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PASI RAATIKAINEN

Sensemaking with Narratives in Enterprise System Implementation Projects

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ACADEMIC DISSERTATION
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Pasi Raatikainen
April 2023
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ABSTRACT

Enterprise system implementation is challenging. The majority of implementation projects face severe issues, even total failures. The antecedents behind these issues and failures are related to collaboration issues between the implementation parties. The central parties include vendors, client organisations, and third-party organisations offering consultancy services. Each party makes a significant contribution to the overall implementation. The vendor delivers and manages the underlying packaged system. Client organisations take the new system into their use while aligning their processes with those of the new system. Third-party organisations offer their support to client organisations and vendors. Increasing the success rate of enterprise system implementations thus necessitates studying this collaboration. These issues are well-recognised. However, the reasons behind the collaboration issues are less clear. This dissertation explores a novel perspective for considering this setting—the narrative theoretical perspective.

A severe challenge in enterprise system implementation is the nature of these implementations. An enterprise system implementation is not the size of a human; it is a mix of abstract and concrete, depending on the interpreter's perspective. Enterprise system implementations are thus equivocal. For the vendor, enterprise system implementation means that they deliver a packaged product to the customers. For client organisations, it is essentially a change project. For the users, on many occasions, it is a disturbance in their familiar environment. For third-party organisations, implementation lies between the aforementioned perspectives. Understandably, collaboration under such equivocal circumstances is complex.

Solutions for the collaboration issues in enterprise system implementations may be found in the way the implementation parties comprehend these implementations. This leads to the people's main sensemaking form: *narratives*. By nature, people are storytellers who comprehend the world with narratives. A narrative is a sequence of particularised events that occur over time. Thus far, narratives have not been studied in the context of enterprise system implementation. This dissertation argues that the narrative theoretical perspective is valuable for studying and conducting enterprise system implementations.

This dissertation studies narratives in enterprise system implementations. The objective is to increase knowledge regarding this topic. The dissertation focuses on explaining the role, description, and influence of narratives in this context. It also considers a way to approach these narratives.

This dissertation uses an interpretive and qualitative case study approach. The case is enterprise system implementation projects in which collaboration issues and narratives occur. This dissertation studies two instances of such a case. In the first case, social and healthcare organisations are acquiring a shared enterprise system. They acquire the system from a large offshore vendor. A third-party project company manages the implementation. In the second case, a large global organisation in the retail industry renews its enterprise system. It decides to develop the system together with a small but familiar vendor. Both cases present significant challenges in their collaborations. These challenges generate severe complications.

This dissertation's research data were collected via semi-structured interviews. The interviewees were the central actors in both cases. The interviews included discussions related to the interviewee's perceptions and experiences about the implementations. The research data generated five peer-reviewed academic articles that comprise this dissertation.

This dissertation's main findings show that enterprise system implementation parties make sense using narratives. These narratives are prototypical and possibly conflicting. The different parties, such as the vendor, the project company, and client organisations, resort to different narratives. For instance, the vendor and the project company may be making sense of the users' negative feedback with a narrative that explains the negative feedback as simple change resistance – nothing to be shocked about. However, the users in client organisations may perceive a narrative in which a great disturbance is being forcefully fed to them in the form of an information system. These narratives have the power to generate collaboration issues in enterprise system implementation. Therefore, narratives in enterprise system implementations should be approached from a critical narrative perspective. This dissertation proposes initial, empirically grounded first steps that adopt such a perspective in both information systems research and practice. These first steps are grounded in prototypical narrative elements, which encompass the essential nature of narratives.

This dissertation increases the knowledge regarding narratives in enterprise system implementations. These findings contribute to information systems research and practice, organisation research, and narrative theoretical research.

TIIVISTELMÄ

Tietojärjestelmähankkeet ovat haastavia. Valtaosa niistä kohtaa merkittäviä vaikeuksia, usein jopa epäonnistumisia. Vaikeuksien ja epäonnistumisten taustalla ovat usein haasteet eri osapuolten välisessä yhteistyössä. Keskeisiin osapuoliin lukeutuvat järjestelmätoimittajat, asiakasorganisaatiot, ja erilaisia konsultointipalveluita tarjoavat organisaatiot. Jokaisella osapuolella on merkittävä panos hankkeessa. Järjestelmätoimittaja kehittää ja hallitsee pohjalla toimivaa paketoitua järjestelmäratkaisua. Asiakasorganisaatiot ottavat uuden järjestelmän käyttöönsä, samalla mukauttaen toimintansa järjestelmän kanssa samaan linjaan. Konsultointipalveluita tarjoavat organisaatiot tukevat asiakasorganisaatiota sekä järjestelmätoimittajaa, pysyen neutraaleina kolmansina osapuolina. Hankkeiden haasteet on hyvin tunnistettu. Syyt haasteiden takana ovat kuitenkin vähemmän tutkittu aihe. Tässä väitöskirjakirjassa tietojärjestelmähankkeita tutkitaan uudella näkökulmalla, joka on kertomusteoreettinen näkökulma.

Merkittävä haaste tietojärjestelmähankkeissa on näiden hankkeiden olomuodon epäselvyys. Tietojärjestelmähanke ei ole itsessään ihmisen kokoinen; se on sekoitus abstraktia sekä konkreettista tulkitsijan näkökulmasta riippuen. Siispä tietojärjestelmähanke on monitulkintainen; hanke merkitsee eri osapuolille eri asioita. Järjestelmätoimittajalle tietojärjestelmähanke on pääasiassa paketoidun ratkaisun toimitushanke. Asiakasorganisaatiolle se on ennen kaikkea muutoshanke. Käyttäjille tietojärjestelmähanke usein merkitsee tutun työympäristö rikkoutumista. Konsultointipalveluita tarjoava organisaatio on edellä mainittujen näkökulmien välissä. Yhteistyö tällaisen monitulkintaisen hankkeen tiimoilla on vaikeaa.

Tietojärjestelmähankkeissa esiintyvien yhteistyöongelmien ratkaisu piilee siinä, miten eriosapuolet luovat käsityksensä tietojärjestelmähankkeesta. Tämä tutkimusongelma johdattaa pohtimaan kertomuksia. Ihminen luonnostaan käsittää maailmaa kertomuksin. Kertomukset kuvaavat tapahtumasarjoja, joissa yksittäiset tapahtuman on nivottu yhteen loogisilta vaikuttavin suhtein. Toistaiseksi kertomusten merkitystä tietojärjestelmähankkeissa ei ole tutkittu riittävissä määrin. Tämä väitöskirja pohjautuu väitteeseen, jonka mukaan kertomusteoreettinen näkökulma on arvokas tietojärjestelmähankkeiden tutkimukselle ja käytännölle.

Tässä väitöskirjassa tutkitaan kertomuksia tietojärjestelmähankkeissa. Väitöskirjan tehtävänä on lisätä ymmärrystä kertomuksista tietojärjestelmähankkeissa. Väitöskirja keskittyy selvittämään kertomusten roolia, kuvausta, ja vaikutusta tietojärjestelmähankkeissa. Lisäksi väitöskirja selvittää kuinka tietojärjestelmähankkeissa esiintyviä kertomuksia tulee lähestyä.

Tämä väitöskirja lähestyy tehtäväänsä tapaustutkimuksena. Tapaustutkimuksen kohteita on kaksi. Ensimmäisessä tapauksessa sosiaali- ja terveydenhuollon organisaatiot hankkivat yhteisen tietojärjestelmän. Kyseinen tietojärjestelmä hankitaan projektiorganisaation kautta ulkomaalaiselta suurelta järjestelmätoimittajalta. Toisessa tapauksessa suuri teollisuuden alan yritys korvaa vanhan tietojärjestelmänsä uudella. Uusi järjestelmä päätetään kehittää pienen, mutta läheisen ennestään tutun järjestelmätoimittajan palveluin. Molemmissa tapauksissa esiintyy selkeitä haasteita eri osapuolten välisessä yhteistyössä. Nämä haasteet luovat kyseisiin tietojärjestelmähankkeisiin merkittäviä vaikeuksia.

Tämän väitöskirjan tutkimusaineisto on kerätty haastattelemalla tutkittujen tapauksien tietojärjestelmähankkeiden keskeisiä toimijoita. Haastattelut ovat puolirakenteisia haastatteluita, joissa on keskusteltu toimijoiden näkemyksistä ja kokemuksista tutkituissa hankkeissa. Tutkimusaineistosta on tuotettu viisi vertaisarvioitua tieteellistä tutkimusartikkelia. Tämä väitöskirja pohjautuu näihin tutkimusartikkeleihin.

Tutkimuksen keskeinen löydös on se, että tietojärjestelmähankkeiden osapuolet turvautuvat kertomuksiin käsittäessään tietojärjestelmähankkeita. Nämä kertomukset ovat prototyypillisiä ja mahdollisesti ristiriidassa keskenään. Näillä kertomuksilla, erityisesti silloin kun ne ovat ristiriidassa, on voima luoda yhteistyöongelmia tietojärjestelmähankkeisiin. Tästä syystä tietojärjestelmähankkeiden kertomuksia tulee lähestyä kriittisellä sekä analyyttisellä lähestymistavalla.

Tämän väitöskirjan löydökset lisäävät ymmärrystä kertomuksista tietojärjestelmähankkeissa. Löydökset ovat hyödyllisiä niin tietojärjestelmätieteen tutkimukselle kuin käytännölle, organisaatiotutkimukselle, sekä kertomusteoreettiselle tutkimukselle.

CONTENTS

List of Figures

List of Tables

LIST OF ARTICLES

I. Raatikainen, P., Pekkola, S., Nurminen, M., & Mäkelä, M. (2021). Masterplots in information systems implementation. In *Proceedings of the 29th European Conference on Information Systems (ECIS). Association for Information Systems. Marrakesh, Morocco.*

II. Raatikainen, P., Pekkola, S., Nurminen, M., & Mäkelä, M. Making sense of information systems implementation masterplots. (Submitted to a major IS journal)

III. Raatikainen, P., & Pekkola, S. (2022). Companions growing apart: Exploring actors' perceptions with narratives and masterplots in ERP systems development. In T. Bui (Ed.) *Proceedings of the 55th Hawaii International Conference on System Sciences.*

IV. Raatikainen, P., & Pekkola, S. (2021). User-centredness in large-scale information systems implementation. In *Proceedings of the 12th Scandinavian Conference on Information Systems (SCIS2021). Association for Information Systems. Orkanger, Norway.*

V. Raatikainen, P. (2022). The prototypical narrative elements in information systems implementation narratives: towards critical narrative approach. In *Proceedings of the 30th European Conference on Information Systems (ECIS). Association for Information Systems. Timisoara, Romania.*

Author's Contribution to the Co-Authored Articles

Article I	In Article I, I led the development of the idea for exploring masterplots in information systems context. I conducted a literature review of information systems development and narratives. I was one of two interviewers during the data collection. I executed the data analysis under the supervision of my supervisor. I discussed my insights from the data analysis with the co-authors. I wrote the article, which was then edited by the co-authors. Based on anonymous peer-review comments, I led the response process and presented the article I at the European Conference on Information Systems in 2021.
Article II	Regarding Article II, I led the process in which the article was further developed into an elaborated version that was submitted as a manuscript for a major information systems journal. I was responsible for progressing the article based on the comments received from the European Conference on Information Systems in 2021. I conducted a literature review on information systems development and sensemaking. I wrote the article, and the co-authors edited the manuscript. I submitted the manuscript to the journal.
Article III	Regarding Article III, I with my supervisor developed the idea of comparing conflicting narratives in an enterprise system implementation. I conducted a literature review of enterprise system implementation collaboration and narratives. The interview transcripts were handed to me from a previous project. I executed a fresh data analysis under the supervision of my supervisor. I discussed these insights with my co-author. I wrote the article, and my co-author edited it afterwards. I received anonymous peer-review comments, and I edited the article accordingly. I presented Article III at the Hawaii International Conference on System Sciences in 2022.

Article IV	I initiated the idea of studying user-centredness in practical terms. I discussed the idea with my supervisor. I conducted a literature review on user-centredness in information systems development (e.g. user-centred design, user participation, user involvement). I was one of the two interviewers during data collection, and I executed the data analysis while being supervised. I discussed my insights from the data analysis with my supervisor. I wrote the article, and my co-author edited the article accordingly. I submitted Article IV to an information systems conference, and I received feedback. I discussed the feedback from the conference with my co-author, and I edited the article based on the discussions. I presented the article at the Scandinavian Conference of Information Systems in 2021.

1 INTRODUCTION

Enterprise system implementations have turned out to be difficult puzzles; as high as over 70 percent of enterprise system implementation projects are considered to be failures in one way or another (Baghizadeh et al., 2020). These root causes, triggers, and consequences of these failures are related to collaboration issues between implementation parties (Kähkönen et al., 2017). The implementation parties, which are organisations such as clients (i.e. the organisation adopting the enterprise system), vendors, and third parties such as consultants, database vendors and business partners, find it difficult to pull in the same direction. However, their corresponding contributions ultimately construct the implementation (Dittrich et al., 2009). As a result of collaboration issues, the implementations are flooded with troubles, such as problems in the client organisation's change management, packaged product's customisation difficulties, and unmet business needs (Momoh et al., 2010). It thus seems that solving this enterprise system implementation puzzle necessitates considering the collaboration between the implementation parties.

We need to explore this infamous setting in which the parties who are supposed to be moulding the system closely together by supporting each other end up struggling to ally. It seems that the parties perceive the implementation differently. In fact, the implementation seems to be a different story for each party. Inspired by enterprise system implementation studies (Dittrich et al., 2009; Smolander et al., 2021), narrative theoretical discussion (Branigan, 2013; Herman, 2009; White, 1981), and organisational research (Brown et al., 2008; Weick et al., 2005), I suggest that narratives offer a phenomenon to explore that could lead to novel insights regarding this setting. With this dissertation, I am taking the initiative on this suggestion and aim to advance our understanding regarding enterprise system implementations' collaborations by considering them from the narrative theoretical perspective.

1.1 Attaching Meaning

I consider that a central element in the collaboration issues within enterprise system implementations is the nature of the implementations: they are equivocal

(Weick et al., 2005). To interact with such equivocal matters, people have to assign them meaning (Orlikowski & Gash, 1994). In other words, people must make sense of them (Weick et al., 2005). This implies that the enterprise system implementation parties assign the implementations with meaning so that they may act in these implementations. In this case, *acting* refers to implementation activities, such as the enterprise system's development, configuration, management, and use. This seems to be a crossroads in which the collaboration begins to split. Due to these implementations' equivocal nature, they have different meanings to different parties depending on a party's perspective (Beaudry & Pinsonneault, 2005; Orlikowski & Gash, 1994); one party might be living a different story than the other. For a vendor, implementation could mean a new customer buying their product (Howcroft & Light, 2006; Sawyer, 2001). For the client, implementation could mean a highly tailored solution for their specific needs. The consultants could see the implementation as a balancing act in which all parties need to be open to compromises. This could be a significant reason why these collaborations often produce unsatisfying outcomes (Baghizadeh et al., 2020; Kähkönen et al., 2017). The knowledge gained from studying this setting from a novel perspective could support making the implementation collaboration more effective, which could eventually reduce their infamously high failure rate.

1.2 Narratives in Making Sense

Unpacking how meaning is attached in enterprise system implementations guides those studying it to consider the fundamental element of sensemaking. This fundamental element is narratives (Brown et al., 2008; Fisher, 1985), which also represent a rather novel perspective for studying enterprise system implementation. People are essentially storytellers (Fisher, 1984). For this reason, narratives intrigue researchers and practitioners from many fields. They want to leverage narratives, as appealing, compelling, and resonating narratives have power in persuasion and communication. This phenomenon has been described as a "storytelling boom" (Mäkelä et al., 2021). Even the information systems field has caught its share of this narrative fever and is so curious about instrumentalising narratives. For instance, in 2019, the Information Systems Journal published a special issue on storytelling (Schwabe et al., 2019). In this special issue, articles proposed, for example, the use of deliberate storytelling in big data analytics adoption (Boldosova, 2019), the use of visual storytelling in communicating information systems research (Mirkovski et al., 2019), and the use of storytelling for generating user stories (Hedman et al., 2019). I

suggest that the information systems field should also consider narratives in a more critical and analytical manner. Narratives are a much more complex concept than what the simplifying storytelling perspective often seems to consider it to be (Mäkelä et al., 2021). The storytelling perspective focuses mostly on people's ability to tell narratives, and less on what narratives fundamentally encompass in regard to human cognition and world comprehension. A critical narrative perspective that focuses on narratives' essential nature could shed light on their role in enterprise system implementation. Such a critical perspective on narratives would approach narratives analytically while recognising the power of appealing, compelling, and resonating narratives in making complex matters simple (Mäkelä & Meretoja, 2022; Shiller, 2017). This would support a deeper understanding of the implementation collaboration and its issues by offering a perspective that is still largely unexplored.

Narratives are intriguing due to their effect on uniting peoples' sensemaking. Narratives, for instance, unite people into entities with shared purposes—that is, into organisations. In other words, an organisation is essentially a storytelling system (Boje, 1991; Geiger & Antonacopoulou, 2009). Organisations are constituted by powerful narratives. By 2019, a particular organisation's narratives had constituted an organisation with a revenue of over 70 billion euros and 200,000 employees. Another example is economic narratives, which affect people's economic decisions. For instance, in 2008, an economic narrative resulted in a financial asset (Bitcoin) that had its value increase from $0 to $300 billion in just a few years (Shiller, 2020). Narratives play a significant part even in how great masses of people, such as societies or religions, make sense of the world (Mäkelä et al., 2020). Examples of narratives with such forces include the rags to riches stories that are prominent in Western cultures or, for instance, moral anecdotes (i.e. exemplums) that are greatly emphasised in religions (Mäkelä et al., 2020). Although it is not widely recognised, narratives carry this effect in enterprise system implementation. As these examples illustrate, this effect may have dramatic consequences. This dissertation argues that narratives play a key role in how each party attaches meaning to an enterprise system implementation. Essentially, this influences how each party, such as the vendor, or the client, interacts with the implementation. This implies that narratives might be the key element whose critical analysis reveals knowledge regarding collaboration issues in enterprise system implementation. Taking the perspective of narratives could thus offer novel insights that can be utilised when finding ways to improve puzzling enterprise system implementations.

Narratives' power is in the way they make equivocal matters more relatable and comprehendible. This is why people make sense of the world through narratives

(Brown et al., 2008). When people experience the world as perplexing, narratives offer them an explanation of what is going on (Weick et al., 2005). Narratives are comforting for minds that are constantly facing information (Mäkelä et al., 2020, p. 17). People can resort to narratives when the world seems confusing. Narratives harmonise peoples' nearly overwhelming circumstances with seemingly reasonable rationales. They offer people plausible and appealing explanations. They make people more confident in approaching their circumstances; they set some sense into the world. Afterall, people do not want to appear to be senseless in their behaviour—not that of others or themselves. This type of reasoning with narratives is a fundamental premise for human behaviour. It is present in a wide range of contexts, such as in organisations (Boje, 1991; Geiger & Antonacopoulou, 2009), policy making (Abolafia, 2010), economic decisions (Shiller, 2017, 2020), and peoples' everyday encounters (Bamberg & Georgakopoulou, 2008). This indicates that sensemaking with narratives should also be present in infamously problematic enterprise system implementations. In other words, narratives most likely make enterprise system implementations relatable and comprehendible for each implementation party, as narratives may enable them to approach the equivocal implementation in a seemingly reasonable manner. The vendor balancing general market needs and specific client needs may use narratives as support when performing their tightrope dance. The client organisation that struggles with the new system may find an explanation from the narratives for their experiences. The third party standing between the vendor's and client organisation's tug of war may resort to narratives when trying to decide how to act. Narratives are thus viable content for analysis when trying to understand collaboration in enterprise system implementation. Their critical analysis could even be a much-needed aid for infamous collaboration problems.

1.3 Essential Nature of Narratives

A narrative is an account of a series of particularised events that occur over time (Bruner, 1991; Fludernik, 1996). It prototypically is a representation that is situated in a specific discourse context or occasion for telling. It cues those who are interpreting it to draw inferences about a structured time course of particularised events. These events address some disequilibrium in what would be canonical—that is, expected. The representation conveys the experience of living through this storyworld-in-flux (Herman, 2009). This definition of narratives does not appear too often in information systems research. This is an indication that the information

systems field may not have considered narratives thoroughly, even though narratives are the main sensemaking form for people (Branigan, 2013; Brown et al., 2008) and thus should be for information systems actors as well. There are examples of narratives in information systems projects. Table 1 presents such examples. These are derived from a social media site, a research interview, and research articles. The accounts (1–3) from a social media site (twitter) discuss a health care sector enterprise system implementation project. The research interview (4) discusses an enterprise system implementation project. The research articles discuss developer's views of users (5), and a university's enterprise system implementation (6).

Table 1 Example Accounts

	Source	Account
1.	Twitter, 2020	[Enterprise system] *implementations turn out to be quite wild. Consultants are intermediaries, experts / clients do not know what an information system is, and skilled bitmasters, who could barely read anything other than code are hired*
2.	Twitter, 2020	[We paid] *775M € for a system that is clearly worse than the old, and dangerous. The Emperor's New Clothes.*
3.	Twitter, 2020	[The new system is] *slow, dangerous, and confusing. Referrals are disappearing, I am currently doing a secretary's work and I can do only 40-50% of the work that I used to be able to do.*
4.	Research Interview, 2019 (Case A)	*What I find as a touching detail about how people get used to anything is that a friend of mine wrote in Facebook how our old information system was initially very poor, but it has been enhanced a lot along the years and currently is very good. I can say that I have heard this about 150 times. [In reality, the old information system] has been taken into use, and no changes have happened afterwards. It is precisely the same piece of [expletive] it initially was, but people simply learned how to use it. It is rare to be able to say that something has remained the same junk to its molecules. Yeah, there is the [one feature], but its functionality is precisely the same it has been the past six years. And suddenly, it is so handy. And the same people who told me that they were using it over their dead bodies now scream that they wanted it back.*
5.	(Isomäki, 2002, p. 100)	Users "*have this resistance to change, so that their attitude is negative already from the beginning, even though it [system] could then facilitate their work*"
6.	(Alvarez & Urla, 2002, pp. 43–44)	*We do not bill automatically as a first thing. The first thing that would have been done is we would send you a note saying "hey Bob you're in a double single situation, you have to make a choice. What do you want to do?" So you have to have time lags for that exchange of information. And what Corey talked about and here we will bill somebody if they just sit there and ignore us. Because in the past that is exactly what they would do and then they claim that nobody told me, nobody did this, nobody did that. We're to the point now where we actually hand deliver under the doors, the notice about this stuff. They will claim, they will cop a plea on campus mail or anything else in terms of that. So we are not federal express but we're pretty close.*

The accounts (1–6) in Table 1 exemplify how different parties may make sense of enterprise system implementations. These accounts convey appealing, compelling, and resonating explanations for the equivocal matter. In the first three accounts, presumed users attach an enterprise system project with meaning, portraying this implementation in a negative light. The fourth account is a developer who makes sense of users' resistance to the new enterprise system. The fifth account

seems to repeat the same narrative as the fourth account but in a different implementation project. The sixth account is a user who makes sense of the inefficiencies of her workplace.

Although narratives are efficient in explaining what is going on, they tend to simplify—or even distort—the circumstances. Narratives do not look for objectivity. Prototypically, they are tied to subjectivity and experientiality (Herman, 2009). The narratives that are used to make sense of the world are also those specific narratives that *make sense* to their tellers. Simultaneously, narratives in sensemaking are satisfied with plausibility (Brown et al., 2008; Mills et al., 2010). As Mäkelä (2018) and Mäkelä et al. (2021) stated, this is the danger of narratives: the most accurate explanations do not tend to prosper. Rather, narratives that prosper are those that are, for example, appealing, compelling, and resonating for their tellers and listeners. The account by Jerry, the university employee, is indeed an appealing and compelling narrative (see Table 1, Account 6). It might also resonate with people who are familiar with university work. Yet, for instance, the developers may be better able to exercise criticality before making strong conclusions based on its explanation. However, there is a reason to suspect if it was solely the new system that forced the doctors to do secretaries' work (see Table 1, account 3). There are, most likely, organisational issues at play. On developers' side, enterprise system implementations often seem to find troubles awfully (Momoh et al., 2010). No matter how hard a developer organisation works to polish pleasant user interfaces, their efforts are criticised. They may resort to reasoning that sees users' resistance as a simple human attribute (see Table 1, account 4). Then again, users may not be simply reluctant towards all that is new. Users' reactions to the new system may be a much more complex issue (Lapointe & Rivard, 2005; Lin et al., 2018).

As narratives explain people's circumstances, they also guide them in how to approach them (Weick et al., 2005). This encourages them to consider, for instance, the approach of those users who see a project as another manifestation of Emperor's New Clothes story (see Table 1, Account 2). They certainly do not want to be the hoaxed emperors themselves. Further, it guides them to consider the approach of those users who see that the new enterprise system makes them do secretaries' tasks instead of doctors' work. For instance, doctors have been observed to be reluctant to spend time adopting new enterprise systems (Jensen & Aanestad, 2006, p. 38). In another setting, Peter, an account manager, saw the new system as a great opportunity (Beaudry & Pinsonneault, 2005). He worked hard to learn how to use the new system. However, Michelle saw it as a threat. She did her best to avoid this threatening system. It thus seems that the narratives of either user about

implementations could result in corresponding behaviour during the implementations.

The approach of developers who see that users' resistance is inevitable may also be problematic. If resistance is merely a fundamental human attribute, it could imply that developers are not able to challenge such an attribute in any way. It could indeed make sense for developers to simply wait for users to eventually get used to the new system's buttons. This is a tricky part; people tend to enact what seems to make sense to them (Weick et al., 2005). Developers are known for having a tendency towards black-box issues that are more social (Holmström & Sawyer, 2011). There is a threat that appealing, compelling, and resonating explanations would become approaches that reflect them—even self-fulfilling prophesies (Hekkala et al., 2018). This seems problematic, especially in a setting in which close collaboration is necessary. Narratives thus could have a significant influence on enterprise system implementations. They deserve more attention in this field.

1.4 Research Motivation, Goal, and Thesis Structure

Based on the presented discussion, I suspect that there is a bridge between enterprise system implementations' collaborations' issues and parties' sensemaking with narratives. I argue that this bridge deserves to be studied. Critical awareness of narrative sensemaking in enterprise system implementations could be a path for more successful collaboration in these implementations. Through such awareness, the parties could learn to understand each other better, and to engage in self-reflection regarding their own perspectives.

In this dissertation, I am improving understanding of enterprise system implementations' collaboration by studying narratives in this context. I analyse narratives that are used to make sense of large-scale enterprise system implementations. This analysis is approached with two tentative research questions. The first tentative research question is: *What are narratives in enterprise system implementations?* This question guides us to consider what narratives are essentially in this context, and why they appear in enterprise system implementations. Answers to this question should improve our understanding of the nature of narratives in enterprise system implementation. The second tentative research question is: *Why do narratives matter in enterprise system implementations?* This guides us to consider the influence of narratives on enterprise system implementation. Answers to this question should improve our understanding of the significance of narratives in this context, if there are any. The answers should also motivate us to consider ways to

address such narratives. These tentative research questions are further specified in the research approach chapter.

This dissertation is structured as follows: the next chapter presents this dissertation's theoretical framework. It combines enterprise system implementation, the sensemaking perspective, and a narrative theory. The third chapter explains the research approach. It discusses this dissertation's philosophical underpinnings, data collection and analysis methods, and case settings. The fourth chapter presents the articles and their main findings. The fifth chapter discusses the findings. The sixth chapter concludes this dissertation.

2 THEORETICAL BACKGROUND

In this chapter, I present this dissertation's theoretical background, which joins three research streams. The first stream and research context is enterprise system implementation. I discuss this context in Section 2.1. The second research stream is the sensemaking perspective, which I discuss in Section 2.2. The third stream is narratives, which are discussed in Section 2.3. These three streams generate the framework illustrated in Figure 1.

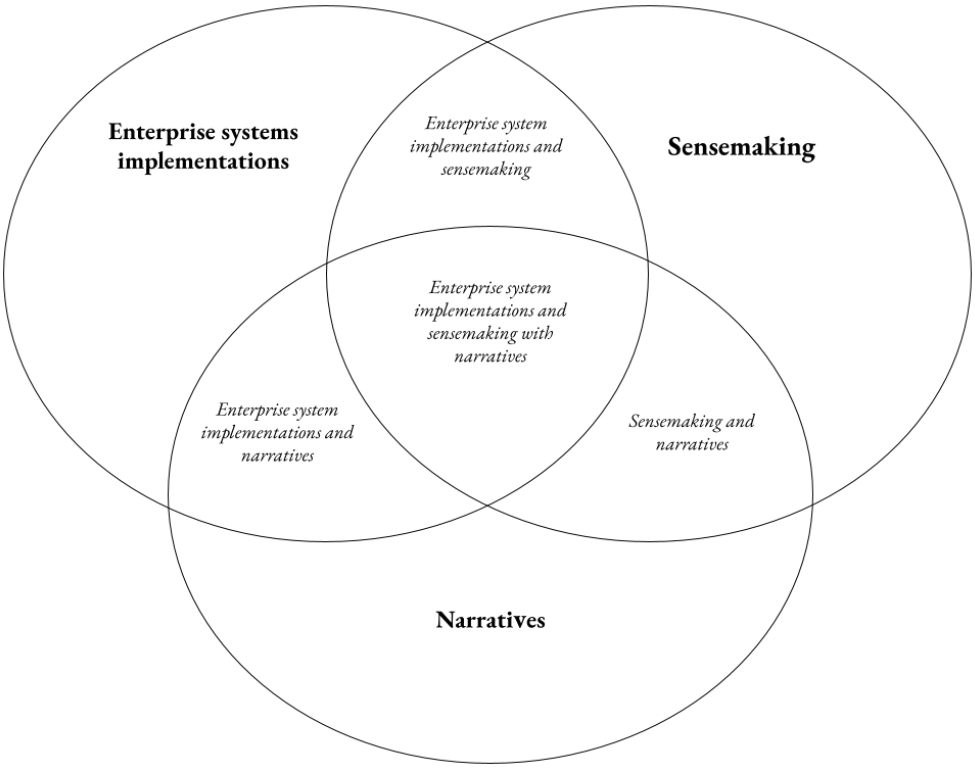

Figure 1 Theoretical Framework

2.1 Enterprise System Implementations

Organisations use enterprise systems to streamline their business processes and increase their operational efficiency. These systems integrate myriad users into a shared system (Kähkönen et al., 2017; Robey et al., 2002; Singh & Pekkola, 2021). Such an enterprise system comprises, for example, people, processes, data models, technologies, and formalised languages (Hirschheim et al., 1995, p. 11). In these systems, such particles are structured so that they support an organisation's functions. When successfully structured, these systems are expected to boost an organisation's performance by increasing its ability to generate critical information throughout the organisation (Beheshti, 2006). Examples of such enterprise systems include enterprise resource planning systems, supply chain management systems, customer relationship management systems, and electronic patient record systems (Sia & Soh, 2007). This section describes how such systems are implemented in organisations.

Contemporary enterprise system implementations are packaged systems' acquisitions. In these implementations, user organisations do not develop the entire information system from scratch (Strong & Volkoff, 2010; Wagner et al., 2010). Instead, these organisations pick an underlying system "off the shelf" (Howcroft & Light, 2006). Due to this practice, enterprise system implementation is a collaboration between separate parties (Dittrich, 2014; Smolander et al., 2021). This practice diverges from the traditional information systems development process in which the systems were developed from scratch for a specific user organisation (Sawyer, 2001).

The earliest information systems in the 1960s and 1970s were developed mostly without methodologies (Avison & Fitzgerald, 2003). This was learned to be unsustainable to manage. Systematic methodologies have tried to address this problem. They defined specific steps that could help manage an information systems development project. Information systems should be built incrementally. They involved a series of development steps (Avison & Fitzgerald, 2003): systems requirements, software requirements, analysis, program design, coding, testing, and operations (Royce, 1970). The first four steps are about defining what should be developed. The coding then refers to programming. Testing and operations involve deploying the system into its use context. This was considered to make the information system development projects more manageable (Avison & Fitzgerald, 2006).

The systematic approach turned out to be heavy, costly, and risky, especially in large-scale enterprise system implementation projects. It was also concluded that it was unnecessary to reinvent the wheel each time there was a need for a new information system. The general packaged systems products, which could be used as a foundation for an information system, attracted user organisations (Howcroft & Light, 2006). This was also attractive for information systems developers. They could focus on developing a general product. They could sell this general product to myriad customers (Sawyer, 2000).

This evolution has altered the nature of information system projects. The traditional philosophy was that a user organisation and a developer organisation establish companionship. The developer organisation tries to address their client's specific needs. Development, in a sense, occurs inside the client organisation (Sawyer, 2001). The developer organisation designs a system specifically for this client. In contemporary enterprise system implementations, a significant part of the system is not developed together. The parties are not in such close and direct companionship (Sawyer, 2000).

In enterprise system implementation, the underlying system is developed by a vendor. Some well-known vendors include EDS, IBM, Lockheed-Martin, Microsoft, Oracle, SAP, and Epic Systems. The vendor packages its system into a product. It is sold as a general product that addresses market needs (Sawyer, 2001). It does not address each client's specific needs. The vendor is more distant from the product's user organisations (Sawyer, 2000). It is not their interest to modify their product for each user organisation. Their interest is to attract as many customers as possible to buy their products.

The packaged system is not a complete system that is ready to be used (Dittrich, 2014; Howcroft & Light, 2006; Singh & Pekkola, 2021). The user organisation is often able to customise a vendor's product to some extent. This is hoped to make it possible to address a user organisation's specific needs. On average, about 80 percent of the package should be fit for the organisation (Strong & Volkoff, 2010). The remaining 20 percent should be customised. The core of the system, which cannot be customised, may be manipulated only by the vendor. The vendor is willing to modify its core product only on special occasions. If they accept modifications, these tend to come with significant extra costs for the client organisations (Howcroft & Light, 2006).

Vendors possess a lot of power in enterprise system implementations. They have the capability to modify the underlying system (Dittrich et al., 2009; Hanssen, 2012). They have developed their products to match what they perceive to be the best

practices (Howcroft & Light, 2006; Sia & Soh, 2007; Wagner et al., 2010). Their business is to manage this product. They balance the market's needs and the specific clients' needs, and are often not tightly associated with deployment activities (Howcroft & Light, 2006). They leave activities such as integration and ensuring user acceptance to the client organisations or third-party organisations to manage.

Client organisations use the new enterprise systems. They live through the changes that the new enterprise system brings about (Leonardi, 2011). The users in these organisations possess agency—that is, they are more or less free to enact the system as they will. Their focus is on how the new enterprise system fits into their practices. The new system often challenges client organisation's institutional logics (Berente et al., 2019; Jensen et al., 2009), structures (Jones & Karsten, 2008), users' identities (Alvarez, 2008; Bernardi & Exworthy, 2020; Carter et al., 2020), and values (Jensen & Kjaergaard, 2008). This system's use, and the resulting disturbance in users' social reality, is a critical part of enterprise system implementation. The system is not implemented before it is used (Beaudry & Pinsonneault, 2005; Hsiao et al., 2008).

In addition to vendor and client organisations, large-scale enterprise system implementations include third-party organisations (Hanssen, 2012). Client organisations turn to such specialised consulting firms to take the lead in localising and deploying the product for them (Howcroft & Light, 2006; Kähkönen et al., 2017; Metrejean & Stocks, 2011; Vilpola, 2008). They are intermediaries that are placed between a vendor and client organisations. They often assume themselves to be neutral parties between client organisations and vendors. They support client organisations in, for example, adjusting the system's process or data definitions, and executing configurations, migrations, and software integrations (Haines, 2009; Nordheim & Paivarinta, 2004). In this position, they have a wide overall role and responsibility for the implementation.

Consequently, enterprise system implementation involves collaboration between separate parties (Hanssen, 2012; Kähkönen et al., 2017; Smolander et al., 2021). It is an ecosystem in which each party should fulfil a purpose for overall implementation (Dittrich, 2014). I specify this ecosystem as that of a vendor managing the underlying system, the third-party/middleman organisation, and client organisations. These are illustrated in Figure 2.

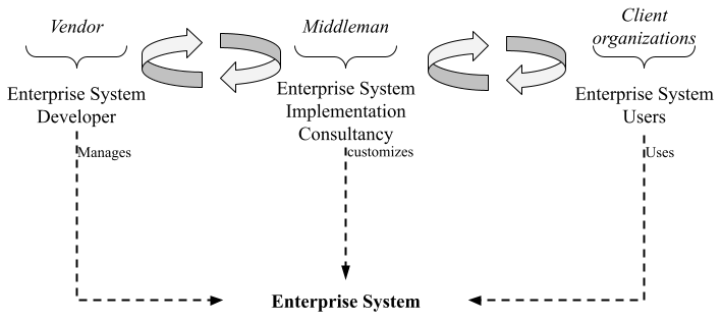

Figure 2 Enterprise System Implementation

Enterprise system implementations often run into problems. Momoh et al. (2010) indicated that the most frequent factors underlying these problems include continuous customisations, misunderstood business implications and requirements, inadequate change management, IT–business misalignments, surprising costs, inadequate user training, and uncommitted top management. Kähkönen et al. (2017) elaborated that such factors are rooted in inefficient collaboration, power imbalances, blind trust, and differing objectives inside the enterprise system ecosystem. Enterprise system implementation is indeed a knowledge-intensive endeavour (Shaul & Tauber, 2013). Success in it requires, for example, communication, cooperation, and knowledge management. As implied by the high failure rates, this collaboration is complex (Kähkönen et al., 2017). As a result, users are often introduced to an information system that does not fit their reality (van Beijsterveld & Van Groenendaal, 2016).

This dissertation suspects that the infamous issues in enterprise system implementation could be related to the fact that the separate parties make sense of this joint endeavour in different ways. For instance, what makes sense for the *vendor* who wants to serve as many customers as possible is most likely different from what makes sense for a *client organisation* that focuses on its own specific needs. Then again, the *middleman organisation* works between the rock and a hard place. They should fulfil their clients' needs while establishing collaborations with the vendor. They make sense of this endeavour from another perspective. This turns our attention towards how such parties make sense of these implementations.

2.2 Sensemaking Perspective

In this section, I discuss the sensemaking perspective. I start this with a brief introduction. Then, I discuss each property of sensemaking. I reflect on these sensemaking properties with information systems research on sensemaking.

The sensemaking perspective has been a particular area of expertise in organisational research. For instance, Korpela (2017) and Maitlis and Christianson (2014, pp. 60–62) reviewed the origins of the sensemaking perspective. It originates from early 1900s psychology. In the 1960s, organisational research gave it some first thought through Garfinkel's (1967) and Weick's (1969) works. The "cognitive turn" in research in the 1980s led to organisational research becoming increasingly intrigued by how organisations are created in people's minds. The sensemaking perspective was finally adopted by organisational research in the 1990s.

"The concept of sensemaking is well named because, literally, it means the making of sense", as Weick (1995, p. 4) stated. The sensemaking perspective discusses how people—organisational actors in particular—attach their circumstances with meaning (Weick et al., 2005). Their circumstances—the organisational context in this case—introduce them to "almost an infinite stream of events and inputs" (p. 411). By attaching meaning to events and inputs, people are able to process what is going on. This aids them in determining what would be a sensible approach under the circumstances. The sensemaking perspective is interested in unravelling how organisational actors are able to act collectively—that is, function in an organised manner (Mills et al., 2010). "To make sense is to organise" (Brown et al., 2008, p. 1055). As actors in organisations clearly have some collectivity in their behaviour, they must attach meaning to their circumstances, at least in a relatively shared manner.

People continuously make sense to clarify what is going on by extracting cues from their surroundings. They use these cues as their basis for plausible accounts to explain the events they have encountered (Maitlis & Christianson, 2014). They set order to their circumstances—that is, they rationalise—and reach a perception of reality that is orderly. They interact with the environment through rationalised explanations (Weick et al., 2005). While acting, people form the environment they inhabit. Such an environment enables and constrains their actions: people are part of those circumstances they make sense of (Weick, 1995). Sensemaking is thus the springboard for peoples' actions.

Sensemaking has also interested the information systems field. Orlikowski and Gash (1994) stated that technologies, and thus information systems, are equivocal.

An information system can be interpreted in different ways based on the interpreter's perspective. Based on this, Orlikowski and Gash (1994) argued that "To interact with technology people have to make sense of it". The authors studied how technologically oriented and business-oriented people interpret information systems differently. This insight has led to information systems research that illustrates how information systems have been given different meanings. For instance, Hsiao et al. (2008) illustrated how taxi drivers gave their new GPS system different meanings (see also Robinson, 1993), such as 'detector', 'beacon', 'navigator', or 'explorer'. This determined how these taxi drivers used the system. A similar insight was provided by Beaudry and Pinsonneault (2005), who studied how a bank's account managers gave their new system different meanings. Jensen and Aanestad (2006) studied how users make sense of a new information system. They studied how doctors and nurses made sense of their new patient record system (EPR).

Weick (1995) divided sensemaking into seven properties, stating that sensemaking is *grounded in identity construction* and *retrospection*, is about *extraction of cues*, is *driven by plausibility*, is about *enacting*, is *social*, and is *ongoing*. These properties are discussed next by simultaneously reflecting on information systems sensemaking research.

Identity Construction. Sensemaking is grounded in *identity construction*. This means that information systems sensemaking is much about the sense maker redefining and maintaining a sense of self. To comprehend the world and how to act there, the sense maker needs to comprehend her position in it. According to Weick (1995, p. 20), "Depending on who I am, my definition of what is 'out there' will also change".

Sensemaking and identity construction have been studied in information systems research. For instance, Jensen and Aanestad (2006) studied the implementation of an electronic patient record system. They observed that doctors' and nurses' sensemaking was grounded in their identity construction. The new system, for instance, increased the reporting tasks, and monitored its users. The doctors made sense of this implementation through their identities as medical professionals. The new system undermined this identity. This identity had assumed authority and status for the doctors. Now, they had to, for example, perform tasks that they considered to be secretarial work. "To be honest, we do not feel that this task is a doctor's task [to write in the EPR]—you know, to sit and click and write" (p. 38), a doctor stated. Another doctor explained her identity through the following role definition (p. 39):

Sometimes I recall that the reason why I chose this profession and job was because I wanted to be a craftsman. You know, to take care of hip replacements. My profession is characterised as being a carpenter, a bricklayer, a butcher, and a seamstress at the same time. Being placed in front of a computer is unfamiliar to me".

The nurses then made sense of the system through their identities as patient care providers. Their identity was used to having a lot of bedside responsibilities. They were also used to emphasising collaboration with other healthcare groups. This meant that they made sense of, for example, the new reporting tasks differently from doctors.

Retrospective. Sensemaking uses *retrospective* reasoning. It is about attaching meaning to what happened earlier when trying to understand the present. This means that people resort to their past experiences to determine how to approach their current circumstances (Mills et al., 2010). In other words, as we have explanations for the past, we use those explanations to comprehend the current events (Weick et al., 2005, p. 413).

Jensen et al. (2009) showed that doctors and nurses made sense of an electronic patient record system's implementation by reflecting on the past before this new system. For instance, the doctors recalled that, in the past, the nurses and secretaries executed many repetitive tasks for them. For instance, before the new system, the nurses put X-rays on the board in the outpatient clinic prior to patient consultations. Now, the new system forced a process in which the doctors had to retrieve X-rays in the EPR system. The doctors used such retrospective sensemaking to conclude that the new system was force-feeding them with nurses' and secretaries' tasks.

Similarly, Jasperson et al. (2005) discussed how information systems sensemaking is reflective. They focused on users' sensemaking during information systems' post-adoption. This refers to the stage "after an IT application has been installed, made accessible to the users, and applied by the users in accomplishing his/her work" (p. 531). Jasperson et al. (2005) argued that in this stage, users' sensemaking is triggered: the users reflect evidence attained during post-adoption with their expectations from initial information system implementation phases. Thus, if these expectations are confirmed or disconfirmed, the users' cognitions change, or their work practices change. The users thus determine how to approach this situation based on this retrospective reasoning.

Extracting Cues. Sensemaking is about extracting cues. People single out certain items and ignore others from flux (Mills et al., 2010). The environment introduces actors with myriad items. This is overwhelming. People simplify this setting by

focusing only on certain cues. These are more or less subconsciously chosen, dictated by past experiences and what is appealing in relation to that which has made sense before. Weick (1995) comprised this by stating that "Extracted cues are simple, familiar structures that are seeds from which people a large sense of what develop a large sense of what may be occurring" (p. 50).

Information systems sensemaking research has worked to identify the kinds of cues actors use when making sense of information systems-related issues. For instance, Griffith (1999) considered that technology features trigger certain types of sensemaking. This would mean that a sense maker uses a given technology's features as cues when making sense of the technology. Similarly, Jensen and Aanestad (2006) illustrated how doctors and nurses extracted specific cues to make sense of the overall patient record implementation project. For instance, the doctors focused especially on tasks that they considered to be nurses' and secretaries' tasks. These doctors extracted these tasks as cues for the implementation project.

Driven by Plausibility. Sensemaking is driven by plausibility, not accuracy. People look for plausible and appealing explanations for their circumstances (Mills et al., 2010). They do not necessarily search for "objective truth". They favour those explanations that aid them in comprehending the messy world in such a way that they can restore and maintain equilibrium. Sensemaking and plausibility have been illustrated in some information systems research. For instance, Yeow and Chua (2020) studied how a client organisation makes sense of which technology vendor to choose. They found that clients do not make sense comprehensively or based on the most accurate information. Rather, they rely on information that they perceive to be sufficient. Then, they generate a plausible idea of which vendor is the best for them. Yeow and Chua (2020) generalised that vendors' proposals are often infeasible for clients. However, as clients' sensemaking is driven by plausibility, on many occasions, they end up choosing an infeasible vendor.

Enacting. Sensemaking is enactive. It is a cycle of interpretation and action. Actors interpret their circumstances and then act based on this interpretation. Thus, they create the reality they have interpreted. This resembles the concept of a self-fulfilling prophecy (Mills et al., 2010) and the social construction of technology.

For instance, Beaudry and Pinsonneault (2005) argued that in an information system implementation, a certain type of sensemaking results in a certain type of approach. They illustrated this in a bank case. A bank was implementing a new account management system. The account managers made sense of this in different ways. Some of these managers made sense of it as an opportunity. These managers put a lot of effort into learning how to utilise the system the most. Some managers

made sense of the system as a threat. These managers did their best to avoid the system. This had different outcomes for these different sense makers. Managers who made sense of it as an opportunity maximised their benefits from the new system, whereas those who made sense of it as a threat did not learn how to use the new system, and thus received fewer benefits from it.

Jensen and Aanestad (2006) found similar implications from the implementation of a patient record system. The doctors who made sense of the implementation in a negative light did not put much effort into learning it. They were more interested in creating workarounds around unpleasant tasks. The nurses put a lot of time and effort into learning how to use the new system. For instance, they performed training assignments for the system at home after office hours. "It [EPR] is something that will mark our future, and it is in our common interest to implement it and use it", these nurses stated (p. 38).

Social. Sensemaking does not occur in isolation but is essentially social. It is conditioned by peoples' interactions with others (Mills et al., 2010). The social setting in which the interactions create, follow, and maintain imposes rules and structures that an individual's sensemaking considers. Weick (1995, p. 53) explains that "the social context is crucial for sensemaking because it binds people to actions that they then must justify, it affects the saliency of information, and it provides norms and expectations that constrain explanations".

The social nature of sensemaking has generated a stream of information systems research. Yeow and Chua (2020) studied how a client made sense during technology vendor selection. This client had to make sense of the vendors. Different vendors offered them cues that this client used to make sense of the vendor candidates. Vieru and Rivard (2014) studied sensemaking during an organisational merger, illustrating how organisational actors made sense of their changing organisational circumstances.

Vlaar et al. (2008) studied how onsite and offshore teams made sense together in an information systems development project. This study found that these teams had knowledge and experience asymmetries, and worked with complex requirements and task characteristics. They needed to make sense together to collaborate. The teams thus engaged in sensemaking acts of sense-giving, sense-demanding, and sense-breaking. Through such activities, these teams were sufficiently able to make sense together. Jenkin et al. (2019) had a similar theme. They studied how key stakeholder groups generate mutual understanding through sensemaking.

The social nature of sensemaking has also interested information systems researchers, in that it could be an implication that sensemaking can be intervened.

Studies focusing on this theme propose that sensemaking could be directed in a desirable direction. For instance, Aanestad et al. (2016) proposed that collective mindfulness is a desired state in sensemaking. They suggested that we should find ways to support sensemaking in such a way that it could reach such a state. Similarly, Tong et al. (2015) considered how to support users' sensemaking for more success in information system adoption.

Ongoing. Sensemaking is ongoing; it does not stop (Mills et al., 2010). People face an ongoing stream of input. Thus, they have to continuously process an unknowable, unpredictable stream of experience. Weick et al. (2005, p. 411) illustrated this through the example of a nurse:

> *This nurse encounters "a million things that go on and the ongoing potential for clusters of things that go wrong - part of an almost infinite stream of events and inputs that surround any organizational actor… the nurse's sensemaking does not begin de novo, but like all organizing occurs amidst a stream of potential antecedents and consequences. Presumably within the 24-hour period surrounding the critical noticing, the nurse slept, awoke, prepared for work, observed and tended to other babies, completed paperwork and charts, drank coffee, spoke with doctors and fellow nurses, stared at an elevator door as she moved between hospital floors, and per- formed a variety of formal and impromptu observations. All of these activities furnish a raw flow of activity from which she may or may not extract certain cues for closer attention.*

The ongoing nature of sensemaking has also been recognised in information systems research. For instance, Hsiao et al. (2008) illustrated that taxi drivers made sense of their new GPS system over a longitudinal time period. Bansler et al. (2004) showed how the meaning of an information system changes over time. Sensemaking is difficult to witness. This is because it largely occurs at the cognitive level. This has also been observed by information systems researchers. For instance, Kjaergaard and Jensen (2008) stated that sensemaking is not easy to use in practice.

Organisational research has considered the role of narratives in sensemaking. Narratives are, in fact, the main form of sensemaking (Brown et al., 2008; Shiller, 2017). Weick et al. (2005, p. 410) characterised this by stating that people are faced "with an ongoing, unknowable, unpredictable streaming of experience in search of answers to the question, "what's the story?" Plausible stories animate and gain their validity from subsequent activity". Consequently, sensemaking is a narrative process (Brown et al., 2008). This encourages us to look at what those who are the experts of narratives have established.

2.3 Narrative Theory

Narratives can be viewed from different perspectives. Such perspectives include narrative occasions (Goffman, 1981), positioning (Bamberg, 1997), worldmaking (Bruner, 1991), and narrative comprehension (Branigan, 2013; White, 1981). In this section, I discuss the narratives from a general perspective. This is done by first defining narratives through prototypical narrative elements (Herman, 2009). Then, I will review relevant research about narratives in organisational and information systems contexts.

Narratives are the expertise of literature scientists. Mäkelä et al. (2020, p. 19) summarised the origins narrative of theoretical research. Narrative theoretical research (sometimes referred to as narratology) studies how narratives are formed and interpreted. Its origins are found in literature studies. After the narrative turn in the 1980s, fields such as organisational research, economics, medicine, and marketing (Goodson & Gill, 2011) became interested in narratives. Initially, the narrative theoretical research focused on analysing novels. Later, it has been applied in myriad contexts, such as in oral stories, formal texts, movies, television, theatre, dance, art, visual arts, social media, and digital games. Today, it seems to be considered that a narrative can be seen to occur almost anywhere in human life.

Briefly defined, a narrative is an account of a series of particularised events that occur over time (Bruner, 1991; Fludernik, 1996). A more comprehensive definition was given by Herman (2009), who identified prototypical narrative elements that distinguish narratives from other closely related concepts, such as schemas, prescriptions, and standards. These elements are situatedness, event sequencing, worldmaking/world disruption, and what it is like. Herman (2009, p. 9) defined narratives as:

> *A representation that is situated in – must be interpreted in light of – a specific discourse context or occasion for telling. The representation, furthermore, cues interpreters to draw inferences about a structured time-course of particularised events. In turn, these events are such that they introduce some sort of disruption or disequilibrium into a storyworld involving human or human-like agents, whether that world is presented as actual or fictional, realistic or fantastic, remembered or dreamed, etc. The representation also conveys the experience of living through this storyworld-in-flux, highlighting the pressure of events on real or imagined consciousnesses affected by the occurrences at issue...narrative is centrally concerned with qualia, a term used by philosophers of mind to refer to the sense of "what it is like" for someone or something to have a particular experience."*

Situatedness. Narratives are prototypically related to the context surrounding them (Herman, 2009). This contextuality occurs on multiple levels. First, there is a particular occasion for the narrative occurrence. This can be, for instance, situations in which stories are told. Such situations can be, for example, during an interview (Riessman, 2001, 2002) or everyday conversation (Georgakopoulou, 2007). The narrative addresses this particular occasion. To elaborate, a narrative considers the interrogators, listeners, bystanders, eavesdroppers, etc., who emerge as perceived accordingly. Second, a narrative is tied to its wider circumstances (Bamberg, 1997; Bamberg & Georgakopoulou, 2008). A narrative addresses, for example, the cultural context to determine what is tellable and makes sense. For instance, the concept of *masterplot* (Abbott, 2008) identifies this narrative aspect. There are skeletal narrative models that belong, for example, to cultures and societies, that determine which narratives resonate in which circumstances. For instance, the rags to riches stories are associated with North American culture. Its model is recounted in many narratives that convey how someone achieved something great through relentless hard work and dedication. Other known masterplots include *Cinderella* and the *Good Samaritan* (Katajala-Peltomaa & Mäkelä, 2022; Mäkelä et al., 2020, 2021).

Event Sequencing. Prototypically, narratives sequence events to form continuums that appear to be logical (Herman, 2009, p. 75). These events are specific events chosen from the flux, and they are sequenced so that the narrative continues to answer the question of "then what happened". In this way, narratives do not reveal general truths. They resort to particular, yet compelling, instances. In these instances, the events seem to happen in a logical and, thus, generalisable manner. The events may be separate, but they are effectively tied together with plots (Branigan, 2013; White, 1981).

Worldmaking. Narratives construct particular versions of the world (Bruner, 1991; Herman, 2009; White, 1981). This is obvious in fictional stories: the narratives create story settings—that is, storyworlds. The same aspect, however, is also present in those narratives that occur in more practical life. Narratives tend to take the canonical breach—that is, something that could be unexpected—and use it to reinforce the perceived reality (Bruner, 1991). In other words, narratives prototypically leverage such breaches from the canonical to strengthen and stabilise the world on which the narratives may want to reflect.

What's it like. Narratives are rooted in experiences. They convey how something has been like for an individual—sometimes in a less straightforward manner (Herman, 2009, p. 137). They are not faithful to objectivity. They draw from what something is or has been like for an individual (Fludernik, 1996). Fictional stories

often tell about a character's experiences. In practical life's narratives, experiences are also often conveyed in less trivial manners. The narratives may also explicitly tell about the character's or narrator's experiences—that is, "this is what happened to me" or "this is how I felt". The experience and feeling can also be conveyed in a less explicit manner. For instance, the decision to resort to a particular narrative may also reveal its teller's experiences.

From a more cognitive perspective, people are essentially storytellers (Fisher, 1984). This fundamental argument implies a set of principles for human comprehension. These challenge the view that humans are solely objective and rational. Allen (2017) synthesised these principles (p. 576), arguing that because people are storytellers who comprehend the world with narratives, they make decisions based on good reason, which is not always logical. History, biography, culture, and character determine what people consider to be good reasons. Their rationality is determined by the coherence and fidelity of their stories. Ultimately, the world is a set of stories from which people choose and thus constantly recreate their lives. Consequently, people comprehend the world with narratives. These narratives are situated representations of particularised event sequences that convey experiences. For instance, organisational research has adopted this idea. It considers that organisations are storytelling systems (Boje, 1991).

Organisational research considers organisations to be storytelling systems (Boje, 1991). This idea is linked to sensemaking. Organisations are collections of narratives. Narratives that people use in their world comprehension construct an organisation (Geiger & Antonacopoulou, 2009). In fact, organisations may be understood as narratives, discourses, or texts. Afterall, an organisation is largely intangible—that is, it mostly resides in peoples' minds. It is thus a narrative that attaches the particular circumstances with a meaning, for instance, that a group of people who act collectively is an organisation.

There are also some examples of narratives in information systems research. For instance, Alvarez and Urla (2002) studied a university that was implementing a new administrative system. This study used interviews between a business analyst and the university's employees and witnessed that these employees indeed resorted to narratives. However, such examples in information systems research are scarce. Further, these examples do not seem to have discussed narratives in terms of sensemaking. The word narrative does appear here or in information systems sensemaking research. For instance, Yeow and Chua (2020) studied a client who was trying to determine which technology vendor to choose from a pool of candidates. They mentioned that this client generated plausible narratives about these vendor

candidates. However, Yeow and Chua (2020) did not elaborate much on the narrative theoretical perspective. The narrative concept is rather pragmatically used, which is understandable, considering the scope of their study.

2.4 Summary of Theoretical Framework

This dissertation combines three research streams. These are the enterprise system implementations, the sensemaking perspective, and the narrative theoretical perspective. In this chapter, I review these three streams. The theoretical framework was further developed based on this review. This framework is illustrated in Figure 3.

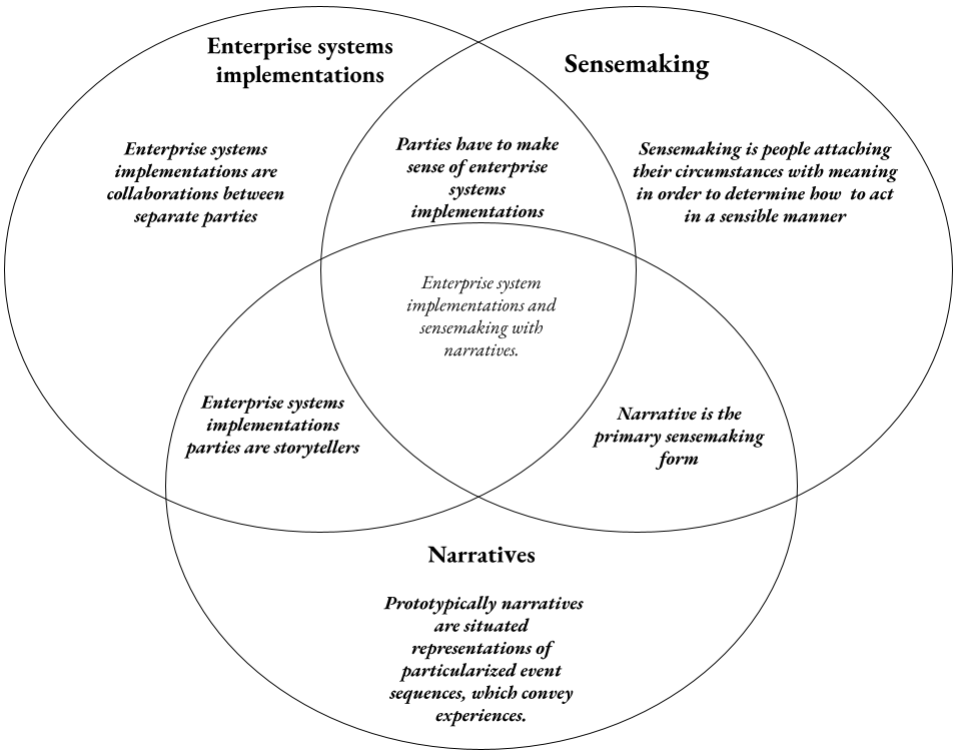

Figure 3 Theoretical Framework After Review

To summarise, enterprise system implementations are collaborations between separate parties. These parties' collective efforts essentially generate these implementations. Such collaboration has been found to be difficult. Sensemaking is about people comprehending their circumstances. People attach meaning to their surroundings. The parties in an enterprise system implementation must make sense

of the implementation. This enables them to function in a manner that is sensible from their perspective. They need to attach meaning to the implementation.

Prototypically, narratives are situated representations of particularised event sequences that convey experiences. People make sense using narratives. Narratives are the main form of sensemaking. When people face a constant stream of inputs and events that challenge their disequilibrium, they look for an answer to the question of "what's the story here" (Weick et al., 2005, p. 410).

Parties in enterprise system implementation are human actors. This implies that enterprise system implementation parties are collectives of storytellers. These storytellers resort to narratives in enterprise system implementations. These streams of research has been established with a strong theoretical base. The overlap between enterprise system implementations and sensemaking and the overlap between sensemaking and narratives have been addressed in the literature review. For instance, Orlikowski and Gash (1994), Jensen et al. (2009), Jensen and Aanestad (2006), and Hsiao et al. (2008) studied sensemaking in the enterprise system implementation context. Organisational research has studied narratives and sensemaking (Brown et al., 2008; Weick et al., 2005). However, the surface of the overlap between enterprise system implementations and narratives has been merely scratched. Only a few studies have discussed narratives in enterprise system implementations. Thus, there is a gap in the research, and we currently lack knowledge regarding narratives in sensemaking in the enterprise system implementation context. This leads to uncertainty regarding what generates the issues in enterprise system implementation and how these issues could be addressed. With this dissertation, I especially target this specific area, since it currently has the weakest support from the literature.

3 RESEARCH APPROACH

In this chapter, I will explain this dissertation's research design. I have adopted the interactive model of research design (Maxwell, 2008, p. 217). It consists of research components, such as *goals*, *conceptual framework*, *research questions*, *methods*, and *validity*. With this model, I have emphasised reflection regarding the ways in which these components may affect and be affected by one another in this dissertation; the model does not argue for any specific order for these components. I have also focused on a general definition of research design, which refers to "an underlying scheme that governs functioning, developing, or unfolding" and "the arrangement of elements or details in a product or work of art" (Maxwell, 2008, p. 215). In alignment with the model, I see that a good design, one in which the components work harmoniously together, promotes efficient and successful functioning. I have searched for harmony (i.e. the absence of conflicts) between components in this dissertation; there should be agreement of ideas and actions, or a pleasing combination of different parts.

The interactive research design model is a general-level model. Hence, I consider it the evident choice for this dissertation, as qualitative research tends to be difficult to strictly predefine before research activities (Klein & Myers, 1999). In alignment with the model, I argue that qualitative research may begin with a broad approach. Such an approach is then further specified as the research proceeds.

In Figure 4, I illustrate the way I applied this model in this dissertation. The figure consists of the research design components. The *research questions* are placed in the middle of the figure. These questions must be aligned with all four components. I have illustrated this with solid lines in the figure. *Goals* need to be aligned with the *conceptual framework,* and *methods* need to be aligned with *validity*. *Goals* should not contradict *methods,* and the *conceptual framework* should not contradict *validity*. In the figure, I have illustrated this with dotted lines.

This dissertation's research design components are informed by the theoretical framework presented in Chapter 2. The objective of improving the understanding of narratives in enterprise system implementations motivates my research goals. This dissertation's philosophical underpinnings are inspired by the sensemaking perspective and narrative paradigm. The research method is guided by my objective

of collecting and analysing the narratives of enterprise system implementation parties in sensemaking. The study's validity is inspired by the research questions and methods while following the principles for interpretive case studies (Klein & Myers, 1999).

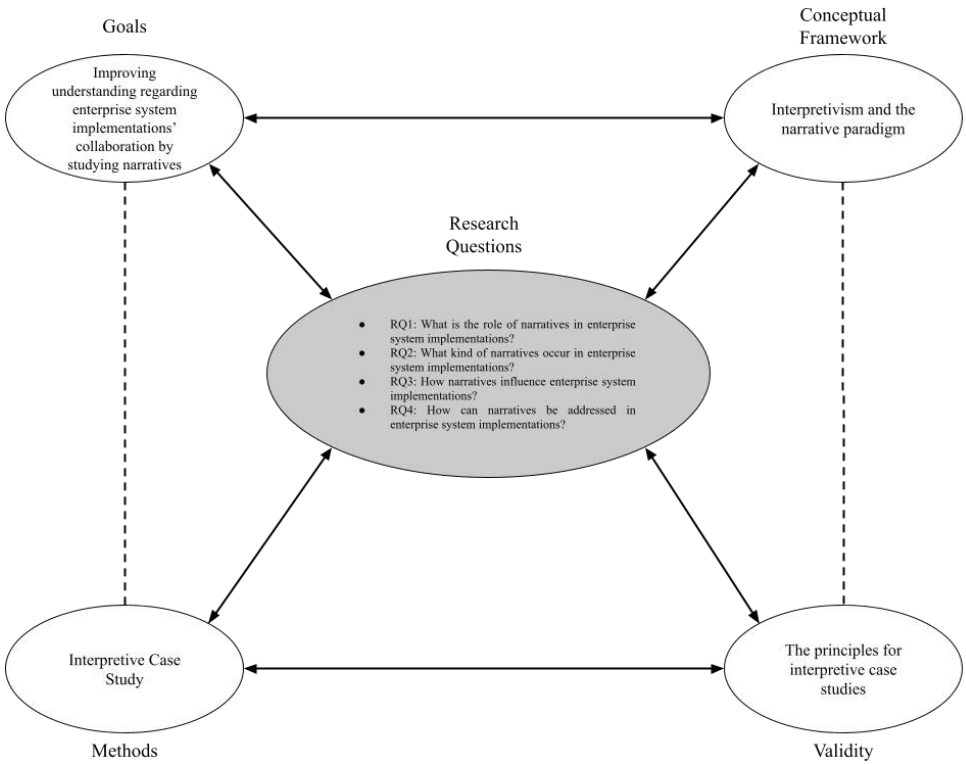

Figure 4 Research Design Adapted from Maxwell (2008, p. 217)

3.1 Goals: Research Objective and Research Questions

With this dissertation, I am improving understanding of enterprise system implementations' collaboration by studying narratives in this context. I see that this is a valuable contribution because narratives may have a significant presence in enterprise system implementations (see Chapter 2). An advanced understanding of narratives in enterprise system implementations will aid in addressing them in research and practise. Reflecting on the prevalent literature, I see that to reach this understanding, we need more insights regarding narratives' role, description, and influence in enterprise system implementations. I also see that the development process for a systematic way to address narratives in enterprise system

implementations should be initiated. I have captured such requirements into four research questions (RQ1–RQ4).

Currently, knowledge regarding the role that narratives play in enterprise system implementation is limited. Only a few studies on enterprise system implementation explicitly even mention narratives. Since we are not fully aware of the narratives' role in this context, we do not know the reason for their occurrence in enterprise system implementation. This makes it difficult to consider this phenomenon's position in relation to the theories that have been used to explain enterprise system implementations. I clarify this role through the first research question (RQ1). My answer to this question is a description of this role. To provide this description, my focus is on explaining why there are narratives in this setting. The first research question is as follows:

RQ1: *What is the role of narratives in enterprise system implementation?*

A review of the literature indicates that so far, the collection of narratives from enterprise system implementations is narrow. Thus, there is no description of what kinds of narratives there are in this context. Narratives come in many shapes and sizes, and they are tied to their surrounding contexts. The description of the narratives that prosper in this specific setting is thus vital. Through the second research question (RQ2), I describe the narratives that occur in enterprise system implementations. To provide such a description, I focus on providing examples of narratives from enterprise system implementations. The second research question is as follows:

RQ2: *What kinds of narratives are there in enterprise system implementation?*

At the moment, there are few insights regarding the influence that narratives have on enterprise system implementations. Therefore, it has been challenging to understand the significance of narratives in this context. This may be one reason why there are so few studies in which narratives are considered in enterprise system implementation. Further, it is understandable that practitioners have not been motivated to consider narratives if they are not aware of their importance. Thus, I describe the influence of narratives on enterprise system implementation through the third research question (RQ3). To provide such a description, I focus on illustrating how narratives have influenced enterprise system implementations. The third research question is as follows:

RQ3: *How do narratives influence enterprise system implementation?*

Currently, there are no propositions regarding how to address narratives in enterprise system implementations. Although there has certainly been interest in instrumentalising and leveraging narratives in the information systems context (e.g. storytelling and user stories), there currently are no well-known approaches that adopt a critical analytical perspective. Thus, it is understandable that enterprise system implementation practitioners have not considered narratives; their toolbox lacks a tool for critically analysing narratives. Further, the lack of propositions for such approaches has made it challenging for enterprise systems research to discuss this issue, since the initial steps have not yet been taken. It is therefore pertinent to offer ideas on how to address narratives in enterprise system implementations, which I do through by addressing a fourth research question (RQ4). To provide such ideas, my focus is on explaining and demonstrating critical narrative analysis in enterprise system implementation. The fourth research question is as follows:

RQ4: *How can narratives be addressed in enterprise system implementation?*

3.2 Conceptual Framework: Philosophical Underpinnings

Philosophical underpinnings are about the philosophy of science. Science's philosophy discusses questions that science alone cannot fully answer (Rosenberg, 2005, p. 18). Such discussions deal with assumptions about the world and reflect on *ontological* and *epistemological* questions. Ontology discusses the nature of the world, while epistemology discusses how we can study it (Maxwell, 2004, p. 224). The main philosophical positions consider ontological and epistemological questions differently. These positions are *positivism*, *critical realism*, *interpretivism*, *hermeneutics*, and *postmodernism* (Eriksson & Kovalainen, 2015). My philosophical stance implies the way in which I am searching for knowledge.

In this dissertation, I adopt interpretivism. I assume that reality is accessed through social constructions. I emphasise the interpretations of actors who are individuals or group members (Eriksson & Kovalainen, 2015). These can be language or shared meanings. Interpretive research is an evident choice because the studied context does not currently have easily identifiable and measurable factors. Through interpretivism, my focus is on generating knowledge that advances the understanding of the information systems context (Klein & Myers, 1999). I am

searching for insights from this context in its full complexity. My interest is in how information systems influence and are influenced by context (Walsham, 1995).

In this interpretive research, my interest is in interpreting findings. I assume that there are different realities in research. I see that the same data can be interpreted in different and meaningful ways (Eriksson & Kovalainen, 2015). Through rigorous scientific procedures, the study produced insights that I could not have achieved when simplifying the social context. These insights may then be transferred to social settings to further improve understanding. Research of this nature may, for instance, lead to propositions that may be tested for further insight. I approach this dissertation's objective *inductively*. I proceed from empirical research to theoretical results. I support this inductive approach with *the narrative paradigm*.

The narrative paradigm (Allen, 2017; Fisher, 1984) objects to the rational world paradigm. In alignment with the narrative paradigm, I question the assumption that people are rational. The narrative paradigm rejects the claim that people generally base their decision making on soundness and logicality based on evidence. The narrative paradigm sees people as storytellers. Storytellers comprehend the world with narratives. The narrative paradigm's premises are as follows (Allen, 2017):

1. People are storytellers.
2. Decision making and communication are based on "good reasons".
3. "Good reasons" are determined by matters of history, biography, culture, and character.
4. Rationality is based on people's awareness of internal consistency and resemblance to lived experiences.
5. We experience a world that is filled with stories. We must choose among them.

In this dissertation, I assume these premises in the following way:

1. People in general, and thus also parties in enterprise system implementations, are considered storytellers.
2. Decision making and communication in enterprise system implementations is not seen as solely rational but also, to a significant degree, as based on 'good reasons'.
3. The 'good reasons' in enterprise system implementations are seen to be determined by matters of history, biography, culture, and character.
4. In enterprise system implementations, parties' rationality is seen to base itself on their awareness of internal consistency and resemblance to lived experience.

5. Parties are seen to experience enterprise system implementations as filled with stories. They switched among them.

These statements (1–5) are philosophical assumptions. These assumptions inspired me, as a researcher, to consider that because people are storytellers, parties in enterprise system implementations are also storytellers. This means that parties in enterprise system implementations comprehend the information systems context with narratives. These narratives are not objective—that is, they do not base their explanations only on facts or rationality. The explanations proposed by the narratives are based on what makes sense. They favour plotlines that are plausible, appealing, and compelling.

3.3 Methods: Case Study

In this dissertation, I follow the qualitative interpretive case study approach (Sarker et al., 2018, pp. 762–763) (see also Klein & Myers, 1999; Walsham, 1995). I chose this approach because prior knowledge about narratives in enterprise system implementation is limited. This dissertation is exploratory and flexible. This is because, in this dissertation, I am interested in problems that are largely 'unstructured'. (Eriksson & Kovalainen, 2015, p. 5)

I chose the case study approach because I needed to explore real-life instances. With this approach, I am able to study these instances while avoiding simplifying the context; I am emphasising holistic knowledge. This is in harmony with interpretivism. Instead of statistical generalisations, this dissertation is interested in producing thick descriptions, interpretations of meanings, and a comprehensive understanding of cases. (Eriksson & Kovalainen, 2015)

The case of this dissertation is enterprise system implementation projects in which collaboration issues and narratives occur. Collaboration issues refer to misalignments between the efforts of the central implementation parties, such as vendor, consultant organisations, and client organisations. The narratives refer to accounts of a series of particularised events occurring over time (Bruner, 1991; Fludernik, 1996) expressed by representatives of the central implementation parties.

I chose the cases based on their typicality and representativeness (Seawright & Gerring, 2008, pp. 299–300). I wanted to take the narrative theoretical discussion into a context that represents general enterprise system implementations. The cases

include multiple parties who are about to acquire a general product from a vendor and who experience typical enterprise system implementation issues (Kähkönen et al., 2017; Momoh et al., 2010). Case studies often collect data through *interviews*, *surveys*, *observations*, or *document analysis*. In this dissertation, I used interviews. Myers and Newman (2007) characterised interviews in qualitative research as involving a researcher, or possibly two researchers, talking to someone who is an actor in the case setting. This actor is not often familiar with the interviewer(s) beforehand. These interviewer(s) ask this interviewee to answer (or to create an answer), often in a conversational setting—that is, there is a more or less defined time limit for this interviewee to provide his/her answers. This time limit may be, for instance, an hour. Insights from such interviews are then used to describe the case. I was an *outsider* in this dissertation's cases (Walsham, 1995); I did not belong to either one of the case organisations. I personally collected Case A's data. Case B's data were collected by other researchers. My role as a researcher is discussed later in this dissertation.

3.3.1 Case Descriptions

The data for Articles I–V were collected from two cases (Case A and Case B). Articles I, II, IV, and V focus on Case A. Article III focuses on Case B. Table 2 presents these cases' details.

Table 2 Cases' Details

	Case A	Case B
Project timeline	2012–2022	2008–2014
Data collected in	2019–2020	2013, 2014
Enterprise system	Electronic patient record system	Enterprise resource planning system
Client	Healthcare and social care organisations	Global service provider in retail business
Vendor	Global offshore patient record system provider	Small local enterprise resources planning system developer
Description	Publicly debated enterprise system acquisition.	Familiar partners having issues with collaboration

Case A is a large-scale enterprise system's implementation project. Several municipalities and health care and social care organisations are acquiring a patient

record system. The underlying system is supplied by a global vendor. This case's main actors are the project company (i.e. the third-party/middleman organisation), client organisations, a vendor, and the citizens. This case focuses on the project company. Figure 6 presents this case's timeline.

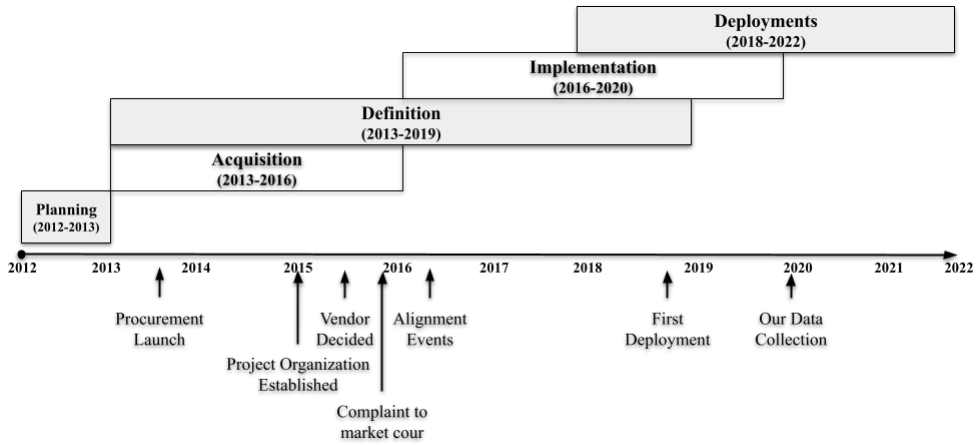

Figure 5 Case A Timeline

Case A was launched in 2012 with a *planning* phase. The client organisations established a consortium. *Acquisition* and *definition* began in 2013. Procurement followed the negotiation procedure. This procurement was finished in 2015, resulting in a globally operating, privately held healthcare software company being contracted. System's *implementation* began in 2017, including, for example, the system's configurations, integrations, and testing. The system's incremental *deployments* began in 2018. These deployments were expected to end in 2022. I collected the data from this case during the winter of 2019–2020.

I observed that the Case A project had been heated. A critique of this project continued throughout the project. For example, scientists, healthcare professionals, and citizens expressed their concerns regarding this project in the media. The country's largest newspapers published numerous articles about this project. Critics voiced their thoughts about this project, for example, in blog posts. A doctor created a social media website to collect feedback on this project. Generally, the critique claimed that the project was too expensive, and that vendor selection had been a mistake. This vendor's product was claimed to be unfitting for the local environment. This enterprise system was alleged to be dangerous, unintuitive, and slow to learn and use. There were claims that users were resigning due to this new system.

In Case B, a global retail business company renewed its enterprise resource planning system. They wanted a customised solution. This enterprise resource planning system was developed by a small local vendor. These two companies had worked together for over 15 years. The vendor also provided the company's old enterprise planning system. This company was this vendor's largest client. In 2008, they established an enterprise planning system implementation project. I observed that Case B's enterprise planning system implementation project faced issues. The vendor wanted to develop a generic product that they would slightly customise for different clients. They could sell this product to many customers. The client assumed that the vendor was serving only them. This client assumed that the vendor knew their specific requirements. This implementation project became difficult to handle. This vendor tried to develop a general product while serving this specific client.

3.3.2 Data Collection: Interviews

This dissertation's data were collected through *unstructured interviews* (Myers & Newman, 2007). Case A included six interviews, and Case B included four broad questions/themes. Table 3 presents these themes from both cases.

Table 3 Interview Themes

Case A	Case B
Interviewee's general perception of the project	Stakeholders in electronic patient record development
Interviewee's role in the implementation	Experiences in the electronic patient record project
Reasons for the project	Issues considered successful
Targeted stakeholders	What should have been done otherwise
Approach for fulfilling the objectives	
Success of the implementation	

In both cases the interviewers avoided leading the discussions during the interviews. The matters that the interviewees highlighted were assumed to be significant issues. This means that, for example, narratives were not explicitly 'invited'. This allowed this dissertation to examine whether narratives appeared naturally. The interviewees also discussed matters outside these questions, and the interviewers improvised accordingly. Figure 7 presents an example of such a scenario in Case A.

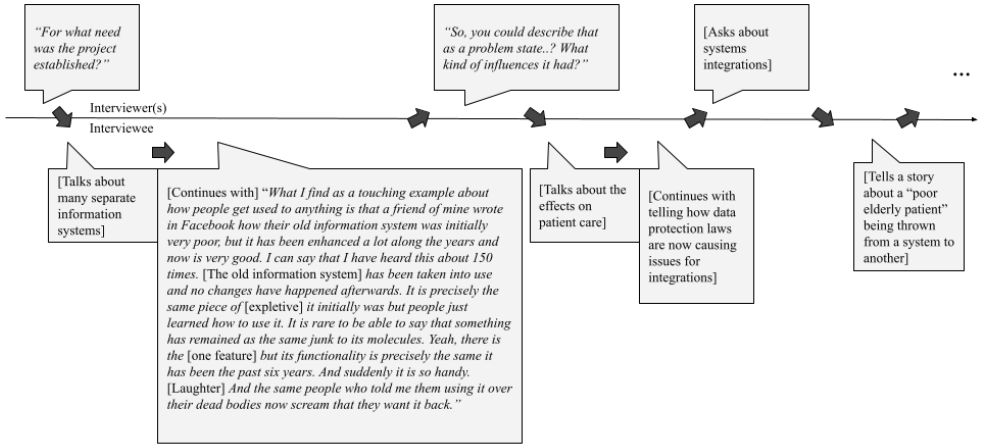

Figure 6 Case A Interview Example

Both Case A and Case B interviews lasted 60 minutes, on average. All interviews were held on the case organisations' premises. All interviews were recorded and transcribed in the interviewees' native languages. Only illustrative quotations from these interviews were translated into English.

Case A was studied with 13, and Case B was studied with 17 interviews with the case organisations' central actors. These interviewees were chosen via snowball sampling (Morgan, 2008). First, the interviewees were proposed by the case organisations' contact persons. Second, each interviewee proposed additional interviewees. This sampling method enabled us to find the individuals these interviewed actors considered to be central. These studies did not interview more actors once the saturation point was reached. This point of saturation was identified together with a group of researchers.

3.3.3 Data Analysis

In this dissertation, I approached the data inductively. Figure 7 illustrates my coding procedure.

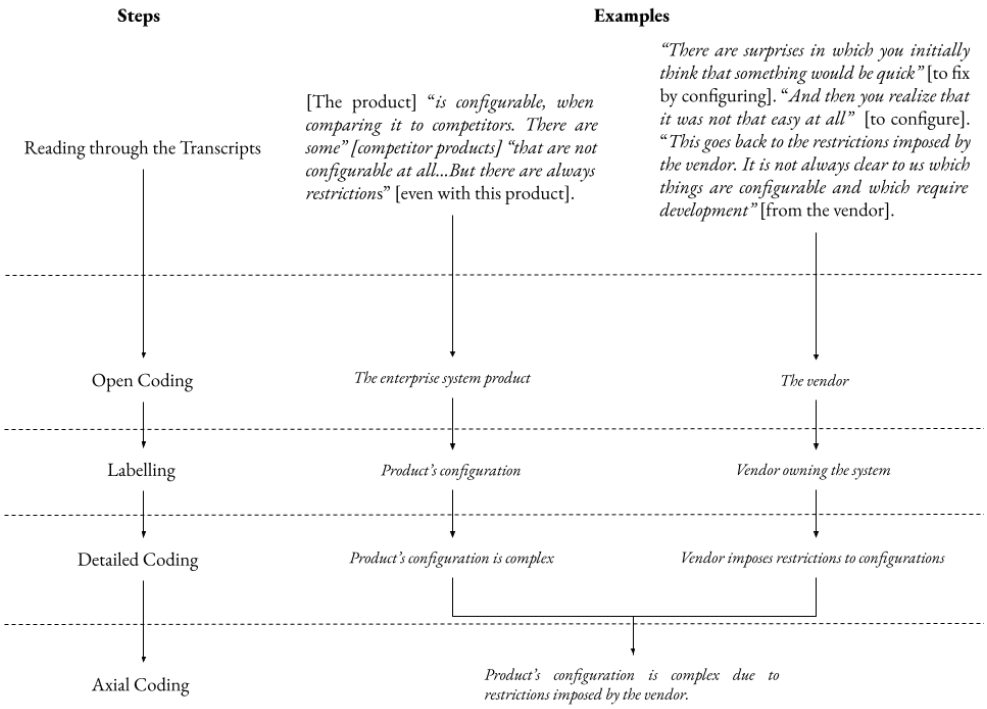

Figure 7 Coding Procedure

I was responsible for the data analysis of all articles. I began my procedure by reading through the transcribed data. Then I executed open coding (Myers & Newman, 2007; Walsham, 1995), in which I identified broad themes from the data—that is, large chunks of data within which some relatively specific topic was discussed. An example of such a theme was "the enterprise system product". Then I conducted more detailed coding inside such themes to identify instances of the same issues and labelled them. For instance, inside the theme of "the enterprise system product", a more fine-grained label of "product's configuration" appeared. Then, within such more-fine grained labels, a detailed coding was done. This meant that short, detailed descriptions were coded. For instance, inside the theme of the enterprise system product" and the inside label of "product's configuration" appears the code of "products configuration is complex". Then, axial coding was conducted, drawing relationships between different codes.

I discussed my findings from the data continuously with other researchers in a multidisciplinary research group that represented the fields of information systems, literature, and management and administration.

I acknowledge that during the data analysis, I was sensitised to the prototypical narrative elements by Herman (2009). These prototypical narrative elements are

general, and they represent an all-encompassing view. This was confirmed by scientists from the field of literature science. Generally, recurring conceptualisations in the interviewee's accounts were good places to identify narratives. For instance, Riessman (2001, pp. 695–708) explained that "an occurrence of a story may, in the simplest instances, be identified for instance by signals from the interviewee indicating that an example shall be given, such as 'I will clarify this with an example'" (p. 698). Explicitly defining a narrative's starting and end points is interpretive. These points are often fragmented and embedded in conveyed explanations. Nevertheless, the act of narration is distinguishable in "ordering and sequence; one action is viewed as consequential for the next. Narrators create plots from disordered experience, giving reality 'a unity that neither nature nor the past possesses so clearly'" (Riessman, 2001, p. 698). When I was identifying narratives, my analysis focused on the interviewees' shared explanations; rather than focusing on brief individual tellings, I searched for similarities and recurring patterns between these accounts.

3.4 The Researcher as a Storyteller

To be faithful to this dissertation's philosophical underpinnings, I should not exclude even myself from its assumptions. This means that the premises of narrative paradigms and interpretivism also include me – the researcher itself – on its statements. What I see these premises implying is summarised below. Each implication and how it has been addressed in this dissertation are discussed. In these implications, the word 'influence' is used purposely. In contrast to fully determining, influence refers to something that "affects or changes how someone or something develops, behaves, or thinks" (Cambridge Dictionary). This is because while the premises do apply to the researcher too, I see that the research process this dissertation has followed moderates their status.

People are storytellers. I am a storyteller myself. This means that I also comprehend the world through narratives. When I am asked to share my thoughts on things, I tend to resort to narratives that provide explanations. This is a significant factor to consider when assessing the arguments I make in this dissertation. They should not be treated as facts but as my—the researcher's—interpretations of issues. This is a factor that is always present, especially in interpretive research.

Decision making and communication are based on "good reasons". As I am a storyteller, the analysis and conclusions conducted in this dissertation are influenced by my thoughts about 'good reasons'. This means that the analysis and

conclusions are not perfectly repeatable, nor is it possible to be fully certain of their 'validity' in a purely objective sense. Rather, my background, culture, and character matter. When writing this dissertation, I am a relatively young researcher from a Nordic country without a significant amount of experience from academics or industry. As I have a relatively small amount of experience, I have learned more, and my thoughts have progressed during the research process. However, throughout the research process, I have worked closely with experienced researchers from other fields of science. Their thoughts and experiences are implemented in this dissertation.

"Good reasons" are determined by matters of history, biography, culture, and character. Third, the 'good reasons'—that is, the kinds of insight that resonate with me—is influenced by my view of the world. In other words, I have conducted this dissertation on the socially constructed reality I perceive.

We experience a world filled with stories, and we must choose among them. Finally, as a storyteller myself, I experience the research cases as filled with stories, and I choose among them. In other words, the cases this dissertation focuses on offer many alternative narratives. This dissertation focuses only on some of these alternatives. This is crucial to consider when generalising the findings. In particular, the specific narratives presented in this dissertation should not be considered generalisable without further studies. Further, the findings can be considered somewhat biased, since they represent a selected portion of alternatives. However, this dissertation's philosophical underpinnings question whether there is research that can be purely objective, that is, entirely non-biased. Moreover, these narratives are not merely the thoughts of a single researcher; they have been continuously reflected with a group of researchers from different fields, strengthening their validity. The narratives have also been discussed with a researcher from another country with a similar case.

4 SUMMARY OF THE DISSERTATION'S ARTICLES AND THEIR MAIN FINDINGS

In this chapter, I will introduce this dissertation's articles and their main findings. This dissertation comprises five peer-reviewed academic articles (Articles I–V). I am the first author of all articles (Article V is single-authored). Figure 8 presents these articles in relation to this dissertation's theoretical framework.

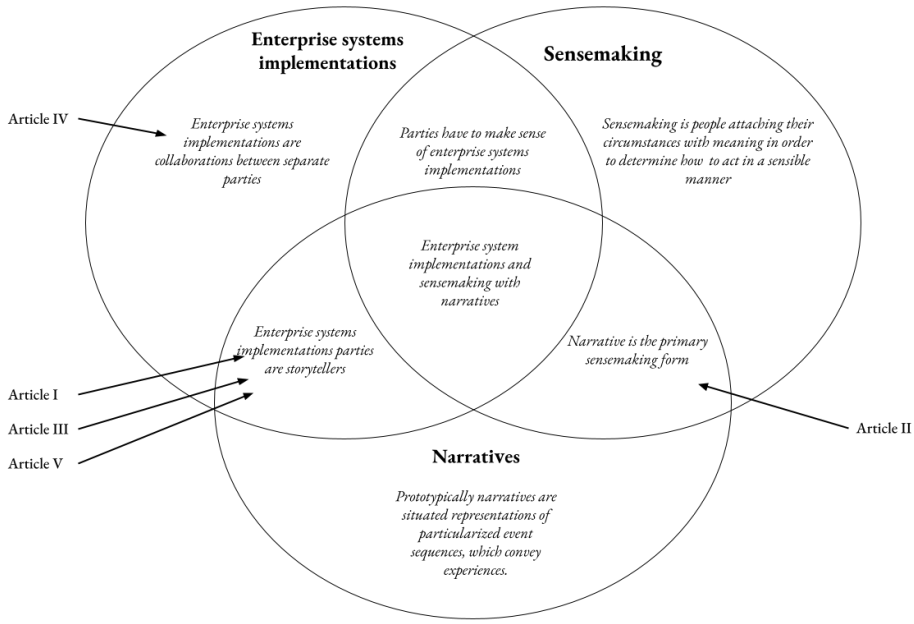

Figure 8 Articles in the Framework

Articles I and II provide an answer to RQ1. These articles reflect on sensemaking and narrative theoretical discussions. They illustrate the role that narratives possess in enterprise system implementation. Articles I–III provide an answer to RQ2. They illustrate narratives found in enterprise system implementations. Articles III and IV especially contribute to the answer to RQ4. They describe the influence that narratives have on enterprise system implementations. Article V answers RQ4. It offers an initial idea of how to address narratives in enterprise system implementations.

4.1 Article I: The Presence of Narratives in Enterprise System Implementations

Article I: Raatikainen, P., Pekkola, S., Nurminen, M., & Mäkelä, M. (2021). Masterplots in information systems implementation. In *Proceedings of the 29th European Conference on Information Systems (ECIS). Association for Information Systems.*

Article I investigates narratives in enterprise system implementations. Fundamentally, the article considers that enterprise system implementation is essentially a social activity. An implementation's technical solutions emerge from the participating human actors' social interactions and cognitive processes, and are then planted into the system's users' subjective realities. The article suggests that narratives play a central role in this social activity. However, enterprise system implementation research has not elaborated on this role. This motivates the article to identify and analyse narratives from an enterprise system implementation project. The article focuses on the skeletal narrative models (i.e. masterplots) of different implementation parties: it interprets the parties' perceptions about the project from their narratives. The studied parties include vendors, project companies, and users (from client organisations). This article presents each party's masterplot, which is interpretively derived from their narratives. This article explores the question, "What kinds of masterplots meet in a large-scale information systems implementation?"

This article found that each party had its own narratives (and masterplots) about the implementation. These findings contribute to this dissertation by illustrating that enterprise system implementations are perceived through narratives by the implementation parties. The explanation for this occurrence, its influence, and how to address it in enterprise system implementations is examined in other articles.

4.2 II: How are Narratives Used in Enterprise System Implementations?

Article II: Raatikainen, P., Pekkola, S., Nurminen., M. & Mäkelä, M. Making sense of information systems implementation masterplots. Submitted to a major information systems journal.

Article II examines narratives and sensemaking in enterprise system implementations. Currently, the enterprise system implementation literature has

studied sensemaking to some extent but narratives almost not at all. This gap motivates this article to explore the topic of why there are narratives in enterprise system implementations and whether sensemaking can explain their presence. Narratives are considered from the perspective that elaborates on how the implementation parties comprehend an equivocal enterprise system implementation project. This article focuses on the research question, "How do human actors use narratives for sensemaking in IS implementations?" This article approaches this question by analysing the narratives resorted to by a project company in an enterprise system implementation project. These narratives are reflected in relation to these parties' apparent sensemaking and corresponding behaviour.

This article found that the enterprise system implementation parties used narratives in their sensemaking. For this dissertation, this article introduces the notion of sensemaking with narratives in enterprise system implementation. Thus, it identifies a link between implementation parties' narratives and behaviour during enterprise system implementations. This is exemplified more in other articles. Further, its effect and how to address it in enterprise system implementations are further discussed in the rest of this dissertation's articles.

4.3 Article III: What is the Significance of Different Narratives in Enterprise System Implementations?

Article III: Raatikainen, P., & Pekkola, S. (2022). Companions growing apart: Exploring actors' perceptions with narratives and masterplots in ERP systems development. *Hawaii International Conference on System Sciences*.

Article III investigates conflicting narratives in enterprise system implementation. The enterprise system implementation literature has invaluably identified the challenges and problems that occur in enterprise system implementations. However, the literature has not considered the role that narratives may play in relation to the challenges and problems that occur so often. Thus, in this article, we are interested in understanding what occurs when the implementation parties have narratives that perceive the implementation differently, and if there is any linkage to the issues these implementations face. In other words, what kind of effect will it have on the implementation if the collaborating parties live different stories? To capture such perceptions, the article focuses on the question, "What narratives tell about collaborating actors' perceptions in an ERP systems development project?" The

article approaches this question by identifying and analysing vendor's and client's narratives about their shared enterprise system implementation project.

This article found that the two parties' narratives conflicted severely, which made these parties' collaboration challenging during implementation. This article contributes to this dissertation by illustrating the presence and effects of conflicting narratives in enterprise system implementation. The explanation for this occurrence, and how to address it in enterprise system implementations is discussed in other articles.

4.4 Article IV: What is Collaboration in Enterprise System Implementations?

Article IV: Raatikainen, P., & Pekkola, S. (2021). User-centredness in large-scale information systems implementation. In *Proceedings of the 12th Scandinavian Conference on Information Systems (SCIS2021). Association for Information Systems.*

Article IV examines user-centredness in large-scale enterprise system implementation. User-centredness is a heavily studied theme in the information systems field. Generally, in theory, user-centredness appears to be a high-level goal that should be achieved in information systems development; achieving user-centredness is generally considered to ensure users' satisfaction. What this concept means in practice is less clear: user-centredness is fuzzy and abstract. This motivates us to elaborate on the topic of user-centredness in practical terms through the research question, "What occurs when user-centredness is pursued in a large-scale information systems implementation project?" Therefore, this article analyses the user-centredness in an enterprise system implementation project; the project developers had claimed that this project has been user-centred in exceptional amounts.

The article found that user-centredness is the outcome of joint efforts from separate implementation parties, such as vendors, consultant organisations, client organisations, and users. Thus, for this dissertation, this article introduces the concept of collaboration in enterprise system implementation and illustrates its importance. The relationship between collaboration and the implementation parties' narratives is elaborated on in other articles.

4.5 Article V: How Can Narratives Be Addressed in Enterprise System Implementations?

Article V: Raatikainen, Pasi. (2022). The prototypical narrative elements in information systems implementation narratives: Towards critical narrative approach. In *Proceedings of the 30th European Conference on Information Systems (ECIS). Association for Information Systems.*

Article IV considers how narratives can be approached in enterprise system implementation. As established, even the information systems field has investigated how narratives can be leveraged in research and practice. However, this theme should be complemented by a critical and analytical approach. In this article, I argue that in cases not carefully considered, narratives can be problematic in enterprise system implementations. In other words, narratives might be a significant reason why enterprise system implementations encounter severe challenges so often. This motivates the article to elaborate on an initial idea of how to address narratives in enterprise system implementations. The article focuses on the research question, "How can a critical narrative approach be applied in information system implementations?" To answer this question, this article identifies and analyses an implementation party's narratives in an enterprise system implementation project. These narratives are analysed from a critical perspective (Mäkelä, 2018; Mäkelä et al., 2021) based on prototypical narrative elements (Herman, 2009). The article presents instructions and illustrations of this critical analysis, with a proposal of how it can be used in practice.

In this study, I found that the critical narrative approach sheds light on the issues that are carried by the perceptions that narratives reflect. This study contributes to this dissertation by introducing and illustrating the notion of a critical approach to narratives in enterprise system implementation. This approach is proposed to inspire enterprise system implementation researchers and practitioners.

5 DISCUSSION

In this chapter, I discuss the findings of this dissertation. I begin by going through the main insights from the articles. These insights include the discovery that narratives are the main sensemaking form in enterprise system implementations, the description that narratives in enterprise system implementations are prototypical narratives that may be conflicting, the illustration that conflicting narratives in enterprise system implementations have the power to generate collaboration issues, and the proposal that narratives in enterprise system implementations should be approached critically. Then, I use these insights to address this dissertation's research objective, which was to improve understanding regarding narratives in enterprise system implementations.

5.1 Narratives as the Main Sensemaking Form in Enterprise System Implementations

The first finding explains the role that narratives play in enterprise system implementation. This dissertation indicates that enterprise system implementation parties resort to narratives as their main form of sensemaking, which is then enacted in practice. In other words, enterprise system implementation parties face equivocal circumstances that they need to comprehend. They, as storytellers, turn towards narratives that explain the circumstances. They then enact these explanations with their seemingly sensible approaches; they make the narratives become real by enacting them during implementation.

5.1.1 Enterprise System Implementation Parties Resorting to Narratives

This dissertation shows that each party has its own narratives through which they perceive the implementation. In Case A, the vendor considered the implementation through narratives that perceived the implementation as a business endeavour; the project company's narratives emphasised usability; and the users' narratives

perceived the new system as a disturbance. In Case B, the vendor considered the implementation through narratives that perceived the implementation as an opportunity for fulfilling their own goals. Their client's narratives, by contrast, showed how the implementation was a continuance in their close client-vendor relationship. Each of these narratives reflects a different view of these enterprise system implementations.

In Case A, the vendor, for instance, emphasised that the system should work efficiently in the sense that customers may be claimed and charged for money. Thus, they focused a lot, for example, on reporting functionalities. This perception represents a typical mindset for vendors: vendors tend to have standardised processes in their products, which reflect their specific view of what is the best way to execute operations (Howcroft & Light, 2006). The users emphasised the way the new system influenced their daily work; the new reporting processes and system interfaces disrupted their daily routines. It was generally acknowledged that users' evaluations of the new system mostly reflected the extent to which they were able to fulfil their goals (Leonardi, 2011). The project company, however, considered that the new system was, indeed, a change for the users but that the users would get used to this change after a while. They were, in fact, convinced that the users would eventually prefer the new system – as developers often assume (Isomäki, 2002).

In Case B, the vendor perceived the implementation as a possibility of growing to become a bigger software developer. They had a desire to start selling a general product, and this implementation represented a chance for them to develop their off-the-shelf system. The client wanted to modernise their business with a new enterprise system. For them, the implementation represented a chance to innovate the enterprise system with a familiar vendor who was aware of their needs.

These findings confirm that enterprise system implementations are, by their nature, an equivocal matter (Beaudry & Pinsonneault, 2005; Orlikowski & Gash, 1994; Weick, 1990). The narratives enabled these parties to conceptualise enterprise system implementation. The narratives compressed the equivocal implementation into comprehendible forms for each party. Figure 9 presents some of the different perspectives of enterprise system implementation from Cases A and B.

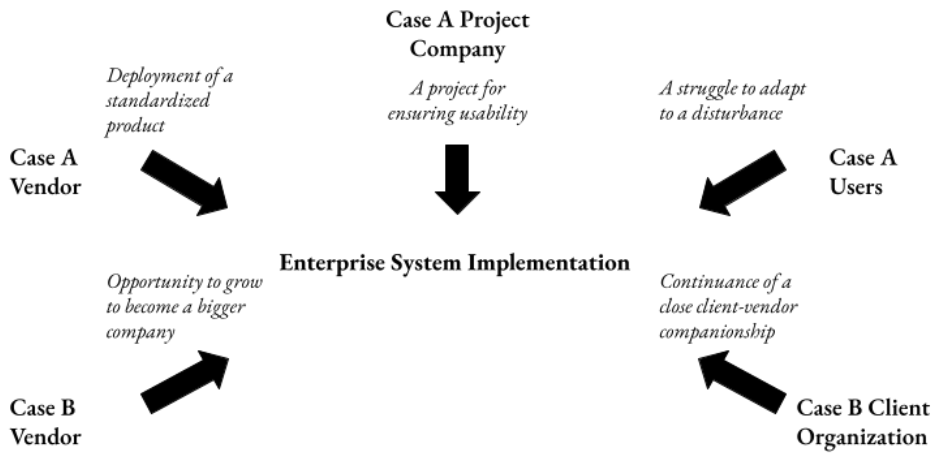

Figure 9 Parties Perceiving Enterprise System Implementation

5.1.2 Sensemaking with Narratives in Enterprise System Implementations

This dissertation illustrates that enterprise system implementation parties use narratives in their sensemaking. In other words, the parties resort to narratives that explain the equivocal matter in a way that is comprehendible so that they may rationalise how to approach their circumstances in a sensible manner.

In Case A, the project company used narratives to make sense of the system's modification difficulties, users' dislike of the new system, and their own difficult role as the project company with overall responsibility. They, for instance, made sense of the system's modification difficulties by concluding that the vendor was inflexible with the system. They made sense of the users' dislike by explaining that the users, as humans in general, were merely naturally reluctant towards anything new. Their own role made sense to them when they described it as a system's configurators.

For this party to act in this implementation, they needed to make sense of it and its events; it was an equivocal matter, and it included circumstances that they needed to comprehend (Weick et al., 2005). With narratives, they were able to make plausible sense of these circumstances and reason their seemingly rational way of approaching them: they were able to construct an explanation that enabled them to preserve their image as being sensible. This party's sensemaking acted as the springboard for their approach, in which they focused on ensuring the system's usability. They felt that they did not have the power to influence the underlying system dictated by the inflexible vendor. They could not fight against human nature to resist new things,

either. Their sensemaking thus reasoned that the sensible thing to do was to make sure that the new system was as usable as possible.

The findings from Case A can also be applied to Case B. In this case, the vendor's sensemaking made sense of the implementation as an opportunity they could leverage by being tactical. They enacted this by offering some individual services for their largest client while still keeping their product general. This client's sensemaking arrived at the conclusion that the vendor was tricking them by forcing them to pay for the general development of a product that would also be sold to others. They enacted this sensemaking by indicating the vendor as inflexible and dictating the project.

These findings show how narratives are a natural form of sensemaking in enterprise system implementations, and that the sensemaking results in enactment. Figure 10 illustrates part of the project company's sensemaking with narratives in Case A.

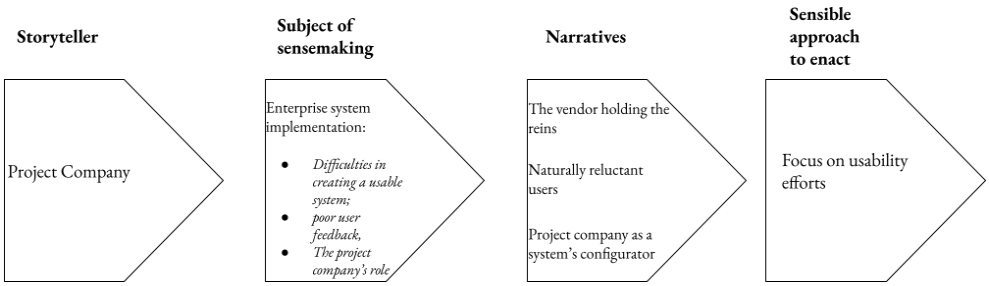

Figure 10 Project Company Making Sense with Narratives

5.2 Enterprise System Implementation Parties Resorting to Prototypical Narratives That May Be Conflicting

The second finding describes the narratives that occur in enterprise system implementations. This dissertation finds that the implementation parties' narratives are prototypical narratives that may conflict in their explanations. The prototypicality of narratives means that the narratives in enterprise system implementations can be characterised based on the prototypical narrative elements: situatedness, event sequencing, worldmaking, and what it is like (Herman, 2009). The conflict refers to serious disagreements between the explanations that the narratives propose in enterprise system implementation.

5.2.1 Prototypical Narratives in Enterprise System Implementations

This dissertation presents several narratives of two enterprise system implementations. These can be complemented by the very few narratives presented in information systems research.

Case A included narratives about usability's mighty power, naturally reluctant users, the new enterprise system as a necessary evil, and the vendor as the one holding the reins. The narrative about usability's mighty power indicates how usability is the ultimate factor for success in enterprise system implementation: if users feel that the new system is pleasant to use, they will use it the correct way. The narrative about naturally reluctant users describes how users always feel that a new system is unpleasant, but after a while, they will get used to it and realise its greatness. The narrative about the vendor as the one holding the reins tells how the vendor is ultimately the one in control of the underlying system.

Case B included narratives about the vendor and client being bound together, the sky being the limit for creativity, as a new system was developed for many customers. The narrative about the vendor and client being bound together underscores how it simply made sense for them to continue their collaboration. The sky being the limit for creativity indicates that the parties can use each other to innovate the new enterprise system. The new system being developed for many tells how the new enterprise system is developed not for just this one client but with the potential of being to other customers once ready.

In a similar vein, Alvarez and Urla (2002) presented narratives from a university's enterprise system implementation, which described honest administration workers, bad students, and outdated information systems. The narrative about honest administration workers tells how the university's administration personnel did their best, but due to reasons beyond their control, the university's processes had become inefficient. The narrative about bad students tells how irresponsible students would not comply with the university's processes. The narrative about outdated information systems tells how the information systems were not working in an optimal fashion and thereby the diligent administrators were forced to carry out processes in very inefficient ways.

The selection of narratives shows that narratives in enterprise system implementations are prototypical: these narratives are situated, they conduct event sequencing, they execute worldmaking, and they convey experiences. Table 5 presents the prototypicality of some example narratives found in Case A and Alvarez and Urla's (2002, pp. 43–47) work.

Table 4 Narratives in Enterprise System Implementations

	Usability's mighty power	Naturally reluctant users	New enterprise system as the necessary evil	Bad Students (Alvarez and Urla, 2002)
Situatedness	The situation in which the project company has a great responsibility.	The situation in which the user feedback has been horrendous.	The situation in which the users are struggling to use the new system.	The situation in which the organisation's inefficiencies are studied.
Event Sequencing	First there are new routines, rules, and regulations that need to be imposed to the users. Then, there is a system that is pleasant to use. Eventually, the users will adapt to the new routines.	First there is resistance from the users because things are new for them. Then, the users get used to the new things. Eventually, the users will prefer the new things.	First there is a harmonious setting. Then, the harmonious setting is disturbed by the new information system. Eventually, users are forced to struggle to use the new system.	First the employees have been working hard. Then, there are irresponsible students who do not comply. Eventually, the employees are being blamed for the inefficiencies.
Worldmaking	Stabilising the world in which the project company has a specific responsibility.	Stabilising the world in which the implementation is going well.	Stabilising the world in which the users are capable workers who are disturbed with new technologies.	Stabilising the world in which the employees are not the reason for the inefficiencies.
Conveying experience	The experience of having tremendous responsibility to impose a radical change.	The experience of receiving poor user-feedback.	The experience of struggling to learn new things.	The experience of feeling being blamed for something.

5.2.2 Conflicting Narratives in Enterprise System Implementations

This dissertation reveals that the narratives of different parties may conflict. In Case B, the vendor's narratives were about them growing to become more independent service providers. By contrast, their client's narratives were about them developing a new enterprise system together for their unique needs.

Interestingly, the parties shared the narrative that they were indeed bound together: the client wanted the services from their loyal companion, and the vendor needed their biggest client. It simply made sense for them to continue their collaboration. However, there are conflicts between their other narratives and their explanations.

The narratives about the vendor growing to a service provider show that this vendor leverages the collaboration with their familiar and large client: in the past, they had been more or less reliant on this client. The leveraging in this narrative means that the vendor, together with this client, who provides them with the necessary resources, develops a general system product that they sell to many customers. With the new product, they could become less reliant on this one specific client. This narrative tells us that the vendor is in this collaboration balancing on the thin rope of client-specific needs and general market-based requirements. They concluded that they could keep this familiar client satisfied while simultaneously addressing the general needs of the markets. This explanation aligns with how vendors in general approach enterprise system implementations (Sawyer, 2001).

The client's narratives, however, show how they were expecting that their long and intimate relationship with this small but familiar and loyal vendor would continue in this project. They needed to revolutionise their business due to evolving requirements from their domain. They needed to be creative and innovative, and they needed flexibility in developing a new enterprise system. The flexibility meant that they could start moulding the system from a very general—that is, unspecified requirements—and creatively specify the needs once their knowledge grew. In daily practices, this flexibility meant that, for instance, they trusted that they could simply call someone from the vendor's office to make quick modifications whenever they needed. This is a typical setting for clients in enterprise system implementations; they tend to learn that their specific needs may not be prioritised by the vendor, even

though they expected it when they established the relationship (Kähkönen et al., 2017).

The explanations offered by these narratives are severely conflicting. Although these two parties shared the conclusion that they should work together, the definition of what this companionship means conflicted. For the vendor, it was an opportunity to become more distant and less reliant on this client. For the client, it was an opportunity to develop something new together for their own needs. This is clearly a conflict: one party expects more independence, while the other party expects intimacy.

The findings from Case B can be applied to Case A. In Case A, the implied narratives of the vendor describe how the system with strictly standardised processes would be deployed to client organisations. The users in these client organisations would be forced to use the new standardised processes, and thus the best practices would become the new practises. The users' implied narratives, however, indicated that the new processes were unpleasant and difficult. These narratives most likely concluded that the new system was horrible due to its unfamiliar processes. The project company's narratives, however, presented how there was a difficult phase when a new system was introduced, but things were expected to settle down after a while.

5.3 Conflicting Narratives in Enterprise System Implementations Create Collaboration Issues

The third finding showcases the influence that narratives have on enterprise system implementation. This dissertation illustrates that conflicting prototypical narratives create collaboration issues in enterprise system implementations.

5.3.1 Collaboration in Enterprise System Implementations

This dissertation highlights that successful enterprise system implementation requires collaboration.

In Case A, the project company emphasised that the implementation must be executed in a user-centred manner. In user-centredness, the overall goal is to satisfy users (Abelein et al., 2013; Bano et al., 2018). This party alone made sincere efforts to do this. They, for instance, organised workshops and feedback events for users,

continuously tested the system's usability with users, and organised training sessions. These actions fall under the umbrella of user-centredness, which refers to approaches that aim to capture what users generally need from the system (Iivari & Iivari, 2011).

The other parties' efforts were not aligned with those of the project company; the vendor was inflexible with their product, and the client organisations were passive in their change management. The vendor, for instance, was unwilling to change some functionalities in the system, even though the users complained that these functionalities were complex. Generally, vendors may be inflexible with their product, since their interest is not to meet every unique need of all clients but rather to satisfy the general requirements (Howcroft & Light, 2006; Sawyer, 2001). This is, however, problematic for this particular implementation because user-centredness becomes difficult to reach if these users' needs are not met. However, in other client organisations, the business processes were not realigned before the new system was implemented. Further, the users did not have time to participate in all training sessions. Consequently, the client organisation's contribution did not support this implementation's user-centredness.

As a result of these unaligned efforts in this implementation, user feedback was very poor and user-centredness was not reached. The reason for this is that the parties' contributions co-create the implementation; reaching user-centredness would have required contributions from all parties. The collaboration's necessity can also be identified in Case B. The client's and vendor's efforts may have been aligned in previous enterprise system implementations, but in this implementation, their efforts started to drift away from each other. The vendor did not offer dedicated service to this client; they were not committed to fulfilling each and every need of this client. The client, especially once they got frustrated with the vendor, was not that interested in collaboration: they were more interested in dictating the project and making the vendor obedient to them.

5.3.2 Conflicting Narratives Hindering Collaboration in Enterprise System Implementations

This dissertation illustrates that conflicting narratives hinder collaboration. Such collaboration issues emerged in Case B. For instance, the vendor and client had different objectives, the system's requirements were too general, there were communication issues, a lack of trust occurred, and power imbalances formed. These

issues led to the implementation project becoming more complex. These collaboration issues can be traced back to the conflicting narratives between the vendor and the client.

In Case B, the client organisation's narratives conflicted with those of the vendor: the client's narratives were about them expecting a close relationship with the familiar vendor but being let down by their once-trusted companion who had become greedy. The vendor's narratives were about them growing to become bigger players with the help of their largest client.

The conflicting narratives created tensions; these two parties started to drift away from each other as they enacted the explanations their narratives proposed. The vendor, for instance, focused on eliciting only the general system's requirements, learning the business domain, and systematising their relationship with the client. They seemed to think that they could use the resources allocated to this implementation to develop a sellable software product. They simply just had to offer a sufficient amount of service to this client while keeping their product general. The client, who felt betrayed by their companion, reacted by pressuring the vendor and tightening the schedules. The vendor kept balancing on the rope by, for instance, outsourcing its development efforts and loosening the quality requirements. As a result, severe collaboration issues emerged.

Case A also implies that conflicting narratives' can result in collaboration issues. For instance, the project company's narratives, which described how the users would get used to anything, had a problematic relationship with the other parties' narratives. The hints of the users' narratives indicated chaos in which their more or less harmonious work environment had been stirred with new processes. Once within such chaos, the message that one just has to be patient may not be comforting but rather irritating. The users would have needed more change management. However, the project company's narratives argued that such change management was not their responsibility but that of client organisations. Such narratives illustrate conflicting viewpoints that create tensions and collaboration issues. As a result, it seems that no one took responsibility for managing the change.

5.4 Narratives in Enterprise System Implementations Should Be Addressed with a Critical Narrative Approach

The fourth finding explains how narratives can be addressed in enterprise system implementations. This dissertation suggests that enterprise system implementations'

prototypical narratives can be addressed with a critical approach. A critical perspective on narratives means that narratives are approached analytically while recognising the power of appealing, compelling, and resonating narratives in making complex matters simple (Mäkelä & Meretoja, 2022; Shiller, 2017).

This dissertation suggests that the critical approach to addressing narratives in enterprise system implementations focuses on prototypical narrative elements (Herman, 2009). In Case A, the project company resorted to such narratives. Their critical analysis revealed that these narratives were tellable in their narrative occasion and context, they sequenced particularised events to form an appealing explanation, they leveraged the deviant from the canonical to restore disequilibrium, and they conveyed this party's experience. The critical analysis indicated that the parties felt the need to explain the implementation's state; they had the urge to note that other parties should carry their responsibilities, and they were under overwhelming pressure. With prototypical narratives, they were able to make sense by providing appealing, compelling, and resonating explanations. However, such narratives may not be optimal for collaboration. Therefore, they require continuous awareness.

Critical narrative awareness may be reached by several steps: (1) recognising such narratives, (2) analysing the narratives, (3) considering how these narratives manifest in action, and (4) supporting productive narratives regarding the collaboration. Productive narratives would be those narratives that promote flexibility, reluctance to premature commitments, reluctance to simplify issues, continuous prioritisation, or reassessment of the taken approach (Aanestad & Jensen, 2016; Hekkala et al., 2018; Lee et al., 2020). This proposition implies that critical narrative awareness could help avoid some of the collaboration issues in enterprise system implementation. For instance, in Case A, the project company could have recognised that the explanations from their appealing, compelling, and resonating narratives may not be optimal. They could have challenged the explanations, for example, that the users' are merely reluctant by their nature, that their focus should be mostly on ensuring usability, and that the other parties should carry their own responsibilities. This sort of awareness could have acted as a springboard for an approach in which they make sure that, for example, the other parties (e.g. the client organisations) are able to conduct sufficient change management, that they consider users' problems seriously (i.e. not considering them as merely natural reluctance), and think about their role outside the narrow box of usability. In Case B, the vendor and client who had almost turned against each other could have been more critical regarding their own narratives. Both of them could have been more critical towards the idea that their collaboration is a good idea to begin with: the vendor wanted to grow, and the

client wanted very committed service. Perhaps the vendor could have benefitted from a relationship in which the client was not as powerful. However, the client could have considered other ways to get individual service, for instance, in-house development. These considerations imply that a critical narrative approach could have led to more successful collaborations and overall enterprise system implementations in Cases A and B.

5.5 Addressing the Research Objective

This dissertation's findings improve the understanding of narratives in enterprise system implementations. The theoretical framework first introduced in Chapter 2 is now completed based on this dissertation's findings and is presented in Figure 11.

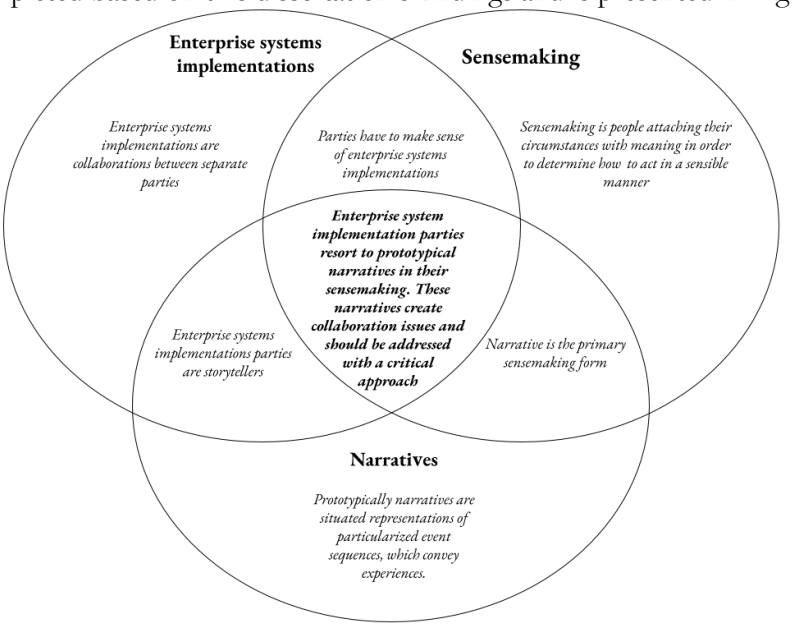

Figure 11 The Completed Theoretical Framework

This dissertation shows that enterprise system implementation parties resort to prototypical narratives in their sensemaking. Such narratives have the power to generate collaborative issues. Therefore, the narratives should be addressed with a critical approach. These findings are summarised in Table 6.

Table 5 Dissertation's Findings Summarised

Argument	Findings	Description
Narratives are the main sensemaking form in enterprise system implementations	Enterprise system implementation parties resort to narratives; enterprise system implementation parties' sensemaking happens with narratives	Enterprise system implementation are equivocal and the parties making sense of them with narratives.
Enterprise system implementation parties resort to prototypical narratives that may be conflicting	Enterprise system implementation parties' narratives are prototypical; enterprise system implementation parties' narratives may be conflicting.	Enterprise system implementation parties make sense with possibly conflicting narratives that are situated, conduct event sequencing, execute worldmaking, and convey experiences.
Conflicting narratives in enterprise system implementations create collaboration issues	Collaboration is essential for success in enterprise system implementations; conflicting narratives hinder collaboration in enterprise system implementations.	In case the enterprise system implementation parties enact conflicting narratives during the implementation, then collaboration issues emerge.
Narratives in enterprise system implementations should be addressed with a critical narrative approach	Narratives in enterprise system implementations should be approach with an analytical perspective that recognises the power of appealing, compelling, and resonating narratives in making complex matters simple.	Enterprise system implementations could find more success in case their narratives are approached with a critical perspective.

The findings are novel based on the following points:

- First, although the equivocality of enterprise system implementations has been acknowledged (Jensen & Aanestad, 2006; Orlikowski & Gash, 1994), the narratives' role has not been thoroughly considered. This dissertation reveals that sensemaking in enterprise system implementations happens with narratives. This offers a point to focus on in further studies that explore sensemaking in enterprise system implementation.
- Second, since the prevalent number of identified narratives in enterprise system implementation has been scarce, there has been no description of such narratives. This dissertation offers a number of narratives from the specific context of enterprise system implementations. This offers a reference for further studies on the description of narratives in enterprise system implementation.
- Third, although enterprise system implementations' issues are well recognised (Kähkönen et al., 2017; Momoh et al., 2010), the influence of narratives on them has not been considered before. This dissertation

indicates a link between these issues and narratives: Narratives, at least partly, explain why enterprise system implementations run into problems so often. This offers an aspect to focus on for future studies that consider enterprise system implementation issues.

- Finally, whereas storytelling has interested the information systems field (Schwabe et al., 2019), there have not been instructions on how to address narratives in enterprise system implementation. This dissertation's preliminary proposal for addressing narratives in enterprise system implementations is a first step towards a critical narrative perspective that should complement the nascent theme of studying narratives in the information systems field. This dissertation implies that such a perspective could aid in finding more success in enterprise system implementation.

6 CONCLUSION

This chapter concludes the dissertation. The concluding remarks begin with the contributions made by the dissertation. This dissertation considers three research streams: enterprise system implementations, sensemaking, and narrative theory. These streams are discussed separately. This is followed by an elaboration on the practical contributions. Then, a section discusses the limitations of this dissertation. The dissertation ends by proposing future research ideas.

6.1 Answers to Research Questions, and Contributions

Whereas enterprise system implementations' issues have been identified (Momoh et al., 2010), what leads to these collaboration issues is still a matter urging more discussion (Kähkönen et al., 2017). This dissertation addresses this theme by considering the main form of sensemaking: narratives (Brown et al., 2008; Fisher, 1984). Thus far, narratives have not been studied in the context of enterprise system implementations. This dissertation's goal was to improve the understanding of narratives in enterprise system implementations.

This dissertation explored the role, description, and influence of narratives in enterprise system implementations. This exploration revealed that narratives are the main form of sensemaking in enterprise system implementations. These narratives are described as prototypical narratives that may be conflicting. Such narratives were presented as having the power to produce collaboration issues. Therefore, the narratives should be addressed in research and practice. This dissertation illustrates that this could be done with a critical narrative approach. Based on these findings, Table 7 presents the research questions and their answers.

Table 6 Research Questions Answered

	Research Question	Answer
RQ1	What is the role of narratives in enterprise system implementations?	Narratives are the main sensemaking form in enterprise system implementation.
RQ2	What kind of narratives occur in enterprise system implementations?	Narratives in enterprise system implementation are prototypical and possibly conflicting narratives.
RQ3	How narratives influence enterprise system implementations?	Narratives have power to generate collaboration issues in enterprise system implementation.
RQ4	How can narratives be addressed in enterprise system implementations?	Narratives in enterprise system implementations can be addressed with a critical narrative approach.

The answer to the first research question indicates that people in enterprise system implementations resort to narratives when they attach meaning to enterprise system implementation related aspects. For instance, the different parties, such as doctors and nurses in Jensen et al. (2009) and Jensen and Aanestad (2006), used narratives to arrive at their conclusions regarding the new patient record system. Similarly, the bank's employees in Beaudry and Pinsonneault (2005) and the taxi drivers in Hsiao et al. (2008) made sense with narratives. However, these studies did not apply critical narrative research when studying sensemaking. The answer from this dissertation compels studies of enterprise system implementation sensemaking to focus on narratives.

The second research question answer describes the narratives that occur in enterprise system implementation. It supports articles such as Alvarez and Urla (2002) and Yeow and Chua (2020), which bring up narratives in this context. However, articles such as these two seem not to apply narrative theoretical discussion in the sense that they describe the narratives, such as their prototypical elements or their relationships. By contrast, the articles from the storytelling, such as articles from Schwabe et al. (2019) and Wende et al. (2014), bring out the presence of narratives in the information systems context. Yet, this stream's view of narratives is less critical, as it focuses on utilising narratives in practice. This answer thus introduces a comprehensive and critical definition of narratives in enterprise system implementations. This definition supports future enterprise system implementation research and practice that is encouraged to consider narratives; these efforts now have descriptions to use as a reference, as they consider narratives in this context.

The third research question answer highlights the power of narratives in the enterprise system implementation context. Information systems research has mostly highlighted the benefits that can be gained from this power (see e.g. Schwabe et al. 2019). The other side of the coin is less studied in enterprise system implementation. The answer also bridges the narrative theoretical discussion with enterprise system

implementation issues. Articles such as Momoh et al. (2010), Kähkönen et al. (2017), and Smolander et al. (2021) have studied issues in enterprise system implementation. However, the human nature that leads to these issues has received less attention. This answer sheds light on the fact that narratives play a role in these issues. The answer thus encourages exploration of how narratives can be addressed to find solutions for enterprise system implementation issues.

The fourth research question offers ideas on how to address narratives in enterprise system implementations. Information systems research has mostly considered how narratives can be leveraged in different ways (Boldosova, 2019; Schwabe et al., 2019). This answer supports this with a more critical perspective. This perspective includes the dark side of the narratives and embeds them in the approach it proposes. The answer thus encourages researchers and practitioners in enterprise system implementation to be aware of the danger of narratives, to employ the critical perspective on narratives, and to avoid or at least address the issues that narratives introduce into this context.

6.1.1 Contributions to Enterprise System Implementations

This dissertation contributes to the research on enterprise system implementation. These contributions include illustrative cases of enterprise system implementations, descriptions of enterprise system implementations as collaborations, linking enterprise system implementations with narratives, and a proposal of a way to address narratives in enterprise system implementations.

First, this dissertation presents two cases of enterprise system implementation that ran into collaboration difficulties. These illustrate the difficulty of these endeavours: the aligned efforts between the separate parties are difficult to reach. The vendor, client organisations, and third-party organisations again found it difficult to pull in the same direction. This dissertation thus further strengthens the idea that research on enterprise system implementation should focus on solving collaboration issues (Kähkönen et al., 2017; Momoh et al., 2010; Smolander et al., 2021).

Second, this dissertation further strengthens the argument that enterprise system implementations should be considered essentially collaborations. This supports the arguments made by, for instance, Smolander et al. (2021), Kähkönen et al. (2017), Dittrich et al. (2009), and Sawyer et al. (2000). The outcomes of these implementations are the result of contributions from different parties. Efforts of a

single party—be it a third-party organisation, vendor, or client organisation—do not alone determine the outcomes in these implementations. Having a specific goal to be reached—such as becoming user-centred—necessitates that all parties work towards this goal. This is an insight that should be considered in research that considers enterprise system implementations.

Third, this dissertation proposes that the infamous issues in enterprise system implementations are linked with narratives. These issues include never-ending customisations, misunderstandings regarding business needs, insufficient change management, IT-business misalignments, creeping costs, poor user training, and lack of commitment from top management (Momoh et al., 2010). These result from collaboration issues, such as power imbalances, trust issues, and competing objectives (Kähkönen et al., 2017). This dissertation demonstrates that these collaboration issues at least partly result from narratives. These collaboration issues could result from the parties' sensemaking of the equivocal implementation with narratives. These narratives tend to offer appealing and simplified explanations. This could result in approaches that are not optimal for collaboration. This insight means that research that studies issues in enterprise system implementations should consider the role of narratives in these issues.

Finally, this dissertation illustrates that it is possible and beneficial to critically approach narratives in enterprise system implementations. There has already been an interest in leveraging narratives and, for instance, storytelling in information systems development. This dissertation illustrates a critical approach that should complement these interests. This illustration also calls for further research to elaborate on how narratives may be tackled in enterprise system implementation. Such an approach—if made in a feasible form—could be beneficial for both theorising and information systems practice.

6.1.2 Contributions to Sensemaking Perspective.

This dissertation contributes to the sensemaking perspective by offering more examples of sensemaking and enactment, revealing more about narratives' role in sensemaking, and proposing a way to use knowledge of sensemaking in more practical terms.

First, this dissertation presents two cases of sensemaking in enterprise system implementation. These cases illustrate that when faced with equivocal matters, people have to make sense of them. In these cases, such equivocal matters were

enterprise system implementations. Previously, specific technologies were considered equivocal (Griffith, 1999). However, this dissertation's cases further strengthen the notion that enterprise system implementations are also an equivocal matter. The cases also illustrated that those who make sense will enact their sensemaking; the studied implementation parties enacted their sensemaking during the enterprise system implementation. These illustrative cases add to the still-growing research theme of sensemaking and enactment.

Second, this dissertation illustrated the role of narratives in sensemaking: narratives offer appealing, compelling, and resonating explanations when people comprehend their circumstances with sensemaking. Sensemaking with narratives settles with plausibility, not strictly with accuracy or with what is the most beneficial. This brings the prototypicality of narratives into sensemaking research (Herman, 2009). This dissertation encourages that the discussion on sensemaking with narratives considers the essential nature of narratives, as it works to understand more about how people come in terms with their surroundings: with narratives, we may understand more about why sensemaking results in non-optimal outcomes (Yeow & Chua, 2020).

Third, this dissertation contributes to studies that consider ideas to address sensemaking in practice: sensemaking is difficult to witness, and it does not easily lend itself to practical approaches, such as methods or techniques (Kjaergaard & Jensen, 2008). However, as confirmed by this dissertation, sensemaking is a crucial issue to address. This dissertation offers a promising direction to focus on in studies that elaborate on ways to address sensemaking: narratives. The narratives were confirmed as entry points for witnessing sensemaking.

6.1.3 Contribution to Narrative Theoretical Research

This dissertation brings a narrative theoretical discussion into a fresh context. The application of narrative theory in enterprise system implementation illustrates how this context is a fruitful ground for narratives. This offers a new context for narrative theoretical researchers to apply their knowledge. This may create a feedback loop in which both fields, the information systems field and the narrative theoretical field, learn from each other.

Second, this dissertation provides examples of how people use narratives to comprehend matters that are not the size of a human. The enterprise system implementation introduced an additional matter that is seemingly equivocal for the

human mind. This further strengthens the description of what kind of matters people use narratives to comprehend. This dissertation illustrates that things that are beyond people's comprehension, such as enterprise system implementation, are compressed into more manageable measures with narratives.

Third, this dissertation further exemplifies prototypical narratives. The narratives presented in this dissertation include prototypical narrative elements (Herman, 2009). These complement the instances in which the narrative theoretical field analyses, as they generate more understanding about the essential nature of narratives. These novel instances can even lead to a more comprehensive description of prototypical narratives.

Finally, this dissertation illustrates the need for ways to apply narrative theoretical research. As Mäkelä et al. (2021) stated, there have already been attempts to instrumentalise narratives. This instrumentalisation has a tendency to simplify the narrative theoretical perspective to remain pragmatic. A critical and analytical perspective is under the threat of being left in the shadows. This dissertation shows that enterprise system implementations are an example of a context that would benefit from ways to apply a critical analytical perspective to narratives. This informs narrative theoretical researchers to offer narrative approaches.

6.2 Practical Contributions

This dissertation contributes to the practice of enterprise system implementation. First, it offers practitioners narratives that different parties may have in enterprise system implementations. The practitioners in these implementations work with myriad parties who approach the implementations from different perspectives. Yet, their efforts need to be aligned—that is, they need to understand each other's perspectives. This dissertation offers knowledge about narratives that these parties can use when trying to understand each other. If these parties can learn to understand each other's perspectives through their narratives, they may even find more aligned collaborations. This could possibly result in more success in enterprise system implementations.

Second, this dissertation hopes to encourage practitioners in enterprise system implementation to engage in self-reflection regarding their own narratives. This dissertation shows how these parties' own narratives can offer them plausible, appealing, and simplified explanations. If they enact such explanations in their implementation practices, collaboration may be difficult to reach. If these parties

become more aware and critical of their own narratives, they may find more beneficial approaches for collaboration.

Finally, this dissertation offers initial ideas regarding how practitioners could critically approach narratives in enterprise system implementations. This is hoped to ignite these practitioners to consider how the critical narrative approach can be embedded in their implementation practices. Fining such an approach and becoming more aware of the narratives could help to identify ways to avoid some of the infamous issues in these implementations. A promising starting point could be to consider popular methodologies, such as waterfall or agile methods, and to see if their frameworks could adopt critical narrative awareness.

6.3 Assessing the Research

In this section, I evaluate this dissertation. This is based on Klein and Myers' (1999, p. 72) principles for interpretive case studies. These are summarised in Table 7.

Table 7 Evaluating the Studies

Principles	The principle applied
Hermeneutic circle	Continuous iteration with details and overall case view
Contextualisation	Presenting detailed case and summarised scientific field descriptions
Interaction Between Researchers and Subjects	Transparency in being interpretive. Publicly available findings
Abstraction and generalisation	Reflecting data with theories
Dialogical reasoning	Challenging the findings
Multiple interpretations	Reflecting the findings from multiple perspectives.
Suspicion	Comparing interviewees' accounts. Discussing findings with colleagues

According to Klein and Myers (1999, pp. 71–72) the fundamental principle in interpretive case studies is the *hermeneutic circle*. This means that in interpretive case studies, understanding is achieved by iterating between focusing on the interdependent meaning of parts and the whole they generate. In this dissertation, this was achieved through continuous comparison between details from the data and an overall view of the cases. This can also be seen in how the dissertation's articles progress from one to another. As one article proposes insights, it contributes to the context of the studies. Other articles reflect this context when attaining new insights. In this way, the articles build on each other.

Contextualisation refers to the fact that in interpretive case studies, there must be critical reflection of the social and historical background of the research setting. This enables the audience, such as readers, to generate their understanding of the case settings. In this dissertation, this was achieved by presenting detailed case descriptions, and by summarising relevant literature. In this way, the audience can create their own interpretations of both the case settings and the knowledge from the scientific field. They can then interpret the findings from their own perspectives.

In interpretive case studies, there should be *interaction between researchers and subjects* (Klein & Myers, 1999, pp. 74–75). This enables transparency and reflection on how data are socially constructed. In this dissertation, I have achieved this first by being open to the interpretive nature. In all the articles, I have made it clear that I am being interpretive. I have underlined that I am not only revealing purely objective facts but I am expressing my interpretation, which is based on empirical data. Further, the findings have been made public. These are presented in the research articles. For instance, in 2020, a publicly available blogpost was published, which was written by me and my colleague, who is a co-author in one or more of this dissertation's articles. This blogpost attracted interest and comments. The findings were also presented in a seminar in 2020, in which the case organisation's representatives were present. This seminar was organised by a research group to which I belonged.

Abstraction and generalisation refer to the fact that in interpretive case studies, the idiographic details revealed by the data interpretation should be reflected with a general view of some theories about the nature of human understanding (Klein & Myers, 1999, pp. 75–76). In this dissertation, I have achieved this by reflecting the data with some major information systems theories. These include structuration theory, institutional theory, and the theory of organisational sensemaking.

The principle of *dialogical reasoning* proposes that interpretive case studies require sensitivity (Klein & Myers, 1999, pp. 76–77). This sensitivity is related to contradictions between theoretical preconceptions and findings. This should be a subsequent cycle. I have continuously challenged the findings. This was ensured, for instance, by discussing the reasoning with colleagues, such as the supervisor, and researcher from other fields. I have also emphasised transparency. In each article, I present their philosophical underpinnings and corresponding assumptions. I see that this enables the audience to witness such assumptions and question the findings.

The principle of multiple interpretations recognises that interpretive case studies are, obviously, open to many interpretations (Klein & Myers, 1999, pp. 77–78). They do not emphasise that only objective facts should be revealed. This also means that to present some ideas as findings, they need to be reflected on from multiple

perspectives. In this dissertation, I have achieved this in several ways. First, I possess many perspectives on this dissertation's cases. The obvious one is the perspective of me as an information systems researcher. From this perspective, we try to remain as objective as realistically possible and reflect on the cases without presumptions. It guides me to consider the intersection of social and technical, and to focus on those issues that arise from this intersection. The second perspective is that I am an information systems user. I also use multiple information systems in my daily life. From this perspective, I consider the cases by reflecting on them with my experiences as a user. The third perspective is that of me as a developer. I have worked on a few small software development projects. From this perspective, I reflect on the findings in relation to those events I encountered when programming applications for users. The final perspective is that of me as a storyteller. This was discussed in the previous sections. This guides me to consider the narratives I have about information systems cases. Second, multiple perspectives were acquired through continuous discussions with researchers from many fields. The findings were then adjusted based on such discussions. Third, the data included many perspectives. The data had the perspectives of users, developers, managers, and third-party organisation members. This ensures that the findings do not include only a single interpretation.

The principle of *suspicion* emphasises that in interpretive case studies, the findings need to always be approached with a critical perspective (Klein & Myers, 1999, pp. 77–78). In this dissertation, I have achieved this by comparing the interviewees' accounts with each other and other information around the cases. Further, the findings were discussed with many researchers.

Overall, proving validity in interpretive case studies is complex. However, any scientific findings need to be sufficiently trustworthy. For this reason, I compiled this dissertation from peer-reviewed academic articles. Each article has gone through a rigorous peer-review process. They have also been presented at scientific conferences. They have thus been open to critique and discussion. This should ensure their trustworthiness.

6.4 Limitations

This dissertation is not without limitations. First, this dissertation is based on a limited number of cases. This means that the findings are generalisable to a limited extent. However, the study of a limited number of cases enabled a deep focus on

those instances with reasonable efforts. Significantly increasing the number of cases could have resulted in an unrealistic amount of additional work without significant additional benefits. This limited number of cases enabled us to improve understanding regarding the role, description, and influence of narratives in enterprise system implementations. The current number of cases also made it possible to propose an initial approach for addressing narratives in enterprise system implementations. The findings may, however, be further elaborated on with more data in future studies.

Second, this dissertation is interpretive. This means that the findings are based on the researcher's interpretations, and there is a possibility of, for example, misinterpretations. However, this dissertation's goal was not to offer testable, repeatable, and provable results. The goal was to improve understanding by deductive reasoning insights from a social phenomenon by combining established theoretical discussions with empirical findings. The chosen approach enabled this study to offer rich descriptions of the narratives in enterprise system implementations. Reaching this goal would not have been possible if the context had been simplified to enable repeatable tests. This decreases the significance of the risks of misinterpretations, for example. Additionally, throughout the study, the findings were discussed with colleagues and researchers from different disciplines. More interpretations can be reached in future studies.

Third, this dissertation's data focused on a limited number of implementation parties' perspectives. This means that this dissertation especially emphasises the role of the studied party. The chosen perspective, however, enabled us to reach an in-depth focus on this specific party. Studying other parties' perspectives in a similar depth could have made their perspectives more represented but would most likely not have significantly affected this dissertation's findings. The focused perspective enabled this study to identify and understand this party's way of utilising narratives.

Fourth, the present dissertation does not explicitly delineate the particular collaborative issues that the proposed critical narrative approach aims to address. Instead, the research outcomes reveal the association between the narrative-critical approach and its potential efficacy in resolving collaborative issues in a broad sense. The precise identification and explication of specific issues necessitates additional enquiry in the future.

Finally, to be faithful to this dissertation's philosophical underpinnings, the researcher also needs to be considered a storyteller himself. This means that this dissertation offered a perspective on narratives, which is itself also influenced by narratives. This, however, guided the researcher to engage in self-reflection as a

researcher and storyteller throughout the study. Self-reflection enabled the researcher to reach an advanced understanding of the studied phenomenon. This enabled the study to reach a view that not only reflects what empirical data and established theories propose but is enriched with the researcher's perspective.

6.5 Future Research

This dissertation opened up topics for future research. First, the number of example narratives should be increased. As established in this dissertation, there are only a few studies that showcase narratives in enterprise system implementations, or even in the overall information systems context. Additional examples of such narratives could increase our understanding of them. This could result in an understanding of which particular narratives prosper in information systems implementation. If this understanding increases enough, we may even be able to identify general narratives in the information systems context.

Second, different parties' narratives should be studied. This study focused mostly on one perspective. Other parties' narratives were not able to be studied to the same extent. The other perspectives include, for example, that of the vendor, client organisations, users, and other consultant organisations. These parties most likely also approach these implementations with their own narratives. Future studies could focus on revealing narratives from these different perspectives. This would result in a more comprehensive view of narratives in information systems implementations.

Third, the narratives' role in more specific enterprise system implementation states could be studied. For instance, requirement elicitation is clearly a natural stage for narratives to prosper. This was already briefly noted by Alvarez and Urla (2002). However, narrative occurrences are most likely not limited only to requirements elicitation; they should be present at any stage where sensemaking occurs. This also includes stages such as designing, programming, testing, and use.

Finally, an approach to addressing narratives in enterprise system implementation requires more studies. This dissertation was able to merely present initial ideas for such an approach. This offers a good foundation for future studies to refine this approach. In addition, the approach should be empirically tested in order for us to learn more about its effects. Promising approaches for such an endeavour include action research, design science, and action design science (Peffers et al., 2007; Venable et al., 2016). If such an approach could be developed, we could more

effectively address narratives in enterprise system implementations. This could even result in more success in these complex sociotechnical endeavours.

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ARTICLE I

Masterplots in information systems implementation

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MASTERPLOTS IN INFORMATION SYSTEMS IMPLEMENTATION

Research Paper

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Abstract

Information systems (IS) implementation is essentially a social activity. Technical solutions emerge from the humans' social interactions and cognitive processes and are then planted into the IS users' subjective realities. These interactions are referred to as narratives, aka stories. Yet the narratives are anything but a simple form of information transfer. Rather than revealing objective facts, narratives make sense of the users' subjective experiences from their reality, and more importantly, their surrounding context. Narratives are thus not just simple standalone stories but draw from masterplots engaging with the actors' deeper and embedded perceptions. Both culturally and socially determined masterplots and specific, situated narratives may thus have an influential position in IS implementation. To explore the occurrence of different masterplots in large-scale IS implementation, we conducted a case study to identify and analyse the masterplots the IS actors resort to when making sense of their own professional and personal experience.

Keywords: Information Systems, Implementation, Narratives, Masterplots.

1 Introduction

Information systems (IS) are increasingly critical in today's organizations. They are the backbone for everyday business processes. This results in that most employees already are or become IS users (Leonardi, 2011). Despite their increasingly significant role, implementing IS has continuously proven challenging (Staehr et al., 2012), as shown by the piling failure reports (Baghizadeh et al., 2020; Dwivedi et al., 2015). Often social and organizational issues rather than pure technical details are accounted for the main problems (Baghizadeh et al., 2020; Berente et al., 2019; Berente and Yoo, 2012; Lyytinen and Robey, 1999). Clarification for these sociotechnical struggles is much needed.

Sociotechnical struggles are concretized in situations where different actors', such as IS users' or system developers', subjective conceptualizations of reality meet with the new technological artifact (Davidson, 2006; Orlikowski and Gash, 1994). IS thus function both as an indispensable element of organizational life, infusing the users' activities (Lamb and Kling, 2003) and still partly remaining as an imperceptible component of their everyday routines, interacting for example with perceived structures and culture (Alvarez, 2008; Ernst et al., 2018; Jones and Karsten, 2008; Orlikowski, 2007) and institutionalized perspectives (Berente et al., 2019; Berente and Yoo, 2012; Pouloudi et al., 2016; Reay and Hinings, 2009). This implies that IS are not just tools to be taken into use, but they are deployed into the reality where their users act (Orlikowski and Scott, 2008). This position subjects them to different interpretations (Davidson, 2006; Lim et al., 2011; Mesgari and Okoli, 2019; Orlikowski and Gash, 1994), connoting for instance what is considered a successful IS implementation

(Dwivedi et al., 2015; Ylinen and Pekkola, 2018). Implementing large-scale IS into an organization concretizes different interpretations through collaborative efforts (Alanne et al., 2015; Dittrich et al., 2009; Sawyer, 2001).

Capturing the sociotechnical context and converting its corresponding needs into implementation efforts is evidently challenging. Almost imperceptibly the result may be that the new IS is not in full harmony with the organizational reality (Ajer et al., 2021; Berente and Yoo, 2012; Ernst et al., 2018; Jones and Karsten, 2008). However, identifying the interpretations that different actors perceive is difficult as they are not often in an explicit form (Orlikowski and Gash, 1994). To understand the situation, it is necessary to enter into the actors' reality. Here the concept of narratives turns out beneficial as it is natural for people to resort to narratives when they try to reach a personally adequate perception of their surroundings. In other words, narratives are efficient cognitive tools for organizing time, process, and change (Herman, 2009; White, 1981). However, while narratives offer views of the reality where their tellers live, they neither represent a simple form of information-transfer that faithfully attempts to convey the objective reality, nor simply emerge from what the individual is experiencing. Instead, the narratives find inspiration from skeletal masterplots that explain sporadic events that would otherwise be difficult to comprehend (Abbott, 2008, 2002). Masterplots are culturally and socially conditioned models that offer a familiar and appealing structure for narratives. The narratives are nevertheless both constituted and propagated socially as they shape our interactions with others, and they are shared with others in encounters that, in turn, have the potential in becoming new narratives (Herman, 2009, p. 9).

IS research considering narratives is rare (Sahni and Sinha, 2016). While their presence for instance in IS development has been briefly explored (Alvarez & Urla, 2002), their relation to a larger social context is not discussed, nor has the potential in understanding them as informative yet complex information sources been entirely revealed. Instead of being merely stand-alone stories generated and told in a vacuum, the narratives are linked to their surrounding context (see Herman, 2009). This makes them relevant for IS research since implementing an IS is a story of different interpretations driving the efforts (Lim et al., 2011; Orlikowski and Gash, 1994). This story comprises issues such as the tension between institutionalized perspectives (Berente et al., 2019; Gosain, 2004; Reay and Hinings, 2009), complex social actors (Alvarez, 2008; Carter et al., 2020; Lamb and Kling, 2003), and collaboration with intrinsic goals (Pouloudi et al., 2016; Sawyer, 2001; Sawyer, 2000).

This complexity and potential but limited support of narratives motivate our paper. In this paper, we study the masterplots and the resultant individual narratives pertaining to these masterplots in the large-scale IS implementation and show their presence and some consequences. We seek an answer to the question: "What kind of masterplots meet in a large-scale IS implementation?" We conduct a qualitative single case study of a large-scale IS project, where a group of municipalities and several healthcare and social care organizations are implementing a shared patient record system. We argue that these masterplots frame the actor groups' interpretations and corresponding actions.

We organize the paper as follows. First, related IS research and narratives are reviewed. Second, research methods and the case setting, and our findings there are presented. This is followed by discussions and concluding sections.

2 Related Literature

IS comprises of people, processes, data models, technologies, and formalized languages, that are structured to support organizational functions (Hirschheim et al., 1995, p. 11). IS, such as Enterprise Resource Systems (ERP) are implemented into organizations to facilitate streamlined business processes and operational efficiency while integrating multiple users into the shared system (Kähkönen et al., 2017). They are designed to improve an organization's performance by improving the ability to produce crucial information throughout the organization (Beheshti, 2006).

Perhaps the most critical yet problematic task in the IS implementation relates to unravelling the user-needs and carrying out appropriate measures during implementation. For instance, mistakes in

requirements engineering (Beimel and Kedmi-Shahar, 2019; Sutcliffe et al., 1999) represent a root cause for significant problems later during the process (Chakraborty et al., 2010; Darke and Shanks, 1997). Misinterpreting the needs easily steers this process into a flawed direction (Alanne et al., 2015; Sutcliffe et al., 1999). The result may be that the system benefits the users differently (Ylinen and Pekkola, 2018), is culturally unfit (Ernst et al., 2018), or that the system supports some institutional perspective and suppresses the others (Berente et al., 2019; Gosain, 2004).

For large systems, the implementation tasks cannot be conducted through a single perspective. Instead, implementing a large-scale IS is a collaborative activity of numerous parties having different and fragmented expertise who are in charge of different inputs for the process (Dittrich et al., 2009; Kähkönen et al., 2017). Often, the underlying system product is developed by a vendor who thus owns this product and is capable of modifying it (Dittrich, 2014; Dittrich et al., 2009; Light, 2005; Singh and Pekkola, 2021; Xu and Brinkkemper, 2007). The system product is not ready for deployment straight from the vendor but requires customizations and configurations (Dittrich, 2014; Dittrich et al., 2009; Light, 2005; Singh and Pekkola, 2021; Xu and Brinkkemper, 2007) often conducted by a specialised consultant organization (Howcroft and Light, 2006; Kähkönen et al., 2017; Metrejean and Stocks, 2011). The ultimate system is deployed into client organizations where users, the complex social actors (Lamb and Kling, 2003), take the system as a part of their reality (Orlikowski and Scott, 2008).

This collaboration in the IS implementation implies that the shared objectives, perceptions on ends and means (Kirsch and Haney, 2006) and goals (Sawyer, 2000) vary. IS implementation is thus subject to alternative interpretations (Lim et al., 2011; Mesgari and Okoli, 2019; Orlikowski and Gash, 1994). For example, the users are conceptualized in alternative ways (Isomäki, 2002) and perspectives on how to address them in the development vary (Iivari and Iivari, 2011, 2006). While each user-centred approach assumes that they are serving the users best, they significantly differ in terms of practically addressing the users (Iivari and Iivari, 2011). The system deployment could also be conducted for example incrementally or as a "big bang" (Ludwick and Doucette, 2009, p. 26). Evidently the perceptions steer the implementation to different crossroads.

Developing and implementing IS is essentially a social activity. There the requirements engineering activity attempts to elicit the needs that the system should fulfil (Appan and Browne, 2012; Beimel and Kedmi-Shahar, 2019). In this activity, the users and the analysts interact in order to produce a systems specification that is, in large parts, steering the subsequent development and implementation activities (Chakraborty et al., 2010; Davidson, 2002; Kirsch and Haney, 2006; Thanasankit, 2002). Here it is crucial to acknowledge that these participants are human actors with their flaws and limitations, such as biases (Holmström and Sawyer, 2011; Kirsch and Haney, 2006), cognitive limitations (Appan and Browne, 2012, 2010), assumptions (Al-Karaghouli et al., 2000; Sutcliffe et al., 1999), and perceptions (Davidson, 2002; Holmström and Sawyer, 2011; Lim et al., 2011; Orlikowski and Gash, 1994). Collaborative actions should produce a shared understanding of what is needed from the future system and what is the best way to achieve this outcome (Holmström and Sawyer, 2011; Rosenkranz et al., 2014). This need should be interpreted similarly throughout the implementation process, since the system often requires customization and configuration before it is ready for deployment (Dittrich et al., 2009; Sawyer, 2000). IS and its needs are thus socially constructed.

However, not only is the IS implementation inherently social but so is also its use. The users are social actors and IS "infuse their everyday actions" (Lamb and Kling, 2003, p. 197). This means that IS are not merely used but rather they become an integral part of the multidimensional social context where the users act (Orlikowski and Scott, 2008). IS users interpret the technological solutions in different ways and by sensemaking attempt to place the technologies in their world (Davidson, 2006, 2002; Hsiao et al., 2008; Orlikowski and Gash, 1994). IS implementation is thus interacting with the organization's social context, such as user identities (Alvarez, 2008), environment, affiliations, and interactions (Lamb and Kling, 2003) and institutionalized perspectives (Berente et al., 2019; Berente and Yoo, 2012; Reay and Hinings, 2009). Implementing organizational IS is evidently much more complex than just shifting to use a new tool. A better understanding regarding different actors' sensemaking of IS is urged (Hsiao et al., 2008; Mesgari and Okoli, 2019).

Social construction of IS is a popular research stream (Leonardi and Barley, 2010; Lim et al., 2011; Mesgari and Okoli, 2019). Inspired by Bostrom and Heinen (1977) Orlikowski and Gash (1994) pioneered the discussion on how actors' make sense of different IS-related activities such as IS use and design through frames that alter their perceptions. Interestingly, such interpretations are not solely individual but actor groups often develop not identical yet relatively similar interpretations – shared frames (Davidson, 2006; Orlikowski and Gash, 1994). This implies a significant topic to consider in IS implementation context that is essentially a collaboration of different parties. When the interpretations of central actors, in this case the collaborating implementation parties, significantly differ, issues will emerge (Orlikowski and Gash, 1994). However, empirical research seems scarce for studies exploring interactions between the interpretations of the various implementation parties. Also, identifying the interpretations is difficult because they rarely find their way to the surface in an explicit form during activities (Orlikowski and Gash, 1994). Yet the tension between interpretations may represent antecedents for many issues as they drive the efforts of the parties. We argue that awareness regarding narratives as a significant step towards addressing issues in the flux of varying interpretations that IS implementation is evidently.

For human beings it is natural to use narratives as a cognitive tool for organizing time, process, and change (Herman, 2009). A narrative is a particularized account of sequenced events that are by the narrative and plot construction made to appear to have relation and sense (Bruner, 1991; Herman, 2008). This cognitive process is sometimes referred to as narrativization (Fludernik, 1996; White, 1981). While being a universal tool for sensemaking, a prototypical, tellable narrative foregrounds the personal and the unexpected; it conveys what it is like for a certain individual to live through a disruption in the storyworld (Herman, 2009). By narrativizing the virtual chaos of events, a human actor is able to find some coherence that resonates with their perception of the world (Fludernik, 1996; White, 1981). People consequently share glimpses of their perceptions of reality with their narratives. However, the narratives are also subject to strategizing and rhetorical factors. This means that the stories of failure, conflict, and personal disappointment are more tellable than the success stories or the stories of "business as usual." Storytelling is in fact particularly impactful, when the told narrative connects storyteller's and her presumed audience's experience (Mäkelä et al., 2021). The IS users quite often produce compelling narratives that point out external difficulties in their work to deflect blame from the past inefficiencies (Alvarez & Urla, 2002). Such narratives effectively convey information about the users' perceptions on subjectively constructed reality. In contrast, an IS that works like a charm is not an interesting topic for a narrative. One of the dangers of narrative is that a personal narrative may become disproportionately representative and even normative when shared with others (Mäkelä et al., 2021). Thus, while the narratives are informative on the subjective reality, they do not present an objective reality, and they often leave, for instance, positive aspects aside. Nevertheless, the narratives paint the picture of the world for human beings and thus guide their behaviour there.

The concept of masterplot, derived from interdisciplinary narrative studies (Abbott, 2008, 2002), captures the culturally and socially conditioned nature of narrative meaning-making. The way individuals utilize masterplots in their personal accounts has also been understood as likened to the act of ventriloquism (Jensen Schleiter et al., 2019). Masterplots are skeletal, easily recognizable models that give familiar, shareable, and portable shape to the individual, situated narratives, and as such, function as tools for both telling and interpreting narratives. They provide almost subliminal models for narrating the surrounding world's phenomena: it is the skeleton of how the narrative of something is usually told. Masterplots reflect the fact that certain ways of telling are more acceptable and available than others in a certain historical period, culture, or social situation. Masterplots tie together the narratives that could otherwise seem separate and individual. Narrative ways of making sense of IS projects are thus affected by culturally and societally dominant ways of conceiving both the human-technology relationship and the users' and developers' professional roles. While the masterplots make the verbalization and sharing of IS implementation experiences possible, they inevitably obscure and ignore certain aspects of the process and communication there. For instance, in organizations, some

widely shared narratives are powerful not only in aligning the actors' perspectives, but also in creating organizational inertia and blind spots by their compelling nature (Geiger and Antonacopoulou, 2009).

Capturing the intangible social environment and its needs appropriately is difficult. Eliciting the actors' needs in a social context is a cumbersome task (Beimel and Kedmi-Shahar, 2019). The IS users comprise their world perception into narratives that they tell to IS developers (Alvarez & Urla, 2002). The developers, seeking objective facts, however, take these narratives as messy implying difficulties in their comprehension. Often this results in adopting an incomplete perspective. There is a tendency to rely on a perspective that is satisfactory rather than optimal (Chakraborty et al., 2010; Pitts and Browne, 2007, 2004) and addressing what is said instead of what is needed (Holmström and Sawyer, 2011). The narratives, however, would convey valuable information if it is looked beyond what is precisely said by engaging in interpretation of these narratives. For example, university administration narrating about irresponsible students to deflect blames of past ineffectiveness (Alvarez & Urla, 2002) could reveal cues of experiences, identities, and organizational culture these users perceive, which easily clashes with a new IS (Alvarez, 2008). Consequently, the narratives offer a valuable entry point into the perceived reality where the users act, and where the IS will be implemented.

The complexity in IS implementation is thus a result of a socially constructed tangible product (IS) that is implemented into organizational context comprising many intangible, interpretational, embedded and significant factors. The work in IS implementation and its different phases is evidently subject to different views, which, have to be ultimately harmonized. However, capturing different perceptions is a non-trivial task as they lay deep in the actors' subjectively held conceptualizations of reality, which is partly subconscious and may thus be not easily identifiable. This may explain why the systems end up not serving the organizations' needs well (Berente and Yoo, 2012; Gross and Pekkola, 2010). In this context, narratives and the skeletal masterplots that propose an easily comprehendible explanation of events, could offer a significant explanation of what views and forces are driving the IS implementation.

3 Research Approach

In this paper, we study a large IS renewal project. In this project, a patient record system is acquired and implemented for a consortium of several public healthcare and social care organizations. The system is estimated to serve around 35.000 social and healthcare professionals and influence around 1.6 million citizens. Total project costs are estimated to be around 600 million euros, from which the technology is approximately 200 million euros.

This case is unique in [the country] in its nature, size, and complexity. The project was launched in 2012. Procurement began in 2013 with a shared procurement strategy and followed the negotiation procedure (Moe and Newman, 2014). The system candidates were assessed by weighting the quality criteria to price. Usability was thus a prioritized criterion. The procurement resulted in that an offshore vendor with a packaged system was contracted. The acquisition began in 2016 with actual implementations starting in 2018 and (planning to) end in 2021. The vendor, local developers in charge of acquiring and implementing the system, numerous client organizations, and the citizens were the primary stakeholders. The client organizations include primary health care organizations, run by each municipality, that are the main contact point towards citizens. More specialized services, such as surgery or cancer treatments, are provided by hospitals, own by the municipality consortium. The social care services, offered by the municipalities, comprise a wide range of services, such as social counselling, rehabilitation, and mental health work to ensure social security and wellbeing. The client organizations have numerous intersecting processes when offering treatment and services for patients and clients. Often the citizens simultaneously use numerous services. Thus, the implementation of a shared IS and common patient records to all client organizations makes sense.

We utilize an interpretative qualitative single case study approach (Walsham, 1995). This is because IS implementation is essentially a social process (Newman and Robey, 1992) that should be understood in its social and political context (Butler and Fitzgerald, 1997; Myers, 1995). Also, interpretivism (Eriksson and Kovalainen, 2015, p. 20) is an evident choice as it sees reality through the

constructions, mainly language and shared meanings. It thus puts the focus on human interpretations and meanings that are perceived as central IS implementation factors (Walsham, 1995). This approach is aligned with the narrative theories, which considers people as storytellers using narratives to construct their reality (Fisher, 1984).

We conducted twelve interviews with the key project stakeholders (see Table 1). The interviews were conducted between the fall of 2019 and the spring of 2020. This was after the first system deployments. We used the snowballing sampling, i.e. we asked the interviewees to name subsequent, influential and relevant people (Morgan, 2008). The first three interviewees were provided by the case company. The interviewees included management level actors from the local development organization and a consult that worked with the social care professionals (Con1). Their positions varied from the highest level of management (M1, M2, Clin1, M5, and M10) to those who manage the development of a certain product or module (M3, M4, M8) or unit (M9) and those who are responsible for a certain aspect of the system (M6) or process (M7). Thus, the perspective we attained is mostly from the local developers' management perspective. There is however also a view into the operational level (Con1). We see the local developers' management level perspective as appropriate because management is responsible for the overall management of the project and thus their views are most likely more influential than those of individual actors from operational level. Also, in the overall project, the local developers are in the position of a middleman and should thus have a view to both directions – to the vendor and client organizations. The possibility to compare the strong management perspective with the view from the operational level is also interesting.

The interviews followed a thematic open interview protocol, where the interviewer does not lead the discussion into pre-defined directions. As an illustrative example, the interviewees were asked to describe the project from their perspective. With these descriptions, interesting issues emerged. All interviews, approximately an hour each, were conducted face-to-face in the case organization premises by two interviewees. All interviews were conducted and analyzed in [language name]. Only illustrative quotations were translated into English.

Index	**Title**
M1	Chief Technology Office
M2	Director of Development
M3	Solution Architect
M4	Business Manager, Social Care
M5	Chief Executive Officer
Clin1	Clinical & Social Care Lead
M6	Usability Manager
M7	Director of Human Resources
Con1	Consultant for Social Care
M8	Business Manager, Digital and Citizens Services
M9	Head of Software Development Unit
M10	Development Manager

Table 1. Interviewees

To identify the narratives, we focused on reoccurring conceptualizations and definitions. For the purpose of this study, we grounded our view of narratives with a definition provided by Herman (2009, p. 9). This emphasizes a narrative as a representation of sequenced events structured to make sense of an experience. During coding, continuously appearing definitions and conceptualization were coded as narrative components while following an open coding approach (Urquhart, 2012). The coding began without preliminary code categories, but we limited the perspectives of narratives on those of the three main stakeholders (vendor, local developers, and domain professionals from the

client organizations). Vendor's and domain professionals' narratives were interpreted from descriptions that the developers provided. This means that the events are viewed through the local developer's perception. This enabled us to attain a wide perspective of the context since the local developer is arguably the most central actor. Similar conceptualizations were grouped to form larger code categories. This process of grouping and creating categories was iterative and continuous throughout the analysis. Rather than focusing on short individual tellings, we aimed to find similarities and recurring patterns between the tellings that form collective narratives. Interpretively we theorized these collective narratives as masterplots. Finally, we analyzed the narratives and their central principles and activities and theorized the relationships between the narratives and the critical actions.

4 Findings

We identified three distinct masterplots that influenced the individual narratives about the IS renewal process, told by the actors. These masterplots emphasized the ease of use as the key to success, the IS's role as a guide towards business-like service production, and information system as the necessary evil for users.

4.1 Ease of use as the key to successful implementation

The local developers stated that they focus on users and usability "*in exceptional amounts*" [M6]. Usability was prioritized already in the procurement and acquisition phases. The developers emphasized they were trying to ensure they choose the system with the most potential in terms of usability. They set requirements, to be followed during the implementation, by user-centred design heuristics. Ultimately they were convinced they had chosen the best usable system.

The efforts on usability continued throughout the project. Domain professionals participated in many design workshops and provided the users' perspective. Usability tests were conducted continuously. The basic principle was that the system should be as simple as possible to use because the users "*are initially not fully aware of their needs. So first they need simple tools*" [M2]. The developers also explained that the system supports the end-user customization. The users could for instance modify system interfaces and create shortcuts because they have "*their own preferences, and not everything should be suppressed because they support fluency*" [M2].

The emphasis on usability was well-argued. The domain professionals need to first learn how to use the system so that they get used to it. A similar case was distinguished in an earlier implementation project where *"those users, who had declared that they shall use the new system over their dead bodies, now want that system back"* [M2*]* – even though the old system had not been significantly evolved. Flattening the learning curve was thus the main objective since the easier the system is to use, the sooner it becomes the preferred system. This was emphasized also in the context of implementing shared processes, because most often *"if doing things the right way is easy, then the things shall be done the right way"* [M2]. However, there was a countless number of unsatisfied users, who were mainly complaining about different changes. The local developers stated that some issues the users bring up are "*real problems and some are things that simply require them to get used to them*" [M2]. A large-scale IS implementation enforces process changes and realignment. This causes significant changes in the domain professionals' mundane work routines. Whether the changes are wanted or preferred, they need to be done to support the system integration. It was difficult for the domain professionals to understand that the changes had been "*decided together*" [M6] by their management.

The local developers, however, did not have complete freedom to customize the system for their users. While individual system packages were configurable, possibilities to modify there were limited. This resulted in a process where "*you can choose between two modules, both having different support for modifications*" [M2]. The usability manager stated that "*sometimes you are surprised when you thought that some little thing is easy to change, but then you realize that it, in fact, isn't. This comes*

back to the vendor's restrictions because it is not always clear what you can configure and what you cannot" [M6]. The implementation was thus about identifying the best possibilities and making reasonable compromises. For instance, some medication-related functionalities were not optimal for local customs, but the vendor was unwilling to change them because the vendor considered their processes should be used. In such situations, the developers had to create bypasses so that the system can be used in the local environment.

4.2 Information system as a guide towards business-like service production

The vendor had a significantly different view on how social and healthcare services should be produced. The vendor's masterplot for IS implementation was based on a view that a strong business perspective and centralized decision-making best supports efficient and standardized service production and delivery. The local developers explained that the system, in its basic form, is developed with a view that "*wants the system to work efficiently, so that many customers may be claimed and charged for money… Many functions are done with money in mind*" [M9]. The developers argued that this service production approach is not suitable for the local environment and required significant adapting. For example, for the vendor it was confusing that: "*you pay money to individual clients, such as income support for a citizen… This is somehow confusing for* [the vendor] *because, from their perspective, the direction is that system is used to charge the clients. So invoicing works very well*" [M3].

The business-like mindset was widely recognizable in how the vendor operated. The developers said that when they requested changes from the vendor, the fluency in processing the change tickets varied. Often, if the vendor "*perceived something being good and saleable, they would implement it into the system quite quickly*" [M3]. Strong hierarchies, centralized decision-making, and efficiency promoting culture were also perceivable in the vendor's operations. For the developers, the working environment at the vendor's site seemed "*very tough… they are willing to switch their management personnel a just couple of months before the deployment. This seems quite radical from our perspective*" [M3]. The same perspective was evident in the vendor's IS implementation instructions. At first, the local developers did: "*not fully understand* [them] *because they* [the vendor] *don't say it explicitly because it is obvious for them. They think that any decision-making power cannot be assigned to the lower hierarchy levels with a mandate. They want much more straightforward decision-making*" [M2].

The system supported strongly processed service production, as planned by the vendor. This means for instance structured reporting, standardized processes, system monitoring, and demanding that all processes are followed. The local developers perceived that the system increasingly "*takes part in the activities the domain professionals perform, and guides them towards a certain operating model*" [M2]. The developers explained that for the domain professionals, "*this sort of guidance is relatively new, and it feels foreign and unpleasant*" [M2]. Although the new operating principles were mostly hoped by the management of client organizations, some were too extreme. The developers explained that "*the system may, in a way, punish the user if things are not done correctly*" [M9], which, however, is not adaptable or acceptable in the local environment. Nevertheless, the developers saw that the system "*makes the domain professionals' work visible… It is easy to see what one has done and where, and in this way, it opens up the work practices. This is very good from the managements' perspective*" [M10].

4.3 Information system as the necessary evil for domain professionals

All domain professionals did not react positively to the implementation. The local developers summed that the user "*feedback has been partly quite poor*" [M5]. They mentioned that when the public media collects feedback directly from the doctors, it "*wasn't exactly flattering us"* [M5]. The local developers claimed that this situation was not surprising, since "*change resistance is a natural function for all humans. It requires at least a slight dissatisfaction with the current state in order to be*

ready for the change" [M6]. All users were not ready for radically changing work practices. This resulted in dissatisfaction.

It is difficult for the domain professionals to identify the reasons for the changes. Often the users just "*blame the system for something that in fact even isn't the system's fault*" [M6]. This means the system was not completely understood, and this was the reason the users "*do not understand which restrictions are caused by their personal computer, by the system, or by the vendor*" [M3]. When the configuration was done according to the user feedback, the users "*may not notice what in fact has even changed. Everything is as horrible as before*" [M3]. Clearly, the users had difficulties comprehending the change and its friction.

Difficulties in understanding the system implementation influenced the domain professionals' perceptions. In general, they were not pleased with any IS in their workplace. As the local developers said, there are "*of course those medical specialities that would just rather do their work and forget that they even have to use any information systems*" [M6]. These prejudices dismounted in how the users reacted towards new functionalities and processes. A consult in the social care sector explained that "*in the system, you can write referrals and forward them. They stay inside the system the whole time. It is confusing that there is a significant concern in how the users could know that the referral has been transferred successfully. We are talking about referrals moving inside the system. If there is some sort of error, it would simply be placed in an error basket"* [Con1]. The domain professionals are thus doubtful towards IS in general. They do not trust the systems they do not fully understand.

For the domain professionals, the system implementation is evidently not just about learning how to use the new system and its interfaces. The change is much deeper, and considers the domain professionals perceptions about their work environment. Web-based appointment booking functionality caused negative reactions because social care professionals "*have a need for a feeling of being in control. And when the booking is moved into the system, they feel like just anyone can book their time. So, they lose the control. They first need to perceive that they are still in control*" [Con1]. Similarly, the shift towards more standardized service production was not simple. The local developers explained that "*the guidance from the system and its predefined processes that, in fact, are based on the recommendations,*" [M2] is difficult to accept because, especially the doctors "*perceive that things should be done very individually*" [M2]. The benefits from the new system are not easily recognizable. For example, the shift from a free form text to structured reporting is not "*easy for the doctors at that moment, but it supports the organizational processes and knowledge management*" [M5]. The value of structured reporting may not, however, be only positive. The structured reporting results in that "*the work done by the domain professionals becomes visible* [for the others]. *If the employee is not fond of that, she may not consider it as an advantage. But it is very good from the management's perspective*" [M10].

5 Discussion

Masterplots that describe IS implementation are identifiable from the interviews. They explain the actors' interpretations regarding the implementation. Table 1 summarizes the masterplots in our case. Our findings demonstrate that information regarding different interpretations driving the collaborative IS implementation efforts (Davidson, 2006; Orlikowski and Gash, 1994) is embedded in masterplots.

Perspective	Masterplot	Narrative
Local developers	Usability will conquer the inevitable resistance	Domain professionals' natural tendency to resist changes explains IS implementation struggles. Once the professionals learn how to use the new system, they become fond of it.
Vendor	IS is a processed service product to be sold.	Social care and healthcare are best executed with business logic that supports hierarchy and efficiency. IS should support this principle and similar logic ought to be followed during its implementation.

Domain professionals	IS implementation is the bringer of chaos	IS are necessary evil, that need to be used although they cause disruption in the professional's most vital work functions, especially when new systems are implemented.

Table 2. Masterplots in IS implementation

Three distinctive masterplots can be identified. First, the developers' masterplot of outlines an IS implementation where the domain professionals, who are by their nature hesitant towards the changes and IS in general, slowly learn how to use a new system. The domain professionals shift their view from resisting the new IS to preferring it when they become fluent with it. Second, the vendor's masterplot, as projected and implied by the local developers, constructs social and healthcare as following a business logic. This emphasizes efficiency, processes, and hierarchy, and constitutes a view of how the IS should be implemented, constructed, and used. Third, the domain professionals' masterplot – as told by themselves or constructed in the local developers' narratives – gives rise to a narrative where a new IS breaks the existing harmony in an organization and introduces unnecessary chaos there. While a previous IS may not be seen as perfect, the users have become relatively fluent with it and could focus on actual work tasks. The new system breaks this situation.

While the IS implementation most likely results in benefits, that are also experienced by the domain professionals, the domain professionals do not consider this. They mostly emphasized how the new IS disturbed their personal world of experiences. This partly results from the experiences of past IS (Ludwick and Doucette, 2009), partly from social influence of others (Venkatesh et al., 2003). Their masterplot consequently initiated cautious behaviour towards new IS and general resistance to change. The users' position is natural for masterplots to occur as these masterplots offer comprehendible explanations of the events. The resisting users often form coalitions (Lapointe and Rivard, 2005) and masterplots may serve as a glue that holds such shared interpretations together. However, in oppose to the local developers' masterplot, the change the professionals experience is much broader. The new IS do not just request them to learn to use the technology, but it interacts with their subjective reality and perceived organizational structures (Jones and Karsten, 2008), their logic in service provision (Berente and Yoo, 2012; Reay and Hinings, 2009), organizational culture (Ernst et al., 2018), and the determinants of use acceptance (Venkatesh et al., 2003). This behaviour is evident in the domain professionals' reactions toward new functionalities, such as web-based booking. These functionalities clashed with their perceived reality where they are in control over their work processes. Obviously, some tension emerged. The tendency to resist changes thus only partly explains why the users object the new IS implementation (Laumer et al., 2016). Using this explanation thus significantly simplifies the cause for the problems (Bhattacherjee et al., 2018; Lapointe and Rivard, 2005). This, for its part, explains why the focus on ensuring good usability did not fade out the tensions that emerged during the implementation.

The developers' masterplot locked their perspective on usability. The reasons were twofold. First, the developers had only limited possibilities to modify the system (Dittrich et al., 2009; Sawyer, 2001) as, after all, it was only the vendor who developed it and who was able to do major modifications (Sawyer, 2000). The developers' masterplot clashed with the vendor's strong narrative on how the services should be provided and how the IS implemented. The developers had to comply with this perception. On the other hand, the client organizations were in charge of appropriate change management measures (Boonstra and Broekhuis, 2010; Leonardi, 2011; Ludwick and Doucette, 2009). The developers were thus a middleman who could just configure the system within certain strict limitations. Second, the developers' masterplot narrated the domain professionals being restrictive towards all changes because they have to be trained to use the new system. The developers perceived that the best way to aid this process is by focusing on usability, which would flatten the learning curve. This masterplot unfolded in user involvement when configuring the system, testing usability, and implementing end-user customization functionalities. Their masterplot was thus characterized by a pronounced tendency to represent vicarious experientiality - the developers were eager to imagine "'what it is like" (see Herman, 2009) for the domain professionals to learn and use the system. These

projected experiences of the users were, however, mostly used to support the developers' own pre-existing perception of the usable IS.

The masterplots aided the sensemaking of a complex context and concretized their different perceptions into seemingly reasonable actions. Masterplots are powerful in creating compelling representations. They help people by offering an attachment while trying to understand the incoherent and in large part intangible reality. For this reason compelling organizational narratives create inertia and alter the organization's dynamics (Geiger and Antonacopoulou, 2009). The domain professionals embraced the perception that the new IS is the main cause for problems while the root causes were actually deep in how the organizations have operated earlier. The IS implementation was merely a catalyst for the issues. Consequently, difficulties cannot be avoided if a solution (focus on usability) is not aligned with other masterplots. Similarly, the vendor's masterplot resulted in a perception that the IS may follow a similar logic that has worked in their earlier contexts and cultures. Their approach emphasized business-like service provision which was not supported in our context, for instance by the physicians (Reay and Hinings, 2009). The vendor's masterplot did not take into account the fact that the domain professionals could hold a radically different perception of their role as professionals and the role of IS in service production (Hsiao et al., 2008). The vendor's perspective required that the developers make their best efforts in adjusting how *the vendor's masterplot* unfolds. All this resulted in competing masterplots, each having their own emphasis and blind spots.

6 Conclusions and Contributions

This study sheds light on the IS implementation by revealing the presence of narratives that different actors' resort to, and illustrating their relationship to skeletal masterplots. As our case illustrates, these narratives are not simply individual stories but are drawn from the powerful and skeletal masterplots, used by the actors when grounding their stances. These masterplots inspire collective interpretations of the events for different actor groups. Evidently, the identification and analysis of the masterplots offer valuable insights for the collaborative efforts necessary in large-scale IS implementation.

First, the masterplot the vendor assumed suggests strong processes and hierarchies. This masterplot is informative especially for the local developers who are responsible for implementing the system into the client organizations. The local developers are also ensuring the client organizations' preparedness regarding the change. Second, the domain professionals' masterplot should be considered especially by the local developers and the client organizations. The new IS and the changes it introduces (and even enforces), require strong and purposeful efforts and activities. Their masterplot may help in understanding the needs and obstacles, to be challenged with proper support, training, and communication. If the masterplots are able to prosper and sustain, the actors will cling on them as they offer a simple and compelling explanation for displeasing events. Different masterplots may thus explain the events and problems in IS implementation.

We contribute to both research and practice. For research, this study illustrated that IS implementation is indeed a socially constructed activity (Holmström and Sawyer, 2011) with different narratives (Alvarez & Urla, 2002). More interestingly, the study revealed and exemplified the relationship between the narratives and masterplots, and social constructivism in the IS context. There has been a lot of discussion in IS discipline on how the technological solutions are socially constructed (Davidson, 2006; Lim et al., 2011; Orlikowski, 2000), and even the presence of narratives has been briefly visited (Alvarez & Urla, 2002). However, the link between the areas has not been shown or studied. This study has thus showcased how the organizational narratives find their inspiration from more general and collective masterplots. Consequently, the study provides a theoretical grounding for future research to draw more implications on narratives and masterplots, and their interplay with actions in IS implementation. This would result in a better understanding of the sociotechnical mess. Already now our small yet insightful analysis revealed fundamental contradictions in the actors' perceptions. Those contradictions provide an explanation for challenges and problems in IS implementations.

For the practice, this study showed the importance of awareness on narratives and masterplots in the IS implementation. The practitioners in IS implementations should identify and analyse the collaborating parties' subconscious narratives since they evidently drive everybody's actions. Second, the practitioners should become aware of their own masterplots. All masterplots frame the actors' perceptions and actions and create blind spots. Those things may eventually creep on the surface and cause various tricky symptoms. Our insights thus are helpful for the collaborating IS implementation parties such as vendors, local developers (and other consults) and client organizations, who work in the flux of varying interpretations.

This paper has limitations. First, this is a single case study in [country name]. Other masterplots may thus be identified in other contexts. Second, we viewed the events through the perspective of the (local) developers. Thus, our perspective is altered by the developers' perceptions of the events and other actors. Third, our approach is interpretative. However, we [the authors] are experts on IS and narratives, so we have triangulated the data from several viewpoints.

Our view on IS implementation supports the argument that the problems in IS implementation are not simply technical but rather social and organizational. We propose that these issues result from human beings and their struggles in comprehending the confusing reality. To find satisfying explanations, they resort to narratives that are inspired by compelling and skeletal masterplots. While they adequately help sensemaking, they do not represent objective reality. As our study showed, these masterplots attempting to explain the events meet and conflict. When each offers their own explanations of what is going on, the tension will emerge.

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ARTICLE II

Making Sense of Information Systems Implementation Masterplots

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ARTICLE III

Companions growing apart: Exploring actors' perceptions with narratives and masterplots in ERP systems development

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Companions Growing Apart: Exploring Actors' Perceptions with Narratives and Masterplots in ERP Systems Development

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Abstract

Collaboration largely determines ERP development success but is fluid with difficulties. We propose them originating from collaborating actors', such as developers' and clients', diverging perceptions. Identifying these perceptions is difficult as they often surface only when the perceptions contradict. In this paper, we utilize the narrative approach, arguing actors being storytellers sharing and living through narratives, to explore an ERP development project where a client and a vendor collaborate in a seeming well-defined manner. Interpreting the actors' narratives and masterplots shows that they contradict each other. We argue this resulting from the parties' different perceptions on collaboration, and their unaligned masterplots. This also explains severe problems in the project and illustrates narratives and masterplots as useful for uncovering the actors' underlying perceptions, driving their actions.

1. Introduction

In modern enterprise resources planning (ERP) systems development projects several actors unite their forces for a shared purpose [1]–[4]. The systems are increasingly acquired as software packages from the systems vendors [5]–[11]. The key actors are the users and the system developers, and their respective organizations. This refers to a client organization for whose usage the system will be implemented, and a vendor driving the technical development. Their collaborations' seamlessness largely determines the overall project success [3], [12].

ERP development projects are famous for the system's customization difficulties, dilemmas in integrations, lack of business requirements understanding, insufficient change management, inadequate data quality, IT-business misalignments, budget ambiguities, and lack of managerial support [13]–[16]. Often these problems result from highly complex cooperation between the actors [17]. Too often a project, which was initially meant to be a straightforward system deployment, ends up with quickly escalating problems [18], [19]. Problems have been identified earlier. For example [14], [17], [20]–[23] all identify central issues. The majority of the ERP systems development projects' problems seem to arise from the collaboration between the actors [4], [17], [24], [25].

Yet it remains unclear why collaboration often faces these problems. It seems that research has not explicitly considered the participants, their backgrounds and stances towards inter-organizational *collaboration*. The actors' perceptions are emphasized as they initiate, guide, and inspire activities in different situations [19], [26]. Perception is "the process of interpreting the messages of our senses to provide order and meaning to the environment" [27, pp. 74–75]. Thus, when the actors try to make sense of the ambiguous world, they, through interpretive processes, arrive at a perception resonating with their perceptual systems. We propose these perceptions as significant factors in the ERP systems development because the actors' actions are based on their perceptions rather than some 'purely objective' reality [27, p. 75]. When the actors share cognitive elements, they share their perceptions and unite their actions. This is illustrated by for instance institutional logics [28], [29], frames of reference [30], [31], structures [32], [33], and IT identities [34], [35]. The perceptions are essentially springboards for actions [26], [27]. For instance socially constructed practices, values, beliefs, and rules a certain professional group perceives guide their actions in different situations [28], [29]. The perceptions, however, are not always shared and especially those of different groups may in fact be contradicting, as the piling failures of inter-organizational EPR development projects imply.

Perceptual issues are difficult to identify. They rarely surface in explicit forms as they are underlying on the actors' subconscious levels [31], [36] and

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perceptual systems [27]. We thus suggest turning towards narrative theorists who are the experts of uncovering embedded information from the actors' interactions. Narrative theorists propose human actors as essentially storytellers who live and share narratives [37], i.e. accounts of series of particularized events occurring over time [38], [39]. When the actors try to comprehend overwhelmingly arbitrary reality, they resort to narratives offering compelling and reasonable explanations for confusing events. Narratives thus convey what the teller perceives and represent an entry point into their world. They are inspired by skeletal masterplots - familiar narrative models inspiring and offering structure for the narratives resonating with the actors' perceptions [40, p. 236], [41], [42]. Masterplots thus reflect collective perceptions that groups of actors possess. Although narratives have been briefly explored in IS research (see [43], [44]) such research is still rare [45]. Especially the concepts of narratives and masterplots have not been used in the ERP development context [44].

We hypothesize narratives as an approach to study the differences in the collaborating actors' perceptions, anteceding the often-occurring ERP systems development issues. Exploring this, we answer a research question: "*What narratives tell about collaborating actors' perceptions in an ERP systems development project?"* We study a case where a large manufacturing company and its small ERP vendor, with a long-shared history, together decided to develop and implement a new ERP system. Our findings show that even though these actors shared some narratives pulling them into cooperation, their underlying masterplots significantly differed and their individual narratives contradicted. We argue this preceding severe problems in the project.

Next we present our take on narrative theories. Then we explain our interpretive case study approach, followed by the empirical findings. The paper ends with a discussion and concluding remarks.

2. Theoretical Background

IS research exploring narratives is rare [43], [45], [46]. Examples include [46], studying organizational members resorting to narratives during requirements elicitation and [47] studying organizational members' narratives for the gain of political advantage. [43], [48]–[50] used narrative analysis as a method to analyze IS projects. These studies show the presence of narratives in the IS context. However, what narratives essentially are in a social and cognitive sense, and what we could learn about their teller's perceptions is left intact and unrealized. ERP systems development is a domain benefitting from this.

Herman [51] thoroughly defines narratives. He conceptualizes them through their prototypical elements and emphasizes narratives as a mode of situated representation emerging in a specific occasion for telling. Narratives focus on particularized and sequenced events prototypically introducing a disequilibrium in the reality the narrative describes. Narratives could thus be seen as ways to organize the world, and narrative as a perceptual activity to organize data into patterns to explain experiences [52, p. 3]. The term narration refers to symbolic actions having a "sequence and meaning for those who live, create, or interpret them" [37, p. 2]. Thus, while narratives are a way for actors to organize the world, they simultaneously convey information for others who want to analyze the narratives. As the actors embed their view of the world into their narratives, they leave clues for others about what they perceive.

The actors utilize narratives when they structure their reality [38], [52], [53]. They organize their temporal experiences into meaningful wholes uniting them by the narrative form [54]. In the example from [46], the narratives were used during a system's requirements elicitation. The employees' narratives focused on claiming their organization's difficulties as not their fault. If looked beyond explicit statements, it is possible to interpret the employees perceiving that they had been assumed to be the main problem to be solved with the new system. The example's setting may have been much more complex than what the tellers' narratives explicitly stated. Nevertheless, the narratives as simple and compelling explanations were prototypically tellable and served their tellers' purposes. This tellability and simplicity apply to both the teller and their listeners. Focusing on what is tellable and resonates with a narrative's teller reveals their underlying perceptions.

Although prototypically narratives are about individualized experiences and particularized perceptions [51], the cognitive models from where these narratives emerge are socially and culturally guided. These skeletal structures are referred to as masterplots, "the recurrent skeletal stories, belonging to cultures and individuals playing a powerful role in questions of identity, values, and the understanding of life" [40, p. 236]. Masterplots promote familiar narrative models including some basic categories for actants, basic plotlines and imply a sanctioned interpretation of the narrative's underlying meaning and moral. A popular example is a "Cinderella story" inspiring many storytelling contexts. Similarly the example narratives from Alvarez

and Urla [46], while not explicitly discussed, could be seen to follow a masterplot of technology making people obsolete. Masterplots inspiring human actors' narratives thus reveal cues of unity in how certain groups of actors perceive their surroundings.

To explain the masterplot concept, [40] uses the terms *type* and *genre* by applying them to the masterplot of the Cinderella story. Type is the "recurring kind of character". In other words Cinderella's type is embodied in Cinderella's character, i.e. the "battered wife". The masterplot, however, is Cinderella's *story* and the events it comprises. Genre, on the other hand, is the labelled description of the story, for instance, a tragedy or an epic. Cinderella's genre could be a novel. To interpret what is the masterplot, the stories need to be analysed. Specifically, the unity of the narratives conveyed by stories reflects the masterplot. For instance in the Cinderella story masterplot, narratives elaborating on "a thread of neglect, injustice, rebirth, and reward" reveal the underlying masterplot.

Analyzing narratives the actors use in explaining the events (for others and themselves) thus reveals their perceptions. This stance has not been explicitly taken in IS research. In addition to the presence of narratives [46], [47], [49] for instance [55] analyzed how groups of actors shared metaphors, being aligned with their perceptions, when making sense of an IS project. Yet they did not study how the perceptions influenced collaboration, for example between the client and vendor organizations. [44] showed how masterplots prosper in IS projects, but did not discuss the theoretical relevance for the discipline in depth. We thus propose narrative theories as helpful for understanding how perceptual differences complicate collaboration in ERP systems development projects.

3. Research Approach

We analyzed the actors' narratives in an ERP systems development project. Our approach combines three concepts: collaboration in ERP systems development, the actors' perceptions, and their narratives. Our proposition overlaps these concepts. We derive our insights from a representative real-life case, using the interpretive single case study approach [56]. This is because ERP systems development projects are social processes [57] to be studied in their actual contexts [58]. Our entry point to the actors' social world is through language [59, p. 20], [60].

Our case is an ERP system development project initiated in 2008 when a client and a vendor decided to renew the client's ERP system. The client is a large global manufacturer, having more than 1,000 retail sites worldwide. The vendor is a small local ERP developer, providing the client's old system. A mutual need to renew the system emerged from the client's need for better support to their evolving business processes and the vendor's eagerness to shift their business model from customized ERPs to general products. The organizations decided to continue their established cooperation, renew the client's ERP, and build a platform for a software product.

Fifteen interviews were conducted with central actors from the client organization and the vendor, before the initial rollouts in 2013. The interviewees (see Table 1) are managers and employees, selected through a snowballing method where former interviewees were asked to name subsequent, influential, and relevant people [61]. The interviews, ranging from 30-90 minutes each, included open-ended questions where interviewees were asked to describe the project and collaboration from their perspectives. The interviews were recorded and transcribed.

Table 1 Interviewees

Client	C1	Business area manager
	C2	Chief Executive Officer
	C3	Concept Manager
	C4	Salesperson
	C5	Sales Office Manager
	C6	Consumer Business Manager
	C7	Controller
	C8	(ex) project manager
	C9	Technical Support
	C10	Chief Information Officer
Vendor	V1	Customer Interface Specialist
	V2	Lead Designer
	V3	Product Development Leader
	V4	Chief executive officer
	V5	IT support

The inductive interpretive data analysis was inspired by the pragmatic guidelines for grounded theory [62]. No theoretical framework was used but the concept of narratives as the representations of sequenced events making sense of the actor's experience [51, p. 9] sensitized the analysis. In line with the open-ended interviews, the issues the interviewees highlighted were assumed to be central.

The themes were first categorized by identifying general areas of interest, such as certain phases of the implementation. Second, detailed coding inside the themes produced descriptive codes. Third, the

reoccurring accounts and explanations inside the descriptive codes were interpreted to form narratives that were labelled based on their teller. Masterplots were interpreted by identifying the unity between the narratives. Finally, the masterplots were compared and findings were reflected with literature. Not all accounts produced prototypical narratives nor did all the narratives fit into presented masterplots. Thus, the presentation of narratives and masterplots were prioritized based on their occurrence and relevance. The data analysis reflects the time when the data collection was completed.

4. Findings

Initially the project seemed like a harmonious collaboration of two organizations. However, when the project proceeded, communication problems, customization difficulties, unclarity of the system's requirements, budget ambiguities, and misunderstandings emerged. The client organization and the vendor shared some narratives, used for defining the main project activities. This implies partly shared perceptions. However, both organizations had their own organization-specific narratives revealing their underlying perceptions. Those differed significantly in terms of activities and general project goals. The unity of organizations' corresponding narratives implies contradicting masterplots. Narratives of one organization followed a masterplot elaborating on intimate collaboration to revolutionize their business with a close partner. In contrast, the other organization's masterplot was about an opportunity to become more independent. This implied contradicting desires and created tensions between the actors.

4.1 We are Bound Together

The large client organization and the small vendor had a long, shared history. The vendor had developed the client organization's previous ERP system. Once the client organization business processes had evolved and needed better support, they decided to renew the ERP system. They evaluated different vendors but concluded continuance to work with the same vendor as their best choice. They knew the vendor had "*learnt much about the* [client's] *business domain*" [C10]. The client felt that if they had "*chosen another vendor, the vendor would have spent the first couple of years just by learning the business domain*" [C10]. In the past, the vendor had "*been able to provide functionality that gave*" [C2] them competitive advantage "*with a rapid phase*" [C2]. For the vendor, the client was crucial, being by far their largest client, producing about one-third of their revenue. Both actors told a narrative that history bounds them together, dictating them to continue their cooperation (see Figure 1). These narratives created a bond, pulling them to collaborate. However, both organizations had complementary narratives revealing contradicting desires on collaboration.

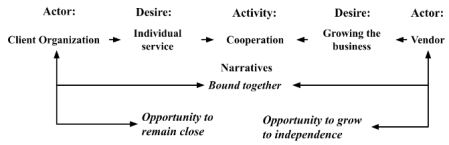

Figure 1 Narrative for cooperation

The organizations' expectations for collaboration diverged. The client told a narrative where the vendor was expected to continue serving them almost individually. The client's manager explained the vendor not being a "*faceless consult organization*" [C10] and it would be easy to "*tailor the system with them*" [C3]. They had become close with the vendor, being able to casually phone about issues with the old system. They felt the vendor almost being a part of their organization, enabling them to develop a new system together, as partners. The client hoped the shared renewal project continuing their intimate relationship with the vendor where they could informally, flexibly, and with low costs resort to the vendor's services.

The vendor saw the project as an opportunity to advance their own business by transforming their business model from customized systems to a software product, developed with a large and reliable client, and then by selling it to new customers. During the project, the vendor for instance "*doubled the number of their employees and acquired more competence*" [C2]. They also formalized their relationship with the client by implementing a ticketing system for requests, and when facing scheduling problems, outsourced some development tasks. Thus, instead of being the individual servant for a single customer, the vendor wanted to become a product owner and seller.

It was not clear who initiated the renewal project. On one hand, the client organization needed a new system as they were losing competitive advantage. Also, the vendor had decided to discontinue updating the old system. On the other hand, the vendor concluded them needing to upgrade their technology and moving into a new business model. The project was thus their excuse to advance their own business. This view, then again, was shared by the client who had learnt the benefits of the service-oriented model. They also had a business intention to shift to the service model.

4.2 The sky's the Limit

First the system's requirements were elicited only generally. Several client's employees participated in this. A client manager described the principle as "*there were no ideas that would be too crazy*" [C6]. The vendor's employee explained that "*when the specifying the requirements, participants were all business people. It started from what we should accomplish, and how should it work. We moved forward that way. That's what we described back then and we purposefully did not spend any time focusing on details*" [V4]. This principle was accepted by both organizations. They shared a narrative that the best way to elicit requirements is by thinking the sky being the only limit (see Figure 2), since, with no restrictions, they could be truly creative.

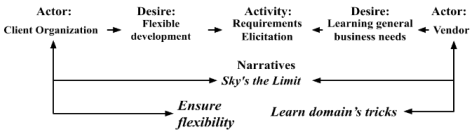

Figure 2 Narrative for requirements elicitation

The client perceived that by approaching the requirements on a very general level, they would ensure flexibility throughout the project. A manager stated that they "*don't want to be involved with a stiff and pre-specified development approach. Never. No thank you! It should be flexible. So that we can later come back to different issues*" [C10]. They thus expected them starting with vague requirements, further specified as the project proceeds. They expected the vendor to continue working closely with them, allowing them to iterate the requirements during development.

This principle was, on a general level, suitable to the vendor. However, their narrative shows that this was not because they wanted to offer superior and flexible services to this client but to learn from the client, enabling them to develop a common product for a broader customer base. They were making a "*general product. Not a product just for the current client".* [V2]. The vendor's CEO explained detailed requirement specifications as "*unnecessary in terms of time management. Now, as they come up, we look at what the world looks like today and what would be the best way to do it."* [V4] They thus wanted to learn the business domain and its future, enabling them to develop a product with competitive advantage.

4.3 Tightrope Walkers Grown Greedy

The organizations shared a narrative that the system is not only for a specific customer but a product. However, the client's expectations did not match with the vendor's approach. This is a point where their narratives diverged. The client expected a system that is customized to their needs, assuming only some parts being generic while the system would mostly be theirs. Meanwhile the vendor was implementing a more sellable product, most of the system being generic and customer-specific issues as handled by changing the system parameters. The vendor's CEO said the system is "*pretty general…We want to ensure that the product is applicable for many domains"* [V4]. They were thus "*making one product…Things that are client-specific are done with settings. We don't have a version specifically designed for them*" [V4]. These competitive desires caused tensions during the implementation, emerging as contradicting narratives (see Figure 3). The client told a narrative where a partner once close to them had grown greedy. The vendor saw themselves as tightrope walkers, balancing with client-specific and general needs, keeping the client happy while still advancing their own business.

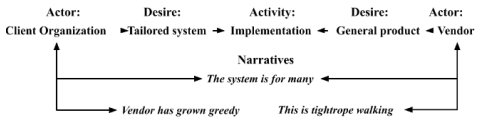

Figure 3 Narratives for implementation.

The client's CEO said that it "*seriously pisses me off sometimes that when we want something to be done and we pay for it, it will be offered to other clients*" [C2]. The client observed that the vendor was not serving them exclusively anymore. Specific functionalities would be charged. They learned that every time they wanted, for instance, to discuss schedules for roll-outs, the vendor would point out its limited resources and ask for "*money, in the name of friendship and help. 250k would be a nice single payment*" [C10]. The client's CIO however emphasized them as not easily fooled by the vendor, not giving "*money just for the sake of it"* [10]. The client elaborated if the vendor's services were necessary. Their CIO stated that perhaps "*we don't necessarily start to code ourselves. But we may take someone* [from the developers] *into our team. Buy someone from the vendor. Or from India. That will be a funny combination*" [C10]. They expected them tailoring the system in close collaboration with the vendor. The client for instance assumed further requirements elicitation through the system's pilots. The vendor instead used the pilots to demonstrate and test that all functionalities were approved. The

client got frustrated as the system development did not proceed as planned. On many occasions, they "*expected that the system would have been more ready already"* [V5].

The vendor underlined them as not fooling their client by creating a general product. They openly told how they were just "*kind of balancing*" [D13]. When the client proposed some features or changes, they were directed to the vendor's *"product manager who will check that it's sensible for the general software development*" [V1]. The vendor's lead designer working closely with the client described that she "*think[s] about it a lot. I always try to keep the client happy. But when there's a new wish from them, I could say that this wasn't in our agreement. I'm still happy to add some little features to keep them happy. You have to balance quite a bit with that"* [V2]. However, when the client started to tighten the schedules, balancing on the thin rope became difficult. The lead designer explained them as being forced to "*rush and quickly hard-code things that the client wants*" [V2]. The vendor felt the pressure and "*worked overtime. Long hours with big crew*" [D14]. They felt the client being used to "*release cycle that's too fast. It was like when you phoned in the morning, a feature might be in the deployment in the evening*" [D14]. The vendor perceived that the pressure resulted in an incomplete and hurried system. The process "*has been too hurried. I am a perfectionist and would want things to be right. Every bug hurts when I hear that there inevitably are some in production*" [V2].

5. Discussion

The findings show two organizations seemingly sharing their perceptions on collaboration. This was evident in their narratives on being bound together to continue the system development and implementation. They were happy with the general level system's requirements for enabling innovation. Both actors also acknowledged the new system being offered to other clients. The narratives indicated a bond between the organizations, pulling them together.

The organizations shared some narratives but their complementary narratives differed radically. The client was frustrated from not receiving similarly personal service as before. The vendor, in contrast, articulated struggles to grow their business while answering to the client's demands. These narratives tell a story of underlying desires starting to pull the actors apart from the cooperation once so close. The narratives revealed the actors perceiving the project fundamentally differently. As the perceptions were so different, it was only natural that the actions these perceptions imposed were not aligned, and the infamous ERP systems development issues emerged.

The masterplots reflect the actors' different perceptions, interpreted by looking into their narratives' unity [40]. The client's narratives unite in their elaboration on them modernizing their business with the new system. In contrast, the vendor's narratives repeat accounts of them growing their business through the same project. Figure 4 presents the flux of narratives presented in the findings and the masterplots they reflect.

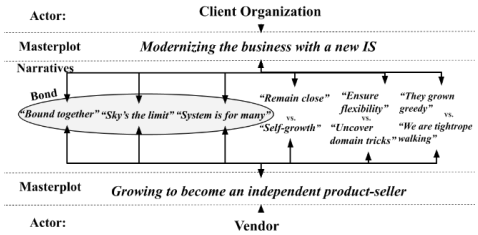

Figure 4 Case narratives and masterplots

Figure 4 shows the narratives of being bound together, the sky being the limit for innovations, and the system being for more than a single customer, implying an area of a bond, highlighted by the circle. The narratives' connections to the different actors' underlying masterplots are illustrated with arrows travelling from the narratives to the masterplots. From the client's perspective, these narratives shared unity in their narration of the project being about innovating a new system with the familiar vendor. In contrast, the vendor's narratives unity was the elaboration on the project enabling them to grow their business. Both actors also had their organization-specific narratives, represented in the figure. They contradicted, highlighted by the abbreviation *vs.* between the narratives.". For the client these narratives had unity in the project being a close collaboration with the vendor, and frustration for learning the vendor's self-interests. The vendor's narratives united in their explanation of them using the project to grow their own business but still serving their familiar client. Thus, from the level of the actor's corresponding masterplots, the masterplots imply contradicting perceptions.

Consequently, only some narratives were shared, resulting from parties having their own masterplots defining the project. The client saw the project as an opportunity to respond to the evolution of their business domain, necessitating ERP system renewal. Their best bet was to execute this with a familiar vendor working flexibly with them. For the vendor the project was a

perfect opportunity to change their business model and to become a player in the packaged systems markets. Having a reliable and large client was essential to secure development resources.

The vendor's masterplots aligns with IS research's description of the contemporary ERP context. The markets have evolved to software markets [63] where packaged solutions are sold instead of client-specific solutions [5], [7], [8], [64]. Simultaneously the vendors have become more distant from their clients and actual users [64]–[66]. Their interest is not serving a specific client, but many [63], [67]. In our case the vendor, once very close to a specific client, drifted away from their client by making their product increasingly generalized and imposing more formality to their relationship. They needed to leverage the benefits from being locked up with a large client to allow their own advancement as a packaged ERP provider. Thus the narratives of being bound with a specific client and emphasizing the sky being the limit made sense. These narratives complemented a view that the system is offered to many clients and fit conveniently under its masterplot of growing to an independent product-seller.

The client's masterplot indicated them expecting a new ERP system supporting their future business operations. The masterplot embedded assumptions of co-operation with the vendor continuing as before. This is understandable because implementations are complex and comprise networks of actors as the users [34], [68], [69]. Addressing their needs with a generic solution is troublesome. The fit between the system and its users is the main determinant for the project's overall success [70]–[72]. However, typically packaged systems do not fit with the client organizations' heterogeneous and unique needs [11], [73]–[75]. Thus, the client's masterplots urged the importance of personalized services. Their narratives of being bound with a specific vendor, and that the sky is the only limit for innovations since requirements will be specified later with the vendor made sense. The narratives increased their belief that while the vendor is essentially a packaged ERP provider, it will still continue its intimate services.

The organizations had different perceptions, reflected by their masterplots. The organizations possessed narratives that contradicted with the others' narratives. When the client saw the project as an opportunity to stay close with the vendor while advancing its retail business, the vendor saw it as an opportunity to safely grow and start serving other customers. While the client wanted to ensure and facilitate flexibility in the development, the vendor focused on uncovering lessons about the business domain. When it became evident that the vendor was not only serving the specific client, the client perceived their once-close companion as greedy, and there possibly being a hoax. The vendor in turn perceived themselves as merely balancing between client-specific and market-generic needs. Their collaboration, which was meant to be bound together, turned into a competition of self-interests.

Gathering all narratives together illustrates the case being a story of two once close companions growing apart. One organization hoped a continuing close relationship with their companion, developing a system revolutionizing their business. The other organization, however, shifted away from the intimate relationship. The vendor wanted to become independent with a new product, demonstrated during the project. This produced tensions between the parties, making their collaborative efforts challenging.

We explored a proposition of narratives and masterplots for learning about perceptual differences preceding the ERP systems development issues. We focused on the overlapping concepts of the development collaboration, the actors' perceptions, and their narratives (see Figure 5). The analysis of the individual narratives and the interpretation of the masterplots enabled us to investigate the parties' perceptions. This provided an in-depth understanding about why different tensions emerged. While it seemed that the parties were executing a textbook-fashion project, the differences in their underlying perceptions were grinding against each other. The underlying perceptions guided the individual actors' actions during the project [26]. When their contradictions manifested, the development problems emerged [17].

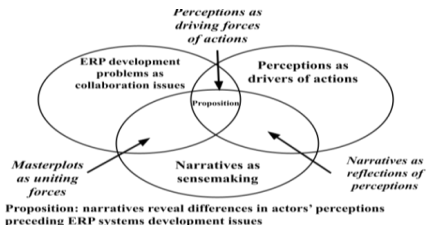

Figure 5 Proposition revisited

This positions narratives and masterplots into IS research, specifically on the theoretical discussion considering human agency, and how this agency operates in relation to the perceived social constructions [49]. For instance structuration theory [76], [77] focuses on the relationship between agents, such as human actors, and the structures they perceive [33]. The central

questions include such as how the actors' actions are influenced by the structures, and reciprocally, how the actions reproduce the structures. As narratives are an integral part of human sensemaking [37], [52], [53], the teller's perceived structures are embedded there. Our findings illustrate differences in different structures: the client perceived that they are in control over the vendor who should be serving them, while the vendor perceived themselves as an independent organization pursuing their own interests. Both organizations operated under their own structures – the vendor expecting individualized services and the vendor working to become a stronger operator in ERP markets. The differences then manifested severe problems that are well known in ERP research [14], [17]. The chain of problems can thus be traced to the actors' own and shared narratives. This finding contributes to the discussion on social structures by showing how the perceptions are conveyed in the actors' narratives and masterplots [44]. Such structures and perceptions that direct the sensemaking of human actors are difficult to be made visible. While narratives as a closely related concept for human sensemaking is acknowledged for instance in organizational research [78], especially in IS research their potential for revealing how human actors see the world seems unrealized. However, as demonstrated, with narratives we can learn about these perceptions, and with masterplots, we see how a collective group of human actors perceives their surroundings. Perceptual issues are simpler to be identified retrospectively once they have created conflicts. The paper demonstrated narrative theories' potential for offering entry points into the minds of collaborating actors. This may aid both IS researchers and practitioners who struggle with the collaborative issues in interorganizational IS projects, such as ERP developments, by revealing more about what kind of underlying perceptions drive the human actors in these projects.

6. Conclusion

We studied ERP systems development with concepts of narratives and masterplots. We explored a proposition of narratives revealing collaborating actors' perceptual differences resulting in the often-occurring issues. We interpretively studied narratives shared in an ERP system development project. By identifying and deriving the actors' masterplots, we learned the actors perceiving collaboration very differently. The analysis revealed one actor as expecting a continuance in their close relationship with the other, and the other actor using the project as a step to become more independent. This manifested problems during the project as underlying perceptions pulled collaboration apart.

This leads to research contributions. Our findings show the actors' perceptions guiding their actions being dramatically different, consequently causing problems in collaboration. Narratives and masterplots reflect these perceptions. We demonstrated how narratives and masterplots can offer an alternative entry point into the actors' perceptions. On one hand, narratives and masterplots were collectively shared. This means the vendor's and the client's narratives were aligned and were reflected in their corresponding masterplots. On the other hand, the narratives contradicted. This conflict provides an explanation for the causes of problems. We thus argue that narrative theories have the potential to reveal differences in the actors' perceptions that precede the infamous development problems. These findings contribute to IS theories of social structuration exploring the relationship between agency, i.e. human actors, and the agency's perceptions.

The paper has practical contributions. The paper implied underlying perceptions significantly diverging during the ERP systems development projects. The findings exemplify the easiness of assuming mutual interests while underlying perceptions may be different, even conflicting. Our example thus motivates the practitioners to become aware of the actors' underlying perceptions when they engage in collaboration. The demonstration of the use of narrative theories to interpret the perceptions is also valuable for the practitioners trying to understand collaborative partners.

Future research could strengthen the theoretical grounding that combines actors, their perceptions, and narrative theoretical concepts of the narratives and masterplots. We merely exemplified the role of narratives. Further research should capture and analyze a much broader selection of narratives and masterplots. This way we can learn more about these concepts and what they reveal about IS projects. When the set of narrative and masterplot examples increases, their comparison becomes possible potentially revealing insightful findings.

The paper has limitations. First, this is a single case study so identified narratives and masterplots should be generalized with caution. Our intention was not to reveal the general narratives that occur in ERP systems development projects, but to demonstrate their analysis. Second, our approach is interpretative. To be faithful towards the philosophical foundations behind narratives, we emphasize that the researchers and the readers of this paper are essentially storytellers

themselves and subject to their share of own narratives. Our interpretations are thus subjective and threatened by misinterpretations.

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ARTICLE IV

User-centredness in large-scale information systems implementation.

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USER-CENTREDNESS IN LARGE-SCALE INFORMATION SYSTEM IMPLEMENTATION

Research paper

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Abstract

Information systems (IS) implementation often aims to ensure user satisfaction. However, achieving such user-centredness has remained ambiguous and challenging, and the results are not always those that were promised. This may result from several views and fluctuating and implicitly defined concepts. While some premises have been identified, they seem to mostly concern easily manageable settings where the number of users is limited, or where the possibility to tailor the system is significant. Especially in large-scale systems' implementations, which are in increasing amounts implementations of packaged systems products, user-centredness seems to be fuzzy. In this paper we illustrate how user-centredness unfolds in a large scale IS implementation. We conduct a qualitative case study to see what occurs when the efforts are declared user-centred. By interviewing 13 central actors from a local developer organization, we learnt that user-centredness in such context is essentially the result of joint efforts thus necessitating that each party carries out their responsibility for user-centredness and engages in collaboration with others. The paper contributes to research by sharing empirically grounded findings to be used to extend the discussion on user-centredness.

Keywords: Information systems, user-centredness, user involvement, user participation, implementation.

1 Introduction

User-centredness is a continuously debated subject in the IS research (Abusamhadana et al. 2019; He and King 2008; Hwang and Thorn 1999; Iivari et al. 2010; Iivari and Iivari 2011; McCarthy et al. 2020; Thakurta 2017; Wing et al. 2017). User-centredness, while referring to many alternative roads (Iivari and Iivari 2011), emphasizes that users should be placed in the very centre of IS implementation. This means that different actions are taken to ensure that the implementation serves the needs of diverse future users. The motivation behind this is that several benefits are associated with being user-centred (Markus and Mao 2004; Thakurta 2017). In fact, being user-centred is often taken as the main ingredient for system success (Abusamhadana et al. 2019; Bano et al. 2017; Bano and Zowghi 2015; Markus and Mao 2004), and that user-centredness is a necessity in IS projects (Butler and Fitzgerald 1997; Harris and Weistroffer 2009; Hwang and Thorn 1999; Ives and Olson 1984). However, what user-centredness means and how it may be achieved have not been unequivocally concluded (Abusamhadana et al. 2019; Iivari and Iivari 2011; Isomäki and Pekkola 2011). It has even been proposed as one of the myths of IS practice (Hirschheim and Newman 1991; Wing et al. 2017).

Markus & Mao (2004) proposed that user-centredness is the most reasonable in easily manageable contexts as otherwise the task gets exceedingly complex. For example, large-scale IS implementations, such as ERP, ES or other organization-wide systems, introduce a socio-technical environment (Sarker et al. 2019) where the task of serving the users seems ambitious as the implementation efforts often become distributed and expanded (Alter 2009; Markus and Mao 2004; McCarthy et al. 2020; Roland et al. 2017). There IS implementations unfold as collaborations of different parties (Dittrich 2014; Dittrich et al. 2009; Vilpola 2008) where vendors, supporting consultant organizations, and client organizations together produce the desired system (Kähkönen et al. 2017; Sawyer 2001). Thus, the activities and efforts of a single party cannot define what occurs there. This context has been little studied from user centredness's perspective (Alter 2009; Hirschheim and Newman 1991; Roland et al. 2017; Wing et al. 2017). User-centredness should be considered in the current challenging IS implementation contexts (Avison and Fitzgerald 2003; Bergvall-Kaareborn et al. 2014; Markus and Mao 2004; McCarthy et al. 2020).

This absence of a thorough understanding motivated us to study user-centredness in the context of large-scale IS implementation. We seek an answer to the question: **"***what occurs when user-centredness is pursued in a large-scale IS implementation project?"* We address this through the grounded theory approach (Urquhart 2012) in an interpretative case study of the large public sector IS implementation project where a group of client organizations acquire a systems product from a large offshore vendor. We interviewed the main actors from the developer organization in the local site of the implementation. The findings imply that user-centredness is challenging as the implementation ecosystem's parties carry their own responsibilities that together create the user-centredness. The efforts are tied together and necessitate a comprehensive approach.

The paper is organized as follows: in section 2, we discuss literature on IS implementation and the concept of user-centredness. In section 3, research settings and methods are presented. Section 4 provides our case description and reveals our findings. The paper ends with a discussion and concluding sections

2 Related Literature

In this section, we discuss literature regarding IS implementations and user-centredness. The discussion on IS implementation focuses on the ecosystem that unfolds when a packaged system is implemented into client organizations. Then literature on user-centredness is reviewed to see what has been learnt about this popular topic.

2.1 Implementing an Information System

Organizations implement information systems, such as Enterprise Resource Systems (ERP) to facilitate streamlined business processes and gain operational efficiency while integrating multiple users into the shared system (Kähkönen et al. 2017; Robey et al. 2002). The systems comprise people, processes, data models, technologies, and formalized languages, that are structured to support organizational functions (Hirschheim et al. 1995, p. 11). They are designed to improve an organization's performance by improving the ability to produce crucial information throughout the organization (Beheshti 2006).

Organizations increasingly resort to packaged systems as oppose to building their own systems from scratch (Howcroft and Light 2006; Keil and Tiwana 2005; Lucas Jr et al. 1988; Sommerville 2008; Strong and Volkoff 2010; Wagner et al. 2010). The packaged, aka off-the-self products, are developed by vendors selling them to customer organizations (Howcroft and Light 2006; Sawyer 2000, 2001; Xu and Brinkkemper 2007). At the technical level, the implementation often is either deployment of a single application, constructing the system from modules, or combining different off-the-shelf products (Sommerville 2008). This is expected to help in avoiding reinventing the wheel, and in lowering costs and risks associated with developing and implementing an IS (Haines 2009; Keil and Tiwana 2005; Lucas Jr et al. 1988).

The system products are not immediately ready for use in client organizations but they require customization (Dittrich 2014; Dittrich et al. 2009; Light 2005; Singh and Pekkola 2021; Xu and Brinkkemper 2007). This refers to activities to change for instance process or data definitions in the system (Haines 2003). The activities include configuration, migration, software integration (Nordheim & Paivarinta, 2004) and modification (Haines 2009). The client organizations often resort to specialized consultant organizations to take the lead on this process (Howcroft and Light 2006; Kähkönen et al. 2017; Metrejean and Stocks 2011; Vilpola 2008).

A central issue when implementing a system product is the product's fit with the client organization (Chiasson and Green 2007; Sia and Soh 2007; Wagner et al. 2010). The products are to a large extent standardized and comprise the perceived best practices (Howcroft and Light 2006; Koch 2007; Sia and Soh 2007; Sommerville 2008; Strong and Volkoff 2010; Wagner et al. 2010). These practices often are not those accustomed to in the client organization and the system may be 'too far' or 'too close' with those (Chiasson and Green 2007). Resistance to adapt to new practices thus emerges in client organizations (Haines 2009; Kim and Kankanhalli 2009). The vendor has to manage the trade-off between making their system generally applicable in many organizations, and addressing the specific needs of individual customers (Chiasson and Green 2007; Pollock et al. 2007; Sawyer 2001; Xu and Brinkkemper 2007).

Consequently, in large-scale IS implementation the vendor, possibly several consultant organizations, and the group of client organizations, form a distributed ecosystem (Bosch 2009; Dittrich 2014; Kähkönen et al. 2017; Smolander et al. 2021) often crossing national boundaries (Levina and Vaast 2008). The vendor owns the system product and manages it (Sawyer 2001). Consultant organizations work as a third-party entity serving their clients. The client organizations live through the change that the new system introduces (Leonardi 2011).

2.2 User-Centredness in IS projects

Users have been in the centre of IS literature (Abusamhadana et al. 2019; Hirschheim and Newman 1991; Markus and Mao 2004; Wing et al. 2017) representing a topic that has attracted much interest. The first significant turn towards focusing on users occurred already in the 1980s (Isomäki 2002). The interest in user-centredness grew significantly during the 1990s and has reserved its position as a central topic ever since (Iivari and Iivari 2011).

The aim for user-centredness is often emphasized (Markus and Mao 2004; Wing et al. 2017) and seen as a key for success (Abusamhadana et al. 2019; Bano et al. 2017; Bano and Zowghi 2015; Butler and

Fitzgerald 1997; Ives and Olson 1984; Markus and Mao 2004; Thakurta 2017). The premise is that users are experts of their work environment (Abelein et al. 2013), will eventually use the deployed system, and thus they should have the deepest insights into their needs which should be fulfilled with the implementation.

Despite all these efforts, user-centredness has remained an ambiguous concept (Iivari and Iivari 2006, 2011) with many approaches (Abelein et al. 2013; Abusamhadana et al. 2019; Isomäki 2002). Already the term referring to placing the users and their needs in the centre during the IS implementation has alternatives (Iivari et al. 2010). Some speak of user-centredness (Iivari and Iivari 2011) that captures a range of approaches, such as the use of personas as surrogates to average users, as well as actual development tasks conducted by the users. On the other hand, the difference between psychological user involvement and actual user participation has also been distinguished (Barki and Hartwick 1989). The term user engagement is sometimes used to include both of these (Abusamhadana et al. 2019; Bano et al. 2017; Bano and Zowghi 2015; Hwang and Thorn 1999). Then again, for instance human-centred design has been standardized with higher-level principles that emphasize reaching "a clear understanding of users" (Iivari and Iivari 2006; ISO 1999).

While a focus on users is a shared premise, the user-centredness approaches diverge in the extent they directly involve the users (Abelein et al. 2013). The approaches range from the developers' conscious acknowledgement of users to the users themselves personalizing their system (Iivari and Iivari 2011). For instance, the user-centred design focuses on identifying who the users are and embracing their heterogeneity during design (Iivari and Iivari 2011; Norman 1986). Participatory design argues for the active and actual participation of users, making them decision-makers (Bergvall-Kaareborn et al., 2014; Kautz, 2010). End-user computing sees (e.g. Cheney et al., 1986) the users as the system co-developers.

The degree of involvement that occurs in actual practice varies (Ives and Olson 1984). Users may be involved in a symbolic way where their input is requested but mostly ignored (Bano et al. 2017; Lapointe and Rivard 2007). User participation can be token participation where the users, despite their participation, have no power to influence the project (Bano et al. 2018; Harris and Weistroffer 2009; Kirsch and Beath 1996; Martikainen et al. 2020; Wing et al. 2017). Even though there is a genuine intention for user-centredness the expected benefits may not be produced (Butler and Fitzgerald 1997).

Consequently, rather than being a specific practical method or approach, user-centredness appears as a higher-level goal. Benefits from reaching user-centredness include psychological *buy-in* of users (Markus and Mao 2004), a better system quality (Abelein et al. 2013; Damodaran 1996; Hwang and Thorn 1999; Markus and Mao 2004; Thakurta 2017) and closer user-developer relationships (Markus and Mao 2004). Achieving the user-centredness in IS projects is expected to result in success (Harris and Weistroffer 2009). Most often this success refers to user-satisfaction (Abelein et al. 2013; Bano et al. 2017; Bano and Zowghi 2015; He and King 2008). The user-satisfaction is a multifaceted concept (Bano et al. 2017) described as the extent users perceive the system meets with their needs (He and King 2008; Ives and Olson 1984) and induces pleasant use-experience (Au et al. 2008).

User-centredness seems the most attainable in projects that are easier to manage (Markus and Mao 2004; Obendorf et al. 2009). However, user-centredness is mostly considered with a narrow perspective (Alter 2009; Hirschheim and Newman 1991; McCarthy et al. 2020; Obendorf et al. 2009; Wing et al. 2017). Literature has not comprehensively analysed user-centredness in relation to setting such as large-scale ERP implementations or outsourcing (Alter 2009; McCarthy et al. 2020) although for instance Avison and Fitzgerald (2003) have argued that the size and type of the IS projects should be taken into account regarding user-centredness. The context's complexity introduces issues such as who to involve from all the possible users (Bano et al. 2018; Markus and Mao 2004). Also, the development and implementation efforts become more distributed (Markus and Mao 2004; McCarthy et al. 2020; Obendorf et al. 2009) and the number of perspectives increases. There is thus a need to study user-centredness in large scale IS.

3 Research Method

We study a large-scale IS renewal project where a patient record system is acquired and implemented for a consortium of several public healthcare and social care organizations. The system is estimated to serve around 35.000 social and healthcare professionals and influence around 1.6 million citizens. Total project costs are estimated to be around 600 million euros, from which the technology is approximately 200 million euros.

The project, launched in 2012, aimed to integrate numerous separate systems for a group of social and healthcare organizations. An integrator organization to carry out the system's acquisition and implementation was established. Its role was to serve as local developers.

Procurement began in 2013 with a shared procurement strategy. It followed the negotiation procedure (Moe and Newman 2014). The procurement resulted in that an offshore vendor with a packaged enterprise system was contracted. The vendor is a large privately-held healthcare software company. They were an experienced actor in markets and had sold their products worldwide.

Numerous client organizations from one region in [a country] formed a company (integrator organization) to acquire the system. The client organizations include primary health care organizations, run by different municipalities, being the main contact point towards citizens. More specialized services, such as surgery or cancer treatments, are provided by hospitals, own by the municipality consortium. The social care services, offered by the municipalities, comprise a wide range of services, such as social counselling, rehabilitation, and mental health work to ensure social security and wellbeing.

We wanted to understand how user-centredness (Iivari and Iivari 2006, 2011) that comprises a wide spectrum of approaches to ensure user satisfaction unfolds in this case. We utilized a qualitative single case study approach since developing and implementing an IS is essentially a social process (Newman and Robey 1992) that should be understood in its social and political context (Butler and Fitzgerald 1997; Myers 1995).

To understand how user-centredness took place in the project, we interviewed the main actors from the integrator organization. In total, thirteen thematic interviews were conducted (see Table 1). The interviewees were selected with snowballing sampling, i.e. we asked the interviewees to name subsequent, influential, and relevant people (Morgan 2008). The first three interviewees were provided by the case company. The interviewees included management level actors from the integrator organization and a consult that worked with the social care professionals. Their positions varied from the highest level of management to those who manage the development of a certain product or module or unit and those who are responsible for a certain aspect of the system or process. Thus, the perspective we attained was mostly managerial. There is however also a view into the operational level. We labelled the interviewees as either information technology (IT) specialists or business domain experts (BIZ).

Index	Title	Role
IT 1	Chief Technology Office	Responsible for information technology
BIZ 1	Director of Development	Managing local development.
BIZ 2	Solution Architect	Responsible for local development of the operative healthcare
BIZ 3	Business Manager, Social Care	Directing the local development of the social care product.
BIZ 4	Chief Executive Officer	Managing the integrator organization
BIZ 5	Clinical & social Care Lead	Directing the development of healthcare and aligning the system with it.
IT 2	Usability Manager	Responsible for ensuring system usabil-

		ity in the local implementation efforts.
BIZ 6	Director of Human Resources	Responsible for managing client relationships.
BIZ 7	Consultant for Social Care	Advising the development from the perspective of operational-level social care.
BIZ 8	Business Manager, Digital and Citizens Services	Directing the development of the products for citizens.
IT 3	Head of Software Development Unit	Managing the unit of technical development
BIZ 8	Development Manager	Directing the local development of senior citizen products.
BIZ 9	(ex) Communications Director	Responsible for directing organizational communication

Table 1 Interviewees

Each interview, organized face-to-face in the integrator premises, took approximately 90 minutes. Two interviewers were present, asking open-ended questions where the interviewees described their views on the project. All interviews were conducted and analyzed in [language name]. Only illustrative quotations were translated into English. All interviews were audio-recorded and fully transcribed.

Data analysis began immediately as the data became available. We used the grounded theory approach (Urquhart 2012) with no preliminary theoretical framework. The ideas were thus deducted from the data. This approach was chosen because existing IS literature on user-centredness is contradictory so we did not want to limit the analysis by theoretically restricting frameworks. The analysis followed the stages of the pragmatic grounded theory (Urquhart 2012), these being open, selective, and theoretical coding. First, the first author coded the data to produce initial and general labels on themes. Then, finer codes were placed that are related to the initial themes to generate more focused ideas. Finally, the relationships between the codes were interpreted so that findings emerged. Throughout the process, a constant comparison was applied. The researchers also discussed the results throughout the process. Table 2 illustrates selected examples of this coding process.

Finding	Excerpt	Interpretation
User-centredness as user participation	[During the requirements elicitation] "*we took those clinicians from the sector to tell us about their needs"* [BIZ 5]	The developers in the local site have pursued user-centredness by making them participate in the efforts.
	"*We utilized workshops for acquiring the user-needs*" [BIZ 5]	
	"*We have continuously involved the users to define what kind of system they would need*" [BIZ 5]	
	[When you are configuring the system] *"surprises emerge when you have first thought some modification as easy, but then notice that it most certainly is not easy at all…This comes from the restrictions imposed by the vendor"* [IT 2]	The developers in the local site have only limited possibilities to

The developers working with limited possibilities	[It has been restricted] *"that what we can do for the system…So, we had to come up with bypasses" [on some issues]* [BIZ 2]	configure the system for their users and thus ensure user-centredness. The vendor has the ultimate capabilities for modifications.
	"*What is distinguishable in our case is that we are not working from a scratch. So, we have restrictions*" [in configuration] [IT 2].	
The client organizations as responsible for carrying out the change in their premises	*"The management in the client organizations, those supervisors and such, need to understand the change and carry it out into their units. It is their responsibility."* [BIZ 8]	The user-centredness necessitates that the client organizations contributed to the efforts by proper change management in their premises.
	"I believe that the significance of the change that the system has introduced into the work practices, and how much management it necessitates has come a bit by a surprise for our client organizations" [BIZ 9]	
	"The client organizations should make the decisions on certain issues. The system does not alone decide what the doctor does and what the nurse does...These necessitate decision-making on role-allocations from the client organizations" [BIZ 8]	

Table 2 Coding Examples

4 Findings

Next, we describe our case and findings.

The system implementation was indeed a multi-party collaboration (see Figure 1). The system, a specialized product for healthcare, was acquired from an offshore vendor, selling the product worldwide. It was to be implemented into a consortium of multiple client organizations where its users, the professionals of health care and social care operate. The integrator organization in the role of local developers took the responsibility for tailoring the system to the local environment. They worked as the middleman between the vendor and client organizations and configured the system by their client's needs.

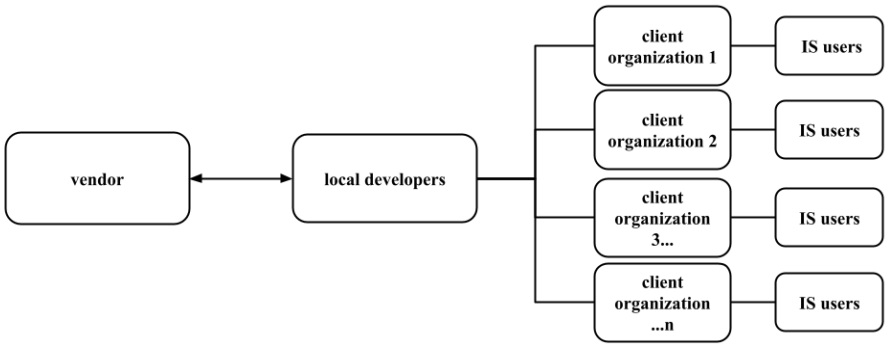

Figure 1 Implementation Ecosystem

4.1 Local Developers promoting user involvement

The local developers declared the project to be user-centred in "*exceptional amounts"* [IT 2]. Their goal was to essentially ensure that "*the users are satisfied with the system*" [IT 2]. The approach resembled user involvement as the users' inputs were gathered throughout the process. From their perspective, this involvement began already before the system's procurement when the system requirements were elicited. The clinical and social care lead in the local development organization explained that they "*took those clinicians, those employees of hospitals, into their premises, and then listened to their needs and requirements"* [BIZ 5]. These requirements were then shared with the vendor candidates so that they could offer their best solutions. Later the users were participating in grading the candidates demonstrating their products. This means the users, at least in theory, were heavily involved in selecting the system.

The local developers continued user involvement after the system was selected and it was time to work adapting the system to the local needs. Numerous workshops were organized where the users gave their opinions on design-related questions. These sessions centred on defining the users' work processes and choosing how the system could be aligned with those. The usability manager explained that in these workshops "*the users were there to evaluate if the process* [supported by the system] *meets with their needs and if they are able to do all their tasks that they are supposed to do*" [IT 2]. In addition to workshops, the local developers utilized product champions for instance. They were selected professionals from the social and health care field who were hired to mediate the communication between the users from the client organizations and the local developers. After the system was deployed into a client organization, the local developers visited the site and gathered feedback from the users. According to the HR director, such visits led to that "*more than a hundred smaller modifications were taken into development in just a couple of weeks after a visit* [BIZ 6]. Thus, the local developers actively worked to find and address the users' needs.

Consequently, the local developers worked in close collaboration with the client organizations (see Figure 2). They reacted to emerging user-needs with their capabilities. These capabilities mostly concern the system's customization activities such as selecting appropriate modules and configuring the system. When their capabilities were insufficient, they contacted the vendor for further development and major changes.

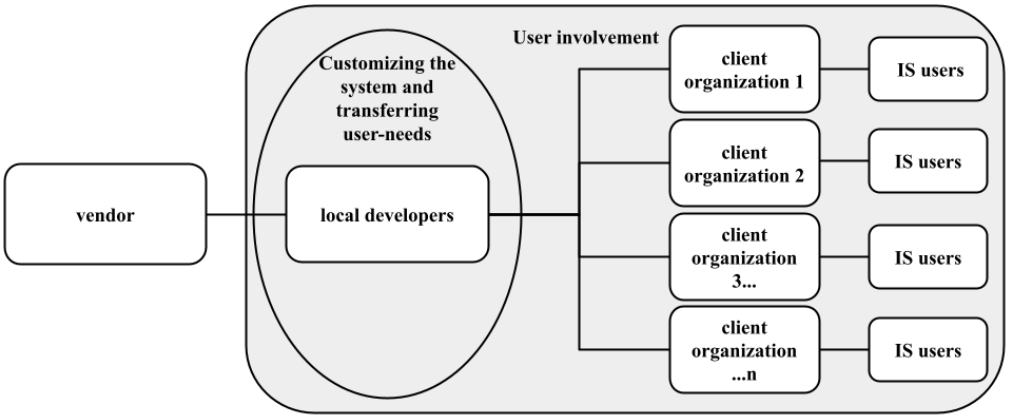

Figure 2 local developers involving users

4.2 Vendor as the system's owner

The vendor owned the system. The local developers explained that the vendor had conducted "*over 400 implementations*" around the world [BIZ 8] and had a strong "*implementation model"* [BIZ 4] driving the project. The vendor worked closely with the local developers and even sent their representatives to support the system's customization (see Figure 3).

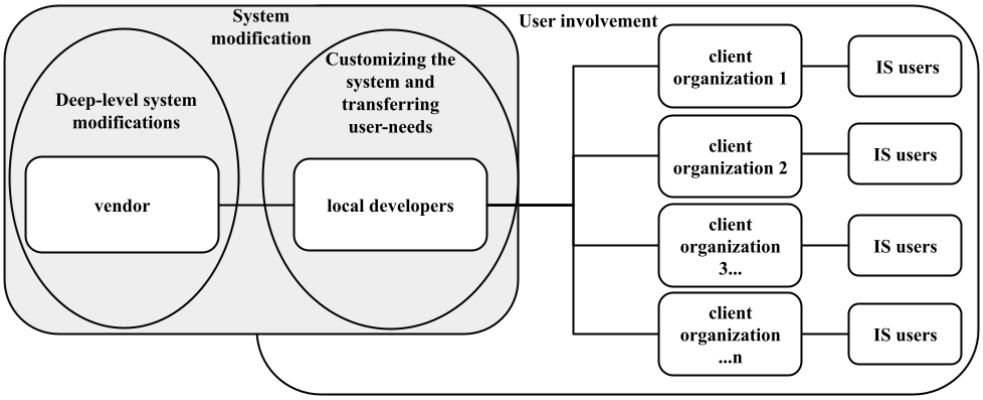

Figure 3 Vendor as the system's owner

The vendor's perception of health care and social care practices was deeply embedded in their product. They perceived that health care and social care is a business-like service, supported by their product. The local developers' head of the software development unit explained the vendor trying to ensure that *"the system works efficiently in a way that enables many customers to be claimed and charged for money… Many functions are done with money in mind*" [IT 3]. For instance, the work practices and processes were standardized and hardcoded in the system's logic. The local developers perceived that the system followed a principle that if the user "*has not done things accordingly, she may be punished in some way"* [IT 3]. This appeared for instance in reporting the work. This logic was locally inappropriate and unacceptable and required modifications.

The vendor's ownership of the system resulted in that the local developers had to comply with "*restrictions*" [IT 2] when implementing the system. The local developers' head of the software devel-

opment unit described that they are "*moulding a system*" and *"are not creating a new system*" but "*customizing and localizing"* one [IT 3]. When the local developers build the system, they "*could choose one from a set of modules, each of them with different options for customizing"* [IT 2]. The usability manager explained that they faced "*surprises in situations where they thought that some issues would have been simple to solve but then learnt that it was not easy at all. This comes to the restrictions placed by the vendor. They are not always clear* [for the local developers]*"* [IT 2]. The local developers perceived that there were situations where they had to choose the "*least bad option*" [BIZ 2] from a set of non-optimal choices.

The vendor was the one able to do changes to the system core. The local developers had to formally request such modifications from the vendor. The vendor would then evaluate if their contract obligates them to make the changes or if they could reimburse the client. The requests for modifications were not always accepted, even if deemed essential, for instance, to fix an issue with medication functionalities. The vendor perceived the current functionality as optimal. This prevented the local developers to configure the system for the users. Instead, the local developers had to create an artificial bypass. On the other hand, sometimes the local developers were happily surprised by the vendor's keenness for certain modifications. This was perhaps when the vendor "*perceived something as good and saleable, and then efficiently made the change for everyone*" [BIZ 2].

4.3 Carrying out the change in the client organizations

The change the new system introduced to the client organizations was significant. In addition to new system interfaces, the logic in operating models the health care and social professionals follow was renewed. The new logic emphasized especially standardized processes and structured reporting practices. For instance the new reporting standards were different from those used earlier. The professionals were used to much less standardized practices. After the first deployments, the user-feedback was "*quite poor*" [BIZ 4] and in general "*not as good as was hoped*" [BIZ 4]. The users for instance complained a lot about the system's "*complexity*" [BIZ 2].

The local developers had faced the radicality of the change. In addition to ensuring the system's usability, the local developers tried to remain "*patient with deploying new features*" [IT 2] into the system. The local developers explained that the users should first learn how to comply with the new reporting procedures and most simple system functionalities. Otherwise, the users would become overwhelmed. Additionally, they explained that for instance systematically training the users to use the new system is essential. However, a product champion working between the local developers and client organizations revealed her dissatisfaction with the training procedures. She explained that she had encountered situations where the users had insufficient time for participating in the scarce number of training sessions.

The local developers explained that the client organizations have a central role in how the change is executed. The local developers perceived that this process had not been optimal throughout the client organizations. They stated that the bad user-feedback in large part "*reflects how the change has been carried out*" [BIZ 4]. To implement the change, the client organizations should have clarified their processes and aligned those with the new system. The local developers argued that "*if the current state in the organization is not clear and employees there are not familiar with their situation…then the deployment will be very hard*" [B 8].

The local developers stated that the responsibility in change management has to be taken by the client organizations. They argued that there the management from different levels needs to be committed to carrying out the change on their part. Figure 4 illustrates the client organizations' position inside the ecosystem. It emphasizes that their role was to concentrate on organizational issues and change management.

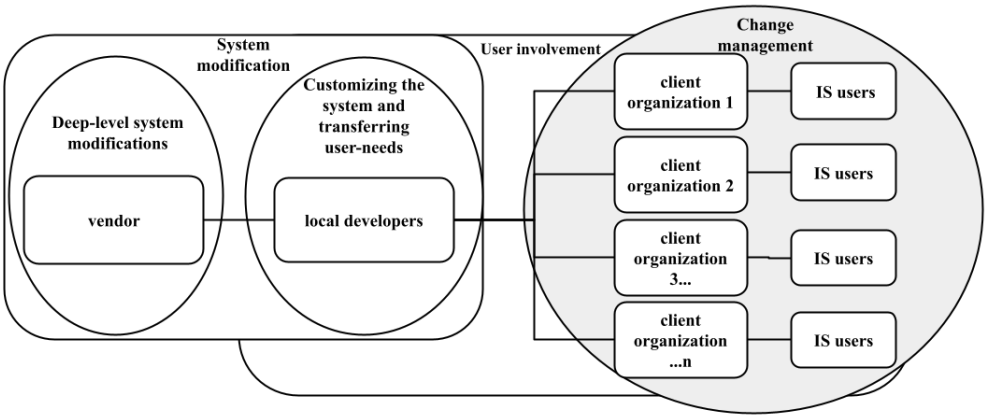

Figure 4 Client organizations and change management

5 Discussion

In the case there were sincere efforts for user-centredness, at least by the local developers. This is often conceptualized to user satisfaction (Abelein et al. 2013; Bano et al. 2017; Bano and Zowghi 2015; He and King 2008). While some activities resembled "textbook" user-centredness (Butler and Fitzgerald 1997) the activities were not sufficient to ensure the benefits the user-centredness generally promises (Lapointe and Rivard 2007; Robey et al. 2002). There were strong indications for dissatisfaction amongst the users. This forces us to question if user-centredness was ever reached.

The findings confirmed that organizations in need of a large-scale IS increasingly resort to packaged systems (Howcroft and Light 2006; Keil and Tiwana 2005; Lucas Jr et al. 1988; Sommerville 2008; Strong and Volkoff 2010; Wagner et al. 2010). Here, regarding the user-centredness we see the main issue is the collaborative context that results from the approach (see Figure 5). The ecosystem (Dittrich 2014; Kähkönen et al. 2017) comprised of an experienced systems vendor who persistently held the reins. On the other end, there were separate client organizations where the users were. In the middle, the local developers worked in configuring and adapting the system for their clients. Each party had its own view and responsibility for user-centredness. Together these defined the limits of user-centredness.

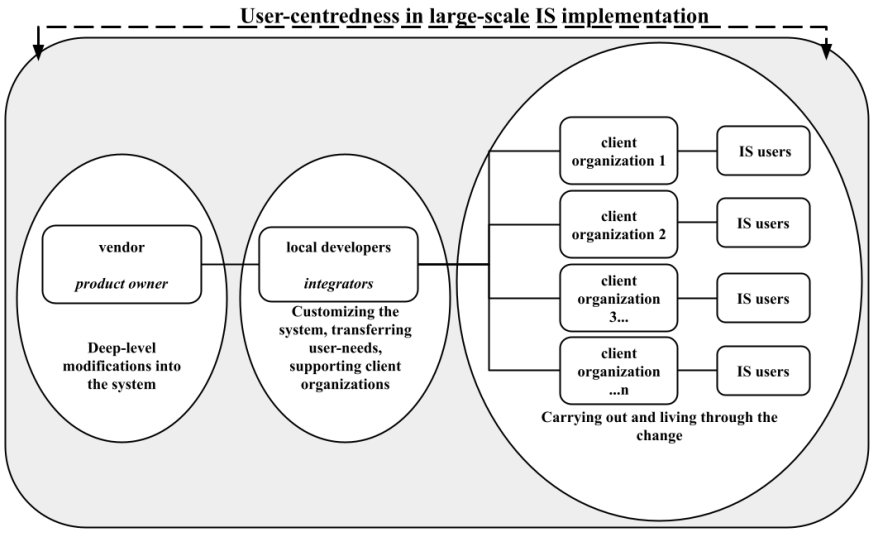

Figure 5 User-centredness in large scale IS implementation

A vendor has an influential role especially in overseeing the system's technical components. The system is their product and they have the capabilities and possibilities to modify it. As our case showed, packaged systems rarely are optimal for new contexts and users (Dittrich 2014; Dittrich et al. 2009; Light 2005; Singh and Pekkola 2021; Strong and Volkoff 2010; Xu and Brinkkemper 2007). Under the circumstances the vendor controls the changes and how those are considered. The vendor´s position poses challenges in serving the users. This is because of several reasons. First, the vendor is often distant from the users (Pollock et al. 2007; Sawyer 2000) so the users' needs reach the vendor only through intermediaries. In our case, the vendor was an offshore supplier. This means the vendor was distant from the local context both physically and perhaps also culturally (Kaplan and Seebeck 2001). This distance concretized in how they perceived the health care and social care service model. Second, the vendor´s business is not to serve individual clients but to compete in markets (Koch 2007; Sawyer 2001; Sommerville 2008). The vendor is serving various clients with their product. This reduces their willingness and ability to be flexible when a new client has unique needs. The vendor was reluctant to change the system´s logic as they risked ruining their own system architecture. Also the other clients' needs tied their hands. Concerning working towards user-centredness, the vendor had a dilemma: to serve their new customer and its users or minimize the risks towards old customers.

User-centredness spreads beyond visible technical components (Sarker et al., 2019). The system's relation to the organizational processes was evident. Our findings indeed confirm that carrying out an organizational change is a significant factor in IS implementation. Executing the changes in the operations and processes concern especially the client organizations as they need to take responsibility in carrying out the changes (Avgerou 2001). This creates a contradictory situation when the clients are expected to change the processes to something they do not want – in the worst-case worse than before as the vendor or the local developers did not follow the clients' needs.

The case highlights the local developers´ role in user-centredness. They were able to work closely with the users and engage them with their tasks. However, it became evident that their efforts alone were not sufficient to ensure user-centredness. The local developers were involved in both technical and organizational matters but only with limited capabilities. The vendor had set strict boundaries for local developers customizing the system. It seemed that the local developers were mostly allowed to work with the system´s surface level. On the other hand, they should also support the client organizations in their execution of change.

We were interested in what occurs in a large-scale IS implementation project that is declared to be user-centred by practitioners. Regarding this the case exemplified that in a large scale IS implementation user-centredness results from the ecosystem's joint efforts. Large-scale IS implementations are projects where heterogenous design constituencies generate the deployed system together (Dittrich 2014; Koch 2007). The context has not been widely considered in research focusing on user-centredness (McCarthy et al. 2020; Obendorf et al. 2009; Wing et al. 2017). The user-centredness literature has concerned the topic mostly in contexts where user-centredness is more reasonable (Alter 2009; Bergvall-Kaareborn et al. 2014; Markus and Mao 2004; Roland et al. 2017). This stream has showcased the value of being user-centred. Research on IS implementations has focused on the issues that working with packaged systems introduce (Koch 2007; Li and Nielsen 2019; Singh and Pekkola 2021; Sommerville 2008). This literature has explained the tension that formulates in the collaborative efforts (Dittrich 2014; Kähkönen et al. 2017; Roland et al. 2017; Smolander et al. 2021). These streams together arrive at the issue we exemplified in this paper. However, they seem to not explicitly discuss issues of user-centredness in the context of IS implementations. Vilpola (2008) is close with our view by stating that implementation "method should cover implementation stages from before the selection of a system until operational efficiency overtaken the level preceding the implementation" (p. 48). Nevertheless, the process view offered does not emphasize the importance of the ecosystem's collaboration. Our findings showed that the themes should be integrated to join their forces on unravelling how to make IS implementations more successful. With this study we bridge the gap between the research streams with empirically grounded insights justifying the topic's significance. The findings urge for more future research where user-centredness is considered comprehensively while taking into account the more complex contexts.

6 Conclusion

User-centredness is said to be an ingredient for success in IS projects. Achieving user-centredness is seen to include different practices that centre on close cooperation between the developers and users which should result in that the system addresses the user needs. These practices are mostly concerned in more easily manageable contexts.

In this paper we explored what occurs when a large scale IS implementation is declared as user-centred. We found that user-centredness necessitates shared efforts from all parties in the ecosystem. This defines the user-centredness. Our findings exemplified how the efforts of a one party, no matter how eager they are, are not enough to ensure that user-centredness and user satisfaction are reached. The failure of reaching user-centredness was evident in that the users were strongly dissatisfied and felt unfamiliar with the new system, even though they were heavily involved in its design.

Our findings contribute to research and practice. The paper contributes to research with empirically grounded insights that exemplify the need to extend the discussion on user-centredness. The discussion should consider the user-centredness along its practices such as user involvement and participation in contexts where the efforts are distributed. Our findings also benefit the practice. Cooperation between the parties in a large scale IS implementation is emphasized. The parties should understand and acknowledge their own and others' responsibilities for user-centredness. To enable and support it, the vendor should ensure flexibility and reactiveness with their product's modification so that it may address the local users' needs. Carrying out the inevitable change should be carried out by client organizations living through the change. The local developers should not be fixed with their assumption on user-centredness but understand the roles of others and work to supporting those from their own central position.

This paper has limitations. First, this is a single case study. More generalizable conclusions could be found by utilizing larger amounts of cases. Nevertheless, the insights from this study are considered with relevant literature and thus reflect a wider perspective than merely a single case. Second, we viewed the events from the perspective of the (local) developers. Thus, our perspective is altered by the developers' perceptions of the events and other actors. Third, our approach is interpretative. Therefore, our findings are tied to our perceptions and may embed misinterpretations.

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ARTICLE V

The prototypical narrative elements in information systems implementation narratives: Towards critical narrative approach

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THE PROTOTYPICAL NARRATIVE ELEMENTS IN INFORMATION SYSTEMS IMPLEMENTATION NARRATIVES: TOWARDS CRITICAL NARRATIVE APPROACH

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THE PROTOTYPICAL NARRATIVE ELEMENTS IN INFORMATION SYSTEMS IMPLEMENTATION NARRATIVES: TOWARDS CRITICAL NARRATIVE APPROACH

Research Paper

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Abstract

Information systems (IS) implementations, e.g., their development and use, emerges from subjectively perceived social realities. Practitioners such as developers, managers, and users, make sense of the world essentially as storytellers. They resort to narratives when searching for explanations. While narratives are a complex form of comprehension and knowledge transfer, they reflect the reality resided by their tellers. Thus approaching them critically can reveal much about the realities and reasoning processes behind explicit words and actions. Understanding more about such aspect would benefit the IS practitioners who work in the trenches between social and technical. Yet critical narrative approach has not found a steady position in IS. This paper presents and illustrates a viable starting point for such discussion. The paper contributes by presenting and instructing an initial idea for critical narrative approach in IS implementations.

Keywords: Narrative analysis, sensemaking, information systems implementations.

1 Introduction

To act in the near overwhelming world, we must make sense of it. We need a comprehendible reality. We generate such reality through sensemaking, and upkeep it with our actions. This applies in the IS context: to act with IS, actors make sense of it (Orlikowski & Gash, 1994). IS implementations are intersections of different realities: those of different user and developer collectives (Dittrich, 2014). The collaboration of these different realities is proven difficult (Griffith, 1999; Smolander et al., 2021). A prevalent issue is that sensemaking is difficult to witness. It does not easily lend itself to be considered in practice (Kjaergaard & Jensen, 2008, p. 2). It seems simpler to be identified during post-mortem. Yet this is when the infamous IS implementation issues have already escalated (Momoh et al., 2010). A need for ways to peek into the realities which the IS actors reside in seems apparent. Placing a mirror in front of them for self-reflection could also be of benefit. This paper suggests that a critical narrative approach would serve such a purpose.

We, as human beings, make sense of the world with narratives (Branigan, 2013; Brown et al., 2008). A narrative is an account of a series of particularized events occurring over time (Bruner, 1991; Fludernik, 1996). When we are asked to tell what happened yesterday, we resort to stories that convey narratives. When we think about tomorrow's possibilities, we scenarize them with narratives. They are a critical for our world comprehension. We are *storytellers* (Fisher, 1984). This combined with sensemaking implies that we live by our narratives.

Narratives intrigue many scientific fields'. Organizational research is the most relevant one here (Boje, 1991; Brown et al., 2008; Geiger & Antonacopoulou, 2009). It has established that actors make sense of their organizational surroundings with narratives (Brown et al., 2008). Organizations are storytelling systems. Relevancy for IS field seems apparent: the field continuously struggles with the socio-technical intersection (Sarker et al., 2019). Yet IS research on narratives is still rare. The few excep-

tions have illustrated narratives' relevancy for the field (Alvarez & Urla, 2002; Raatikainen et al., 2021). The bridge between narrative theory and IS practice still seems shaky. This paper wants to take part in such construction work.

This paper addresses the following issue. Sensemaking does not easily lend itself for practical means. Narratives are the primary form on sensemaking. Yet IS research considering applying narrative theoretical insights is rare. This raises the following research question: "*How critical narrative approach can be applied in IS implementations?"* This paper answers the question by illustrating a critical narrative approach in an IS implementation case. This leads to presenting an initial idea for adopting narrative approach in IS implementations.

The next section constructs this paper's theoretical background. The third section describes the case. The fourth sections presents the example narratives. The fifth section illustrates their analysis. The final sections propose the critical narrative approach and conclude the paper.

2 Theoretical Background

Sensemaking is a perspective that emerges from organizational research. It considers the ways people come in terms with their surroundings, i.e. make sense of the world (Weick et al., 2005). Weick (1995) presented the properties of sensemaking. Sensemaking is *enactment*. Actors are part of their surroundings. As they act based on the reality they perceive, they create this reality. Further, sensemaking is grounded in actors' *identity construction*. In their sensemaking, actors define and maintain their identity. Sensemaking is also *social construction*. The reality is constructed in relation to other actors. Finally, sensemaking is about people noticing and *extracting cues*. These are singled out aspects that actors make sense with. Sensemaking is obviously of IS field's interest. There is an apparent overlap in the context. Yet more interestingly, the technology aspect of IS has something particularly interesting for the field. Technologies are *equivoques* (Jensen & Aanestad, 2006). They are an integral part of organizational sensemaking as they are linked with human *agency*. This is especially intriguing for sociotechnical research.

IS cases' post-mortem analyses reveal that their infamous issues are rooted in the contradictions between different realities. Orlikowski and Gash (1994) noticed a congruence between technologists'' and users' realities during an IS implementation. In the technologists' reality, the new IS was technically highly capable, easy to use, and would revolutionize their organization's business. In the users' reality it was a confusing system, at best a nice tool. Beaudry and Pinsonneault (2005) noticed different realities inside user groups. In some account managers' realities the new account management system was an opportunity for making their work better. In others' reality it was threat they would not want to be involved with. Hsiao et al. (2008) found that some taxi-drivers resided in a reality in which they were "preying" for customers. A Global Positioning System (GPS) was their detector for locating the customers. Other taxi-drivers perceived themselves as sailors. The GPS was their "beacon". Jensen et al. (2009) noticed that doctors, nurses, and managers resided in different realities. In doctors' reality they have high authority and their mission is to treat patients. They saw the new electronic patient record system (EPR) as an introduction of administrative tasks that they did not perceive as their job. Such examples illustrate how sensemaking generates realities which actors then follow. Actors exercise their agency. For instance the account manager Michelle, avoided the use of the new threatening account management system (Beaudry & Pinsonneault, 2005, pp. 515–517). Similarly the doctors did not put much of their effort into learning the new patient recording system's reporting features. These studies do mostly focus on users' perspective. Nevertheless, other actors, such as vendors, consultants, and managers, do also engage in sensemaking (Chauhan & Gupta, 2020; Hekkala et al., 2018; Yeow & Chua, 2020). It is the intersections of the different realities where their crashes occur. Their aftermaths tend to be so surprising that they attract interest (Griffith, 1999). Narrative theorists, i.e. the experts of human communication, would encourage to have a look at narratives. This is justified by that human is essentially *homo narrans* (Fisher, 1984) who comprehends the overwhelming world with narratives. Thus narrative is the essential form of human sensemaking (Brown et al., 2008).

Narrative theoretical discussion in the IS field is scarce (Raatikainen et al., 2021), but slowly growing (Schwabe et al., 2019). Few examples include Alvarez and Urla (2001) who exemplified how employees in an organization resort to narratives when making sense of their organization. In this example a university planned to implement a new enterprise system and a business analyst was interviewing employees to identify current issues. The employees resorted to storytelling, conveying narratives about how for instance the students do not react to the employees' notifications. The demonstration invaluably introduced IS context with people's natural tendency to use narratives in sensemaking and communication. However, the concept of narratives, their analysis, and practical implications in this context has not been much discussed. This paper suggests taking a few steps back towards the underlying phenomenon – narratives as a way to comprehend the surroundings - and considering what are essentially narratives

Narratives can be viewed from different perspectives. These include e.g., narrative occasions (Goffman, 1981), positioning (Bamberg, 1997), worldmaking (Bruner, 1991), or narrative comprehension (Branigan, 2013; White, 1981), to name a few. Each of them can be valuable for the IS field. This paper uses a general approach so that it may aid as many further studies as possible. The prototypical narrative elements approach is thus suitable (Herman, 2009a). It comprises a large chunk of the narrative perspectives into main elements that characterize narratives. These elements are *situatedness*, *event sequencing*, *worldmaking*, and conveying *experience* (see Figure 1). They are captured in the narrative's definition: a narrative is a situated mode of representation focusing on a structured time-course of particularized events. The events introduce a disequilibrium in a storyworld, the representation conveying what it is like to live in this disturbance (Herman, 2009a, p. 9). The prototypical elements represent a general level, yet relatively comprehensive, view of narratives. Each prototypical element is an interpretively analysable aspect of a narrative, offering systematicity for trying to grasp what is conveyed.

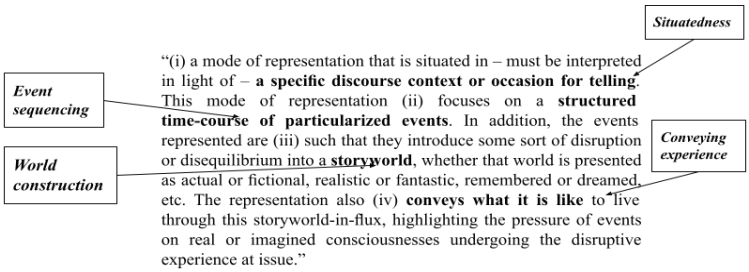

Figure 1 Prototypical narrative elements (Herman, 2009, p. 9).

S*ituatedness* refers to narratives' relatedness to the context surrounding them (Herman, 2009a). Such context is relevant on multiple levels. First, the more obvious is the particular situation where the narratives are told in the form of a story or account, such as during an interview (Riessman, 2002) or everyday conversation (Georgakopoulou, 2007). For instance Goffman (1981) is known for describing the statuses of the individuals present in the narrative occasion. To elaborate, a narrative considers the interrogators, listeners, bystanders, eavesdroppers, and such, and emerges as perceived accordingly. To exemplify, the university employees in Alvarez and Urla (2002) recognized their audience (business analysts) as interrogators keen to learn about the university's problems. This could explain for instance why the employees wanted to use narratives for convincing their innocence. Secondly, a narrative is also tied to its larger surroundings. For instance Bamberg (1997b, 2004a, 2005) has focused on describing this positioning aspect of narratives. The employees in Alvarez and Urla (2002) may have positioned themselves into a phenomenon where employees are recognized as antecedents of issues, or where information technology is making human employees more obsolete, perhaps making these employees restless.

In narratives, particularized *events* are *sequenced* to form continuums perceived as coherent (Herman, 2009a, p. 75). This sets narratives apart from for instance simple descriptions or explanations. While narratives may attempt to appear as telling general truths about various issues, they still resort to particular yet compelling instances. In narratives, the events that may in fact be rather separate are tied together with plots (Branigan, 2013; White, 1981). The university employees, again in Alvarez and Urla (2002), offered compelling accounts explaining the prevalent issues. It is plausible that the situation in the university has been very complex. Yet the employees' focused on events (the employees sending notifications to students, students not reacting to them, and employees having to hand-deliver the notifications) that made the disequilibrium comprehendible. The key is that the narratives continue to compellingly answer the question of *then what happened,* until it reaches its conclusion. In this example this was that the students' irresponsibility is the problem.

Narratives are about *worldmaking* (Bruner, 1991; Herman, 2009a; White, 1981). In more fictional stories this is rather obvious in the way the story settings - the storyworlds - for the narratives are constructed. The same aspect, however, is also present in those narratives that occur in the more practical life. Narratives tend to take the canonical breach, i.e. something that could be unexpected, and use it to reinforce the perceived reality (Bruner, 1991). This also may be applied in the examples by Alvarez and Urla (2002). The university employees' narratives seem to use the narratives for constructing a storyworld where they are essentially victims of circumstances. In this storyworld, the students' lack of cooperation, despite the employees' altruistic efforts, have led to issues. The narratives thus utilize the disequilibrium - the implied issues in the university's processes – for constructing the appealing reality.

Narratives essentially *convey experiences*, but in tricky manners (Herman, 2009a, p. 137). Thus, rather than being solely faithful to objectivity, they emerge from and communicate what something is or has been like for someone (Fludernik, 1996). In fictional stories this is simpler since they tell about the experiences of the characters in the stories. However, the narratives of the practical life experience may be conveyed in less trivial manners. Indeed these narratives also may explicitly tell about the experiences of the narrators, like telling that *this is what happened to me.* Yet these narratives also emerge from the more non-explicit world of experience. For instance the university employees' narratives in Alvarez and Urla (2002) explicitly tell how the two narrators have had to struggle with the irresponsible students. However this also shares hints about their larger world of experience, this perhaps being related to them fearing to be alleged as responsible for the problems in the university.

The aforementioned prototypical narrative elements offer guidance for those trying to grasp what narratives convey. This paper argues that such analysis would have an invaluable contribution for the IS field. It could be utilized as a critical narrative approach. *Critical* here emphasizes that the compelling and appealing explanations that the narratives offer, should be challenged (Mäkelä et al., 2021). This does not mean that they must be declined. Rather they should be weighted in a reflective manner to not get lured into their explicit "lessons". For instance in the example from Alvarez and Urla (2002) the developers, such as the business analysts, could have learned much about the reality the employees resided. The developers could have then tried to address the social reality in their practice. On the other hand, the managers of the employees could have tried to address the apparent organizational issues in their university which the narratives implied. Similarly, the doctors' narratives could have revealed their reality in which the new reporting demands may not fit (Jensen et al., 2009). Or listening to Michelle's narratives could have aided the crash in which Michelle purposefully avoids the new accounting system. By analysing such elements from narratives, those of own and others, one can look behind the explicit words expressed, and potentially see glimpses of the subjectively perceive social reality the teller resides in. Such critical approach, this paper argues, could shed light on the antecedents of the infamous IS implementation issues, and inspire ways addressing them in IS practise. Perhaps even proactively before the post-mortem reveals them.

3 Case Description

The examples narratives are from a large-scale IS project: a new EPR is acquired and deployed for a consortium public healthcare and social care organizations. The client organizations' many separate, non-integrated, and poorly usable systems would be replaced with a single system. The consortium concluded that the best way to approach the project is to acquire a packaged system from a vendor, then customize it for the local needs. A project company, a sort of a middleman, was established to take responsibility for the project. They as the system's local configurators had responsibilities such as e.g. organizing procurement, executing the system acquisition, implementation, and deployments.

The project was officially launched in 2012 and is planned to end in 2022. It is its deployment country's largest public sector IT project. It influences over 1.7 million citizens and more than 50.000 users, costs being well over 500 million euros. The project has great goals, including the world's first system integrating social care and health care, widely digitalizing the services, significant cost reductions, improved services and safety. Yet the project has been in great turbulence. The vivid public discussion judges the project as a total failure. Especially the way the project has been approached, the vendor selection, and systems usability have been heavily criticized. The public discussion claims that this new system is totally non-fitting for the local context. They alleged it to be costly and dangerous waste of taxpayer money. The system has even been associated with a fatal incident. Much of the critique has been directed to the project company.

The project company has alleged being, as Mary from the organization states, user-centred "in exceptional amounts". They have focused on ensuring usability and user satisfaction. They have defined these to be the key factors for fulfilling other project goals, such as cost reductions and patient safety. The strong critique implies that these key factors may not have been actually reached. It seems that the project company may have focused on a rather narrow perspective regarding being user-centred. They seem to focus a lot on making configurations and then expecting that things eventually fall into their places. Such sensemaking may attract critical views. They are an organization with major responsibility for this magnificent mega-project, after all. However, critical narrative approach – as later demonstrated – reveals their reasoning behind their fixated approach.

The examples narratives are from interview data collected in 2019-2020. These were conducted with employees from the project company. The case company provided the first three interviewees. The latter interviewees were selected using snowball sampling. This means that they were asked to identify other influential and relevant people (Morgan, 2008). The interviewees included management-level employees and a consultant who worked with the social care professionals. The interviewees who are given randomly generated names, are listed in table 1.

Name	Title	Role
Jason	Chief Technology Officer	Responsible for information technology
Carole	Director of Development	Managing local development.
Sarah	Solution Architect	Responsible for local development of the operative healthcare
Rachel	Business Manager, Social Care	Directing the local development of the social care product.
Hank	Chief Executive Officer	Managing the project company
Andy	Clinical & social Care Lead	Directing the development of healthcare and aligning the system with it.
Mary	Usability Manager	Responsible for ensuring system usability in the local implementation efforts.
Patricia	Director of Human Resources	Responsible for managing client relationships.
Lisa	Consultant for Social Care	Advising the development from the operational-level social care's perspective.
Michelle	Business Manager, Digital and Citizens Services	Directing the development of the products for citizens.
Peter	Head of Software Development Unit	Managing the unit of technical development
Angela	Development Manager	Directing the local development of senior citizen products.

Table 1 Interviewees

Two interviewers conducted the interviews. They included open-ended questions. The interviewees were cued to discuss subjects they perceived as significant. The questions to inspire the discussion included such as "how has the project been", "what kind of role you have had in the project", "why was this project initiated", "for who the project was established for", and "how has the project met its goals". The main principle was to encourage the interviewees to reflect on issues from their perspectives. The interviewees were let to direct the discussion in the direction they felt relevant. The data was initially open coded (Myers & Newman, 2007; Walsham, 1995) following the pragmatic guidelines for grounded theory (Urquhart, 2012; Wiesche et al., 2017). The definition of a narrative (Herman, 2009a) as a representation of sequenced events structured to make sense of an experience, has been a sensitizing concept during the analysis (Bowen, 2006). In this paper, two of the most often reoccurring and interesting narratives are presented as examples.

4 Example Narratives

This section presents the two example narratives. They were expressed by some of the project company's employees. The first narrative explains the users' critique of the system. The second narrative narrows down the project company's role.

4.1 The first narrative – users lost in the Death Valley

The first example narrative was expressed by Carole. Carole is a manager in the project company. This account is from a discussion regarding the project's objectives. Carole described how, before this project, the client organizations had many separate and poorly usable information systems. The narrative conveyed in this account is easy to identify. Carole signals an upcoming example:

> "*What I find as a touching example about how people get used to anything is that a friend of mine wrote in Facebook how their old information system was initially very poor, but it has been enhanced a lot along the years and now is very good. I can say that I have heard this about 150 times.* [The old information system] *has been taken into use and no changes have happened afterwards. It is precisely the same piece of* [expletive] *it initially was but people just learned how to use it. It is rare to be able to say that something has*

> *remained as the same junk to its molecules. Yeah, there is the* [one feature] *but its functionality is precisely the same it has been the past six years. And suddenly it is so handy.* [Laughter] *And the same people who told me them using it over their dead bodies now scream that they want it back."*

This is a narrative conveying how also in a previous project users were first reluctant towards the new IS. Yet they eventually became fond of it. They simply had to become used to it. It explains that users are always reluctant towards new things. It is merely their human nature. They later do always become used to them. It explains that once the users learn how to use the new system, they will become fond of it. Even if the IS itself is not changed at all.

This same narrative was conveyed in Peter's account. Like Carole, Peter is a manager in the project company. Peter described the project and its goals. Peter began by stating that the upcoming year will be busy. Peter followed this by expressing the joy from what they had already accomplished:

> *"So far, we have shown that we have been able to build a functioning system. And even in this first deployment when there is always this dip. A sort of a Death Valley. First, there is the shock. Then finding out that they do not know how to use* [the new system]. *Then it gradually begins to rise from there. Now, clearly, there are already some things that were terribly criticized - it is now recognized that they work much better than before. So it's pretty great to hear that the things we were berated from* [are taken as solved] – *that the resistance to change is overcome and it's understood to let go that old model."*

This narrative again reasons that the users react to the new IS according to a linear process. It describes, with colourful rhetoric, that users begin by struggling with the new IS. This explains their negative feedback. They will find their way out from this "Death Valley" by accepting the new IS. It argues that users are simply keen on their routines. It explains that once they *realize* to let go of them, they will *realize* how new IS's value.

This narrative was indirectly referred to in some shorter accounts. Mary stated that "*change resistance is a natural human function".* Sarah explained that "*when people start using a new thing, they think that this is different than before, this is unpleasant".* Also Carole expressed that some of the users' "*problems are real problems, but some of them are just things they get used to".*

4.2 The second narrative – don't shoot the messenger

The second example narrative was conveyed by Angela. At some point during the interview, Angela mentioned that the project had attracted change resistance. Angela was now further questioned about this. Angela reacted by describing change resistance management. This was based on strict role allocation:

> *What I think has been one clear place for learning like this, or the kind of thing I've had to learn, is the role allocation. That is, when I am, or at that point when I came from the old organization to this new organization, then having to learn that what is my role. I am a development manager in this organization compared to being a leader there in a client organization. And then the fact that what we have also learned together with these organizations is the question of who does and what does. That is, in the early stages - there was probably more to it when a new organization, new project offices, and organizations were born - finding out who is responsible for doing what things. I don't know at what point I got this insight. But in a way, the fact is that, for my part, the managers, and leaders of those* [client] *organizations must lead their organizations themselves. And my job as a development manager, it's not my job to lead.*

This narrative is conveyed in a less identifiable manner. Yet it expresses a compelling explanation. It narrows down the project company's role. It explains that the project company is not in a position to manage the users. It points the blaming finger in the direction of the client organizations' management. It wants to specify that the project company is merely delivering the system. They are a courier. It suggests that what happens after the deployment concerns them less.

This same narrative was conveyed in Mary's account. Mary was cued to discuss the issues she had faced during the project. Mary expressed frustration with configuring the system:

> *"The most surprising thing is that you can never know which things are easy and which are hard to change. Such are those surprises that come when you think that something would be like that, "well, I'm just quickly doing this a little change now." And then realizing that it is not so easy at all. This comes again from the system vendor's constraints. It is not always clear to us as what is a configurable thing and what would require development from the vendor."*

This narrative was again resorted to specify different roles in the project. This time it specifies the project company's role in relation to that of the vendor. The blaming finger points towards the vendor's direction. It wants to assure everyone that the project company has had all the interest to do perfect job. Yet they can only do so much. The vendor ultimately holds the reins.

Also Peter repeated this narrative. Peter was discussing the cultural difference between them and vendor. Peter expressed that there are serious perceptual differences between the countries of the vendor and client organizations:

> *"Quite simply, the* [the problem is the vendor's local] *system. They* [in the vendor's country] *basically want the system to work efficiently, so that it enables them to acquire a lot of customers in and billing those customers for their money. And in* [client organizations' country] *it doesn't work that way. We don't try to force those customers and even less, what matters to us is the money. The system is made with the money a lot in mind. And the functionalities that lead to that money-making, are in the ways the system users are monitored and controlled. Whether it's a doctor or a nurse being monitored, the system monitors if he or she did everything correctly. If not done correctly the user will be punished. They may lose something, such as access rights or something until things have been done correctly. Then when the user has done them correctly, their rights are restored. We in* [client organizations' country] *do not want such far-reaching guidance."*

The narrative was now retold in the same context as Mary did. It explains why the IS might not be perfect in the client organizations' eyes. It describes that the vendor has a strong perception of how things should be done. The vendor is keen on controlling the system. This again allocates the roles. It specifies that the project company has its hands tied.

5 Illustrating the Analysis

This section illustrates the analysis of the narratives presented in the previous section. It analyses the example narratives through each of the prototypical narrative elements. This also includes instructive comments. Table 2 includes these elements as derived from the example narratives.

	Focus	First narrative	Second narrative
Situatedness	The narrative occasion's affordances. The context surrounding the narrative occasion.	Research interview: two interrogators investigating the organization the narrator represents. Critical feedback from the users.	Research interview: two interrogators investigating the organization the narrator represents. Implications of failed implementation.
Event Sequencing	The particularized events comprising a sequence.	Users inevitably resisting new things, but later realizing the value.	Project company acquiring a producing from a vendor and delivering into client organizations
Worldmaking	The ways the storyworld is constructed.	The project company on top of things despite the critique directed at them.	The project company having carried out their responsibilities while others may have not.
Conveying experience	The experience explicitly and implicitly conveyed by the narrative.	The project company under a lot of pressure due to strong critique towards them.	The project company under a lot of pressure due to their overwhelming responsibility.

Table 2 Narrative Analysis

5.1 Situatedness

The prototypical narrative element of *situatedness* considers narrative in relation to its context (Herman, 2009a). It first means that a narrative is told during a specific narrative occasion (Goffman, 1981). It guides to consider the context's affordances. Such affordances include for instance who was telling the narrative, for whom it was specifically told, who others were present in the occasion, when it was told, and other similar details defining the very moment. This element secondly means that a narrative reflects also the wider context surrounding the narrative occasion (Bamberg, 1997). It guides to consider what is going on around the matter at hand, and to reflect on its relationship to the narrative.

In both example narratives, the specific setting is a research interview where two researchers interrogate a representative of an organization. This organization, thus also its representative, feels itself pressured due to vivid public debate around the project. This can be seen in these narratives. They have a clear self-defensive stance towards the issues. The way in which these narratives guide the discussion towards explanations of sensitive issues in this specific occasion is revealing. The narrators perceive the researchers as interrogators trying to discover something 'juicy' from the case. These researchers could even have their own agenda. The narrators want to stay one step ahead of these interrogators. They thus reveal compelling explanations which are then reference points in case the sensitive issues, such as the critical feedback, is brought to the discussion. The narratives proactively addressed the elephant in the room. Such a defensive stance tends to be insightful. It encourages one to consider why such a stance is taken.

5.2 Event Sequencing

The prototypical narrative element of event sequencing considers the particularized events a narrative resorts when it formulates a compelling event sequence (Herman, 2009a). To make sense of the disequilibrium, even chaos, a narrative chains specific, more or less carefully chosen events to provide an appealing explanation (Branigan, 2013; Brown et al., 2008; Bruner, 1991). This element thus guides one to focus on the way a narrative continuously answers the questions *then what happened,* until it reaches its conclusion, i.e. the lesson of the story. Thus, the task is to identify these particular events.

In the first example narrative, the particular events include the *introduction of a new IS*, *users becoming shocked by the new IS* due to their inability to use it similarly as the old one*, users gradually learning* how the use the new IS, and *users realizing* how good the new IS is, ultimately starting to prefer it. This narrative is used to convey the lesson that resistance to change is inevitable but will fix itself once the users learn the ways of the new IS. This narrative thus comprises a very complex social phenomenon into a very tidy and simple explanation. This obviously is an appealing explanation for the project company. The project has been alleged to be a failure due to very strong critique from the users. The narrative counters such an accusation. The sequence it proposes states that issue is simple. It will resolve itself. *Just be patient.*

In the second example narrative, the particular events include the vendor developing and supplying a product, *the project company acquiring the product from a vendor*, *the project company delivering the IS to client organizations*, and *the client organizations going through a change while adapting to use the new IS.* This narrative's lesson is that each party has their responsibilities. All the issues should not be associated with the project company. This makes sense since the project company may feel blamed from the overall state of the project. This narrative redirects the blaming fingers. The explanation is interesting. The project company does carry the main responsibility over the project, after all. One could ponder if they should have established the collaboration in which each organization, indeed, carries out their responsibilities.

5.3 World construction

The prototypical narrative element of *world construction* considers the way a narrative is about disequilibrium in a storyworld, which is through the particular event sequence ultimately stabilized (Her-

man, 2009b, 2009a). This element guides one to consider the way a breach in canonical is pointed out. A narrative leverages such breach for further strengthening the perceived reality. Thus, first, the canonical or expected should be defined. Then, different points in a narrative that represent breaches in this canonical script can be identified.

In the first example narrative, the canonical script could be that the project company successfully listens and addresses the users' needs. Users would voice their satisfaction. The project company would be praised. This narrative reveals the apparent disequilibrium. The users were not happy. The project company was not praised. This is leveraged strengthen the perception that that the project company is still on top of things. While it may not seem like it, they are still successfully doing their job. This is identifiable in the way that this narrative explains the critique as inevitable resistance to change. It is described as a sort of a law of nature. It would have emerged no matter what the project company had done. This is a strong argument. Quite many issues can be swept under it.

In the second example narrative, the expected could have been that a suitable product was acquired and configured for the client organizations. This clearly had not happened. The narrative again takes such a breach, (implications that the product is unsuitable for the client organizations) and implies that other parties have not carried out their responsibilities properly. This explanation strengthens the project company's status as a party successfully completing its tasks. Nevertheless it does introduce an interesting topic to discuss: whose responsibility is it to make sure that the ecosystem collaborates successfully.

5.4 Conveying the experience

The prototypical narrative element of *conveying the experience* considers how a narrative implicitly and explicitly describes what going through something is like. This may be identifiable in the explicit Mentions of raw feelings. Sometimes it necessitates approaching the conveyed experience more interpretively. One may need to look behind the explicit words to understand the narrator's feelings.

Both example narratives convey the project company's pressured feeling. Explicit raw feelings are not expressed in these narratives. Yet their interpretation reveals such an experience. By proactively bringing the issues (i.e., users 'critique and implications of failure) into the discussion, these narratives reveal their significance for the project company. Even though the project company uses narratives to simplify the issues, even to mitigate them, they are very concerning for them. Both narratives may be seen to cover up the project company's feeling overwhelmed by their demanding responsibility. Some have claimed that their project has been a catastrophe. This now makes their self-defensive stance more reasonable. It may even be seen to convey that they feel the project as too large of a chunk for them to carry out.

6 Discussion

The aforementioned illustration confirmed that the prototypical narrative elements do guide a fruitful analysis of an IS implementation's narratives. It revealed insights about the project company's subjectively perceived reality. Their, perhaps, narrow-minded fixation on focusing on usability and waiting for issues to solve themselves, once usability handles itself, became deeply analyzed. Their efforts may have not been optimal, as implied by the severe issues. The company would have benefitted from self-reflective critical approach regarding their own narratives. This section now comprises the illustrated analysis into a critical approach for practice.

The critical narrative approach is proposed for those who may find benefits from insights regarding the different realities in IS implementations. In the examples, this was the researcher who interviewed and analyzed the narratives. In practice this can be for instance a management level actor who leads employees in an IS implementation project. It can also be an employee in the IS implementation who wants to understand the colleagues or even engage in self-reflection. To elaborate, it could have been anyone of the interviewees in this paper's case, wanting to engage in self-reflection regarding their organization, or wanting to understand the sensemaking of other groups, such as the users.

The simplified critical narrative approach is comprised into Figure 2. This paper wishes to emphasize that the model is, first, simplified. Approaching narratives critically is not a linear process. Rather, in practice, the steps of identifying, analyzing, reflecting, and realigning, become mixed and blend together. Steps are taken back on forth in the messy social reality. Second, the approach should be *continuous*. This means that while there may be a formal beginning when one starts to collect the narratives, the activity never finds its completion. Generating the reality is an ongoing process which finds new inspiration all the time (Griffith, 1999; Hsiao et al., 2008). The critical approach regarding the narratives should keep reacting to the evolving circumstances.

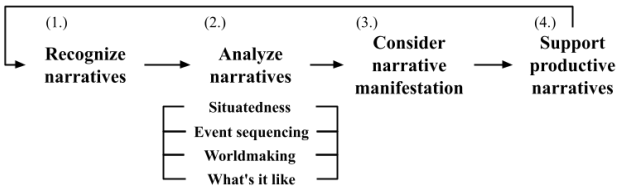

Figure 2 Applying critical narrative approach

1. Recognize narratives used for sensemaking

Organizations are storytelling systems (Boje, 1991; Geiger & Antonacopoulou, 2009). Thus narratives are everywhere in the organizational environment. Yet they appear in complex ways (Riessman, 2002). They are embedded in communication and action. A potential way for becoming aware of them could be to invite and collect them. As confirmed, narratives often emerge e.g. during interviews (Alvarez, 2001; Riessman, 2002). Interviewing actors, such as employees or clients, may thus be a viable option for searching narratives. Interview's formality is important to consider. It could vary from one-on-one interviews to group discussions, or even conversations at a coffee table. Narratives can also be witnessed from media. Actors could have shared their thoughts in newspapers or social media. However, such different narrative occasions should be taken into account when analyzing their narratives (Goffman, 1981; Herman, 2009a).

2. Analyze the narratives

While narratives and their reflection are highly interpretive, having a structure in their analysis can be beneficial. This paper confirmed that the prototypical narrative elements offer guidance. It guides to focus on aspects, the prototypical elements of narratives, which include situatedness, event sequencing, worldmaking, and conveying experience (Herman, 2009a). The situatedness directs the analyser to consider how narratives are used to come to terms with situations. The event sequencing guides the analyser to reflect the explanation reached with the narratives. The worldmaking suggests the analyser to try to enter the world – a storyworld - the narratives construct, resided by their owners. Finally, the conveying experience proposes the analyser to try to grasp what the narratives tell about the world of experience their owners possess. Narratives in non-trivial ways convey what something is like for their owners. Such analysis encourages to consider one's own sensemaking, the sensemaking of the collective one belongs to, and the sensemaking of other groups. This way it makes the different realities more visible. It is thus both self-reflective and aware of others. For instance in this paper' case, the project company could also try to understand the sensemaking of the users by analyzing their narratives. After all it was quite clear that the users did not share the project company's interpretation of the project's state (see also Fleron & Pries-Heje, 2021).

3. Consider how the narratives manifest in actions

The issue with different realities is not mainly their presence. The issue is that the actors act based on these realities. They act in way their reality remains stable and comprehendible. The perceived reality

thus manifests in actions. Through these action, such as when technologist and users act according to different realities (Griffith, 1999; Orlikowski & Gash, 1994), issues become real. The critical narrative approach thus encourages to consider the behavior resulting from the narratives. This study confirmed that narratives can be linked for instance with self-protective, narrow, or even fixated approaches. Narratives are powerful in creating such fixed perceptions (Geiger & Antonacopoulou, 2009) that are not productive for the overall IS implementations (Hekkala et al., 2018; Raatikainen & Pekkola, 2021). Such analysis is interpretive and complex. Yet the careful reflection of the prototypical narrative elements offers guidance. This encourages groups to be critical towards their approaches to situations. In this paper's case, the project company's user-centred approach seemingly was not satisfying the users, but as it made sense for them it became quite fixed. On the other hand, the project company could have tried to understand the other groups' approaches and reactions, such as those of the users, by considering the ways their narratives manifest in actions.

4. Realign the narratives for productivity

This paper's premise is that while narratives can't necessarily be eradicated from emerging, they can be approached critically. This premise does not claim that narratives are bad. It promotes awareness regarding them in manner that challenges their reasoning. It encourages to consider *why this makes sense* to me, to us, to them. Once such consideration is engaged with, it becomes possible to support sensemaking that is *mindful* (Aanestad & Jensen, 2016; Hekkala et al., 2018; Lee et al., 2020). Mindful qualities include such as flexibility, reluctance to premature commitments, reluctance to simplify issues, continuous prioritization, or reassessment of the taken approach. The project company could have looked for ways for more productive actions rather than fixating on a narrow perspective. Supporting such the desired sensemaking with narratives is a complex issue. Narratives are produced and reproduced in various ways of practice and communication. A potential way to focus on internal communication is to consider the storytelling approach where narratives are conveyed with disseminated stories (Hull et al., 2019; Schwabe et al., 2019). Narrative approach also asks for self-reflective abilities. These may be supported with training and education. Yet the approach needs to be careful. A too aggressive approach may also become obvious. It could result in narratives that want to challenge the master narratives.

The proposition presented in this paper is not finalized. The perfect solution for such a complicated social phenomenon may not in fact even ever be reached. This proposition is disclaimed to be empirically exemplified *food for thought*. It is something for researchers and practitioners to build upon. Nevertheless, the prototypical narrative elements generated a proposition that is a pragmatic step towards utilizing a critical narrative approach in the IS implementations. As the proposition grounds itself on rather generic aspects of narratives, it also welcomes researchers to engage more deeply with specific narrative perspectives, such as narrative occasions (Goffman, 1981), positioning (Bamberg, 1997), worldmaking (Bruner, 1991), or narrative comprehension (Branigan, 2013; White, 1981). In this way, researchers who take more specified approaches may continue to contribute by revealing more about the relation between narratives and sensemaking in IS practice. This can lead to, first, more understanding of why the collaboration in IS implementations is so difficult and how it should be addressed. Second, it can result in even more practical and helpful instructions for IS practitioners working in the trenches. Additionally researchers and practitioners are encouraged to consider the proposition in other more specified IS activities. Potential activities could include for instance requirements elicitation, business analysis, business process reengineering, and others where understanding how others see the world is vital.

7 Conclusion

This paper considered how critical narrative approach can be applied in IS implementations. It illustrated that the prototypical narrative elements are a viable starting point. General instructions for conducting such an analysis were given. This option was shown to reveal valuable insights regarding an actor group's sensemaking in an IS project. A simplified yet pragmatic idea for applying the critical

narrative approach in practice was proposed. This is hoped to intrigue the interest of future researchers. They are hoped to carry this idea to more enhanced solutions.

The paper contributes to both research and practice. For research, it adds to the bridge between narrative theoretical discussion and the IS field. Further research is hoped to consider its proposition, and refine and challenge the idea with more theoretical insights and empirical results. The paper essentially offered pragmatic ideas for IS practitioners, such as the managers in IS implementations. They are hoped to consider these ideas as they battle with the infamous IS implementation issues.

This paper has limitations. First, the example narratives are from a single case. They are not generalizable without further data. Secondly, there are many approaches to narratives. This paper applied only one. Thirdly, the researcher is also a storyteller. He resides in his reality constructed with his narratives. Caution must be exercised when generalizing his findings.

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