Upravljanje znanjem u funkciji efikasnijeg poslovanja preduzeća mašinske industrije

Pero Petrović^{1*}, Dobrica Vesić^{2,3}

¹Institute of International Politics and Economics, Makedonska 25, Belgrade, Serbia

²Institute of International Politics and Economics, Belgrade, Serbia

³University Bossiness Academy, Novi Sad, Serbia

In modern business organizations knowledge is considered to be the basic resource for an organisation's work quality and competitiveness improvement. Open organizations insist on developing, organizing and using of knowledge. The knowledge that an organization creates should increase its value. This is made possible by adequate knowledge management. The paper presents the basic characteristics of an open organization, aspects of knowledge management, as well as the elements of an organization's knowledge life cycle. In business, guidance on the processes in organizations, the focus of activities for the products and services on the set of activities and factors shape the machinery products and services. Key position and contribution to the successful business processes and organizations belong to the knowledge workers who are the two basic pillars of modern enterprise of machinery. Business performance of hotels is focused to the determination and realization of goals in the areas of research and development, the introduction of innovation and improves performance of products to meet the identified and unidentified needs of consumers. Requirements of innovative business are focused on constant improvement of human resources, acquiring new knowledge of employees and management to be created and realized the value for the organization and stakeholders. The transformation of knowledge in the essential resource, human resources management delegate new tasks, challenges, requirements and responsibilities for the preservation of market competitiveness and the achievement of positive business results.

Keywords: knowledge, knowledge management, processes, profit, company

1. UVOD

Znanje zaposlenih i menadžmenta u preduzeću mašinske industrije, kao proizvodni faktor, postaje sve značajnije za savremeno poslovanje. Potreba da preduzeća ulažu u ovaj resurs, u vrlo specifičnom kriznom periodu, postaje sve izraženija povećanjem konkurentnosti na tržištu, generisanjem kriza poslovanja kao produkt tržišnog zaostajanja u pogledu konkurentnosti usluga i proizvoda ili faza razvoja samog preduzeća. Preduzeća koja pre shvate da je to neminovnost pre će moći da procene svoje znanje, da steknu dodatne kompetencije i unaprede svoju tržišnu poziciju. Ovo je veoma veliki izazov za sva preduzeća u Srbiji i sigurno da za ovakav menadžerski stav ima mesta, obzirom da mnoga preduzeća prolaze ne samo kroz proces restrukturiranja, već imaju sve više problema sa očuvanjem konkurentnosti na domaćem a posebno međunarodnom tržištu. Znanje ili intelektualni kapital podrazumeva patente, tehnologije, veštine, upravljanja, marketinške i tržišne informacije, podatke o konkurentima, istraživanja o partnerima i dobavljačima, ideje za unapređenje procesa i procedura. Potreba za znanjem i primenom znanja u procesima u preduzeću kojima se uvećavaju i realizuju vrednosti na tržištu, zahteva promene u organizovanju procesa i podršci koje hotel dobija kroz mere stimulisanja naučno istraživačkog rada i rada na osavremenjavanju poslovanja od strane države. Promene strukture preduzeća kao i njegovog portfolija kojima se kroz nove proizvode, inovacije i poboljšanja stiče i održava konkurentnost na tržištu, uslovljene su stvaranjem ambijenta za generisanje i primenu novog znanja.

Prvi korak je prikupljanje i generisanje znanja dok je sledeći korak pokretanje i upravljanje znanja pomoću prikladnih alata što će uvećavati kapacitet i potencijal preduzeća. Iskazivanje kapaciteta i potencijala preduzeća transparentno se prikazuje pomoću faktora vrednosti znanja - *KnoVa faktor*, koji je osnovni pokazatelj potencijala preduzeća za stvaranje dodatne vrednosti. Istovremeno zaposleni znanja odnosno stručnjaci pružaju usluge i edukaciju na svim nivoima tako da postoji stalni i nesmetan tok i razmena znanja u samom preduzeću što stvara dodatne vrednosti. U savremenim uslovima poslovanja strateške pozicije organizacije, u prvom redu, zavise od mesta koje ima u jedinstvenom, međuzavisnom naučno-tehnološkom i proizvodnom razvoju. Konkurentnost organizacije vezuje se, pre svega, za: rezultate poboljšanja i inovacije proizvoda i procesa; unapređenje u aktivnostima poslovanja sa subjektima iz okruženja; kontinuitet i stabilnost razvoja; stratešku poziciju koju ima u okruženju. Osnovni faktor koji opredeljuje stratešku poziciju i konkurentnost organizacije jeste njeno znanje. Organizacija mora da bude otvorena za kreiranje, inoviranje, korišćenje i unapređivanje znanja. U otvorenoj organizaciji novo znanje postaje znanje organizacije, nezavisno od njegovog izvora. Organizacija, takođe, mora da ima potencijal za upravljanje znanjem. U radu se analiziraju prednosti otvorene organizacije, aspekti upravljanja znanjem, razlike između korišćenja, procesuiranja i upravljanja znanjem, kao i životni ciklus znanja organizacije.

2. OPERATIVNO UPRAVLJANJE TOKOVIMA ZNANJA

Potreba za operativnim upravljanjem znanja polazi od niske produktivnosti preduzeća. Preduzeća mogu svoje vrednosti uvećavati operativnim upravljanjem tokovima znanja tako što će svoje postojeće generisano znanje učiniti efikasnijim, bolje povezanim i inovativnim sa konstantnim unapređenjima. Efikasnost znanja se ogleda kroz dobru i organizovanu upotrebu informacione tehnologije, elektronske baza podataka koje moraju svakog trena biti dostupne što podrazumeva uštedu u vremenu odnosno smanjenje troškova. Povezanost znanja se vidi kroz saradnju i protok znanja između zaposlenih kroz sve poslovne jedinice u svim potrebnim pravcima što je i deo strategije poslovanja. Brzina protoka i tačnost informacija povećava performanse preduzeća kao i poslovni učinak. Posmatrajući tokove povezanosti znanja kroz preduzeća stvara se dodatna vrednost putem identifikacije najefikasnije prakse u preduzeću a istovremeno se razvija jedinstveni potencijal tima i naravno sveukupna korist preduzeća.

Generisati vrednosti kroz znanje podrazumeva da preduzeća moraju zadržavati i podržavati znanja, upravljati radnicima znanja odnosno stručnjacima kako bi pretvarili znanja u vrednosti. Znanje zaposlenih može biti izgubljeno zauvek ako zaposleni pređu u drugo preduzeće. Zato se smisao generisanja znanja odnosi na niz složenih odluka koje obuhvataju :

- strategiju za sticanje dodatnih vrednosti,
- organizaciju baziranu na timskom radu,
- profesionalcima znanja obezbediti ključne kompetencije uz pomoć motivisanja i sistema nagrađivanja,
- znanje koje će biti usmereno na konstantna unapređenja upravljanja tokovima znanja zasnovanih na vrednosti.

Znanje se uvećava kada se razmenjuje. Kombinacija vrednosti i uverenja vodi ka stavu prema znanju i ponašanju koje je od suštine važnosti za uvećanje vrednosti preduzeća prema znanju. Tako profesionalci odnosno stručnjaci mogu da uče prateći najnovija zbivanja. Oni mogu da daju, razmenjuju i uzimaju znanje a preduzeće profitira sticanjem kodifikovanog znanja. Stav prema znanju zauzima pojedinac kroz vrednosti odnosno samoocenjivanje, kroz uverenje da je on odgovoran za učenje i svojim ponašanjem teži ka učenju. Specijalizovani timovi stav prema znanju pokazuju kroz uverenje da njihovo znanje raste dok se njime služe i dok ga razmenjuju. Preduzeća svoje vrednosti iskazuju kroz poverenje timovima i pojedincima jer od svih tih znanja preduzeća imaju korist i uspon.

3. STRATEŠKO UPRAVLJANJE TOKOVIMA ZNANJA

Strateško upravljanje tokovima znanja je osnovni zadatak menadžmenta u preduzeću. Svi osnovni problemi preduzeća mogu da se reše sa dobro uspostavljenim odnosima u tom preduzeću. Dobro informisanje sa obiljem informacija, brzi internet na svim nivoima su sistemi koji neće uticati na odluku zaposlenih da rade na dobrobit preduzeća ili svoju ličnu potrebu. Da bi se zaposleni u preduzeću podstakli na saradnju mora doći do izražaja

strateško upravljanje tokovima znanja. Potrebno je uspostaviti saradnju i odrediti razmene i smer mišljenja o potrebnim ciljevima i mogućnostima. Na taj način će znanje moći da se pretvori u tržišnu vrednost. Pravilan odnos među zaposlenima u preduzeću koji tokom svog radnog veka proizvode znanja, moraju se motivisati dodelom adekvatnih poslova i kompetencija. Na taj način oni će biti inspirisani ka sadržajnijem izražaju kreativnosti, fleksibilnosti i sigurnosti. Ovakav stav prema zaposlenima oslikava transparentnu strukturu koja omogućava da svaki pojedinac uoči svoju poziciju i vidi vrednosti svoga rada u hotelu u celini. Transparentna struktura je zasnovana na razvoju i timskom radu a postiže se strateškim upravljanjem tokovima znanja. Strateško upravljanje tokovima znanja je nadgradnja operativnog upravljanja tokovima znanja koje zajedno integrisana, u vezi, i sa stalnim unapređenjima, poboljšavaju poziciju preduzeća.

4. NOVI STILOVI ORGANIZOVANJA

Rukovodeći menadžment preduzeća treba da na osnovu vrednosti faktora znanja KnoVa-faktor-a odredi poziciju preduzeća. Upravljački menadžment treba da pristupi operativnom a potom strateškom upravljanju tokovima znanja odnosno da kreira nova znanja koje uvećava vrednosti što je veoma kompleksan i vrlo odgovoran zadatak. Takvom stavu prema znanju u preduzeću bi trebalo da se priklone svi zaposleni. Potrebno je da se uspostave kontinualne razmene znanja jer znanje mora postati transparentno. Preduzeća mašinske industrije bi sa takvom promenom postala konstruktivnija. Otpor promenama stvaraju kulture znanja zasnovane na ideji da je znanje moć a pojedinci sa znanjem moćni i kao takvi pojedinačno napreduju a preduzeća nemaju adekvatnu dobit. Naravno ključne sposobnosti preduzeća se ogledaju kroz sposobnosti za inoviranje, za brze i fleksibilne dogovore, sposobnosti za predviđanja, kreiranja i učenja kao i istrajnost. Uspeh i budućnost preduzeća zavisi od kolektivne sposobnosti da koristi sveukupno znanje, mišljenja, iskustva i integraciju svih zaposlenih. Naravno to podrazumeva povećanja nivo usluga kao i nivoa sadržaja znanja.

Vođenje zaposlenih a upravljanje procesima i tokovima znanja vodi ka prosperitetu. Osnovna suština je da preduzeća shvate važnost znanja kroz procenu njegove vrednosti i tako stvore mrežu znanja koja omogućava svakom zaposlenom da upotrebi znanje i veštine ostalih zaposlenih.

Novi stil preduzeća mora da bude dinamičan, spremna da uči, da ima bogat priliv informacija, da razmišlja globalno, da ima orijentaciju na veštine, ka timskom radu, proizvodu/klijentu, da je upravljanje latentno i umreženo. Kada se promene izazovi i zahtevi mora da se menja kao i samo preduzeće. Ono mora ponovo da pronađe svoju svrhu, ciljeve i načine rada. Suština je u prilagođavanju koje nikada ne prestaje.

5. OTVORENA ORGANIZACIJA U PREDUZEĆU

Otvorena organizacija predstavlja normativni model organizacije u kojoj procese identifikovanja problema, formulisanja zahteva za neophodnim znanjem, njihovog testiranja i nepekidnog procenjivanja, odlikuje transparentnost, poverenje, sveobuhvatnost i otvorenost. Iz

definicije proističu i osnovne karakteristike otvorene organizacije [1]:

- otvorenost za identifikovanje problema;
- otvorenost za rešavanje problema sa stanovišta novih ideja;
- otvorenost za kritiku rešenja, teorija ili znanja, kako bi se eliminisale neusaglašenosti;
- realno izveštavanje o problemima, novim idejama i kritikama.

Prve tri karakteristike su vezane za korake u Poperovoj tetradnoj šemi. Na osnovu formulacije problema definiše se inicijalno rešenje, a zatim se u procesu evaluacije rešenja razmatraju i uklanjaju neusaglašenosti, nakon čega se identifikuju novi problemi koje je neophodno rešiti. Četvrta karakteristika ukazuje da proces rešavanja problema neće dovesti do pravog rešenja ukoliko ne postoje transparentnost i poverenje u organizaciji. Nerealno izveštavanje dovodi do neefikasnosti u procesu rešavanja problema jer (a) najozbiljniji problemi organizacije možda nisu identifikovani, (b) najbolja moguća rešenja nisu identifikovana prilikom testiranja i evaluacije, odnosno (c) alternativna rešenja nisu analizirana sa stanovišta najvećih izazova. Prednosti otvorene organizacije su: (1) kontinuirani funkcionalni procesi koji omogućavaju samoorganizaciju; (2) merljivost procesa i njihovih efekata; (3) razumevanje i naučno sagledavanje organizacije na osnovu ishoda njenih procesa. Konkurentnost otvorene organizacije je bazirana na kontinuiranoj akumulaciji i inovaciji znanja. Iz ovoga proističe bolja adaptivnost organizacije, kao i unapređenje organizacione inteligencije. Pojam organizaciona inteligencija ukazuje, pre svega, na veći kvalitet informacija. Ponekad se ovaj termin koristi: (a) za ukazivanje na agregaciju inteligencije pojedinaca koji sačinjavaju organizaciju, (b) kao sinonim za upravljanje znanjem, ili (c) za ukazivanje na kapacitet organizacije za rešavanje problema putem učenja. Problem organizacione inteligencije je problem proširivanja kapaciteta učenja u organizaciji. Organizacije su složeni adaptivni sistemi, koji se karakterišu samoorganizovanjem elemenata i definisanjem globalnih sistemskih atributa. To se potiče samoorganizujućim interakcijama pojedinaca i grupa koji sačinjavaju organizaciju.

6. UPRAVLJANJE ZNANJEM

Upravljanje znanjem je deo svakog poslovnog procesa. Evropska komisija za standardizaciju definiše upravljanje znanjem kao "upravljanje aktivnostima i procesima za sticanje znanja u cilju povećanja kompetitivnosti putem boljeg korišćenja i kreiranja pojedinačnih i kolektivnih resursa znanja". Upravljanje znanjem obezbeđuje prosljeđivanje neophodnih informacija odgovarajućim osobama u pravom trenutku. Prema Evropskoj komisiji, upravljanje znanjem podrazumeva pet osnovnih aktivnosti: identifikovanje, kreiranje, smeštanje u bazu podataka, deljenje i korišćenje znanja. Aspekti upravljanja znanjem mogu biti:

- filozofski i psihološki – ukazuju na to šta je znanje, odakle dolazi;
- organizacioni i sociološki – ukazuje na koji način kreirati i dobiti znanje;

- ekonomski i poslovni – ukazuje na koji način ekstrahovati vrednost na osnovu postojećeg znanja;
- tehnološki – ukazuju na to kako obezbediti efikasne i efektivne alate za upravljanje znanjem.

Znanje može biti eksplicitno i implicitno. Eksplicitno znanje se može izraziti formalnim i sistematskim jezikom. Može se obrađivati i čuvati veoma jednostavno. Implicitno znanje sadržano je u akcijama, iskustvu i vrednostima i, kao takvo, veoma je subjektivno i teško za formalizovanje.

Kreiranje znanja predstavlja proces interakcije između eksplicitnog i implicitnog znanja, što se obično naziva konverzija znanja. Postoje četiri tipa konverzije znanja: socijalizacija (od implicitnog znanja ka implicitnom znanju, na osnovu iskustva), eksternalizacija (od implicitnog znanja ka eksplicitnom znanju), kombinacija (od eksplicitnog znanja ka eksplicitnom znanju, složenijem ili sistematičnijem) i internalizacija (od eksplicitnog znanja ka implicitnom znanju).

Model kreiranja znanja identifikuje pet kognitivnih faktora, koji predstavljaju osnovu kognitivnog procesa, koji su navedeni u tabeli 1.

Akvizicija je proces generisanja znanja na osnovu prikupljanja informacija iz različitih izvora. Sinhronizacija je proces deljenja informacija direktnom komunikacijom ili elektronskom razmenom.

Tabela 1. Kognitivni faktori izvedeni iz modela kreiranja znanja. Izvor: [13]

Kognitivni faktor	Izvor	Rezultat
Akvizicija	Eksplicitno znanje	Implicitno znanje
Validacija	Eksplicitno znanje	Eksplicitno znanje
Sinhronizacija	Implicitno znanje	Implicitno znanje
Realizacija	Implicitno znanje	Eksplicitno znanje (kod)
Filtriranje (selekcija)	Implicitno znanje	Eksplicitno znanje (entitet)

7. ŽIVOTNI CIKLUS ZNANJA

Neophodno je razlikovati korišćenje znanja i procesuiranje znanja od upravljanja znanjem. Korišćenje znanja se javlja svaki put kada odgovarajući agent donosi odluku. Pod agentom se podrazumeva proces ili osoba koja prilagođava svoje aktivnosti shodno odgovarajućim promenama u okruženju. To je deo svakog poslovnog procesa. Procesuiranje znanja podrazumeva generisanje znanja i integraciju znanja. Generisanje znanja uključuje: (a) formulisane zahteve za znanjem, (b) pojedinačno ili grupno učenje i (c) akviziciju informacija. Integracija znanja podrazumeva: (a) emitovanje znanja, (b) pretraživanje/pristupanje znanju, (c) obučavanje i (d) deljenje znanja. Upravljanje znanjem i interakcija između procesa generisanja i integracije znanja.

Upravljanje znanjem počinje formulisanim osnovnog konceptualnog okvira za definisanje i specifikovanje znanja i obuhvata sve procese u kojima se generiše znanje, odnosno konceptualni okvir koji obezbeđuje kognitivnu mapu ovih procesa.

Ovakav okvir se obično naziva radni okvir za opisivanje životnog ciklusa znanja. Sa konceptom životnog ciklusa znanja, mnogi autori povezuju koncept ciklusa organizacionog učenja i njegovu ulogu u procesuiranju znanja i upravljanju znanjem. Neki autori, čak, veruju da ne postoji izdvojeno upravljanje znanjem, već samo ciklus organizacionog učenja.

Organizaciono učenje vezano je za načine sticanja znanja u organizaciji, odnosno za načine prilagođavanja organizacije novim potrebama i zahtevima konkurentnosti. Životni ciklus znanja, pak, treba posmatrati nezavisno od životnog ciklusa organizacionog učenja. Zapravo, životni ciklus znanja je iniciran u okviru ciklusa organizacionog učenja. Razlika između životnog ciklusa znanja i ciklusa organizacionog učenja ogleda se u procesuiranju znanja, i zasnovana je na psihologiji ljudi na pojedinačnom i grupnom nivou. Ova razlika omogućava da upravljanje znanjem bude tretirano kao poseban proces i disciplina.

Proces integracije znanja zasniva se na znanju organizacije i njegovoj integraciji unutar organizacije, a dovodi do toga da distribuirana baza znanja organizacije sadrži novo znanje koje je generisano u životnom ciklusu znanja, nasuprot znanju koje se generiše u ciklusu donošenja odluka putem učenja koje se obavlja u jednoj petlji.

Integracija podrazumeva komunikaciju sadržaja znanja organizacije sa organizacionim agentima, sa ciljem da im ukaže na odgovarajuće postojeće znanje organizacije. Takođe, neophodno je i omogućavanje korišćenja znanja putem baza znanja koje agenti mogu da koriste za pretraživanje i preuzimanje odgovarajućeg znanja. Rezultat integrisanja znanja treba da bude raspoloživ u lokalnim i distribuiranim baza znanja, i da oslikava predispozicije agenata u celoj organizaciji. Životni ciklus znanja, se sastoji od: (1) problema koje generišu poslovni procesi, (2) procesa sticanja znanja i (3) distribuirane baze organizacionog znanja, koja sadrži ishode procesa sticanja znanja, kao i znanje o specijalnim događajima i uslovima koji su definisani u ciklusu izvršavanja odluka.

Distribuirana baza znanja organizacije koristi se u okruženju za analizu poslovnih procesa, a u tom okruženju se definišu novi problemi i nove instance životnog ciklusa znanja. Distribuirana baza znanja organizacije ima veliki uticaj na strukture koje inkorporiraju organizaciono znanje, kao što su normativni poslovni procesi, planovi, organizaciona kultura, organizaciona strategija, politike, procedure i informacioni sistemi. U sprezi sa spoljašnjim resursima, ove strukture povratno utiču na funkcionalne poslovne procese u okviru ciklusa donošenja odluka. Ciklus donošenja odluka generiše nove probleme u fazama planiranja, nadgledanja i evaluacije, koji će se rešavati u sledećem ciklusu procesuiranja znanja, odnosno u novom životnom ciklusu znanja.

8. ZAKLJUČAK

U radu su analizirane prednosti otvorene organizacije, kao i životni ciklus znanja i upravljanje znanjem organizacije. Otvorena organizacija na osnovu promena u okruženju, kreiranjem novog znanja može da se menja i prilagođava, čime ostaje konkurentna na tržištu. Životni ciklus znanja organizacije predstavlja niz

aktivnosti koje omogućavaju da se na efektivan i efikasan način generiše i iskoristi novo znanje sa ciljem samoorganizovanja organizacije radi postizanja definisanih ciljeva. Dovoljno je identifikovati znanje koje poseduje preduzeće i osposobiti samo ono znanje koje ima smisao i nadgraditi njegovu vrednost. Operativno i strateško upravljanje tokovima znanja u preduzeću odnosno kreiranje transparentnog prikaza znanja zaposlenih koja se istovremeno poboljšavaju i inoviraju. Vrednost preduzeća se uvećava kroz integraciju operativnog i strateškog upravljanja tokovima znanja tako da svi zaposleni upotrebljavaju i koriste veštine, znanja i iskustva ostalih zaposlenih. Na ovakav način znanje dobija odgovarajući značaj u stvaranju dodatne vrednosti preduzeća tako što se povećava kapacitet i potencijal preduzeća kroz prikaz pozicioniranja faktora vrednosti znanja *KnoVa faktor-a*. Suština uspeha svakog preduzeća je u stalnom prilagođavanju promenama.

LITERATURA

- [1] Mr. Knowledge, The Economist, 31. may, 1997.
- [2] Thomas Stewart, Intellectual capital, The new wealth of Ogranization, Doubleday/Currency, 2003., page105.
- [3] Andrieesen D., Tisen R., The Knowledge Dividend, Copyright Pearson Education Limited, 1999.
- [4] Skills, gap Jeopardizing U.S Companies, Ability to Complete, Select Appoctments, North America, 27 april 1999.
- [5] D.Sims, S.Finemena, Y.Gabriel, Organizing & Organizations, Sage Publications, 1998.
- [6] CENWorkshop Agreement CWA 14924-1. European Guide to Good Practice in Knowledge Management, Part 1. European Committee for Standardization, 2004.
- [7] M. Notturmo, Science and the Open Society, Budapest, Hungary: Central European University Press, 2000.
- [8] Joseph M. Firestone, Mark W. McElroy, The Open Enterprise Building Business Architectures for Openness and Sustainable Innovation, KMCI Publications Group, Hartland Four Corners, Vermont, Executive Information Systems, 2003.
- [9] O. Gendrau, P.N. Robillard, "Exploring Knowledge Flow in Software Project Development", In Proc. of the International Comference on Information, Process, and Knowledge Management eKNOW 2009, Kankun, Mexico, 2009, pp. 99-104.
- [10] Second Annual E-Business Cconference, The Economist Conferences, 27-28 October 1999., Case studies,
- [11] <http://www.eresources.com/presentations/mcginnis/tsld023.htm>
- [12] Steven E. Prokesch, Unieashing the Power Of Learning, Harvard Business review, October 1997.
- [13] J. Hong and P. Stähle. *The coevolution of knowledge and competence management*. Int. J. Management Concepts and Philosophy, 1(2):129–145, 2005.

Knowledge Management in the Function of More Effective Business of Companies in the Machine Industry

Pero Petrovic^{1*}, Dobrica Vesic^{2,3}

¹Institute of International Politics and Economics, Makedonska 25, Belgrade, Serbia

²Institute of International Politics and Economics, Belgrade, Serbia

³University Bossiness Academy, Novi Sad, Serbia

In modern business organizations knowledge is considered to be the basic resource for an organisation's work quality and competitiveness improvement. Open organizations insist on developing, organizing and using of knowledge. The knowledge that an organization creates should increase its value. This is made possible by adequate knowledge management. The paper presents the basic characteristics of an open organization, aspects of knowledge management, as well as the elements of an organization's knowledge life cycle. In business, guidance on the processes in organizations, the focus of activities for the products and services on the set of activities and factors shape the machinery products and services. Key position and contribution to the successful business processes and organizations belong to the knowledge workers who are the two basic pillars of modern enterprise of machinery. Business performance of hotels is focused to the determination and realization of goals in the areas of research and development, the introduction of innovation and improves performance of products to meet the identified and unidentified needs of consumers. Requirements of innovative business are focused on constant improvement of human resources, acquiring new knowledge of employees and management to be created and realized the value for the organization and stakeholders. The transformation of knowledge in the essential resource, human resources management delegate new tasks, challenges, requirements and responsibilities for the preservation of market competitiveness and the achievement of positive business results.

Keywords: *knowledge, knowledge management, processes, profit, company*

1. INTRODUCTION

Knowledge of employees and management in the enterprise of mechanical industry, as a factor of production, becomes increasingly important for modern business. The need for companies to invest in this resource, in a very specific period of crisis, it is becoming more pronounced increasing competitiveness in the market, generating business crisis as a product of market lagging behind in terms of competitiveness of products and services or the stage of development of the enterprise. Companies that earlier understand that this is inevitable sooner they will be able to assess their knowledge, to gain additional competencies and improve their market position. This is a very big challenge for all companies in Serbia and certainly for this managerial attitude there is a ground, since that many companies do not just go through the process of restructuring, but already have more problems with the preservation of competitiveness in the domestic and especially in international markets. Knowledge or intellectual capital includes patents, technology, skills, management, marketing and market information, information on competitors, research on partners and suppliers, ideas for improving processes and procedures.

The need for knowledge and application of knowledge in the process by which is increased and realized values on the market requires changes in the processes and support that hotel gets through measures to stimulate scientific research and work on the modernization of the business by the state. Changes in the structure of the company and its portfolio which, through new products, innovations and enhancements acquire and

maintain competitiveness in the market place, thereby, are conditioned creating the environment for the generation and application of new knowledge.

The first step is to gather and generate knowledge while the next step is the launch and management of knowledge using appropriate tools that will magnify the capacity and potential of the company. Expression of the capacity and potential of the company is transparently displayed by the factor value of knowledge - *KnoVa faktor*, which is the main indicator of the company's potential to create additional value. At the same time staff knowledge and specialists provide services and education at all levels so that there is continuous and smooth flow and exchange of knowledge in the company, which creates additional value. In modern business conditions, the strategic position of the organization, first of all, depend on the place, which has in an unique, interdependent scientific-technological and product development.

The competitiveness of organizations is linked primarily to: the results of the improvement and innovation of products and processes; improvement of the business activities of the entities from the environment; continuity and stability of development; strategic position it has in the environment. The main factor which defines the strategic position and competitiveness of the organization is its knowledge. The organization must be open to create, innovate and utilize and improve the knowledge. In an open organization the new knowledge becomes the knowledge of the organization, regardless of its source. The organization also needs to have the potential for knowledge management. This paper analyzes the advantages of open organizations, aspects of

****Corresponding author:** Institute of International Politics and Economics, Makedonska 25, Belgrade, Serbia, E-mail: pera@diplomacy.bg.ac.rs

knowledge management, the difference between the use, processing and knowledge management, as well as the life cycle of organizational knowledge.

2. OPERATIONAL MANAGEMENT OF KNOWLEDGE FLOW

The need for operational management of knowledge is based on the low productivity of enterprises. Businesses can magnify their value operational management of the flow of knowledge by making their existing knowledge to be generated more efficiently, better connected and innovative with constant improvements. The efficiency of knowledge is reflected in the good and organized use of information technology, electronic databases that need to be available at any moment which means saving time and reducing costs.

The link between knowledge is seen through the cooperation and exchange of knowledge between employees across all business units in all necessary directions as part of business strategy. The flow rate and accuracy of information increases the performance of the company, as well as business performance. Observing the interaction of knowledge flows through the company creates additional value through the identification of the most effective practices in the company and at the same time developing the unique capabilities of the team and of course the overall benefit of the company.

To generate values through knowledge means that companies must keep and maintain knowledge, manage with knowledge of workers and professionals to pretend knowledge into value. Knowledge of employees could be lost forever if the employees are employed to another company. Therefore, the sense of generating knowledge refers to a series of complex decisions involving:

- strategy for gaining additional values,
- organization based on team work,
- knowledge professionals to provide key competencies with the help of motivation and reward system,
- knowledge that will be focused on the constant improvement of managing the flow of knowledge-based value.

Knowledge increases when exchanges. The combination of values and beliefs leads to the attitude towards knowledge and behavior which is of the essential importance of increasing the value undertook to knowledge. Both professionals and experts can learn by following the latest developments. They can give, share and take note of a company profiting by acquisition of codified knowledge.

Attitude toward knowledge takes the value of the individual and self-assessment, the belief that he is responsible for learning and their behavior tends to learning. Specialized teams of attitude toward knowledge show the belief that their knowledge is growing while they serve by until being exchanged. Companies with their values express confidence to the teams and individuals because of all these knowledge companies have the benefit and the rise.

3. STRATEGIC MANAGEMENT OF KNOWLEDGE FLOWS

Strategic management of the flow of knowledge is the main task of management of the company. All the basic problems of enterprises can be solved with the well-established relationships in the company. Good information with an abundance of information, high speed internet at all levels are the systems that will not affect the decision of employees to work for the benefit of your company or personal use. In order the employees to be encouraged to cooperation in the company must come to the fore the strategic management of knowledge flows. It is necessary to establish cooperation and exchange and determine the way of thinking about the necessary goals and possibilities. In this way, knowledge will be able to be converted into market value. The proper attitude among the employees in the company, who during their working life product knowledge, must be motivated assigning them by adequate tasks and competences. In this way they will be inspired to more meaningful expression of creativity, flexibility and security. This attitude towards employees reflects a transparent structure that allows each individual ahead of their position to see the value of their work at the hotel as a whole. Transparent structure is based on the development and teamwork and achieves the strategic management of knowledge flows. Strategic management of the flow of knowledge is an upgrade of the operating flow management knowledge integrated together, in relation, and with constant improvements, improves the position of the company.

4. NEW STYLES OF ORGANIZATION

The managing enterprise management should n the basis of the value factors of knowledge *KnoVa-faktor* determine the position of a company. Control management should accede to the operational and then the strategic management with the flows of knowledge and to create new knowledge, which increases the value of which is very complex and highly responsible task. Such attitude towards knowledge in the company should be subscribed to all employees. It is necessary to establish a continuous exchange of knowledge, because knowledge must become transparent. Companies with mechanical industry with such a change would become more constructive. Resistance to changes creates a culture of knowledge based on the idea that knowledge is power and the individuals with knowledge is more powerful and, as such, they're individually advanced and companies do not have adequate profits. Of course, the key capabilities of enterprise are reflected the ability to innovate, for fast and flexible arrangements for capacity forecasting, creation and learning and perseverance. The success and future of the company depends on the collective ability to use an overall knowledge, opinions and experiences and the integration of all employees. Of course, this means increasing the level of service and the level of content knowledge.

Keeping employees and management of processes and flows of knowledge lead to prosperity. The basic point is that companies understand the importance of knowledge through the assessment of its value and create a network of knowledge that enables each employee to use the knowledge and skills of other employees.

New style of enterprises should be dynamic, willing to learn, to have a rich inflow of information, to think globally, to have the orientation skills of teamwork, product/client that the management is latent and networked. When the changes are challenged and requirements need to be changed, as well as the company itself. It must again find its purpose, objectives and ways of working. The essence is in adaptation that never stops.

5. OPEN ORGANIZATION IN THE COMPANY

Open organization represents the normative model of organization in which the processes of identifying problems, formulating a request for the necessary knowledge, their testing and continuous assessment are characterized by transparency, trust, inclusiveness and openness. From the definition is resulting the basic characteristics of open [1]:

- openness to identify problems
- openness to solve the problems from the standpoint of new idea;
- openness to criticism solutions, theory or knowledge, in order to eliminate non-compliances;
- realistic reporting of problems, new ideas and problems.

The first three characteristics are related to the steps Popper's tetrad scheme. Based on the formulation of the problem is defined the initial solution, and then in the process of evaluation of the solutions are considered and eliminated non-conformity, after which are identified new problems that need to be solved. The fourth characteristic indicates that the process of solving problems will not lead to the right solution if there is no transparency and confidence in the organization. Irresponsible reporting leads to inefficiencies in the process of solving the problem because (a) the most serious problems the organization may not be identified, (b) the best possible solutions are identified in testing and evaluation, and (c) alternative solutions are analyzed from the standpoint of the biggest challenges. The advantages of open organizations are: (1) a continuous functional processes that enable self-organization; (2) the measurement of the process and its effects; (3) understanding and scientific understanding of the organization on the basis of the outcome of its process. Competitiveness of open organization is based on the continuous accumulation of knowledge and innovation. From this comes out a better adaptability of the organization, as well as improving organizational intelligence. The concept of organizational intelligence indicates primarily to higher quality information. Sometimes the term is used: (a) for the indication of the aggregate intelligence of individuals who make up the organization, (b) as a synonym for knowledge management, or (c) to indicate the capacity of the organization to solve problems through learning. Problem of organizational intelligence is the problem of expanding the capacity of learning in the organization. Organizations are complex adaptive systems, which are characterized by self-organization and defining elements of the global system attributes. This is achieved by self-organizing interactions of individuals and groups that make up the organization.

6. KNOWLEDGE MANAGEMENT

Knowledge management is part of every business process. The European Committee for Standardization defines knowledge management as "the management of activities and processes for acquiring knowledge in order to increase competitiveness through better use and creation of individual and collective knowledge resources". Knowledge management provides forwarding necessary information to the right people at the right time. According to the European Commission, knowledge management involves five basic activities: identifying, creating, storing in a database, sharing and use of knowledge. Aspects of knowledge management can be:

- philosophical and psychological - indicate what knowledge is, where it comes from;
- organizational and sociological - shows how to extract and gain knowledge
- economic and business - indicates how extract value on the basis of existing knowledge;
- technological - suggest how to ensure efficient and effective tools for knowledge management.

Knowledge can be explicit and implicit. Explicit knowledge can be expressed in a formal and systematic language. It can be processed and stored very easily. Implicit knowledge is contained in the actions, experience and values and, as such, it is very subjective and difficult to be formalized.

Knowledge creation is a process of interaction between explicit and implicit knowledge, which is commonly called the conversion of knowledge. There are four types of knowledge conversion: socialization (from implicit knowledge to implicit knowledge, based on experience), externalization (from implicit knowledge to explicit knowledge), combination (from explicit knowledge to explicit knowledge, more complex, or more systematic) and internalization (from explicit knowledge to implicit knowledge).

Model of knowledge creation identifies five cognitive factors, which are the basic cognitive processes, which are listed in Table 1.

The acquisition is the process of generating knowledge by gathering information from different sources. Synchronization is the process of sharing information, communication or direct electronic exchange.

Table 1. The cognitive factors derived from the model of knowledge creation. Source: [13]

Cognitive factor	Source	Result
Acquisition	Explicit knowledge	Implicit knowledge
Validation	Explicit knowledge	Explicit knowledge
Synchronization	Implicit knowledge	Implicit knowledge
Realization	Implicit knowledge	Explicit knowledge (code)
Filtering (selection)	Implicit knowledge	EksPLICITno znanje (entity)

7. LIFE CYCLE OF KNOWLEDGE

It is necessary to distinguish between the use of knowledge and process skills of knowledge management. Using knowledge occurs whenever appropriate agent makes a decision. Under the agent is referred the process or the person who adapts his activities pursuant to relevant changes in the environment. It is part of every business process. The prosecution of knowledge includes knowledge generation and integration of knowledge. Generation of knowledge includes: (a) the formulation required for knowledge, (b) individual or group learning, and (c) acquisition of information. Integration of knowledge means; (a) the broadcasting of knowledge, (b) search/accessing to knowledge, (c) training and (d) knowledge sharing. Knowledge management and interaction between the processes of generation and integration of knowledge.

Knowledge management starts by formulating the basic conceptual framework for defining and specifying the knowledge and encompasses all processes in which knowledge is generated, and a conceptual framework that provides a cognitive map of these processes. This framework is commonly called a framework for describing the life cycle of knowledge. With the concept of life-cycle knowledge, many authors link the concept of cycles of organizational learning and its role in the processing of knowledge and knowledge management. Some authors even believe that there is no isolated knowledge management, but only a cycle of organizational learning.

Organizational learning is related to the ways of acquiring knowledge in the organization, or for ways to adapt the organization to new needs and demands of competitiveness. The life cycle of knowledge, however, should be viewed independently of the life cycle of organizational learning. In fact, the life cycle of knowledge is initiated within the cycle of organizational learning. The difference between the life cycle of knowledge and organizational learning cycle is reflected in the processing of knowledge and is based on the psychology of people at individual and group level. This difference allows the management of knowledge to be treated as a separate process and discipline.

The process of integration of knowledge is based on knowledge of the organization and its integration within the organization, and leads to a distributed knowledge base of the organization which contains new knowledge that is generated in the life cycle of knowledge, as opposed to the knowledge that is generated in the cycle of decision-making by learning that takes place in one loop.

Integration involves communication content knowledge of organization with organizational agents, with a view to draw attention to relevant existing knowledge of the organization. Also, it is necessary to enable the use of knowledge through a knowledge base that agents can use to search and download the appropriate knowledge. The result of the integration of knowledge should be available in local and distributed knowledge base, and to reflect the predispositions of agents throughout the organization. The life cycle of knowledge is consisting of: (1) the problems generated by business processes, (2) the process of acquiring knowledge, and (3)

distributed organizational knowledge base, which contains the outcomes of the process of acquiring knowledge, and knowledge of special events and conditions, which are defined in the cycle of implementation of decisions.

Distributed knowledge base of the organization is used in an environment for business process analysis, and in that environment defines new problems and new instance lifecycle knowledge. Distributed knowledge base of the organization has a major impact on the structures that incorporate organizational knowledge, such as normative business processes, plans, organizational culture, organizational strategies, policies, procedures and information systems. In conjunction with external resources, this structure adversely affects the functional business processes within the decision-making cycle. Decision cycle generates new problems in the stages of planning, monitoring and evaluation, which will be addressed in the next cycle of processing knowledge, or the knowledge of a new life cycle.

8. CONCLUSIONS

In the paper are discussed the advantages of open organizations, as well as the life cycle of knowledge and knowledge management organizations. Open organization based on changes in the environment, creating new knowledge can change and adapt, which remains competitive in the market. The life cycle of organizational knowledge represents a set of activities that allow you to efficiently and effectively generate and use new knowledge with the aim of self-organization of the organization in order to achieve defined goals. It is enough to identify the knowledge that owns the company and enable only the knowledge that has meaning and upgrade its value. The operational and strategic management of the flow of knowledge in the company and creating a transparent view of knowledge that employees at the same time improve and innovate. The value of the company is increased through the integration of operational and strategic management of flows of knowledge so that all employees are suitable for places, and use the skills, knowledge and experience of other employees. In this way, the knowledge obtained the corresponding character in the creation of added value of the company by increasing the capacity and potential of the company through the positioning of factors show the value of knowledge of the KnoVa factor. The essence of the success of every company is constant adapting to changes.

REFERENCES

- [1] Mr. Knowledge, The Economist, 31. may, 1997.
- [2] Thomas Stewart, Intellectual capital, The new wealth of Ogranization, Doubleday/Currency, 2003., page105.
- [3] Andrieesen D., Tisen R., The Knowledge Dividend, Copyright Pearson Education Limited, 1999.
- [4] Skills, gap Jeopardizing U.S Companies, Ability to Complete, Select Appoctments, North America, 27 april 1999.
- [5] D.Sims, S.Finemena, Y.Gabriel, Organizing & Organizations, Sage Publications, 1998.

- [6] CENWorkshop Agreement CWA 14924-1. European Guide to Good Practice in Knowledge Management, Part 1. European Committee for Standardization, 2004.
- [7] M. Notturmo, Science and the Open Society, Budapest, Hungary: Central European University Press, 2000.
- [8] Joseph M. Firestone, Mark W. McElroy, The Open Enterprise Building Business Architectures for Openness and Sustainable Innovation, KMCI Publications Group, Hartland Four Corners, Vermont, Executive Information Systems, 2003.
- [9] O. Gendreau, P.N. Robillard, "Exploring Knowledge Flow in Software Project Development", In Proc. of the International Conference on Information, Process, and Knowledge Management eKNOW 2009, Kankun, Mexico, 2009, pp. 99-104.
- [10] Second Annual E-Business Conference, The Economist Conferences, 27-28 October 1999., Case studies,
- [11] <http://www.eresources.com/presentations/mcginnis/tsld023.htm>
- [12] Steven E. Prokesch, Unieashing the Power Of Learning, Harvard Business review, October 1997.
- [13] J. Hong and P. Stähle. *The coevolution of knowledge and competence management*. Int. J. Management Concepts and Philosophy, 1(2):129–145, 2005.