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Developing of the information management

Case: University Association of South Ostrobothnia

Thesis

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Thesis abstract

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The objective of the thesis is to develop the information management of the University Association of South Ostrobothnia. The development measures were begun by examining the current status of information management at the organization and by analyzing the needs for development. A development plan was created based on them.

Based on a group interview, the goal status was defined. The goal status included the defined need for development, specifications and the features the new information management tool should have and what features were regarded as important. The goal status would define the vision.

As a result of the interview, it was decided that develop information management would be developed between the University Association and the professors in order to facilitate reporting on projects. An electronic survey was made to interview the professors about their user experiences and expectations of reporting.

Based on the specification of the requirements, different information management tools and their features were examined, compared and scored. The information management tool that scored highest was examined more closely and an implementation plan was made for it. The theoretical part deals with information management and its advantages, introduction and success factors.

Keywords: Information management, customer management, implementation

SEINÄJOEN AMMATTIKORKEAKOULU

Opinnäytetyön tiivistelmä

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Opinnäytetyön tarkoituksena on kehittää Etelä-Pohjanmaan Korkeakouluyhdistyksen tiedonhallintaa. Kehitystoimenpiteet aloitettiin kartoittamalla tiedonhallinnan nykytilanne ja analysoimalla tiedonhallinnan kehittämistarpeet, joiden perusteella Korkeakouluyhdistykselle laadittiin kehittämissuunnitelma.

Ryhmähaastattelun perusteella selvitettiin tiedonhallinnan nykytilaa ja käytännön toimia, kehitystarpeita sekä määriteltiin tavoitetilä. Tavoitetilassa määriteltiin kehitystarve ja mitä ominaisuuksia tiedonhallintaohjelmassa tulisi olla ja mitkä ominaisuudet koettiin tärkeiksi.

Haastattelun tuloksena Korkeakouluyhdistyksen ja professoreiden välistä tiedonhallintaa päätettiin kehittää projektien raportoinnin helpottamiseksi. Professoreille laadittiin sähköinen kysely, jossa kartoitettiin heidän käyttökokemuksiaan ja odotuksiaan raportoinnin osalta.

Vaativuusmäärittelyn pohjalta laadittiin taulukko, jossa vertailtiin ohjelmien ominaisuuksia ja pisteytettiin ne. Eniten pisteitä saanutta ohjelmaa tarkasteltiin lähemmin ja sille laadittiin käyttöönottosuunnitelma. Teoriaosiossa käydään läpi tiedonhallintaa ja sen etuja, käyttöönottoa ja menestystekijöitä.

Avainsanat: tiedonhallinta, asiakashallinta, käyttöönotto

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Terms and Abbreviations

B2B	Business to business market
CRM	Customer relationship management
Epanet	Research network Epanet
IMS	Integrated management system
IT	Information technology
UCS	University Consortium of Seinäjoki

1 INTRODUCTION

1.1 Background and case organization

University Association of South Ostrobothnia is a stable promoter of University level education in the region of South Ostrobothnia. Association is established in 1960 to promote research work, development and provide university level education and co-operation in the field of higher education policy in the region. University Association of South Ostrobothnia has been co-coordinating the work of Research network Epanet since 1999. University Association of South Ostrobothnia provides diversified services to the network and builds up co-operation between academic and non-academic organizations. It also collects funds for the actual research work. Membership of University Association of South Ostrobothnia consists of 16 municipalities, Helsinki University Ruralia-institute, Seinäjoki Joint Municipal Authority for Education Sedu, Seinäjoki University of Applied Sciences and Chamber of Commerce in South Ostrobothnia. (University Association of South Ostrobothnia & Research network Epanet.)

The task of the University Association of South Ostrobothnia is to promote the developing of the area formed especially by its members. The research activities are promoted with the help of the Research network Epanet. The education of the higher level is carried out in a summer University. The Association operates with the universities which operate in the close cooperation in South Ostrobothnia and with the polytechnic and with the local educational institutions of the free education work. (Korkeakouluyhdistys 2017.)

The University Association has three tasks: university policy, education and research. The university political task means the promotion of university functions and developing in the province. The educational task is the carrying out and developing of the university level education. The research task is the promotion and carrying out of the research activities which serve the area. The Research network Epanet carries out the study strategy of the University center of Seinäjoki which is carried out in the cooperation with the University center of Seinäjoki, the research institutions of universities, Seinäjoki Polytechnic, companies and the

municipalities of the area. The objective is to develop a network and its operation as a high-quality and interdisciplinary expert concentration of the applied research. The operation of the network is based on five-year study professorships. The University Association of the South Ostrobothnia designs professor projects, collects financing and follows the project execution. (Korkeakouluyhdistys 2017.)

Aim of Research network Epanet is to develop South Ostrobothnia by development work and research. Network increase the volume of research work and competitiveness of regional enterprises. The structure of coordination has presented in the Figure 1. Epanet form research groups on the branches need in South Ostrobothnia. The basic resources and agreements with financiers for professorships are collected by the University Association. Association has agreement with University which employs professor. Every professor generates own project and research group. The University Association of South Ostrobothnia co-ordinate the professors' joint ventures and gather financiers and donators. All the South Ostrobothnia municipalities are financing the Research network Epanet. (University Association of South Ostrobothnia & Research network Epanet.)

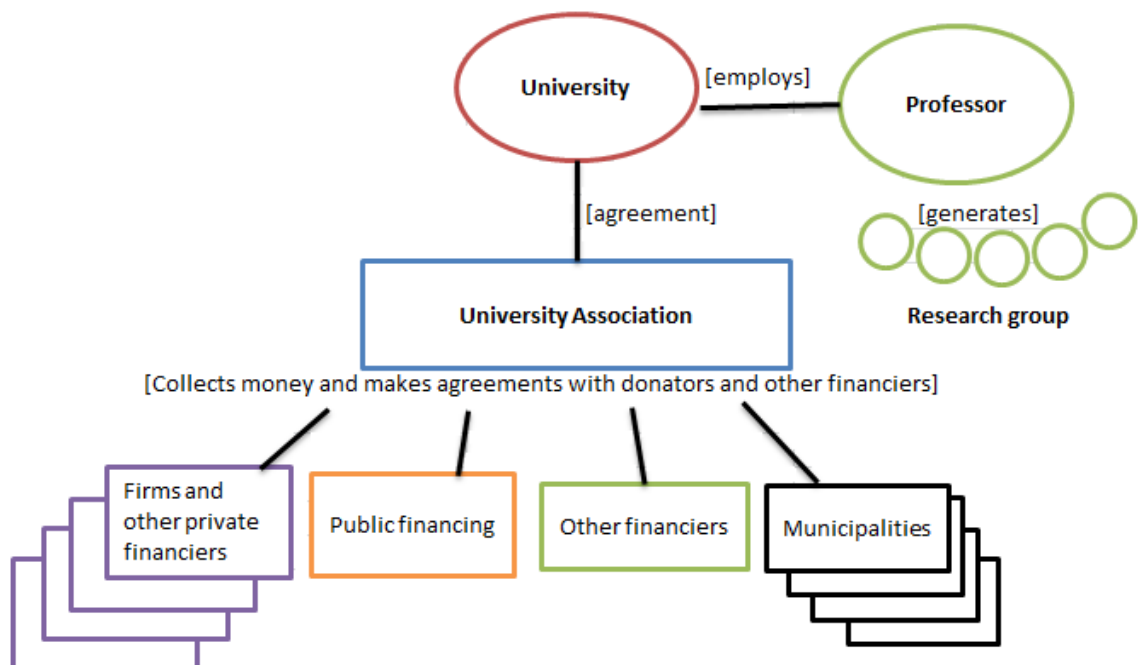


Figure 1. Coordination in practice.

University Association donates the collected funds to six different universities. With donation allowances the university establishes the periodic study professor's task. The duty of the research professor is founded by donations. Professor`s task is to collect the research group of its field and the extension financing required by its operation. (Korkeakouluyhdistys 2017.)

The year 2017 strategy of University Association of South Ostrobothnia includes excerpt that highlights the need to improve the information management: “The tasks of the Epanet co-ordination can be divided into basic tasks with which the realization of Epanet professorships is secured and into developing tasks with which an attempt is made to improve the functionality and effectiveness of the network. In practice, these tasks are partly overlapping.

In 2017, the plan is to improve the customership control which is related to the professorships. Regarding the Epanet professorships, much information about the professorships and their results is gathered. The coordination also gathers information about the financiers of projects. In the future, an attempt is to develop the relationship for companies which finance the projects, also outside the steering group. A systematic customership control is developed to support this. The better control of information also helps the operation of the coordination during the preparation of professorships.” (Strategy 2017.)

The operation of the network is based on five-year study professorships. The University Association of South Ostrobothnia designs professor projects collects financing and follows the project execution. (Korkeakouluyhdistys 2017.) In 2017, University Association of South Ostrobothnia had 26 professors and research directors (Toimintakertomus 2017).

1.2 Aim and objectives

Aim of the thesis is to develop the information management between the University Association of South Ostrobothnia & Research network Epanet (in future the University Association), professors and financiers. The objectives of the thesis are:

- Objective is to examine the present state of information management in the University Association.
- Analyze the development needs of information management
- Create development plan.

The present state of information management of University Association will be studied by a group interview. Participants to the interview will be three experienced employees of University Association. Objective is to examine current situation of information management of the University Association of South Ostrobothnia. Aim is to examine the present state and the practical actions of information management and the needs for a development. Aim is to find if association has challenges with the information management with the professors or financiers and specify the need.

Based on the interview the target state will be created. Target state will include the defined need of a development and also specifications and requirements what a new information management tool should have or what features are experienced as important. Objective state will define the vision. Possible electronic inquiry will be created if a need to it arises during group interview.

Potential information management tools will be surveyed on a development plan. Objective is to report and evaluate some potential information management tools that already exist and which can solve the development need of information management. Information management tools will be analyzed based on the association's specifications and requirements.

Chosen information management tools will be surveyed and scored based on the features and specifications. The need of the University Association and possible information management tools will be compared. Initiation plan will be created to the best information management tool which scores highest.

2 INFORMATION MANAGEMENT

Information management increases the efficiency of the stages of the business and it has become important competition factor for companies. According to Lindén (2015, 5) period of transition is operating in information management where new and more efficient ways of the information management are replacing the old ineffective ways of information management. The information has been often shattered to several saving places in the organizations. Information is locating in closed systems, personal compartments, e-mails and hidden files and behind indefinite hierarchies. The users should not use time for inquiries around the organization to find needed information and to think over the locations of files. The data structures are created in the future on the basis of the data content to be recorded. Instead of thinking where the information is recorded one should ask instead what one is recording or what information one wants to use. (Lindén 2015, 5.)

Many studies show that the fluency of the working affects to the effectiveness and sensibility of the working. In everyday life, the feeling of the control is a recurring resource. The information catches us through e-mail, a telephone call, text message and in conversations during coffee breaks. Furthermore, the information is created in the groups and at the meetings. The methods of the transmitting of the information are so manifold that it is challenging to be accounted for all the channels. The information can be recorded, copied, sent, destroyed or it can be filed. Information depends on the method of data management of the company how it is utilized or how the information becomes ennobled after the recording. (Lindén 2015, 16-18.)

Business world is attempted to be less bureaucratic which has led to the reducing of support functions which leads to a greater responsibility for the personal information management. The work performances are made by utilizing new technique more independently and phenomenon is requiring more from the people and technique. The business also has become more global. It must be possible to take care of the actions of daily information management despite of the place, time, used devices or language barriers. The growing demands drive companies

to look for the improvements to the ways of action. The result of companies is increasingly based on the versatile control of the real-time information and its availability. There is no business without the information. (Lindén 2015, 9-10.)

2.1 Benefits of the information management

Information management should be integrated part of the business processes of the company. When a company knows its own processes, it will know the wants and needs from the information management system. (Mäntyneva 2001, 58-61, 73-75.) According to Lindén (2015, 19-23) the business advantages of the developing of the information management can be identified including the following sectors.

Turnover: New business opportunities, quicker billing and more exact control of the payments traffic. The productivity will increase when the worker finds easily the information which is related to the work and is able to make a larger number of daily work performances than before. The supply of the right information also improves the effectiveness of the mutual operation of information processing systems. The information management increases the work efficiency and the number of the work performances. This leads to the growth of the productivity of labor which increases profitability. However, the profitability of the company is not always a consequence of the efficient information management (Lindén 2015, 25).

Information processing systems: Replacement of removing non-updated systems, the version control is up-to-date and supports the new data environment. Getting rid of expensive administration systems and the modern interfaces accelerate and facilitate system development. The different information processing systems offer the pieces of the information for narrow subjects. Combining of the pieces of the information requires professional skill. The general view is formed by several information sources. The bad information processing system can spread the wrong or old information which causes confusions and takes valuable working hours. One leads to the interpretation, extra inquiries around the organization and thinking of the unclear information during working hours. (Lindén 2015, 19-28.)

Staff: Reducing of the overlapping and unproductive work increases the productivity, sensibility and fluent doing and diminishing the disappearance and destroying of the information caused by the staff changes. Important information can disappear with the worker and it can be transferred also to the competitors. One can know among which tasks the worker has worked but not what information the person has produced and where the information is filed. The disappearance of information with the worker leads to the remaking of the lost documents and to worse quality. The replacing worker does not own the work tasks as well as the previous worker and has to start from the beginning. (Lindén 2015, 19-28.)

The right information management supports the work performances and processes. Here are examples of influence of effectiveness and relation between work processes:

Sales – Economy

The person of the financial management must see the offers made by the sales.

Economy – Planning

The planning department needs the cost information of the financial management for its use.

Quality – Production

The quality department wants to make sure that the production has read the updated work instructions.

Workers - Human resources management

Workers must be able to change their own personal data directly into the system of the human resources management.

Production – Sales

Schedule information of the projects of the production must be within reach of the responsibility seller.

Sales – Economy

The billing department must know the selling prices. (Lindén 2015, 40.)

2.2 Benefits of customer relation management

Term customer relation management (CRM) has several definitions and every project have its own focus and perspective. Because of this, writers and researchers have defined it to mean different things. CRM can be seen as a concept, management tool, process, business strategy and improved customer relationship. (Richards & Jones 2006, 121.) In Finnish, term CRM has not only one meaning of translation. When speaking from CRM, definitions such as customer management, management of the client connection and management of the customerships are used. (Oksanen 2010, 21.)

CRM means at least the following matters. Firstly, CRM is concept to ways of action and information processing systems with which the organization systematically commands its customerships. Secondly, it is process with all the commands of customer meetings, for example marketing, sales and customer service. Thirdly, CRM approach for the customers' identification and getting and keeping customers. Fourthly, it is information processing system of the business that helps to design, schedule and lead market conducted sales and functions of customer service. Lastly, it is business strategy with which the profitability of the customer's yields and satisfaction are maximized. (Oksanen 2010, 22.)

Back in the history, the handling of customer data was more simple and easy. The customer stock was smaller than the present and often geographically from the same area. Customer data was commanded with the help of the customer file or spreadsheet program. Nowadays customer base is often much bigger and more heterogeneous than before and the amount of the information which is collected of the customers is on the constant increase. (Oksanen 2010 147.)

The profitability of the company can be strengthened to use information management effectively among others in marketing and sales. However, this requires purposeful development of the processes and of customer-oriented

operations models. Customer relation management increases the effectiveness of marketing and sales and their procedures. (Mäntyneva 2001, 11-14.)

From the point of view of information management, the ideal-type information is easy to command and to compare. The decent database makes the identification of the customers' needs possible, both an individual and at a group level. The database gives an opportunity to express according to the interest of the target group to the attempt to adapt and to individualize. The better the customers' needs and expectations are known and the information has been stored, the better and more reliably database is. (Mäntyneva 2001, 76-77, 84.)

The pioneers have paid attention to the fact that information management is not merely the system project but philosophy which affects all the functions of the company. Better understanding of the customer gives the opportunity to more high-quality customer analyses. It is possible to focus the marketing campaigns better than before on different customer segments taking the customer profitability into consideration. It is the central objective of CRM to give a company better information from the customers and improve customer-specific profitability. The appreciation and developing of the profitability of the customers improve the profitability of the whole company essentially. When making strategic choices which are related to the CRM, also the strategic choices must be prioritized and what strategy is reached for. (Mäntyneva 2001, 33-35.)

The different programs have been developed for the recording and control of customer management, marketing, economy and resource planning. The development of programs is continuing as the demands of the control of the information also are on the constant increase. (Oksanen 2010 147.) From the point of view of marketing, the improving of the effectiveness means for example, the allocation of the communication improving. In turn the improving of the effectiveness can mean economically reasonable marketing to the big target groups. Company is able to focus its communication and is able to receive a better reception and counter reaction from receivers. Successful information management is answering to this need. (Mäntyneva 2001, 58-61, 73-75.)

If company is able to gather information about the customer, it is able to react for the customer's changing behavior and to classify its customers. The customerships are different and therefore the company must be able to classify customerships suitably. In CRM, the classification is often based on that information which the company has collected in its customerships. On the business to business (B2B) market, the demographic lifestyle and customer relationship criteria or needs of the company can be used as classification criteria. Demographic criteria's are, among others, the customer's branch or location. The lifestyle criteria's are for example net worth of the company or enterprise culture. Some of the customer relationship criteria's` are the customer satisfaction and the value of purchases. (Mäntyneva 2001, 12-14, 25 -27, 62-63.)

2.3 Network management

In the network it is important to see the difference for the traditional management. Decision-making and developing ideas in the network are very different compared to the ordinary company. In an open environment anybody can get the authorizations that have been bound without the bureaucracy. (Sydänmaanlakka 2009, 146). The management of the network deviates from the traditional hierarchical management. For example, in the network leadership is usually divided to several persons. The leader's task is also to command a complex wholeness which consist teams instead of the individuals. The objectives of the management are effectiveness, constant reviving and taking care of the workers' wellbeing. (Sydänmaanlakka 2009, 148-150.)

The building of a confidence, cooperation and common learning between different organizations is a challenging task to the network leader. The management of the networks can be defined as the promoter of the interaction processes in interaction between the different actors, for acting as the mediator and for directing the operation towards the searched goals. The networks are often complex unities which are dependent on management; co-ordination and the parallel with the objective operation and the transmitting of the information do not succeed without the management. (Ojala 2008, 155.) The activation of the network is a way to

administer expertise and to keep contacts fresh. Network which consists of the leaders, colleagues, suppliers and customers and other fields makes possible the high quality and significant crowd source which offers wide possibilities to use. (Molinsky et al 2012.)

The management of the networks is more challenging than traditional management. The company which is not focused on the networking is centralizing its management strategy only to own company. However, the company which is networking must command also the wholeness of the network because management of company must direct own business but also affect to the other parties of network. Independent companies and the connections between these companies establish the network of the companies. The network contains the different positions and tasks of companies. Some of the networks can operate so that it will contain one central organization where other companies are connected. This way the cooperation can be smaller between other companies of the network. The network can consist also independent companies that are equal. (Ollus et al 2002, 61-89.)

The openness is challenge to the steering group of the network when particularly the number of members increases. (Sydänmaanlakka 2009, 146). Transparency and commitment are expected from the actors of the network to reach the common goal. The risk of failure in the strategic network is big because the sharing of the information can be insufficient. (Ojala 2008, 155.) Network's self-direction and effective systems are one of the most important properties from the point of view of the steering group. The system and properties must be automatically in everybody's use. This also means that the management trusts its members' ability to report businesslike. The contents and the information in the system must be reached to every member. The network company is open, self-managing and emphasizing the communality and the equality. (Sydänmaanlakka 2009, 146-152.)

2.4 Sorts of information management projects

The five-basic sort of information management projects are a pilot project, the first information management project, the reimplementation, the further development project and international implementation (Oksanen 2010, 31). The most essential sort of projects to the thesis is the first information management project and the reimplementation so these two topics are monitored closely.

2.4.1 The first information management project

The first information management project is the situation where the organization brings into use a totally new tool. Organization has not had earlier centralized tools of the information management. It is common that organization has used only a register such as the Excel but they have not formed a complete, solid or functioning register. The first challenge of the project is connected to the inexperience of the organization. Organization has no common idea of the good or bad practices. The worker`s previous experience of the similar systems from the earlier jobs might be useful or then one is able to set the wrong prejudices to the project. (Oksanen 2010, 39).

Positive factor of inexperienced organization is that it does not have previous experiences of failures or challenges from the previous projects. There is an order for the change and workers want functioning tools and are positive against the change. The supplier must be able to bring his own experiences and good practices to the project. (Oksanen 2010, 39-40.)

2.4.2 Pilot Project

The pilot project is a low risky way to become acquainted with the supplier and with its way of action: if the supplier's know-how or technologies are not at the expected level, it is easy to end the cooperation with the supplier. The pilot project gives the opportunity to estimate the future changes and to start the groundwork that is related to it. The pilot project facilitates the actual implementation project,

because the key persons of the customer and the supplier and ways of action will become familiar to both parties during pilot. (Oksanen 2010, 32-33).

The piloting is suitable in the beginning of both phases: the first project and the reimplementation. Particularly it is good to pilot the reimplementation if earlier unsuccessful reimplementation project had the consequence of changing the supplier. A drawback and risks which are probable when the project is not professionally conducted are connected to the piloting. These are for example the change resistance of the staff and the wasting the working hours if there are no clear program and contents for the pilot. (Oksanen 2010, 33.)

When a pilot is designed, there are four important starting points. Firstly, *commitment to the future production use*. The organization must be willing to take the system into use and have commitment to necessary implementation project. Secondly, *commitment to the supplier*. The pilot is made only with one supplier. The client organization chooses the most probable supplier from the most suitable ones and starts the cooperation. The piloting is not worth making simultaneously with more suppliers at the same time because it reduces the commitment and the resources. Thirdly, *commitment to the target-orientation*: the pilot requires target-orientation and arrangement, as well as actual implementation. The pilot's objectives must be clear before the start. During the project, it requires effort to accomplish the appointed objectives. Fourthly, *commitment to the preparations*: in a successful information management pilot, the right data will be used in the right operating situations. The data is brought to the system from some other operative system. (Oksanen 2010, 34-35.)

Pilot should be defined to 2-3 divergent functions and to investigate the success of the technical solutions which are related to them. Functions can be for example, control of the offer stock and documentation of customer meetings. It is essential to clear the ways of action of chosen functions and their realization with the tool. The information management pilot's duration is organization-specific and case-specific. As a rule, the project lasts usually a few months. Good practice is to collect the participants or test group in different organization units so that the unit-specific needs and ways of actions will be observed. It is good to create the atmosphere to the pilot that enables the pilot's success. The key persons of the

project must often strive consciously to positive atmosphere and team spirit. (Oksanen 2010, 35-36.)

2.4.3 Decision and evaluation of the piloting

According to Oksanen (2010, 36-38) at least the following must be estimated as the part of the decision:

1. The changes while action and preconditions for it

How did the pilot group react to the change? Is the planned change operating in practice? What objections can be identified to a change and what matters assist the coming change? (Oksanen 2010, 36-37.)

2. The pilot users' attitude and participation to the project

This gives the further details from how the rest of the organization will react to the project. (Oksanen 2010, 38.)

3. Resources- and schedule prognosis to future introduction

In the pilot project, one will struggle with the same matters as in actual implementation. One can say that the pilot is a scale model from the implementation. When pilot ends, it will be good to examine these matters with the supplier candidate, who has the needed experience of the market and of the ways of action. (Oksanen 2010, 38.)

4. Cooperation with the supplier

The supplier candidate's evaluation is from the most central matters of the pilot project. Weaknesses and strengths of the supplier should be judged generally. How well does the supplier's staff understand the customer's environment? Has the supplier needed expertise and know-how or is there a sufficient experience? Durability of the promises: did the agreed matters take place on

agreed schedule? Price-quality ratio: is the result equal to expenses? (Oksanen 2010, 38.)

5. Functionality of the system and suitability for the needs for the organization

Evaluation and usability of the system: do the users like the system and is it suitable for environment and to a branch? (Oksanen 2010, 38.)

6. Changes in the objectives and demands

Based on information and experience that has been collected during the pilot, it is possible to estimate objectives and demands and to make the fine adjustment to them. (Oksanen 2010, 38.)

7. Further measures to start the implementation project

The measures of the implementation project must be designed so that they will be based around the matters that have been done in the pilot. It is beneficial for the pilot and implementation to follow each other in the short run that the users can continue the use and learned practices are not forgotten. (Oksanen 2010, 38.)

3 THE SUCCESS FACTORS OF ACQUISITION AND IMPLEMENTATION

3.1 Information management solutions and alternatives of implementation

The starting points for the developing are always a branch and company-specific. Following factors, among others, affect developing process and their demands: geographical operation and used languages, demands brought by the law, changes and licenses in the organization structure, demands of the working with the financiers, budgeting, objective follow-ups and effectiveness and reporting of the operations. (Lindén 2015, 103.)

The old information management systems used in the organization can perform some of the functions well but the usability and the functionality demands within time may not be full filled any more. The organization can be willing to utilize old systems and investments that have been put to them and it can become ballast. It may cause underutilization of the new system if the information management system is neither designed nor taken into use in the right way. The new system also can function alongside with an old system and can supplement its lacks. The parallelism of systems requires for new system integration which integrates an old system and which takes responsibility for managing operations the old system is not able to operate any more. The old system should be run down on a flexible schedule without endangering the daily operation of the company. (Lindén 2015, 105-106.)

Companies have different alternatives how they can implement the information management system in to their organization. Alternative is to build and to *develop own information processing system*. In this alternative the advantage is the fact that the information processing system becomes individually tailored and it supports the needs of the company and other systems. After this the company also has skills and resources with which it is able to develop its information processing system according to the demands of the company. (Kumar & Reinartz 2006, 25.)

On the other hand, this alternative is expensive and binds the most time of the company's resources because they must maintain the system independently (Oksanen (2010, 188).

Oksanen (2010, 188) points out that nowadays there can be found several solutions of information processing systems on the international markets which are able to offer correct solution in any challenge of handling information management challenge. Tailored information processing system is an advantage and offers flexibility to the company.

According to Lindén (2015, 112), growing number of companies has given up their own information processing systems, servers, devices and maintenance work. Among others, the expenses of maintenance resources, device acquisitions, the updating expenses of software, the expenses of an administration and IT department affect the *outsourcing* of the services. (Lindén 2015, 112.)

Company can outsource the information management solutions to other company against the payment. The realization usually takes less time because the systems have already been built and the service provider is willing to get to cooperation as fast as possible. Outsourcing of the solution does not require tremendous IT know-how and company pay only for visible results. Company does not need to take care of the maintenance payments or license fees of the programme. This alternative is cheaper than previous alternative. On the other hand, the weakness of the alternative is that the customer is dependent on another party continuously. It is risky if service provider will suddenly discontinue its businesses. (Kumar & Reinartz 2006, 25-26.)

Licensed information processing system can be found in the markets. The information processing system is built and developed together with the supplier. Customer has to make sure that the new programme is suitable for its other IT applications. Licensed system affects costs with their system payments and license fees. (Kumar & Reinartz 2006, 25-26.)

Cloud service provider takes care of installations, maintenance and equipment. In cloud service, software resources, storage capacity or processor effect can be increased when necessary. According to Lindén (2015,112), it can feel

unprotected to save important information outside the walls of the company which can seem unsheltered if the matters related to the information security are not known in the company. The cloud service is a good alternative when the business field is changing and company is not the attempt to invest money in own devices. Furthermore, the cloud service is flexible. When considering a cloud service, the responsibility issues, the possible contact person changes, the follow-up of agreements and negotiations with several parties have to be taken into consideration. (Lindén 2015, 113.)

Hybrid solution is the combination of the cloud service and of the own hardware environment in which both advantages are utilized. Hybrid can be an alternative solution when company has both internal users the information processing system and external users. Company is rarely willing to let to the external users to the systems and internal data network of the company. The information needed by the external users' moves automatically or manually to the cloud. To the company this is a safe way to connect and share important information to external users. (Lindén 2015, 113.)

3.2 Acquisition of information processing systems

National acquisition of information systems in Finland, published in 2013 is cooperation study by Celkee Oy, Tietotekniikan liitto ry (nowadays TIVIA) and by the association of Ohjelmistoyrittäjät ry. The study clarified the customer company's and service providers' point of view and challenges which are related to the acquisition of information processing systems. (Tietojärjestelmien hankinta Suomessa 2013.)

The first main result of the study was *communication* and *communication significance* to success of acquisition of information processing systems. The effective communication between customer and service provider was seen as extremely important factor. At the same time, from particularly the service provider pointed out that the most generally crises in projects are the result of poor communication or because of the parties' differences in point of views. According to the study, communication is the most problematic sector in information

processing system projects and needs generally actions of improvement. (Tietojärjestelmien hankinta Suomessa 2013.)

The customer and the service providers often act within very different branches which can cause problems. For example customer is not familiar automatically with the conformity to law and ways of action of the software field. The understanding of the opposite side and different stages of the project draws much energy and it is difficult to escape from the misunderstandings. Other reason is the dominating enterprise culture and attitudes of the organizations. The study shows that *harmful attitude* can be seen between a customer and a service provider where the opposite side is regarded as if as the competitor when confidential and good mental cooperation would be needed within a project. Only with cooperation and a suitable appreciation of another party, leads to successful results. The company visits and get to know with the staff of the opposite side are good methods to create confidence. External help is good way to cooperation and to solve problems if project meets critical stages. (Tietojärjestelmien hankinta Suomessa 2013.)

In the customer`s opinion, *the value of the project* to the business was by far the most important factor from the point of view of wholeness of the project. The *price* was the second most important factor. In the customer`s opinion, the indicators that were the most used in the projects, were *the budget, the support of business and the schedule*. It is significant how position of traditional indicators is too emphasized, such as a budget and schedule. The fact is that both are understandable easily measurable and their measurement is quite simple. To guarantee successful projects, the indicators should be directed to the right matters that are experienced as important. (Tietojärjestelmien hankinta Suomessa 2013.)

The price and the schedule are factors which are important to many projects but if the system produced by the project does not set the support of business the system in question does not really have a use even though it is delivered on a schedule and on a budget. Therefore it is important to try to find the right indicators to different projects. This is not always easy but the improvement to the situation is

most probably only the question of the time, when the need for the developing of indicators has been identified. (Tietojärjestelmien hankinta Suomessa 2013.)

3.3 Successful implementation

Many companies` operation model is increasingly based on customer-oriented operation model. In order to succeed in the introduction and development of the customer-oriented operations model, the company has to have a defined customership strategy. When a customership strategy is prepared properly, the demands are clear. There are own systems development models for the developing of the customership control. The introduction of the systems development model is justified if the company wants to invest in the development purposefully. The systems development model has five-stages and its central contents are in the headlining of stages: research of the start situation, definition of the vision, method of implementation of the developing, development operations and follow-up and evaluation. (Mäntyneva 2001, 111.)

The planning has the extremely big effect of the acquisition for the success of the project. The better the project has been designed, the more effectively and more advantageously the projects will success. The time and money that has been sacrificed to the planning tend to come manifold back. In order that the planning will succeed, the clear objectives and good information of the start situation are needed. (Tietotekniikan liitto 2002, 18.)

According to Oksanen (2010, 29), the implementation of information management -solution can be seen successful if after two years of end of implementation these criteria are fulfilled:

- At least 4/5 of the designed users use the system regularly.
- The user organization is dependent on the system. In other words, it produces information needed in the management of the business.
- The system is an essential part of the information management of the organization.

One can say that about 40-90 % of the implementations fail. Few organizations succeed in changing its operation culture and implanting the management tools and –ways of action genuinely partly its business. The success of information management introductions requires strong management and purposeful measures. The genuine taking into possession of customer ships will not be possible if the ways of action and systems which support it are not in order. The best moment to take care of them is immediately after the implementation. (Oksanen. 2010, 29-30.)

The reasons for the failure of the project vary but one can avoid it with good advance planning and with good commitment to the project. The most general reasons to the failure are general resistance to change, too long-term project, too much information at time, lack of the education and defective support of the management. The resistance to change and the incomplete commitment are the most general reasons to failure information management projects. Despite the commitment in company`s management, the project can failure because of the staffs change resistance and refusal to use the system. (Lombardo 2006, 366.)

According to Lindén (2015, 105-106) company should have internal change agents who have a motive and a view on the right direction of the developing of the information management are needed for the successful developing. They may have the years' experience in developing which is based on the doing in practice and information which they want to offer as the advantage of the company. They clarify the right will premises of the organization and interests of the developing. At the planning stage it will be important in the organization to pay attention to the accustomed practices and to operation methods. In addition to technical functions, one must concentrate on a human ability, desire and know-how too. The obstacles of the developing have to be identified in early stage so that they can be managed in good time. (Lindén 2015, 105-106.)

Organization has to identify the needs and sectors where the information management functions should be more effective. After this, organization should have internal discussion where they identify the details. The discussion is worth extending also to the individual workers who can estimate best the challenges

which are related to the functions. (Lindén 2015, 107-109.) One view on the progress of the specification of the objectives and demands is pointed out in the Figure 2.

Decision making of details is made when the needs have been identified in a general level. The developing of the information management is always the developing of processes because the business is based on the processes. The process can be for example the recycling and approval of purchase invoices, electric filing, control of agreements or the intensifying of sales processes. The development work inside the organization is worth doing independently until the big lines are drawn and understood. At the early stage it can be useful to include the supplier of the information processing system to the developing process. They have an expertise and experience in the common developing situations. (Lindén 2015, 107-109.)

According to Oksanen (2010,78) the most typical objectives of the information management projects are usually connected to the schedules, to the use of time and to the economic indicators. In the objectives the organization objective and vision are partly combined. The objectives are conducted from a long term vision.

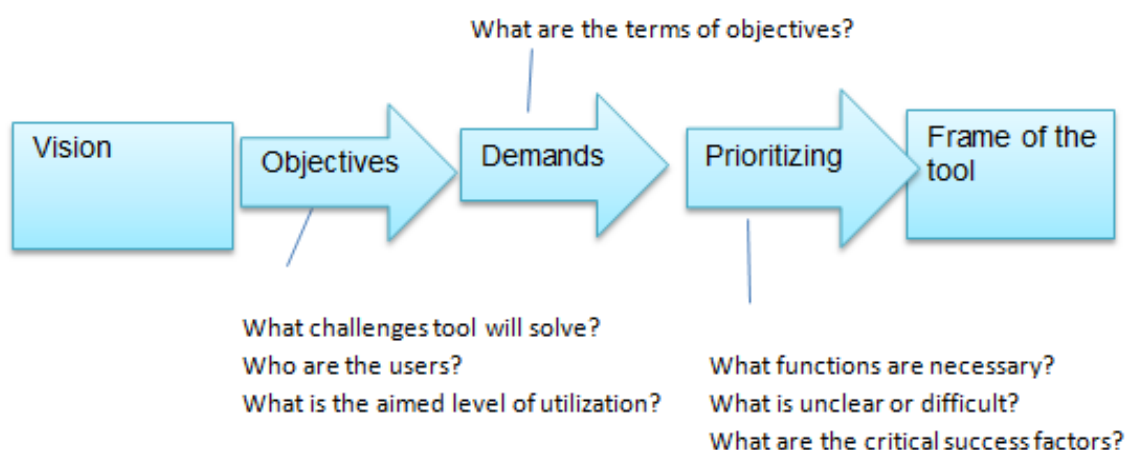


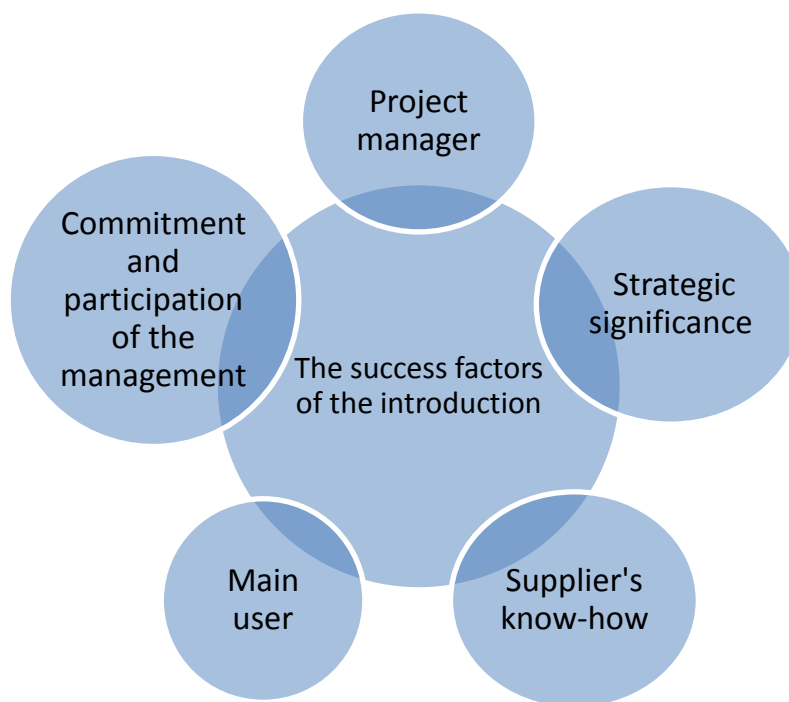
Figure 2. Definition process of objectives and demands (Oksanen 2010, 77).

It is supposed as a starting point that the company has set already earlier its information management vision and begins to define and to set the project's

concrete objectives. The viewpoints help to specify the main demands. The demands are prioritized and based on them the success factors of the project can be defined. (Oksanen 2010, 77.)

According to Lindén (2015, 110-111) the developing of the information management cannot be the responsibility of merely the management or IT-department. Organization`s workers and departments have excellent information about the daily problems of the information management that should be utilized. Nowadays the working days are busy and taking part in the extra development project can be challenging to the workers. Often the IT-persons are paid or rewarded from the development work even though the best ideas are often obtained from the workers. Among a project, workers often work without any thanks or rewards. The developers should have preconditions given by the management in order to succeed. The good management is based on the confidence and use of the right resources. (Lindén 2015, 110-111.)

Oksanen (2010, 48) tells about the study made by the THO Consulting Oy in 2010 in which viewed and studied information management opinions of the Finnish executive and success factors. Results are pointed in the Picture 1, the success factors of the introduction according to the study of the THO Consulting Oy.



Picture 1. The success factors of the introduction (THO Consulting Oy).

According to the study, the success factors of the introduction are the commitment of the management a project, strategic significance, project manager, main user and the supplier's know-how. Altogether 129 leaders from 125 different companies were participating to the study. The success factors of the introduction are estimated by 80 interviewees. 93% of the participators kept the commitment of the management the most significant success factor of the introduction. Commitment of the management and participation are factors that the project cannot success without. The management must commit itself to the project and must stay on a chosen route. The commitment and the communication are not enough. During the project one must clarify to every worker what the project and change means and affect practically to their work. The commitment is not created by order of the management but from understanding of the change in the own working environment which reaches to a personal level. (Oksanen 2010, 48-51.)

The project manager's ability to be able to make matters is a necessary feature. Often a person who is interested in the matter is chosen as the project manager of the project and takes care of the project manager's action in addition to the own work. In the ideal world the project manager is the owner's right hand and they work the vision of the company with good cooperation. The project manager is

responsible to the owner of the project. The organization is strongly responsible of the pulling responsibility of the project. (Oksanen 2010, 104-105.)

According to Oksanen (2010, 107) project managers main tasks are to lead the project in cooperation with the tool owner, make the decisions on the daily matters of the project. Design the scheduling and the resources and follows from their realization, take care of the communication between the organizations of a supplier and customer. Control the coming true of the performance agreement, clarify and present the decision alternatives to the steering group and act as an introducer and secretary in the steering group. (Oksanen 2010, 107.)

It is possible to give the pulling responsibility of the project to the supplier of the project with a financial investment. The suppliers' project managers have experience of the similar projects start-specifically and they have references and a display. According to Oksanen (2010, 106) it is the consideration's worth is the pulling responsibility of the project worth leaving to the supplier and using released internal resources to the productive work. (Oksanen 2010, 105-106.)

3.4 View point of the user of the change in organization

In the viewpoint of the user, common problem with information management systems are the uninspiration and lacking number of using the system. Despite the supplier promoted the system to be easy to use and save precious working time the reality can vary. The main concern is that user does not find the system useful, disses the agreed operations and does not insert the needed data to it. This kind of risk is especially high in the early stage of the change, after the implementation when system and the agreed operations are new to everyone. Organization members might also find that the system is unneeded. Usually this is the follow up from the situation where members have not understood the improvements and positive outcomes of the use of the system. (Oksanen 2010, 68-71.)

According to Oksanen, in the introduction phase one cannot suppose that information management is brought into use on the common decision after which everyone in the organization approves it and finds its own use of style

automatically. The matters which are related to the ways of action and to the tool less often will come to the practice by heart. Personal feelings are often connected to this kind of changes. While preparing the change, some of the keywords are the genuine interaction and possibility of influencing. There has to be possibility to the organization members to influence to the change and planning related to the change. (Oksanen 2010, 61-62.)

The general view of the developing is focused and a common view is strengthened by collecting of the information around the organization. The identification and describing of needs should be possible to get to the understandable form that can be understood by everybody. The objective is to form a sufficient common view and approval why the matters are developed and how it affects the doing of individuals in the future. It is good to keep the discussion open in the organization so that it will be seen how it is reacted at different levels organization to the development matters. However, the report stage should not be extended to too wide a participant group so that the discussion will stay in the subject. (Lindén 2015, 108-109.) Objectives must be as concrete as possible and measurable so that people are able to adopt them as easily as possible. The clear objectives for their part create motivation. Unclear or unjust objectives produce the frustration and dissatisfaction. (Oksanen 2010, 78.)

The introduction of the tool or implementation does not produce the right results without their strong linking in practice. The success of the tool introduction requires the realization of the introduction project level of the whole organization and the changes related to it. Information management is often perceived as the tool of sales and marketing even though it serves organization's level way of thinking and action; attention must be paid also to a customers, suppliers and other functions which deal with the network of the organization. (Oksanen 2010, 55-57.) When implementation has been come true, one must postpone at the realization stage in where everyone must operate in practice what have been agreed on. In this stage the skills of the management and superiors of the organization are weighed. (Oksanen 2010, 61-62.)

4 RESEARCH METHODS AND SOURCES

4.1 Interview

The study was performed by using a qualitative research method. The perspective and current situation of the University Association's information management was examined by group interview. The group interview was held to three people in the University Association of South Ostrobothnia at the same time. Participants were two Senior Planning officers and Project Secretary of Epanet-coordination. Objective of the interview were to find out the current situation of information management in University Association of South Ostrobothnia. Intention was to find if University Association had any challenges with the information management with the professors or financiers and specify the need. Interviewees received the interview questions day before the interaction. The interview was kept in Finnish and was recorded. Interview questions structure were based on the meetings and Oksanen's view of a definition process of objectives and demands which main points has shown in the Figure 2 on page 28.

Interview had two segments: firstly, report on the present state and the practical actions and secondly, the needs for development and definition of the vision. In the first question, interviewees were asked two parted question: how they experience information interaction at the moment with the professors and then how they experience information interaction with the financiers. Interviewees were asked to grade the situation with the scale "excellent, good, moderate and bad" and explain the answer. Aim was to find out interviewees thoughts and to have description of the present state, practical actions and challenges.

In the second question interviewees were asked to describe what information management systems or tools they are now using. After this, the three most important and used systems of the information management were examined through in more details. Aim was to find out what systems are used, by whom how often, which form the information is in and where is the information sent and recorded.

In the next questions objective was to find the needs for development in the daily interaction with the professors and financiers. Interviewees were asked to specify separately what information University Association needed from professors, what information professors needed from University Association, what information University Association needed from financiers and what information financiers needed from University Association. Aim was to find out in the University Association's view how the information is managed in the coordination, what information is needed, what information they want to control, how the information is shared between the parties, in what form, how often and to have a description of problem situations and the vision of objective state.

Finally interviewees were asked how they experienced University Association's mental, economical and chronological readiness to a new information processing system or solution. Aim was to find out the University Association's will state to invest to new possible information management tool. Lastly interviewees were asked to describe requirement specification what they thought new information management tool should have or what features they experience important.

4.2 Web survey

Based on the group interview, the web survey was created to professors, the leaders of research groups. The University Association of South Ostrobothnia was willing to explore the professors' user experience of current reporting, utilization and their thoughts of development needs in reporting. Intention was to make professors analyze the present reporting model and alternatives visible in the survey. According to Oksanen (2010, 61-62), it is important to the organization members to have possibility of influencing while preparing the change. This helps the whole organization to plan and approve the change.

Survey was named as "Survey of the University association of South Ostrobothnia and the University Consortium of Seinäjoki to the leaders of research groups". Survey was in Finnish, created with Webropol and sent to 25 professors via email in October 2018. Answerers had eleven days to answer and they were noticed three times via email to participate to the survey.

Web survey had 9 questions: five questions with multiple choice and four questions with open answers where answerer can write own answer. Survey started with the part where answerer informed his or her employer. After this, survey represented claims of year reporting and answerer where asked to choose the answer closes to what they mind. Questions with multiple choices had the same answer options in every question: "Totally same mind", "Nearly same mind", "Not the same and not a separate mind", "Rather separate mind", "Totally separate mind" and "I cannot say".

Claims considered the current ways of reporting, the time period and returning of report and the development needs of reporting. Answerers were asked to mention what good and bad features they thought current reporting model had. Finally answerers were able to leave open comment considering reporting and to recommend information management tool what they felt could serve the reporting between them and the University Association. Specific questions are shown in the section "Analyzing and results".

4.3 Research material and data collection methods

Research material was collected firstly from conversations, emails and meetings with Epanet Network Development Manager. Main information of research material was received from meetings and in group interview with Senior Planning Officers and Project Secretary and from web survey to the professors. Other sources of information were annual reports, research reports, literature and websites. Data collection methods have pointed out in the Table 1.

Table 1. Data collection methods.

Base information and defining objective	Spring 2017 Email conversation with Epanet Network Development Manager	15.5.2017 Telephone conversation with Epanet Network Development Manager	19.6.2017 Skype meeting with Epanet Network Development Manager	12.12.2017 Meeting in University Association`s office with Senior Planning Officers and Project Secretary	
Viewpoint of the University Association of South Ostrobothnia	12.12.2017 Meeting in the University Association`s office with Senior Planning Officers and Project Secretary	Email conversations and inquiries with Senior Planning Officer B.B	11.9.2018 interview study in the University Association`s office with Senior Planning Officers and Project Secretary	November 2018 Email conversations with IT-contact person of University Association	
Other sources of information	Annual report 2017 of University Consortium of Seinäjoki Annual report 2016 of University Consortium of Seinäjoki	Report: University Association of South Ostrobothnia & Research network Epanet by Senior Planning Officer C.C 11.12.2017	Report: Research groups of University Consortium of Seinäjoki and Research Network Epanet 2018 by C.C 11.4.2018	Websites: www.epky.fi www.ucs.fi	Literature and other sources: See bibliography
Viewpoint of the professors	October 2018 Web survey to the professors				

5 ANALYZING AND RESULTS

5.1 Present state

The present state of information management of University Association was studied by a group interview. Participants in the interview were three experienced employees of University Association. Objective was to examine current situation of information management of the University Association of South Ostrobothnia. Intention was to examine the present state and the practical actions of information management and the needs for a development. Goal was to find if association had any challenges with the information management with the professors or financiers and specify the need. Based on the interview, web survey was created to the professors.

5.2 Results of the interview

Based on the group interview, the University Association of South Ostrobothnia sums their information management to be good in average. The University Association updates actively different sources of information to share both internal and external information to target groups. University Association is a small work community in which the information sharing and communication inside the house is performed mainly with orally distributed face-to-face to the colleagues. Work community holds meetings and hallway meetings regularly and talks from the work cases. The important files and information such as records and agreements are saved in a common cloud service SharePoint and OneDrive by every person in charge. The practice has been regarded as good and productive. Documents in the SharePoint have been filed clearly. Cloud service is in regular use by the whole work community. University Association uses Microsoft Office 365. The most used tools are Word, Excel, PowerPoint and SharePoint.

Office 365 is cloud based service which offers the modern tools for the working life. Office 365 makes the creation and the division possible by connecting its class with and any given device. Service includes applications such as One Drive, Excel

and Outlook. (Office 365. Ref. 20.9.2018.) SharePoint is a cloud service that facilitates teamwork by offering every project team, a department and unit dynamic and productive group sites. User can distribute files, information, news and resources. Sites can be adaptable and organization can be easily and safely departed with internal and outside members of the team. SharePoint functions in a PC or Mac computers and in a mobiles. (SharePoint 2016. Ref. 20.9.2017.) At the moment SharePoint is used in University Association`s internal use and some of the files access is shared with the University Consortium of Seinäjoki.

Outlook has the clear view from e-mail, calendars, contact information and files and helps to stay in the connection and improves productivity. Outlook functions in all devices. (Outlook 2016. Ref. 20.9.2018.) Important dates and meetings are wrote down to personal planners and marked to calendar of Outlook. Email`s calendar will inform and remind of important happenings. Important dates can also be seen and checked from the meetings` protocols. University Association`s work community has regarded this procedure active and functioning.

5.3 Perspective of the professors

Information management between the University Association and professors is regular and constant. Communication with the professors will be emphasized especially before seminars and when research group`s support teams gather together during the year. Communication happens mainly with email, phone and in the meetings and seminars.

The University Association will reserve important information of the project through professors. University Association gathers information of the projects which is based on the professors` year reports, the steering group meetings, seminars and meetings` protocols. University Association generates own data and statistical information about the research groups and projects. This data includes for example information of financers, used and remaining funds, members of project teams and progress of the projects. University Association coordinates Epanet-newsletter based on professors´ given information. Newsletter is open to public and it will be sent also to financers and the members the steering groups.

Main source of information source to the University Association is a year report of every project. At the moment, professor's duty is to make report to the Association of their ongoing projects once a year. University Association sends the base form of year report to the professors via email to gather needed information in the beginning of the year. Professors will fill up the form and return it to University Association via email.

Professors' activity to fill the form and answer to questions differs widely. Usually given information or numbers are not comparable. University Association is hopeful to have the form filled up with exact and real-time information so that all the needed information is given directly. At the moment University Association has to search frequently and fill up the lacking information of the reports. However, University Association is not ambitious to cause any extra work to project team leaders with reports or inquiries of the missing information.

The University Association is willing to have real-time information of research groups' projects direct from the professors. At the moment University Association has no effective system or operating mode to gather and manage the needed information. The present situation does not serve the information supply with projects. The University Association is willing to have more updated, on-time information on projects, direct from the professors. University Association has no common information management tool with professors that could solve the problem.

5.4 Perspective of the financiers

The University Association collects agreements and money with financiers and donators such as firms, private financiers, public financing and municipalities. The University Association communicates and manages information from the financiers mainly when a new project is planned. University Association meets financiers and donators mainly face-to-face in the meetings. Financers will receive information of the on-going project on the specific meetings where project's achievements are viewed and evaluated. Main information of the projects professorships, financiers and donators can be seen in the University Association's websites. University

Association informs financiers and donators via email and sends newsletters, invitations to the seminars and happenings and information of the new publications.

University Association is willing to give financiers more specific information of the projects. This problem will be solved during the autumn when University Association starts a new seminar that is especially designed to financiers and the steering groups. During the seminars, professors perform current information of on-going project to financiers and other professors who can discuss and share thoughts. This event will solve the need of information management development with the financiers that University Association is willing to have. Because of this, Association pointed out that this matter can be leaved out from the thesis.

5.5 Results of the survey

Survey had 11 answers of 25 from the leaders of research groups therefore the answer rate was 44 %. Employers of the answerers were among others university of Vaasa, central hospital of Seinäjoki, university of Tampere and university of Helsinki. Questions had claims considering the current ways of reporting, the time period and returning of the year report.

Currently the professors are asked to fill the year report once a year on February to the University association and University Consortium of Seinäjoki despite of the timetable and progress of the project. In Figure 3, professors' opinion was asked is the current time suitable to the professors to fill the year report.

Claim: "In my opinion, the year report of the operation of the research group is currently asked for to fill during the suitable time to the professors?" Based on the given eleven answers, most of the answerers were totally same mind (27 %) or nearly same mind (36 %) that the current time to fill the year report is suitable.

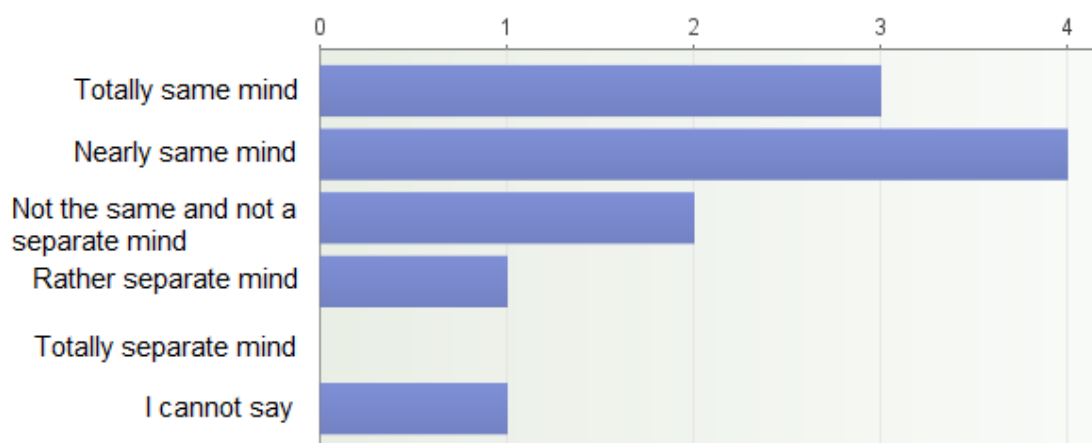


Figure 3. Current time to fill report (N=11).

Claim in the Figure 4: “The basic information of the new projects started by the research groups would be good to report to University Association and to University Consortium of Seinäjoki immediately at the beginning of the projects in some simple and easy way.” The given eleven answers were divided evenly between the answer alternatives. 27 % of the answerers were not the same and not a separate mind. The question divides the rest of the answerers into different groups; one supports or partly supports, one resists or partly resists the claim.

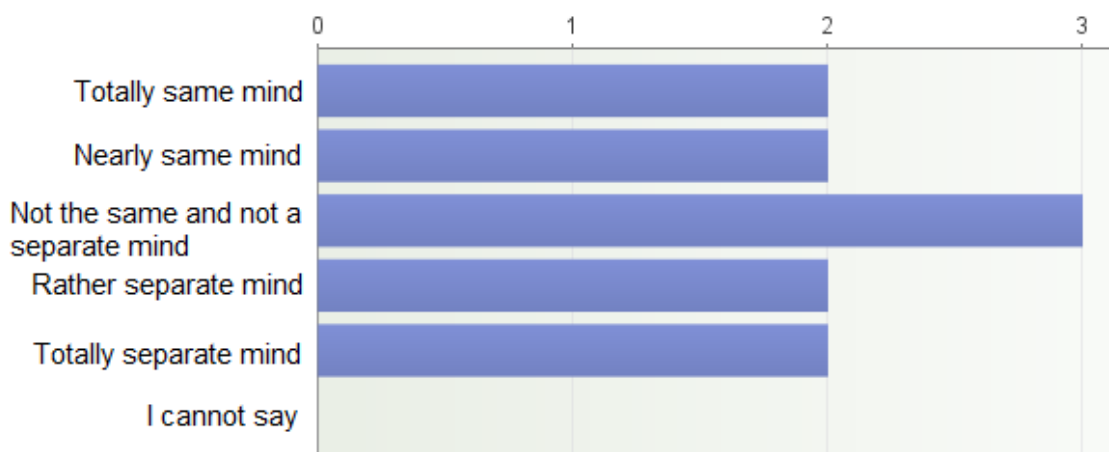


Figure 4. Reporting in the beginning of the project (N=11).

Claim in the Figure 5: “It would be more reasonable to supplement the information of the year report electrically all year long for example on the e-form. I would be ready to commit to use it if the same information could be utilized as a foundation

of the year report.” The question divides the answerers evenly into different groups where they support or resist the claim. Most of the answerers are nearly same mind (27 %) or totally separate mind (27 %) with the claim. 18 % of the answerers cannot say their mind.

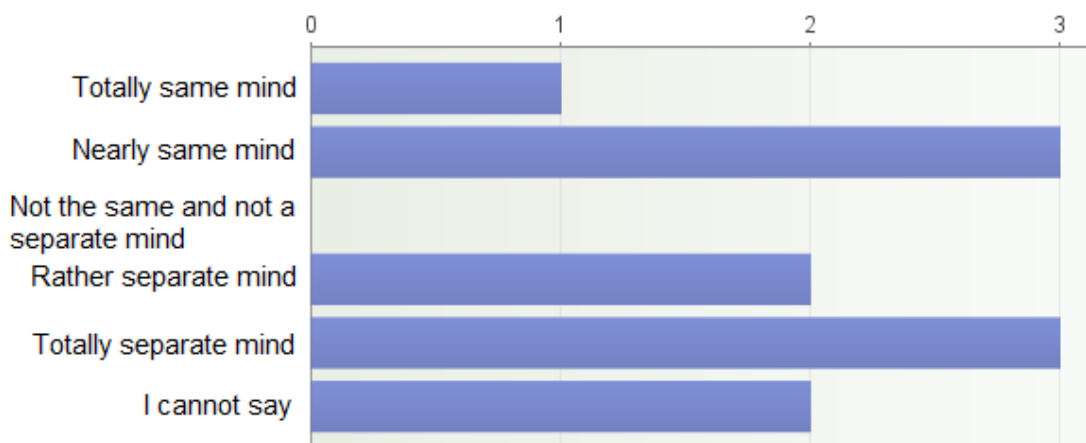


Figure 5. Reporting thru the year (N=11).

Claim in the Figure 6: “Common reporting base should be developed for the meetings of steering groups and this way the information would be collected with the same work in the connection with the meetings.” The clear majority of the answerers (55 %) are nearly same mind with the claim that common reporting base should be develop to the connection of the steering group meetings.

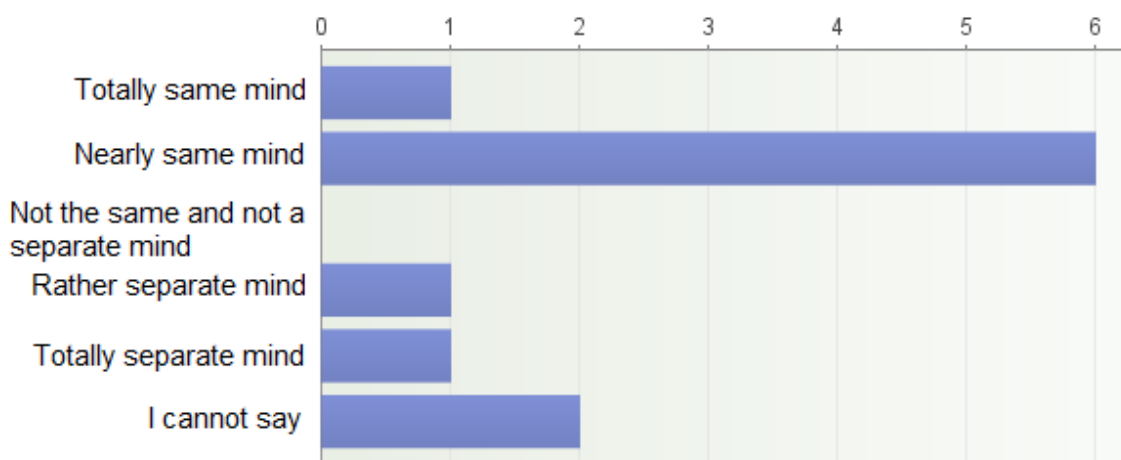


Figure 6. Common reporting in steering group meetings (N=11).

Claim in the Figure 7: “However, I experience the current year report model (Word-document filled in every February) in use is the best and simplest method to gather the information once a year.” 36 % of the answerers are totally same mind or nearly same mind (18 %) with the claim. 27 % of the answerer experience that the current reporting model is not the best and simplest solution.

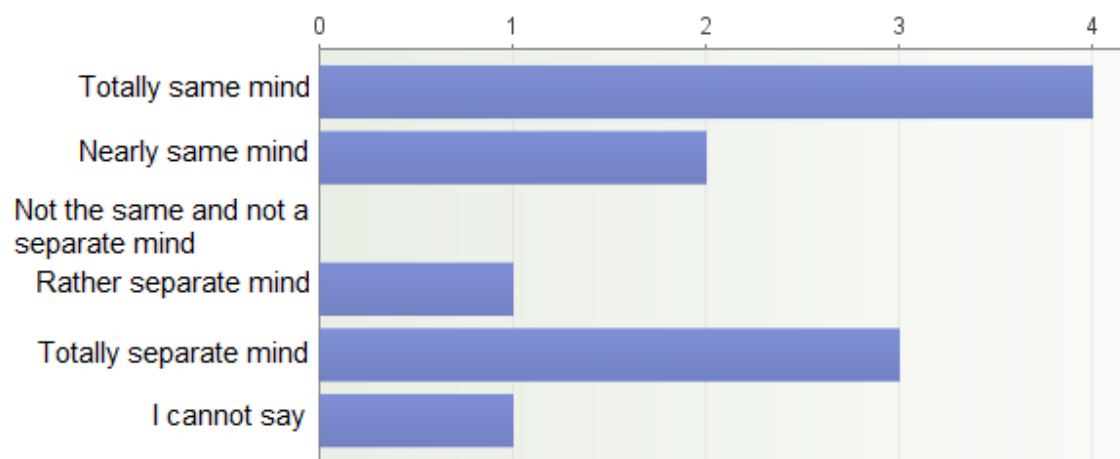


Figure 7. Current year report model (N=11).

Questions considered also the development needs of the year reporting. In question 7 answerers were asked to write what good and bad features they thought current year reporting model had. All 11 answerers left a comment considering good or bad features evenly.

Based on the answers, the clarity of the year report is regarded as good in the current reporting model. Results of the reports are comparable and it shows all the information at the same time. The report produces good information provided if it is filled thoroughly and correctly. With the help of the year report the reporting is performed properly at once.

Current year reporting model is experienced as bad because of the manifold reporting in which the professor feeds the same information asked also to other databases. Answerers also commented that at times it is difficult to find or to remember the information which is asked in the year report.

In question 8, answerers were able to leave open comment considering year reporting. Eight professors left a comment. From the year reporting it was proposed that University Association should gather the information of the year

report directly from the electric databases of the universities and final reports, this way without employing the professor. These comments were justified with the easiness and with the availability of the real-time information. The matter was commented and supported for three answerers (37 %). This proposal had also one supporting comment in the question 9.

From the year reporting it was proposed that the information of the report should be gathered in connection with the steering group meetings (2 answers) or with the common reporting with the steering groups without a separate year report (1 answer). It was also commented that the possible information management tool should not increase the burden of the work and the information to be obtained should be utilized in the final report.

Finally in the question 9, answerers were able recommend information management tool what they felt could serve the reporting between them and the University Association and University Consortium of Seinäjoki. Question had no relevant recommendations from professors. Only Scopus, Google scholar and Orchid were recommended. Scopus is database for literature, scientific journals and other research material (Scopus: Access and support center). Google scholar is tool to search scholarly literature (Google scholar) and Orchid is identifier for researchers and scholars with their research output (Orchid). Hence these are not information management tools, they are not observed in this thesis.

5.6 Objective state

Based on the interview the objective state was created. Target state will include the defined need of a development and also specifications and requirements what a new information management tool should have or what features are experienced as important. Target state will define the vision.

The target state to the University Association of South Ostrobothnia is to have information management tool that facilitate reporting on projects between professors and University Association. University Association highlighted that tool must be fordable, technically easy to use and ease the workload of the parties.

University Association and professors should manage easily real-time data and have easy access to the tool from several workstations. The University Association must be able to administer the rights and access of the parties to the files and information in it. Basic document and file forms must function in the tool. Tool must be in Finnish or English and can be used with browser and mobile.

The needed features of the information management tool are:

- Easy to use
- Technically clear
- Fordable
- Can be used from several workstations > Web-based
- University Association can share and control the access of the users > Administrator
- Must function with browser and on mobile
- Tool language must be Finnish or English
- Must offer real-time data
- Possible to record and read the necessary information
- Basic document such as Word, PowerPoint and Excel must function
- Basic file forms such as pdf and jpeg must function

5.7 Summary of the survey results

Reporting model and time of the reporting: Based on professors' survey, the professors' opinion the arrival time of the current operating model of the year report is experienced as a good. The current operating model of sending the information got both support and resistance.

Table 2. Result of current operating model.

Current operating model	
Experienced as good	Experienced as bad
<ul style="list-style-type: none"> • Information is in clear form and proportional • The whole year reporting is done in one report • The current filling time of the report is suitable 	<ul style="list-style-type: none"> • Reporting is causing extra work • Manifold reporting

Sharing information to the University Association at the beginning of the project in some simple way got support and resistance impartially. Professors disagreed on the matter even if the information which is given at the beginning of the project could be utilized in a year report and these ways ease the workload.

Expectations and development needs: According to the answers, the reporting must not increase the workload too much. Survey showed three main proposals and expectations from the professors:

- **Reporting in the steering group meetings**

Professors proposed that the information of the report connections should be collected in the steering group meetings. Based on Figure 6: The majority of the professors, 7 of the 11 answerers support at least partly a common reporting base to the connection of the steering group meetings. Furthermore, the matter got support from one answerer in the question 8 open comment.

- **Information gathering from other databases**

Professor proposed that University Association gathers the information of the year report directly from the electric databases, this way without employing the

professors. Based on open comments on questions 7-9, proposal got support by 4 of the 8 answerers.

- **Present operating model**

Also continuing of the current operating model got support. Based on Figure 7: The present operations model is at least partly supported by 6 of 11 of the answerers.

5.8 Development plan

Potential information management tools are surveyed on a development plan. Objective is to report and evaluate some potential information management tools that already exist and which can solve the development need of information management. Tools are surveyed and scored based on the features and specifications.

Suitable information management tools were observed based on the interview of University Association of South Ostrobothnia, web survey of the project team leaders and Google search. Information management tools and their features were familiarized by their websites, tutorials and tested by free test versions. Some of the examined tools were eliminated, for example Jakamo.net, because of too overloading features which were designed to information management of manufacturing, purchasing and engineering and does not serve University Association.

University Association has already Microsoft Office 365 Business Essentials in use and the techniques and features of the solutions are familiar to the staff. Microsoft Office 365 offers lots of different kind of fordable and technically clear communication and information management tools that University Association can use or upgrade easily. This is why the solutions of Microsoft Office 365 were chosen to nearer examination.

Also inquiry tools were observed but they were left out of the comparison of the tools. All inquiries have the basic functions where administrator creates the inquiry form and shares the link to the users who fill the form. Administrator receives filled inquiries and can observe given information. Inquiries can be created with several tools or programs, for example with Microsoft Forms, Excel or Webropol. Inquiry tools does not offer feature where user could send or read documents or files with it. Also the sent information is not changeable afterwards.

The chosen tools to the comparison were:

-SharePoint / Office 365

SharePoint is a cloud service that facilitates teamwork by offering every project team, a department and unit dynamic and productive group sites. User can distribute files, information, news and resources. Sites can be adaptable and organization can be easily and safely departed with internal and outside members of the team. SharePoint functions in a PC or Mac computers and in a mobiles. (SharePoint 2016. Ref. 20.9.2017.)

- OneNote Class Notebook / Office 365

Digital notebook where user can prepare and record meeting notes, gather material for lesson plans, track and update To-do lists, keep notes in one place (OneNote Ref. 5.11.2018).

- OneNote Staff Notebook / Office 365

Digital notebook is designed to help teachers to save time and to use the notebooks of the class effectively. It offers quick evaluation of the pupil's work and administration systems, personal working space for

every worker, the contents library for the divided information and open cooperation space. (OneNote. Ref. 5.11.2018.)

- Microsoft Team / Office 365

Chat based workspace: collaborations, files and all conversations in one place. Offers solutions to conversation and computer conferences. (Office 365. Ref. 29.10.2018).

All the chosen tools were scored according to their properties and features which University Association appreciated. Point scale were one to three stars were one star (*) was the lowest score and three stars (***) the highest score. The given points can be seen in the Table 2.

Table 3. Comparison of the tools.

Features	Tool			
	SharePoint Office 365	OneNote ClassNotebook Office365	OneNote Staff Notebook Office365	Microsoft Team Office365
Easy to use	***	**	**	***
Technically clear	***	**	**	**
Online based	***	***	***	***
Administrator	***	***	***	***
Function with browser and on mobile	***	***	***	***
Language: Finnish or English	***	***	***	***
Offer real-time data	***	***	***	***
Record and read the necessary information of basic documents and file forms	***	***	***	***
Price	Includes current Office 365 package: Office 365 Business 8,80€ /month/user	Office 365 Education: Free utility program OneNoten to the desktop version (2013 or 2016).	Office 365 Education: Free utility program OneNoten to the desktop version (2013 or 2016).	Includes to Office 365 Business Premium and Office 365 Education. Office Business Premium 10,50 €/month/user
Points /27	27/27	22/27	22/27	23/27

All tools in the Table 3 are online based tools where Association has opportunity to control the access of the users or what documents users can read or use. Tools are in Finnish and English and their offer real-time data in needed file and document forms. Tools and their features were scored by their tutorials and tested by free test versions.

All the tools were easy to use and technically clear and SharePoint and Microsoft Team received three stars in the category. OneNote Class Notebook and OneNote Staff Notebook were more challenging because of multifold features for example creating common cooperating space to the team. SharePoint as a cloud service requires no installation of programme from the team. However, if report is required to fill in OneNote applications or Microsoft Team, it requires that the whole team must download the same application to their devices.

Price of the tool is marked separately and therefore it is not scored. SharePoint cloud service includes University Association`s current Office 365 service package so it does not cause extra expenses. OneNote Class Notebook and OneNote Staff Notebook requires Office 365 Education which is designed to schools and learning institutions and have demands of the using organization to operate is the educational field. Both utility programs in the Class Notebook and Staff Notebook are free. More advanced service package A3 of Office 365 Education is priced based on the users per month: students 2,5 € /user/month and teachers and other staff members 3,20 € /user/ month. Office 365 Education price-lists and features can be seen in appendix 2.

Microsoft Team includes both Office 365 Business Premium and Office 365 Education service packages. This means that if University Association wants to use Microsoft Team, they should change or upgrade their current Office 365 to Office 365 Education or Office 365 Business Premium. However, according to University Association`s IT-support, they are planning to upgrade Association`s Office 365 service package to Office 365 Business Premium in 2019. Therefore Association could use Microsoft Team after upgrade. Office 365 Business and Business Premium price-list and features can be seen in appendix 1.

SharePoint received most points in the comparison of the tools with 27 points. Microsoft Team received 23 points and Class Notebook and Staff Notebook received both 23 points. From these compared tools, SharePoint offers the most needed features to the University Association.

5.9 Description of SharePoint

SharePoint helps the user to connect the different needs of the company under one web-application. The company can combine for example the portal, the control of documents and cooperation system which helps the company to save money from investments of several programs. (Office 365. [Ref 29.10.2018].)









Document library is a secure place to store files where co-workers and users can find them easily, work on them together and access them from any device at any time. For example, one can use a document library on a site in SharePoint Online to store all files related to a specific project or a specific client. In a document library, among other features, one can add, edit, co-author, download and delete documents, control the access to a library, a folder or an individual file within a library, track the activity on a file and share folders or files with others. (Office 365. Document library. [Referred 29.10.2018].) When a user acknowledges the file for the revision, it will lock the file into use of the opener until he saves the file and closes it. SharePoint saves always a newest version from the file. (Office 365. [Referred 29.10.2018].) Information can be found fast and teamwork and cooperation of the organization are improved by dividing and commanding information, contents and applications. Office 365. [Referred 29.10.2018].)



The cloud services are not just a saving place of information they can be used many several ways. The cloud service offers the tools which allow working anywhere. This is due to the fact that the e-mail and the important documents can be loaded and can be recorded in the cloud service so the work can be done in the cloud service. The division of files is important reason for why the cloud service serves as the mobile working space. When an organization uses the hosted cloud environment, it will have a place for big or timid files which one does not want to send by e-mail. The cloud service makes it possible that the e-mail can be used from anywhere. This is especially important if the workers travel or work at home. The use of the cloud services makes possible the reliable back-up copying of files. There is an advantage especially from this when the office changes or the equipment is changed and it helps to protect the information from the catastrophes such as the floods or fires. (Cloud storage. Ref. 7.11.2018).

5.10 Evaluation & initiation plan

The need of the University Association and possible information management tools were compared. Initiation plan will be created to the best information management tool which scores highest. SharePoint have all the features and requirements which University Association set to the information management tool. These features and requirements have pointed out in Table 4.

Table 4. Features and requirements.

Easy to use	 SharePoint is easy to use and familiar to University Association
Technically clear	 SharePoint is technically clear
Fordable	 SharePoint does not require any extra financial investments.
Can be used from several workstations > Web-based	 SharePoint is web-based platform and cloud service
University Association can share and control the access of the users > Administrator	 Association can divide and command information, contents and applications. Also control the access of the users or what documents they can see or use.
Must function with browser and on mobile	 Access from any device
Tool language must be Finnish or English	 Yes
Must offer real-time data	 Contents of the documents and files can be seen in real-time

Possible to record and read the necessary information	 Yes
Basic document such as Word, PowerPoint and Excel must function. Basic file forms such as pdf and jpeg must function.	 Yes

Both University Association and professors required that information management tool must not increase the workload. With SharePoint, whole reporting between University Association and professors is possible to move to the cloud service where all the files are easily reachable. All the documents are in secure place, easy to fill and find of every party, with any device in any time. This helps to do the work, increases the productivity and the use of time. Professors can fill the report in any time they want and they are not anymore dependent on when they receive the blank report base from University Association. Professors can fill the report partly and continue the work later. University Association does not need to wait by email when they receive the filled report from professors. Association is able to see in the real-time what professors have filled in the report or even read the information while professor is filling it.

Survey showed three main proposals and expectations from the professors:

- Reporting in steering group meetings

Professors supported and proposed that reporting should be collected in the steering group meetings. “Common reporting base should be developed for the meetings of steering groups and this way the information would be collected with the same work in the connection with the meetings.” The clear majority of the

answerers (55 %) were nearly same mind with the claim that common reporting base should be develop to the connection of the steering group meetings.

With the help of cloud service, University Association is has opportunity to create report form to the steering group meeting which can be seen and filled in the cloud service. Because all the professors would use the same report form, all the given information would be in the same form and this way comparable to each other. This helps the University Association`s work while preparing the statistics of the projects.

- Information gathering from other databases

Professors proposed that University Association should gather the information of the year report directly from the electric databases. If University Association is willing to aid professors with their reporting, cloud service makes it possible. University Association is able to see in the real-time what professors have filled to the year report or add information to it from other databases.

- Present operating model

Also continuing of the present operating model got support from the professors in the survey. University Association has opportunity to use the cloud service where all the needed files and reports are available to professors to fill. This reduces the amount of emails from University Association when they do not need to send the blank report base to all professors as attachment of email.

However, if University Association is willing to receive information of the follow-up project from the professors through the year some other way, Association can use inquiry, such as Microsoft Forms to receive the needed basic information of the project: name of the project, financiers and project team members. In this case, inquiry tool serve the data collection better than basic e-mail because the inquiry results or answers will be saved in the same database. This saves time both University Association and professors who will inform right and needed information at once.

5.11 Implementation

Implementation plan is structured with help of University Association`s IT-support person who would perform the implementation. Development between the University Association and the professors in order to facilitate reporting on projects can be done in a cloud service. With SharePoint, every access right requires separate library. In practice this means that separate library and access right is created to every professor separately or group of professors who are justified to see the shared information in the shared folder. In Figure 8 has pointed out how the access right would be created to the users A-D.

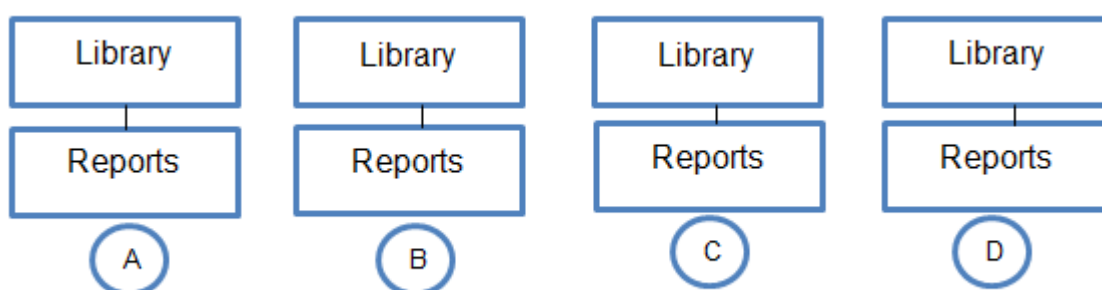


Figure 8. SharePoint access rights.

SharePoint is a good tool for this matter if the amounts of libraries are maximum 10. This means that some of the professors share the same folder and information if the demands made upon reporting and concealment of confidential information is full filled.

If every professor is in need to have separate library and access, so that the amount of folder arises, IT-support recommended a cloud service to be OneDrive which is also University Association`s use. In practice, every access right can be built under one Association`s current cloud service account. Main folder "Reports" have separate folders where Association shares access to those who are justified to see them. This has pointed out in the Figure 9, to users A-G. Information moves manually to the cloud.

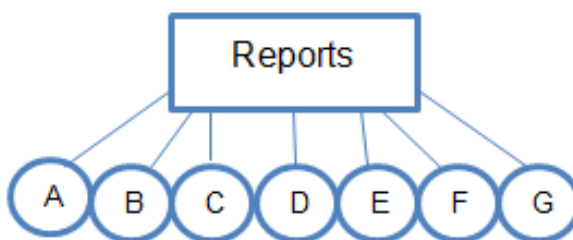


Figure 9. OneDrive access rights.

OneDrive does not affect any extra expenses to University Association and have all the same features and requirements which University Association set to the information management tool to have. All the Universities and professors are likely using Office 365. Personal Office 365 account would be created to users who are not using Office 365 already.

6 CONCLUSIONS

Objective of the thesis was to develop the information management between the University Association of South Ostrobothnia & Research Network Epanet, professors and financiers. Firstly, objective was to examine the current situation of information management in the University Association. Secondly, analyze the development needs of information management and thirdly, create a development plan. The thesis is structured and created by the plan.

A current situation of the University Association`s information management were examined by the group interview. At the early stage of the interview occurred that University Association had a need for the development of information management more with the professors than financiers. University Association had already started to develop the seminars where financiers and other interest groups would receive the needed information and this way improve the information management with them. Association made a request that thesis would concentrate on to development need between University Association and professors.

Current situation and development need of University Association and professors were analyzed by interview and survey. Potential information management tool were searched and tested based on the need. Lastly, development plan were prepared. University Association of South Ostrobothnia received solution of the best information management tool compared and initiation plan. The main indicators of the development were the support of business and the budget. Chosen information management tool, SharePoint cloud service is fordable, technically easy to use and the most importantly, it ease the workload of the parties. Objective of the thesis was achieved.

University Association was using cloud service before but only partially. By using all the features that cloud service offers, reporting is possible to move to cloud in every parties reach. This small development action will increase the productivity and time-using both in the University Association`s and professors` perspective. Productivity will increase when individuals find the needed information easily and are able to do work performances effectively.

Even a small change or development action can affect positively organization's information management. It is important to make sure that organization is using wisely all the current IT-solutions, services and programs. Some feature or service can be used only partially from their whole potential. This is especially important when developing project has limited economical readiness.

Nowadays several information management solutions can be found in the markets. Cloud service is a flexible solution. Cloud service provider takes care of maintenance and software resources. Also storage capacity or processor effect can be increased when necessary. On top of everything else, implementation can be performed by Associations current IT-support in the short run. University Association is able to concentrate to own work instead of thinking over IT challenges.

University Association has both internal and external users of their cloud service. Association can use their internal data network like before and also share information to external users. With managed access rights of the users, Association and professors are able to share information needed by safe and secure way. Cloud service can be used also to other reporting in the coordination and steering group meetings.

Most important property to the coordination is self-direction. In today's business world individual have great responsibility of personal information management. The structure of the coordination is not a traditional business environment with employer and employees. Operations of coordination is based on the equality, professionalism and self-managing of every party. The in-house communication and the common rules are a significant part of the functionality of the reporting and members must be capable to report businesslike. All the information and contents must be reachable to every member. Results are strongly based on real-time information and it's availability.

University Association can measure the success of the implementation of information management tool with these criteria set by Oksanen (2010, 29). Implementation has been successful if after two years of the end of implementation these criteria are fulfilled:

- At least 4/5 of the designed users use the system regularly.
- The user organization is dependent on the system. In other words, it produces information needed in the management of the business.
- The system is an essential part of the information management of the organization.

According to Oksanen (2010, 48-51) the most important factors of successful information management project are the commitment of the management and communication. The management must commit itself to the project and must stay on a chosen route. The commitment is not created by order of the management but from understanding of the change in the own working environment which reaches to a personal level. Any information management tool shall not improve the reporting if the participants do not act according common rules and carry out their own responsibilities. This means that everybody in the coordination knows their own duties and what is required from them.

BIBLIOGRAPHY

- Cloud storage. Office 365. [Referred 7.11.2018]. Available:
<https://products.office.com/fi-FI/business/articles/6-tasks-ideal-for-the-cloud-cloud-storage-and-beyond>
- Google scholar. [Referred 23.10.2018]. Available:
<https://scholar.google.com/intl/en/scholar/about.html>
- Jakamo. [Websites]. [Referred 2.10.2018]. Available:
<https://jakamo.net/usecases/software-for-supply-chain-management-scm/>
- Korkeakouluyhdistys. [Online publication.] [Referred 29.6.2017]. Available:
<http://epky.fi/korkeakouluyhdistys/>
- Kumar, V. & Reinartz, W. 2006. Customer Relationship Management, A Databased Approach. United States of America: John Wiley & Sons, Inc.
- Lindén J. 2015. Tiedonhallinta & Yrityksen menestys. Netera Consulting. 2 edition.
- Lombardo, R. 2006. CyberSelling; Using CRM Technology to Help You Sell. Las Vegas: PEAK Sales Consulting, LLC.
- Molinsky A, Davenport T, Iyer B, Davidson C. 2012. Harvard Business Review [Referred 26.4.2017]. Three skills every 21st century manager needs
Available at: <https://hbr.org/2012/01/three-skills-every-21st-century-manager-needs>
- Mäntyneva M. 2001. Asiakkuudenhallinta. Helsinki:WSOY
- Office 365 Business and Business Premium price-list .[Referred 5.11.2018].
Available: <https://products.office.com/fi-fi/compare-all-microsoft-office-products?tab=2>
- Office 365. Document library. [Referred 29.10.2018]. Available:
<https://support.office.com/en-us/article/what-is-a-document-library-3b5976dd-65cf-4c9e-bf5a-713c10ca2872>
- Office 365 Education price-list. [Referred 5.11.2018]. Available:
<https://products.office.com/fi-fi/academic/compare-office-365-education-plans>
- Office 365. Microsoft. [Referred 20.9.2018]. Available:
<https://products.office.com/fi-fi/home>

- Office 365. Microsoft. [Referred 29.10.2018].)Available:
<https://products.office.com/fi-fi/business/teamwork/online-file-storage-and-sharingilable>:
- Office 365. Microsoft. [Referred 29.10.2018].)Available:
<https://products.office.com/fi-fi/business/teamwork/online-file-storage-and-sharing?rtc=1>
- OneNote.[Referred 7.10.2018]. Available at:
<https://www.onenote.com/classnotebook>
- OneNote. [Referred 5.11.2018.] Available:
<https://www.onenote.com/classnotebook>
- OneNote.Staying organized with OneNote.[Referred 25.10.2018]. Available at:
<http://onenoteforteachers.com/en-US/Guides/Staying%20organized%20with%20OneNote>
- Oksanen, T. 2010. CRM ja muutoksen tuska. Asiakkuudet haltuun. Talentum Media Oy.
- Ollus, M. Ranta, J. & Ylä-Anttila, P. 2002. Yritysverkostot – kilpailua tiedolla, nopeudella ja joustavuudella. Vantaa: Taloustieto Oy.
- Orcid. [Referred 23.10.2018]. Available at: <https://orcid.org/help>
- Otala, L. 2008. Osaamispääoman johtamisesta kilpailuetu. Helsinki:WSOY.
- Outlook 2016. Microsoft. [Referred 20.9.2018]. Available:
<https://products.office.com/fi-fi/outlook/email-and-calendar-software-microsoft-outlook?tab=tabs-1>
- Peel, J. 2003. CRM: Redefining customer relationship management. Digital press. [Online publication]. [Ref. 20.7.2017]. Available at:
<http://libts.seamk.fi:2483/ehost/ebookviewer/ebook/bmxIYmtfXzlwMzI0OV9fQU41?sid=79566b70-5f5f-425c-a208-3c210a6424e4@sessionmgr4010&vid=2&format=EB&rid=1>
- Research groups of University Consortium of Seinäjoki and Research Network Epanet 2018. Report 11.4.2018. Senior Planning Officer Nina Harjunpää.
- Reynolds, J. 2002. A Practical Guide to CRM: Building More Profitable Customer Relationships. New York: An Imprint of CMP Media Inc.
- Richards, K.A. & Jones, E. 2006. Customer relationship management: Finding value drivers. Industrial Marketing Management. Vol 37 (2008) 120-130.

Scopus: Access and use support center. Elsevier. [Referred 23.10.2018].
Available:https://service.elsevier.com/app/answers/detail/a_id/15534/supporthub/scopus/#tips

SharePoint 2016. Microsoft. [Referred 20.9.2017]. Available:
<https://products.office.com/fi-fi/sharepoint/collaboration>

Skype meeting with K.K 19.6.2017.

Staff Notebook. [Referred 7.10.2018]. Available: <https://support.office.com/fi-fi/article/Opetushenkil%C3%B6kunnan-OneNote-muistikirjan-k%C3%A4yt%C3%B6n-aloittaminen-vaiheittainen-opas-opetushenkil%C3%B6kunnan-johtajille-7cb2b36f-8950-4543-907e-934dc6e8108b?omkt=fi-FI&ui=fi-FI&rs=fi-FI&ad=FI>

Strategy 2017. University Association of South Ostrobothnia.

Sydänmaanlakka, P. 2009. Jatkuva uudistuminen. Luovuuden ja innovatiivisuuden johtaminen. Hämeenlinna: Talentum Media.

Telephone conversation with Y.Y 15.5.2017.

Tietojärjestelmien hankinta Suomessa 2013. Tieto- ja viestintäteknikan ammattilaiset TIVIA ry. [Online publication.] [Ref. 5.2.2018]. Available at:
http://www.tivia.fi/sites/tivia.fi/files/liitteet/Tietoja%CC%88rjestelmien%20hankinta%20Suomessa%202013_0.pdf

Tietotekniikanliitto, 2002. Tietojärjestelmän hankinta. Vantaa: Talentum Media.

Toimintakertomus 2016 /Annual report 2016. University Consortium of Seinäjoki. [Ref. 20.7.2018].

Toimintakertomus 2017 / Annual report 2017. University Consortium of Seinäjoki. [Ref. 13.9.2018].

Toimintasuunnitelma 2017/ The year 2017 strategy. The University Association of South Ostrobothnia [Ref. 15.5.2017].

University Association of South Ostrobothnia & Research network Epanet. Report 11.12.2017. Senior Planning Officer C.C. [Referred 20.7.2018.]

APPENDICES

Appendix 1. Office 365 Business and Business Premium price-list

Appendix 2. Office 365 Education price-list

Appendix 1. Office 365 Business and Business Premium price-list

Office 365 Business

8,80 € /kuukausi
(vuositilaus)







1 vuosi 8,80 € käyttäjä/kuukausi ▼

Osta nyt

ALV ei sisälly hintaan.

Yrityksille, jotka tarvitsevat Office-sovelluksia, tiedostojen pilvitallennustilaa ja jakamista. Yritystason sähköposti ei sisälly pakettiin.

Sisältyvät Office-sovellukset

 Outlook	 Word	 Excel	 PowerPoint
 OneNote	 Access (vain PC)		

Office 365 Business Premium

10,50 € /kuukausi
(vuositilaus)







1 vuosi 10,50 € käyttäjä/kuukausi ▼

Osta nyt

ALV ei sisälly hintaan.




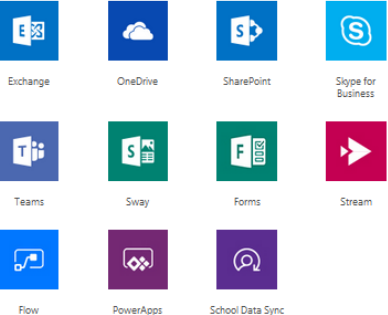
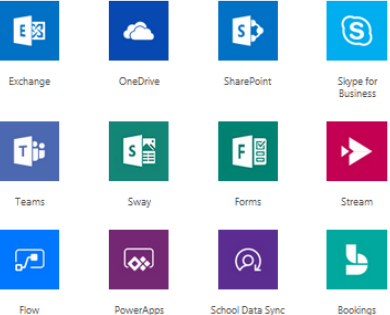
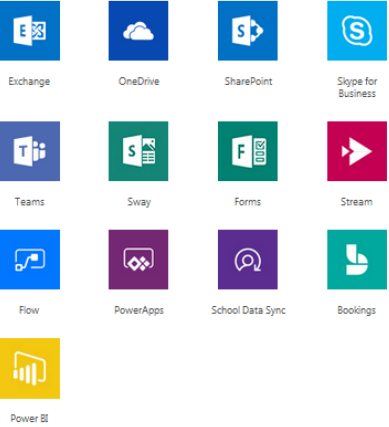
Yrityksille, jotka tarvitsevat yritystason sähköpostin, Office-sovelluksia ja muita yrityspalveluja.

Sisältyvät Office-sovellukset

 Outlook	 Word	 Excel	 PowerPoint
 OneNote	 Access (vain PC)		

(Office 365. Ref. 5.11.2018.)

Appendix 2. Office 365 Education price-list.

<p>MAKSUTON (opiskelijoille)</p> <p>MAKSUTON (opetushenkilöstölle ja muulle henkilökunnalle)</p> <p>Office 365 A1</p>	<p>2,50 € per käyttäjä kuukaudessa (opiskelijoille)</p> <p>3,20 € per käyttäjä kuukaudessa (opetushenkilöstölle ja muulle henkilökunnalle)</p> <p>ALV ei sisälly hintaan.</p> <p>Office 365 A3</p>	<p>5,90 € per käyttäjä kuukaudessa (opiskelijoille)</p> <p>7,90 € per käyttäjä kuukaudessa (opetushenkilöstölle ja muulle henkilökunnalle)</p> <p>ALV ei sisälly hintaan.</p> <p>Office 365 A5</p>
<p>Täysin maksuton Officen verkkoversio, joka sisältää sähköpostin, videoneuvottelutoiminnot, mukautetun Microsoft Teams -keskuksen luokan ryhmätyötä varten, vaatimustenmukaisuustyökalut sekä tietojen suojaus.</p>	<p>Kaikki A1:n ominaisuudet sekä Office-työpöytäsovellusten täysi käyttöoikeus ja hallinnan ja suojauslisätyökalut.</p>	<p>Kaikki A3:n ominaisuudet sekä Microsoftin luokansa parhaat älykkään suojaus hallinnan, kehittyneen vaatimustenmukaisuuden ja analytiikan järjestelmät.</p>
<p>Office-sovellukset</p>  <p>Outlook (vain verkkoversio) Word (vain verkkoversio) Excel (vain verkkoversio) PowerPoint (vain verkkoversio)</p> <p>OneNote</p>	<p>Office-sovellukset</p>  <p>Outlook Word Excel PowerPoint</p> <p>OneNote Publisher (vain PC) Access (vain PC)</p>	<p>Office-sovellukset</p>  <p>Outlook Word Excel PowerPoint</p> <p>OneNote Publisher (vain PC) Access (vain PC)</p>
<p>Palvelut</p>  <p>Exchange OneDrive SharePoint Skype for Business</p> <p>Teams Sway Forms Stream</p> <p>Flow PowerApps School Data Sync</p>	<p>Palvelut</p>  <p>Exchange OneDrive SharePoint Skype for Business</p> <p>Teams Sway Forms Stream</p> <p>Flow PowerApps School Data Sync Bookings</p>	<p>Palvelut</p>  <p>Exchange OneDrive SharePoint Skype for Business</p> <p>Teams Sway Forms Stream</p> <p>Flow PowerApps School Data Sync Bookings</p> <p>Power BI</p>

(Office 365. Ref. 5.11.2018.)