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WHAT BENEFITS DO THEY BRING? A CASE STUDY ANALYSIS ON ENTERPRISE SOCIAL NETWORKS

Benjamin Wehner
University of Regensburg, Germany, benjamin.wehner@ur.de

Thomas Falk
University of Regensburg, Germany, thomas.falk@ur.de

Susanne Leist
University of Regensburg, Germany, susanne.leist@ur.de

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Research paper

Wehner, Benjamin, University of Regensburg, Germany, benjamin.wehner@ur.de

Falk, Thomas, University of Regensburg, Germany, thomas.falk@ur.de

Leist, Susanne, University of Regensburg, Germany, susanne.leist@ur.de

Abstract

Over the last years, Enterprise Social Networks (ESN) have gained increasing attention both in academia and practice, resulting in a large number of publications dealing with ESN. Among them is a large number of case studies describing the benefits of ESN in each individual case. Based on the different research objects they focus, various benefits are described. However, an overview of the benefits achieved by using ESN is missing and will, thus, be elaborated in this article (research question 1). Further, we cluster the identified benefits to more generic categories and finally classify them to the capabilities of traditional IT as presented by Davenport and Short (1990) to determine if new capabilities of IT arise using ESN (research question 2).

To address our research questions, we perform a qualitative content analysis on 37 ESN case studies. As a result, we identify 99 individual benefits, classify them to the capabilities of traditional IT, and define a new IT capability named Social Capital. Our results can, e.g., be used to align and expand current ESN success measurement approaches.

Keywords: Enterprise Social Network, Benefit, Case Study, Qualitative Content Analysis.

1 Introduction

Enterprise Social Network (ESN) adoption has accelerated over the past years. With these platforms, companies hope to foster collaboration, support communication and facilitate knowledge management, for instance (Leonardi et al., 2013). Market research has shown a significant rise in ESN investment recently. For example, IDC's February 2013 Social Business Survey mentions an ESN adoption rate of 79% among all respondents. Between 2014 and 2019, the worldwide revenue of ESN software is expected to more than double (Thompson, 2015). However, ESN do not always fulfil the companies' expectations as usage often dwindles after an initial spike, making companies question their investment (Li, 2015). For example, a study by Gartner states that 80% of these initiatives fail at achieving the stated goals (Mann et al., 2012).

When analyzing the large number of practice-driven articles (e.g., case studies, field studies), which describe the impacts of ESN in a particular company, it becomes obvious that many benefits can be achieved by the use of ESN. For example, it has been shown that employees' performance on non-routine tasks increases (Mäntymäki and Riemer, 2016) and that geographical boundaries are reduced (Wiesneth, 2016). Due to the nature of ESN, with the community and social aspects in the foreground, many of the benefits are non-tangible and, following Harden (2012), based on "the subjective perception about the potential positive values resulting from the online interactions" (p. 3891). Therefore, apart from the difficulty of describing the *Business Value* by monetary metrics (Herzog et al., 2013) ex post, the major challenge is to anticipate the positive effects (ex ante) that support the design and implementation of ESN considering company-specific needs.

While there is a great variety on topics that are elaborated in the context of ESN (Wehner et al., 2017), which, e.g., explore the applications of ESN (Turban et al., 2011), their success dimensions and measurements (Richter et al., 2013a), the different technologies in ESN (Chin et al., 2015b) and the use cases of ESN (Herzog and Richter, 2016), a detailed elaboration on the benefits achievable by ESN is missing. However, a detailed list of achievable benefits would prevent false expectations and help to anticipate the real value of using an ESN. It could convince practitioners of their added value, as many of them still struggle with using an ESN (Kügler et al., 2012). Thus, in this paper, we review the benefits of ESN on the basis of case studies (Yin, 2013), which show the proven impact of ESN.

The investigation of Information Technology (IT)-benefits has a long tradition in literature, e.g., (Bharadwaj et al., 1999a, Lin and Penvan, 2003), shifting the focus on these benefits from single applications, whose competitive advantage is at best short-lived, to company-wide IT capability that provides a substantive basis for sustained IT innovation (Bharadwaj et al., 1999b). We will therefore organize the identified ESN benefits with regard to the IT capabilities they support. In so doing, this assessment will be based on the general IT capabilities defined by Davenport and Short (1990). Since social software (including ESN) are different from traditional IT, as sociality, and not functionality, is in focus (Bouman et al., 2007), we will especially expose the corresponding benefits of ESN. In addition, we investigate whether all of these benefits support the traditional IT capabilities or whether we have to define a new IT capability. In summary, we will elaborate on these two research questions:

(RQ1) Which proven benefits are achieved by using Enterprise Social Networks?

(RQ2) Which traditional IT capabilities are supported by ESN benefits and are traditional IT capabilities able to comprehend all ESN benefits?

To address these two research questions, we set up a broad literature base using three literature reviews on ESN that have been published recently and perform an additional literature search. We then conduct a qualitative content analysis to aggregate the benefits achieved by ESN (RQ1) followed by a comparison to the capabilities of traditional IT (RQ2). With our research, we aim to contribute to a better understanding of the value of ESN. Especially practitioners will get an overview of the proven benefits gained by using ESN, which are described in case studies, e.g., an increased creativity of the employees (Qi and Chau, 2016). In addition, our research will support managers in making their decision, clarify what benefits may be expected, and which IT capabilities are strengthened. Finally, with our analysis, we hope to contribute to a better understanding of ESN success, possibly enabling researchers to expand or adjust ESN success measurement models and define areas of further research.

The remainder of this paper is organized as follows: in section two, we give a brief overview of related work in regard to ESN including ESN success and benefits as well as IT capabilities. In section three, our research method is explained in detail. Section four provides our findings, namely the benefits of ESN and the comparison to the IT capabilities by Davenport and Short (1990). In section five, we discuss our findings and elaborate the added-value of ESN in comparison to traditional IT. Section six concludes the paper, giving a short summary, limitations and an outlook on future research.

2 Theoretical Background

2.1 Enterprise Social Networks

Research on ESN has gained increasing attention in recent years (Viol and Hess, 2016, Wehner et al., 2017). A definition of ESN that is often used in ESN articles was published by Leonardi et al. (2013) with ESN being *"web-based platforms that allow workers to (1) communicate messages with specific coworkers or broadcast messages to everyone in the organization; (2) explicitly indicate or implicitly reveal particular coworkers as communication partners; (3) post, edit, and sort text and files linked to themselves or others; and (4) view the messages, connections, text, and files communicated, posted, edited and sorted by anyone else in the organization at any time of their choosing" (p.2).*

As such, the possibilities of the application of ESN can be described in the following categories: *communication, collaboration and innovation*, *information dissemination and sharing*, *management activities and problem solving*, *training and learning*, and *knowledge management* (Turban et al., 2011). Due to the interplay of employees, software and the enterprise itself in ESN, various facets can be analyzed. Thus, a growing number of articles on ESN have been published with different objects of analysis. As a consequence, researchers have recently aimed at providing an overview of ESN articles, resulting in three literature reviews published by different co-authorships in 2016/2017. Even though the search parameters are similar and the three articles intend to identify research gaps and define a research agenda, the results are presented in different or overlapping categories, e.g., *user behavior*, *effects of ESN usage*, and *data and data analytics* (see (Stei et al., 2016, Viol and Hess, 2016, Wehner et al., 2017)). Wehner et al. (2017) additionally define a framework and perform a topic analysis resulting in ~70 detailed ESN topics, e.g., gamification in ESN and governance of ESN. All the above shows the large variety of topics in ESN research. There is, however, a consensus in all of the three literature reviews that further research is needed on the effects and impacts of ESN both on the employees and the organization.

2.2 Success and Benefits of Enterprise Social Networks

In general, social software – including ESN – differ from traditional IT, as sociality, and not functionality, is in focus (Bouman et al., 2007). It has been shown that measurement models assessing the success of traditional IT (e.g., the Information Systems (IS) success model by DeLone and McLean (1992) or the IS-Impact Measurement Model by Gable et al. (2008)), are hardly applicable to social software (Steinhueser et al., 2011). Consequently, a measurement model on social software was developed with the two success dimensions *quality* and *impact*, in particular *individual* and *organizational impact* (Steinhueser et al., 2011). In the specific context of ESN, success measurement models were defined, too, trying to evaluate ESN success from different perspectives. For example, Muller et al. (2009) defined a metric "return on contribution" (ROC) to measure the impact of ESN on individual employees. Lehner and Haas (2011) focus on success factors on an organizational level describing the "system of knowledge management". Richter et al. (2013a) as well as Herzog et al. (2013) define metrics for both dimensions (users and business value), e.g., *reduced time to find correct information*. In each of them, success is measured by means of success factors or metrics, which, if a certain degree or value is achieved, define success on the basis of these individual benefits. However, among these models, there is no congruence regarding these perceived benefits, neither on an individual nor on an organizational level (Herzog et al., 2013). Therefore, we focus on the achievable benefits of ESN as a basis for discussing the added value of ESN.

Benefits of web 2.0 technologies have been discussed and defined in multiple studies comprising internal as well as external impacts, e.g., communication and customer relationship management, respectively (Andriole, 2010). Looking at ESN benefits in particular, only three articles could be identified focusing on this topic. Kugler and Smolnik (2013) develop a conceptual model to measure the impact of ESN usage on individual performance, employee connectedness, decision-making and innovative performance, and they define hypotheses for these constructs. However, they do not present an evaluation of this model in their article. Majumdar et al. (2013) perform 10 interviews to assess benefits and usage patterns of ESN. Even though a list of 17 benefits is provided, e.g., *communicating across time zones* or *gaining knowledge*, the results are very abstract and do not provide a broad overview of benefits achievable by ESN. Holtzblatt et al. (2013) perform 63 interviews, analyze log data and perform a survey within the MITRE corporation to assess the benefits in this particular company. However, this article focuses on one company only and, thus, a broad overview (across companies and branches) is missing.

Even though there are only three articles explicitly addressing ESN benefits, there is a large number of case studies on ESN (Wehner et al., 2017) that present benefits without focusing on them. For example, Han et al. (2015) focus on the governance of the ESN at Statkraft (Norwegian energy company)

and also present the benefits of ESN usage, e.g., stating that it is e.g., "creating a greater overall business understanding within the company across geographical regions" (p. 9). Thus, we focus on case studies (Yin, 2013) to extract the proven benefits being achieved using ESN.

2.3 IT Capabilities

The usage of IT has a substantial impact on organizations in many regards and affects business models, organizational structures as well as the way business processes are performed. An important aspect is to explore the strategic value of IT capabilities, e.g., to gain competitive advantage (Bharadwaj et al., 1999b, Fink, 2011), and several studies have shown that the use of IT positively impacts business performance (Bharadwaj et al., 1999a, Mata et al., 1995). IT capabilities can be defined as "combinations of IT-based assets and routines that support business conduct in value-adding ways" (Sambamurthy and Zmud, 2000). However, the types of existing IT capabilities are manifold and range from physical aspects, e.g. technology, to human aspects (e.g., IT knowledge and experience), to organizational aspects, e.g. relationship assets and culture of IT use (Kim et al., 2011). Moreover, IT capabilities are subject to changes for mainly two reasons. First, technological advance brings about new possible applications for IT and its capabilities change or extend when new technologies emerge. Second, the way IT is used within organizations has significantly changed over time. In the past, IT was mostly used as a tool to support business processes or to assist people in their work. Nowadays, IT is closely fused with the business environment and additionally blurs the line between work and personal life as well as between public and personal information, thereby continuously augmenting its capabilities (El Sawy, 2003).

As the use of social software in an organizational context is a relatively new topic (Berger et al., 2014a), commonly accepted capabilities for this type of IT (e.g., ESN) have not been established yet. For that reason, we use the capabilities ascribed to traditional IT as a starting point to classify those capabilities we were able to identify for ESN. A set of nine generic IT capabilities is presented by Davenport and Short (1990) who also describe their organizational impact and benefits: **Transactional** capabilities describe the ability of IT to support routinized transactions and thus standardize existing working routines. A higher **Geographical** independence is achieved because information can be shared across large distances and within narrow time frames. **Automational** capabilities reduce the amount of human labor since tasks which were previoulsy conducted manually are now performed automatically by an IT system. IT also facilitates the use of complex **Analytical** methods, which can be used to derive useful information from data gathered during business operations. **Informational** capabilities of IT on the other hand make vast amounts of detailed information available to users who, in turn, are enabled to manage increased data complexity. With regard to **Knowledge Management**, IT provides support to several stages such as capturing, organizing and sharing of information. To better differentiate between the two aforementioned capabilities, we refer to Davenport and Prusak (1998), who state that knowledge derives from information. This transformation occurs through the processing or enrichment of information, e.g. by comparison, connection, conversation, or drawing consequences. Further, the use of IT helps to break open the strict **Sequential** order of tasks and often enables users to work on multiple tasks simultaniously. The transparency of business processes can be increased as IT allows the **Tracking** of task statuses as well as inputs and outputs. Finally, **Disintermediation** covers the ability of IT to improve communication and coordination by directly connecting parties that would otherwise communicate through an intermediary.

3 Methodology

To address our research questions, our research process was designed in accordance with the qualitative content analysis by Mayring (2014). As our analysis aims at elaborating the proven benefits of ESN presented in case studies, our initial goal was to set up a literature database including all peer-

reviewed papers on ESN. For that purpose, we summed up the literature from the three literature reviews, i.e., Stei et al. (2016), Viol and Hess (2016) and Wehner et al. (2017) as shown in section 2.1. Due to a large overlap of articles among them, initially, 114 articles were identified. However, only articles from 2004 until mid-2015 were included in the three literature reviews. Thus, to also include publications that were published in the meantime, we performed an additional literature search on ESN articles in three meta-databases (EBSCOhost Business Source Premier, dblp and Google Scholar) covering the timeframe from 2013 to 2016 using the same search terms as the three literature reviews, i.e., a combination of *(1) Enterprise/Corporate, (2) Social* and *(3) Network/s/ing, Software/Platform, Network/ing Site, Microblogging, Knowledge Sharing* and *Intranet* appearing in the search fields *title, abstract* or *keywords*. In this step, we identified an additional 40 articles published in peer-reviewed conferences and journals. Finally, our literature database comprised 154 high quality articles to undergo further analysis. In the subsequent selection process, we initially reviewed the research method of each article. For further analysis, we only considered articles, which were case studies as defined by Yin (2013), with, e.g., in-depth interviews being performed or a participant observation (Gable, 1994). Of the remaining 60 articles, 37 articles explicitly mentioned benefits using the ESN, while the other 23 articles had a different focus regarding their object of investigation, e.g., content attractiveness in ESN (Heim and Yang, 2015). Table 1 presents the codification of the 37 articles, which are the basis for our further analysis.

[1] (Wiesneth, 2016)	[9] (Riemer et al., 2015b)	[17] (Chin et al., 2015c)	[25] (Wu et al., 2010)	[33] (Wu, 2013)
[2] (Qi and Chau, 2016)	[10] (Riemer et al., 2015a)	[18] (Chin et al., 2015b)	[26] (Liu et al., 2013)	[34] (Majumdar et al., 2013)
[3] (O'Leary, 2016)	[11] (Merz et al., 2015)	[19] (Chin et al., 2015a)	[27] (DiMicco et al., 2009)	[35] (Seebach, 2012)
[4] (Mäntymäki and Riemer, 2016)	[12] (Kügler et al., 2015a)	[20] (Risius, 2014)	[28] (Richter and Riemer, 2009)	[36] (Riemer et al., 2011b)
[5] (Greasley and Wang, 2016)	[13] (Kügler et al., 2015b)	[21] (Mäntymäki and Riemer, 2014)	[29] (Zaffar and Ghazawneh, 2012)	[37] (Riemer et al., 2011a)
[6] (Weiss et al., 2015)	[14] (Han et al., 2015)	[22] (Leonardi, 2014)	[30] (Riemer and Scifleet, 2012)	
[7] (Suh and Bock, 2015)	[15] (Gonzalez et al., 2015)	[23] (Gibbs et al., 2014)	[31] (Friedman et al., 2014)	
[8] (Silic et al., 2015)	[16] (Ding et al., 2015)	[24] (Zhang et al., 2010)	[32] (Holtzblatt et al., 2013)	

Table 1. Codification of the 37 articles to be analyzed

The qualitative content analysis was performed on each of these 37 articles according to Mayring (2014) to derive the benefits achieved by using ESN. The full text of each case study was analyzed in detail, relevant text passages were extracted and tagged afterwards. In the course of this analysis similar benefits were grouped and assigned to categories (inductive categorization) to better structure the benefits and to highlight their thematic focus (Mayring, 2014). This led to clearly distinguishable categories of benefits. Some of the categories turned out to be relevant from both an individual user's perspective and an organizational business perspective, whereas others could be found for only one of the perspectives, depending on the context of the text passage. The distinction between an individual and organizational perspective was deduced from the success models presented in section 2.2 (Steinhueser et al., 2011). Afterwards, we classified each category (including the distinct benefits) to the IT capabilities by Davenport and Short (1990) (see section 2.3). For example, from the case description: "creating a greater overall business understanding within the company across geographical regions" (Han et al., 2015, p. 9), we derived the benefits *reduces geographical boundaries*. In sum, we identified eight case studies showing identical benefits and, thus, we aggregated them to the category *breaking through geographical boundaries*. Afterwards, this category was assigned to the organizational perspective and the capability Geographical (see section 2.3 and Table 2). The codification was performed accordingly for all 37 articles. Due to this alignment of the benefits achieved by ESN and the

capabilities of traditional IT, we are able to present the benefits by the traditional IT capabilities (see RQ1) and discuss the additional benefits of ESN (see RQ2).

All steps – identification of benefits, assignment to categories and classification to the capabilities of traditional IT and individual or organizational perspective – were performed by two researchers individually to reduce subjectivity. In case of disagreement, the article in question was analyzed by a third researcher followed by a discussion until a consensus was reached. For example, we discussed the question of flattened hierarchies being a benefit or not. However, as the respective article explains that flattened hierarchies lead to a reduction of information asymmetries (Chin et al., 2015a), we included this point as well.

4 Findings

The extraction of the benefits described in the 37 case studies resulted in 99 distinct benefits, which were achieved by applying ESN. Their classification resulted in three groups: 69 benefits could be classified using the capabilities of traditional IT by Davenport and Short (1990), a further 25 benefits built a newly created, ESN-specific capability named "Social Capital", while the remaining 5 benefits were too generic to be classified into one particular capability as they are results of combinations of various individual ESN benefits, which are presented in sections 4.1 and 4.2.

The latter group is characterized by common and familiar benefits usually attributed to ESN or social media in general. The benefits described in the case studies can be summarized into the following categories: increased performance, collaboration, and business value. Although detailed information on the actual contribution of ESN, i.e., how the added value is created and which particular features of the ESN lead to the benefit, cannot be derived from the description in the case studies, the benefits allow to identify some general implications of ESN for business operations. An **increased performance** [4,7,10,12,13,14] through ESN has been determined in several empirical studies. The improvements regarding task or job performance are attributable to concepts such as crowdsourcing [4], better team coordination [7], or an effective and efficient access to information [10] and expertise [14]. ESN support extensive **collaboration** [1,14,28] by connecting employees regardless of their geographical location and by making knowledge easily accessible to them [8]. They further provide a platform for employees to easily discuss ideas [14] or to ask experts for help in case of problems [14]. Finally, the category **business value** covers a number of rather fuzzy aspects, which are considered to be beneficial to organizations but are difficult to isolate or measure. An ESN is a means to exploit collective intelligence [32] and to strengthen social connections [32]. Further, they bring about a competitive advantage [35], as for instance the time-to-market for newly developed products is shortened [8].

However, most of the aforementioned general implications do not qualify as distinct benefits per se but are in fact results of a bundle of other ESN benefits that take their full effect in combination. For that reason, increase of performance, enhanced collaboration, and contribution to business value are attributable to other benefits that are clearly based on the decisive capabilities of ESN. The aforementioned 69 benefits, which were matched to the capabilities of traditional IT, are explained right behind in section 4.1. As ESN also show benefits that cannot be classified in terms of existing capabilities, we strongly anticipate that additional capabilities for ESN will have to be defined. The corresponding 25 benefits focusing on social aspects are presented in section 4.2.

4.1 Benefits classified to Capabilities of traditional IT

When analyzing the benefits of ESN derived from the case studies, the nine IT capabilities as described by Davenport and Short (1990) were used for classification. No particular ESN benefit could be assigned to the three categories Automational, Analytical, and Sequential. This does not necessarily mean that ESN do not possess such capabilities, but rather that in the case studies evaluated no benefits regarding one of those categories were explicitly mentioned. The classification of the identified benefits to the remaining six capabilities – Transactional, Geographical, Informational, Knowledge

	Individual	Organizational
Trans.		**Formalization of Processes:** documents unstructured processes [5]; formalizes processes [11]; increases process flexibility [11]
Geo.	**Breaking through Geographical Boundaries:** integrates teleworkers better [6,23]	**Breaking through Geographical Boundaries:** reduces geographical boundaries [1,7,8,14,18,19,23,31]; connects dispersed teams [7]
Informational	**Exchange of Information:** allows sharing information [4,21,24,25,27, 34]; sharing information becomes easier [11,14]; provides real-time access to information [8,10,14]; increases information diversity [33] **Promotion of Creativity:** increases creativity [2]; helps to explore new solutions [16]; increases innovative capability [2,16,23]; allows sharing ideas [4]; facilitates the generation of new ideas [4,16,21]	**Exchange of Information:** spreads news quickly [1]; synchronizes formal and informal information [5]; reduces the costs of managing information [8]; directs attention to certain matters of interest [11]; reduces information asymmetries [3,35]; reduces search costs [35] **Promotion of Creativity:** supports discussion of ideas [1,14,21,25,34]; crowdsources ideas [10,18,19,30]; increases innovative performance [13]; gathers ideas from various employees [17]; leads to more innovative products and services [22]; enables collective intelligence [32]
Knowledge Management	**Knowledge Sharing:** encourages employees to share knowledge [2]; easier knowledge sharing [14]; increases knowledge sharing [23] **Access to Expertise:** more efficient and direct way to access expertise [14,26]	**Knowledge Sharing:** creates knowledge [2,30,34]; improves knowledge extraction and retention [14]; turns individual knowledge into organizational knowledge [29] **Access to Expertise:** provides meta-knowledge on "who-knows-what" [22]; improves knowledge exchange [35]; helps to solve problems [4,10,14,17,18,19,24,28,29,30,36,37]; provides access to knowledge faster [8,22,29]; finds experts faster [10,17,19,26,28, 34] **Reduction of Redundancy:** reduces knowledge duplication [22] **Training and Learning:** increases organizational learning [2]; better understanding of job and role expectations [15]; supports mutual training [18,19]
Tracking	**Transparency of Responsibilities:** makes own work visible to others [24]; increased transparency of work of colleagues [11,14,17,24,36,37]	**Transparency of Responsibilities:** provides information about collaborative activities [17]; increases visibility of employees' actions to others [19] **Improved Task Assignment:** helps to align activities in a team [36,37] **Traceability:** provides meta-information on who changed what [11]
Disintermediation	**Eased Point-to-Point Communication:** supports and increases communication [1,20,23]; less effort handling messages [11]; easy and more convenient way to receive instant feedback [11,24,37]; streamlines communication between employees [18] **Elimination of Intermediaries:** connects employees [12, 30]; helps to make new connections [24,27]; reduces barriers to contact colleagues [28,34]	**Eased Point-to-Point Communication:** reduces e-mail for internal communication [8,11]; introduces more balanced communication structures [9]; communication remains accessible [11]; promotes communication within teams [11]; collective communication among team members [11]; ensures communication reaches entire team [11]; supports communication among team members [20]; less formal communication [24]; facilitates discussions [36] **Elimination of Intermediaries:** reduces hierarchical boundaries [9,17,19,23]; reduces organizational boundaries [4,14,31]: better connects all employees [8]; involves a wider group of people [8]

Table 2. Benefits of Enterprise Social Networks (Categories by Davenport and Short 1990)

Management, Tracking, and Disintermediation – is shown in Table 2. Each benefit is allocated to one corresponding IT capability (rows) and, depending on its primary focus, divided into being either individual or organizational (columns).

Within the context of the capability **Transactional (Trans.)**, ESN facilitate both the documentation [5] and the formalization of unstructured or semi-structured processes [11] as they occur, e.g., during recruitment, project management, or promotion campaigns. At the same time, ESN help to maintain or even increase the flexibility of the processes in which they are applied [11]. This is of special importance in the case of ad-hoc processes that are extended or changed during their execution.

Further, ESN facilitate to break through geographical boundaries (capability **Geographical (Geo.)**), which is among the benefits mentioned most often in the case studies [1,7,8,14,18,19,23,31]. They support communication and professional networking independent of the physical location of the parties involved. Here, the geographically-dispersed silos are broken and employees are able to connect globally [18]. This is of special advantage for dispersed teams [7] or teleworkers who are better integrated in the company when using an ESN [6,23].

Looking at the capability **Informational**, ESN show benefits in the two categories exchange of information and promotion of creativity. One crucial aspect of the exchange of information is that it happens quickly, providing almost real-time access to highly topical information, [1,8,10,14] and in an easy way [11,14], allowing a wide range of users to participate. Hence, information asymmetries, e.g., among employees within a company, are reduced [3,35]. News can be spread quickly [1] to a great number of recipients directing the attention to current matters of interest [11]. Another benefit of an ESN compared to other, traditional, communication channels is the combination of different types of information, e.g., formal as well as informal [5] on the very same platform reducing the effort of information management [8] or searching costs [35]. Regarding the promotion of creativity [2], ESN provide some functionalities that support the collection and the development of new ideas [4,16,17,21] and foster innovation [2,13,16,22,23]. This can be achieved by exploiting the collective intelligence [32] of a vast number of contributors who interact via the ESN to share and discuss ideas [1,14,21,25,34] and refine them, e.g., via crowdsourcing [10,18,19,30].

In the capability **Knowledge Management**, four categories of benefits can be distinguished: knowledge sharing, access to expertise, reduction of redundancy, and training and learning. In contrast to the capability Informational, which focuses on speed and the simplicity of information interchange, the main emphasis of knowledge management capabilities is on the access to reliable expert knowledge of high relevance and quality. Regarding knowledge sharing, ESN provide helpful tools, e.g., (micro-) blogs or wikis, which make this often unpopular task easier [14] and thus encourage employees to participate and publish their knowledge [2]. The factor of convenience combined with low administrative barriers and participation on a voluntary basis constitute the main advantage of ESN compared to traditional knowledge management systems. Further, by enabling individual employees to share their personal and tacit knowledge, the latter is converted into organizational and explicit knowledge [29] that is kept available for other colleagues [14]. In regard of access to expertise, ESN facilitate the exploitation of the knowledge basis and provide a direct and efficient way to access existing knowledge [8,14,22,26,29]. One of the most prominent benefits mentioned by the case studies is the help ESN provide in solving problems [4,10,14,17,18,19,24,28,29,30,36,37] by making on-topic information available. However, not only the codified knowledge is a valuable asset but also the ability of ESN to bring experts and persons in search of advice together [10,17,19,22,26,28,34]. Authors posting experiences valuable to other employees as well can directly be contacted as they are likely to provide assistance in case of similar tasks. All aforementioned points create a lock-in effect strongly committing the employees to the ESN because they obtain added value in terms of, e.g., getting help faster or finding information on working solutions, etc. Finally, using ESN has benefits in the category training and learning. Organizational learning [2] is promoted as mutual training among employees is supported [18,19] and employees better understand their job and role expectations [15].

The capability **Tracking** comprises the categories transparency of responsibilities, improved task assignment and traceability. Transparency of responsibilities is accomplished by ESN as they reveal what employees are currently working on, e.g., by a status update. Thus, their current work becomes visible to other colleagues [11,14,17,24,36,37] and may identify them as qualified contact persons on similar topics. An overview of collaborative activities [17] is of importance when working in teams. ESN contribute to an improved task assignment e.g., by helping to align activities in a team [36.37] or to synchronize activities among two or more employees. Finally, an ESN increases the traceability of the employees' actions as, e.g., meta-information on changes made via the system are logged [11].

The final capability, **Disintermediation**, comprises the two categories eased point-to-point communication and elimination of intermediaries. In the first category, ESN streamline communication [18] by supporting and increasing direct interaction among employees [1,20,23] and by providing a convenient way to receive instant feedback [11,24,37]. In certain scenarios, ESN start to supersede emails as the prevailing medium of internal communication [8,11]. They provide valuable benefits for collective communication as it is needed within teams [11,20] and facilitates discussions [36] on a certain topic. Finally, more balanced communication structures are the result [9], as messages are less formal in ESN [24]. The second category covers ESN benefits relating to the elimination of intermediaries. This is achieved by ESN because they involve a wide group of people [8] and directly interconnect all employees [8,12,30] of either the own company or a wider cooperation network, often even beyond the actual business context. Due to the availability of private pages in ESN, barriers to contact colleagues are reduced [28,34]. Thus, employees directly contact these colleagues and, finally, make new connections [24,27]. This fosters direct communication among the users of an ESN without depending on intermediators. On an organizational level, a reduction of both hierarchical [9,17,19,23] and organizational boundaries [4,14,31] can be observed brought about by the utilization of ESN.

In summary, a large number of the benefits accruing from the use of ESN could be classified into the capabilities of traditional IT, which can be explained by the fact that, on the one hand, the IT capabilities by Davenport and Short (1990) are rather generic and, on the other hand, ESN themselves represent a specific sub-type of IT possessing capabilities similar to those of other IT-systems. However, even if many ESN benefits match the IT capabilities in general, they often exceed the original notion of IT capabilities and generate added value based on the distinctive characteristics of ESN. These aspects, e.g., Knowledge Management and Tracking, are discussed in section 5.

4.2 Social Capital as a new Capability of ESN

As already explained at the beginning of section 4, there are 25 benefits that could not be classified to the capabilities of traditional IT. These benefits can be grouped into five distinct categories: personnel development, merging of private life and business, trust-based community, common identity, and disclosure of hidden interactions. All of these aspects refer to the value of an individual member that can be promoted in the network, social relationships of individuals and the corporate network itself, often subsumed in literature under the term Social Capital (Portes, 2000). These aspects were not covered by the IT capabilities by Davenport and Short (1990), as functionality and not sociality was in focus at that time. Thus, it is necessary to derive a new IT capability to cover these aspects, too. Social Capital "stands for the ability of actors to secure benefits by virtue of membership in social networks or other social structures" (Portes 2000, p.6). This phenomenon can also be observed when using ESN, as benefits like e.g., builds a networked organization [19], were achieved. Therefore, we determined Social Capital as a new capability, which complements the traditional IT capabilities. The benefits of ESN associated with this newly built capability are summarized in Table 3.

In regard to **Personnel Development**, a number of benefits have been identified. ESN provide a platform that gives employees, regardless of their position, a voice in the corporate community. This can be part of a staff empowerment strategy [8,19], where employees are encouraged to assume more personal responsibility. In this regard, ESN provide employees with the necessary features towards more self-organization (e.g., in autonomous teams) to utilize the team members' potentials and skills at the

best. In addition, employee satisfaction is positively influenced as ESN motivate users during their daily tasks [23]. Because activities in the ESN are visible to other users, employees are recognized by the corporate community and, thus, can earn reputation [12] and gain a higher level of confidence [15]. In a second step, employees can benefit from these aspects, e.g., to promote their careers [25]. Finally, by actively participating in the corporate community, employees increase their feeling of "belonging" [14], as they gain more influence in the corporate community [9].

	Individual	Organizational
Social Capital	**Personnel Development:** empowering employees [8,19]; supports employees gaining influence in the corporate community [9]; increases reputation [12]; increases feeling of "belonging" [14]; helps gaining a level of confidence [15]; motivates employees [23]; used to promote careers [25] **Merging of Business and Private Life:** helps to develop interpersonal relationships/friendships in the workplace [15,17,18,19,20,34]; increases flexibility of working hours [6,7]; helps to find employees with similar interests [24]; supports social browsing [25] **Trust-Based Community:** supports on-boarding newly hired employees [9,15,26]; creates trust among employees [28]; strengthens social connections [32]	**Trust-Based Community:** builds a networked organization [19]; creates and sustains a user community [21,23]; supports informal interaction [4] **Common Identity:** creates better understanding of own employees [3]; creates greater overall business understanding [14]; better understanding of the organizational culture [15]; creates a shared background [30] **Disclosure of Hidden Aspects**: identifies key contributors in the corporate network [3]; higher recognition of highly performing employees [8]; increases organizational awareness on formal and informal matters [17]; improves meta-knowledge on "who-knows-whom" [22]

Table 3. Benefits of Enterprise Social Networks in capability Social Capital

A second category of benefits is related to the **Merging of Business and Private Life**, which has also been identified as an outcome of the use of ESN. The boundaries between private and job-related activities become increasingly blurred as ESN link both areas together. They allow for a greater flexibility regarding working hours [6,7], which, in turn, enhances the compatibility of family and career and leads to a better work-life balance. Furthermore, ESN help to develop interpersonal relationships or even friendships at the workplace [15,17,18,19,20,34]. This is also fostered by social browsing [25] where personal information made available by the users in their profiles or private pages are used to identify colleagues with similar interests or hobbies [24].

As regards the multilayered connections that take place within ESN (e.g. formal/informal, peer-to-peer/group-based), most often, the informal, interpersonal interactions [4] promote the creation of a **Trust-Based Community** among the employees [21,23,28]. Using an ESN strengthens social connections [32] and helps to build a networked organization [19] that is characterized by mutual trust and respect. In this way, gains in collaboration as well as in mutual assistance can be achieved because ESN create and sustain a user community [21,23] where employees can work together in an atmosphere of well-being. In case of newly hired employees, ESN are successfully used to support onboarding processes [9,15,26], which aim at a smooth integration of recruits into the organization.

From an organizational perspective, ESN provide means for accomplishing a **Common Identity** among the employees. Benefits leading to a better alignment of corporate values and individual needs also fall into this category. For example, by disseminating business information among all personnel, the ESN can be used to create a greater overall business understanding [14]. Alternatively, activities started in or opinions exchanged via the ESN enable the management to learn about the needs of their employees [3]. In general, ESN can serve as a valuable source to deepen the understanding of the organizational culture [15]. That way, a shared background is created [30], which can be turned into a competitive advantage such as having a workforce pulling together and pursuing a common vision.

The last category of benefits is the **Disclosure of Hidden Aspects** formerly concealed under the surface but now available for analysis by the use of ESN. As such systems keep track of communication relationships, social contacts and other user interactions, there is an increased organizational awareness of both formal and informal matters [17]. Informal relations are of special interest in this context

as they can be used to detect the actual sequence of work or organizational structures where they deviate from the organizational chart. By applying methods of social network analytics, it can be determined "who-knows-whom" [22], which communication channels are used, and how close the collaboration between the users is. That way, the key contributors in a network can be identified [3]. Relying on that information, ESN are also a suitable platform for the recognition of high performing employees [8].

5 Discussion

After presenting the benefits of ESN, we will discuss interesting aspects based on our findings. While all of the benefits have been achieved using ESN, they are widely dispersed and often only appear in single cases. One possible reason for that is that the benefits described in the case studies are subject to the objects of investigation of the particular paper. Additionally, we cannot state if there are benefits that are invariably achieved by implementing an ESN simply by looking at all the case studies we analyzed. Thus, we do not argue that implementing ESN creates benefits per se.

Rather, ESN can provide support for specific categories in a company classifiable to the capabilities of traditional IT as shown in Table 2. However, our analysis also shows that there are three capabilities to which no benefit could be classified to: **Automational, Analytical** and **Sequential** (see section 2.3) (Davenport and Short, 1990). All of them put traditional IT systems in the foreground that execute defined business operations. This is contrary to ESN, as they focus primarily on supporting the execution of single activities and interpersonal relationships (Muller et al., 2009). Thus, we see a need for further research on how ESN can be used effectively and efficiently to support business processes. The use of online social networks used for marketing may serve as an example, in which Social Media is combined with traditional business operations (Berger et al., 2014a). Although none of the case studies identified a benefit classified to the above-mentioned capabilities, there might, e.g., be an automation of certain tasks even if not mentioned in the case studies. For example, an employee is reminded to complete a task at a project milestone, which could be triggered by an ESN instead of a person.

On the other hand, the capability **Social Capital** was identified complementing traditional IT capabilities. The importance of this new capability can be substantiated with the changing nature of IT and the so called "third perspective of IS identity" established by El Sawy (2003). El Sawy (2003) recognizes IS as IT-enabled solutions that comprise people (which are using IT) and IT as the two essential parts of the system. The capabilities of traditional IT are defined in two perspectives, whereas IT is seen as a tool helping users in their work or as a system supporting users to work in an IT-intensive business environment. The third perspective describes the fusion of IT and business environment in which boundaries between work and personal life are blurred. Most of the identified benefits within the IT capability Social Capital, especially the category *merging of business and private life*, reflect this development and make the definition of the new IT capability necessary. In addition, we contribute to the different levels of Social Capital theory (Adler and Kwon, 2002, Leana and Van Buren, 1999): looking at to the so-called ego network (where, at a relationship level, actors derive value from their own social relationships), we see additional benefits that have not been described in previous works on Social Capital. For example, the use of ESN may especially be used to strengthen the individual network position (Holtzblatt et al., 2013) in one's company, e.g., to promote an employee's own career, which often builds on the personal relationships (Bolton, 1980). On the other hand, at the network level, ESN may be used to formalize the network structure, e.g., as it becomes visible "who-knows-whom" (Leonardi, 2014), which will reveal further hidden aspects like the key contributors in the corporate network (Berger et al., 2014b). The advantages of network visibility in the context of ESN have been shown e.g., by Leonardi (2014). Thus, using ESN may contribute to a better understanding and conceptualization of Social Capital theory, too.

An interesting use case that combines Social Capital benefits and capabilities of traditional IT, i.e. **Transactional and Tracking**, is the formalization of processes. While standardized business processes are mostly covered by traditional IT, e.g., in ERP-systems, ESN are of particular interest for flexi-

ble and ad-hoc processes that vary regarding their execution from instance to instance. We see an advantage of ESN especially regarding these processes, as ESN provide a flexible platform, supporting these processes at their execution (Merz et al., 2015), e.g., at supporting discussions on specific problems and gathering the relevant data (Greasley and Wang, 2016) by tracking status updates, messages, or even the changes in a document (Merz et al., 2015). This information is then an integral part of the ESN and can be extracted to generally formalize the process in question. This makes the process more traceable and possibly more controllable, while keeping it flexible. Further, hidden aspects in the process will be revealed, e.g., which informal matters exist (Chin et al., 2015c) at executing a process. Both the formalized processes as well the awareness of "soft-facts" enable to initiate process improvement projects. Consequently, the new opportunities coming along with ESN, e.g., tracking and analyzing informal information flows with the aim of improving formalized processes, generate new challenges for research to provide supporting modelling techniques and methods.

A large number of benefits are organized within the IT capability **Knowledge Management**, which is not surprising since ESN are expected to make a major contribution in this field. This can also be seen in the increasing number of articles relating ESN to knowledge management theory, e.g., (Mäntymäki and Riemer, 2016, Richter et al., 2013b). ESN offer several integrated technologies such as wikis, blogs, social tagging, and chats that provide useful functions to share and manage knowledge. Furthermore, the aspect of community in ESN contributes to encouraging users to share their knowledge and make it accessible to and reusable by the company, which is often cited as a main problem of Knowledge Management as presented by e.g., Rubenstein and Geisler (2003). When users base their decision to share knowledge on a cost-benefit-calculation, they compare their present cost of converting individual knowledge to group-available knowledge, including the fear to make themselves dispensable, with the benefit of profiting from group-available knowledge in future. A frequently used ESN, which is integrated into existing processes and enables collaboration, knowledge exchange is much more dynamic, and the connection between present costs and future benefits becomes much more visible. Additionally, the costs of converting knowledge for the community are lower, e.g., by directly answering questions to solve a problem. Likewise, the access to expertise is much easier since the network either helps to identify the source of knowledge and offers possibilities for direct contact (Han et al., 2015) or keeps the solution of a discussion available, e.g., in forums, with this "tacit" knowledge (Zaffar and Ghazawneh, 2012) reducing searching cost in both cases. The calculation of cost and benefits is also described by Muller et al. (2009) who defined a metric named "Return on Contribution" measuring how much employees get back when providing something to the ESN. Another argument in favor of substantiating the contribution of ESN to Knowledge Management originates from the organizational commitment theory (Wiener, 1982), in which the normative commitment is defined as a sense of obligation to the community. Users participate because they feel they ought to, a feeling that may grow when persons feel indebted to the community because the benefits they receive exceed their own contribution (Bateman et al., 2011, Oestreicher-Singer and Zalmanson, 2013). Therefore, persons asking for a solution, which is then provided by various users in the community (Richter and Riemer, 2009, Riemer and Scifleet, 2012) may feel indebted (maybe only after the second or third time) so that they are encouraged to share their knowledge, too (Qi and Chau, 2016).

Looking at the aforementioned points and the variety of ESN benefits in general, it becomes obvious that many benefits are hardly quantifiable, e.g., the increased creativity of employees (Qi and Chau, 2016). Further, there are benefits that are influenced by various factors, e.g., organizational culture (Gonzalez et al., 2015). These, in addition to the great variety of benefits, make it difficult to establish a **success measurement approach** that covers most aspects. Even though, when comparing our benefits to the current success measurement approaches, e.g. by Richter et al. (2013a), we see that some of the benefits we identified are already covered by them. For example, the benefit *helps to solve problems* is covered by the success measures *number of questions asked*, *number of useful or correct answers*, and *number of answered questions* (Richter et al., 2013a). However, a discrepancy between our list of benefits and the success measures was identified, too. For example, Richter et al. (2013a) describe impacts of ESN that were not identified as benefits in the case studies, e.g., *reduced travel*

costs; on the other hand, we identified benefits that are not covered by current success measurement approaches, e.g., *creates trust among employees* (Richter and Riemer, 2009). While we do not argue that all benefits have to be measured, we still see the need to create new means to measure relevant benefits and, thus, align or expand current success measurement approaches. With our analysis, we hope to provide researchers with a starting point to do so.

From an organizational perspective, it is interesting to note that no advantage was identified on an employee level, which contradicts the view of the business. Obviously, each individual benefit and company always have to be considered separately, for example, if the business strategy favors a strict hierarchy, an ESN may possibly work against it. Apparently, the same holds true for the opposite. No benefit on the organizational side was identified that is contradictory to the individual view. Thus, we are convinced that ESN are an enrichment in the corporate life due to the previously mentioned positive effects, both on an individual and an organizational level. ESN usage may additionally be promoted by the fact that its usability is well-known from private life, e.g., from using Facebook, and because ESN are platforms comprising various integrated web 2.0 technologies such as personal pages and activity streams. Finally, we see ESN as a useful complement to traditional IT, due to their stimulating different aspects previously not stimulated, e.g., hedonic usage at the workplace (Chin et al., 2015c).

6 Conclusion

In this paper, we elaborate on the benefits of Enterprise Social Networks and compare them to the capabilities of traditional IT. In this regard, we perform a qualitative content analysis according to Mayring (2014) with a focus on case studies on ESN. As a result, we identified 99 benefits that were classified to the capabilities of traditional IT and to a new capability named Social Capital. With this research, we claim that ESN have enormous potential to bring about business value, even though hardly quantifiable, as, e.g., a networked organization is built by ESN.

Our research contributes to theory and practice. As a contribution to theory, first, we identify and present the benefits based on the evidence of 37 case studies. Those were classified to the IT capabilities by Davenport and Short (1990). To three IT capabilities, no benefit could be classified to, while five are very well supported with 69 benefits distinguishable in 13 categories of benefits. Second, we derive a new IT capability, Social Capital, covering an additional 25 benefits and resulting from the changing nature and reflecting the present nature of IT hallmarked by the fusion of business and personal life (El Sawy, 2003). Third, we identified several fields for further research, e.g., to expand success measurement approaches on social software (see last paragraph). From a practical perspective, first, our list of benefits and the definition of categories is of additional help to prevent practitioners from false expectations and to stress the added-value of ESN. Second, companies having already implemented an ESN gain further insights into the impacts of ESN and can, thus, facilitate a more targeted use of ESN. Finally, the benefits, especially in the capability Social Capital, give insights on the informal activities and information flows in the company that may help to rearrange the focus of improvement projects.

However, our research is not without limitations. The list of benefits extracted from the 37 case studies is limited. Even though we carefully selected the case studies and all of which passed a review process, we did not question their results. Further, we have not elaborated on the negative impacts of ESN in companies, which - at worst - might compensate the positive effects.

In the course of our research, we came upon possibilities of further research: first, the mentioned limitations present a basis for further research. Second, we identified informal information flows as a possibility to improve business processes. Third, the definition of metrics for our benefits for a further development of success measurement approaches is a promising future research areas. Finally, the determination of influencing factors either enabling or hindering the generation of benefits based on empirical research is of great importance to support the successful implementation and use of ESN.

References

Adler, P. S. and Kwon, S.-W. (2002). Social capital: Prospects for a new concept. Academy of management review, 27 (1), p. 17-40.

Andriole, S. J. (2010). Business impact of Web 2.0 technologies. Communications of the ACM, 53 (12), p. 67-79.

Bateman, P. J., Gray, P. H. and Butler, B. S. (2011). The impact of community commitment on participation in online communities. Information Systems Research, 22 (4), p. 841-854.

Berger, K., Klier, J., Klier, M. and Probst, F. (2014a). A Review of Information Systems Research on Online Social Networks. Communications of the Association for Information Systems (CAIS), 35 (1).

Berger, K., Klier, J., Klier, M. and Richter, A. (2014b). " WHO IS KEY...?"-CHARACTERIZING VALUE ADDING USERS IN ENTERPRISE SOCIAL NETWORKS. European Conference on Information Systems (ECIS).

Bharadwaj, A., Bharadwaj, S. and Konsynski, B. (1999a). Information Technology Effects on Firm Performance as Measured by Tobin's q. Management Science, 45 (6), p. 1008-1024.

Bharadwaj, A. S., Sambamurthy, V. and Zmud, R. W. (1999b). IT capabilities: theoretical perspectives and empirical operationalization. 20th international conference on Information Systems (ICIS). Charlotte, North Carolina, USA.

Bolton, E. B. (1980). A conceptual analysis of the mentor relationship in the career development of women. Adult education quarterly, 30 (4), p. 195-207.

Bouman, W., de Bruin, B., Hoogenboom, T., Huizing, A., Jansen, R. and Schoondorp, M. (2007). The realm of sociality: Notes on the design of social software. International Conference on Information Systems (ICIS).

Chin, C. P.-Y., Choo, K.-K. R. and Evans, N. (2015a). Enterprise Social Networks: A Successful Implementation within a Telecommunication Company. Americas Conference on Information Systems (AMCIS).

Chin, C. P.-Y., Evans, N. and Choo, K.-K. R. (2015b). Exploring Factors Influencing the Use of Enterprise Social Networks in Multinational Professional Service Firms. Journal of Organizational Computing and Electronic Commerce, 25 (3), p. 289-315.

Chin, C. P.-Y., Evans, N., Choo, R. K.-K. and Tan, F. B. (2015c). What Influences Employees to Use Enterprise Social Networks? A Socio-Technical Perspective. Pacific Asia Conference on Information Systems (PACIS).

Davenport, T. H. and Prusak, L. (1998). Working knowledge: How organizations manage what they know. Harvard Business Press, Boston.

Davenport, T. H. and Short, J. E. (1990). The new industrial engineering: information technology and business process redesign. Sloan Management Review, 31 (4),

DeLone, W. H. and McLean, E. R. (1992). Information systems success: The quest for the dependent variable. Information systems research (ISR), 3 (1), p. 60-95.

DiMicco, J. M., Geyer, W., Millen, D. R., Dugan, C. and Brownholtz, B. (2009). People sensemaking and relationship building on an enterprise social network site. Hawaii International Conference on System Sciences (HICSS), p. 1-10,

Ding, G., Liu, H., Wei, S. and Gu, J. (2015). Leveraging Work-Related Stressors for Employee Innovation: The Moderating Role of Enterprise Social Networking Use. International Conference on Information Systems (ICIS).

El Sawy, O. A. (2003). The IS Core IX: The 3 Faces of IS identity: connection, immersion, and fusion. Communications of the Association for Information Systems (CAIS), 12 (1).

Fink, L. (2011). How do IT capabilities create strategic value? Toward greater integration of insights from reductionistic and holistic approaches. European Journal of Information Systems, 20.

Friedman, B. D., Burns, M. J. and Cao, J. (2014). Enterprise Social Networking Data Analytics Within Alcatel-Lucent. Bell Labs Technical Journal, 18 (4), p. 89-109.

Gable, G. G. (1994). Integrating case study and survey research methods: an example in information systems. European journal of information systems, 3 (2), p. 112-126.
Gable, G. G., Sedera, D. and Chan, T. (2008). Re-conceptualizing information system success: The IS-impact measurement model. Journal of the association for information systems (JAIS), 9 (7).
Gibbs, J. L., Eisenberg, J., Rozaidi, N. A. and Gryaznova, A. (2014). The "megapozitiv" role of enterprise social media in enabling cross-boundary communication in a distributed Russian organization. American Behavioral Scientist.
Gonzalez, E. S., Leidner, D. and Koch, H. (2015). The Influence of Social Media on Organizational Socialization. Hawaii International Conference on System Sciences (HICSS), p. 1899-1908,
Greasley, A. and Wang, Y. (2016). Building the hybrid organisation through ERP and enterprise social software. Computers in Industry, 82, p. 69-81.
Han, S., Sörås, S. and Schjodt-Osmo, O. (2015). Governance of an Enterprise Social Intranet Implementation: The Statkraft Case. European Conference on Information Systems (ECIS).
Harden, G. (2012). Knowledge sharing in the workplace: A social networking site assessment. Hawaii International Conference on System Sciences (HICSS), p. 3888-3897.
Heim, S. and Yang, S. (2015). Content Attractiveness in Enterprise Social Networks. European Conference on Social Media (ECSM).
Herzog, C. and Richter, A. (2016). Use Cases as a Means to Support the Appropriation of Enterprise Social Software. Hawaii International Conference on System Sciences (HICSS).
Herzog, C., Richter, A., Steinhüser, M., Hoppe, U. and Koch, M. (2013). Methods And Metrics For Measuring The Success Of Enterprise Social Software-What We Can Learn From Practice And Vice Versa. European Conference on Information Systems (ECIS).
Holtzblatt, L., Drury, J. L., Weiss, D., Damianos, L. E. and Cuomo, D. (2013). Evaluating the uses and benefits of an enterprise social media platform. Journal of Social Media for Organizations, 1 (1).
Kim, G., Shin, B., Kim, K. K. and Lee, H. G. (2011). IT Capabilities, Process-Oriented Dynamic Capabilities, and Firm Financial Performance. Journal of the Association for Information Systems, 12 (7), p. 487-517.
Kügler, M., Dittes, S., Smolnik, S. and Richter, A. (2015a). Connect Me! Antecedents and Impact of Social Connectedness in Enterprise Social Software. Business & Information Systems Engineering (BISE), p. 1-16.
Kugler, M. and Smolnik, S. (2013). Just for the fun of it? Towards a model for assessing the individual benefits of employees' enterprise social software usage. Hawaii International Conference on System Sciences (HICSS), p. 3614-3623,
Kügler, M., Smolnik, S. and Kane, G. (2015b). What's in IT for employees? Understanding the relationship between use and performance in enterprise social software. The Journal of Strategic Information Systems, 24 (2), p. 90-112.
Kügler, M., Smolnik, S. and Raeth, P. (2012). Why don't you use it? Assessing the determinants of enterprise social software usage: a conceptual model integrating innovation diffusion and social capital theories. International Conference on Information Systems (ICIS), p.
Leana, C. R. and Van Buren, H. J. (1999). Organizational social capital and employment practices. Academy of management review, 24 (3), p. 538-555.
Lehner, F. and Haas, N. (2011). Measuring knowledge management success: Development and test of a theory-based measuring model. Information Technology 53 (3), p. 126-134.
Leonardi, P. M. (2014). Social media, knowledge sharing, and innovation: Toward a theory of communication visibility. Information Systems Research (ISR), 25 (4), p. 796-816.
Leonardi, P. M., Huysman, M. and Steinfield, C. (2013). Enterprise social media: Definition, history, and prospects for the study of social technologies in organizations. Journal of Computer-Mediated Communication (JCMC), 19 (1), p. 1-19.
Lin, C. and Penvan, G. (2003). The practice of IS/IT benefits management in large Australian organizations. Information & Management, 41 (1), p. 13-24.

Liu, D., Wang, L., Zheng, J., Ning, K. and Zhang, L.-J. (2013). Influence Analysis Based Expert Finding Model and Its Applications in Enterprise Social Network. International Conference on Services Computing (SCC), p. 368-375.

Majumdar, A., Krishna, S. and Bjorn, P. (2013). Managers' perceptions of social software use in the workplace: identifying the benefits of social software and emerging patterns of its use. Americas Conference on Information Systems (AMCIS).

Mann, J., Austin, T., Drakos, N., Rozwell, C. and Walls, A. (2012). Predicts 2013: social and collaboration go deeper and wider. Gartner Inc. report.

Mäntymäki, M. and Riemer, K. (2014). Information, Ideas and Input: The Value of Enterprise Social Networks. Australasian Conference on Information Systems (ACIS).

Mäntymäki, M. and Riemer, K. (2016). Enterprise social networking: A knowledge management perspective. International Journal of Information Management, 36 (6), p. 1042-1052.

Mata, F. J., Fuerst, W. L. and Barney, J. B. (1995). Information Technology and Sustained Competitive Advantage: A Resource-Based Analysis. MIS Quarterly, 19 (4), p. 487-505.

Mayring, P. (2014). Qualitative content analysis: theoretical foundation, basic procedures and software solution.

Merz, A. B., Seeber, I. and Maier, R. (2015). Social Meets Structure: Revealing Team Collaboration Activities and Effects in Enterprise Social Networks. European Conference on Information Systems (ECIS).

Muller, M. J., Freyne, J., Dugan, C., Millen, D. R. and Thom-Santelli, J. (2009). Return On Contribution (ROC): A metric for enterprise social software. European Conference on Computer Supported Cooperative Work (ECSCW).

O'Leary, D. E. (2016). Knowledge Management and Enterprise Social Networking: Content Versus Collaboration. (Razmerita, L. et al. Ed.). Innovations in Knowledge Management: The Impact of Social Media, Semantic Web and Cloud Computing. Springer Berlin Heidelberg, p. 45-74.

Oestreicher-Singer, G. and Zalmanson, L. (2013). Content or community? A digital business strategy for content providers in the social age. Management Information Systems Quarterly (MISQ), 37 (2), p. 591-616.

Portes, A. (2000). Social capital: Its origins and applications in modern sociology. LESSER, Eric L. Knowledge and Social Capital. Boston: Butterworth-Heinemann, 43-67.

Qi, C. and Chau, P. Y. (2016). AN EMPIRICAL STUDY OF THE EFFECT OF ENTERPRISE SOCIAL MEDIA USAGE ON ORGANIZATIONAL LEARNING. Pacific-Asian Conference on Information Systems (PACIS).

Richter, A., Heidemann, J., Klier, M. and Behrendt, S. (2013a). Success Measurement of Enterprise Social Networks. International Conference on Wirtschaftsinformatik (WI).

Richter, A. and Riemer, K. (2009). Corporate social networking sites–modes of use and appropriation through co-evolution. Australasian Conference on Information Systems (ACIS).

Richter, A., Stocker, A., Müller, S. and Avram, G. (2013b). Knowledge management goals revisited: A cross-sectional analysis of social software adoption in corporate environments. Australasian Conference on Information Systems (ACIS).

Riemer, K., Altenhofen, A. and Richter, A. (2011a). What are you doing?-enterprise microblogging as context building. European Conference on Information Systems (ECIS).

Riemer, K., Diederich, S., Richter, A. and Scifleet, P. (2011b). Short Message Discussions: On The Conversational Nature Of Microblogging In A Large Consultancy Organisation. Pacific Asia Conference on Information Systems (PACIS).

Riemer, K., Finke, J. and Hovorka, D. (2015a). Bridging or Bonding: Do Individuals gain Social Capital from Participation in Enterprise Social Networks? International Conference on Information Systems (ICIS).

Riemer, K. and Scifleet, P. (2012). Enterprise social networking in knowledge-intensive work practices: A case study in a professional service firm. Australasian Conference on Information Systems (ACIS).

Riemer, K., Stieglitz, S. and Meske, C. (2015b). From Top to Bottom: Investigating the Changing Role of Hierarchy in Enterprise Social Networks. Business & Information Systems Engineering (BISE), p. 1-16.

Risius, M. (2014). IS IT REALLY ABOUT FACTS? THE POSITIVE SIDE OF" MEFORMING" FOR TURNING SELF-DISCLOSURE INTO SOCIAL CAPITAL IN ENTERPRISE SOCIAL MEDIA. European Conference on Information Systems (ECIS).

Rubenstein, A. H. and Geisler, E. (2003). Installing and managing workable knowledge management systems. Praeger Westport. Connecticut London.

Sambamurthy, V. and Zmud, R. W. (2000). The organizing logic for an enterprise's IT activities in the digital era – a prognosis of practice and a call for research. Information Systems Research, 11 (2), p. 105-114.

Seebach, C. (2012). Searching for Answers -Knowledge Exchange through Social Media in Organizations. Hawaii International Conference on System Sciences (HICSS), p. 3908-3917,

Silic, M., Back, A. and Silic, D. (2015). Atos-Towards Zero Email Company. European Conference on Information Systems (ECIS).

Stei, G., Sprenger, S. and Rossmann, A. (2016). Enterprise Social Networks: Status Quo of Current Research and Future Research Directions. International Conference on Business Information Systems (BIS), p. 371-382.

Steinhueser, M., Smolnik, S. and Hoppe, U. (2011). Towards a Measurement Model of Corporate Social Software Success - Evidences from an Exploratory Multiple Case Study. System Sciences (HICSS), 2011 44th Hawaii International Conference on, p. 1-10.

Suh, A. and Bock, G.-W. (2015). The Impact of Enterprise Social Media on Task Performance in Dispersed Teams. Hawaii International Conference on System Sciences (HICSS), p. 1909-1918.

Thompson, V. (2015). Worldwide Enterprise Social Networks and Online Communities 2015-2019 Forecast and 2014 Vendor Shares.

Turban, E., Bolloju, N. and Liang, T.-P. (2011). Enterprise social networking: Opportunities, adoption, and risk mitigation. Journal of Organizational Computing and Electronic Commerce, 21 (3), p. 202-220.

Viol, J. and Hess, J. (2016). Information Systems Research on Enterprise Social Networks – A State-of-the-Art Analysis. Multikonferenz Wirtschaftsinformatik (MKWI). Ilmenau.

Wehner, B., Ritter, C. and Leist, S. (2017). Enterprise social networks: A literature review and research agenda. Computer Networks, (114), p. 125-142.

Weiss, D., Damianos, L. E. and Drozdetski, S. (2015). Teleworkers and Their Use of an Enterprise Social Networking Platform. Ed.). International Conference on HCI in Business (HCIB). Springer, p. 532-541.

Wiener, Y. (1982). Commitment in organizations: A normative view. The Academy of Management Review, 7 (3), p. 418-428.

Wiesneth, K. (2016). Evolution, Structure and Users' Attachment Behavior in Enterprise Social Networks. Hawaii International Conference on System Sciences (HICSS).

Wu, A., DiMicco, J. M. and Millen, D. R. (2010). Detecting professional versus personal closeness using an enterprise social network site. Conference on Human Factors in Computing Systems (CHI), p. 1955-1964.

Wu, L. (2013). Social network effects on productivity and job security: Evidence from the adoption of a social networking tool. Information Systems Research (ISR), 24 (1), p. 30-51.

Yin, R. K. (2013). Case study research: Design and methods. Sage publications.

Zaffar, F. O. and Ghazawneh, A. (2012). Knowledge sharing and collaboration through social media– the case of IBM. Mediterranean Conference on Information Systems (MCIS).

Zhang, J., Qu, Y., Cody, J. and Wu, Y. (2010). A case study of micro-blogging in the enterprise: use, value, and related issues. Conference on Human Factors in Computing Systems (CHI), p. 123-132.