rečnik i koncept na kome se zasniva ova serija standarda. Opisnog je karaktera i sadrži 8 principa menadžmenta kvalitetom; ISO 9001:2000, sistemi menadžmenta kvalitetom - zahtevi: standard u odnosu na koji će biti proveravana i sertifikovana; i ISO 9004:2000, sistemi menadžmenta kvalitetom - uputstva za poboljšanje performansi: nije namenjen za potrebe sertifikovanja ili ugovaranja, već je u vidu uputstva u cilju stalnog poboljšavanja u organizaciji i sadrži i program samoocenjivanja. Za postizanje svetske klase proizvodnje najefikasnija rešenja nudi koncept totalnog upravljanja kvalitetom kao sistemski i sistematski pristup stalnom unapređenju i poboljšanju proizvoda i usluga. Nastao je u Japanu kao posledica primene 14 Demingovih principa: kreirati konzistentnost ciljeva i unapređenja, usvajanje nove filozofije, smanjiti uticaj inspekcija, prekinuti sa kupovinom na bazi cene kao osnove za odlučivanje, stalno unapređivanje, obezbediti stalnost obučavanja, obezbediti "liderstvo", raditi bez straha/opasnosti, rušiti barijere između sek-

gained through such period of time. Instead of formulating a theory, followed by its use for practical purposes, the principles of quality management are profiled through practice.

Business systems that aim to make a profit, survive and ensure the development at the domestic and international market are necessitated to focus on quality as an imperative. The quality system is a process that characterized the end of the previous century and the beginning of the current one, bringing a new relationship with the customers, the environment, and, above all, in the working process in organizations, clearly specifying what is and what will be the determinants for a successful business in the future. Quality is by far the most important requirement for success and longevity of any business entity, which is why it has no other alternative. The series of standards ISO 9000: 2000, which officially appeared on 15 December 2000, followed by an official version of this series of standards in Serbian language in May 2001, comprises the following three standards: ISO 9000:2000 Quality Management Systems-Fundamentals and Vocabulary: contains vocabulary and concept which the series of standards is based on. It is of a descriptive character and contains eight quality management principles; ISO 9001:2000 Quality Management System - Requirements: which specifies the criteria for certification; and ISO 9004: 2000 Quality Management System - Guidelines for Performance Improvement: it is not intended for the purposes of certification or contracting, but can be used as a springboard for constant improvement of the efficiency and effectiveness of a quality management system and also contains a self-assessment program. In order to achieve world-class manufacturing, the most efficient solutions are offered by the concept of Total Quality Management as a systemic and systematic approach to continuous improvement of products and services. It originated in Japan as a result of the application of Deming's 14 points of management: create constancy of purpose for improving products and services, adopt the new philosophy, cease dependence on inspection to achieve quality, end the practice of awarding business on price alone, improve constantly, institute training on the job, adopt and institute leadership, drive out fear, break down barriers between staff areas, eliminate slogans, ex-

tora, eliminisati slogane, natpise i ciljeve radnika, eliminisati radne standarde (radne kvote, eliminisati upravljanje prema kvotnim ciljevima), rušiti barijere među radnicima (rušiti barijere između "plavih" i "belih" mantila), uspostaviti obavezujuće programe obuke i samoproveru za menadžment, uključiti sve da rade na procesima transformacije. Za TQM možemo reći da je menadžerski koncept prema kome preduzeće vrši stalno poboljšanje svog funkcionisanja i tako utiče na poboljšanje proizvoda, vodeći računa o potrebama i očekivanjima kupaca.

ANALIZA KOMPATIBILNOSTI STANDARDA KVALITETA U ODNOSU NA PRINCIPE TQM-a

Verovatno, ključni koncept koji sadrže opisani principi je integracija. Ukupni sistem menadžmenta (lideri, procesi, zaposleni, snabdevači) funkcioniše najbolje u uslovima potpune integrisanosti.

Osam principa menadžmenta kvalitetom, integrativno i konzistentno primenjeni, uslov su optimalnog funkcionisanja organizacije, koji vodi izvrsnosti, inače nedostižnoj kroz optimizaciju pojedinačnih aktivnosti. U tom smislu, u narednom tekstu je dat pregled reagovanja pojedinih ISO standarda (u smislu njihove kompatibilnosti) sa osnovnim principima TQM-a, jer je zapravo njihova kompatibilnost i mogućnost implementacije osnova uspeha preduzeća u turbulentnom okruženju.

hortations and targets for the workforce, eliminate working standards (eliminate numerical quotas and management based on numerical goals), remove barriers among the staff (eliminate the barriers between blue-collar and white-collar staff), institute a vigorous program of education and self-testing for the management, engage everybody in the company in the transformation processes. TQM can be defined as the managerial concept according to which the company performs continuous improvement of its operation thus contributing to the product improvement, taking into account the needs and expectations of customers.

COMPATIBILITY ANALYSIS OF QUALITY STANDARDS IN RELATION TO THE TQM PRINCIPLES

Probably, the key concept contained by the principles described is - integration. Total Management System (leaders, processes, employees, suppliers) works best in conditions of complete integration.

The eight principles of Quality Management, integratively and consistently applied, are the condition of organization's optimal functioning, which leads to excellence, otherwise unattainable through optimization of individual actions. In this regard, the following text contains an overview of reactions to certain ISO standards (in terms of their compatibility) in comparison to the basic principles of TQM, for it is actually their compatibility and the implementation capability a basis for a company's success in a turbulent environment.

Tabela 1

Reagovanje pojedinih ISO standarda sa osnovnim principima TQM-a

Table 1

Reaction of some ISO standards with the basic principles of TQM

Principi	Odnos sa ISO 9001:2000	Odnos sa ISO 9004:2000
<p>Princip 1: ORGANIZACIJE USREDSREĐENE NA KORISNIKA</p> <p>- Organizacije zavise od svojih korisnika i stoga moraju da razumeju njihove trenutne i buduće potrebe, moraju da zadovolje njihove zahteve i nastoje da prevaziđu njihova očekivanja.</p> <p>[Principle 1: CUSTOMER FOCUS</p> <p>- The organizations depend on their customers, and should therefore understand their current and future customer needs, meet customer requirements and try to exceed the expectations of customers]</p>	<p>Na operativnom nivou upravljanja kvalitetom organizacije moraju učiniti napore ne samo da upravljaju zacrtanim parametrima već i da spoznaju ukupne zahteve kupca. Čak i oni sistemi za menadžment kvalitetom koji zadovoljavaju minimum zahteva (kao, na primer, QMS usaglašen sa ISO 9001), moraju u svim svojim procesima biti usredsređeni na zahteve korisnika.</p> <p>Primeri uključuju procese preispitivanja ugovora, projektovanja novih proizvoda i preduzimanja korektivnih mera. Zapravo, striktna usredsređenost na utvrđivanje zahteva korisnika je, verovatno, i najveća korist od usvajanja ISO 9001 kao modela QMS modela date organizacije.</p> <p>Stoga ovaj princip može da posluži kao platforma za razumevanje široke palete potreba, zahteva i očekivanja korisnika, bilo da se radi o karakteristikama samog proizvoda (usluge), kvalitetu isporuke, ceni ili pogodnosti za upotrebu.</p> <p>Imajući na umu definiciju kvaliteta (ISO 9000:2000), koja uz kupca stavlja naglasak i na ostale interesne grupe, ovaj princip ističe neophodnost usklađivanja potreba svih interesnih grupa.</p> <p>QMS, po pravilu, uspostavlja vezu između žalbi i reklamacija korisnika sa analizom podataka.</p> <p>Ovi procesi predstavljaju početak sistematskog tumačenja povratnih informacija od korisnika i njihove uloge u sprečavanju budućih problema.</p> <p>[When referring to the operational level of quality management, organizations have to commit themselves not only to manage the set parameters, but also to understand the total needs of the customer. Even those</p>	<p>U vezi sa ISO 9004:2000, možemo zamisliti organizacije koje u potpunosti poznaju svoje korisnike - njihove sadašnje i buduće potrebe i percepcije.</p> <p>Mnoge organizacije, sa potpuno neuređenim sistemom kvaliteta, tvrde da u potpunosti poznaju svoje korisnike. Često, one se pozivaju na svoj sektor istraživanja i razvoja, kao nekoga ko ima apsolutni uvid u korisničku populaciju, neretko sa njom nemajući nikakvog kontakta (tzv. sindrom snova).</p> <p>Međutim, u TQM okruženju sticanje uvida u korisničku populaciju se ne zasniva na pojedinačnim slučajevima, niti je stvar pojedinih sektora. Umesto toga, informacije se moraju prikupljati iz mnoštva izvora, sistematski, u svim delovima organizacije, a potom integrisati u proces koji omogućava sticanje koherentne i uravnotežene slike o zahtevima korisnika i tržišta.</p> <p>U TQM okruženju je neophodno uspostaviti mehanizme uzajamnog pružanja uvida u važne informacije i podatke. Postoje procesi kojima se utvrđuje korisnička percepcija rezultata organizacije i utiče na kretanje na tržištu.</p> <p>Kao posledica toga organizacije ovladavaju (ili, pak, ne ovladavaju) tržištem stvarajući određenu dozu korisničke lojalnosti, koja je rezultat ponude preferiranih proizvoda (roba i usluga) po povoljnim cenama, uz neophodno poštovanje zahteva i potreba unutrašnjih korisnika.</p> <p>[In relation to ISO 9004:2000, we can observe the organisations which are fully familiar with their customers - their current and future needs and perceptions.</p> <p>Numerous organizations with a completely disordered quality system</p>

Napomena: Tabela 1 se nastavlja na sljedećoj strani.

Note: Table 1 continues on the next page.

quality management systems that meet the minimum requirements (such as, for example, QMS compliant with ISO 9001), shall be focused on meeting customer requirements in any of their processes.

Examples include contract review processes, new product design and undertaking corrective actions. In fact, a strict focus on identifying user requirements is probably the greatest benefit gained from the adoption of ISO 9001 as a QMS model of the given organisation.

Therefore, this principle can be used as a platform for better understanding of a wide range of needs, requirements and expectations of customers, whether they refer to the characteristics of a product (or service), quality of supply, price or suitability for use.

With reference to the definition of quality (ISO 9000: 2000), which along with the customer emphasises other interest groups, this Principle stresses the necessity of harmonizing the needs of all interest groups.

As a rule, QMS establishes a connection between the complaints of customers with data analysis.

These processes represent the beginning of a systematic interpretation of feedback from customers and their role in preventing future problems.]

claim that they are fully familiar with their customers. They often refer to their research and development sector, as a department which has an absolute access to the customers, often without having any actual contact (so called “dream syndrome”).

However, an insight into customer population in TQM environment is not based on individual situations, nor is it a matter of individual sectors. Instead, the information have to be systematically gathered from a variety of sources in all segments of the organization, followed by their integrated into a process that allows the acquisition of a coherent and balanced picture of the customers’ and market demands.

It is necessary to establish mechanisms for mutual access to important information and data in such TQM environment. There are processes that determine customer perceptions of the organization’s results and its influence to market trends.

As a result, the organizations master (or fail to do so) the market, by creating a certain amount of customer loyalty, which is a result of the portfolio of preferred products (goods and services) at affordable prices, accompanied by the compulsory respect for the demands and needs of internal customers/users.]

Princip 2: LIDERSTVO

- Lideri uspostavljaju jedinstvo svrhe postojanja i pravaca delovanja organizacije. Oni treba da uspostave i održavaju takvu unutrašnju klimu u kojoj ljudstvo postaje uključeno u sve aktivnosti koje vode postizanju ciljeva organizacije.

[Principle 2: LEADERSHIP

- Leaders establish unity of purpose and direction of the organisation. They should create and maintain the internal environment in which people can become fully involved in achieving the organisations quality objectives]

U svakoj organizaciji postoje rukovodioci na svim nivoima rukovođenja. Neosporno je da je najviše rukovodstvo odgovorno za uspostavljanje vizije i strateških pravaca u svim aspektima poslovanja, uključujući menadžment kvalitetom i sistem menadžmenta kvalitetom.

U svakoj dimenziji QMS-a neophodno je ispoljiti liderstvo kao garant ispravnog uspostavljanja i sprovođenja unutrašnjih i spoljašnjih procesa koji rezultuju povećanjem produktivnosti i zadovoljstva korisnika.

[Each organization has leaders at each management level. It is undisputed that the highest level of man-

U organizacijama koje u svojim stremljenjima ka izvrsnosti koriste ISO 9004, liderstvo poprima dimenzije ličnog; menadžeri moraju neprekidno sopstvenim primerom uticati na stvaranje klime koja rezultuje visokim nivoom zadovoljstva korisnika.

U ovom slučaju lideri kvalitet tretiraju kao stratešku stvar. Analiza ciljeva i preispitivanje od strane rukovodstva neizostavan su deo prakse, uz potpunu integraciju kvaliteta i planova za ljudske resurse u strateške biznis planove.

[In the organizations which strive towards excellence using ISO 9004, the leadership assumes a personal dimension; managers must constantly

Napomena: Tabela 1 se nastavlja na sljedećoj strani. *Note:* Table 1 continues on the next page.

	<p>agement is responsible for establishing the vision and setting a strategic direction in all aspects of business, including quality management and Quality Management System.</p> <p>Leadership within each dimension of QMS is necessary to act as a guarantee of proper establishment and implementation of internal and external processes, resulting in increased productivity and customer satisfaction.]</p>	<p>lead by example and creating an environment resulting in high level of customer satisfaction.</p> <p>In this case, leaders treat quality as a strategic matter. Analysis of objectives and review by the management are an indispensable part of the practice, with full integration of quality and plans for human resources in strategic business plans.]</p>
<p>Princip 3: UKLJUČIVANJE SVIH ZAPOSLENIH</p> <p>- Najvažniji resurs svake organizacije predstavlja ljudstvo, a njegovo uključivanje u poslovanje predstavlja priliku da se postojeći korpus znanja, veština i sposobnosti iskoristi na dobrobit cele organizacije.</p> <p>[Principle 3: INVOLVEMENT OF PEOPLE</p> <p>- People at all levels of an organization are the essence of it. Their complete involvement in the business operations enables their abilities, knowledge and experience to be used for the benefit of the organization.]</p>	<p>Osnovni sistem menadžmenta kvalitetom treba da obezbedi okruženje u kome su svi pojedinci kvalifikovani i sposobni da izvode procese koji su im povereni. Obuka i sticanje kvalifikacije za obavljanje određenih procesa integralni su deo QMS-a. Organizacije moraju visoko vrednovati sposobnost svojih zaposlenih kojom oni doprinose unapređenju. Primeri njihovog doprinosa obuhvataju učešće zaposlenih u procesima za preduzimanje korektivnih mera, timovima za uvođenje novih proizvoda ili procesa, poboljšanje mera bezbednosti i sl.</p> <p>[Basic Quality Management System should provide an environment where all individuals are qualified and able to perform the processes entrusted. Training and qualification to perform certain processes are an integral part of the QMS. Organizations should highly value the abilities of their employees used to contribute to its improvement. Examples of their contribution include employee participation in the processes for taking corrective measures, their participation in the teams in charge for the introduction of new products or processes, improvement of security measures and the like.]</p>	<p>Većina organizacija je ovladala znanjima neophodnim za uključivanje zaposlenih u procese unapređenja poslovne prakse. Postojanje procesa kojim se uspostavlja komunikacija između lidera i zaposlenih. Lideri su ti koji moraju obezbediti potpunu usaglašenost ciljeva organizacije i ličnih ciljeva zaposlenih. Na sadašnjem stupnju razvoja u organizacijama postoji svest o neophodnosti zajedničkog raspolaganja podacima i informacijama, tj. obezbeđivanju njihove dostupnosti svim zaposlenima. Na ovaj način postiže se visok nivo shvatanja ciljeva organizacije.</p> <p>[Most organizations have fully mastered the skills and knowhow required for introduction of employees processes of improving business practices. There are processes which establish communication between leaders and employees. The leaders are to ensure full compliance of the organization's goals and personal goals of employees. Current stage of development in organizations brings awareness of the necessity of joint management of information, i.e. ensuring their availability to all employees. This way ensures a high level of understanding of the organization's objectives.]</p>
<p>Princip 4: PROCESNI PRISTUP</p> <p>- Željeni rezultati postižu se mnogo efikasnije ukoliko se menadžment resursima i aktivnostima vrši kroz procese.</p> <p>[Principle 4: PROCESS APPROACH</p> <p>- A desired result is achieved more efficiently when related resources and activities are managed in an organisation as a process.]</p> <p><i>Napomena:</i> Tabela 1 se nastavlja na sljedećoj strani.</p>	<p>Osnovna postavka ISO 9001:2000 je procesni pristup svim aktivnostima u okviru jedne organizacije. Novi, procesni model je mnogo lakši za primenu nego stari hijerarhijski model zbog toga što on u stvari odražava način na koji većina organizacija i posluje - kao lanac ulaza i izlaza.</p> <p>Bazična postavka sistema menadžmenta kvalitetom podrazumeva jas-</p>	<p>Po ISO 9004:2000 organizacije su usredsređene na optimizaciju resursa u okviru svakog procesa, procese je uvek moguće unaprediti, a u organizaciji moraju postojati aktivnosti namenjene ostvarenju planiranih unapređenja.</p> <p>Uz neophodno razumevanje procesa, sveprisutne su aktivnosti merenja parametara procesa. Radi utvrđivanja</p> <p><i>Note:</i> Table 1 continues on the next page.</p>

no definisane procese projektovanja, proizvodnje i isporuke proizvoda (roba i usluga), kao i procese koji obezbeđuju zadovoljenje zahteva korisnika. U ovakvom okruženju težište upravljanja se premešta sa kvaliteta proizvoda na upravljanje procesima.

Procesi kao što su preduzimanje preventivnih i korektivnih mera, obavljanje odita i preispitivanje od strane rukovodstva neizostavni su deo svakog QMS-a.

[The basis of ISO 9001: 2000 is a process approach to all activities within an organization. A new process model is much easier to apply than the old hierarchical model, due to the fact that it actually reflects the method used by the majority of organizations - as a chain of inputs and outputs.

The basic setting of Quality Management System with implies clearly defined processes of design, production and delivery of products (goods and services), as well as the processes that ensure the satisfaction of user needs. In such environment, the focus of management is transferred from the quality of the product onto process management.

Processes such as taking preventive and corrective measures, conducting audits and review by the management are integral part of every QMS.]

aktivnosti neophodnih za realizaciju unapređenja, rezultati merenja izlaza procesa moraju se neprekidno korelirati sa rezultatima merenja u ključnim tačkama procesa.

[According to ISO 9004: 2000 organizations are focused on resources optimization within each process. It is always possible to improve a process, while certain activities must be aimed at achieving the planned improvements within an organization.

Alongside with the necessary understanding of the process, activities of measuring process parameters are ubiquitous. In order to determine activities necessary for the implementation of improvement, the results of output measurement of the process must be continuously correlated with the results of measurements at key points of the process.]

**Princip 5:
SISTEMSKI PRISTUP
MENADŽMENTU**

- Utvrđivanje, shvatanje i menadžment sistemom međusobno povezanih procesa, usmerenih na postizanje datog cilja, poboljšavaju se efektivnost i efikasnost organizacije.

**Principle 5:
SYSTEM APPROACH TO
MANAGEMENT**

- Identifying, understanding and managing as a system all interrelated processes, focused onto achieving given quality objectives contributes to an organization's effectiveness and efficiency.

Razvojem bazičnog QMS-a, organizacije počinju sa integrisanjem procesa za proizvodnju roba i usluga sa procesima namenjenih verifikaciji zadovoljenja potreba korisnika.

Na ovom nivou naglasak je na razvoju QMS -a primerenog trenutnom stanju organizacije, koji je svrsishodan za zadovoljenje zahteva korisnika.

Na ovom nivou izazov predstavlja stvaranje svrsishodnog sistema sa potpuno integrisanim procesima, uz istovremeno izbegavanje nepotrebne papirologije i birokratije.

Na ovom nivou svrha QMS-a je postizanje zadovoljstva korisnika.

Primenjujući smernice ISO 9004:2000, organizacija u potpunosti ovladava interakcijom različitih procesa u svome poslovanju. Procesi su usaglašeni međusobno, a, takođe, i sa ciljevima organizacije.

Na ovom nivou organizacije su usredsređene na postizanje rezultate neprekidnim unapređivanjem sistema menadžmenta. Iako postizanje zadovoljstva korisnika i dalje ostaje osnovni pokretač poslovnog uspeha, organizacije mogu sada da koriste podatke o svojim procesima, zajedno sa povratnim informacijama, za strateško odlučivanje i opšte poslovno planiranje.

Napomena: Tabela 1 se nastavlja na sljedećoj strani. *Note:* Table 1 continues on the next page.

Apsolutno svrsishodni sistemi koriste rezultate merenja zadovoljstva korisnika, kao i druge relevantne podatke, za svakodnevne menadžerske aktivnosti i odlučivanje. Proces preispitivanja od strane rukovodstva je usavršen do te mere da se rezultati ovog procesa, zajedno sa rezultatima odita, mogu koristiti za proveru efektivnosti sistema.

[By developing basic QMS, organizations start with the integration process of the production of goods and services with the process of verification intended for satisfying the needs of the customer.

At this level, the emphasis is on the development of QMS suitable to the current state of the organization, which is adequate and required for the purpose of meeting user requirements.

At this level, the challenge is to create a functional system with fully integrated processes, while avoiding unnecessary paperwork and bureaucracy.

At the same level, the purpose of QMS is to achieve customer satisfaction. Absolutely functional and meaningful systems use the results of measurements of user satisfaction, as well as other relevant data for the daily management activities and decision-making. The Review process by the management was perfected to such an extent that the results of such process, together with the results of the audit, may be used to verify the effectiveness of the system.]

[By applying the guidelines of ISO 9004: 2000, the organization fully mastered the interaction of different processes in its business.

The processes have been aligned both mutually and with the organization's objectives.

At this level, the organizations are focused on achieving results by continuous improvement of management systems. Although achieving customer satisfaction remains to be the primary driver of business success, organizations can now use data on their own processes, alongside with feedback information, for the purpose of strategic decision-making and general business planning.]

**Princip 6:
NEPREKIDNO POBOLJŠAVANJE**
- Neprekidno poboljšavanje mora biti stalni cilj organizacija.

**Principle 6:
CONTINUAL IMPROVEMENT**
- Continual improvement should be a permanent quality objective of an organisation.

U ovom stadijumu postoje ustanovljeni zreli i robusni korektivni, kao i preventivni procesi.

Organizacije su usredsređene na unapređivanje efektivnosti sistema menadžmenta kvalitetom, zasnovanom na činjenicama (Princip 7) dobijenim svrsishodnim merenjima (uz korišćenje statističkih metoda).

[This stage is characterised by mature and robust corrective as well as preventive processes.

Organizations are focused on im-

U ovom stadijumu lideri postavljaju ciljeve na bazi merenja zadovoljstva korisnika i unutrašnjih performansi. Postoji podsticaj da se postignu motivišuće postavljeni ciljevi. Lideri su i sami uključeni u proces unapređivanja, kao i u obezbeđivanje resursa neophodnih za postizanje ciljeva. Organizacije su usredsređene na efikasno zadovoljavanje budućih zahteva korisnika i postizanje poslovnih rezultata kroz sistem menadžmenta kvalitetom.

[At this stage, leaders set goals based

Napomena: Tabela 1 se nastavlja na sljedećoj strani. *Note:* Table 1 continues on the next page.

proving the effectiveness of the Quality Management System, based on facts (Principle 7) obtained by adequate and meaningful measurements (with the use of statistical methods).

on the measurement of customer satisfaction and internal performance. There is an incentive to achieve the motivating preset objectives.

The leaders themselves are involved in the process of improvement, as well as in providing the resources necessary to achieve the objectives. Organizations are focused onto efficient fulfilment of future demands and achievement of business results through Quality Management System.]

**Princip 7:
ODLUČIVANJE NA OSNOVU
ČINJENICA**

- Svrsishodne odluke zasnivaju se na analizama podataka i informacija.

**[Principle 7:
FACTUAL APPROACH TO DE-
CISION MAKING**

- Effective decisions are always based on the data analysis and information.]

Činjenice i podaci koriste se u sistemu menadžmenta kvalitetom za donošenje odluka koje se odnose na rad sistema. Do informacija se dolazi analizom rezultata odita, korektivnih aktivnosti, performansi procesa, žalbi korisnika, kao i drugih izvora. Analize se fokusiraju na podatke koji se mogu upotrebiti za unapređivanje zadovoljstva korisnika i efikasnosti i efektivnosti sistema menadžmenta kvalitetom.

[Facts, figures and data are used in Quality Management System for decision-making related to system operation. The information are obtained by analyzing the results of audits, corrective actions, process performance, customer complaints, as well as by other sources. The analyses are focused on the data that can be used for the improvement of customer satisfaction as well as of the Quality Management System efficiency and effectiveness.]

Odluke i aktivnosti zasnivaju se na analizi širokog spektra podataka. Podaci u vezi sa korisnicima dobijaju se iz svih raspoloživih izvora da bi se što više saznalo o tome šta je presudno za poboljšanje tržišne pozicije organizacije. Tehnike kao što su fokusne grupe, ankete i praćenje trendova rutinski se koriste da bi se zasigurno razumele potrebe i očekivanja korisnika. Informacije se dobijaju analizom podataka i kroz inovativne ideje svih iz organizacije. Usresređenost je na poboljšanju produktivnosti, uz eliminaciju otpada i dorade, kao i povećanje tržišne vrednosti.

[Decisions and activities are based on the analysis of a wide range of data. Customer-related data are obtained from all available sources in order to gather as many information as possible for the purpose of gathering more information on what is crucial for the improvement of the organization's current market position. Techniques such as focus groups, surveys and monitoring trends are routinely used to fully understand the needs and expectations of customers/users. Information are obtained through data analysis and innovative ideas coming from everybody within an organization. The focus is on the productivity improvement, with the elimination of waste and processing at the same time, as well as with a simultaneous increase in market value.]

Napomena: Tabela 1 se nastavlja na sljedećoj strani. *Note:* Table 1 continues on the next page.

Princip 8:**UZAJAMNO KORISNI ODNOSI SA ISPORUČIOCI**

- Organizacije i njihovi snabdevači su međusobno zavisni, tako da uzajamno korisni odnosi povećavaju sposobnost i jednih i drugih da stvaraju vrednost.

[Principle 8:**MUTUALLY BENEFICIAL SUPPLIER RELATIONSHIPS**

- Organisations and their suppliers are interdependent. Therefore a mutually beneficial relationship between them increases the ability of both to add value.]

Razvojem sistema menadžmenta kvalitetom organizacije ovladavaju sopstvenim procesima, dokumentujući zahteve koje snabdevači moraju da zadovolje. Među postojećim procesima moraju se naći i oni za ispitivanje i ocenu sposobnosti snabdevača da zadovolje te zahteve, kao i oni za procenu usaglašenosti ciljeva organizacije i njenih snabdevača.

[Development of the Quality Management System enables the organizations to master their own processes by registering the demands that suppliers are to meet. The existing processes should include those for reviewing and evaluating the ability of suppliers to fulfil such demands, as well as those used for assessment of objective compliance of the organization and its suppliers.]

Uspostavljanjem strateških alijansi i partnerstva postojeća orijentacija se menja. U mnogim slučajevima organizacije uključuju snabdevače u rane faze definisanja zahteva zajedničkog razvoja i simultanog inženjeringa.

Organizacije saraduju sa snabdevačima, razvijajući uzajamno poverenje, poštovanje i posvećenost zadovoljstvu korisnika. Zajednički naponi na neprekidnom unapređivanju postali su standard ponašanja za obadve strane.

Briga za sistem za menadžment kvalitetom snabdevača postaje stalno prisutna.

[The existing orientation is changed by establishing strategic alliances and partnerships. In many cases, organizations include suppliers in the early stages of defining requirements of common development and simultaneous engineering.

Organizations cooperate with suppliers, developing mutual trust, respect and commitment to customer satisfaction. Joint efforts on the continuous improvement have become standard behaviour for both sides.

Care for a Quality Management System of suppliers is becoming continuously present.]

Uvođenje integriranih sistema menadžmenta zahteva mnogobrojne promene u preduzeću, od promena u procesima i procedurama do promena u čitavoj filozofiji poslovanja i celokupnoj kulturi preduzeća. Integracija menadžment sistema je racionalan i prirodan put koji zadovoljava različite standarde, a, istovremeno, podiže nivo sposobnosti preduzeća i njegovo približavanje ciljevima izvrsnosti.

Standardizacija menadžment sistema postaje ključni zadatak menadžera i pitanje opstanaka preduzeća u dvadeset prvom veku. Pored vlasnika preduzeća, čiji je prioritet profit i što brže uvećanje uloženog kapitala, različite zainteresovane strane: kupci, društvena zajednica, zaposleni, isporučioци i vlada, na organizovan način vrše sve veći pritisak i postavljaju zahteve da preduzeća adaptiraju svoj menadžment sistem prema različitim

Introduction of integrated management systems requires numerous changes in the company. Starting from the changes in processes and procedures to changes in the entire business philosophy and culture of the company. Integration of a management system is a rational and natural path that fulfils various standards and simultaneously increases the ability of a company and its convergence towards the objectives of excellence.

Standardization of management systems is becoming a key task of managers, as well as the survival issue of enterprises in the twenty-first century. In addition to the company's owner, whose priority is profit and the fastest possible increase of the funds invested, the various interested parties: customers, community, employees, suppliers and the government, manage to increase the pressure in an organized manner and set requirements for the companies to adapt their management system

standardima kako bi unapred bili sigurni da će ispuniti njihova očekivanja. Menadžeri koji se bore sa porastom složenosti tehnoloških, organizacionih i socijalnih problema, teško mogu da shvate moderne trendove u razvoju menadžment sistema zasnovane na konceptu totalnog kvaliteta. Pojava standarda ISO 9000 i modela izvrsnosti dovela je do primene ovog koncepta: sa jedne strane, postavljenog kao tržišne barijere, a, sa druge strane, kao metoda za unapređenje konkurentnosti i efikasnosti, smanjenje troškova i dugoročan održiv razvoj preduzeća. Sertifikacija različitih menadžment sistema: kvaliteta, životne sredine, zdravlja i bezbednosti, socijalne odgovornosti, bezbednosti hrane i drugih, postaje prioritet preduzeća. Integracija svih navedenih sistema sa postojećim sistemima u preduzeću u jedan operativan menadžment sistem predstavlja prvorazredno pitanje za njihove menadžere. Primena koncepta totalnog menadžmenta i težnja ka izvrsnosti omogućuje stvaranje jedinstvene osnove za ovu integraciju kako za kreatora standarda tako i za menadžment preduzeća.

ZAKLJUČAK

Pojava eksternog pritiska sa strane države, koji se ispoljava putem donošenja velikog broja zakona i propisa i izuzetno oštre kazne za i najmanju omašku u njihovoj primeni, te jačanja pritiska javnosti koja zahteva zdravu životnu i bezbednu radnu sredinu, nagoni preduzeća da preispitaju svoju praksu u oblasti primene sistema menadžmenta. Kada se tu dodaju i drugi razlozi kao što su troškovi usluga konsaltinga i ocenjivanja, vreme potrebno za pripremu za sertifikaciju i ograničeni ljudski resursi, postaje očigledno da firme moraju da pronađu optimalan put za istovremeno i što jeftinije zadovoljenje svih eksternih i internih zahteva.

Kada se planirani rezultati (projektovane vrednosti kvaliteta procesa) ne postignu, moraju se preduzeti korekcije i korektivne mere, gde je moguće, da bi se osigurala usaglašenost predmeta rada sa planiranim rezultatima. Pri-

according to different standards in order to make sure in advance their expectations are met. The managers who are struggling with the increasing complexity of technological, organizational and social problems, find it difficult to understand the modern trends in the development of management systems based on total quality concept. The emergence of ISO 9000 standard and models of excellence has led to the application of such concept: positioned as market barrier - on one hand, and, on the other hand, positioned as a method for improving the competitiveness and efficiency, reduction of costs and long-term sustainable development of an enterprise. Certification of various management systems: quality, environment, health and safety, social responsibility, food safety and others, is becoming a priority of companies. Integration of all the above systems with the systems already existing in the company in a unique operational management system is an important issue for their managers. The application of the total management concept and the pursuit of excellence enables unique basis for such integration both for creators of such standards and for the management of a company.

CONCLUSION

Having external pressure imposed by the state, which is manifested in the enactment of numerous laws and regulations and extremely harsh penalties and fines even for the slightest omission in their implementation, as well as strengthening of pressure imposed by the public requiring a healthy and safe working environment, urges companies to reconsider their practice in the field of management system application. Adding other factors to the equation, such as the cost of consulting and cost of assessment, the time required to prepare for certification as well as limited human resources, it becomes evident that companies are required to find the optimal path to simultaneously fulfil all external and internal requirements as cheaply as possible.

In case the planned results (projected value of the process quality) are not achieved, certain corrections and corrective measures are to be taken where possible, in order to ensure compliance of the objectives with the planned results. In the

likom sprovođenja korektivnih mera potrebno je utvrditi uzrok nastajanja neusaglašenosti i definisati i primeniti neophodne mere koje će osigurati da se neusaglašenosti ne ponove. Sa stanovišta efikasnog i efektivnog upravljanja procesima bitno je potencijalni problem uočiti što je ranije moguće, pre nastanka neusaglašenosti. Ukoliko se praćenjem karakteristika kvaliteta procesa uoči, na osnovu trenda karakteristika, da proces neće biti u mogućnosti da ostvari planirane rezultate, tada se moraju preduzeti preventivne mere kako bi se sprečile potencijalne neusaglašenosti.

Zbog konkurencije i napretka tehnike, organizacije su primorane da stalno poboljšavaju svoje proizvode i procese. Pored inkrementalnih unapređenja „korak po korak“ potrebno je i radikalno unapređenje kvaliteta procesa, pošto se potrebe i očekivanja korisnika stalno menjaju. Praćenjem bitnih karakteristika kvaliteta, pratimo stepen ispunjenja zahteva svih korisnika, što, u stvari, predstavlja sintetizovan pokazatelj indeksa zadovoljstva korisnika.

LITERATURA

Culbertson, A., Houston, A., Faast, D., White, M., Aguirre, M. & Behr, C. (1997). *Total Quality Leadership Office: The Process Improvement Notebook*. Department of the Navy.

ISO. (2001). *ISO 9000 Introduction and Support Package: Guidance on the Process Approach to quality management systems*. Autor

Luning, P.A., Devlieghere, F., & Verhé, R. (2006). *Safety in the agri-food chain*. Wageningen Academic Publishers.

SZS. (n.d.). Sistemi menadžmenta kvalitetom - Uputstva za poboljšavanje performansi. Preuzeto 29. septembra 2014. sa sajta http://rp-kns.com/~rp-knsco/images/stories/ekologija/Uputstva_za_poboljsanje_performanci.pdf.

U.S. Department of Energy. (1995). *How to Measure Performance A Handbook of Techniques and Tools*. Autor.

implementation of such corrective measures it is necessary to determine the cause of nonconformities and define and implement the necessary measures to prevent repetition of the nonconformities. From the standpoint of efficient and effective process management, it is essential to notice potential problems as early as possible, prior to the nonconformities occur. If the monitoring of process quality characteristics demonstrates, on the basis of the trend of characteristics, that the process will not be able to accomplish the planned results, it is then necessary to engage preventive measures to prevent potential nonconformities.

Due to the competition and technical advances, organizations are forced to constantly improve their products and processes. In addition to incremental “step by step” improvements it is necessary to radically improve the process quality, since the needs and expectations of users are constantly changing. By tracking the essential characteristics of quality, we are able to monitor the level of fulfilling the requirements of all users, which, in fact, represents a synthesized indicator of user satisfaction index.

LITERATURE

Culbertson, A., Houston, A., Faast, D., White, M., Aguirre, M. & Behr, C. (1997). *Total Quality Leadership Office: The Process Improvement Notebook*. Department of the Navy.

ISO. (2001). *ISO 9000 Introduction and Support Package: Guidance on the Process Approach to quality management systems*. Autor

Luning, P.A., Devlieghere, F., & Verhé, R. (2006). *Safety in the agri-food chain*. Wageningen Academic Publishers.

SZS. (n.d.). Quality management system - Guidelines for performance improvements . Retrieved September 29, 2014. from http://rp-kns.com/~rp-knsco/images/stories/ekologija/Uputstva_za_poboljsanje_performanci.pdf.

U.S. Department of Energy. (1995). *How to Measure Performance A Handbook of Techniques and Tools*. Autor.