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MANAGING BUSINESS DOCUMENTATION IN VIEW OF ITS INFORMATION VALUE IN SLOVENIAN WOOD INDUSTRY COMPANIES

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Abstract

The present competitive business environment demands more documentation, which is also more complex for the purpose of quality execution of business operations. Documents are no longer merely bearers of information among active subjects in business processes but have certain information value in the archives as well. For a better control of documentation and documents themselves, availability of data and information for the need of the decision-making process in the companies, the so-called contemporary documentation management systems (DMS) and e-archives have been introduced. During our research, the current state of use of contemporary technologies and approaches to documentation management was assessed and the quantities and recording medium for documentation storage in Slovenian wood industry companies were analysed. Documentation was classified in view of its information value and a three-level proposal of e-archive organization based on information value of documents in wood industry companies was introduced.

Key words: documentation flow, e-Business, archive, business information systems, wood industry firms

RAVNANJE S POSLOVNO DOKUMENTACIJO GLEDE NA NJENO INFORMACIJSKO VREDNOST V SLOVENSKIH LESNOINDUSTRIJSKIH PODJETJIH

Izvleček

Današnje konkurenčno okolje zahteva vse več in vedno bolj kompleksno dokumentacijo pri poslovanju. Dokumenti pa niso več samo nosilci informacij med aktivnimi subjekti v nekem poslovnem sistemu, marveč imajo neko informacijsko vrednost tudi v arhivu. Da bi si podjetja zagotovila boljši pregled nad dokumentacijo in tudi boljši vpogled v podatke in informacije za potrebe odločanja, uvajajo sodobne sisteme ravnanja z dokumenti (angl. DMS - Document management systems) in shranjevanja dokumentov v elektronske arhive. V raziskavi smo preverjali trenutno stanje uporabe sodobnih tehnologij in pristopov pri ravnanju z dokumenti v slovenskih lesnoindustrijskih podjetjih, kjer smo opravili tudi analizo količin in medijev zapisa za shranjevanje dokumentov. Dokumentacijo smo tudi razporejali glede na njeno informacijsko vrednost in na podlagi tega pripravili predlog organizacije e-arhiva za potrebe lesnoindustrijskih podjetij.

Ključne besede: dokumentacijski tok, elektronsko poslovanje, poslovni informacijski sistemi, lesnoindustrijsko podjetje

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1 INTRODUCTION
UVOD

The present competitive business environment demands higher amount of more specified documentation for the purpose of quality execution of business operations. Documentation management in a business process is becoming a rather complex process, which has undergone great changes in the recent period, also in line with the development of new information and communication technologies and implementation of e-business. Documents are no longer merely bearers of information among active subjects in business processes, but have a certain information value in the archives as well. According to the available data, more than three-quarters of business information are hidden in the form of documents (JERMAN BLAŽIČ, 2003). In 2001, International Data Group IDC began to gather data on what not finding information might cost an organization. The study (made by IDC) examined the phenomenon, called the "knowledge work deficit," and concluded that the cost of intellectual rework, substandard performance and inability to find knowledge resources were $5,000 per worker per year and rise to $5,850 in the year 2003. (FELDMAN, 2004)

Document management systems (DMS) is the right answer to solve the problem, although they are usually connected to paper-related problems. They seem to offer the opportunity to exercise a high degree of control over the ways in which paper and non-paper documents are handled. It is important to realize that document management systems just manage documents, not the information or knowledge contained within the documents. Thus, their impact on a business is in the efficiency they provide in document storage and retrieval, in information access – there is little or no impact on the performance of individuals using the information on those documents. (RAYNES, 2002). This is what other systems should do. Enterprise Content Management (ECM) system is one of the possible solutions and consists of many functions for effective management of the documents' critical contents and information flows inside and outside the company. ECM systems represent a complete solution by integrating Document Management Systems (DMS), Content Management Systems (CMS), and http://www.ixos.com/ Content Archive. Content management and document management are complementary, not competing technologies (ROBERTSON, 2003).

The information value of a single document is a basis for determination of managing and archiving rules. Orderly documentation in a business system and effective DMS ensures effective overview of the situation in the system, which is a basis for correct and prompt decisions both at strategic and operational levels. In addition, they increase business process quality - ultimately one of the important objectives of any business system. Within the framework of our research, the emphasis will be put particularly on the information value of documents after their use (usually in archives), which differs from a value of the documents that are still in the active life-cycle phase.

2 HYPOTHESIS AND OBJECTIVES
HIPOTEZE IN CILJI

The value of the documents, which are carrying various information for decision-making, is increasing. For this reason it is of crucial importance for the companies to establish an appropriate document management system, where information value of any document should be considered and evaluated. Therefore, the article verifies the thesis that Slovenian wood industry companies are ill-prepared for the changes in this business field; the checking was based on the ascertained differences between the theory (from the literature) and the actual state in Slovenian wood industry companies.
The aim of the research was:

- to study current trends and changes in the field of managing and archiving documents,
- to determine and analyse the state of documentation management in Slovenian wood industry companies in view of its content, quantity and way of use,
- to determine and analyse the state of use of modern technologies for documentation management in Slovenian wood industry companies and to determine basic development tendencies.

The final objective of our research was to prepare a proposal of e-archive organization based on information value of documents.

3 METHODS
METODA DELA

3.1 THE COURSE OF THE RESEARCH
POTEK RAZISKAVE

The research was performed at two consecutive and separate levels. The first level included examination of the references available from the field of document management in periodical press, professional and scientific publications (publications of researches, books) and Internet sites. The purpose of this level of research was to acquire information about the state and trends in the field of storing and archiving technology, documents and content management systems.

At the second level, the state of document management in Slovenian wood industry companies was assessed. To analyse the current state in Slovenian wood industry companies, two approaches were introduced: a method of an opinion pool and a method of data collection by recording actual state in an actual business process.

3.2 IMPLEMENTATION OF THE PRACTICAL PART OF THE RESEARCH
IZVEDBA PRAKTIČNEGA DELA RAZISKAVE

With the opinion pool method, the state of document management technologies and principles in wood industry companies (in the year 2005) and basic tendencies for business informatics development (in the year 2003) were established. An analysis with the aid of a questionnaire in electronic form, sent directly to 58 e-mail addresses of the people responsible for information systems in Slovenian wood industry companies, was performed. In processing the data from the 14 (in the year 2005) and 17 (in 2003) returned questionnaires, we were able to establish absolute values of the acquired answers. The sample included medium large and large companies. All the studied companies were manufacturing companies, mostly dealing with furniture production. For this reason, the influence of activity was negligible and was not included in the data processing in this article.

The DFD ((Data Flow Diagrams) method was used for collecting data on the actual quantities, functions and record mediums of documentation. Detailed analysis of the current situation was performed according to DFD method in representative large wood industry company with near 500 employees. The analysed company performs all modern approaches of quality management systems (ISO 9000, RAL standards) and is very much active and recognized internationally. A record medium of documentation was also examined in additional 14 Slovenian wood industry companies according to the method of opinion pool in the year 2005.

4 RESULTS
REZULTATI

4.1 THEORETICAL ANALYSIS OF DOCUMENTATION MANAGEMENT
TEORETIČNA OBDELAVA RAVNANJA Z DOKUMENTI

4.1.1 Documentation in the business system
Dokumentacija v poslovnem sistemu

A document can be defined as a record on a piece of paper characterised by official validity and showing or confirming the existence of something (TURK, 1987). Written in the document are the data having a structure and content, which depend on its designed purpose. The term documentation refers to a group of documents associated on the basis of a certain key. Changes in the business environment lead to the increasingly rising and extending demands for every single document, and are thus becoming more and more complex, the same as document life-cycles (Fig. 1). With document life-cycle the flow of a document is defined, from its creation to active use and finally to archiving, where its life-cycle usually ends.

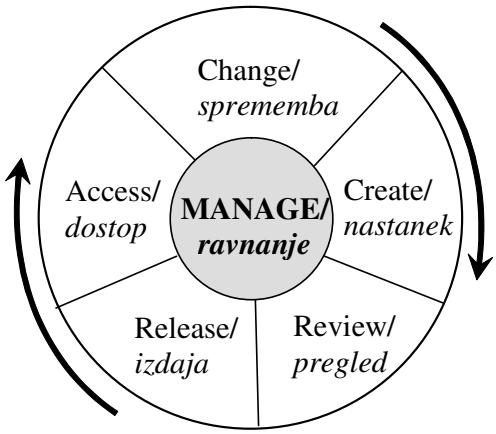

Figure 1: Document management life-cycle (Yin-ho Yao et al., 2003)

Slika 1: Življenjski cikel ravnanja z dokumenti (YIN-HO YAO et al., 2003)

Usually, documents are recorded on paper medium, but in the recent period, with the development of ITT (Information and Telecommunication Technology), the role of electronic documents has started to increase. The number of electronic documents is also increasing and their legal value is based on national and international legislation, where paper and electronic forms of documents are not discriminated. ITT allows generation of data by means of computers, recording of such data on an electronic medium, passage of such record through business process via an electronic medium, as well as collecting and storage of the same on an electronic medium. Electronic documents are no more simple analogues of paper documents; they are more dynamic entities in multiple forms and media (PAPASPYROU et al., 1999). Managing and archiving of e-documents need appropriate security technology (mostly because of legal requests), what is usually supported by infrastructure of public keys, which contain functions of cryptography, digital signatures and time stamps.

Each document must also be suitably marked. Such marking must ensure uniform defining of the document, enabling the document to be easily found among all other document on the basis of such marking and to ensure traceability of documentation, which is of particular importance in ensuring the quality of business process management and direction (according to ISO 9000) (POTOČNIK, 1996, YIN-HO YAO et al., 2003).

4.1.2 Document management systems and e-archives

Sistemi za ravnanje z dokumenti in elektronski arhivi

Main differences between document management systems (DMS) and systems of e-archives are in their functions. DMS enable both imaging (methods for converting paper documents to an electronic format (for instance scanning) and OCR (Optical Character Recognition) technology, and managing (creating, use and controlled distribution) of 'live' documents (documents in active role), while e-archives usually support scanning and storing of documents. Archiving is a means to move dated or unused files off the main storage medium to secondary storage and represents a kind of 'business support unit' (GRAY, 2002). The DMS must ensure that users can still search the information in the archived files and, if desired information is contained in an archive, that there is a ready means to restore it.

Document management systems (DMS) are comprehensive systems for managing any kind of documentation in the company and can be described as computer-aided systems for the collection, combining, storage, filing, electronic distribution, indexing of, browsing through and archiving of documents (PEČAR, 1997). DMS enable an organization to create, profile, search, check out, check in, save, and locate documents stored electronically. This provides a scalable approach that includes: intelligent imaging, standard vault functions, change management and workflow solutions. The real benefits of an electronic DMS arise from the additionally provided ''value-adding'' facilities.

In general, documents can be stored by using the system of *Hierarchical Storage Management (HSM)*. Essentially, this system simulates classical archiving methods, where users have on their desks such documents as are currently most important, while older documents are kept in "cabinets" or in "basements". The difference between manual and automatic systems is in that the user does not need to arrange for the search for and the delivery of documents (from archives), nor for their return (back to the archives). In this way, by the use of different electronic media, a kind of (electronic) archives are built, in which documents "travel" from one medium to another - depending on the frequency of use. HSM system can be illustrated by a pyramid, which represents the different archiving media. The pyramid shows individual storage levels (ŽERKO, 1997) from hard disc in HSM server at the first (highest) level, through magnetic-optical (MO) disc juke-box, to the fireproof cabinet (the so-called *off-line archives*), where MO discs are stored. At the first level, the Data Warehouse technology can also be used. This is a separate data

storage location, in which data are stored in a form suitable for information support to business management and decision-making support (INMON, 2002). Such warehouses derive their data from operational databases, archives of e-documents and external databases. In the data warehouse, an important role is played by the technology *On Line Analytical Processing (OLAP)* of information, which shows the complex structure of the warehouse in a manner that the user can understand.

Although the benefits of DMS are significant, there are still some limitations when considering the issues of document customisation, information exchange, reusing, intelligent search and integration. Thus, their limitations are inflexible information exchange and document customisation/adaptation for multiple users' needs. Furthermore, few researches or commercial solutions really tackle the integration issues in document creation, review, approval, modification and release, which are the key functions of ISO9000 document control. Electronic integration of these functions is essential to streamline the document flow among supply chain members and reengineer information value chain, the so-called traceability. The limitations are mainly due to the facts that most current ISO9000 DMS solutions are not standard XML (Extensible Markup Language) enabled. Hence, it is important to study how the new XML capabilities and related technologies can be used to fulfil the ISO9000 compliant document management and integration (YIN-HO YAO et al., 2003). In recent years, there have been active moves to introduce XML as a standard data exchange format for e- commerce and document management applications (DICK, 2002; WEITZ, 1998).

4.2 RESULTS OF THE RESEARCH IN SLOVENIAN WOOD INDUSTRY COMPANIES AND A PROPOSAL FOR THREE-LEVEL ARCHITECTURE OF THE ARCHIVE

REZULTATI RAZISKAVE V SLOVENSKIH LESNOINDUSTRIJSKIH PODJETJIH IN PREDLOG TRINIVOJSKE ARHITEKTURE ARHIVA

4.2.1 The knowledge bearers

Nosilci znanja

The knowledge inside an organization is present in many different forms – in the employees' 'heads', on paper and electronic forms, and in different databases. According to the results of our research, the Slovenian wood industry companies indeed swear by paper handling and archiving of documents, but it was established that 28% of knowledge

is borne by paper documents, 18% by electronic documents, 27% by operative databases, while the rest (27 %) lies in the employees' heads. These results are also comparable with the results gained by other authors. The Delphi Group has thus assessed that a little less than half of the knowledge lies in the employees' heads (42%), whereas the rest is kept in the form of documents (paper media 26%, electronic media 20%) or databases (12 %) (http://www.marand.si/xerox/main.html).

4.2.2 Tendencies of business information system development for document management support

Smernice razvoja informatike za podporo ravnanja z dokumenti

Document management is tightly connected with the state and expected development of business informatics in the companies. The results of the research carried out in Slovenian wood-industry companies show somewhat weak use of modern information technologies for document management, with the exception of e-archive and (to a lesser extent) data warehouse technologies (Fig. 2).

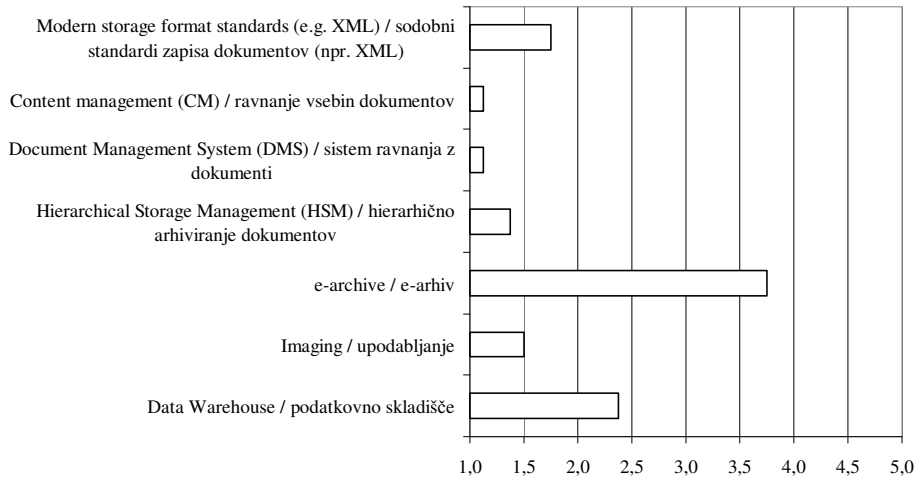

Figure 2: Use of modern information technologies for document management (in Slovenian wood-industry companies) (1-not in use, 5-in regular use)

Slika 2: Uporaba sodobnih tehnologij ravnanja z dokumenti (v slovenskih lesno-industrijskih podjetjih) (ocene: 1 – ne uporabljamo, 5 – uporabljamo redno)

The fact that many companies are not acquainted with any modern technology at all, is even more alarming. Although Slovenian wood-industry companies are aware of the need to improve this field, they admit that the main tendency of business informatics development is to give a support to the sales / purchase process in the sense of informatics development in supporting non-paper operations and an efficient information support to the decision-making process (Table 1).

Table 1: Basic tendencies of business informatics development (in Slovenian wood-industry companies) (1-least important, 5-most important)

Preglednica 1: Osnovne smernice razvoja informatike (v slovenskih lesnoindustrijskih podjetjih) (ocene: 1-najmanj pomembna, 5 najbolj pomembna)

Tendency / *Smernica*	average/ *povprečje*	standard deviation / *standardni odklon*
support to sales/purchase / *podpora prodajno/nabavnemu procesu*	4.3	0.78
support to development process / *podpora razvojnemu procesu*	3.69	0.98
support to decision-making process / *podpora procesu odločanja*	4.00	0.50

The results give appropriate support to the informatisation of document management and archiving due to the great quantity of information on it, as mentioned earlier on.

4.2.3 Quantities and recording medium for documentation storage

Količine in medij zapisa dokumentov

Various documents are the main data and information bearers in business processes and differ mainly in view of their contents and form. During our research, these documents were separated, in view of their contents, into 7 different (bigger) groups (according to their connection with various business functions): general business documentation, financial documentation (invoices, contracts), documentation connected with employees (contracts with employees and other data), technical and production documentation (drawings, project policy-making), development documentation, quality system documentation (execution, revision, approval, distribution, forms, procedures etc.), support to consignee service (received orders, forms etc.). For each of these groups, the quantities and medium for documentation storage recording were assessed (Table 2).

Table 2: Quantities and recording medium for documentation storage (in Slovenian wood-industry companies)

Preglednica 2: Količine in medij zapisa dokumentov za arhiviranje (v slovenskih lesnoindustrijskih podjetjih)

DOCUMENTATION / *DOKUMENTACIJA*	**Quantity in archive** / *količina v arhivu*		**Record and archive medium** / *medij zapisa in arhiviranja*	
			Paper / *papir*	Electronic medium / *elektronski medij*
	[piece] / *[kos]*	[pages] / *[strani]*	[%]	[%]
General business documentation / *splošna poslovna dokumentacija*	300	2,000	56	44
Financial documentation / *finančna dokumentacija*	200,000	250,000	65	35
Personnel documentation / *kadrovska dokumentacija*	200,000	200,000	64	36
Technical and production documentation / *tehnična in produktna dokumentacija*	1,000,000	3,700,000	43	57
Development documentation / *razvojna dokumentacija*	100,000	1,000,000	58	42
Quality system documentation / *dokumentacija sistema kakovosti*	2,000	20,000	61	39
Support to consignee service / *podpora naročniški službi*	200,000	400,000	49	51
Sum / *skupaj:*	1.7 mio	5.6 mio		

Quantities in Table 2 were calculated according to the data gained directly from an actual (fairly big and modern) Slovenian wood industry company, where the frequency of each individual document in the business process (piece/year), the volume (number of pages) and number of copies (piece) were determined. The minimal period of documents kept in the archive was also determined according to legislation, internal regulations and standards. In order to calculate the quantity of documents in the archive, the number of documents per year was taken into consideration on the one hand and the number of document pages in connection with the period of keeping them in the archive and the data about the frequency of these documents on the other hand. In the cases where period of keeping them in the archive was permanent, the period of 25 years was taken for calculation, representing the average value for the group of longest period archived documents in our business system study.

Finally, in the analysis of the existing situation it was assessed that the archive should provide room for at least *1.7 million documents*, i.e. more than *5.6 million A4 format paper pages*. Efficient organization of archives is highly important, for otherwise it is impossible or at least time-consuming to find certain documents or data in the archives. The capacity of the latter dictates development and use of modern technology in the process of document management and archiving, where electronic medium will be used exclusively for document storage, so that the capacity will be sufficient to ensure efficient control and management of these documents. The assessment that in wood industry companies the recording medium for documents still represents, on average, more than 50% (nearly 60%) on paper media, dictates use of appropriate technologies for imaging, including methods for converting paper documents to an electronic format (scanning) and methods for the transformation into form, which enables content searching (OCR technology) while establishing the concept of effective document management through its life-cycle.

4.2.4 The proposal for three-level architecture of the archive

Predlog trinivojske arhitekture arhiva

The information value of a document after its elimination from business process is the consequence of needs of business process upon information based on past data, which can be higher for specific documents, and lower for the other. Since all the documents must be kept in the archive, its characteristics show only which documents in the archive need to be organized in a manner to support the largest number of readings (for example: the decision-making support) and which are present in the archive only if business process would incur anything unpredictable (for instance: recall).

According to the different information value of documents kept in the archive, the three-level structure of the archive shall be defined:

- The ***first level*** includes the documents with the greatest impact on information forming for decision-making support; these documents shall be on electronic media and included into Data Warehousing - for example documents about financial transactions (orders, invoices, payments and payment notices, final balance), checks by customers and suppliers, various plans (business and production plans, etc.)

- The ***second level*** comprises the documents, concerning mainly the settling of disputes (e.g. recalls) with business partners; some documents from this group include important information on the course of events in business process (mainly technical and technological solutions) and for the establishment of knowledge databases; these documents shall be also on electronic media (for example technical and technological documentation, issuing or receiving documentation)
- The ***third level*** includes the documents that are otherwise important for the course of events in business process in their active role. However, when these documents reach the archive they are rarely read or used at al; these documents can easily still remain in paper media (for example regulations, standards, contracts)

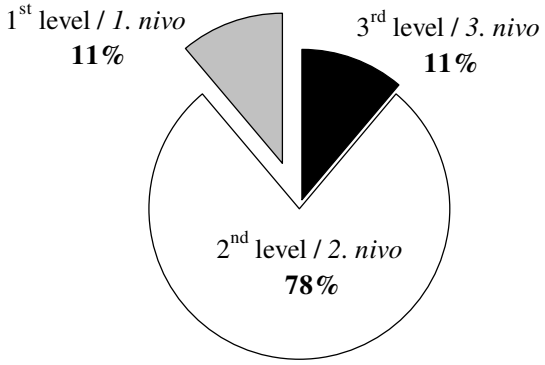

Figure 2: A range of levels of document archiving (according to the three-level architecture)

Slika 2: Obseg posameznih nivojev arhiviranja dokumentov (glede na trinivojsko arhitekturo)

Regarding the number, range and time required for keeping the documents at certain levels, it can be concluded that it is the second level that is most extensive and represents the active part of the archive. Technologically, the plan for archive can be supported by the HSM (Hierarchical Storage Management) principle in connection with imaging technologies and active use of Data Warehouse technology.

5 DISCUSSION
RAZPRAVA

On the basis of the carried out research we can assess that in Slovenian wood industry companies a little less than half of the entire knowledge is stored on paper or non-paper (electronic) documents. In these companies, large quantities of documents are used (due to different needs as well as legislation) and are archived in more that 50% of documents in paper media. A need for effective document management and archiving (= storage after its use to reach the goal of higher quality of business process and decision-making process) is therefore more than obvious. The tendencies of the information system development in Slovenian wood industry companies bring us to the same conclusions. The strong emphasis on support of decision-making process and handling with active (sales/purchase) documentation has been established, but the current and actual state of affairs in this respect is rather poor.

To provide for a more effective support in decision-making process, the three-level structure for e-archive organization was constructed. It introduces three levels according to the information value of documents and the frequency of their use in business processes. The technology for the levelling can be based on HSM approach and shall be connected with the technology of data warehousing to reach direct decision-making support.

6 CONCLUSIONS
ZAKLJUČKI

Business document management is becoming (due to the requirements of competitive environment, regulation and standards that demand a more thorough documenting of events) more complex and worthy of particular attention due to the documents' information potentials. A better control of documentation and documents themselves, availability of data and information for the need of the decision-making process in a firm can be reached by introducing contemporary documentation management systems (DMS) and e-archives. During this process, different approaches and technologies have to used, of course depending on the present circumstances in a business process and the expected

results. Integration of the above-mentioned systems in business information systems (ERP) with data warehousing technology is commonly applied. The tracing itself ensures an appropriate decision-making support.

Without the use of the most recent approaches and technologies based on computer data processing and electronic data recording, the storage is practically impossible. Due to the enormous number of subsistent documents on paper media (more than 50% according to the research in Slovenian wood industry companies) it is of crucial importance to establish the use of imaging technology (scanning and OCR). Thus, the establishment of computer based system for documentation management becomes the important step, enabling indexing and aggregated retrieval of all information as a tool of support in decision-making process next to the basic tasks of documentation control through their entire life-cycle. The research shows that the contemporary technologies and approaches are not used in wood industry companies, of which speaks hardly any readiness for the contemporary business challenges. The thesis of the research was confirmed.

Within the framework of this research, the focus was on the organisation of e-archive, and according to the disposable data the subsistent three-level architecture was proposed, which depends on information value of documents after their active role in a business process. The essential scope of the research was achieved.

With the classification of documents at the above-defined levels in view of their information value, the companies would disburden the subsistent archives and create favourable archiving conditions, as there are only certain documents interesting for further processing and only some documents are in need of special archiving processes. And this is also interesting from the aspect of lowering the archiving costs as well as document and data handling management in a business system.

7 POVZETEK

Ravnanje s poslovnimi dokumenti postaja zaradi zahtev konkurenčnega okolja, regulative in standardov, ki terjajo izčrpnejše dokumentiranje dogodkov, čedalje bolj kompleksno in vredno posebne pozornosti. To področje je tudi tesno povezano s hitrim razvojem

informacijskih in komunikacijskih tehnologij ter uveljavljanjem elektronskega poslovanja. Spreminja se medij zapisa in povečujejo se informacijske potrebe uporabnikov, dokumenti pa so po nekaterih ocenah nosilci kar treh četrtin poslovnih informacij v podjetjih. Da bi si podjetja zagotovila kar najboljši pregled nad dokumentacijo in hkrati vpogled v podatke in informacije za potrebe odločanja, uvajajo sodobne sisteme ravnanja z dokumenti (*angl. DMS - Document management systems*) in shranjevanja dokumentov v elektronske arhive. Pri tem se zatekajo k različnim pristopom in tehnologijam, kar je seveda odvisno od stanja in pričakovanih rezultatov. Zelo pogosta je integracija teh sistemov v poslovne informacijske sisteme (ERP), pogosto prek tehnologije podatkovnih skladišč. Sledenje zagotavlja ustrezno podporo odločanju.

Vrednost posameznega dokumenta je osnova, na kateri določimo pravila za njegovo ravnanje. V okviru prispevka pa smo se ukvarjali predvsem z vrednostjo dokumentov po uporabi, t.j. v arhivu. Najprej smo na osnovi zbranih in obdelanih prispevkov iz literature ter analize v slovenskih lesnoindustrijskih podjetjih prišli do konkretnih podatkov o trenutnem stanju. Ugotovili smo, da je v posameznem podjetju lahko kar 1,7 milijona dokumentov z več kot 5,6 milijona stranmi, s katerimi je treba v njihovi življenjski dobi ravnati in jih shranjevati v arhive. To pa je brez uporabe najnovejših pristopov in tehnologij, ki temeljijo na računalniških obdelavah in elektronskih medijih zapisa podatkov, praktično nemogoče. Zaradi velikega števila obstoječih dokumentov na papirnem mediju (glede na raziskavo več kot 50%) je treba najprej uporabiti tehnologije elektronskega upodabljanja (angl. imaging). Sledi postavitev ustreznega računalniško podprtega sistema za ravnanje z dokumenti, ki poleg osnovnih nalog obvladovanja dokumentov skozi njihov celoten življenjski cikel omogoča tudi indeksiranje in združeno iskanje po vseh virih informacij kot podpora procesu odločanja. V raziskavi smo ugotovili, da v slovenskih lesnoindustrijskih podjetjih sodobnih tehnologij in pristopov ravnanja z dokumenti ne poznajo in ne uporabljajo, kar dokazuje njihovo slabo pripravljenost na sodobne poslovne izzive.

V raziskavi smo se omejili tudi na organizacijo elektronskega arhiva, kjer smo glede na razpoložljive podatke predlagali ustrezno trinivojsko arhitekturo, kar je bil tudi temeljni cilj raziskave. Le-ta temelji na informacijski vrednosti dokumentov po opravljeni aktivni vlogi v poslovnem procesu. Med temi nivoji sta bila posebej zanimiva prva dva. Prvi nivo zajema dokumente, ki imajo velik vpliv na oblikovanje informacij za podporo odločanju,

medtem ko na drugi nivo sodijo dokumenti, ki vplivajo predvsem na reševanje morebitnih sporov s poslovnimi partnerji, kot tudi na postavitev baze znanja, ki je osnova za reševanje problemov v poslovnem procesu, kjer si pomagamo z rešitvami preteklih podobnih dogodkov.

Z razvrstitvijo dokumentov na opredeljene nivoje glede na njihove informacijske vrednosti bi v podjetjih razbremenili obstoječe arhive in ustvarili ugodnejše razmere za arhiviranje, ker so samo določeni dokumenti zanimivi za nadaljnjo obravnavo in samo določeni izmed njih potrebujejo posebne prijeme pri arhiviranju. To je za podjetja zanimivo tudi z vidika stroškov arhiviranja in ravnanja z dokumenti in podatki.

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