Experiences with Business to Business E-contracting
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ABSTRACT
E-contracting is a frequently debated topic in scientific research. A large number of technical applications and methodologies are present. Moreover, several vendors, which are providing e-contracting software, have been evaluated. However, studies reporting on the experiences with e-contracting software and the companies’ decision making process concerning e-contracting are lacking. Companies might face difficulties in their decision-making process whether to make use of e-contracting software. On the other hand, vendors providing this software might not perfectly meet the needs of the customers. This study tries to gain insight into SME’s experiences with Business to Business (B2B) e-contracting software and into reasons why SME companies adopt e-contracting software. This exploratory research investigates contract management of four small and medium-sized enterprises (SME), which created insight into the current state of the usage of and experiences with e-contracting. Three out of four investigated companies did not adopt e-contracting software. Their visions towards e-contracting software contradicts the visions of vendors and scientists. These new insights are valuable for e-contracting software developers who can meet the demands of potential customers. Furthermore, companies will be able to make well-informed choices whether to use a particular e-contracting software. This exploratory research could also be used as a basis for further research on this topic.

Keywords

1. INTRODUCTION
Business to Business (B2B) contracts are the basis for proper collaboration between companies, which contains activities executed by one or more businesses in relation with contract clauses. B2B contracts vary from large and complex partnership agreements to a simple trading agreement. Insurance contracts, lease contracts, supply agreements, and service contracts are common contract types in the B2B domain. These contract types include different characteristics and focusses. Supply agreements involve specifications about the pricing, quality, and quantity of the trading goods. Insurance contracts, however, focus on characteristics of cases in which a company is insured. All B2B contracts may include incentives and penalties to assume compliance to the agreement. B2B contracts are used in every business sector and have an influence on the business processes. In order to capture the collaboration between parties in a contract, requisite elements should be established [12]. First, an offer should be proposed by parties, subsequently a consideration between parties has to take place [12]. After potential negotiation the parties can reach an agreement. Finally, each party should understand the basic substance of the agreed upon terms of the contract [12]. After these steps have been accomplished, the document can be considered a legally binding contract.

For a long time, contracts have been handwritten and each particular clause had to be agreed upon. Manually monitoring and auditing the agreements, required much effort and time. A current trend is that transactions and small contracts are highly automated by technological systems. However, whether this trend continues to contract management in the B2B domain is not clear. Current businesses are exchanging information and products, providing services and engaging in complex relationships with multiple parties. Those complex situations are in need of proper contract management. A suitable way to cope with those complex contracting situations may be e-contracting.

B2B e-contracting has been a popular topic in recent years. Angelov and Grefen [2] conducted a short literature research on papers about e-contracting methodologies and theories. They concluded that a lot of research has been done in this field and that there is still enough space for further research on important topics concerning electronic contracting [2]. According to market research, there is a large diversity of electronic contract software [6]. Only companies with a strong market position, which provide e-contracting software, took part in this research. Since only companies with a strong market position were investigated, a greater amount of business should be operating in the reasonable e-contracting software market.

Since there are multiple theories about several phases in e-contract management and because a lot of market research has been conducted, case studies on this topic might be expected. However, even after extensive search, only a small number of case studies could be found. It seems that, there is hardly any information about to what extent companies put e-contracting into practice and about the reasons behind that choice. Clearer insight into this matter is needed in order for companies to make well-informed choices concerning the automation of contract management. Furthermore, this information is also required by e-contracting software vendors. Opinions and arguments about whether to use e-contracting software give the developers the possibility to adapt their software and include incorporate desired features.

This exploratory research with vendors and small and medium-sized enterprises (SME) tries to solve the lack of information. An exploratory research qualifies best for this study as its design intends to explore unprecedented topics [7]. Companies in the SME sector are involved in a large number of B2B contracts, which is the main reason for e-contracting vendors to focus on this market segment. In addition, e-contracting vendors focusing on the smaller market segment consisting of large enterprises...
would not be as profitable as when the focus is on the ample SME sector. A low current adoption by SME companies can be expected and thus a huge potential market exists. Considering this reasoning, the SME sector is suitable for investigation.

In order to gain insights from both the supply and the demand side of e-contracting software, a multi case study is required. Since insights into the demand side is lacking, this exploratory research will mainly focus on the case study with companies in the SME sector. Four small and medium-sized enterprises will be investigated conducting semi-structured interviews. This case study will reveal insights into the current adoption of e-contracting software and the factors which influence the decision to adopt. Besides the case study a short desk research is conducted, to gather insights from the supply side and scientific literature. The gained insights will better enable enterprises to make well-informed choices regarding adoption of e-contracting. Moreover, vendors can adapt the offerings based on the findings in order to make offerings more appealing to their target market.

This paper has the following structure: In Section 1.1 and 1.2 the problem statement will be described and the research questions will be given. Section 2 and 3 will respectively discuss the related literature and the research approach. In Section 4.1 and 4.2, results of the desk research and the case study will be shown. Finally, possible explanations and conclusions will be drawn from the results in Sections 5 and 6.

1.1 Problem statement
As already stated in the previous section, comprehensive research on e-contracting technologies has been executed. Despite a large number of frameworks and models concerning e-contracting and a considerable amount of market research, only very little is known about e-contract management in practice.

Companies providing e-contract management support software might be interested in the current B2B contract management of enterprises. Furthermore, a clear overview of factors which play a role in their decision-making process, will be valuable for developing e-contract software.

Apart from companies that provide e-contract software, all other businesses using contracts have no access to information about other businesses’ e-contracting experiences. Companies could be supported in their decision making process regarding e-contracting software by having access to information about the experiences with e-contracting software.

Therefore, the problem statement reads as follows: Despite the technological B2B e-contracting knowledge and offerings, there is still knowledge missing to successfully implement B2B econtracting. In order to solve the lack of information, conducting an exploratory research with the aim of gaining a clearer in-depth look into the degree to which companies adopt e-contracting software and what their reasoning looks like.

This research adds value to the existing body of knowledge. Particular insights into factors, which play a role in the decision to adopt e-contracting, could be a new basis for further research. Factors, which have a negative influence on the adoption, could be further investigated to improve e-contracting software.

1.2 Research questions
Based on the given problem statement, as mentioned in the previous section, and motivation for investigating companies in the SME sector, mentioned in the introduction, the research question is:

What is B2B e-contracting, what are SME’s experiences with e-contracting software and SME’s reasons for adopting e-contracting software.

In order to answer the research question, it is subdivided into three sub-questions which are assigned to specific research components. Table 1 shows the connection between the sub-research questions and the components of this exploratory research.

Table 1. Connection between sub-research questions and the research method

<table>
<thead>
<tr>
<th>Sub-research question</th>
<th>Research method</th>
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<tbody>
<tr>
<td>What is B2B e-contracting?</td>
<td>• Desk research</td>
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<tr>
<td>What are the SME’s experiences with e-contracting software?</td>
<td>• Interview with vendor</td>
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<tr>
<td>What are the reasons for SME’s to adopt or not adopt e-contracting software?</td>
<td>• Case study</td>
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2. RELATED LITERATURE
A large amount of related scientific information was found in multiple literature databases. Mainly Google Scholar, Scopus and IEEE Xplore were used for the search. Different search techniques and terms were used to find scientific information and to create a clear overview of research in this domain. Search terms such as e-contracting, contract, Business to Business, B2B, and contract management were often present in search queries. Moreover, search techniques like using proximity operators and refining results by excluding or selecting particular document types, keywords or subject areas were applied.

The definition of e-contracting is rarely discussed in the scientific literature. However, scientists who discuss the definition, interpret this definition in various ways. Angelov and Grefen describe the benefit of e-contracting as follows [3]:

“E-contracting decreases the time and costs to reasonable values and allows micro-contracting to take place”

Costs and time ensuing from standard paper contracting are often too high in order to allow contractual relationships to exist [3]. In order to reduce these costs, contract management is in need of a smart electronic approach.

Furthermore, during the literature search, multiple papers about models, philosophies and methodologies concerning e-contracting have been found. Angelov and Grefen propose a framework for supporting B2B e-contract management [1]. According to their research, four concepts of a contract should be taken into account for developing B2B e-contracting support software, which are the actors, the context, the content, and the processes of a contract. Angelov et al. [4] discusses the features of e-contracts and the required technology. In addition, he demonstrates the inefficiency of straightforward contract management compared to his automated version of contracting.

Furthermore, Gâteau et al. [10] states that little concern exists on monitoring and managing enforcement of contracts, which might be considered the most important part of contract management. However, Molina-Jimenez et al. [14] and Solaíman et al. [16] discuss a technology called Contract Compliance Checker, which could support monitoring contracts. Radha Krishna and Karlapalem [16] state that contracts need to be able to change over time due to the dynamic environment. Currently, however, contracts are established in a particular moment but do not adapt to an environment which is likely to change over time [16]. Thus,
a dynamic environment calls for the need of adapting agreements. In their paper a solution to this problem has been proposed.

E-contracting software is by researchers seen as a tool to support contract lifecycle management. According to a guide of EMC Corporation [9], contract lifecycle management (CLM) consists of controlling, coordinating, and streamlining all the contract lifecycle stages. In a contract lifecycle the following stages are present in some form: request, author, negotiate, approve, present, execute, manage obligations, amend, and renew [9].

A recent market research by Bartels and Wang [6] evaluates e-contracting software vendor profiles and their e-contracting software that is currently provided. The most recent software available has been reviewed include multiple aspects. Leaders in contract management software are Apttus and Icertis [6]. Next to the leaders, there are many other vendors focusing on a small market with specific software. According to Bartels and Wang [6], the focus of CLM can differ depending on B2B sectors. Sectors like healthcare, education, and government should focus on the ‘buy-side’ of CLM. On the other hand, sectors such as insurance, pharmacy, and professional services should focus on the ‘sell-side’ of CLM. Moreover, a list of five key functions of CLM solutions has been presented [6]. The progress in terms of CLM implementation can be reflected by defining to what extent the value has been realized in a company.

In short, this literature research showed that there is no consensus about a clear definition of e-contracting among researchers. Moreover, a variety of research has been done in this field and software is offered to support contract management.

3. METHOD OF RESEARCH

This multi case study approaches the research question from two perspectives. As mentioned in Section 1, the desk research followed by an interview with a vendor ought to approach the research question from a supply perspective. The case study at the SME companies will reveal the demand perspective. Both parts of this study require a different approach due to the distinctive research characteristics and focuses. Section 3.1 and 3.2 will respectively discuss the desk research and the case study.

3.1 Desk research + interview

The desk research mainly focuses on the definition of e-contracting, vendors, and their offerings. The related literature search raised the expectation of a diverse range of e-contracting technologies and methodologies. This desk research tries to find a clear definition of e-contracting and tries to gain insights into the current e-contracting software by investigating blogs, fora, websites and white papers. Due to the limited scope and focus on the case study at SME companies, only one vendor of e-contracting software will be further investigated using a semi-structured interview. This semi-structured interview will provide a better understanding of their offerings, business methodologies, and customers. Relevant insights of the desk research and the interview will be descriptively visualized in this paper. This description will answer the first sub-research question which functions as the demand side perspective of the research question.

3.2 Case study

The case study approaches the research question from a demand perspective. An investigation of a few particular cases will be executed, in which the focus will be on the analysis of qualitative data. A case study was chosen since detailed insights into experiences with e-contracting is required. Eisenhardt [8] describes a theory to build theories based on case studies. Her proposed process has been used as a guidance in the case study.

The primary data collection method includes semi-structured interviews with stakeholders which are in their daily work routine dealing with contracts. Four Dutch companies in the SME sector were contacted for participation.

The interview is semi-structured and can be described as a respondent interview. A baseline for the questions is prepared and made specific to each SME company. Prior to a visit, specific characteristics and businesses of the companies were researched on the internet. This information has been used to create a company-specific guideline for the interview and prevented questions which could easily be answered with publicly available information. The interviewee was able to elaborate on a certain topic during the entire interview. However, the interviewer was in control over the interview by interrupting the interviewee when he or she got off the subject or by asking for further explanation when the response did not seem clear enough.

To analyze the collected data, qualitative analyzing methods are used. The analysis was based on an audio record instead of interview notes. The loss of important information due to the lack of sufficient detailed interview notes is thus excluded. Content analysis, described by Lazar et al. [13], is based on the theory that the structure of the comments of the interviewee provides useful information for additional understanding. In fact, in comparison to interview notes, much more information can be extracted from an audio recorded interview. Therefore, the SME companies have been explicitly asked for participation in an audio recorded interview. In case a company refused to adhere to this requirement, another company was invited. The analysis of this data was used to answer the sub-questions which will result in an answer to the research question. Since every company has different characteristics and deals with contract management differently, valuable insights might also differ. The various focuses during the vendor interviews have been reflected in the interview description. These descriptions will not be structured in the same ways and elaborations on particular topics could differ per company, depending on relevance to the research question.

By using the cross-case analysis described by Eisenhardt [8], valuable information can be extracted from the descriptive data. Since this is an exploratory research, after the analysis of the data, theories and methodologies might apply to the findings. Therefore, in the discussion applicable theories are discussed. Moreover, concluding from the literature research, e-contracting software has not been related to theories such as adoption models.

4. RESULTS

The results of the desk research with the interview and the case study are shown separately. In Section 5 the results are combined for discussing possible explanations of the results and the concluding remarks.

4.1 Desk research + interview

The following will be a description of the gained insights of the desk research. The definition of e-contracting, the growing attention for contract management, and suppliers of software that supports contract management will be discussed.

During the desk research it became clear that the definition of e-contracting is ambiguous. Various websites, books and vendors have a different interpretation of e-contracting. The closely related term ‘e-contract’, which has been debated a lot on the internet, also has multiple definitions. However, both terms should be interpreted differently. The following two definitions are in compliance with other definitions which have been given by blogs, vendors, and books. The definition of e-contracting given by Xu and de Vriezen [17] is as follows:
The processes of formatting and negotiating of contracts electronically, and also monitoring the contract performance over networks.”

The definition of e-contract given by Xu and de Vriezen [17] is:

“A contractual agreement, represented as digital information and signed with digital signatures of the parties.”

The importance of contract management is often debated on multiple platforms. Blogs and columns point out that proper contract management is vital for a successful enterprise. However, a general impression of the blogs and columns is that a large amount of enterprises does not realize the importance of e-contracting or of investing in proper contract management. A white paper of Hoven states that eighty percent of CEOs opine that their enterprise should manage their contracts and external relationship in a better way [10]. Furthermore, multiple institutions provide part- and full-time contract management trainings. The increase of supply of contract management training could be the result of the growing attention for contract management. Some Dutch institutions which provide trainings on multiple levels include NCOI opleidingen, ISBW, Avans+, and Nervi. Parts of these trainings are dedicated to education about tools and software which might support contract management. These findings illustrate the increasing importance of contract management.

As already discussed in Section 2, multiple suppliers of e-contracting software, offering a diverse range of contract management solutions, are present on the market. The desk research focused on four suppliers and their contract management support offerings. Only suppliers focusing on the SME market segment have been selected by investigated vendor’s websites. The following paragraphs will briefly describe the vendors and their offering(s).

Crics was established in 2008 and provides online contract management software. Crics claims to have software that ensures out of years of experience with contract and supplier management. The company offers three different software editions: Crics contract register, Crics contract manager, and Crics professional. Crics contract register is the online software solution that includes the fewest functionalities. This edition basically serves as a cloud-based repository in which contracts can be found easily. Crics contract manager offers more functionalities such as user authorization, Service Level Agreement (SLA) management, and dashboards. Adopting this edition enables the user to have a clearer insight into the current state of the contracts. Crics Professional offers all possible functionalities which are mainly extensions of the already provided functionalities in the other two editions. The extra functionalities of this edition is that rapports can be received by email, user authorization is extended, and dashboards can be adapted.

M-files is a software company that provides software that helps enterprises share, find, and secure information and documents in all industries. One of their solutions focuses on supporting the entire contract life-cycle management. According to their vision, there are three main benefits in managing contracts supported by their software. Visibility, control, and efficiency are pointed out as the core benefits of the contract management support system. Easy access and a unified view make sure that all the software users are able to work easily with the correct contract. The user is able to tailor the software and monitor contracts by preferred components. Automating contract management streamlines processes and thereby increases the management efficiency.

Evidos, market leader in solutions for electronic signatures, offers a service which enables the user to sign documents digitally and legally. Three main benefits of this offering are stated on their website. The first benefit is the swiftness of signing. Partnership agreements can be signed any moment at any location and the waiting time for the collaborating enterprises to sign is reduced. Secondly, the agreements can be signed easily. This is a solution to what Evidos calls the 'print-scan-send-problem'. Finally, this solution can save a lot of costs emerging from scanning, printing, and sending the document.

MochaDocs offers an all-in-one software solution for managing contracts. According to MochaDocs’ website, their software has advantages in multiple respects. Some of those advantages are, having a central repository for contracts, creating unlimited contract rapports, and having the ability to use convenient dashboards.

Websites of vendors focus on their offerings and the benefits of the offering. For this research the vendor’s vision towards the e-contracting market could be valuable. Due to this reason, one of the vendors, MochaDocs, has been contacted for an interview which gave a more detailed view of the supply side. Since MochaDocs is recently established and innovative in the e-contracting market, it should know what the current demand in the e-contracting market is. This made MochaDocs an interesting company for further investigation. The following section shows the results of the interview with the CEO of MochaDocs.

4.1.1 Interview MochaDocs

Respondent5 is founder and CEO of MochaDocs.

Company

MochaDocs is a contract management software vendor. Their mission is to change processes concerning contract creation, contract signing, and contract management. Respondent5’s opinion is that these processes can be approached in a more efficient and effective way to optimize a contract’s outcome. Prior to the creation of contract management software, research has been done regarding what the actual problems concerning contract software are. This research resulted in a vision which should be pursued by MochaDocs’ solution in the form of software. Respondent5 mentioned that MochaDocs is seen as experts in the field of contract management and that they are willing to solve these problems by providing their software to enterprises.

Definitions

According to Respondent5, the definition of ‘contract management’ is ambiguous. For MochaDocs, however, a clear definition is not important since contracts simply need to be managed. From their perspective, contract management includes managing the documents after these have been signed legally until this document is no longer valid (expiration date of the contract).

A contract, however, is in accordance with the vision of Respondent5, a document which is signed legally. Before this document has been signed it could have been an offer, a proposal or something similar, but not a contract. In fact, an agreement between several parties can be reached orally, yet the document has to be signed in order to be considered a contract. Moreover, managing contracts is not a business process. Conversely, a contract influences business processes in many aspects.

Software

Stakeholders of a contract want to maximize the rate of return they can gain from a contract. MochaDocs offers an intellectual property that enables companies, to maximize the outcome of
what can be yielded from a contract. Every company is able to implement the system provided by MochaDocs and can use it for every type of contract. In order to maximize the outcome, the user needs to give the right input. This enables the system to inform the right person in the right moment about the required information to make the right decisions. Already in the precontractual phase it is important to create a clear overview of the contract components which can maximize the rate of return, to make sure they are included in the contract. Equally important, including contract components that lead to unmanageable business processes should be prevented.

One of the most important characteristics of the software is simplification of managing contracts. MochaDocs’s system simplifies contract management, which might seem complex at first sight, without personal training. Employees, who are not acquainted with the content of the contract, are able to manage contracts with this software.

**Market of contract management**

Proper contract management is requirement for all companies that take their contracts and businesses seriously, according to Respondent5. If companies fail to do so they might eventually lose market share or go bankrupt because contract management is going to take away the profit from these companies. However, a high percentage of companies have a non-corresponding view on contract management. When a company wants to improve contract management, they are focusing on automating business processes and not on managing contracts. A common way of incorrect reasoning is that, since contracts are the central point of all the business processes, improving contract management is established when the corresponding business processes are more efficient and effective. This means, according to Respondent5’s vision, that a large amount of companies does not exactly know what the essence of managing contracts is.

In order for MochaDocs to support enterprises with managing their contracts, the vision towards managing contracts should be similar. In case these visions are too divergent MochaDocs dissuades adoption of their software. An unmatched vision of the problem leads to an unintended use of the software. Unintended use of their software won’t result in the expected outcome of either the adopter or the provider. Pursuing this strategy of only providing enterprises with a similar vision towards contract management, however, will lead to satisfied customers and a long-lasting customer relationship.

**Innovation**

MochaDocs has its own vision on what the problems are that companies face concerning contract life-cycle management and software is continuously being innovated and developed based on that vision. MochaDocs develops software that meets the needs of enterprises, not necessarily their desires at first sight. Currently, their focus is on developing software that supports the contract initiation phase of contract life-cycle management, which requires integration with the already existing support of managing contracts. In order to be able to establish a proper contract, the company should know how they want to manage their contract. The establishment of a contract should enable the company to manage the document. Without a clear insight into how to manage a contract, the company is not able to establish an effective proposal or offer.

4.2 Case study

Four SME companies have been selected for an interview with an employee who deals with contracts. Websites of the SME companies have been consulted, in order to select only the companies which are operating in the B2B domain and match with the SME characteristics. Each investigated SME company and their experiences with e-contracting will be described briefly. Each description has a different structure and focus depending on the particular company.

4.2.1 3PL Company 1

**Company1** is a relatively small (approximately 60 employees), international operating transport company with a horizontal organizational structure, specialized in the transportation of furniture and pianos among a number of other musical instruments. Next to these services, storage facilities are offered at their terminal. Trucks are mainly loaded at factories before Company1 distributes the objects to enterprises all over Europe. Respondent1.1 characterized the company as being ‘traditional’ which is expressed by their long-lasting relationship with personnel, suppliers and customers. Once someone is employed, the employee is likely to remain employed at the company for a long period of time, sometimes even for his or her entire career. Respondent1.1 is a commercial manager and therefore primarily responsible for commerce and human resources. Respondent1.2 is responsible for finances and contract management.

Respondent1.1 opines that there is great importance of having proper relationships with the company’s business resource suppliers, especially regarding the business relationships with the truck supplier. Recently, Company1 made a switch from buying trucks to a ‘full operational lease’ of trucks, in which contracts are involved. Furthermore, Company1 collaborates with sub-suppliers, but establishing extensive contracts is not seen as important since the management relies on former positive cooperation. Respondent1.1 values an extensive contract to a lesser extent than good relational experiences in the past. Maintaining these business relationships in an informal way is regarded as more effective than establishing a formal contract and strictly monitor it.

Lease contracts are pre-formulated, standard contracts established by the truck leasing company. A representative of the supplier personally visits the company to discuss the contract whereupon both parties sign the document. After signing the contract, a hard copy of the contract will be stored in a portfolio and a digital copy will be archived in their digital system. Required payments are verified monthly in the contract to prevent mistakes. Since the suppliers are more motivated to sign new contracts, they are contacting Company1 shortly before the contract expires. According to the vision of Respondent1.1, automation of this process would not save time and money. Moreover, Company1 prefers personal contact for the purpose of maintaining its informal business relations.

Respondent1.1 states that the flexibility of being able to terminate the lease of a truck in a short-time period is important when downsizing is needed. However, whether this clause is adopted in the contract is not known.

Negotiations with international partners took place but this involved large contracts which are in contravention of their business methodology. According to Respondent1.1’s vision, willingness to cooperate on an informal, personal basis is the key to a long-lasting collaboration.

4.2.2 3PL Company 2

**Company2** is a relatively small company (less than 100 employees) which provides synchromodal container transport by rail, water, and road throughout Europe. Company2 has multiple terminals in the Netherlands and Germany. Respondent2 is a commercial director and responsible for human resources.

The current trend concerning contracts is that agreements between Company1 and other companies are established in contracts. First, Company1 trusted the other company based on a
stable collaboration and relationship in the past. The business culture in the operating area is less official and more traditional, which comes down to granting services to particular businesses. This must have had a large impact on the late rise of the trend. Currently, Company2 is trying to establish contracts with their shippers in order to ensure that agreements are clear to all the employees and not only the employers who agreed upon the verbal agreements. It seems to be of great importance to Company1 that jurists and lawyers support the company by creating legally proper contracts. The main reason for outsourcing the establishment of contracts is that the necessary knowledge and abilities are not present. The clauses which are included in the contract are discussed with the company beforehand.

Recent accidents, for example boats blocking a river, have caused large implications for companies in the logistic sector. This triggered Company2 to make sure that agreements are stated in proper contracts in case such incidents occur. On the other hand, covering yourself might also lead to less shippers who are willing to transport the containers. Therefore, Company2 tries to find the right balance, in cooperation with the jurists. Furthermore, other terminals, which are using more contracts, positively influenced Company2’s behaviour towards establishing contracts. This is one of the main reasons that Company2 is stating agreements between shippers in contracts.

In most cases, contracts are signed during a physical meeting between the stakeholders. Software that can be used to sign contracts digitally has never been used. Only the adoption of contracts with current customers or shippers will be accomplished in a digital way.

After the contract has been signed, a digital copy of the contract will be archived on the computer and important information, such as costs and operational procedures, will be communicated to the person responsible for those tasks concerned by the contract clauses. In addition, clauses will be integrated into software that supports their operational procedures. After the communication and integration the company does not look into the contracts anymore. Employees of Company2 do not put a large amount of effort in keeping track of expiring dates. In their experience, agreements remain valid also after its expiring date.

The main reason for not adopting software to support or automate contract management is that the company did not face any implications concerning contracts in the past. Moreover, existence of supporting technology of contract management was not known. None of the employees ever looked into the advantages and disadvantages of adopting certain technologies. According to Respondent2’s vision, automation of contract management is not as important to them as to companies dealing with a larger number of intricate contracts. Intricate contracts cannot be managed easily and are therefore in need of software to support the management.

The traditional way of establishing contracts which includes physical meeting with stakeholders sub-serves to create a stronger relationship. This is seen as one of the benefits of not adopting contract management software. Besides this advantage, having a detailed look into the possibilities in this field is not possible as activities with a higher priority have to be done first. However, respondent2 expects that the company will automate more tasks for contract management within a timeframe of five years.

4.2.3 3PL Company 3

Company3 is a provider of international logistic services with approximately 300 employees. Their offerings include air freight, road transport, sea freight, warehousing, and e-

fulfillment. According to their vision, the wide range of offerings are a perfect solution for companies that want to place their focus exclusively on the core tasks without having to deal with transportation and warehousing. Respondent3 is responsible for human resources, sales, the truck fleet, and deals with complex contracts. Most contracts, however, are managed by the other salesmen.

Usually, the salesmen create offers which are sent to the customers to be signed by them. Negotiation about these offers barely take place meaning that the customer has to accept the offer in order to cooperate. In the first place, customers are able to only agree upon the offer without having agreed upon the standard terms and conditions which apply to cooperation with Company3. In a booking system customers should have ticked a box to agree upon the standard terms and conditions before their first order. According to the vision of Respondent3, the terms and conditions are part of the contract with the customers. After the offer has been signed and the box in the booking system has been ticked, collaboration can commence.

Company3 consists of four large business units who separately manage the relationships with sub-contractors. Each of these units has its own forwarding-agent who negotiates and eventually establishes partnership agreements. After contracts have been signed by the CEO or a representative every business unit has its own way of managing their contracts. None of the forwarding-agents is using sophisticated systems to automate contract management. According to Respondent3, the appearances of these agreements that have to be dealt with have a closer resemblance to price agreements than to official contracts. Hereby, Respondent3 insinuates that contract management on the business level requires relatively low effort.

Besides contracts on the business level, some B2B contracts apply to the entire company. Currently, Company3 has contracts with companies such as certification institutions, cleaning organizations, inspection authorities, and organizations providing food services. A paper-copy of the contracts is stored in a portfolio and a digital copy is archived in a local directory on the computer. Then the expiring date will be put on the agenda and important agreements will be communicated to the personnel. The contract will be looked into at the time of invoice to verify the agreements regarding the tariffs. In the particular case of the partnership with the cleaning provider Respondent3 employed supervisors in different buildings to ensure that the service provider complies with the prohibitions and obligations stipulated in the contract. When a breach of contract has been discovered, further investigation follows. These investigations take place incidentally. This attitude against monitoring the contractual compliance evolves from the vision that the contract is a partnership agreement, which is partly based on trust. Experiences with sub-contractors who did not meet the requirements have occurred in the past. This breach of contract has been discovered after a relatively long period, which eventually led to a termination of the partnership agreement.

Respondent3 holds the opinion that automating contract management is not profitable because Company3 deals with a limited amount of contracts that should be actively monitored. If the company wants to automate contract management, this functionality should be an extension of their software platform, which is currently in use. Furthermore, automating contract management has never been discussed at meetings within the company since no issues regarding contracts were ever raised.

4.2.4 Adopting Company 4

Respondent4 is the CEO of Company4 and also responsible for managing contracts. Company4 is an expert in the field of network security and network management. According to the
vision of Company4. Network Access Control (NAC) is necessary for enterprises who want to secure their information. In order to establish a secure network, subscribing for Company4’s NAC-offering could be a proper solution.

Company4 is dealing with purchase and sales contracts. Types of purchase contracts Company4 is dealing with include subscriptions, insurance contracts, and contracts with suppliers. These are also the contracts which are monitored by MochaDocs’ e-contracting software. Only contracts which are important and thus need to be monitored are managed by this software.

Contracts are established in various ways depending on the type of contract. After the contracts have been signed, MochaDocs will be used to register the contract. In this way the contracts can be assessed easily when they need to be looked into. To monitor the contracts, Respondent4 creates different components for each contract with related tasks in the software. Only components which are important to monitor for a particular contract are created for this contract. In other words, only the components of a contract that Respondent4 wants to monitor are created. A component of a contract might be the expiring date of a contract. The tasks that could be connected to this component include discussing the relationship with companies to find out whether a next contract with this the company should be established. The particular person who should perform the task will receive a reminder which appears in the workflow system used by the Company4.

According to the ISO certification, the supplier management of Company4 was not working properly. This caused the company to search for solutions for this problem. Respondent4 was not willing to implement a solution only because of the ISO certification. Alternatively, he searched for a solution that would also be lucrative for the company itself. After a short internet search he concluded that most of the contract management software solutions were too sophisticated for Company4. However, MochaDocs provides a solution that is not too extensive but still capable of solving Company4’s problems. After a live demo Respondent4 was convinced that the software would be a solution to the problem and decided to adopt this software. Respondent4 also considered creating his own repository on a file server with the purpose of storing all the contracts. The advantage, that monitoring particular components of a contract and linking these components to tasks, is integrated into this system. This has been considered as the main reason to adopt the solution of MochaDocs. Another large advantage of the e-contracting software are the low monthly costs.

Making use of the MochaDocs’ software has no disadvantages according to Respondent4’s experiences with the system. To store a contract in the system requires more effort since the components and the related tasks have to be created. This outweighs the effort that needs to be made when contracts have to be found. When contracts are only stored in a digital repository, the probability to forget, for example terminating a subscription, might prevent a large negative impact on the company. Implementing the solution consumed quite some time. However, this is seen as an investment rather than a disadvantage. According to Respondent4, the large effort that implementing this software required is caused by the extra work concerning contract management. If their contract management had been in a proper state, implementing would not have required such a large effort.

5. CROSS-CASE ANALYSIS AND DISCUSSION

Multiple sources have been consulted to find a clear definition of e-contracting. Blogs, forums and vendors hold various definitions for this term. Also Respondent5 was not able to give a clear definition of e-contracting. The reason for the ambiguity of this term may lie in the different possible ways of interpreting the components which the term consists of. The term basically exists of two components which are ‘electronic’ and ‘contracting’. The exact meaning of ‘contracting’, according to the desk research, is debatable. There is no consensus about when one can speak of contracting. The term ‘electronic’ makes this term even more complex. Various opinions exist about when tasks are being executed electronically.

The interview with Respondent5 of MochaDocs gave a supply perspective on e-contracting. This company has its own vision on problem-solving related to contract management software. Respondent5 claims that proper contract management is necessary for a successfully operating business. Managing contracts properly without any supporting tools is seen as an almost impossible challenge. The current contract management shortcomings of enterprises can be solved by adopting contract management software provided by MochaDocs. Remarkable are the controversial opinions about contract management of the participants of the non-adopting companies and vendors of e-contracting software. According to the investigated vendors, e-contracting software has many advantages. Furthermore, blogs and a whitepaper show that many enterprises insufficiently deal with contract management. However, the investigated companies do not realize or agree upon the benefits of adopting contract management software. This controversy and its explanation could be a starting point for further research.

In the paper Integrating TAM and TOE Frameworks and expanding their characteristic constructs for E-commerce adoption by SMEs, Awa et al. [14] propose an IT adoption model in organizations by integrating the TAM model into the TOE model and adding more factors to this model. Three adoption drivers, namely Technology, Organization, and Environment, consisting of multiple factors, have a significant influence on E-commerce adoption. Figure 1 shows the proposed adoption model.

Figure 1. Integrated TAM, TPB, and TOE framework of Innovation Adoption [14]

The Technology driver shows that IT adoption depends on the technology competence within the company. The Organization driver describes the influences of descriptive factors of the organization on IT adoption. Finally, the Environment driver, includes the environmental threats and opportunities influencing IT adoption.

The proposed adoption model, which is also applicable to e-contracting software, and the cross-case analysis described by Eisenhardt can give a valuable overview of the potential reasons why SME companies do not adopt e-contracting software [8].
The cross-case analysis is a method that tries to find cross-case patterns between corresponding cases [8]. These patterns have been translated to reasons why e-contracting software is not adopted by SME companies. These arguments can be classified by the three adoption drivers influencing the E-Commerce Adoption.

Technology
1) None of the companies faced large implications concerning contracts and contract management. Therefore, e-contracting software that is currently on the market is not perceived as useful (PU). Perhaps, when SME companies face difficulties with their contract management, the perceived usefulness increases.

2) Respondents expressed that their company did not deal with a relatively large amount of contracts for which automating contract management could be lucrative. Furthermore, most of the contracts SME companies deal with are not complex enough. Thus, adoption of e-contracting software is not perceived as useful for their business.

3) The non-adopting companies have their own contract management process which is adapted to the company’s preferences and known by all the employees who are involved. Implementing e-contracting has been seen as a business renovation which requires a lot of effort. Moreover, the respondents of the non-adopting companies opine that e-contracting software requires more effort than their current contract management.

Organization
4) Respondents of non-adopting companies mentioned that due to the firm’s size (FS), adopting e-contracting software would not be lucrative. Larger companies are, according to non-adopting companies, dealing with more and complex contracts. For these companies adoption would be lucrative.

Environment
5) Positive experiences with co-operating companies give in the eyes of the companies more trust in proper collaboration than a contract could do. Formally establishing and strictly monitoring contracts (what e-contracting involves in the eyes of the respondents of the non-adopting companies) affect the business relationship and thereby the trust in the collaboration.

6) Relationships with collaborating companies are regarded as important, and automating contract management might affect this. Respondent1.1 pointed out that physical meetings to discuss and eventually sign the contract is important for establishing long-lasting business relationships. This can be considered as an external constraint which discourages SME companies to use this software.

7) An external incentive to adopt e-contracting might be necessary. None of the non-adopting companies experienced an external incentive to adopt e-contracting. However, the investigated adopting SME company did experience an external trigger.

This model could include more reasons for not adopting e-contracting software. Other researchers might interpret the acquired results differently, thus resulting in a different model.

Company4 is an adopter of e-contracting software, provided by MochaDocs. Their trigger to adopt supporting software came from an external source, which is the ISO certification authorization. If this company had not been triggered it might still be dealing with contracts in a traditional way. The need of an external trigger for Company4 in order to adopt contract management software is noticeable. Company one, two and three were not triggered to adopt contract management. A trigger with certain characteristics might be required for a company to adopt contract management. What characteristic this trigger should comply with cannot be concluded from this exploratory research. This might be a starting point for further research.

Most of the investigated vendors have been recently established and offer various types of software. However, all offerings are focussed on automating contract management. The fact that the investigated vendors are in their initial phase of their business could be the result of the recent attention for contract management. The upcoming attention for proper contract management, which is also reflected in the increase in contract management training offerings, might be the reason that companies have not gotten in touch with the current innovation in this field.

The exact differences of contract management software that is currently on the market could not be researched in detail. The limited scope of the research was the main reason these differences could not be investigated. Based on what is stated on vendors’ websites, vendors try to differentiate their products by focussing on the support of specific parts of the contract lifecycle management. However, Evidos’ signing software functions as support for a different phase in the contract life-cycle management than the software of the three other investigated vendors.

Three out of four investigated SME companies are not adopting e-contracting software. This led to less convincing outcomes concerning experiences with e-contracting. Concluding remarks of SME companies’ experiences with e-contracting software cannot be given based on only one adopter. More adopters should be investigated in order to create a more valuable insight into this matter. Nevertheless, more insights into the reasons why companies do not adopt supporting software have been gained already. The reasoning of companies to not adopt will be valuable for vendors to gain a better understanding of SME companies’ decisions. Software might be adapted to arouse the interest of these companies.

Another weak point of this research is that in most of the interviews only one stakeholder in the contract management of the company was interviewed. This might have resulted in missing information or unilateral opinions about e-contracting software.

The telephone interview instead of the face-to-face interview with Respondent4 affected the consistency of case study. It is not expected that this change in the research method has negative consequences regarding the reliability of this research. Nevertheless, an audio record of the conversation has been made. Furthermore, three of the four investigated companies were Third Party Logistic (3PL) companies. This might be seen as a non-corresponding sample of the entire SME sector. It affected the ability to draw firm conclusions from this exploratory research.

Despite the fact that the investigated companies might not be representative for the entire SME sector, a concluding remark stating that third party logistic companies are not innovative on the field of contract management can be drawn. Explanations of not adopting e-contracting software might also hold for other 3PL companies, or even SME companies. For drawing definite conclusions from this, further investigation needs to be conducted.

An in-depth overview of all e-contracting software could not be gained. What can be concluded is that software can support different phases of the contract life-cycle management. Some
vendors offer software that integrate multiple phases of CLM. For example, MochaDocs is continually innovating their software and currently trying to integrate two phases of the CLM into their software. According to related literature, e-contracting software can still be innovated in many respects. Recent papers demonstrate that solutions regarding monitoring compliances are technically possible. None of the investigated offerings adopted this technology.

6. CONCLUSIONS

Based on the results, vendors and researchers interpret e-contracting differently. By combining the various interpretations one can define e-contracting as dealing with contract management in a smart and electronic way. A complete overview of which contract management tasks can be automated could not be given due to the limited scope of this study.

Only one of the four investigated SME companies adopted e-contracting software. The company that adopted this software is satisfied with the software and didn’t experience any disadvantages. According to respondent4’s opinion, e-contracting improves the effectiveness and efficiency of contract management. Concluding from the interview at MochaDocs, the majority of their customers are satisfied with the software. In brief, adopting SME companies have highly positive experiences and are satisfied with e-contracting software.

The non-adopting companies question whether adoption of e-contracting software is lucrative for their business. Several reasons to not adopt e-contracting software could have been extracted from the results by using the cross-case analysis. In short, the limited amount of contracts the companies are dealing with and the potentiality of affecting trust are the main reasons why e-contracting software is not adopted.

Concluding, e-contracting is a relatively new concept which has been regarded as a positive experience among companies who adopted this software. Currently, there is a large gap between the sophisticated e-contracting technologies available and which e-contracting technology is currently in use.

7. ACKNOWLEDGEMENTS

I would like to thank the respondents of the companies for participating in this research. In particular I would like to thank the respondent of MochaDocs who provided useful information. Furthermore, I want to thank my supervisor, Jos van Hillegersberg, for guiding me during this research and providing useful feedback.

8. REFERENCES