# CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE FACULTY OF ECONOMICS AND MANAGEMENT

# **DEPARTMENT OF MANAGEMENT**



# **BACHELOR THESIS**

# **BENEFITS FROM KNOWLEDGE MANAGEMENT** SYSTEMS IN A COMPANY

# ANETA NAGYOVÁ

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### CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

## Department of Management Faculty of Economics and Management

# **BACHELOR THESIS ASSIGNMENT**

### Nagyová Aneta

Agricultural Economics and Management

Thesis title
Benefits from Knowledge Management Systems in a Company

#### **Objectives of thesis**

In the theoretical part, there is important to characterize knowledge managament as a developing discipline and focus on important topics which the theme is closely dealing with. The goal of practical part is to show what are the main benefits of knowledge management systems for the company and also proposal of recommendations for using the systems well in practice so it brings advantages and values into the company.

#### Methodology

In the theoretical part, the data will be analysed using various literature sources. For the practical part will be used questionaire survey and possible interviews within chosen companies.

#### Schedule for processing

Specifying the schedule of working-out the bachelor's thesis:

1. Introduction	6/2011
2. Aims and methodology	4/2011 - 6/2011
3. Theoretical basis	6/2011 - 10/2011
4. Own work	10/2011 - 12/2011
5. Results and discussion	2/2012
6. Conclusion	2/2012
7. List of sources	6/2011 - 2/2012
8. Appendices	2/2012

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#### The proposed extent of the thesis

30 - 40 stran

#### Keywords

Knowledge management, knowledge, tacit knowledge, explicit knowledge, information, data, knowledge asset, knowledge map, knowledge management system, know-how

#### **Recommended information sources**

Awad Elias M., Ghaziri Hassan M. - Knowledge Management

Becerra-Fernandez Irma, Sabherwal Rajiv – Knowledge management: Systems and Processes Published by M.E. Sharpe, Inc., 2010, ISBN: 978-0-7656-2351-5

Maier Ronald – Knowledge Management Systems: Information and Communication Technologies for Knowledge Management – 3rd edition Published by Springer, 2007, ISBN: 978-3-540-71407-1

Mishra J.K. – Knowledge Management: Complexity, Learning and Sustainable Innovation Published by Global India Publications Pvt Ltd, 2009, ISBN: 978-93-80228-15-0

Knowledge management portals: kmworld.com allkm.com

**The Bachelor Thesis Supervisor** Selby Richard, Ph.D.

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ve Riturnka Parte

prof. Ing. Jan Hron, DrSc., dr.h.c. Head of the Department



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### STATUTORY DECLARATION

I, THE UNDERSINGED, HERBY DECLARE THAT THE THESIS TITLED "BENEFITS FROM KNOWLEDGE MANAGEMENT SYSTEMS IN A COMPANY" IS WHOLLY MY OWN WORK, AND ONLY SOURCES I USED ARE LISTED IN THE REFERENCES.

In Prague, November 30<sup>th</sup>, 2012

Aneta Nagyová

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# BENEFITS FROM KNOWLEDGE MANAGEMENT SYSTEMS IN A COMPANY

# VÝHODY SYSTÉMŮ ZNALOSTNÍHO MANAGEMENTU VE SPOLEČNOSTI

#### SUMMARY

The goal of this bachelor thesis is to introduce how knowledge management works and how knowledge management system may be beneficial for a company.

The bachelor thesis is divided into two parts. The theoretical part is characterizing knowledge management as a developing discipline and introduces all important terms connected with knowledge management and defines them

The practical part introduces the knowledge management and the knowledge management system used in company Dance Perfect, s.r.o. and evaluates its value and benefits.

#### SOUHRN

Cílem této bakalářské práce je představení, jak funguje znalostní management a jaké výhody mohou do společnosti přinést systémy znalostního managementu.

Bakalářská práce je rozdělena do dvou částí. Teoretická část pojednává o znalostním managementu jako rozvíjející se disciplíně, představuje důležité pojmy spojené s tímto tématem a definuje je.

Praktická část této práce zkoumá fungování znalostního managementu a systému znalostního managementu ve společnosti Dance Perfect, s.r.o. a hodnotí jeho výhody.

**KEY WORDS:** knowledge management, knowledge, information, data, tacit knowledge, explicit knowledge, knowledge management system

KLÍČOVÁ SLOVA: znalostní management, znalost, informace, data, tichá znalost, explicitní znalost, systém znalostního managementu

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### **1. INTRODUCTION**

Nowadays the world is dealing with huge amount of information. It used to be quite difficult to keep them, so it could happen that the information was not fully used. However nowadays, thanks to the advanced technologies, it is possible to collect almost all of them and store them up by a lot of different ways or in many various systems.

If a company wants to be successful, make profit and beat the competition it is very important to have some knowledge and experience and to know how to get as many advantages as it is possible from gaining, processing and storage of the information. It is also of great importance to recognize what information is really useful for them, which can take in some benefits and what is just meaningless and not important noise. That is why knowledge management exists, so the companies can learn how to deal with knowledge, data and information and to get them to the proper person in proper time. Knowledge management systems are developing these days and companies start to use them because, in times of huge competition, it is very beneficial.

For each company, the system brings different benefits and the knowledge brings different values. Of course it depends on many factors. What is a type of the company, how many employees it has, what is its product, who are their customers, what are their resources, their competitors, what is their background like and other aspects.

This thesis introduces not only concept of knowledge management in general but also introduces usage of knowledge management in the studio Dance Perfect, s.r.o. The thesis contains theoretical and practical part. The methodology which was used to do the practical part is described in the following chapter. The results of the thesis are presented in the last chapter.

### 2. THESIS OBJECTIVES AND METHODOLOGY

#### 2. 1. OBJECTIVES AND HYPOTHESES

The purpose of this bachelor thesis is to introduce the concept of knowledge management in general and how it works in practice. The basic terms, definitions and issues are included in the theoretical part and followed by the practical section.

In order to investigate how the knowledge management works in practice, the practical research took part in studio Dance Perfect, s.r.o.

Objectives are:

- Study of literature in order to describe knowledge management as a discipline, what are the basic definitions, terms and issues.
- Investigation of using knowledge management system in small company in order to describe how the system works and evaluate its benefits.

Hypotheses are:

- Implementation of knowledge management system is beneficial.
- Explicit knowledge is the key knowledge for the company's strategy.

#### 2. 2. METHODOLOGY

For the theoretical part, the secondary data were gathered from various literature and online resources in order to clarify and introduce all important terms and definitions. The various concepts of knowledge management were described and evaluated.

The methodology for the practical part includes two parts:

• Interview

The interview with owner of the studio Dance Perfect, s.r.o., Lenka Ottová was held on  $2^{nd}$  August 2012. The interview passed face to face in the dance studio and was noted into the electronic form. Other personal interviews were made with the other employees during practicing.

• Personal observation

Personal observation was allowed in the form of practice on the reception of studio in time from August to November.

### **3. LITERATURE REVIEW**

In the theoretical part, there is focus on knowledge management in global, what is its history like, what its main role is and why it is so significant. Further it explains basic terms of knowledge management, its strategies, what types and levels of knowledge exist, how they can be organised and transmitted. The literature review also provides technological perspective of knowledge management systems.

#### **3.1. KNOWLEDGE MANAGEMENT**

There exist many definitions of knowledge management. Basically good knowledge management ensures that right person has the right information in proper time (Mládková, 2004).

Success of every person depends on how they can use their intellect, if they are capable of recognizing the proper information that can be beneficial in that certain situation they are in.

According to Awad E. M. and Ghaziri H. M. (2007) "Knowledge management is newly emerging interdisciplinary business model that has knowledge within the framework of an organization as its focus."

It is increasingly important discipline supporting creation, sharing and usage of the company's knowledge. Austrian economist Peter Drucker, who is considered as a father of knowledge management, was the first one who came with the idea that knowledge has become the key resource for military strength, as well as for its economic strength (Beccera-Frernandez, Sabherwal, 2010).

The purpose of knowledge management is maximizing the company's knowledgerelated effectiveness and revenues from its knowledge assets and renewing them constantly (Wiig, 1994).

Those companies, who are able to consciously use their knowledge and experience, can succeed. They also need to learn how to get as many advantages as it is possible from methods and tools available from knowledge management. This discipline is mainly about knowledge of people and usage of their knowledge in practice, not just about information systems and technology.

In Czech Republic, Ludmila Mládková is mainly concerned with this topic and she states in her book (2004) that "Knowledge management is practical discipline that arises from practice and is strongly linked to it."

#### 3.1.1. History

Knowledge management as a discipline is quite new. However the thought of transferring knowledge is not. Sharing of knowledge and experience is used for many centuries. Since the Stone Age people have been sharing their experience from generation to generation mainly in tacit form. Through the time, knowledge became more comprehensive and usable. Migration across the continents helped to spread the knowledge faster and to many worldwide places.

First mentions about importance of knowledge management appeared in the second half of the 20<sup>th</sup> century. Above mentioned Peter Drucker and Paul Strassman, distinguished professor of information sciences, were ones of the first people who stressed knowledge as a very important subject for every organization. According to them, it is very important organizational resource. (Thomas, 2012)

One of the first books focused specially on knowledge management were published in early 1990s. For instance The Knowledge Value Revolution written by Taichi Sakaiya or The Fifth Discipline written by Peter M. Senge. Simultaneously the technology was developing. One of the first applications was Doug Engelbart's Augment which was an early hypertext/groupware application capable of interfacing with other applications and systems. (Thomas, 2012)

Later the number of internet networks focusing on knowledge management is growing as well as various conferences and seminars. Organizations put focus on explicit and tacit knowledge so the advantage over competition is achieved.

Nowadays knowledge management is usually a part of every bigger company because there is a very huge competition and everybody searches for the smallest details which can help to be at least a little different and better than the others.

#### 3.1.2. Aim

The section above provides what knowledge management is. In this section there are described aims of knowledge management. What the company is trying to achieve by implementing knowledge management.

Aims of knowledge management according to KM World (2012) are as follows:

- increase transparency and efficiency of work with knowledge
- contribute to the growth of value and competitiveness of the organization
- establish a knowledge value chain
- increase motivation and participation of workers
- support decision-making and strategic management
- prevent the loss of know-how
- support innovation within the organization
- increase preparedness of response to unexpected situation
- support creation of new business opportunities
- contribute to better financial results of the organization
- systematically strengthen efficiency of effects of other factors (human resources, means of production, technology and so on)

#### **3.2. BASIC TERMS**

It is important to define basic terms of knowledge management such as data, information and knowledge. Within this discipline, it is necessary to know the difference between them very well. Sometimes people consider them as synonyms. However to understand knowledge management properly, the meaning has to be clear.

#### 3.2.1. Data

The term data means everything that we perceive with our senses. It can be objective facts about various events or sequences of characters. These characters do not make much sense to us and do not carry any information. Data are for example individual letters, numbers or other characters that were created by measurement, observation, and statistics and so on. It is necessary to put them in context to understand.

There are two possible ways how to evaluate the data - quantitatively or qualitatively. In case of quantitative evaluation, data can be evaluated using costs which are needed for gaining them. Other way of quantitative evaluation is according to speed or time required to gain them or according to the capacity (how much data is available in system for using). In case of qualitative measurements, it is observed whether the company has access to them at the very moment it is really needed, whether they meet the requirements and if the data are able to be deciphered so it is possible to make some sense out of it (Davenport, Prusak, 1998).

#### 3.2.2. Information

Information is relevant data that is organized to some purpose and some meaning is attributed to it. It is related to the needs and requirements of the user and arises from data only if the purpose was understood and the unawareness was removed. If the unawareness was not removed the data still remain data without added value and the information is not created. Thus, when two recipients obtain the same data it is not certain that both of them get the information of it.

There are several methods of creating information (Davenport, Prusak, 1998):

- Contextualization it is known for what purpose the data was gathered
- Categorization user knows which category data is from or its key components
- Calculation data is analyzed by mathematical or statistical methods
- Correction data is corrected and possible errors are removed
- Condensation user summarize the data in more understandable form

Expansion of data to information can be done via technological or human networks. Its character is subjective because it depends on the recipient and his evaluation of the information. This is also related to the value which is dependent on the price recipient paid for acquisition and the personal relationship.

#### 3.2.3. Knowledge

Knowledge is something that combines feelings, experiences, values, context information and insight view. All of this creates a framework for evaluation and incorporating of new experiences and information. It is the attitude which people already have in their minds and thanks to these they are able to stand up to the information and present it in some sort of way. It is highly connected to a human sentiment. Within organizations it is usually saved in documents and repositories but it may be also embedded in their everyday routines, processes, practices and norms.

Knowledge is arising from information as well as information arises from data and there are several methods of creation (Davenport, Prusak, 1998):

- Comparison new information is compared to the ones they are already known
- Consequences evaluating the meaning of information for decisionmaking
- Connections in what way is this information related to the others
- Conversation researching what other people think about the concrete information

These methods are used between people or in their minds. Knowledge is always obtained from individual or group of people or from the company's routines. A way of delivery is usually via books, documents, people contacts such as for example conversation or teaching.

#### **3. 3. TYPES OF KNOWLEDGE**

Knowledge can be divided into two forms – tacit and explicit. Basically all knowledge has these two forms. The first form is possible to explain or express and the second form which lays in people's minds or consciousness.

#### **3.3.1. Explicit knowledge**

This form of knowledge can be formalized and documented and its main advantage is much easier sharing and administration for instance via modern information or communication technologies. As explicit knowledge it can be considered documentation of some project, painted picture, poem or things like that. It is necessary to keep in mind that explicit knowledge is not kept only by information technologies but it can be also a book or printed document. This type of knowledge is documented, kept and shared and can be formalized through data, it means numbers, tables, pictures and so on. It is not connected to people's emotions, so basically it is information (All KM, n 2012a).

#### 3.3.2. Tacit knowledge

Tacit knowledge is kept in people's minds therefore it is very difficult, sometimes impossible, to catch it somehow or communicate it. It may be person's intuition, experience, ideas, skills or personal imagination interacting with explicit knowledge. It is very important for the company to find people with tacit knowledge and care about them, so they are happy because their loss could have very bad consequences. In some cases, it may happen that person with very beneficial tacit knowledge does not know about their existence (All KM, 2012b).

In the literature, there is usually used only two type model. However there can be also described an implicit knowledge.

In organization, it is usually kept in employee's experience. It may not be documented in formal evidence but people with this type of knowledge know they have it and they are able to share it with others via communication. This type of knowledge is mostly shared while training new employee.

#### 3. 4. CONVERSION OF KNOWLEDGE

If only two types of knowledge are considered (tacit and explicit), there are four possible ways of conversion. This process is called SECI according to Japanese scientists who introduced this model as first. Name SECI is composed from first letters of each of the four conversion ways (Nonaka, Takeuchi, 1995).

#### 3.4.1. Socialization

Socialization is creation of new tacit knowledge from actual tacit knowledge. This knowledge stays only on level of individual because it is available only via sharing. Therefore it is not usable for the company in some sort of formal way. Significant contribution for increasing efficiency has informal relationship between persons who are communicating or informal background of the communication. It is not limited just for the organization's background because socialization is general social phenomenon which is basically about sharing experience between two or more people. As a typical example of socialization, it can be considered relationship between student and his teacher. The teacher is transferring his knowledge to a student.

#### 3.4.2. Externalization

Externalization is creation of new explicit knowledge from tacit knowledge. Purpose of formalizing tacit knowledge into explicit is formalization for easier understanding and easier sharing. Within this process, intermediated person is very important. It is usually somebody who tries to understand the tacit knowledge and transmit it to other people because the original knower may not be able to communicate it. For the transmission they use various models, analogies or metaphors. Unfortunately sometimes happens that

the original tacit knowledge is damaged by the formalization because it is too close to the owner or it is not possible to transform it at all.

As an example there can be used telling stories or fairy-tales. This way is convenient especially when the person who tells the story has some professional or unprofessional specialization, hobbies or interests.

#### 3.4.3. Combination

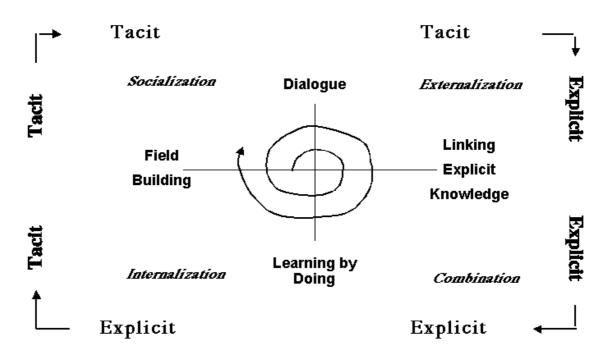
This way combines two or more existing knowledge with purpose to create a new one, more complex and more systematic. The combination may occur while calling or on an appointment. Due to formalized form, it is also possible to combine the knowledge automatically via information technologies. To get the knowledge to the organization, there are three steps for it. First is the combination second is extension and then it is actual transmission to the organization.

#### 3.4.4. Internalization

Internalization is opposite of the externalization. Tacit knowledge is created from the explicit form. It is essentially a transfer and adoption of formally stored knowledge into practical action. It is a way how mental models and different types of know – how are formed. Internalization takes place at the individual level and impact on the knowledge base of organization has no meaning. Purpose of the internalization is extension of tacit knowledge of the worker. Besides practical action, internalization can be achieved also by modelling. Everything depends on experience that certain person has already got. Therefore it is necessary to make a control.

On the picture below, it can be seen the process of conversion of knowledge. It is called the knowledge spiral.

# **Knowledge Spiral**



Source: Nonaka, I., Takeuchi, H., 1995: The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation, Oxford University Press, ISBN 0-19509-269-4

#### **3. 5. INTELLECTUAL CAPITAL**

All the knowledge the company has can be summarized as an intellectual capital. The capital is not just knowledge itself but it also includes willingness of the workers to share it and use it for their work. There exist several different divisions of intellectual capital and this bachelor thesis provides as follows (Catasús, Chaminade, 2007).

#### 3.5.1. Human capital

The human capital is represented by personnel component of the company. It includes all the workers of the company and their knowledge, skills, abilities and experiences. These workers may not be permanent employees but also external employees hired only for specific tasks for the company. The HR (human resources) activities are, in most cases, closely related to the development of human capital. This component of intellectual capital is considered as one of the most important. However the organization cannot own the tacit knowledge or human beings as their entities.

#### **Knowledge worker**

Knowledge worker is a person whose work is mostly based on the work with knowledge. He has a specific set of skills or knowledge that are important for the organization and that the organization cannot obtain otherwise than from this or another knowledge worker. It can be a person whom the others do not know about that he is so important for the company and he may not be aware of it himself (Mládková, 2005b).

Knowledge workers contribute to the increase of the human capital. Therefore they are searched and well appreciated. If a company has such a worker, they try to keep him inside as long as it is possible and use him as an advantage. Properties, which could be perceived negatively in case of other workers, can be perceived positively in case of knowledge worker. For example they are expected to be critical or suspicious or to solve problems in their own unusual way. Sometimes they need special certain conditions to do their job and the company should meet these conditions as much as they are able to.

#### **3.5.2. Organizational capital**

The organizational capital includes structure of the company, their database, software or patents. This should insure quality information to the right person in time. This type of capital is monitored according to the return of investments. For example, the old database is replaced with the new one.

#### 3.5.3. Relational capital

The relational capital of the company includes internal and external contact networks through which information is transferred and knowledge is shared. Sometimes the relational capital is classified to the human capital. It also comprises of information about organization's customers, relationships with them, their needs, preferences or how they react to changes that have been done. (Mládková, 2005a)

#### **3. 6. KNOWLEDGE STRATEGY**

As it was mentioned in chapter 3.3., knowledge is divided into two groups. This division is not pointless. Each company has to be clear which kind of knowledge it works with and which type of knowledge is priority for them. Both of these forms require different demands for work and management. In practice, all companies work with both types but only one is the key one for them. Therefore it is very important for the company to determine which knowledge type is the key one just for them (Mishra, 2009).

Depending on what type of knowledge the company deals with, the knowledge strategy is divided into two types – codification strategy and personalization strategy.

#### 3.6.1. Codification strategy

The basis for codification strategy is ability to formalize the explicit knowledge. The company works with this knowledge as it is an information or data. It can be stored, transmitted, expressed through language and so on. Organizations working with knowledge in this form are basically users of the databases. These organizations do their work with help of wide databases containing large amount of data. Their activities are based on repeated procedures. Formalized knowledge can be used again and again therefore it saves time and costs (Mládková, 2005a).

These companies require very good information technology system. They do not demand too much expert work and their employees are required to be able to work with these databases and to solve problems with available information.

#### 3.6.2. Personalization strategy

The personalization strategy is applied in creative organizations which have the tacit knowledge as a key form of used knowledge. The activities of these organizations cannot be standardized. Processes are constantly changing and there is still need for new knowledge and practices. Access to the customer or the product is individual.

These organizations do not need to build up the top information technology systems. They focus mainly on interpersonal relationships within the organization and on organizational culture and climate because these factors are very important for the transmission of tacit knowledge. The most valuable worker, and sometimes the most expensive, is an expert or otherwise also known as a knowledge worker. This worker is in every organization and he may or may not be aware of. It depends on the organization to find out who is the expert for them and to make sure he is properly taken care of. The last important task is to focus on selection and training of the successor of the expert who will carry the tacit knowledge further.

#### **3. 7. TECHNOLOGICAL MODELS OF KNOWLEDGE MANAGEMENT**

Technological perspective has such crucial importance that sometimes the whole discipline of knowledge management is incorrectly narrowed and presented as a set of specific technologies. However this is wrong.

Technological model of knowledge management can be understood as a set of specific tools in form of information, communication and knowledge technologies.

#### 3.7.1. Features of knowledge management tools

Proper tool of knowledge management supports user's managing knowledge. Managing knowledge means (Mishra, 2009):

- Expressing knowledge knowledge as it is, is quite abstract. In order to become useful within a software tool, there has to be a user interface which is flexible and simple.
- Storing knowledge when the knowledge is expressed it should be stored for other usage. The knowledge is usually stored in some computer environment where the others have the access to it.
- Sharing knowledge the stored knowledge is available so it can be shared and used for another purposes.
- Refining knowledge sharing knowledge usually meets the new suggestions for improvement. These suggestions could consider importance, best expression, who should have the access to the knowledge and how it could be improved. All knowledge should be constantly under revision because the environment is changing.
- Retaining knowledge retaining of knowledge is probably one of the most important features of each knowledge management tool. The knowledge should remain in the organization even after some employee leave or is not present so that his work can be done by somebody else thanks to the remained knowledge.

Nowadays these knowledge management tools are the mostly used:

#### INTRANET

Intranet is a private or semi-private computer network. It is basically a closed version of the Internet. It relies on the basic protocols of the Internet (system of unique addresses) as well as on the same type of connectivity - the machines are connected as a network. Intranet does not require the location of the computers in the same room or building and that is the difference from local area network (LAN). The Intranet network can rely on the public telecommunications which provide the connection among the distant computers. The purpose of the Intranet is to have the information of the company available for all the employees or other people but the information is protected against those who are not permitted to access them. The information is usually protected by some password or other protocol. The Intranet enables company's employees to have all the information about training, products, benefits or customers at one single point.

The benefits of Intranet are (Suciu, 2006):

- Easy access for all employees, especially for SME
- Ease of shared data
- Protection of sensitive data
- Easy access of employees to updated information and news

#### DOCUMENT MANAGEMENT SYSTEM (DMS)

The purpose of DMS is to capture storage and retrieve documents. The DMS is a system which is necessary for every company. Today the documents are both electronic and paper which makes the document management more difficult. The DMS' goal is to make all the information easy-to-find and to ensure that no information was lost. The electronic documents are stored and are indexed in order to make the search of the document easier. The paper documents are scanned and put together with the electronic documents. The documents are indexed by department, purchase order number, vendor, or any other criteria which are comprehensive and make sense to the business organization (Docuvantage, 2012).

#### CONTENT MANAGEMENT SYSTEM (CMS)

According to the Comentum (2010) the CMS can be defined as "an application (more likely web-based), that provides capabilities for multiple users with different permission levels to manage (all or a section of) content, data or information of a website project, or internet / intranet application. "

The CMS enables the company to manage the content. For instance, by using a web application the multiple users are capable to manage the content of the web page. Everyone has a different permission level and that enables them to cooperate (Comentum, 2010).

The content refers to the text, movies, pictures, links and other types of data. Functionalities vary from CMS to CMS, but most are web based and offer some access control. Some CMS<sup>-</sup> are publicly available and these are, for example Word press, Drupal and Joomla. There are more than one hundred various content management systems, their applications and services worldwide. (Whatcms, 2012).

#### WEB CONFERENCING

Web conferencing is a useful tool for meetings of managers and other employees. It simulates the usual room but it enables the meeting of people who are distant 1,000 miles from each other. The concept of web conferencing is very cost-effective and easy-implemented. The company has to purchase the system which enables web conferences. These systems are either web applications or single installed programs. The most known systems are Cisco WebEx, MS Office Communicator, Wimba Classroom, HP Virtual Rooms, Microsoft GoToMeeting or GoMeetNow. The web conference requires low technical requirements (software as well as hardware) and usually saves money. By using a web conferencing the transportation costs, rent costs and time requirements are excluded. It is fast and effective. It enables the users to share a content- presentations,

videos, images, doc files and so on. The users can see each other and can communicate very easily (iCord, 2012).

#### HELPDESK

Helpdesk software is a very useful tool for communication of the company. It enables customers to ask questions which are answered as quickly and reliably as possible. It is a centre which is designed for the customers. They are provided assistance, often related to computer and other technical support. The Helpdesk is usually operated by individuals and this appropriate system enables them to walk users through step by step solutions. The large companies have their Helpdesks as well as SMEs, universities, public administration and so on. It consists of dashboard and reporting. The key features of the dashboard are dynamic generation of the graphs, visual view of requests in the system and the latest forum topics. The reports are generated in order to make the processes more effective and improve the work of the Helpdesk. The reports report the activities according to several criteria; peak hours of the day, day of the week, month of the year, etc.; speed of resolution; staff workload; requests by some customer or according to the reporting tags. The Helpdesk also filters requests and sorts them according to the topic, their date or according to the employee (Helpspot, 2012).

#### GROUPWARE

Groupware systems refer to the specific technology which is designed to help people collaborate by including a wide portfolio of applications. The groupware systems can be categorized into three groups- communication tools, conferencing tools and collaborative management tools. Communication tools enable the users to send messages and files including emails. Conferencing tools enable the users to meet in online sessions (video conferencing) or to communicate via chat. Collaborative management tools were designed for managing group activities such as workflow systems, information management systems or project management systems. The groupware systems are extremely effective when it comes to the support of knowledge management. They support the knowledge creation process (KM tools, 2012).

### 4. PRACTICAL PART

The research was conducted in the studio Dance Perfect, s.r.o. At first, the interview with the owner of the studio, Lenka Ottová was made. The interview took place at her office in the studio on  $2^{nd}$  August and it was noted in the electronic form. Other personal interviews with other employees were made during practice.

The further research was made by personal observation as the practice on the reception of the studio was allowed.

#### 4.1. DANCE PERFECT, s.r.o.

The studio Dance Perfect, s.r.o. was founded in 1992. The owner, Lenka Ottová, student and lover of dancing decided to share her experience in dancing and started to teach other people how to dance. The first studio was situated in Praha 4, Háje and because the business went really good and more lectors of dancing could have been hired, another studio with 3 more dancing halls was opened in city centre on Národní Street. Unfortunately, later the first one needed to be closed because it was not prospering as it was expected. However the other one in the centre was doing great and it still is. The semi-annual turnover of the studio is approximately 5 millions CZK.

Nowadays the studio is open for everybody, from 2 years old children to elderly people. The range of offered products is very wide. The studio offers various types of dancing classes such as ballet class, contemporary dance class, jazz dance class, musical dance class, street dance class, MTV style class, dancehall class, lady's sexy dance class, glamour dancing class, salsa class and also fitness such as zumba, power yoga, dynamic yoga, pilates or body shaping and general dancing training for children in age range from 2 to 10.

The classes are divided into two groups. Open classes are available for everybody every day (there is a one-class price) and the dancing classes are paid semi-annually. Of course, the studio has also a wide offer of the permanent tickets. There are 3 different

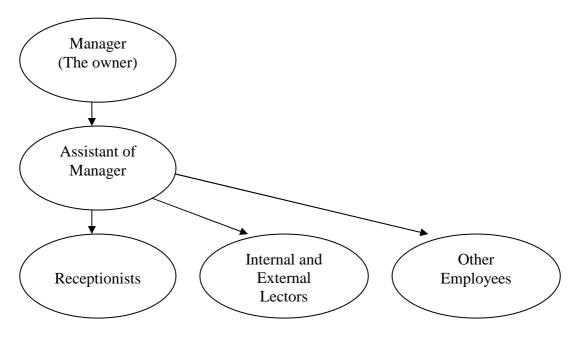
types of permanent tickets for 5, 10 or 20 classes. The type depends on what the people prefer, whether it is fitness or dancing or if the classes are held on weekends or during the week. For the biggest lovers of dancing, there is the gold chip offered which costs 8,088 CZK and the owner of the chip can attend every dancing class, even several times a day for 5 months. One open class costs from 160 to 200 CZK and prices of the dancing classes move from 2,750 CZK to 4,200 CZK. As another product, the studio can be rented for various dancing or fitness showrooms and conferences and the price for one day renting is approximately 4,000 CZK.

#### 4.1.1. Organization structure and strategy

On the top of the company, there is the manager and also the owner, Lenka Ottová who is mostly cooperating with her assistant. Together they are dealing not only with usual things such as administration but also with the objectives of the company's strategy, keeping a good awareness about the studio and of course with propagation to the customers.

The studio has two receptions and both of them run everyday except weekend. The first one has two-shift run and the second one runs only in the afternoon. Therefore there are at least 3 receptionists required for 1 day. Together there are 6 receptionists employed. The main task of the receptionists is communication with customers which is the most important. The studio's priority is to be nice and helpful to everybody no matter what is happening. The receptionists welcome the customers, provide them the services the clients need and also offer them something to drink or little snack. When there is any sort of problem, the receptionists are always the first whom the customers go to.

Weekly there are about 100 classes running with more then 25 lectors. The lectors are both external and internal and of course there are other employees, such as for example the charlady. The organization structure of the studio is following:



Source: the author

#### STRATEGY

Strategy of the studio is mostly codification, based on the explicit knowledge. The studio has to deal with huge amount of data. The data about classes need to be processed, what day and time it is, what lector is leading the class, in case of dancing class, how many people have paid for it and when it is actual then how many people attended the class, how many people came for replacement of other absent class, if it was led by the planned lector or if there was a replacement. The data about the clients need to be processed as well, their name, address, email, telephone number, number of the chip if they have any and so on. Also all the payments, received or issued, and outlays have to be registered.

#### **4.1.2. Intellectual capital**

For each company, the important factor is to know their competition, the market and its customers. Then it is easier to adapt the supply of products and services in order to satisfy the client for a reasonable price and as fast as it is possible. In Dance Perfect studio, the people who are the closest to these information are the manager Lenka Ottová and her assistant because they both come from the dancing environment and they both have their own classes within the studio so they meet the studio's clients on daily basis. They work with them, spend time with them at the classes, therefore they are the best people in the studio who can evaluate their needs. All of this can be described as a human capital. The organizational capital is for instance the A+ program which was implemented in the studio.

#### 4.1.3. Knowledge management in Dance Perfect, s.r.o.

As a dancing studio with wide range of products and permanent clients, there is a big need for a database. From the beginning, the Microsoft Excel was used. However it was very difficult and time-consuming. It may have been the easiest solution at the beginning but during the time when more and more clients and also lectors have been coming to the studio, it started to be very confusing.

That is why, in year 2005, Mrs. Ottová decided to switch from the MS Excel to one of the knowledge management tools. She chose a company which created a special bespoke program just for the studio Dance Perfect. This program is called A+ and it is able to include every data and information which is needed for run of the studio. The preparation and creation of the program was very long. It took almost one year before it could have been installed and used while normal service. She had regular meetings with the computer programmer during which she was trying to explain best how the studio works.

It was really necessary to describe every detail. What is the division of the dancing and fitness classes, that there are semi-annual classes, open classes available every day for

everybody, then weekend dancing classes which are available to everybody only during weekends. What client's data are processed, what lector's data are processed and so on. Shortly, there needed to be put an explanation of every anomaly and each structure of the individual courses.

After several months of developing, the system could have been installed and the training began. The computer programmer himself provided one-week training, printed out the instructions and in September 2006, the program started to be used while running the studio. At first it was quite difficult because the program is controlled only by keyboard abbreviations but after several days of everyday-using it is printed to the memory and the receptionist gets used to it. Of course, there is a hot line in the price available all the time in case of some sort of difficulties and problems.

During the first months of usage, the errors were revealed and removed and several new components were added during the time.

The basic price of the program A+ was calculated on 150,000 CZK. With all the additional components, the price climbed to approximately 200,000 CZK.

This program is very multifunctional. It includes several databases (clients, lectors, and courses) which are interconnected, accounting entity – in case of payments or outlays and also a statistical program which automatically creates various statistics from the processed data. For example how much money turned over one month or average amount of clients per one week and more. Part of the program is also place where possible comments can be left and thanks to the intranet network it can be accessed from another computer in another room or building. The access to the program is password protected and each employee has its own credentials.

Every client who buys any permanent ticket gets special chip which is assigned just form them, to their evidence number. Every time the client visits the class, they just put the chip on the special device and the system automatically signs them as present and deducts one class down from the ticket. Then in the client's card can be seen the classes left.

Another usable component of the program is connection to the web sites of the studio where is the link right to the client database. If the client gets the chip, they also get an automatic access through their email and password to the database (of course after the registration). At their profile, they can find not only how many tickets they already bought in the past but also the type of their actual permanent ticket, how many classes are left or when it expires.

On the picture below, there is a small illustration of how part of the program looks.

🏷 Detail klienta 018289					
Systém Zobrazit Přehled Detail Eunkce Tisky Nápověda					
	🗖 Záloha Stav Aktivní 💌				
Příjmení Jméno	Titul				
Datum narození 📃 RČ 📄 Pohlaví Žena 💌 🗖 Přípravky					
Způsob platby					
Kontakty Poznámka Podepsané podmínky Objednávky / Platby Permanentky Docházka					
Ulice	Zástupce 1 Zástupce 2				
Město	Příjmení Datum narození				
PSČ Země 🛄	Jméno				
Spojení 1 Typ Spojení Popis	Typ         Spojení         Popis           Spojení 1         Mobil         Image: Spojení         Image: Spojení				
E-mail @ . 🔽 Zasílat aktuality	E-mail @				
Spojení 2 Pevný tel.	Ulice				
Spojení 3	Město				
Spojení 4	PSČ Země 🛄				
Poznámka					

Source: Dance Perfect, s.r.o.

On the picture 3, there is possible to see the card of new client. When somebody, who has never been to the studio, comes and wants to take some of the classes (even trial lesson) he is asked to submit basic personal details because without them, the program cannot note any action. In the bottom part, there are several tabs with notes, payments, reserved or paid classes, list of presence and so on.

#### 4.2. RESULTS

Mainly according to the interview with Mrs. Lenka Ottová, the knowledge management system working in the studio Dance Perfect, s.r.o. was introduced in the previous section.

According to the personal observation and additional personal interviews with other employees, the table of values and benefits was constructed. The table includes all essential benefits of the program A+. All the benefits are evaluated on different level of knowledge management system features.

KM FEATURE	VALUE	BENEFITS
Expressing	high	<ul> <li>expressing every data the company needs</li> <li>space for expressing any notes and additional information about clients and so on</li> </ul>
Storing	high	<ul> <li>knowledge is stored and</li> <li>can be re-used again and</li> <li>again</li> <li>reducing data loss</li> </ul>
Sharing	very high	<ul> <li>each employee has access to the program</li> <li>saves time</li> <li>faster problem solving</li> <li>faster training</li> <li>faster customer service</li> </ul>

#### 4.2.1. Table of benefits

Refining	high	<ul> <li>actual data can be</li> <li>changed anytime –</li> <li>continuous improvement</li> <li>(new ideas)</li> <li>gives people feeling they</li> </ul>
		can be helpful
Retaining	very high	- data remains within the studio even if the original knower is not present anymore

Source: the author

Based on the interviews and active practice in the studio, it was also observed that tacit knowledge is within the studio Dance Perfect also very important. Some of the receptionists who mainly deal with the system and all the clients are in the studio for very long time. Therefore they have many experiences which they can benefit from. Also they created some sort of position there and many of the permanent clients know them very well and it is very pleasant for them to see there the same friendly faces on the reception every time they visit the studio. The mentioned receptionists realized they are important for the studio. However nobody can imagine how it would look like there without them.

As a disadvantage it was stressed that the training of new employees could be quite demanding because the system is very difficult to understand from the very beginning. However it depends on the individual, of course.

### 5. CONCLUSION

Knowledge management as a developing discipline together with its effective tools is important for every organization. Coordinating the knowledge received and shared is very beneficial. In the studio Dance Perfect, s.r.o., the knowledge management system was implemented in order to work more effectively and to satisfy the customers more. These expectations were met. The studio builds mainly on explicit knowledge and a special program was developed just for them. Developing of the program was timeconsuming and quite expensive but the investment returned in several months.

According to the research, the both hypotheses were verified. The implementation of knowledge management system is beneficial and explicit knowledge is the key knowledge for this particular company.

The research shows that implementing the program A+ has raised the efficiency in several ways. The most important factor is that the work is done faster and more effectively, therefore the customers are more satisfied. It means both sides benefit.

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