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Process development in Mediverkko

Efficiency research on financial management system

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The purpose of this research is to identify the problem areas in the use of financial management system OpusCapita in Mediverkko and to find solutions to battle them. Since Mediverkko is in tight co-operation with the system provider in order to develop the system further, this research was done alongside and to help that co-operation.

Manuals provided by the system provider were used as the main research material in order to understand the process while qualitative research methods of interviews and observing were used to gain additional information. These interviews provided some crucial data to completely understand each separate operation in OpusCapita.

It became apparent that since the finance management system is new in the company, there are multiple sections in the operating system that can be developed further. Some of these have already been identified by Mediverkko and have been put in development during this research, while many problem areas are still waiting to be solved. Few of these areas require software updates to be fixed, but many of them can be solved internally by proper flow of information.

It can be concluded that with proper communication between the end-user and the system provider the development process of financial management system can be fruitful to both parties. As the information flows to both directions, problems are more easily dealt with.

Keywords	Finance management system, accounts payable, liquidity

Contents

1   Introduction

1.1   Selecting the research topic

The idea for this thesis was formed soon after I started working for Mediverkko Terveyspalvelut Oy as a financial assistant. The firm had just recently switched to a new financial management system through which for example accounts payable are controlled and managed. However, due to shortage in labour, the financial department was facing severe problems which resulted in a bottleneck in the flow of payments. Since I started working with the company, one additional person has been hired to the accounts payable team and now after six months we can declare that the labour shortage is no longer the reason behind the bottlenecks. However, the system is still not functioning to perfection, which is why this paper will focus on identifying the problem areas and finding solutions to them. In order to improve the efficiency of the financial team as a whole and each individual working in it, I believe it is important to identify the problems and bottlenecks the operating system is currently facing and to determine how to resolve these issues and optimize working practices. Since Mediverkko is in tight co-operation with the system provider, and wishes to develop the system further, this research was done alongside and to help that co-operation.

The usage of financial management operating systems in companies increases more and more as time goes by. An undeniable reason for this is the efficiency and simplicity it provides when compared to traditional manual processes. For a company to update to a digital operating system it typically means 30-50 percent efficiency increase over all in its financial management. Since this integration of processes prevents the unnecessary processing of data, the company can achieve as high as 90 percent efficiency increase in one individual process. (Lahti & Salminen, 2014)

1.2 Research process

To support this research, literature regarding financial management systems has been studied. On top of this theoretical approach, also other researching methods have been implemented. Financial management system manuals provided by the system operator has been used as the main research material. This information composes most of the theory section of this research. Additionally, interviews with the personnel actively participating in the system development process have been used to support this research. These employees work in management, system specialist, accounts payable and system admin positions. Their knowledge of the system is important in this research as they have the hands on experiences of using it.

Interviews have been concluded during the process of the system development process in 2014. These interviews have not been executed in one sitting, but are compiled from the meetings arranged to discuss the system development process. All the interviewees have been notified of this research and they have been prepared for each meeting well beforehand.

1.3 Choosing the research method

When planning the research one must choose the correct research method best fit for the research at hand. While it can be argued that defining the difference between qualitative and quantitative research can be problematic (Saunders, et al., 2007), we must be able to identify the method that is more appropriate to what we are trying to find out. (Silverman, 2005) Since the goal of this research is to explain and describe the current situation, we will choose the qualitative research method as our method to proceed (Hirsjärvi, et al., 2005).

The starting point of qualitative research is to describe real life. This means that the target must be studied as a whole while knowing that the entity in itself is complex. While doing the research one must remember that the entity cannot be separated to multiple pieces as these pieces affect each other. For this reason it is possible to find multiple relationships as we study the topic as comprehensible as possible. (Hirsjärvi, et al., 2005)

In qualitative research it is common that the researchers trust their own observing skills more than for example regular pen and paper tests. The reasoning for this is that people are flexible enough to adapt to changing situations while tests are unable to do so. For this reason it is typical for the researcher to observe and discuss with the examined individuals. Methods for qualitative research can for example be theme interviews, participating observation, group interviews and analysing different documents and texts. Target groups are selected to fit the research rather than being randomly selected. It is commonly stated that the goal of qualitative research is to find new facts rather than to verify existing ones. These findings might force changes to the original research plan, which is not an uncommon situation to happen. (Hirsjärvi, et al., 2005)

1.4   Research method

Interviews and observing were selected as the optimal research methods for this thesis. In qualitative research it is common to use interviews as one of the main methods, as interview process can be flexible and can proceed according to the situation or individual interviewee. In an interview it is possible to change the order of the questions and the interviewee has broader chances to answer each question. The reason for selecting interviews as a research method is in many cases the fact that the topic is largely unknown and the researcher finds it hard to know the direction of answers beforehand. For this reason it is also possible that the result of the interview is broader than expected. In these cases the interviewer can ask more in depth follow-up questions to explain and clarify the newly acquired information. (Hirsjärvi, et al., 2005)

In research interviews the interviewer directs the interview and can control the pace by changing the depth of each question. As there are multiple ways to hold an interview with varying amounts of structure in them, it is important to choose the most suitable method to fit the interview at hand. Interviews with high structure can be based on forms, whereas interviews with less structure are called focused interview or semi-structured interviews (Livesey). In the latter the topic is known by the participants, but the interviewer can control the order and format of the questions (Hirsjärvi, et al., 2005). In this research the goal is to find out if there are existing problems that the company is not aware of. For this reason the questions were less structured and broader in definition to allow the interviewee to describe the subject as freely as possible. The interviews provided the chance to gain information and feedback of different processes and problems that the users' manuals and other sources did not provide.

Observation can function as a support for the interview's where the goal is to find out what the participants think, feel and believe in. This tells us what the individuals perceive is happening around them rather than what actually happens. Observation gives us the possibility to find out if what the individual says reflects what they think. Scientific observation is not only seeing, but also monitoring. It provides the possibility to witness the natural habitat of the studied topic, thus giving us immediate information of the actual situation. Observing is a brilliant method for qualitative research as it provides us with information that studied individuals do not know or do not want to tell in interviews. The disadvantages of observation are that it is a time consuming research method and it might also interfere with the studied subject and thus affect the final findings. Another drawback is the fact that in some situations it is impossible to write down the findings and the researcher must act on his/her memory. This can negatively affect the objectivity of the research. (Hirsjärvi, et al., 2005)

1.5   The research problem

The research problem was selected to be the following: How effectively is the financial management system used in Mediverkko and what could be done to make it more efficient?

The purpose of this research is to provide knowledge to the readers and the company regarding the processes and how to improve them. In addition, this research is important to the author for the professional experience it provides. Being given the opportunity to study the operating system one uses on a daily basis and being part of the actual development process provides in-depth knowledge both on a theoretical and a practical level, which in turn becomes a valuable skill in everyday work.

1.6   Mediverkko

Mediverkko is a company that provides social and healthcare services in Finland. The company functions as a service provider for municipalities that decide to outsource their health care services. Mediverkko also administers dental clinics and safe houses for youth as well as nursing homes for the elderly. Since the foundation of Mediverkko in 2002 the company has been continuously growing both organically and through acquisitions of businesses and is now one of the fastest growing companies on the field (Mediverkko, 2014).

While the company is over a decade old, the finance department of Mediverkko is not more than two years old. As the financial operations have been outsourced for the majority of the company's lifetime and have only recently been adapted back to the internal processes, many of the functions are still under development. Because of the young age of the finance department some activities are not carried out to their full advantage and others are simply waiting to be incorporated to the in-house operations. Although the financial operations have been back as in-house functions for some time already, the new operating system has been used in majority of the companies for less than a year.

Since the operation system Mediverkko uses for its accounts payable is fairly new, some of its features are not used to provide full advantage, and in worst case scenario features that could create efficiency in the process are not used completely out of ignorance. This thesis will focus on finding out the possible features that OpusCapita offers and how they should be used in Mediverkko to optimize the working processes.

1.7   OpusCapita

OpusCapita, previously known as Itella Information, is a company that provides finan-
cial process automation in over 50 countries around the world. OpusCapita focuses on
providing their customers better scalability, improved transparency and full control over
processes. They began by providing scanning and document saving services, and later
extended their offering to cover electronic commerce and e-invoicing. By natural
growth and strategic acquisitions they have further broadened their service portfolio to
cover all tasks of finance and accounting. Now they provide an operating system that
allows the user to manage all financial processes as automated services, all available
by one provider. (OpusCapita, 2014)

1.7.1   Mepco

Mepco is a Finnish company that provides software services in order to allow their cus-
tomers to be more efficient with their daily management. They offer to develop their
customer's sales and marketing, business and customer service as well as finance, IT
and human resources administration. This all is achieved with a variety of solutions
that include operating systems and support from the Mepco experts. (Mepco, 2014)

Since OpusCapita has licenced some of its services, Mepco functions as the provider of
OpusCapita finance management system for Mediverkko. Mepco and Mediverkko ar-
range semi-monthly meetings to give feedback on the system and discuss issues and
development suggestions that Mediverkko has for the operating system. (Interviewee
A, 2014)

2   Accounts

Payments traffic in financial management refers to payment transactions between banks and companies' financial management systems and how they are processed in the system. Traffic leaving the corporation is formed in the financial management system and is then sent to the bank who charges the amount of the payment from the firms account. The traffic coming to the company is collected by the bank, which then informs the corporation with daily bank statements and files including references of payment. This information is then reconciled with the open transactions the corporation has. (Lahti & Salminen, 2014)

"Accounts" is a workspace in OpusCapita that collects all the payments traffic that happens in Mediverkko. Mostly used by the bookkeeping and sales teams it allows them to administer all transaction and balance data. Viewing the data has been made possible from various different perspectives, which allows fast and convenient data analysis. (OpusCapita, 2014)

2.1   Accounts receivable

Accounts receivable is a critical function in corporations operations. Delays and faults in account receivables can impair the liquidity of the company and can jeopardize the operations of the whole organization. On top of this the accounts receivable process results in the invoices sent to customers and therefore is part of the image creation process within the firm, giving out a feeling of the company image and the level of customer service provided. (Lahti & Salminen, 2014)

When we review the accounts receivable process as a whole, the billing process starts by forming an invoice. The whole process ends when the payment has been received and it has been reconciled in the accounts receivable and made visible in the bookkeeping. (Lahti & Salminen, 2014) Invitation to tender, pricing and delivery of goods can all occur before forming of the invoice, but since none of these actions are processed in OpusCapita, we will only be focusing on the final stage of the accounts receivable process.

As the accounts receivable team is responsible of making sure that the company gets the payments it is entitled to receive, the team must be able to see the transactions of funds to each account. In OpusCapita this is handled through the "Accounts"-section. On a daily basis the accounts receivable team checks the bank statements from the previous day to track down which invoices have been paid and which ones are still open. Since all the invoices are sent with a reference number, the worker is able to compare this information with the information in the accounts receivable operating system. This greatly benefits the team since it makes the inspecting process faster and precise. (Interviewee B, 2014)

In case there is a payment with no reference number, it must be tracked down separately. This must be done in order to find out what kind of payment it is and to mark it correctly in the bookkeeping. The operating system shows the name of the payer with each payment received. This information can clarify the meaning of the payment if there is no better way to find it out. In Mediverkko's case most of the invoices are sent to municipalities buying services or tenants residing in one of the elderly houses renting a room or apartment. Because of this, most of the payments causing problems are paid by individuals and are easily tracked down. (Interviewee B, 2014)

If the payer ends up to be a company, the first step the accounts receivable team usually does is to contact the accounts payable team. This is to find out whether there has been an overpayment that is waiting for compensation. There are multiple reasons why this might have happened. One is that the payment was delayed for some reason and the delayed payment notification was also paid by accident. Another reason is that an invoice was faultily issued but still accidently paid. (Interviewee B, 2014)

2.2   Accounts payable

Just like accounts receivable, accounts payable is a crucial operation in every company. While a fault in accounts payable does not necessarily affect the company's liquidity in the same sense as accounts receivable, mistakes in accounts payable can severely harm the corporation's image. For this reason companies tend to put a lot of resources in accounts payable to secure its functionality. (Lahti & Salminen, 2014)

In the eyes of financial management the accounts payable process starts when an invoice is received and ends when it has been paid, marked in the bookkeeping and then archived. If the process is viewed as a whole, receiving the invoice is preceded by invitation to tender, pricing and delivery of goods as mentioned before (Lahti & Salminen, 2014). As the stages of procurement are not included in OpusCapita, we will not be processing those in this research. The "Accounts" section is only linked to the later part of the accounts payable process and thus we will study the other parts later on in this research.

In order to mark the paid invoices to the bookkeeping, accounts payable team in Mediverkko checks that the amount paid the date before matches to the amount stated in the bank statement provided by the bank. This quick check is done with the help of the printout from previous day. In case difference between these two is noticed, it will be the first priority of the team to track down the reason for this mismatch and then to solve it. This is done so that the company's imago does not get in jeopardy by unpaid invoices. (Interviewee B, 2014)

2.3 Receipt

The "Accounts" –section in OpusCapita allows the user to print receipts of payments that have been done by the company (OpusCapita, 2014). The receipt shows the information of the payer, the amount and the time of the payment and the bank information of the receiver. It also includes the tracking code provided by the bank in case there are requirements to track down the individual transaction. Because of the fact that the tracking code is provided by the bank the following day of the transaction, this receipt is not possible to be printed on the same day. In urgent situations there is a possibility to print out a similar report with all the same information without the tracking code. (Interviewee B, 2014)

Cases where this kind of a receipt could be required are for example orders where a prepayment is required. Another common situation for this kind of a requirement for Mediverkko is new rental contracts that require a deposit before giving out the keys of the apartment. Providing the receipt of the payment usually makes the mentioned processes faster and thus cuts down unnecessary timing restrictions. (Interviewee B, 2014)

3   Invoices

As it was pointed out earlier in this research, accounts payable is commonly the process that takes the most resources. Enhanced processes and automation in accounts payable can substantially decrease the costs of operation for the whole financial management department (Lahti & Salminen, 2014). Since "Invoices" is the section in OpusCapita where accounts payable is controlled and we just learned the impact accounts payable have on the company as a whole, the following chapter will explore the invoices process more in-depth.

Electrical invoicing is used in approximately 70 percent of the companies operating in Finland. Despite that, most of the invoices processed are still handled manually too, as many of the organizations scan all the invoices they have received in paper format. Scanning enables some of the basic information on the invoice to be automatically changed to electronic format, but this is time consuming and therefore pricier option when compared to electrical invoicing. For this reason companies should trend away from accepting other than electrical invoices in order to get rid of unnecessary manual work and to further develop the automation of invoices. (Lahti & Salminen, 2014)

Accounts payable include the following phases:
1. Order and delivery process
2. Receiving the invoice
3. Setting the bookkeeping information for the invoice
4. Inspecting and approving of the invoice
5. Paying the invoice
6. Reconciliation
7. Archiving

From the phases provided by Lahti and Salminen (2014) the first step, order and delivery process, is not included in OpusCapita. For that reason we will not include that to our discussion, but rather focus on the following steps to greater depth.

3.1   Accounts payable process in Mediverkko

The process of accounts payable is controlled in the Invoice-section of OpusCapita. Before the invoices get to the system, they need to be imported there. This is first step of handling the invoices and it is done by Itella, a Finnish conglomerate who is responsible for the postal services in Finland. OpusCapita, previously named Itella Information, is part of the Itella organization so the cooperation needed between the two is not slowing down the process as a whole. (Itella, 2013)

Itella accepts invoices delivered in three different methods. The first method is traditional mail, in which they have provided a separate postal address to each company part of Mediverkko. The second method is the most preferable one, the electronic invoicing. This name is used for a wide range of different technologies and entry options but they all share the idea of information sent directly from the customer without any middle hands (Tieto, 2009). This makes reading the material much easier and quicker for the receiver. The receivers address for the electronic invoicing is derived from the company code. This allows each company to have their own unique address thus avoiding the need to ever change that address, which is rather common for the first method of traditional mail (Interviewee A, 2014).

The third method through which Itella allows Mediverkko to deliver invoices to the system is via e-mail. Itella has set certain emails for each of the companies in the system, where anyone can send a PDF-file of the invoice. This allows the creditor to send the documents without any postal fees. This is particularly useful in Mediverkko, since many of the creditors are small businesses that do not have the possibility for the electronic invoicing, but would prefer not to send the paper versions either. (Interviewee A, 2014)

3.2   First step: reading the file into the system

If Itella receives an invoice by traditional mail, the workers will open the letter and insert it manually into a scanning machine. The machine will then scan the paper to get the visual look of it and while doing so it will look for certain information that the invoice is expected to have. The program looks for 15 different keywords in order to find the needed information. The first part of the keywords belongs to the creditor. The machine will scan for information regarding the name of the creditor, the company code of the creditor and the bank account the payment needs to be paid to. The second part of the keywords belongs to the invoice itself: the invoice number, the reference number of the invoice, the amount that needs to be paid and the date the payment has to be made. The system will then add the found information along with the scanned picture to the invoice section. This same procedure will be made to the invoices sent by e-mail with the difference that there is no manual work needed in opening the mail and starting the scanning process. (Interviewee C, 2014)

Before the accounts payable workers touch the payment, the program has already identified and inserted some of the required information to go with the payment. In special cases, however, the scanned information is not fully used in the program. For example, if the scan found out a supplier that already exists in the database, it will include it to the payment. In cases where the supplier has multiple bank accounts set in the system, the program is not able to select the correct bank account to match with the one mentioned in the invoice. This problem is recurrent as many of the parties Mediverkko is doing business with are municipalities that have separate bank accounts for each separate branch, but that are still part of the same company. The program also fails to inform the end-user in case the bank account has been changed in the midst of time and allows the payments to be paid to the wrong account if the controllers do not notice the mistake in time. (Interviewee B, 2014)

3.3   Second step: "Piping"

In Mediverkko the order of phases 3 (Setting the bookkeeping information for the invoice) and 4 (Inspecting and approving of the invoice) mentioned by Lahti and Salminen (2014) can vary. The reason for this is that in some of the companies phase 3, setting the bookkeeping information to the invoice, is done by the person responsible for inspecting the invoice, while in most cases it is handled by the accounts payable operator. Same person can be responsible for companies of both categories, which causes unnecessary mistakes and confusion from time to time. (Interviewee B, 2014)

When the payment reaches the system it will be processed by the accounts payable controllers. They will quickly inspect the invoice and try to pick up the required information from the payment in a glance. The task of the accounts payable operator is to figure out the correct people to process the payment further in order to get the invoice inspected and approved. In Mediverkko these pairs of personnel are figuratively called pipes, hence the name of the process. All the companies in Mediverkko have their own approvers for payments in OpusCapita. One company can have multiple different pairs of approvers who all have their own segment of invoices they are responsible for. These segments can vary by geographical location or by items bought in the respective invoice. It is up to the person from the accounts payable team to make sure that the payments go to the correct approvers in the correct companies. (Interviewee B, 2014)

We will go deeper into the approving process later in this research.

3.3.1   Bookkeeping information

As mentioned, the person responsible for inputting information to each invoice varies, but all information needs to be included in order for invoices to be paid through the system. The invoice must have three key details to provide the necessary facts required by the bookkeeping.

The first information needed is the cost centre the invoice belongs to. This explains the unit of the company that is responsible for the costs. It provides the information whether the cost belongs to the capital area units or if the units in the northern part of Finland are responsible for it. Each unit has its own cost centre and each employee is set to belong to one of them. In accounts payable this allows the employee responsible for processing the invoice to search for certain names mentioned in the invoice to determine the cost centre it belongs to. (Interviewee D, 2014)

Mediverkko has instructed every party responsible for ordering invoices to request the supplier to include the cost centre in the invoice. This instruction is executed with varying success, but in more and more cases this information is mentioned in the section called "Your reference". Its existence in an invoice reduces the time spent by employees in the financial department to find the information in between the lines. The seconds it saves with each invoice will accumulate to huge time savings in the long run. In majority of the cases however, this information is still lacking. This is because some of the personnel involved in purchasing are not familiar with their own cost centre. In these cases the more common instruction is to include the name of the participating worker in the invoice. This then again causes extra time spent for the accounts payable worker to find out the matching cost centre for the individual responsible for the invoice. (Interviewee B, 2014)

The second fact that needs to be found from the invoice is the bookkeeping account the invoice belongs to. This explains the type of payment in question. The different bookkeeping accounts separate medication bills from healthcare supplies within the respective units of operation This allows the management to see what has been bought and where in each separate time period. While setting the cost centre is mainly done by the accounts payable workers, they set only two thirds of the bookkeeping accounts. The reasoning behind this arrangement is that for some of the companies it is simply too hard to identify what the product actually is. While the grocery bill for an elderly home is rather simple to identify, some of the instruments used in dentist offices require proper education to tell apart from each other. (Interviewee D, 2014)

The third key fact is simply the price. Most of the invoices include more than one article and they often belong to either different cost groups or to different bookkeeping accounts. A great example of a situation where costs are separated on the invoice is monthly payments of rent or phone bills. Mediverkko offers its employees a possibility for a housing benefit. Without going into too many details, this means that the company pays for the rent and then reduces the amount minus the tax deductible amount from the salary of the employee. In these cases the invoice most commonly includes not only the rent, but water and a possible parking spot for the car on top of it. While belonging to the same cost centre they are still clearly different costs and are therefore separated from each other in one invoice. (Interviewee D, 2014)

Another example is monthly phone bills that Mediverkko gets from offering phone benefits to its workers. Since the phone accounts have all been ordered from the same provider, they will send Mediverkko one invoice each month, including all the separate accounts. In this case, while all the separate articles in the invoice belong to the bookkeeping account of phone costs, they all still require to be put to their own cost centres which are set according to the workers using them. (Interviewee D, 2014)

3.4 Third step: Approvals

While the law is rather strict when it comes to bookkeeping in companies, it does not regulate the approving process of invoices in any way. For this reason the practices in each company are decided internally. By using electronic processing with invoices the company can use log history to track down the actions of each user on the site. A common practise in many companies is to use a two level approving process in which the person who has ordered the invoice is responsible for the first inspection of the payment. This is then followed by the approval of another worker, possibly the manager of the inspecting worker. (Lahti & Salminen, 2014)

Ideally every payment that comes to accounts payable in Mediverkko is linked with personnel who know about the validity of the payment. As the employees in accounts payable forwards the payments to the two approvers, they are notified by e-mail about the task they have to do. The first to inspect the invoice is ideally the one who did the ordering and the following approver is in most cases the manager of the first. (Interviewee A, 2014)

As the first task, the first approver must redo the initial check the employee from account payable did. This is because the approvers are legally responsible for the payments that they have authorized and it is their task to make sure each payment is correct. After this the first approver does the inspecting of the payment and in some cases fills the required bookkeeping information. When everything is in order the payment will go forward to the second approver. The task of the second approver is to verify that the first was authorized to order the invoice and then inspect it once more. As the final responsibility also lies with the second approver, they are suggested to go through the payments once again. (Interviewee B, 2014)

3.5   Fourth step: Payment

Since the invoice has been accepted during the previous phases, the payment is rarely required to have a separate approval for it to be paid. The payments are more commonly paid every day. By changing the amount of payments to one or two payments each week the company can save working hours and will also ease the liquidity control in the company. Faster cycle time of invoices in the system allows the company to adapt to fewer payments per week. This derives from the fact that daily payments usually fall due or have fallen due on the date because of the slow cycle time. When working with a daily payment scheme the invoices are limited to the payments due that same day, if moving to a payment scheme with fewer payment days during the week, the daily payments could include invoices due the day before the next payment day. (Lahti & Salminen, 2014)

When the approval cycle is done in OpusCapita, the payments are once again processed by the accounts payable employee. They are responsible for transferring all the payments to Microsoft Dynamics AX (AX), the bookkeeping program that Mediverkko uses. In AX all the payments wait until the payment day and they are then paid manually every day. This process is also handled by the financial department. In AX the payment files will be sent through OpusCapita straight to the bank for payment. (Interviewee B, 2014)

4   Liquidity

The prolonged uncertainty of the economic situation and the structural changes in many fields of business has driven many organizations to improve the state of their management reporting and forecasting (Lahti & Salminen, 2014). This is also clearly shown in a survey of the top 500 companies in Finland, where the chief financial officers have stated that the most important area of development at the moment is following the profitability and forecasting it (Management Events, 2013).

A lot is expected from reports these days. At best they are automated and up to date in real time. Unfortunately this is not always the case because the reporting is still handled manually in many companies and in the worst case scenario reports include outdated information or pure misinformation. For this reason it is necessary to build reporting operations carefully as functioning and trustworthy reports can significantly benefit the strategic planning of the company (Lahti & Salminen, 2014).

By definition management accounting is: "a profession that involves partnering in management decision making, devising planning and performance management systems, and providing expertise in financial reporting and control to assist management in the formulation and implementation of an organization's strategy." (Institute of Management Accountants, 2008). These reports can be divided into three areas depending on their usage: Financial reporting, corporate performance management reporting and business intelligence and analytics (Lahti & Salminen, 2014).

4.1   Invoices reports

Out of the three types of reports possible, OpusCapita includes the feature for only one, corporate performance management reporting. While budgeting and forecasting are key functions in corporate performance management reporting, merely the latter is supported in the financial management system Mediverkko has (Interviewee B, 2014).

4.1.1 Forecasting

When the bookkeeping information for payments in the "Invoices" –section has been set, the information will automatically transfer to the liquidity section. The program will get the data regarding the due date, the amount and the cost group set for the payment. This allows the program to track down and show the amounts of payments due in certain dates while separating different cost groups from each other. (Interviewee C, 2014)

For money flow that does not go through the normal invoice cycle, the system allows the user to input payments manually. By providing the mentioned information the company can add payments like salaries to be included in the report. The manual input of data allows better forecasting of future payments, since it allows a wider range of future transactions to be taken in account when viewing the forecast. With all this information the program categorizes the information for each separate company and thus enables the reports to be as precise as needed. (Interviewee C, 2014)

4.1.2 Report of realized transactions

Since the approval process of the payments has some flaws and the approvers are humans too, some of the payments are not paid at the due date. This fact affects and defects the forecast report, which is led purely by the due date of the payments in its forecasting. For this reason OpusCapitaa has another report that takes this problem in account. (Interviewee C, 2014)

The report of realized transactions shows the payments that have been expired but are still in the system waiting for the final approval and payment. It also shows the history of the amounts that have indeed been paid, and the amount for the day of printing the report includes both payments for that certain date, but also the payments that have not yet been met. Depending on the size of the company and the situation of the approval cycle of its employees, this report can be rather dark. With multiple users being slow with approvals the expired payments can pile up rather fast, which is clearly shown by this report. (Interviewee C, 2014)

5   Research results

5.1   Mepco

Since Mediverkko uses the finance management system built by OpusCapita, but de-cided to pick Mepco as the content provider, it is clear that complications of some kind arise. While the operating system itself functions as promised and the software exper-tise is available when needed, it is the separation of these two functions that become an issue when the customer would like to have changes in functionalities of the operat-ing system. This is because OpusCapita decides the timetable for each software update and they are in full control of what these updates will include. Mepco is only able to suggest certain changes according to the wishes of their customers while being in no control of realizing these changes. (Interviewee A, 2014)

Mediverkko and Mepco have arranged semi-monthly meetings regarding the develop-ment of the operating system since its implementation. Since the "Invoices" –section in OpusCapita is the largest in its functions and in usage at Mediverkko, it is suitable that the meetings are held with representative specialized in invoices. Problems arise how-ever, if questions or suggestions regarding any other section are brought up as the representatives do not possess the knowledge to answer or comment on them. This can gravely prolong the fixing of the problem as even the simplest requests needs to be left open for consultation on a later date. (Interviewee A, 2014)

5.1.1 Suggestion

Since OpusCapita is offering a similar product directly without middlemen, it could be a possibility for Mediverkko to change the content provider in order to get better service. However, one of the major problems with such a solution is that Mepco is also the system provider for Microsoft Dynamics AX, the bookkeeping operating system that Mediverkko uses. It is this compatibility between OpusCapita and AX that first made Mediverkko choose this arrangement and it has since proven itself fruitful with many additional functions between the two programs. Since many of these functions operate on Mepco's servers rather than either of the operation systems, the question regarding the continuum of this situation can be big enough to wave Mediverkko away from considering the change seriously.

5.2 Accounts

While we found out that the "Accounts" –segment in OpusCapita is able to deliver what is required of it, Mediverkko has still initiated an update that speeds up the process of the accounts receivable team. As of now Mediverkko uses multiple operating systems for accounts receivable, each of which have their own style of reference number attached to the invoice. The accounts receivable team currently separates the incoming payments manually and changes them to different file formats. The files are then sent to their correct destinations, some controlled by entirely different branches of the company. (Interviewee B, 2014)

Initiated during the process of this research, Mepco has now created a feature in the program for automatically reading and checking payment information from the files received from the bank. The initial check separates the payments with differencing reference numbers to own subgroups and forms the required file formats that are required by separate operating systems. This cuts down the manual process of separating the information, which allows the information to reach the correct destinations quicker while saving working hours of the accounts payable team. (Interviewee C, 2014)

5.3   Invoices

We have learnt that while the financial management system does not fully follow the structure suggested by Lahti and Salminen (2014), we can still find most of the steps from both of the methods. While the first step of order and delivery process was not dealt with in much detail, it is a process that is handled outside of financial management system. The only step that is clearly missing is the seventh and the last step: archiving. This process is supported by OpusCapita, but it has simply not been used by Mediverkko so far.

The reasoning for this is that in many cases the personnel processing the invoice must compare it to previous invoices by the same supplier. Since the operating system has been in use for less than a year, Mediverkko feels that some payments might still be required to be shown in regular view. It is however the plan of Mediverkko to start using this function to archive the old invoices as the year of operation comes to full.

5.3.1   First step: Reading the files in the system

In addition to the regular pathways for an invoice to reach the accounts payable, Mediverkko has certain payments that need to be inserted to the system manually. The best example of this situation is weekly allowances provided to youth situated in the safe houses operated by the company. As these payments are not proper invoices, but they are still required to be included in the bookkeeping, Mediverkko has decided that the best way is to process them through the "Invoices" –section. Manual input of payments is a time consuming process since the imported files need every single piece of information added separately. When tens of similar payments need to be done in order to pay all the youngsters at the same date, this weekly process takes multiple working hours. (Interviewee B, 2014)

The second problem is that out of those 15 keywords mentioned in the scanning process, some are not utilized at all. These keywords, if used properly, can function as triggers for certain automations when the invoice is processed in the system. The problem is that the suppliers are not aware of the existence of this possibility and therefore leave the invoices blank on these sections.

5.3.2 Suggestions for the first step

To overcome the problem with the weekly allowances, Mediverkko and Mepco initiated a project in order to make the process automated. During the research process this project was planned, created and put successfully in action. The new method is to provide the safe houses with certain files with pre-set sections for varying information of payment name, date and amounts to be paid for each youngster. The only manual process left for the employees in accounts payable is to convert the file and upload it to the system. The system will then create all the payments required with the data automatically set for each one of them. With the new way of operating, the accounts payable team manage with a fraction of time when compared to the old method and is therefore able to use that time to other processes. (Interviewee B, 2014)

The problem with unused keywords requires Mediverkko to communicate with the suppliers. This is a highly recommended action especially with the biggest suppliers as they are more likely to have the processes to include this kind of information and usually have the largest and most time consuming invoices to process. The co-operation with the suppliers can lower the work amount needed to process the invoices at Mediverkko. This can then ensure that the invoices are paid in time, which in turn benefits both of the sides.

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5.3.3 Piping and approvals

As mentioned before, the piping process of selecting the correct approvers for each invoice is the task of the accounts payable operator. While this is a fast and simple process in itself, problems occur if the operator is unaware of the proper pipe to put the invoice in. Like we learned in the section concerning the bookkeeping information, workers responsible for ordering invoices are instructed to request the cost centre to be included in the invoice. Since many of the cost centres have set pair of approvers, the information is highly helpful when added in the invoice to provide easy information for the account payable operator. (Interviewee B, 2014)

As it was also mentioned, in many cases the cost centre in the invoice is replaced by the name of the person responsible of the invoice. While previously this situation slowed the process down, in piping the different information can occasionally be beneficial. This could be the case if the cost centre has predetermined pair of inspector and approver, but the said invoice was ordered by third person with equal rights to inspect the payment. If the invoice was sent to the regular inspector, they might not be aware of the payment, which could in turn cause extra work for each party involved. This could then slow the approving cycle down and lead to delay the payment of the invoice. (Interviewee B, 2014)

Since many of the personnel responsible for accepting the invoices in Mediverkko are in high managerial positions, they tend to have days packed full of other tasks of higher priority. While processing one payment can take just few minutes, the invoices waiting for approval can pile up rather quickly if left unchecked for days. It is a known problem in Mediverkko that person who has 40 invoices waiting for approval pays less focus on each one of them than person who only has four for the day. While this piling up rarely happens on purpose, it can cumulate to situation, where the user completely ignores the received notifications regarding payments that require their attention. This can then lead to result where multiple payments are delayed from the initial due date. (Interviewee B, 2014)

5.3.4 Suggestions for piping and approvals

The problems of piping are both possible to be fixed by simply informing the personnel responsible of ordering and approving invoices about the correct approach. If the individuals are able to understand the big picture of the whole accounts payable process, they are able to adapt their own actions regarding it. Since the problem seems to be more common in certain companies, it is of great importance to find out the individuals most commonly responsible for these mistakes in order to get the information across. (Interviewee B, 2014)

During the process of this research Mediverkko has taken actions in order to find out the most problematic cases amongst the employees. This is done by a report that has list of all the invoices from said period, the users involved in the cycle of the payment and the time stamps of each action taken. This way it is possible to track the inspectors and the accepters who take the most time to process their invoices. The report also provides some useful information regarding how fast the accounts payable team reacts to the received invoice and how long the overall process takes in each company. Mepco is expected to provide the report for Mediverkko later in fall 2014. (Interviewee C, 2014)

Another possible solution for piling payments could be using contract invoices. This new feature is expected to be included in OpusCapita's next software update. It allows contract to be input to the system and every arriving invoice that fulfils the requirements set in the contract gets automatically processed in the system. With pre-set bookkeeping information the invoice is not required to go through the accepting process at all as the contract itself has been previously accepted. (Interviewee C, 2014)

5.3.5 Payment

We have learned that while Lahti and Salminen (2014) suggested one to two payments to be done each week, Mediverkko has set guidelines for daily payments. As a separate process, the daily payments consumes multiple working hours each week and the need for that should definitely be evaluated. While lowering the amounts of payments to one or two per week might prove too big of a change for Mediverkko, I believe that three payments each week would be the more reasonable solution. This way the changes to the process itself are not substantial, but it still provides some of the benefits mentioned.

5.4 Liquidity

As it was pointed out, the "Liquidity" –section in OpusCapita provides rather limited possibilities for reporting. However, currently the biggest problem for Mediverkko is that the whole section is currently out of use. This situation has been known for some time now and should be fixed at least to some extent in the new software update later in the fall of 2014.

Since the reporting in Mediverkko is limited to simple reports and mainly done manually, they should put more focus on developing the "Liquidity" as it becomes possible. Close co-operation with Mepco experts is strongly suggested as they have the knowledge of the possibilities the program offers and can provide crucial information regarding new reports possible to be created in the software as it is further developed.

6 Conclusion and self-evaluation

6.1 Conclusion

The goal of this research was to be able to identify the problems and bottlenecks in OpusCapita in order to develop and optimize the working practices in Mediverkko. The research sums the situation and process of the financial management system development from spring 2014 to fall 2014.

Interviews of key personnel involved with the development project were used to support the information received from the system manuals and observation. They proved to provide crucial data in order to generate the overall picture of the process. While the development project was ongoing and all the interviewees had different point of view to the project, they all seemed to have similar view regarding the purpose of it. It was this unique view each interviewee had that gave the research the depth it needed.

The research pointed out that the main requirement for operating system development to success is to have strong communication between the end users and the system provider. It is that feedback brought in by communication that informs the system provider of problems in the system and allows the possibility to fix them. The two-way stream of information is also important as it allows the users to gain knowledge of possible limitations the operating system has.

As a rapidly growing company, many of the problems Mediverkko faces when using OpusCapita are in fact internal. By properly informing the employees involved in the payment process about the correct guidelines, Mediverkko could get rid of some of the problems it is currently struggling with. While being easier to fix, these internal problems can be belittled when the use of the operating system is studied, but are just as important to get fixed.

Since the start of this research, multiple problems and bottleneck have been identified. To some of them Mediverkko has already reacted and initiated the changes needed to make the operations more effective. Yet few problems shown by this research are still untouched and remain to hamper the usage of the financial management system. It is hoped that this research provides some new information about some of the problems and sparks interest to fix them.

6.2   Validity and reliability of the research

The trustworthiness of research is measured by two factors: validity and reliability. Validity in research is concerned with the accuracy and truthfulness of scientific findings while reliability is concerned with the consistency, stability and repeatability of the research. These are particularly vital in qualitative research, where the researcher's subjectivity can easily cloud the interpretation of the data. (Brink, 1993)

Research process was built around manuals provided by the system provider and interviews of personnel in charge of the process development. The manuals can be regarded as valid research data as they describe the operations of the finance management system relevant to this research. The interviews were only concluded during the meetings regarding the process development which has helped the interviewees to stay on topic. For this reason we can regard the interviews as valid research data.

The reliability of this research has suffered and it is not repeatable. This is for the reason that the topic of the research is continuously developing further. If this research was to be repeated, some of the problems identified by this research could be already fixed while new problems could also have been brought to light. The views the interviewees have towards the operating system could also have adapted accordingly to the development made between the researches.

6.3 Self-evaluation

When the topic of the thesis is a research about an on-going process, it sets certain expectations for it. The fact that the information written yesterday can be old today puts enormous pressure for the planning of the research. This was shown in the fact that the initially planned schedule and research topic had to be adapted to the changing situation. While it was to some extent expected to happen, the largest changes could have been avoided with more precise planning of timetable and process schedule before actually starting the research process.

Apart from these hardships the thesis was completed according to the plan and includes the research topic, research material and the results of the quality pursued to. The importance of this research is big for both the author and the target company. Studying the problems and bottlenecks of an operating system that is in your daily use allows you to start thinking the processes differently, which can allow you to work more effectively.

While a lot of material can be found regarding system development, each system is unique and has their own problems. This research does not provide any new theory to the field, but serves as an example case. It shows that some of the problems are more visible than the others and they all need equal work to be fixed. These problems in operations are not meant as a demonstration of failure of any kind in Mediverkko, but as information in order to develop them further.

6.4 Further research proposal

As it has been pointed out in this research, the financial management system in Mediverkko is having constant improvements in many segments of operation. For this reason it could be beneficial to repeat this research in some extent after the updates mentioned in this research have been implemented. This could provide crucial information regarding the efficiency of the new updates and the problems that have been forgotten to be improved.

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