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# Planning for ERP Implementation in a Media Production Company

Case: Case Company

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<p>This thesis analyses enterprise resource planning (ERP) systems and the challenges and benefits of implementing them in companies. The thesis consists of theory of ERP systems with an analysis of the history of ERP systems. This provides some necessary background information that is useful when considering ERP implementation. It also focuses on the phases and focus points of ERP implementation to provide readers with an analysis of the efforts needed to start an ERP implementation project.</p> <p>The case company of this thesis is a small-scale media production company in Finland, which focuses on the production of 3D images and graphics for advertisements, movies and television series. The objective of the case study is to analyse the challenges and possibilities that the case company faces in the project of implementing an ERP system in their company. The target of the case study is to provide the necessary groundwork on the very initial stages of the ERP implementation process. This serves as a practical challenge to provide results for the case company as well as an example of for the readers of ERP implementation analysis in a specific company working in the media industry.</p> <p>The target objective of this thesis is to provide the case company with a possible solution to enhance their current processes. This has been done through the research of theory to provide necessary theoretical information of ERP implementation. The case study uses the information of the research and research gained through the author's experience of working in the case company (8.11.2013-8.5.2014) and interviews conducted after the working period ended. The goal is to provide an analysis of a very specific small-scale company operating in the media industry and to determine the challenges and opportunities that such a company could have with ERP implementation.</p> <p>As a result of this thesis the case company is still in the initial planning stages of ERP implementation. The company has undergone major changes after the author's placement period ended in the company and therefore the ERP implementation project has lost its place in the company's priorities. However the research and analysis done in this thesis has provided the company with possible solutions and analysis of the risks and opportunities that it can use when ERP implementation becomes a higher priority again.</p>	
Keywords	ERP, SME, ERP Implementation

## Contents

1	Introduction	1
1.1	Objective Of The Thesis	2
1.2	Research Methods	2
1.3	Case Company	3
2	Enterprise Resource Planning Systems	5
2.1	History of ERP	6
2.1.1	The 1960's and 1970's	7
2.1.2	The 1980's and 1990's	8
2.1.3	The 2000's	8
2.2	Future Developments Of ERP	10
2.3	ERP In SME's	10
3	ERP implementation	12
3.1	Traditional Steps Of Implementation	12
3.2	Risks Of Implementation	13
3.3	Risk Management	15
3.4	Risk Management Strategies	15
3.4.1	Risk Avoidance	16
3.4.2	Risk Retention	16
3.4.3	Risk Reduction	16
3.4.4	Risk Transfer	17
4	Case Study: Case Company	17
4.1	Carrying Out The Case Study	17
4.2	Business Processes of The Case Company	19
4.2.1	Sales Process	19
4.2.2	Production Process	21
4.2.3	Financial Administration Process	23
4.3	Justification For ERP Implementation	24
4.4	ERP System Requirements	25
4.4.1	General Requirements	25
4.4.2	Requirements For Processes	25
4.4.3	Usage Requirements	27
4.5	ERP Implementation Risk Assessment	27

4.5.1	ERP Implementation Risks	28
4.5.2	ERP Usage Risks	29
4.6	ERP System Proposition For The Case Company	30
4.6.1	SAP Business One	31
4.6.2	Microsoft Dynamics NAV	32
5	Conclusions	33
	References	36
	Appendices	
	Appendix 1. Case Company Employee Interview Framework	

## List of Figures

Figure 1:	Process Information Sharing Through ERP System	4
Figure 2:	Overview of an ERP system.	5
Figure 3:	The Actual Increase of Transistors in a Chip.	7
Figure 4:	Worldwide ERP Software Market Share, 2012	9
Figure 5:	Traditional steps of ERP implementation.	12
Figure 6:	The Case Company's Sales Process.	21
Figure 7:	The Case Company's 3D Animation Production Process.	22
Figure 8:	Invoicing Process in The Case Company.	24
Figure 9:	SAP Business One Functions.	32

## List of Abbreviations

ERP:	Enterprise Resource Planning.
MRP:	Material Requirements Planning.
MRP II:	Manufacturing Requirements Planning.
SME:	Small and Medium-Sized Enterprises.
Y2K:	The Year 2000, or the Year 2000 Problem.
CEO:	Chief Executive Officer.
WIP:	Work In Progress.
CAD:	Computer-Aided-Design.
3D:	Three Dimensional Computer Graphics.
UI:	User Interface.
R&D:	Research and Development.

## 1 Introduction

The thought to write this thesis on enterprise resource planning (ERP) system implementation came to the author's mind during his placement period (8.11.2013 – 8.3.2014) in his media production case company. During the placement period the author was working as a producer trainee, which included setting up new projects, delivering work-in-progress versions of productions for customer approval and billing the customer. This gave the author insight in to the processes of the case company and also the media industry in Finland. There were areas of inefficiencies in the processes of the case company and the need to improve these areas with an ERP system was discussed with the management and producers the company. This thesis analyses the possibilities of ERP implementation in this media production company and if such a solution is viable considering the industry that the case company operates in as well as company's own factors influencing this decision.

Many businesses, even smaller scale ones, are competing in international markets, which makes it necessary for them to work as efficiently as possible. Implementing an ERP system can bring many benefits to a small or medium sized enterprise (SME) through the integration of information of processes all in to one platform. Since companies operate in an ever increasing competitive business environment, finding solutions for efficiency to gain a competitive advantage is vital for success. Implementing ERP solutions can bring great success to a company's competitiveness if it is done correctly. This thesis will look into the challenges and critical success factors of implementing an ERP system through theoretical analysis and the case study.

This thesis will look into the possibilities of implementing an ERP system into the case company. The case company has reached the point where an update of processes is necessary. This thesis will try to analyse their current processes and discuss and evaluate possible solutions of ERP system implementation to benefit their current state. After the analysis and proposition from the author, the best course of action is evaluated and chosen by the case company's management.

## 1.1 Objective Of The Thesis

Through the analysis of literature on ERP systems the main objective of this thesis is to analyse and complete the necessary research and planning for an implementation process to begin in the case company. The goal is to evaluate the current state of the company in regards to its information systems and resourcing of working hours. Evaluating the processes will determine what improvements in the processes are needed for a smoother operating environment of the company. The main objective of the case study is to determine the crucial areas of improvement for the company's processes and to propose an ERP system that could efficiently improve operations. The goal of the case study is to provide possible solutions of ERP systems in the case company. With the help of qualitative research performed in the company the thesis will analyse and evaluate the possibilities of an ERP system in the company. Naturally the case company makes the decision to pursue an ERP system with their skilled employees.

The objective of the theoretical section of this thesis is to provide necessary information about ERP systems to support the case study. This includes the history of ERP systems development and analysis of the benefits and challenges of implementing an ERP system with a look at small and medium size enterprises. Another goal of the theoretical section of the thesis is to look at the future of ERP systems and define the direction of development that ERP systems are heading and what challenges will likely be faced in the future. Through the research the author's goal is to provide the necessary information needed to begin the process of ERP implementation. This research and the knowledge gained from it will then be put in practical use in the case study of the case company.

## 1.2 Research Methods

The research methods of this thesis are highly qualitative. The theory of ERP section of this thesis uses analysis of literature and other research of the subject to provide an objective look at enterprise resource planning systems. The case study relies on the analysis of the theory of ERP as well as incorporating information gained from the case company's management. The information from the case company was gathered through formal and informal interviews of management personnel in the company. The formal interview framework can be found in appendix 1. The research was gathered over approximately one year starting in the spring of 2014. During the research period

the case company has undergone major changes in personnel and direction. This affected the original plan of this thesis but the research gathered is nevertheless valuable.

Since the author of this thesis worked in the company during his placement period (8.11.2013 – 8.5.2014) he had an internal access to the company's information and processes. Although primarily the information for the case study is based on the interviews with the management personnel and employees, personal experiences and the author's own observations bring more depth and transparency to the research. The researcher had the opportunity to participate in staff meetings, management meetings and weekly order backlog analysis meetings. Along with this the researcher had the opportunity to work directly with the business operation functions that the possible implementation of ERP would affect.

There has been a lot of research conducted about ERP systems. The author of this thesis has analysed a lot of literature to conduct his qualitative research and analysis about ERP systems. The theory of this thesis provides the needed knowledge of ERP systems for implementation in the case study. The research is then analysed in the case study to propose a solution for the case company and to determine the challenges and possibilities that such a company in the media industry faces with an ERP implementation project.

### 1.3 Case Company

The case company of this thesis is a media production company specialized in production using 3D software. It operates in Finland with its headquarters in Ilmala, Helsinki. Its market is primarily in Finland, working with advertising agencies and also directly with businesses. It also operates in international markets but is primarily focused on Finnish markets. It employs 27 people and has 5 regular freelancers working for them as well. Primarily the case company produces still and motion pictures for commercials and movie post-production.

The reason why the case company is looking into the possibility of an ERP system implementation is that they have inefficiencies in their processes. There is overlap in data and it is scattered in several small systems that do not work together. The target in ERP implementation would be to unify the data and to enable the processes to work

smoothly together. The processes of the company that are operating inefficiently are the sales process, financial process and production process. Figure 1 illustrates the target of unifying the processes with an ERP system to improve efficiency. These processes will be addresses later in the case study of this thesis.

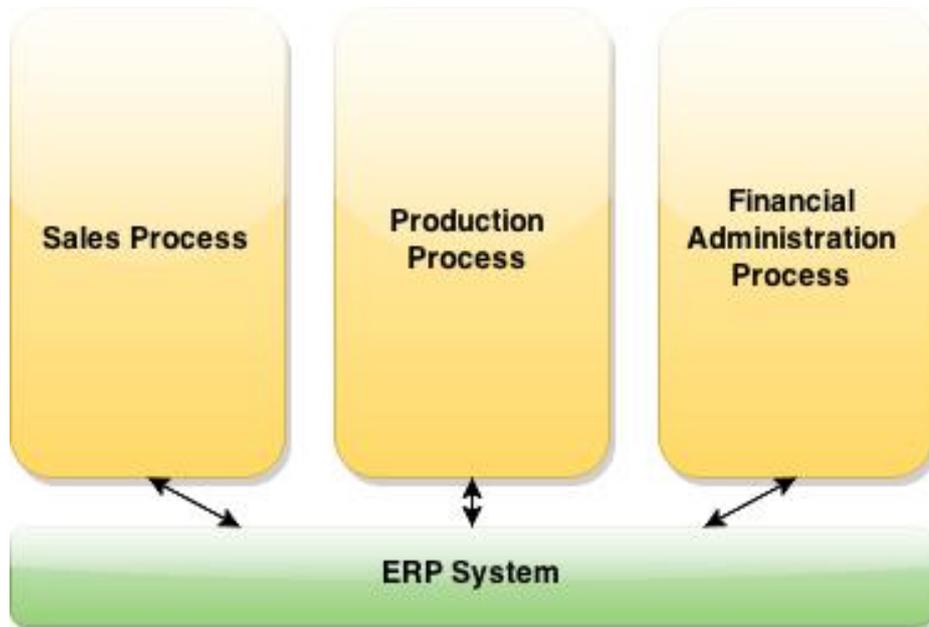


Figure 1. Process Information Sharing Through ERP System.

As the case company operates in the media industry and has a unique operating environment, the target of the thesis is to determine whether an ERP system is viable for the company. The company has undergone changes during the research period of this thesis, however changes to these processes are still necessary. The case study aims to benefit the case company by providing analysis of their current business processes and providing possible solutions for ERP implementation to ease the company's workload if an ERP system is decided to be implemented.

## 2 Enterprise Resource Planning Systems

ERP systems have been developed to improve information flow between companies' processes. Motiwalla and Thompson (2012: 28) write, "ERP systems are comprehensive software applications that support critical organizational functions." ERP systems are designed to integrate the processes of a company as well as its customers and partners. Because of the Internet, ERP systems are more accessible for all involved parties. (Motiwalla and Thompson 2012: 28)

The challenges of ERP implementation come from the different needs of different departments and functions in a company. Integrating all the departments into one big single software aims to remove the information silos of each department. This is believed by Motiwalla and Thompson (2012: 29) to improve communication and information flow since data can be entered into the system to be available for use in all applications of the company. Figure 2 visualizes the integration of information through an ERP system.

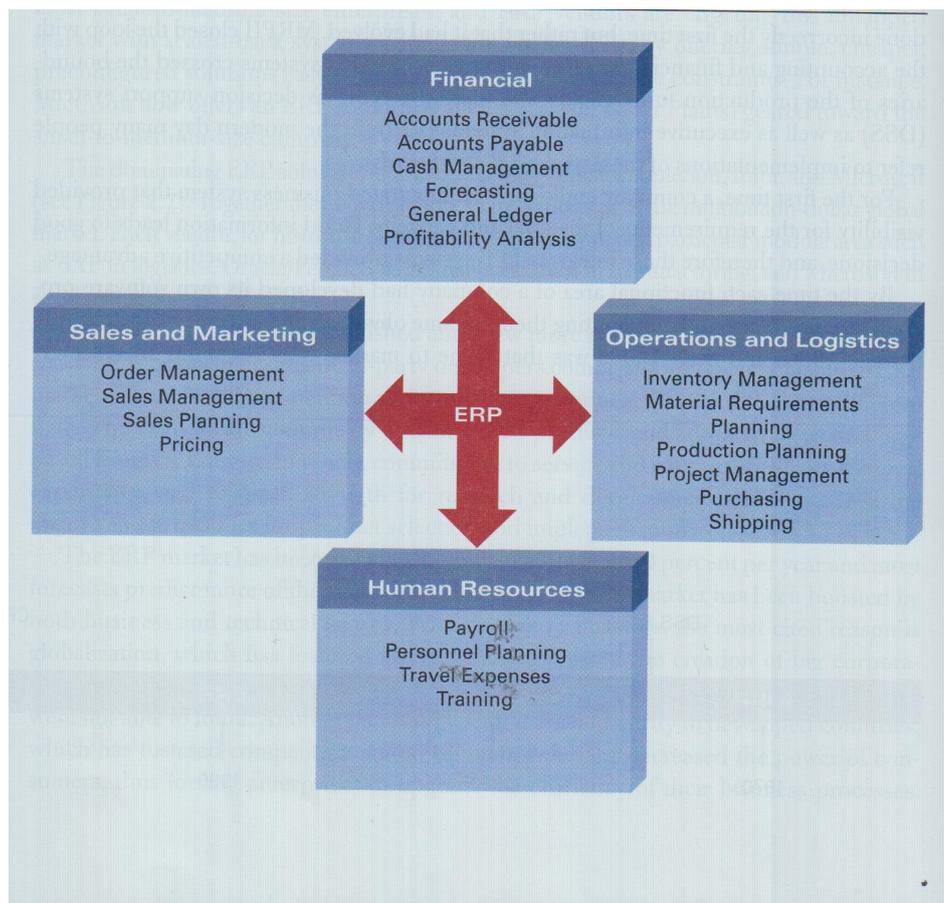


Figure 2. Overview of an ERP System. (Haag and Cummings (2013: 48)

ERP aims to conjoin all information in to one source. This is seen to bring competitive advantages to companies through improvements in supply chain management, operation efficiency improvements and the capability to respond to rapidly changing markets. Through ERP systems the information flow becomes spread out with the goal of being accurate and immediate. This is because the information is now passing to other systems and users outside the company, rather than just in-office information. (Developer.com, Robinson 2004)

## 2.1 History of ERP

While enterprise resource planning systems do not have a very long history, it originates from the 1960's. The fundamental force for the development of ERP systems has been the development of computer software. Since ERP software runs on computers, the development and increased efficiency of computers has been crucial for the system.

Through the rapid development of computer software the term legacy system has become known in the business world. Legacy system refers to old and often out-dated software that a company's processes are operated in. The challenge of implementing ERP to companies that operate with legacy systems is to find a method in which transition to more modern technology happens smoothly. A legacy system is also defined as a system, which does not operate on the Internet. Therefore legacy systems are in contrast with ERP and require a leap in technology to be transitioned in to using ERP software (Stone 2001: "Keeping Legacy Software Alive".) The reason for the occurrence of legacy software can be explained with the same reason for ERP having quite a short history. The computer software has been developing rapidly since the 1960's and is continuing to develop still. As Monk and Wagner (2013: 21) write "In 1965, Intel employee Gordon Moore observed that the number of transistors that could be built into a computer hardware were doubling every 24 months, and this trend has continued". This doubling every 24 months is known as Moore's Law. The diagram in Figure 3 shows the development in Intel processors.

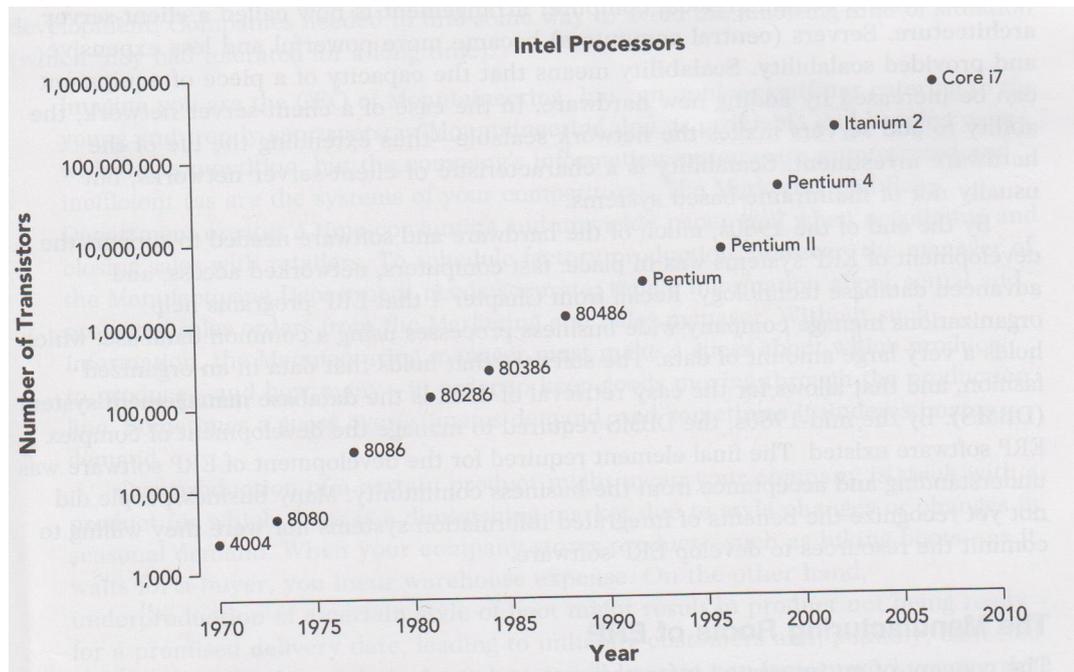


Figure 3. The Actual Increase of Transistors in a Chip. (Monk and Wagner 2013: 21)

### 2.1.1 The 1960's and 1970's

The predecessor of ERP was the material requirements planning (MRP) system, which developed its early forms in the 1960's. The history of ERP starts from manufacturing companies and their need for cost-efficiency in high volume productions. Through the development of early computers and the competition with cost minimization, the first computerized manufacturing and order planning systems were born. MRP software emerged from simple inventory tracking systems, which were focused on large-scale productions reorder points, during the 1960's and 1970's. MRP developed further than just tracking inventory and allowed plant managers to look at sales forecasts and marketing and to calculate cost and time requirements to meet the projected sales from the computers calculations. Basically the emerging of the computer age brought the opportunity for companies to handle their supply chain management electronically, resulting in increased efficiency due to cuts in costs and delays from paper purchase and invoicing systems. (Monk and Wagner 2013: 23; Jacobs and Weston Jr. 2007: 358)

Compared to the 1960's system of inventory management and control the 1970's MRP systems were focused mainly on marketing and sales. The early form of MRP in the 1960's focused on efficiency by computerizing inventory reports and managing and tracking raw materials. These systems provided systems for inventory replenishment

through legacy software. MRP focused on sales and marketing to generate schedules for production. It allowed tracing sales forecasts to production requirements for these forecasts and creating a schedule for production planning, operations control and inventory management (Motiwalla and Thompson 2012: 31; Monk and Wagner 2013: 23).

### 2.1.2 The 1980's and 1990's

During the 1980's the MRP evolved into manufacturing requirements planning (MRP II). MRP II was focused on the whole supply chain and to help managers design the production process from product planning to distribution. While MRP was more focused on sales and marketing, MRP II had a focus on manufacturing strategy and quality control. (Motiwalla and Thompson 2012: 31)

Early ERP emerged from MRP II in the 1990's. Compared to MRP II and MRP enterprise resource planning not only focused on supply chain processes but also integrated support activities such as finance, accounting and human resources, into the same system. ERP brought a focus on improving the internal business processes through information integration to improve customer service. (Motiwalla and Thompson 2012: 31)

### 2.1.3 The 2000's

The early ERP systems became more developed and their position in the business world became strengthened. Through the huge growth in technology and the need to adapt to customer need ERP evolved into the Internet based system it is now. Now the system did not only focus on internal processes but integrated organizations' systems. The systems allowed long-range access to resources of the company and its partners and integrated the supply chain management and other external business modules into a single computer system. (Motiwalla and Thompson 2012: 31; Jacobs and Weston Jr. 2007: 362)

A great motivator for companies to implement ERP in the late 1990's was the Y2K problem. Since programmers in the 1970's had not expected their systems to still be running businesses after 30 years, and since hard drive space was very much smaller than it is today, they had programmed systems to only save dates with the last two

numbers of a year. With the coming of the new millennium causing the last two digits to go from 99 to 00 this caused the problem known as the Y2K problem. ERP systems became an appealing solution to this by offering better-updated technology and the possibility for better business process management. (Monk and Wagner 2013: 27)

The German company SAP (Systeme, Anwendungen und Produkte in der Datenverarbeitung Aktiengesellschaft) has been the leading ERP system provider through the history of enterprise resource planning. The greatest single competitor SAP has is the Oracle Corporation based in the U.S (Monk and Wagner 2013: 23). The pie chart in figure 4 shows the market shares of ERP system providers as of 2012.

**Worldwide ERP Software Market Share, 2012**  
**Market Size: \$24.5B; 2.2% Growth Over 2011**

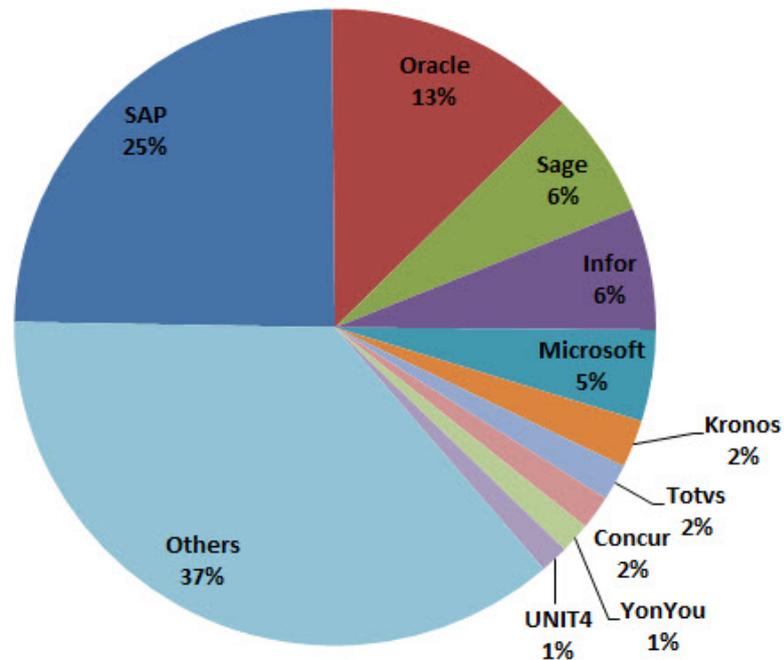


Figure 4. Worldwide ERP Software Market Share, 2012. (Columbus 2013: Forbes)

## 2.2 Future Developments Of ERP

ERP has originally been software for large companies especially in production and manufacturing. According to Monk and Wagner “by 1998, most Fortune 500 companies had already installed ERP systems” (2013: 34). This has resulted in ERP systems developed for small and medium-sized enterprises. For example SAP Business All-in-One is an ERP system for smaller companies, which are tailored for specific industries

One key issue that will likely direct ERP systems is the need for adaptability. ERP systems are typically complex and time consuming to implement in companies. The future developments of ERP systems will likely offer software that is adaptable to changes in the market and growth. Also the further use of Internet will develop ERP, as more and more appliances can be attached with Internet devices. Devices and vehicles can be automatically feeding data in to the ERP system, which will further improve efficiency. Also using mobile technology and cloud technology can make ERP accessible even on the go and at any time. The constant development of mobile technology can be the next great advance in ERP systems. (Mathews 2014: IndustryWeek)

## 2.3 ERP In SME's

The nature of ERP systems has been historically such that it has been developed for large companies. The ERP system is based on a certain business model and however customizable the system is, it still may or may not be the right structure for a specific company. This problem is especially present in smaller and medium sized enterprises. Implementing ERP without thorough research can be cause critical failures in a company. Different ERP providers have different models as their basis, selecting the right provider can be crucial for a smooth implementation of the system.

One reason for the need for research and pondering before taking the action of implementation is that ERP systems are so complex that it is very hard for a company to develop a fully functional system on its own. Having to rely on complex ERP systems that have been fundamentally built for large corporations becomes more risky for an SME, which needs to be adaptable to fast changes in the market and has a simpler structure. Through the advancement of ERP there has become more and more options for SME's ERP systems. The systems still require thorough analysis and evaluation before considering implementation, since ERP systems always carry a risk of failure

and the possibility to ruin smaller businesses. (Shanks, Seddon and Willcocks 2003: 277)

The benefits of ERP implementation are not always easy or even possible to measure quantitatively. For an SME to implement an ERP system, the benefits can come in forms of improvement in schedule compliance, reduced costs in operation, better time management in production and improvements on completion and on-time deliver in productions. Adequate implementation of an ERP system can bring long-term benefits in a company and make it operate efficiently. Attempting to measure benefits that ERP systems can bring to an SME is important. By measuring performance SME's can see where the ERP system is helping the most and what areas could be made more efficient with more utilization of the ERP system. Since ERP systems are made increasingly with the focus on SME's the benefits of implementing an ERP system properly are increasing as well. This is because ERP system manufacturers are focusing on bringing the best possible product for SME's and therefore the performance of the ERP systems are increasingly better. (ERP Software Blog 2010)

The challenges of ERP system implementation in to an SME relate to the benefits. The focus ERP system providers have on SME's has caused the market to be flooded with ERP system providers for smaller businesses. The resources for making such a great investment are not always available for SME's. The scale of an ERP implementation project is very large and requires a great financial investment. Selecting the right ERP system is crucial for the ERP system implementation to be successful. Often the ERP systems are too extensive, too complex and are not very user-friendly. For an SME this is a great challenge since training and customisation of the ERP system are very expensive. SME's are increasingly required to have modern technology to be able to run ERP systems. Many ERP systems are tailored more for bigger enterprises and are less attractive for smaller businesses. For a company in working in the media industry the problem of needing modern technology is not very big. Media is an industry that requires high technology and therefore companies operating in the industry have a slight advantage towards the information technology challenge of ERP system implementation. (Roland Berger 2013)

### 3 ERP implementation

#### 3.1 Traditional Steps Of Implementation

ERP implementation traditionally consists of five stages. These stages according to Motiwalla and Thompson are the planning, analysis, acquisition, implementation and operation stages. The traditional stages are relevant to major corporations. However, they are also relevant to smaller companies but with a lesser scale. Figure 5 illustrates the order of the five stages of ERP implementation.

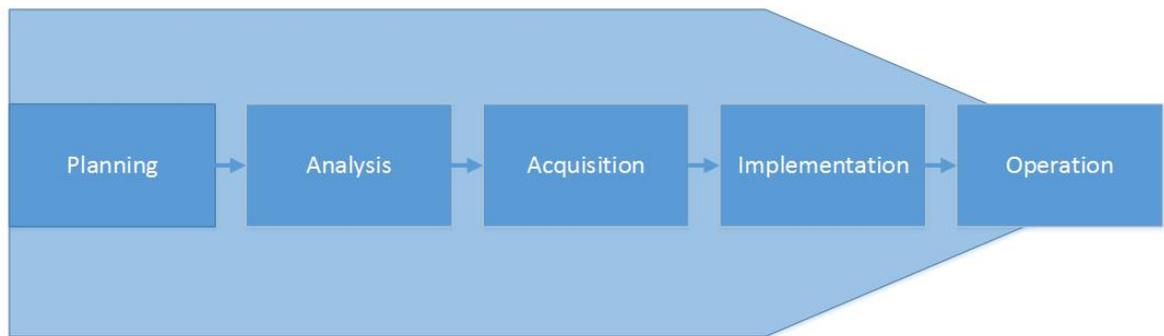


Figure 5. Traditional steps of ERP implementation.

The first stage of ERP implementation is planning and developing a scope according to the boundaries of the company. In this stage the company must look at the requirements and functional areas that are expected to improve with an ERP system. It is necessary to assess the constraints on the project to determine the method of implementation. During the planning stage it is common to evaluate the functions that the ERP system is required to provide. The current state of the company's processes is evaluated: will the processes be refined or replaced entirely. Also the company must look at the budget and time that will be invested in the implementation project. Although no decisions are made on the ERP vendor in the planning stage, choices are narrowed down in the according to the parameters set by the plan and scope of the project.

During the analysis stage the company makes the decision on the ERP software. Using the information gathered in the planning stage the company will decide on the most suitable system to implement. In the analysis stage the company uses gap analysis, which is "the evaluation of the functions provided by the ERP system compared with the operational processes necessary to run your business" (Motiwalla and Thompson 2012: 119). This is done to see what existing processes require customisation as well

as how much the ERP system will require customisation. In order for a successful implementation there must be a detailed plan assessing all changes that the implementation will bring and a strategy to prepare for this. If there is a prototype or demo version of the software it is commonly tested at this stage.

In this stage the ERP software is purchased and modified to match the requirements gathered in the previous stages. During the acquisition stage the company works on installing the software as well as training the staff on the changes on the processes. All data is simultaneously transferred to the new system, which can be a difficult task depending on the previously used system. Also in this stage comes configuring the new system with security and authentication and authorization policies for accessing the software along with other modifications that were decided in the planning stage.

During this stage the ready system is released to the users. It is crucial that the acquisition stage has been completed thoroughly in order for the implementation stage to run as smoothly as possible. Any errors found during the release of the system are fixed and the software is updated regularly according to the found errors. The company must also choose the manner of implementing the new software. It can either phase the new system in gradually or opposing this, move directly to the new system with no running of both systems simultaneously. Additionally it can choose to run the old system parallel to the new ERP system, causing more costs but reducing risk. Training users is an on going factor in this stage as well as gathering feedback to ensure the right adjustments are made to the system after implementation.

After the implementation is done successfully the company must focus on operating the ERP system to ensure it continues to function properly. Depending on company size, staff can be hired for the purpose of operating the ERP system. In this stage the company also trains new users to the system as well as monitor the use of the system with care in order to make necessary changes and upgrades when needed. (Motiwalla and Thompson 2012: 118–119)

### 3.2 Risks Of Implementation

The need for the different stages of implementation is based on the risks that an ERP system's implementation brings along. Like any major investment, investing in an ERP system has risks that the company needs to be aware of and prepared for. The following section will look at the significant risk factors especially for a smaller enterprise.

Research done by Päivi Iskanius based on the work of Poba-Nzaou, Raymond and Fabi has determined six risk dimensions for implementing ERP systems into manufacturing SME's. These dimensions are organizational, business related, technological, entrepreneurial, contractual and financial risks. (Poba-Nzaou, Raymond & Fabi 2008: 530-550.) The organizational risk comes from the possible failure to redesign business processes. This means that the company is at risk to implement a new system without adequate preparations and modifications in its processes so that the implementation could be successful.

The risk is that a new system is there but is not functioning appropriately. The business related risk dimension refers to the post-implementation performance of the ERP system. There is a risk of falsely believing that the implementation project is done after the new system has gone live and is functioning. Even the companies with the smoothest executions of ERP systems commonly suffer a dip in performance after launch. "Transactional efficiency, the pace of taking sales orders may slow down, or the speed of pushing products into the warehouse may decline a bit." (Stevenson 2005: 600)

The technological risk factor includes all the information systems and technology required to maintain the ERP system. A company needs to be prepared to run the ERP system and therefore be supplied with the necessary technology and technological knowledge to do so. This dimension also consists of training users to the system. Without proper training of users the system is cannot work properly.

The entrepreneurial risk dimension is top managements commitment to the project. The attitude of the top management is important to the project since the failure to commit to the project can devastate the whole implementation process. This risk factor is apparent when the implementation process is long and requires a long commitment.

Contractual risk is the risk that the new system brings to existing partnerships and partner companies. This relates to the technological risk since the technological issues that the new system can bring will possibly cause harm to the company's partners due to decreased communication and data sharing. Finally the financial risk factor results from the possible inadequate preparation for the costs of the ERP implementation. The financial risk increases if other risk factors start to harm the process, bringing further costs for the company. (Poba-Nzaou, Raymond & Fabi 2008: 530-550; Sumner 2000: 319; Stevenson 2005: 600)

### 3.3 Risk Management

How a company prepares for the risks of implementing ERP can make a huge difference in the success of the implementation project. Managing the risks should start from the earliest stages of ERP implementation by looking at the risks that concern the company the most. Avoiding and managing the risks can help the process of implementation significantly. Looking at the most common pitfalls of ERP implementations can prepare management for their own implementation.

The most common mistakes of ERP implementation according to Stevenson (2005: 600) are ones that a company can easily avoid and therefore minimise the risks of implementation. Management, which is lacking a proper vision during the implementation process, represents a crucial risk that can be avoided easily. Believing that the project of implementation is ready after the system has gone live is a common mistake that can be avoided with proper preparation. Preparation minimises the financial risks that come from the performance dip after going live. By recognizing the likely situation where performance suffers after the new ERP system has been launched, the company can best prepare itself to deal with the situation. This way the company can turn it to just a short performance dip in the beginning.

To ensure the smoothness of the ERP implementation process management must recognize the strengths and weaknesses of the company's current state. Since the system works on the data that is inputted into it, the company must recognize if the data accuracy and quality is not consistent. If the company does not hire real professionals in both the technical and business sides with great expertise, the implementation project becomes riskier. It is a complex system trying to tie in all data of the company and unifying it. Therefore help from consultants is recommended because of the complexity of the project. Management should also have realistic expectations of the ERP system in order to minimize risks and prepare for them. It is not uncommon for companies to rely on an ERP system to solve all problems it is facing. (Stevenson 2005: 600)

### 3.4 Risk Management Strategies

Companies can also choose to use a strategy to avoid risk in the ERP implementation process. These strategies include risk avoidance, risk retention, risk reduction and risk

transfer strategies. These strategies can help with the hard decisions in the process of implementation but relying on one sole strategy for all decisions may not be beneficial.

#### 3.4.1 Risk Avoidance

Risk avoidance is quite self-explanatory. It is the actions that are made to avoid risk by avoiding actions that are associated with risk. During ERP implementation process, areas of the system may bring about significant risk factors for the project. Using risk avoidance the company may decide to not include the risky area of the project completely, changing the scope of the implementation project. Using the risk avoidance strategy might also cause for an entire ERP implementation project to be scrapped after too many risks have been determined. Risk avoidance can be quite counterproductive since it eliminates the possibility of the rewards from taking risks. Avoiding risks in ERP implementation by simply removing the risk can bring more problems than what it solves. However there can be a few logical situations to use it, such as avoiding unnecessary risk that has little expected rewards.

#### 3.4.2 Risk Retention

Risk retention means acceptance of risk factors and not taking any significant actions to deal with the risks. Risk retention can generally be either active or passive. Active risk retention is the process of evaluating possible losses and costs of other means to deal with risk but settling on retention. Passive risk retention is the inability to identify risk or just the absence of action for one reason or another. Since ERP implementation brings many different risk factors to a company, it may not be productive to focus on every single risk. Risks that bring small losses to a company and do not happen frequently can be suitable for risk retention.

#### 3.4.3 Risk Reduction

Risk reduction is similar to risk retention in the way that risks are retained but actions are taken to reduce the negative effects of them. It is done when risk avoidance is not an option and risk cannot be transferred to another area. Many areas in ERP imple-

mentation can create risks that must be treated and reduced rather than just accepted or avoided completely. Risk reduction can be achieved by trying to decrease the situation when negative effects from the risks would occur. Also preparing and reducing the loss brought by the risk is part of risk reduction. Preparation and planning is key for risk reduction to be successful. If management has been thorough with its research, it can prepare counter measures for specific risks that are expected to emerge, thus reducing the risk or possibly avoiding it entirely.

#### 3.4.4 Risk Transfer

Risk transfer refers to the action of transferring risky areas of a process to a third party or getting insurance for a risk. In ERP implementation however there is hardly any insurance to get. In ERP implementation risk transfer usually means to transfer risky parts of the implementation process in to the hands of experts from consulting firms and ERP vendors. To ensure risk transfer there must be contractual agreements. Risk transfer is important in ERP implementation since the complexity of the process will very likely need assistance from consultants and ERP vendors. (Zeng 2010: 171–173)

## 4 Case Study: Case Company

### 4.1 Carrying Out The Case Study

The case study of this thesis is the authors attempt to use his knowledge and research to benefit a company as well as provide a unique and practical study in to the thesis. Throughout his research the author has been involved in laying out the initial stages of the project of implementing ERP in to the case company. During the researcher's time spent working in the company the need for ERP implementation became apparent and was discussed in several meetings. The goal for the researcher was to use his time to build a good research on ERP and ERP implementation and to present the knowledge to the company. This became a good approach to serve both the researcher's thesis as well as benefit the company. The case study required research within the company, which was gathered through interviews, participating in meetings, data gathering, general observation, and statements from co-workers.

The actual implementation of an ERP system is so complex that it usually happens through the help of consultants and ERP vendors. This is how the case company chose to handle their implementation as well. However, as pointed out in the research of this thesis, there are several prominent factors that can be worked on before the actual implementation takes place. The researcher of this thesis was in charge of making the necessary groundwork before the actual implementation process began. This was to benefit the company by gaining initial knowledge about the process before any decisions towards an ERP vendor is made. The initial stages that the researcher was in charge of were the analysis of the company's business process currently as well as explaining and justifying the need for ERP implementation. The researcher also gathered information and research to determine the requirements for the ERP system suitable for the company. The researcher also analysed the risks of implementation for the company. Finally the researcher was in charge of researching possible vendors and suggesting initial ERP software for the company.

The research for the case study was gathered through participation in meetings as well as general observation. Since being an employee gave the researcher access to all necessary information for setting up the project, observation of current processes was easily done. Interviews were held with co-workers to gain specific information regarding the needs and requirements of ERP and ERP implementation.

What has been discussed with employees in the company and through observation is that a single system could unify all the information that are now being scattered in different smaller applications. The ERP system would need to be able to work in the specific environment that the case company operates in. Currently information is spread in applications such as Google Docs, Basecamp and the case company's own production management tool Terox. These tools work decently as separate software; Google Docs for managing the order backlog, Basecamp to communicate with customers during production and Terox to organize current productions. However the problem arises from when information is in different systems, making it complicated to locate specific information related to individual productions. Since there is a lot of information related to production projects, there are issues with updating information into all three of the systems. The target could be so that information could be added only once to a single software.

## 4.2 Business Processes of The Case Company

This section analyses the business processes of the case company and their core elements. Defining these processes as well as their functionality in the company can determine important factors that the ERP implementation would come to affect. Looking at the processes at their current state will provide knowledge of the areas of improvement as well as of the scope for the ERP implementation. This will help in defining the specific needs for the system as well as provide information for the expected outcomes of ERP implementation.

Being a small enterprise in the media industry, the case company has some issues in its processes that cause lack in efficiency as well as time- and financial constraints. The case company works with 3D technology producing high quality motion and still images for advertisement. It also creates special effects for movies as well as other visual effects, such as colour grading and composition. Teams of artists who are briefed by the producers as well as the clients do the actual 3D work. The work is very much project based with shorter projects lasting one to two weeks and longer projects lasting up to a year. Due to the fact that information is coming to the artists from many sources and the lack of any consistent system to gather and share information causes projects to often stall, putting pressure on the time constraints. The core processes that would require the support of an ERP system in the case company are the sales process, production process and the financial administration process. ERP system could help with the issue of scattered information as well as help artists and producers alike with the production by simplifying projects information flow. Furthermore the financial processes of the case company could benefit from an ERP system, which would unify financial information in to one database and keep up to date. It would also help by automating many areas that currently require manual labour.

### 4.2.1 Sales Process

The sales process of the case company is a problematic area. Currently the information of sales and customer relations are kept in several sources and requires time and effort to locate. Many customer relations are held in the minds of the producers with little information shared in written form between employees, causing problems in

cases when a worker is unable to come to the office. There are four producers who are also the sales team of the company. Also the CEO and owner of the company handle some of the sales effort. There is no single data collection method of sales, customer prospects and opportunities. The lack of this causes missed opportunities and a sense of confusion towards future projects. Information is scattered and not in a clear form in a database, affecting the budgeting for the future.

There are many aspects of the sales process requiring manual labour from the producers as well as from the artists that an ERP system could ease. During the process of bringing in a new potential production, the sales team has to first close the deal with the customer. This generally happens in four stages. First the customer contacts the case company with a potential production with a small brief on the production. The brief generally consists of the time constraints of the production, the general idea and theme of the production and the budget of the production. The producers and the team of artists that could be allocated to the production then discuss these aspects and create a cost estimate for the production. This offer is delivered to the customer who either approves the offer and starts the production process or is unsatisfied and requires changes to the offer, which are met if possible. If the offer is declined and the case company is unable to make a feasible counteroffer, the production is not initiated.

Using ERP to manage customer relations would help in the manual labour of these stages. It could benefit the company by having a set way of dealing with the sales process and automate some of the information flow. Naturally since the production is largely a creative process, manual labour cannot be diminished completely since the visions of the client and the artists must be discussed in order to have the desired end product. Proper customer relationship management with an ERP would benefit the process by simplifying the data and therefore ease the process of budgeting projects. Figure 6 helps to visualise the current sales process of the case company. The yellow boxes are the areas that especially could benefit from ERP by data unification and increasing efficiency. Following the arrows starting from the case company's marketing to the final order received from the client, the sales process is time consuming. An ERP system with some CRM tool could possibly ease the flow of bringing in new clients' productions.

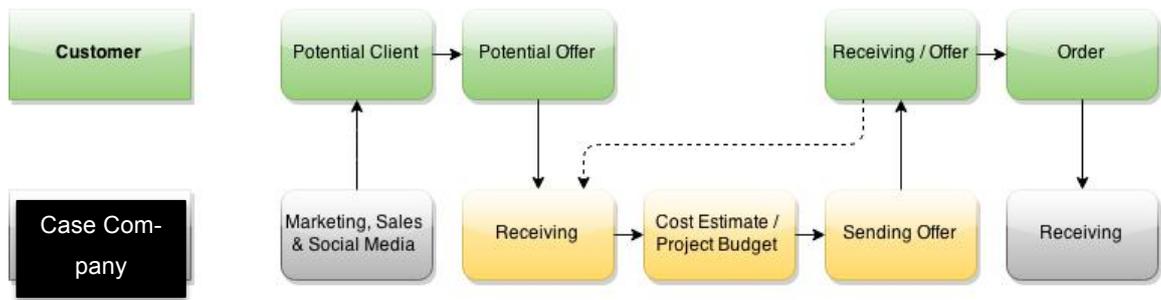


Figure 6. The Case Company's Sales Process.

#### 4.2.2 Production Process

The production process has own problematic areas in the case company. Since the production happens in projects, and these projects can vary in length drastically, the problems arise from no set tool to manage projects efficiently. By bringing in a tool for project management as part of an ERP system, production could be monitored by the artists, producers and management alike. This could ease issues that the case company is having with production currently. By inputting the right data the producers could see how many hours are allocated to a certain project. Using the data could help calculate working hours spent on projects. This is important for the case company because currently it is unable to calculate exact working hours for each artist on specific projects even though it prices projects based on working hours. This has caused decreases in efficiency and sometimes poorly valued projects that have brought little profit to the company.

There is a lot of information that needs to be communicated during production projects in the case company. By having an ERP system with a project management tool would help with the communication. By simply adding the right data, the project progress and information could be easily visible and accessible. Production progress monitoring could benefit the company by enabling producers to bring in new productions efficiently. Since many artists often have several projects that they work on at once, it is common for issues with deadlines and time management to occur. With the help of a proper tool for production the producers could easily see who would be best available for an upcoming project. This would decrease bottlenecks in production.

Another issue in production is that the stages in production bring waiting time that halt production. The waiting time often comes from the customer who needs to approve work-in-progress or WIP versions of the production for it to proceed on to the next stage. A project management tool would help with this issue by easing the production information flow. This would help in setting deadlines for each WIP version so that the client is ready to receive and approve them. Use of an ERP tool would help the producers to see the progress of the project helping them focus on other tasks rather than manually discuss and gather progress reports on projects each day. Manual progress report gathering is their current method and it is time-consuming and inefficient.

Figure 7 shows the production process of a 3D animation. It is similar to the 3D still image production process but with one two extra stages: music and animation stages. Figure 7 shows the deliverables, which are the stages causing waiting time. The animatic is a very simple version of the final animation and its idea is to give the idea of the motion and look of the final product. There is the need to deliver an animatic is because rendering is very time-consuming. Therefore getting an approval on an animatic will make it more likely to get a quick approval on the fully rendered final versions.

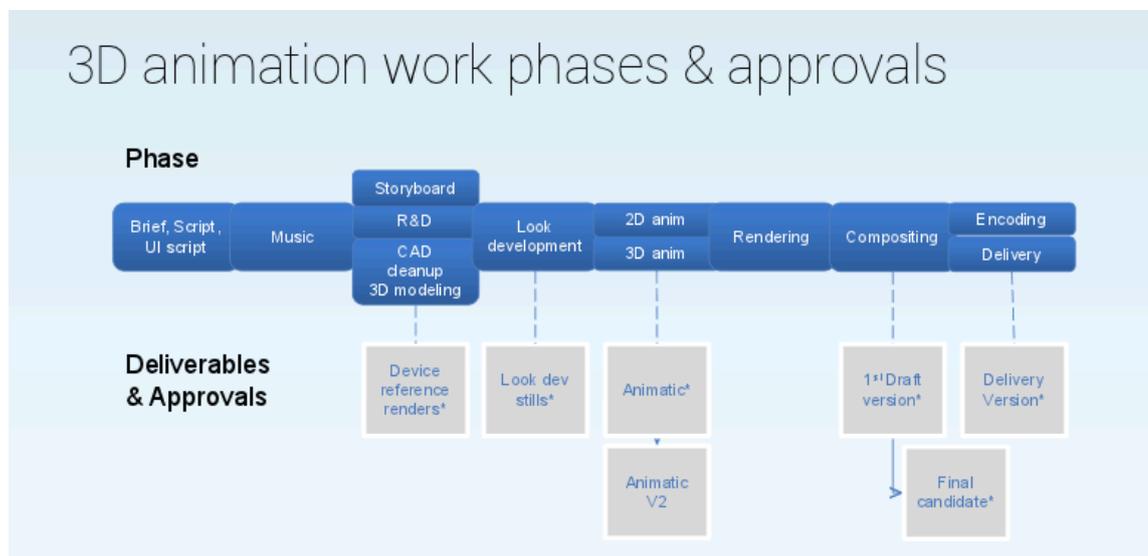


Figure 7. The Case Company's 3D Animation Production Process.

SAP Business One for example has a project management module provided by Maringo Computers. It is a module that allows users to set up projects with necessary information related to the project added in the module. This module has functions that could work for the case company since it has the ability to access the project information with smartphones and tablets. This is a benefit since the producers are often in meetings

outside the office. It also enables producers to set positions for workers in specific projects. This could clarify productions where many artists are working on different projects, helping the artists stay on track of what their timeline for each project is. This module is one of many options that could benefit the case company's production process and project management. Further analysis is necessary after the decision to pursue a specific ERP system has been made. (Maringo 2012: 6-14)

#### 4.2.3 Financial Administration Process

The case company has some trouble with its financial process. There is one accountant working in the company who is in charge of invoicing the customers as well as purchasing and wages. The problem arises with the billing of customers. Because there is no database for information, it is up to the producers to procure the billing information of the clients. The case company has a standard of billing half of a production when production starts and half after delivery. However the clients often do not provide the billing details on time but production must start to meet a deadline. Also the accountant is generally not informed of the production process of projects making her unable to automatically send invoices when projects are ready.

An ERP system could provide a system, which gathers data from the clients so that all billing information is accessible and up to date. It would help in automating the billing system, which is overly complicated and time consuming at the moment. Currently producers need to send an email to the accountant with the billing details of a project. Only then can the accountant send the actual invoice and update the order backlog. The system needs to be more automated with updated information in a source that everyone can access. This would reduce the manual work that currently is required and also simplify the billing process by having information gathered in one place. Figure 8 shows the process of invoicing customers in the case company. The red box indicates waiting time that commonly occurs in this stage. The yellow boxes indicate manual labour that is required due to lack of consistent information sharing. Accounting is unsure when to bill customers because they have no quick method of following the stage of productions. A unified source of data would help to solve these issues.

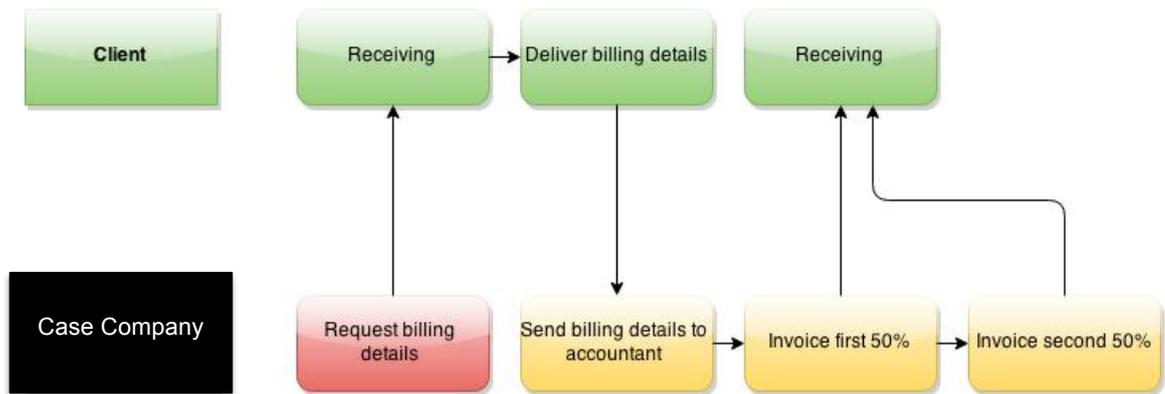


Figure 8. Invoicing Process in The Case Company.

#### 4.3 Justification For ERP Implementation

The case company is a media production company founded in 2004 and has experienced some rapid growth periods as well as declined periods. It is highly susceptible to economic situations and was greatly affected by the 2007 crash. Being quite a unique company and producing work that is creative and artistic requires the company to work with certain flexibility. This flexibility comes from management wanting to please customers, sometimes forcing artists to re-do productions to satisfy the customer. Although the case company has been active for quite a while, there are obvious lacks in efficiency that cause the performance to suffer.

The ERP implementation project would possibly cause less of an issue to the employees in the case company than in any other given company. This is because the company is very technology based and the employees are professionals with computers. Since an ERP system is technologically challenging, the company has some advantage of having a generally high level of tech-savvy workers in the company. The company has undergone some changes in its processes throughout its history and therefore the changes that an ERP system would bring would likely not be incredibly disrupting to the company's production.

After gaining information and researching enterprise resource planning as well as the case company, the core focus areas for the implementation project have been discovered. By simplifying information flow and joining all data sources in to one system, the problems that span from sales to production to financial management could be eased if not solved entirely. With careful planning and implementation the ERP system could benefit these areas greatly and cause the company to work in a more efficient manner.

This could bring more capacity for production and reduce the inefficient customer invoice process that it currently suffers from.

#### 4.4 ERP System Requirements

The requirements for an ERP system are very important to consider when making the decision to implement an ERP system. The requirements for the ERP system in the case company were defined through the analysis of the present state of processes and through the expected developments for these processes. Also the requirements include the business operations of the company and that the ERP system can function in such a company. The main requirements for an ERP system in the case company are the following: affordable, comprehensive enough, user friendly and able to function in its business environment.

##### 4.4.1 General Requirements

The general requirements for the ERP system implemented in to the case company has to include the information and processes that are currently required to run the company in to the software. The case company requires functions from the sales process, production process and financial management process to be included in to ERP software with the possibility to customize the ERP software to fit the company's business model. The ERP system would need to have the functionalities for sales management, customer relationship management, project management and financial management especially related to sales.

##### 4.4.2 Requirements For Processes

The main requirements for the processes in the case company are that the communication and invoicing problems should be solved. Along with this comes the need for a single hub where information is inserted once and joins the processes together. A general requirement for the ERP system is to simplify and unify the current processes.

The sales process is struggling due to the fact that there is no good source for information to be collected. There are small tools that help in the field of customer relationship management but the information is not stored logically and consistently in to these

systems. With an ERP tool that has a customer relationship management function, this problem could be solved. The requirement is that there is a CRM function in the ERP system and that it is user friendly. The ERP system needs to be or become simple enough to use so that the sales process can be automated more than it currently is. Also the information from sales process needs to be easily accessible for other processes to ease the communication issues between the processes.

There are some time consuming stages in the case company's sales process that are unrealistic to expect to be solved with the use of an ERP system. The negotiations between customers and the case company's producers can hardly be shortened with an ERP system since the discussions are about creative solutions. However, proper data gathered in an organized fashion in to an ERP system can bring long-term benefits to this issue. An ERP system can help the company make better sales forecasts and the information stored in the system can help in negotiations if the project under negotiations resembles a previous production, which has all its details and information stored in the system. The requirements for the ERP system in the sales process area are therefore to bring ease to communication and long-term benefits by providing a better data gathering system.

The main production process requirement for an ERP system is to have a useful project management tool. This function would help with the communication of information in projects between artists, producers and customers. It would need to have a function of calculating working hours allocated to each project. This would help in the sales process as well since it would bring clarity to the costs of productions. The system would have to have a project management function that fits the case company's versatile project schedules. Since production times vary so much it is important that both short and long projects have an equally clear and simple tool for information gathering and sharing. Since many deadlines are currently estimated and often cause issues to the production, a proper project management tool would help in setting deadlines for production stages. The system would also need to have information shown so that progress reports would be easy to gather if not be entirely automatic.

The financial process has possibly the most to benefit from an ERP system. The primary requirement for the financial process is to have invoicing become automatic through the system. The information that currently is gathered with telephone calls and emails could be saved into the system, which would handle invoicing of customers automatically. This could reduce the manual work, which is currently required. Another require-

ment for the system is again to unify information so that the accountant responsible for the invoicing and other financial management would have a proper access to sales and production process information. Currently financial management is an isolated process from other processes requiring unnecessary manual work for financial functions to work in the company. An ERP system would need to improve this with the mentioned information unification.

#### 4.4.3 Usage Requirements

The initial users of the ERP system would be the producers, management and some of the artists. The initial artists using the ERP are the creative directors from projects. Creative directors are generally artists with more experience and are in charge of creative decisions. The total amount of initial users would be about 15 people. There is no current business software that the ERP system would need to be integrated with. The expectation is to build the ERP system so that no sub-system is eventually needed for the three processes. The smaller tools used by the case company currently can be redirected to smaller functions once the ERP system is running well.

At the implementation stage the company has decided not to pursue integrating customer's systems with the ERP system. However, it is required that the system that is selected has this feature. Also the ERP system is required to be synchronized with emails and calendars of the company and is highly preferred to have mobile access. Another preferred feature of the ERP system is to be suitable for Mac computers. A majority of the company's computers are Mac computers but there is also access to Windows computers with a shared screen system that the case company uses. However, Mac compatibility would be preferred. Since the company has been in business for over a decade, they have quite a good knowledge and insight of future development expectations. The case company's management does not see the need for scalability of the ERP system. This means that the system that will be implemented does not have to be prepared for rapid growth and expansion of the company but mainly to be maintained and to bring efficiency in their current processes.

#### 4.5 ERP Implementation Risk Assessment

As with any investment, ERP implementation brings risks with it. The risks that the case company faces are risks that were discussed in chapters 3.2 and 3.3. Along with

these come specific risks related to the case company. This chapter of the thesis will look into the risks of an ERP system implementation in the case company. The risks can be divided in to the implementation process risks and the risks that emerge after implementation in the usage of the new ERP system.

#### 4.5.1 ERP Implementation Risks

The highest risk that the implementation of an ERP system poses to the case company is the selection of an unsuitable system. Since the industry that it works in is very specific and is focused on media production, the system would need to be suitable for this industry. Since the case company currently does not utilize any management software there is a high risk that changing their current system into an ERP system will prove unsuitable. The risk of selecting the wrong ERP system has to be faced by analysing the case company's present state and future expectations as well as look at the history of the company's processes.

On the other hand the case company has been operating for so long that some aspects in the ERP system's requirements are quite easy to pinpoint. This reduces the risk of selection since the areas that the ERP system would impact are quite specific without the requirements for functions for expected rapid growth of the company. The selection of the ERP system should be done with enough research on different systems to define the most suitable system. Also the knowledge and prior experience from the case company's workers and management gives great input into the ERP system selection since some have been using ERP systems in earlier stages of their career.

The ERP system's vendor plays an important role in the proper selection of ERP system. When the vendor's financial situation and reputation is considered, it helps with the proper selection. By interviewing vendors the case company can get a good look at the level of commitment of the vendor toward the project. This would enable to establish good communication between the companies.

Another high risk factor that comes from the ERP implementation is the financial risk. Since the case company is very susceptible to market changes, making an expensive investment in to an ERP system naturally brings risks to the company. The financial risk increases along with other risks of the ERP implementation. Selecting an unsuitable system could disrupt the flow of the processes crucially and cause an unexpected

impact on the company's finance. Proper preparation and analysis of the company's financial situation should help to manage this kind of risk. By having a realistic view of the company's present financial situation, management can be better prepared to the coming investment and see how high a negative impact the company could endure. The ultimate goal is to minimize the negative impacts of the ERP implementation but being prepared against these risks is crucial.

Once the ERP system has been implemented the risks of the initial use will become apparent. The highest risk at this stage is that users of the system are inadequately trained to use the system. This is a high risk because in order for the system to start running smoothly the users should become comfortable using it as fast as possible. Adequate training will help with the transition stage of systems from old to new and decrease the impact this change will have on all the processes. Also the initiation stage can prove that the system does not run as it was expected to. This risk can be managed by proper analysis in the selection stage of the ERP systems and to have trial runs with the system before the actual implementation. Other risks come from employees who might get frustrated with the new system during implementation stages and become resistant to the change. This could cause the schedule of the project to stretch and thus further costs to the company. This is not the highest risk in this stage but needs to be acknowledged so that the management can be prepared for this and prepare all workers properly for the coming change.

#### 4.5.2 ERP Usage Risks

The risks of ERP usage are important to analyse and to be prepared for them in the early stage of the implementation process. There are some crucial risks that need to be tackled after the ERP system has been implemented fully and is in use. One risk in the case company is that it has a somewhat frequently changing group of employees. This brings risk to ERP usage since new workers must be trained to the system in order for it to function properly. Preparing for this means that the case company must be well prepared to train all new employees to the system. This requires good knowledge of the system so that the stages before the implementation and usage must run as smooth as possible also. To minimize the risk of the ERP system usage, the case company could train a user to specialize in the ERP system. Having a user with comprehensive knowledge of the ERP system would ease the learning curve of new users and be very helpful in problematic situations related to the ERP system.

Another high risk factor in the usage of the ERP system is that it becomes a system that is not utilized to its full potential. This may occur due to the fact that workers were not trained properly to use the system. It may also happen because of the workers unwillingness towards changes. It is a high risk factor because it would bring great cost to the company without bringing any of the expected benefits but rather add just one more system that is used along with the other smaller systems. To manage this risk the management of the company must be fully committed to the whole ERP implementation project and demand commitment from the workers as well. There must be an expectation of reward from the project so that the motivation of workers as well as management does not fall. This is something where strong leadership of the managers can help.

Another risk is that the ERP system is seen as ready and complete once it is being used. The case company should rather look at it as a system that can be moulded in to a better form depending on its needs. Therefore the system should be developed according to changes that the company might have in the future. The risk lies already in the selection of ERP system, since the company must select a system that can be developed further in order to tackle this risk. The case company must also be prepared to and willing to develop the system if the time comes for it. The problem that arises from the need to tailor the ERP system is the cost. It is highly expensive to tailor an ERP system, especially for a small company like the case company. To find the best suiting ERP system for the company without major tailoring needs is ideal, however the possibility of tailoring the system must be considered as a possibility. This is not the highest risk since the company has been somewhat stable during its years of operating, however it is something that must be mentioned since the ERP implementation process is to improve the processes in the company's future.

#### 4.6 ERP System Proposition For The Case Company

The target of this thesis was to propose a possible ERP system to the case company. Although the company is very willing to initiate an ERP implementation project, recent events in the company have made it unfeasible for it to pursue an ERP system at this moment. The recent changes in the company have altered the thesis into becoming an analysis of the possibilities and challenges that the case company faces with the pos-

sible ERP system implementation. The changes in the company have not abolished its needs to improve its processes. On the contrary it is evident that changes in the process management need to be done. The author selected two possible vendors that the case company could take into consideration when a more suitable time for ERP purchase and implementation is at hand. The two selected vendors were chosen by the author were based on research and discussions with the case company's management. The management had a clear favourite due to prior use of the system. However, the author provided another option for comparison.

#### 4.6.1 SAP Business One

The SAP Business One is the ERP system that the company's management had prior experience with and were most interested in. It is an ERP system developed for smaller businesses and has a low enough financial risk for the case company since it is quite affordable. Since it is a product of SAP AG family, which is one of the largest ERP providers in the world, it has a certain good reputation about it. It is a system that can be tailored for the case company's needs and it could ease management and integration of the financial, production and sales processes. Without tailoring it is already a comprehensive ERP system for the case company and therefore the specific tailoring is an option that could possibly be utilized later after implementation. The fact that management has prior experience with the system would lower the risk of implementing it since there would be less need for training them. However, training the active users is still necessary. The selection of SAP Business One could bring benefits especially in the financial and sales processes. Figure 9 shows a simple image of data unification through SAP Business One. It is a simple idea of how the ERP system could work and it is exactly what the case company hopes to achieve from ERP implementation.



Figure 9. SAP Business One Functions. (Fast Track)

Since SAP is such a prominent figure in the ERP world it has an advantage towards some other ERP systems. Many customers that the case company has use SAP, which would make the implementation of SAP Business One a good choice. It would ease in the transition when some clients are already using the system that the case company is initiating. On its own, however, SAP Business One is not quite comprehensive enough to support all the needed changes in the processes, especially the scheduling of the production projects. However, it is customisable and with the help of modules for project management and by negotiations with the vendors the right solutions could possibly be found. It is also not Mac compatible which is a relatively small inconvenience.

#### 4.6.2 Microsoft Dynamics NAV

After research and interviews with the case company staff the second proposition for the company's ERP system is Microsoft Dynamics. It is also a globally supported system and goes along with the company's budget limitations. Based on the authors own experience it appears to be relatively easy to use. However, it would require customisations if implemented in the case company. It is also Mac compatible making it more suitable for all the computers in the company. It is also easy to integrate with other Microsoft products like Microsoft Office, which are used in the case company constantly. This could ease the transfer to the new system quite a bit. It is also accessible with

smartphones and pads with the Mobile Nav App. This is a great benefit to the system since many producers and management work on the go and have meetings with clients out of the office. Having access to the information through an App is very beneficial in such situations.

The risk with Microsoft Dynamics is that it is designed for companies larger than the case company. It has a lot of options for a lot of functions, which can be confusing to the user. However as mentioned it is customisable and with the help of the system vendor, Microsoft Dynamics could be customised to suite the case company very well. This is something that requires more financial investment and therefore is not pursuable by the company at the moment. However, the company is far from failing and the option to have a tailored ERP system through Microsoft Dynamics is a possibility for the future.

## **5 Conclusions**

It is evident that ERP systems can bring major benefits to companies that implement it. There is no coincidence that almost all major companies use some form of ERP for their processes. Throughout the development of ERP the need for systems for smaller businesses has become evident. Since most businesses in the world are small businesses, it is natural that ERP system providers have attempted to fill this market. Smaller businesses have special needs in regards to ERP systems, since smaller businesses vary so vastly in all business elements.

ERP implementation is a major investment for a big or small company. In order to initiate the implementation project, the company must do a lot of research and background work. This is crucial for the implementation project to be successful. ERP projects are risky and expensive and therefore must not be rushed into. Managing and assessing the risks of the project must start in the beginning stages already. Along with risk management must come the evaluation of what exactly the ERP system would be utilized for. By planning and preparing the company can reduce risk and increase expected benefit that the ERP system would bring. Although the benefits the system would bring are not always easy or even possible to measure the system that unifies data and brings information from separate processes together will likely benefit the company on the long run. This required proper implementation.

The goal of this thesis was to provide readers with information about the ERP systems and the challenges of implementing the system. The theoretical section of this thesis provided information on the challenges and different aspects and risks that are included in the implementation process of an ERP system. This was used in the case study in order used to initiate the ERP implementation process to the case company.

Although the case company went through some major changes during the time span of this thesis, the research and case study of the company will be useful in the future, when ERP implementation is a priority again. The target was to research and propose an ERP system for the case company, through which the company could make their sales-, finance- and production processes run more efficiently. To do so the company must be prepared financially for the major investment and also have the right motivation and morale to undergo the major changes an ERP system would bring in to the company. Initially the plan for this thesis was to initiate the implementation project in the company from, which the case company's management would then take the project further. However, the changes in company structure and operations caused the target to change slightly. It is clear that changes in the case company's operations are necessary.

The case study became a great example of the recourses needed to initiate an ERP implementation project for a SME. The challenges are evident in a media company such as the case company, where the investment is so great that changes in the company stalled the implementation project. Therefore, the practicality of the case study suffered slightly, however, the necessary research and preparations for the case company to initiate an ERP implementation project have been done. This will ease the starting of the project in the future.

Another target of the thesis was to look at the possibilities and challenges that businesses operating in the media industry may face when planning for ERP implementation. The main result from research and experience in the case company indicates that from the technological aspect, companies in the media industry have a slight advantage towards ERP system implementation. Challenges emerge from factors, such as the lack of ERP systems specifically designed for media industry. This is a complex issue in the sense that media industry companies may not operate similarly to each other, making it hard to design an ERP system that would fit most companies operating in the media industry. The opportunities in this area come from the fact that ERP sys-

tem providers are constantly targeting SME's with their systems. This has the opportunity that an ERP system that fits companies like the case company will possibly emerge. The problem this brings is that there is already a vast selection of ERP systems to analyse. More ERP systems means more work for SME's in regards to doing proper research to find the right system. Proper preparation for ERP implementation is crucial for success as has been pointed out in this thesis. SME's face the hard task of finding the resources to implement ERP systems. Successful implementation can cause long lasting benefits and improve the company's operations significantly. The case company's target is to receive these benefits and increase efficiency in its operations in the future. This thesis has done the necessary research and analysis for the company, from which the case company's management can build their ERP implementation project and pursue the delayed ERP implementation.

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## Case Company Employee Interview Framework

Name:

Position in Case Company:

Time as Case Company's employee:

Do you have any prior knowledge / Experience with ERP?

What kinds of experiences?

Would you like to see ERP utilized in the Case Company?

What are the most problematic areas in your work?

How could these be fixed?

How do the processes in the company function in your opinion?

Would you mind the changes in current processes that ERP would bring?

Would you be willing to work harder for the ERP implementation to be successful?