E-leadership and Factors Influencing Adoption of Enterprise Social Networks

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Zusammenfassung

Die vorliegende Arbeit untersucht E-Leadership-Forschung und betrachtet Kommunikation als Hauptwerkzeug den Führungskräften um zu beeinflussen im virtuellen Kontext. Weiters beschäftigt sie sich mit Faktoren, die die Nutzung von Enterprise Social Networks (ESN) beeinflussen können. Mittels empirischer Online-Umfrage wurden Daten aus 247 Rückmeldungen erhoben – mit dem Ziel, herauszufinden, ob Faktoren wie frühere Erfahrungen mit Social Media, wahrgenommener Nutzen von ESN für die Führungskommunikation, Vertrauen und dem Alter mit der Höhe der ESN-Nutzung korrelieren. Die Daten wurden in Bezug auf die Gesamtstichprobe, in Führungskräfte und Nicht-Führungskräfte getrennt, analysiert. Die Ergebnisse zeigen, je höher der wahrgenommene Nutzen von ESN für die Führungskommunikation ist, desto höher ist der Grad der Nutzung von ESN. Dies scheint für alle Mitarbeiter, unabhängig von ihrem formalen Führungsstatus in der Organisation, gleichermaßen gültig zu sein. Individuelles Vertrauen stellte sich als ein statistisch signifikanter Einflussfaktor für die Nutzung von ESN durch Nicht-Führungskräfte heraus, wohingegen bei Führungskräften keine statistische Signifikanz festgestellt werden konnte. Die bisherigen Erfahrungen mit Social Media hatten bei Führungskräften Einfluss auf die Nutzung von ESN, während der Faktor Alter, betrachtet in Altersgruppen, keine statistische Signifikanz für den Grad der Nutzung von ESN ergab.

Schlüsselbegriffe: E-Leadership, virtuelle Führung, Führungskommunikation, Soziale Medien, ESN, Vertrauen, Generationen

Abstract

This paper reviews e-leadership research and specifically takes the view of communication as main tool leaders have to influence in virtual context. Further it focuses on factors that might influence adoption of Enterprise Social Networks (ESN). By means of empirical online survey data from 247 responses was collected with aim to find out whether factors like previous experience with Social Media, perceived value of ESN for leadership communication, trust, and age correlate with the level of ESN usage. The data was analyzed with regard to total sample and separately compared for formal leaders vs non-leaders. The result indicate higher level of perceived usefulness of ESN for leadership communication predict higher levels of usage of ESN. This seems to be equally valid for all employees, independent of their formal leadership status in organization. Individual trust appeared to be a statistically significant contributor to usage of ESN for non-leaders, but no significance was identified for formal leaders. Previous experience with Social Media showed relative effect on ESN usage among formal leaders while age factor, viewed in generation cohorts, did not reveal any significance on the level of usage of ESN.

Keywords: e-leadership, virtual leadership, leadership communication, social media, enterprise social networks, trust, generations

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1 Introduction

The great myth of our times is that technology is communication.
– Libby Larsen

Nowadays no one would argue that information technologies have become part of everyday life, both in private and in business contexts. Over the last twenty years, organizations have faced tremendous changes in the way their daily business and communication take place. More and more, we are online rather than offline. We no longer meet in person nor use the traditional landline telephone to sell, buy, or simply talk to our colleagues, customers, and suppliers, but we instead predominantly use Advanced Information Technology (AIT) such as e-mail, internet platforms, video conferencing, and groupware web-based systems (Avolio, Sosik, Kahai, & Baker, 2014). We do not just communicate nowadays — we *post*, we *twit,* we *pin,* and we *blog*. The fact that we may never meet in person some of those with whom we interact on a daily basis is becoming a normality in our lives. Digital and social technologies are changing the face of business as they are changing the core element of business: relationships and the way we communicate (Li, 2010).

For leaders in large organizations, where collaborators are spread all over the world and the majority of interactions are mediated through technology, the geographical disperse and integrated technology may mean both great advantages and challenges (DasGupta, 2011). Advantages can be identified in terms of reduction of costs and time spent on travel, speed of dealings through instant connection with colleagues and other business stakeholders, more opportunities to access talents in any part of an organization, and better knowledge exchange. Challenges might be related to questions of how to motivate and develop business partners, customers, and employees while not being physically present as well as what being a virtual leader means in practice. Many modern leaders ask questions about how to communicate effectively and be present while being virtual as well as how to inspire and build trust with employees and customers to influence and drive the achievement of organisational goals. The challenges mentioned above require a better understanding of the phenomena of virtual leadership in addition to what knowledge and specific skills are necessary to become successful in leading in a new digital space (Avolio et al., 2003; Brake, 2006; DasGupta, 2011).

In discussion on how technology affects leadership, Avolio and Kahai (2003) view e-leadership — a term they use to describe the leadership process mediated through technology — as a fundamental change in the way leaders and followers relate to each other within and between groups and organizations. Although leadership is a well-researched as well as highly valued topic with universal appeal (Northouse, 2015), e-leadership is still seen as an emerging research area. The growth pace of our knowledge base of interactions between leadership and technology as well as what impact they have on each other is slower, compared to our knowledge regarding the introduction and use of new technologies (Avolio & Kahai, 2003). The research on e-leadership is still far from its zenith (Avolio et al., 2014).

Some companies, in particular those that operate on an international level, react faster to new high-tech trends by introducing different technologies to support internal and external communication. Competitors' use of advanced tools in their business operations and internal communications puts additional pressure on organizations that compete for the same customers and talents. Particularly for the younger generation of the workforce, this factor may play a role when they decide to work for a particular employer (Hallikainen, 2015; Lazazzara & Ghiringhelli, 2015).

The most popular and frequently cited internal communication solutions are public social platforms, blogs, web conference solutions, and enterprise social networks[1]. International research on internal communication channels showed that one third of the participants in surveyed organizations had already introduced and implemented enterprise social networks (ESN) as an internal communication platform[2].

In leadership and communication research, it is currently advised to look at and define "social media" not only from the information technologies' point of view, regarding consumer or social psychology perspective, but also from the organizational perspective, where communication and leadership processes play an essential part (Avolio et al., 2001; Avolio et al., 2014; Lazazzara et al., 2015). Although scholars' interest in social media phenomena is not new, factors that affect adoption and usage of ESN in leadership communication contexts still need further research (Men, 2014; Lazazzara & Ghiringhelli, 2015).The lack of studies on adoption of social media in organisation as well as

[1] "Internal Communication and Employee Engagement" State of the Sector report, 2016 Volume 8, www.gatehouse.co.uk

[2] www.internal-communication.com/SOS2014

the growing demand of e-leadership knowledge mentioned above determined the direction of research of this thesis.

The research area of master thesis is based on the recommendation of Avolio, Walumbwa, and Weber (2009) regarding required further e-leadership research as well as on the fundamental question raised by Avolio et al. of "how existing leadership styles and cultures embedded in a group and/or organization affect the appropriation of advanced information technologies (AIT)" (Avolio et al, 2001, p. 658). The purpose of this thesis is to take a snapshot of the current research status in e-leadership and, in particular, to investigate further factors that affect the adoption of advanced information technology for leadership communication.

The goal of the first section of the theory chapter is to review the state of research on e-leadership and identify components of e-leadership that differentiate it from traditional face-to-face leadership constructs. In order to elaborate on the specific organizational context where e-leadership takes place, I take a closer look at ESN as an internal communication channel, examining its purpose and opportunities for utilization in the leader-follower context. Current research findings are investigated in more detail regarding which factors affect the appropriation and usage of AIT and, in particular, constructs such as generations and trust. Additionally, I consider previous experience with social media platforms as a potential determinant in the adoption of new internal enterprise-driven technologies. In the final theoretical section, a case of Yammer implementation in Canon EMEA will be described. Yammer is an ESN solution developed by Microsoft.

In the empirical section, which is designed as an exploratory investigation, I aim to discover leaders' preferences regarding the usage of communication channels available to them as well as determine factors that influence the earlier adoption of ESN for leadership communication. Quantitative research is used to test the hypotheses concerning the relationship between the generation factor and the level of appropriation of enterprise social networks for leadership communication as well as the extent to which the level of trust relates to the commitment of leaders to positively use ESN for leadership communication. In order to collect data on possible relationships among different variables of the research question, an online questionnaire was created. The random sample will consist of employees and managers (formal leaders) from the Canon EMEA company.

Insights gained in this research may bring further understanding of factors that influence an organization's successful implementation of a new social communication platform and may find practical application in the development of internal leadership communication as well as in learning and development initiatives for leaders and managers.

2 Theoretical background

2.1 E-Leadership: development of concept, definition, and components

Ever since it started to evolve in the beginning of the last century, leadership research has been predominantly focused on the complexity of leadership phenomena (Northouse, 2015) in the face-to-face context of interactions between leaders and followers (Avolio, Kahai, & Dodge 2001; Zigurs, 2003). Northouse (2015) reviewed the different ways leadership has been conceptualized in literature over the past 60 years and identified those that view leadership as a focus on group processes. Some of these instances involve taking the personality perspective and viewing the leader as the central resource of leadership that originates from leading traits or skills, while others define leadership by behavioural acts and their interrelation with followers.

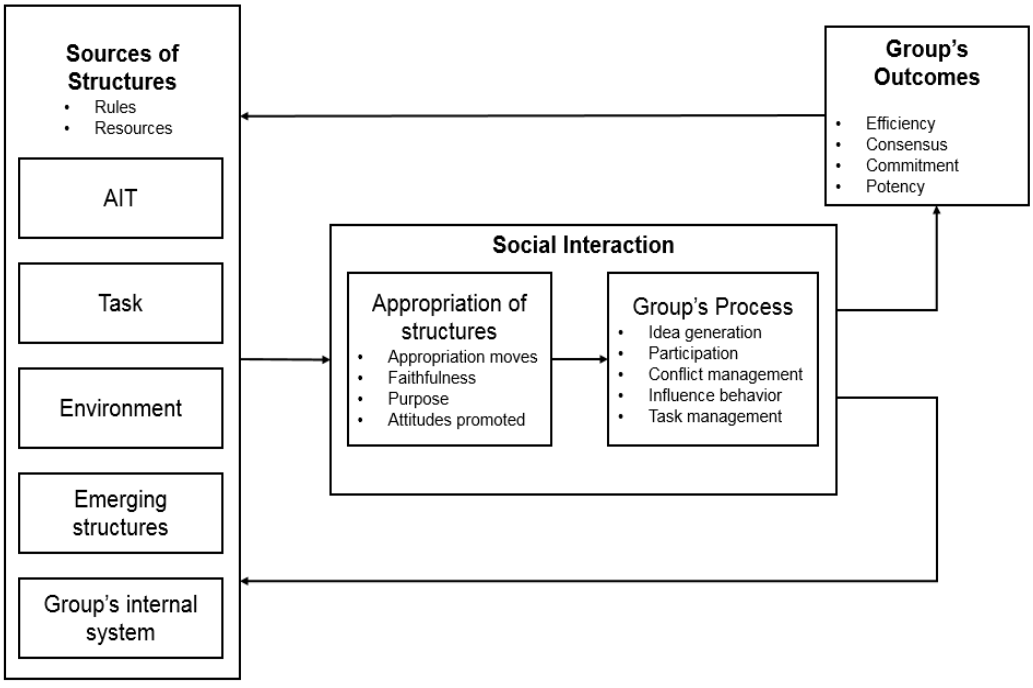
Scholars' attention to technology and its role in leadership can be found in Bass (1990), Russ, Daft, and Lengel (1990), who state the importance of information revolution for leadership as well as opportunities and implications of new technologies on leadership practices. Nonetheless, we are not yet able to say with 100% certainty that we can apply current leadership theories to the context where primary communication between leaders and followers is virtual, nor can we be sure that theoretical recommendations apply similarly in this new context (Zigurs, 2003).

While AIT has been developing progressively since the mid-1990s when it was introduced to organizations all over the world, the first integrative review and research on e-leadership was published in The Leadership Quarterly in 2001. In their work, Avolio, Kahai, and Dodge (2001) reviewed up-to-date leadership research and started the discussion on e-leadership to "incorporate the new emerging context for examining leadership" (p. 617). They stated that previous leadership research had not been considering factors related to the technology and remoted work issues, which leaders may be confronted with when their interactions with follower and outcomes are mediated by AIT. Already at that time, the authors were confident in saying that AIT affects leadership dynamics, though on the other hand they agreed that there were not enough "empirically based, systematic patterned variations … to draw any broad conclusions about e-leadership" (Avolio et al, 2001, p. 616).

Avolio et al. took Adaptive Structuration Theory (AST) as the fundamental and theoretical framework for their study, which from their perspective best understands the view that organizational structure and technology mutually influence each other (2001, p. 619). The authors proposed using modified AST framework (Figure 1) to incorporate the influence of AIT and to further use it as their basic concept for future examinations of e-leadership.

The adaptive structuration theoretical framework for e-leadership helps reveal the relationship of leadership to the emergent dependency between technology and organizational structures. It reveals the components—or sources of structures—that affect the use of technology for leadership as well as how technology interacts with these components, and most importantly, it demonstrates "the dialectic interplay between technology and the course of structures" (p. 619).

Figure 1: Adaptive Structuration Theory-based Theoretical E-Leadership Framework



Source: adapted from Avolio et al. (2001, p. 622)

As seen in the figure above, technology and leadership have a recursive relationship, one influencing the other and at the same time being affected, each transforming and being transformed by the other (DasGupta, 2011).

The fundamental question for e-leadership research proposed by Avolio, Kahai, and Dodge in 2001 remains current and focuses on “how the adoption of AIT influences the leadership in organizations and also how leadership affects the appropriation of AIT in the sense of their mutual co-evolution” (Avolio, Sosik, Kahai, & Baker, 2014, p. 106).

Among other questions dominating later e-leadership research, one concerned what kind of skills and knowledge are required to lead in digital space. To this point, Kissler (2001) stated that, in addition to cognitive skills and education, attributes such as flexibility, the ability to adapt to change quickly, the ability to work in a volatile and ambiguous environment as well as entrepreneurial spirit and individualism could all have implications for e-leadership outcomes. Annunzio (2001) in turn drew attention to the need for the aging generation factor to be addressed in creating virtual leadership as it might help link the different generation of employees currently present in the workforce. The author called for more openness and honesty, responsiveness and willingness to learn, attentiveness and altruism—factors that from his perspective would distinguish leaders from e-leaders and could make the necessary difference in becoming a successful e-leader.

2.1.1 Definition of e-leadership

When it comes to defining leadership, it seems to be a ‘bon ton’ among many authors to start with a notice that this is “the topic with no end to be finalized” or with a statement such as “the only thing many agree on is that there is no single universally valid definition of leadership”. There are and will be as many definitions of leadership as there are researchers involved (Clifton, 2014, p. 99).

As for e-leadership—also sometimes referred to in literature as virtual leadership (Jiang et al., 2016)—the definitions appear to not be very diverse. The following definition was proposed by Avolio et al. in their first review article: ***“***E-leadership is defined as a social influence process mediated by AIT to produce a change in attitudes, feelings, thinking, behavior, and performance with individuals, groups, and/or organizations***”*** (2001, p. 617).

This original definition was later modified and extended in the ‘re-examined’ research by Avoio, Sosik, Kahai, and Baker (2014), where they focus more on the role of context in e-leadership. The reviewed definition considers how AIT mediates the leadership process as well as describes how leadership influences the appropriation of AIT by all parties, which they name the Total Leadership System (Avoio et al., 2014, p. 106). Under the total leadership system, Avolio et al. understand all forms of leadership (vertical,

horizontal, and diagonal) as well as leadership presented by individuals and through groups/entities (2014, p. 126).

What differentiates e-leadership from the traditional leadership construct? If we first look at a classical definition of leadership proposed by Northouse: "Leadership is a process whereby an individual influences a group of individuals to achieve a common goal" (2015, p. 6), we can see that the components in this definition include the most important aspects of traditional leadership phenomena. Thus, in defining leadership as a process, Northouse on one hand excludes the understanding of leadership as a trait or characteristic of a person and on the other stresses a transactional mode or event that occurs between leader and follower, suggesting that anyone can be a leader. Regarding the component of the "individual", the leader's personality and skills play a central role and shouldn't be underestimated. In most theoretical areas of leadership research, the "leader's" relationship to differentiators is the backbone and centre of the concepts (Bass, 2004). A "group of individuals" explains the context in which leadership occurs. The presence of other people is essential for leadership to take place, where the "common goal" is important to provide ethical connotation underlining the mutuality of purpose for collaboration between leaders and followers.

The newer definition of e-leadership by Avolio et al. (2014, p. 107) states the following: "E-leadership is defined as a social influence process embedded in both proximal and distal contexts mediated by AIT to produce a change in attitudes, feelings, thinking, behaviour, and performance with individuals, groups, and/or organizations". It describes leadership as a process and underlines its influence as the essence of leadership. The main deviations from the general definition of Northouse concern the shared social source of leadership and the AIT context where leadership influence takes place.

In order to provide an updated overview of what constitutes e-leadership, Avolio et al. (2014) structured further academic research findings along a two-dimensional leadership framework of Hernandez et al. (2011). The concept of Hernandez et al. allocates all leadership components along two axes: the *sources of leadership* (leader, follower, dyads of leader and follower, collective, and context) and the *mechanisms of leadership* (traits, behaviours, cognition, and affect) (Hernandez et al., 2011, p. 1166). Avolio et al. (2014) suggest that context plays the main differentiating role in e-leadership and should be seen both as a source and as the enabling environment.

2.1.2 Context of e-leadership

The context where leadership takes place can act as a determinant of the nature of leadership (Hernandez et al., 2011, p. 1167) and affects both the social interaction processes and outcomes. For example, cultural, social, and organizational contexts play an important role in the shaping of leadership (Schein, 2004; Hofstede, 2006; Kwantes & Boglarsky, 2007).

As mentioned above, the e-leadership concept views advanced information technology as the major context where leadership is exercised (Avolio at al., 2003; Lazazzara & Ghiringhelli, 2015). Specific features of advanced information technologies and the way they are utilized can jeopardize or eliminate the effects of e-leadership influence, and thus both the sources and mechanisms of e-leadership as well as context all play an important role (Kahai, 2013).

Advanced Information Technology (AIT) is a collective term to describe technological solutions that arise from the introduction of e-mail, internet, and the further development of web-based technologies. Avolio et al. define AIT as tools, techniques, and knowledge that enable multiparty participation in organizational and inter-organizational activities through an advanced technological manner of collecting, processing, managing, retrieving, transmitting, and displaying data and knowledge (Avolio, Kahai, & Dodge, 2001, p. 616). Examples of AIT include e-mail and messaging systems, knowledge management systems, social platforms or networks, conferencing solutions, and many others. These kinds of technologies not only enable greater real-time accessibility of information, but they also tremendously affect the speed of interactions and the landscape in which we communicate. Members of organizations, whether individuals or groups, can participate in one-to-one, one-to-many, and many-to-many synchronous and asynchronous communications with anyone located anywhere in the world (Avolio et al., 2001).

One major benefit of AIT regarding information access is the ease of sharing and exchanging of media that allows not only for a viral spread of ideas but also for immediate feedback. Advanced information solutions provide a great opportunity to organizations and individuals for learning and development (Avolio et al., 2009). Collaborative learning platforms, wikis and search engines, online video courses, and live video tutoring can accelerate knowledge management in organizations, add value to individuals' capabilities and motivation, and therefore enhance organization performance (DasGupta, 2011).

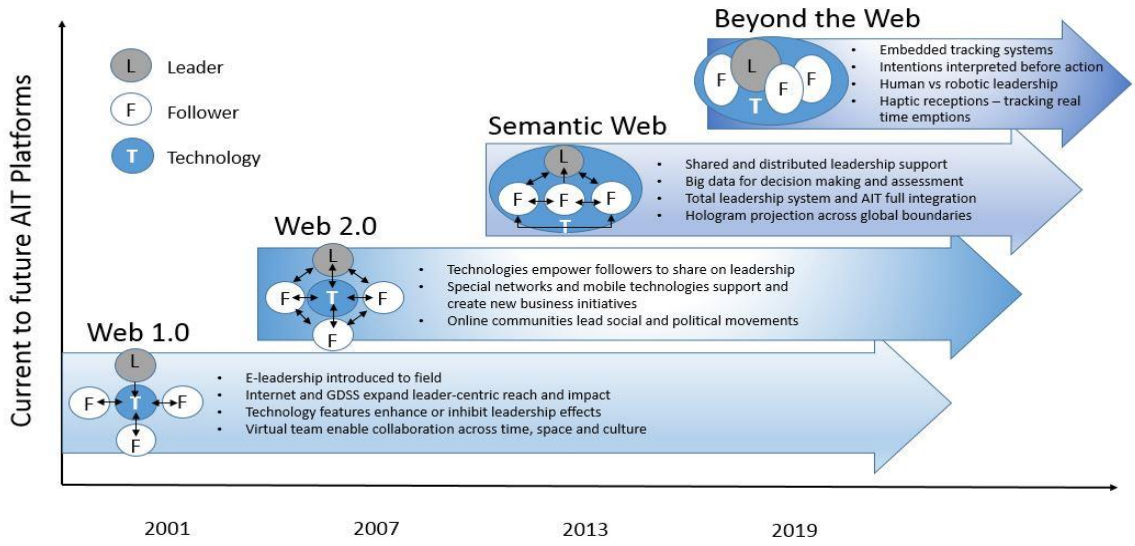
How does AIT transform the context of leadership and the ways we collaborate in organizations? Based on Kahai (2013), Avolio et al. organize the changes happening at work due to the introduction of AIT by the following five themes (2014, p. 115ff):

1. Increasing use of AIT in organizations. The German digitalization consumer report (Roland Berger, 2014) showed that the digital share of daily communication in Germany was 37%. Concerning business contexts, the number was slightly lower with 35% of daily business communications in Germany taking place in a digital space. Organizations introduced new technologies to their businesses in order to move closer to the customers, improve collaboration among employees, create new business models, and enhance productivity and innovation. This can become an added value, but it can also play a disruptive role at the workplace (The Economist Intelligence Business Unit report, 2015).
2. Greater openness and transparency. From Google to Wikileaks, technology offers a greater level of access to information and opportunity for sharing than ever before. In this context, organizations and leaders can use technology as a competitive advantage in communication with customers and employees. The challenge, however, is to remain authentic and transparent in interactions with others, as misconduct of leaders can quickly become known and cause severe consequences for an organization's or a person's image and credibility (Avolio et al., 2014).
3. The rise of social networks and geographical dispersal of connections. According to the Austrian Statistical Office web portal, in 2015 42% of enterprises in Austria had their official account on social networks (www.statistik.at). The rise of social media has major implications on working relations in organizations (Li, 2010). On one hand, it offers more opportunities to connect and reach colleagues from remote locations and increases collaboration and exchange of knowledge. On the other hand, digital communication will never be able to replace the effectiveness of the face-to-face communication channel. Thus, leaders need to find the right balance and acquire leading skills in both contexts.
4. Instant contact between leaders and followers. Mobile internet technologies and greater internet accessibility constantly keep us connected and "available" for interactions with others. The working environment is not limited to the office space, it can be everywhere. According to Avolio et al. (2014), the 24/7 availability of leaders and followers can influence task performance and alter behaviours and interactions between them. Apparently, constant contact can also have a negative effect on the relationships, making them more superficial and disruptive and changing the work-life balance, causing more stress and even burnout (Kahai, 2013; Avolio et al., 2014).

5. <u>The rise of tracking devices.</u> This relates to the implementation of GPS trackers, webcams, and other sensor-based technologies on working devices. Their potential effects on leadership dynamics are a recommended area for future research.

One of the most outstanding characteristics related to information technology is its rapid advance (Avolio et al., 2011; Leonardi et al., 2013). Since its emergence in the mid-1990s, we have not paused to learn about these new ways of interacting via different types of new technologies—from email and video calls to instant messaging and posting on social media platforms. Still, as stated by Avolio et al. (2014, p. 126), every time new technologies are being appropriated, the understanding of the potential effects of these technologies on leadership dynamics inside or outside organizations is limited and fairly delayed. Avolio et al. proposed a framework (Figure 2) to describe the interactive effects of evolving AIT and leadership on individual, team, and organizational interactions (2014, pp. 126-127ff).

Figure 2: The evolution of e-leadership and the emergence of AIT



Source: adapted from Avolio et al. (2014, p. 127)

The authors related passage of time to stage of emergence of AIT platforms, where the x-axis representing time starts at the period of the first original publication on e-leadership of Avolio et al., in 2001 and projects into the future, and on the y-axis we can see the evolution of web-based platforms from Web 1.0 to Semantic Web and what authors called “beyond the web”.

This framework (Figure 2) demonstrates how changing the context of e-leadership affects relationships of Leader, Followers, and Technology and how interactions between them are changing due to the evolution of information technologies. Thus, in Web 1.0 leaders were enabled via information technology to collaborate with followers across time, space, and culture, but the relationship between the followers themselves was mainly transmitted via technological platforms. In the Web 2.0 context, we already see that technology allows the sharing of knowledge and has greater impact on leadership behaviours. Rising social networks and advanced mobile technologies support online communities and their role in organizational, social, and political movements. Current and future outlooks on e-leadership appeal to shared leadership, integration of big data, insight into leadership decision-making, and integration of AIT as part of total leadership system.

2.1.3 Sources and mechanisms of e-leadership

Where does e-leadership evolve? Leaders, followers, dyads, and collectives as sources of e-leadership.

E-leadership can evolve both from individuals assuming the role of a leader and/or those acting as followers as well as from leader-follower dyads when members interact in a virtual environment or in the AIT context (Avolio et al., 2014, p. 109). Each can become a source or locus of the leadership influence process (Hernandez et al., 2011).

The traditional approach to leadership emphasised the role of assigned leadership, where power was more prerogative of leaders (Northouse, 2015). Concepts like the Leader-Member Exchange theory, Transformational Leadership, the Adaptive Leadership model, and the Psychodynamic Approach put leader-follower interactions as the focus (Bass, 1990; Rost 1991). Nonetheless, these theories support the idea of the prominent role allocated to leaders and position them as a driving force in leadership relationships in the organizational context (Northouse, 2015).

Avolio et al. (2014, p. 109) refer to previous works of e-leadership based on the Adaptive Structuration Theory and state that leaders play an important role in the appropriation of AIT by followers. Avolio and Kahai (2003) give examples of directive and participative e-leaders that influence global virtual teams through a different leadership style. They confirm that e-leaders can exhibit the same content and style they use in traditional leadership interactions, but those who manage to stay agile and present to address the needs

of followers concerning reach, speed, and permanence of interactions make the greater difference in virtual contexts.

The power relationship between leaders and followers was identified by Northouse as one of the important factors that define leadership (2015, p. 5). How information technologies affect leadership dynamics, distribution of power and power relationships can be viewed in the framework of the French and Raven Model (Bass, 1990; Northouse, 2015), which describes six bases of social power in the organizational context. The model states there are two types of power present in organizations: position power and personal power, each consisting of different bases. Position power includes legitimate, reward, coercion, and information powers and is derived from formal hierarchical systems in organizations, thus offering leaders a higher status and more opportunities to execute their influence (Northouse, 2015, p. 12 ff). The other, personal power, occurs either from the level of competence of a leader as perceived by others and/or from the level of the leader's popularity or reference level to the followers. Both position power and personal power can be seen as sources of leadership and play a role in the emergence of leadership (Bass, 1990, p. 230). This is also valid and true for e-leadership, as the mechanics of e-leadership are not much different from traditional models (Avolio et al., 2003). The difference however is that with the evolution of the internet and shared knowledge platforms, 'first-hand' access and the possession of critical business information are no longer prerogatives of assigned leaders.

The primary implication for the leader-follower relation is that influence, though previously concentrated in the hands of leaders, now has more bottom-up dynamics through evolving access to information and expertise (Lazazzara & Ghiringhelli, 2015, p. 32). Followers can know more about and participate more in decision-making processes (Avolio et al., 2003). Thus, leaders increasingly face the challenge of adapting their leadership style and finding the right balance between a traditional and new way of communication mediated through technology.

The acknowledgement of followers as an equal source of leadership is yet to be established in leadership literature. Tourish (2014) argues that the dominated approach allocates greater power for influencing and acting to the leader, diminishing the role of followers and leading to little space for feedback and resistance. The author formulates "leadership in terms of networks of relationships and interactions between organizational actors" and suggests "a more processual and communication-oriented perspective of leadership", which could enable the dispersal of powers and reinforcement of leadership

as a process where communication between leaders and followers forms the outcome (Tourish, 2014).

According to Kellerman (2012), with the introduction of new social media and collaborative tools, leaders lose their exclusivity in power while followers can increase their influence in organizations to unprecedented levels through access to information and thus increased information power. Increased openness and transparency in communication that occur in digital social networks allow for the opinion of one to become influential and popular (liking effect) and lead to an increased amount of emergent leaders. The followers' voices spread via social networks become quite influential in organizations (Thienel, 2015).

A shared information culture and the belief that leaders should serve rather than direct foster a greater follower impact on the leadership dynamic via AIT (Avolio et al., 2014, p. 109). Examples of the role of followers in the "Arab Spring"[3] in a political or organizational context show how followers can have a tremendous impact on the outcomes of events[4] or the future decision-making processes of an organization when employees or customers openly share their feedback on company culture or customer service on Facebook.

Teams are important components of e-leadership (DasGupta, 2011). According to DasGupta, e-leadership is mainly required to address the need to lead geographically dispersed teams or virtual teams (2011, p. 15). *Virtual team* was defined by Zigurs (2003) as a collection of geographically and/or organizationally remote individuals who communicate and collaborate via information technology in order to accomplish a specific goal. Particularly in international organizations that deploy AIT to reinforce communication and accomplishment of tasks in geographically dispersed teams, virtual working groups are a common form of collaboration (Avolio et al., 2014, p. 111ff). E-leadership occurs both in dyads and in the virtual group but may not necessarily arise from the assigned leader, and it can expand to broader online communities. Thus, a team leader can influence the values and behaviours of the virtual group members, and they in turn can expand their influence to outside of the group. In a broader social context, virtual groups or communities can have a constructive and destructive impact on shared values, norms, or outcomes. Individuals or groups possessing the greatest reference power can

[3] The Arab Spring was a series of anti-government protests, uprisings and armed rebellions that spread across the Middle East in early 2011.

[4] https://newint.org/books/reference/world-development/case-studies/social-networking-in-the-arab-spring/

create a leadership dynamic with a great impact on broader society. The “Arab Spring” revolution or recent IS radical movements are examples of how technology can mediate and affect our society (Avolio et al., 2014).

Traits, behaviours, cognitions, and affect as mechanisms of transmitting e-leadership. In the questions “*Where does e-leadership evolve?”* and “*How is e-leadership transmitted?”* Avolio et al. refer to the two-dimensional framework of leadership suggested by Hernandez et al. and suggest that e-leadership mechanisms are not different from traditional ones in that they are traits, behaviours, cognitions, and affect (2014, p. 112). Leadership mechanisms are defined as “*the means by which leadership is enacted*” and serve to demonstrate the way in which leaders exert influence (Hernandez et al., 2011, p. 1167).

Traits are characteristics or qualities that differentiate leaders from non-leaders and can include physical factors, personality features, and other attributes such as intelligence, generation, and many others (Northouse, 2015, p. 7). Avolio et al. (2014) indicate that certain traits are likely to make an impact on the emergence and impact of e-leadership. Thus, diversity of group members plays an important role in the processes and outcomes of e-leadership (Avolio et al., 2001), while the appropriation of AIT may differ by gender and gender identity (Avolio et al., 2014, p. 113ff). The authors propose greater focus on leader and follower profiles with the help of large data applications to investigate how e-leadership players influence each other across time and space as well as on the way these traits relate to the leadership outcomes.

The behaviour of leaders, followers, or groups influences the dynamics of social interaction and collaboration and has an impact on leadership mediated through technology (Avoio et al., 2001; Zimmerman et al., 2008). As with the face-to-face context, the leadership style describes behaviours leaders choose to influence followers (Hernandez, 2011) operating in the online context. Like traditional “offline” face-to-face leadership, e-leadership can also be directive, participative, and inspiring (Avolio & Kahai, 2003). Zimmerman, Wit, and Gill (2008) assessed whether the task-oriented or the relationship-oriented leadership style makes a difference in the virtual communication setting in comparison to the face-to-face setting. The survey results showed that most of the task-oriented and relationship-oriented behaviours of leaders were considered more important in virtual settings than in face-to-face settings. Hence, it also demonstrated the relative importance of leadership behaviours in a virtual setting and the equal preference of face-to-face interactions. The authors also underlined the essential role of effective

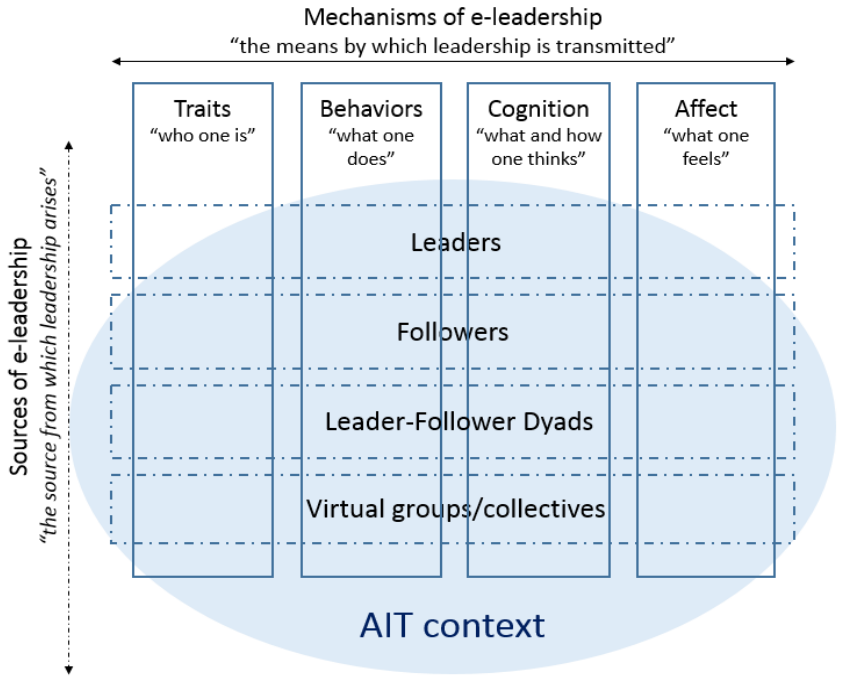
communication for ensuring task completion as well as productive interpersonal relationships (Zimmerman et al., 2008, p. 331).

According to Hernandez et al. (2011, p. 1168), cognitive scripts and schemas can directly influence leaders and their behaviours as well as the decision-making process and choices they make. Additionally, leaders influence the attitudes and thinking of followers, and followers can also express their opinion of who seems to be a leader.

In the virtual communication context, we receive information as text or visual messages created by others and thus do not have immediate additional information about their emotional or physical state. The interpretation of this electronic information is primarily a cognitive process and shapes the leadership outcomes. In proposing to treat cognition and affect as separate mechanisms, Hernandez et al. (2011) admit that the line between them is not easily identifiable. According to the authors, leadership is an emotional process and the affect mechanism best captures the role emotions and moods play in leadership transmission.

Figure 3 below aims to demonstrate the various sources and mechanisms of e-leadership and the relation of the AIT as a source and context.

Figure 3: Sources, mechanisms, and context of e-leadership



Source: adapted from "Two-dimensional framework of leadership", by Hernandez et al., 2011, and Avolio et al., 2014

This visualization of the “Two-dimensional framework of leadership” by Hernandez et al., 2011 and Avolio et al., 2014 conveys that e-leadership is not only about the leader as a driving force and source of leadership but also shows that followers, dyads, and collectives can play a role in emergence of e-leadership. And all of them can have different mechanisms to transmit leadership influence, from leader personality and behaviours to cognitions and affect. What could add to the understanding of e-leadership constructs and what is missing in the above framework are tools, which leaders use to reinforce leadership and change. In the next chapter of the paper, we take a closer look at communication as a tool that supports e-leadership transformations.

2.1.4 Communication as a main tool to influence in e-leadership context

A number of publications state that AIT can help organizations improve internal collaboration and communication (Andriole, S.J., 2010; Men, 2015; EIU report, 2015). The question is, can technology alone improve anything, or is it a human factor that makes an impact? Kiron et al. (2012) point to social media activities that contribute to leadership in terms of strategic insight and contribution, where social media help leaders sharpen their vision and communicate strategies to meet organizational objectives (Jiang, H., 2016).

Communication is seen as sine qua non in leader-follower interactions, and focal tool leaders have to influence followers to enforce the change (Christensen, 2014; Swart et al., 2015; Zimmermann et al., 2008). Communication behaviours of leaders are essential to the success of organizations (Braun et al., 2015; De Vries et al., 2010). *Leadership communication* can thus be seen as purposeful communication behaviours to influence individuals, groups, and/or organizations to produce a “change in attitudes, feelings, thinking, behaviour, and performance” (Avolio et al., 2014, p. 107).

According to Fairhust and Connaughton, the emerging lens in academic literature devoted to leadership indicates “communication to be central, defining and constitutive of leadership” (2014, p. 8). The authors propose that leadership communication has both transmissional and meaning-centred character, is typically power-based and relational, and is neither leader-centric nor follower-centric, and that “influential acts of organizing are the medium and outcome of leadership communication” (Fairhust and Connaughton, 2014, p. 8). In research conducted by Men (2014), the link between leadership style, symmetric communication, and employee satisfaction was investigated along with the effectiveness of internal communication channels. In this research, Men also stresses the importance of two-way, open, symmetric communication in leader-follower contexts

and states that rich communication channels — or rich media such as face-to-face communications — are preferred by both followers and leaders. All in all, leaders' communication culture and behaviour are crucial to the success of an organization.

An essential aspect that affects leadership communication is the choice of media or channel to communicate information (Russ et al., 1990; Men, 2014). A communication channel is defined as "the means by which messages get from one individual to another" (Rogers, 2003, p. 17). According to Braun et al. (2015), the usage of ideal communication media plays as important a role as the message itself and can be seen as a key skill related to management and leadership effectiveness, particularly in constantly changing communication environments.

"The medium will make a difference in what happens and how things happen" (Bass, 1990, p. 675). Choices organizations make regarding what channel to use for internal and external communications depend on many internal and external factors (Kupritz & Cowel, 2011). It seems that the rationale of "we introduce this new communication tool because we know it very well and can anticipate the impact it will have on our organizations" is not initially considered. Instead, we start using new technologies without having full knowledge of how it affects relationships and processes in an organization (Avolio & Kahai, 2003; DasGupta, 2011).

Recent research on leadership and communication focused primarily on assessment of effectiveness of face-to-face vs technology mediated communication channels (Russ et al., 1990; Zimmermann et al., 2008; Purvanova & Bono, 2009; Kupritz & Cowell, 2011; Men, 2014; Braun et al., 2015). Thus, Zimmermann, Wit, and Gill (2008) differentiated two primary settings of organizational communication: face-to-face and virtual. According to the definition of Zimmermann et al. (2008, p. 322), a face-to-face communication setting describes interaction between people located in the same place and at the same time, where the leader is usually physically present at the same place as followers. A virtual communication setting is defined as interactions between people working in different locations and often in different time zones (Zimmermann et al., 2008, p. 322). Although in virtual settings communication is predominantly mediated through AIT, the authors admit that face-to-face interactions are used in addition.

There is strong evidence that, in comparison to technology-mediated channels, leaders' usage of face-to-face communication channels is positively associated with increased employee satisfaction (Kupritz & Cowell, Men, 2014). Face-to-face communication is perceived as higher quality than email and telephone communication (Braun et al., 2015) and is preferred for the transmission of personal or sensitive information (Men, 2014).

Purvanova and Bono (2009) concluded the review of communication theories and, based on the findings, identified several reasons that support the superiority of face-to-face communication over computer-mediated communication. Face-to-face communication is superior due to its richness, minimized information loss, better opportunity to transmit involvement, social presence, social standing, and social context, making it is less cognitively demanding than other communication channels (Purvanova & Bono, 2009, p. 344).

Although the above-mentioned findings make important contributions to what we know about benefits and opportunities in face-to-face vs technology-mediated communication contexts, the growing area of leadership in virtual contexts and increased appropriation of AIT in organizational contexts require additional focus on emerging social media communication channels (Men, 2014). Therefore, further in the thesis literature review and the experimental section the focus will be on practical aspects: what drives social media appropriation in organizations, how does social media support e-leadership, and what factors influence appropriation of enterprise social media for leadership communication?

2.2 Enterprise Social Networks (ESN) as an emerging communication platform and factors affecting its usage

Use of social media has become a part of daily routine for adults who are active internet users. According to the GlobalWebIndex report for Q2 2016, 93% of adult internet users have an account on at least one social media site, and the daily average time spent on social networking amounts to 1 hour 51 minutes (GWI report 2016Q2, www.globalwebindex.net). With the introduction of mobile internet technology and lower costs of data traffic, the time spent online both for private and business purposes is steadily growing. The German Digitalization Consumer Research report (Roland Berger Consulting and University of Muenster, 2014) showed that 37% of our communication takes place in digital space—35% in business contexts. More and more organizations recognize not only the advantages but also the necessity to become present on the Web and to integrate social media into their communication strategies. As an example, in 2015 42% of enterprises in Austria have an official account on social networks (www.statistik.at). However, taking a further example of a statistic for Austria, we see that for many businesses it might be more about being present rather than making social media part of the daily organizational communication, as only 8.4% of organizations implemented internal blogs or microblogging solutions, and only 5.7% implemented wiki-based solutions.

What is social media and what makes it so special that large numbers of companies decide to invest their attention, time, and money into this communication channel?

Web 2.0 technologies include social media and are a broad collection of diverse tools with unique features that tend to change at a rapid pace (Andriole, S. J., 2010). This complexity makes it a challenge to come to a concise definition of social media (Obar & Wildman, 2015). Therefore, Obar and Wildman (2015, p. 745) proposed their definition of social media based on commonalties they found in social media solutions. The authors define social media as 1) web 2.0 internet-based applications, where 2) the core is user-generated content, and where 3) individuals and groups create user-specific profiles, which are 4) built in networks and facilitated by social media services by connecting a profile to those of other users (Obar & Wildman, 2015, p. 745). Both individuals and organizations can use social media applications to interact, share, and produce content (Hallikainen, 2015).

Appropriation of social media in organizational contexts primarily has two directions: utilized for external relations with customers, vendors, and broader public as well as for internal communication and social interaction within the organization (Leonardi et al., 2013, p. 2). The growing trend includes both the use of publicly available social platforms such as Facebook, Twitter, LinkedIn as well as the implementation of internal solutions limited to enterprise access. This could be in-house developed solutions or integrated ESN services from a third provider such as SalesForce, Chatter, Yammer, Jive, or MangoApps, to name a few. According to Bobsin and Hoppen (2015, in Mola et al., 2015), Organizational Virtual Social Networks (another term used to describe ESN) have great potential to bring additional competitive advantages to organizations, as these tools support changing power relations in organizations and enable new forms of collaboration.

Leonardi et al. (2013) identified three key features that enterprise social media bring to an organization:

1) Changed directionality of communication and visibility of content to those who are not involved in it. Because information and knowledge sharing happens in seconds, information flow is less predictable. This should have a positive impact on internal growth in capabilities and innovation factor within an organization.

2) Immediate feedback, which is not limited to people from your circle. Anyone can comment, give positive or negative feedback, praise or criticize, whether in an open or group

space. This seems to support the change in corporate culture towards more collaborative and open forms of communication.

3) Employees can easily find and reach any employee within an organization. People can locate expertise and better capitalize on social connections. This factor positively impacts internal mobility, talent discovery, and quicker action in business processes.

The points above support the proposition that enterprise social media tools can be implemented in an organization for different purposes and bring various benefits to participants.

At this point, it is important to mention that disruptive effects recognized in relation to technological changes limit enthusiasm regarding positive effects that technology has on business. A recent Economist Intelligence Unit report (EIU, 2015, http://transforming-business.economist.com) described the current state of challenges that organizations face in relation to the introduction of new technologies in their workplaces. The report was based on survey answers from 608 executives across the globe and in-depth interviews with industry executive experts. Key findings were grouped into four areas: 1) real-time data and growing interconnectedness of processes and people bring more complexity than relief in workload; 2) the expectation to do more with less (thanks to technology) in reality means more time is needed if the skills to successfully deploy new technology are missing; 3) the open world of networking and collaboration requires extra efforts and skills to lead and coordinate the team both face-to-face and virtually; 4) advancement in professional goals is closely linked to mastering new technologies. The acquisition of new skills seems to be required to compete with the rise of Millennials[5], who grew up with the internet (Mangelsdorf, 2014).

Independently of the above challenges, organizations implement new solutions to be current with technological trends and meet expectations of external and internal stakeholders, and they create opportunities to add value to the business by making social media's presence and utilisation a competitive advantage. Hence, there are expectations from leaders to be able to manage not only in traditional face-to-face settings, but more and more they must become a skilled virtual leader.

Hallikainen (2015, p. 9) counsels: "understanding why people use social media platforms would provide organizations with guidance when designing services for their clients". I believe that identifying *mediators* that affect the intention to use a social media platform

[5] Millenials is a label commonly used to describe people born between 1980 – 1995 (McCrindle, 2014)

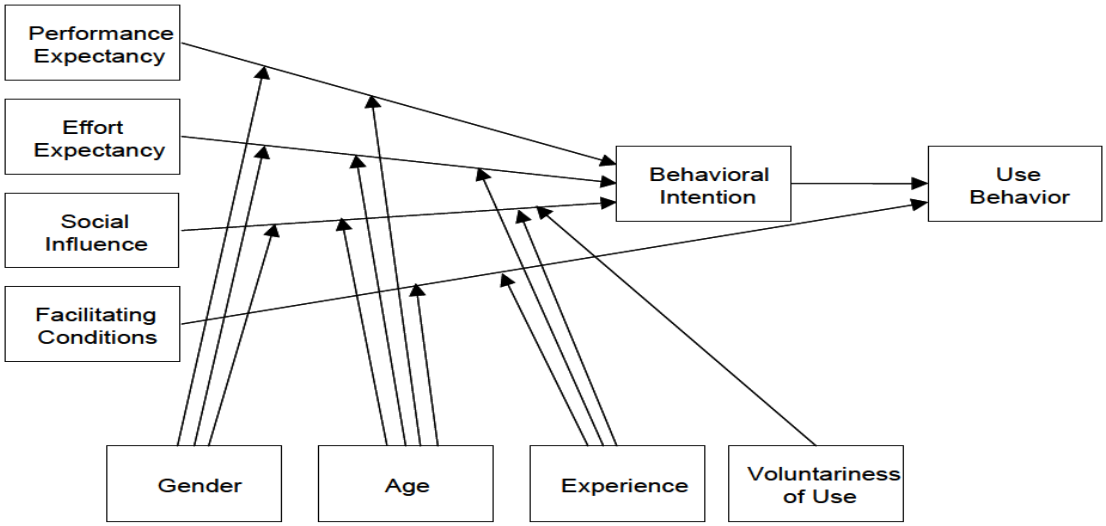
can help organizations better reflect on their current situation as well as predict the dynamics of new technology appropriation. Consequently, potential slipups in launches and communication of new IT solutions can be avoided and opportunity costs minimized.

What are those factors that affect the usage of Enterprise Social Networks in organizations by the employees?

We can look for answers in existing theories such as the Technology Acceptance Model (TAM) proposed by Davis (1993) or its extended version: Unified Theory of user Acceptance and Use of Technology (UTAUT) formulated by Venkatesh et al. (2003). These models, predominantly built on Theory of Reasoned Action and Theory of Planned Behaviour (Venkatesh et al., 2003), claim to predict how people accept and use technology and suggest constructs that influence the decisions regarding potential appropriation and usage of the technology (Sykes et al., 2009). Thus, the UTAUT model identified 'performance expectancy', 'effort expectancy', and 'social influence' components as direct determinants of *Behavioural Intention* to use technology, and the model identified *Facilitating Conditions* such as perceived level of organizational and technical environment as direct determinants of technology usage (Venkatesh et al., 2003). Sykes et al. (2009) summarized the direct determinants from the UTAUT model and argued that the relevance of this model is valid only on an individual level.

In addition, the research models of Venkatesh et al. also include 'gender', 'age', 'experience', and 'voluntariness of use' as key moderators that influence behavioural intention and use behaviour (Figure 4).

Figure 4: UTAUT research model



Source: Venkatesh et al., 2003, p. 447

The UTAUT model showed that Performance Expectancy is the strongest predictor of intention to use technology (Venkatesh et al., 2003, p. 447). Performance expectancy is defined as "the degree to which an individual believes that using the system will help him or her to attain gains in job performance" (Venkatesh et al., 2003, p. 447). Out of the five constructs that comprise performance expectancy factors – perceived usefulness, extrinsic motivation, relative advantage, job-fit, and outcome expectations – perceived usefulness is the most acknowledged in the research literature and can be seen as an independent construct in the Technology Acceptance Model (TAM) and its later version TAM2 (Venkatesh & Davis, 2000). In reference to the previously discussed importance of communication in e-leadership and the significant role the choice of media channel plays in it, I propose that the perceived usefulness of ESN for leadership communication can be a strong predictor of ESN usage. Therefore, I hypothesize:

H1: *There is a direct relationship between perceived level of usefulness of ESN for leadership communication and level of usage of ESN.*

Further research on social media appropriation refers to and builds on the TAM and UTAUT models (Sykes et al., 2009; Cha, 2010; Chung et al., 2010; McGowan et al., 2012; Sago, 2013; Banerjee & Dey, 2013) and confirms that specific features of social platforms—such as perceived ease of use and perceived usefulness—may influence the intention to adopt and use these platforms (Cha, 2010; Chung et al., 2010; Sago, 2013; Banerjee & Dey, 2013). In addition, privacy concerns (Cha, 2010; McGowan et al., 2012; Banerjee & Dey, 2013; Chung et al., 2010) and age (Morris & Venkatesh, 2000; Cha, 2010; McGowan et al., 2012) were named as indicators that may help predict the adoption and frequency of use of new technology. Gender factors seem to have a similar effect on technology adoption for younger generations while becoming more pronounced among older users (Venkatesh et al., 2004; Morris et al., 2005).

Building on the UTAUT framework, I take the opportunity to research whether experience of usage of public social media networks can directly influence the level of ESN usage. The reasoning I found relevant in this regard is as follows:

Most employees of any organization have previous experience of use and interactions with co-workers via open social networks before they begin using enterprise social media, (Leonardi et al., 2013, p. 4). According to the 2016 GlobalWebIndex report, in 2012 an adult internet user had on average 3.5 social media accounts, and in 2016, the report shows that the average number of accounts among adult internet users in diverse social networks is 7, and with users aged 16 to 24 years old the number has doubled to 8 (GWI report 2016Q2, www.globalwebindex.com). The sequence of adoption of social media

for business purposes begins often with decision to utilize public social sites such as Facebook and LinkedIn for internal communications. Then comes the decision to introduce internal solutions through ESN such as Yammer, Ingage Networks, Socialtext, or BlueKiwi (Leonardi et al., 2013, p. 5). This creates a natural flow for employees to get experience in communication via external public platforms first, and then based on this experience and the perceived benefits of using social media (Cha, 2010; Sago, 2013; Banerjee & Dey, 2013), the employees can appropriate internal communication solutions like ESN. The UTAUT model states that increasing experience with the technology plays a significant moderating effect on the intention to use and the actual usage of the technology (Venkatesh et al., 2003, p. 461). Recent research findings of Cha (2010) suggest internet experience to be a direct predictor of usage of social networking sites. This leads me to the proposition that individual experience and frequency of usage of external (public) social media platforms has a direct effect on usage of ESN. Herewith I formulate my next hypothesis as:

H2: *There is a direct relationship between the extent of individual usage of external social media platforms and level of usage of ESN.*

As mentioned earlier in this section, age as a factor influencing usage of technology was the research component of numerous studies, few of which had social media in a technology context (Cha, 2010). Additionally and with regard to AIT as a context for e-leadership, trust constructs are considered to be an important component of e-leadership processes (Avolio et al., 2000, p. 651ff). However, the trust constructs were mainly researched from the perspective of how e-leadership and technology affect trust rather than how trust affects technology appropriation and use. Hallikainen (2015) proposes to look at trust as part of the user-perceived value of information systems and to focus on trust as a factor directly affecting continued use of social media platforms (Hallikainen, 2015, p. 14). It seems to be a recommended direction to look for potential new insights regarding factors affecting adoption of new technology. Next, I consider the actuality of aging generations and trust topics in current organizational practices, and in the next chapters I aim to take a closer review of age and trust constructs and how they potentially affect the level of adoption of ESN.

2.2.1 **Role of trust in adoption of ESN**

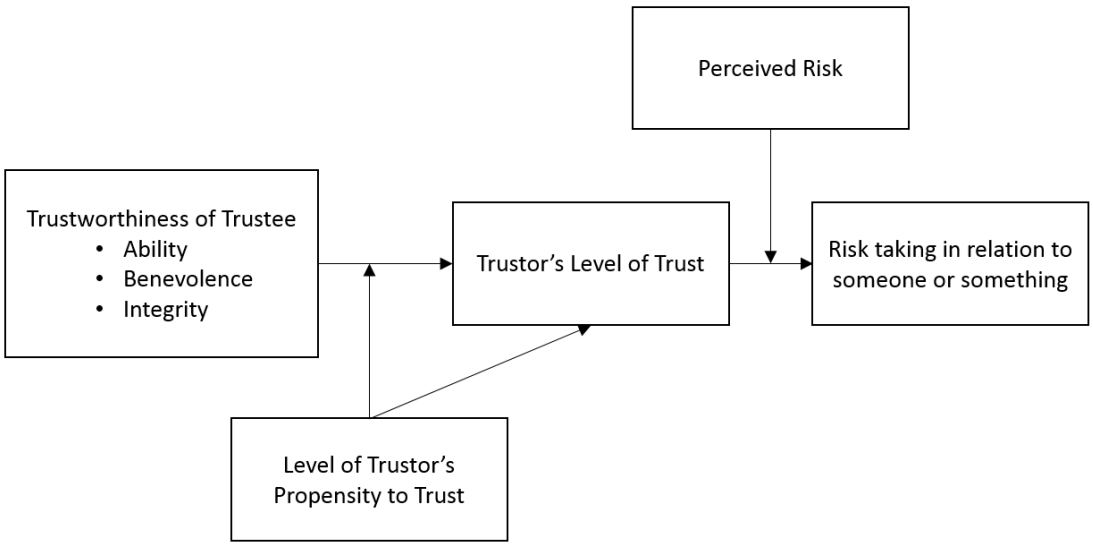
Next to poor communication, the most cited reason for unsuccessful teamwork is lack of trust (Bovee & Thill, 2012; Thienel, 2015). On an organizational level, trust can impact both positively and negatively the 'bottom line' and become a competitive advantage (Covey & Merrill, 2006).

What is trust and what role does trust play in an organizational context? Additionally, the question of what role trust plays in virtual contexts seems to be relevant for our research topic.

Trust as a construct is a topic of importance for many disciplines, from philosophy, psychology, and sociology to management and economics. As a result, the perspectives regarding trust vary from looking at trust as a cognitive act, as behavioural intention, or as a personality feature to seeing trust as synonymous with cooperation or risk taking (Colquitt et al., 2007, p. 909).

Mayer et al. (1995) proposed an integrative model (Figure 5) to define trust and suggested differentiating trust from two other constructs such as trustworthiness and trust propensity. The following definition was proposed to define trust: "*the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party*" (Mayer et al., 1995, p. 712).

Figure 5: Integrative Model of Trust



Source: adapted from Mayer, Davis, and Schoorman (1995, p. 715)

With this definition the authors argued for trust as an aspect of relationships and disagreed with the view on trust as a 'trait-like', dispositional personality feature (Schoorman et al., 2007, p. 344), and they proposed viewing characteristics of the trustee—ability, benevolence, and integrity—as antecedents of trust that build his or her perceived trustworthiness (Mayer et al., 1995, p. 715). Propensity to trust was proposed to be viewed as a stable personality factor that affects the likelihood that a person will trust (Mayer et al., 1995, p. 715). Trust propensity is also referred to in the literature as dispositional or generalized trust (Colquitt et al., 2007, p. 911).

Both trust and trustworthiness constructs are applicable across individual and organizational levels of analysis (Schoorman et al., 2007). Thus, as with individuals, we may find one management team more trustworthy than another. Likewise, some organizations have greater trust propensity than others (Schoorman et al., 2007, p. 346)

Covey (2008) brings the importance of trust in organizational contexts to an economic level and compares trust as a "currency of new economy" and a potential business success driver, arguing that the higher the trust, the faster and more efficient the business processes and the lower the costs related to time. In addition, Covey views trust not only as a 'noun' but also as a 'verb' and argues that trust is also a competency that can be developed (2008, p. 56).

In virtual contexts, trust becomes an immense part of our interactions. Because we often do not have enough knowledge and time to validate the quality of information, and because we do not know and/or do not see the person we interact with, our judgements, decisions, and actions therefore might be mediated by how much trust we have or, in following the definition of Mayer et al., how much we are willing to be vulnerable to another party (Schoorman et al., 2007, p. 347).

There are a number of papers on leadership and team performance that investigated trust in virtual contexts. Avolio et al. (2001, p. 654) proposed that a higher level of trust will result in higher activity levels (defined by frequency of comments) of leaders and virtual team members. These actions demonstrate leadership behaviours as inspirational motivation, individualized attention, and intellectual incentive. In addition, the authors suggest that media richness of groupware technologies reinforces collaboration and that, by these means, will be related to higher levels of trust among virtual team members (Avolio et al., 2001, p. 655). The focus of their research was therefore on how leadership behaviours in virtual contexts and adoption of technology affect trust (Avolio et al., 2001) as well as on how trust mediates relationships between leadership, interactions in virtual

teams, and outcomes of virtual leadership and virtual collaboration (Avolio et al., 2014, p. 115).

Greenberg, Greenberg, and Antonucci (2007) investigated trust in a virtual team environment. In physical teams, trust is generally established over time only when there is a history of reliable behaviour. Therefore, it follows that it will be hard to establish trust in virtual teams because there is no physical contact and no history. The study found that trust can develop quickly in a virtual team but also that such trust can be quite fragile. Greenberg et al. described the three components of trustworthiness (ability, integrity, and benevolence) and assigned these to different stages in the life cycle of a virtual team. The authors proposed how e-leaders and virtual team members can develop trust and sustain it through the entire project lifecycle.

Kanawattanachai and Yoo (2002) conducted an empirical study to examine the dynamic nature of trust in virtual teams. The authors also drew distinction between high-performing and low-performing virtual teams and sought explanation for the performance differential and its influence on trust. The study showed the amount of trust differentiated between the early, middle, and late stages of a project. Using data collected from a study of thirty-six four-person MBA teams from six universities competing in a web-based business simulation game over the eight week process, the authors found that both high-performing and low-performing teams started with similar levels of trust, but high-performing teams were better at developing and maintaining the trust level throughout the project life.

Comparing communication channels that organizational leaders utilise for interactions with their colleagues, the most commonly used media channel was and will be face-to-face contacts (Kupritz & Cowell, 2001). Hence, with development of Web 2.0 technologies and social media, more and more communication channels replaced traditional communication. Social media are popular thanks to the greater networking opportunities and ease of reaching large numbers of people, higher time-to-reach, dynamic interaction, opportunity to share and produce content, and—importantly—immediate feedback and emotional reactions through 'liking' opportunities. However, as mentioned earlier, privacy and security issues (Cha, 2010; McGowan et al., 2012; Banerjee & Dey, 2013; Chung et al., 2010; Kupritz & Cowell, 2011) are concerns related to the 'new' media, and thus trust can be seen as a factor influencing decisions regarding media channel choice.

Organizational culture and the level of trust in the group or organization are important factors that influence leadership effectiveness and are related to appropriation of social media platforms for internal communications and knowledge sharing (Hallikainen, 2015).

Thus, in his recent research on what motivates people to use social media, Hallikainen assumes that level of trust directly affects the usage of social media platforms and can affect their perceived value, which could be derived from participating in social media communication (2015, p. 13).

Based on the reviewed theory on trust topics and referring to the previous chapter where factors affecting technology acceptance were studied, I argue that there is still a lack of research devoted to trust in relation to its role in technology adoption. Therefore, along with recommendations of Schoorman et al. (2007, p. 348ff) to look at trust across different levels (individual vs organizational) and to look at trust in the particular context of virtual/e-leadership, I would like to question whether individual trust level affects the usage of enterprise social media and whether the level of organizational trust plays a role in adoption of ESN. Thereby, I formulate my empirical research hypotheses as follows:

H3: *There is a direct relationship between trust and level of usage of ESN*

H3.a: Individual trust level positively relates to the level of usage of ESN

Where individual trust level is an individual level of willingness to be vulnerable in virtual environment.

H3.b: Perceived level of trust in organisation positively relates to the level of usage of ESN

Where level of trust in organisation describes the level to which an individual perceives a trust as part of organisational culture.

How can trust be measured? As an attempt to do so, Schoorman et al. took their definition of trust (Mayer et al., 1995) and proposed the use of questions that evaluate “the extent to which a trustor is willing to voluntarily take risks at the hands of a trustee” (2007, p. 347). The authors also reviewed various applications of their initial four-item measurement approach and discovered a reliable consistency between different in time trials. Based on the feedback from the research field, Schoorman et al. recommend using the expanded seven-item measurement of Schoorman and Ballinger, which produces the alpha level of .84 (2007, p. 348). Three of these seven items measured were taken and integrated into the survey, which constitutes the empirical section of this paper.

2.2.2 Role of age in adoption of ESN – generation cohorts view

Browsing sites of leading consulting companies such as Deloitte.com and McKinsey.com, human resources portals such as SHRM.com and CIPD.co.uk, and reading management magazines has shown the aging workforce to be one of the most trending topics next to digitalization of the workplace. According to Global Human Capital Trends 2016[6], the number one force that drives changes and demands the reorganization of institutions is *demographic upheavals,* which "made workforce both older and younger as well as more diverse", while the second force named is *digital technology*, "which is now everywhere, disrupting business models and radically changing the workplace and the way work is done". Although interest of researchers and practitioners in technology adoption and use in organizational settings is not new (Sykes et al, 2009), the changing workforce demographics have affected the typical user base in organizations and thus have directed the research toward investigation of how gender and age factors can influence the implementation of technology in the workplace (Morris et al., 2005, p. 69)

There is evidence showing the important effect age has on technology usage in the workplace (Morris & Venkatesh, 2000, p. 375). There are many theories aiming to explain the attitudes and motivations that can predict behaviours. Specifically, Ajzen's (1991) theory of planned behaviour (TPB) was considered as a base to further research on the moderating factor of age regarding intention to use technology (Morris & Venkatesh, 2000; Morris et al., 2005). Thus, Morris and Venkatesh (2000) argue in their initial study "Age differences in technology adoption decisions: implications for a changing work force" that age not only plays a moderating role on the effects of three TPB theory constructs ('attitude toward using technology', 'subjective norm', and 'perceived behavioural control') but also has a direct effect on technology use (Morris & Venkatesh, 2000, p. 378). The results of their study confirmed this hypothesis, where findings showed greater acceptance of new technology by younger workers both for short- and long-term usage (Morris & Venkatesh, 2000, p. 392).

Other indications that age plays a role in adoption of new technology can be found in further research (Blankenship, 1998) based on Roger's (1995) diffusion of innovations theory, which also aims to explain the mechanics, reasons, and pace of innovation spread and adoption. One of the constructs of Roger's model is the individual or other

[6] http://www2.deloitte.com/content/dam/Deloitte/global/Documents/HumanCapital/gx-dup-global-human-capital-trends-2016.pdf.

‘decision making unit’, which includes personality variables and socioeconomic characteristics including age and communication behaviour constructs (Rogers, 2003, p. 165). Rogers argues that “not all individuals in a social system adopt an innovation at the same time” (Rogers, 2003, p. 241). The author proposes grouping individuals into ‘innovators’, ‘early adopters’, early majority’, ‘late majority’, and ‘laggards’ as *ideal types of adopter categories* (Rogers, 2003, p. 247) depending on the time to adoption and degree to which individuals are willing to adopt new ideas and technology.

A great amount of research was done to investigate variables related to the diffusion of innovation constructs and adopter categories (Sahin, 2006), where some findings indicate that age can play a significant role as a predictor to technology use (Blankenship, 1998). Although Rogers (2003, p. 251) argues that the generalization regarding relation of age to innovativeness lacks consistent evidence, the changing proportions of generation in the workforce as well as advances in technologies point to the actuality and need in further investigations.

In contemporary language, terms such as ‘earlier adopters’ and ‘innovators’ often go together with generation categories that have as many labels as there are authors defining them, from ‘digital natives’, ‘millennials’, and ‘baby boomers’ to ‘generations X-Y-Z’ (Benett et al., 2008; Tolbitze, 2008; Schüller, 2014; McCrindle, 2014). Although not all scholars see the sense in labelling age groups to differentiate generations from each other (Morris & Venkatesh, 2000, p. 398), a number of authors support differentiation of generations as a possibly significant variable that impacts values, behaviours, and motivations of people (Tolbitze, 2008; McCrindle, 2014; Twenge et al., 2010). On the contrary, there are studies that argue against the significance of the differences between generations as meaningful for research (Sammer, 2014, p. 20). In addition, some authors argue that a stage of life or career cycle (such as childhood, youth, adult, midlife age, and pension age) affects values and differentiates behaviours and motivations of individuals (Jurkiewicz & Brown, 1998; Tolbize, 2008, p. 2).

As will be seen later in this chapter, ‘going virtual’ and adoption of new technologies have their place in generational descriptions. The focus herewith will be on the generation constructs and their specifics in an attempt to describe both current research and their relation to social media technology usage.

While the Merriam-Webster dictionary[7] defines generation rather generically as "a group of people born and living during the same time", sociology scholars define generations as cohorts of "individuals born around the same time who share distinctive social or historical life events during critical developmental periods" (Twenge et al., 2010, p. 1120). In general, five generations can be found in the literature devoted to the topic, while McCrindle (2014, p. 8) argues that up to seven generations can be differentiated. Although slight differences can be found in the differentiation of birth time frames allocated to generations (Twenge et al., 2010; Mangelsdorf, 2014,) this does not seem to be a significant factor. Where many authors agree is that there are still too many labels in use for age categories (Benett et al., 2008; McCringle, 2014; Twenge et al., 2010).

What are the commonalities and differentiators for the generations and, specifically, what are their work preferences with regard to technology and leadership styles? Further review is primarily based on the works of Tolbize (2008), McCrindle (2014), Mangerlsdorf (2014), and Schueller (2014) and aims to offer a short generalized overview rather than claim to provide a complete picture about generations. The period references and key generation labels are borrowed from McCrindle (2014, p. 6ff).

The oldest generation, which includes individuals born between 1922 and 1945, has many labels: The Builders, The Silent generation, The War generation, The Traditionalists, and many others (see Table 1). At work, they are assumed to be consistent and uniform and prefer hierarchical organizational structures and command-and-control styles of leadership (Tolbize, 2008, p. 2). With regard to technology, they prefer to avoid advances, tend to resist the introduction of new technology, and consider internet, social media, and smart technologies "as largely alien concepts to them" and therefore became labelled *'digital aliens'* (McCrindle, 2014, p. 53).

The next generation is most commonly titled the Baby Boomers (The Boomers) and consists of individuals born after World War II between 1946 and 1965, and thus other common labels for them are 'the Post War generation' and 'the War Babies'. Boomers can be described as those who started workaholic and teamwork trends (Tolbize, 2008, p. 3) and are known for being loyal, optimistic, positive, and conflict-avoiding at the workplace (Mangelsdorf, 2014, p. 17). The Boomers grew up in a digital-free world, and although many adopt new technologies, some do remain hesitant. The label '*digital immigrants*',

[7] http://www.merriam-webster.com

first proposed by Marc Prensky (2001), is commonly used to reflect how this generation relates to technology (McCrindle, 2014).

Generation X (GenX) follows the Boomers' generation and includes individuals born between 1966 and 1980. Commonly mentioned attributes characterizing this generation include individualism, pragmatism, and rationality (Tolbize, 2008, p. 4; Sammer, 2014, p. 13). The GenXers value work-life balance and extrinsic rewards in their work (Twenge et al., 2010). Regarding leadership styles, they are more the "Sellers" than "Tellers" and tend to be relationship oriented and involving towards their subordinates (McCrindle, 2014, p. 159). In relation to technology and the digital world, representatives of Generation X were already part of the emergence of computers and the internet. They willingly adopt new technologies and are often referred to as 'tech-savvy' at the workplace (Twenge et al., 2010, p. 1120). They are thus labelled by McCrindle as '*digital adaptives'* with regard to how this generation responds to digital evolution (2014, p. 53).

The newer Generation Y (also The Millennials, Generation Me) and Generation Z (The New Millennials, Screenagers) are ones that grew up or were born surrounded by digital technologies (McCrindle, 2014). The main characteristic associated with these generations – comfort with technology as well as labels associated with them are consistent with the most significant phenomena that shaped their lives: rapid and continuous technological advances (Tolbize, 2008, p. 4). While elder generations required 'adaptation' or 'immigration', the digital world is the motherland for those born after 1980, and the new world's language is something they do not need to learn; they are *'digital natives'* (Prensky, 2001).

Although Generation Y shares many GenX characteristics such as independence, seeking a balanced life, and extrinsic motivation, as leaders they are more visionary, using an 'involving' rather than 'selling' style (McCrindle, 2014, p. 159) and are people that support shared and participative leadership culture in organizations. Interest in social and virtual relationships as well as entrepreneurship in high-tech areas are also attributed to Generation Y and Generation Z (Tolbize, 2008).

Table 1 consolidates the labels allocated to different generations and lists the technologies that were iconic and the most influential for the respective generations. The included items do not claim to be a complete list and only serve to offer additional overview for the reader.

Table 1: Overview of generations and technological innovations

Birth time frame	Generation 'labels'	Influential years	Iconic Technology
1922 – 1945	**The Builders** The Traditionalists The Greatest generation The Veterans The Matures War generation Silent generation	1933 - 1960	Central radio stations Stereo recordings Sound films Television Black'n'White
1946 – 1965	**Baby Boomers** The Sandwich generation War Babies Digital immigrants Digital transactors Post war generation	1957 - 1979	Public radio stations Audio cassette Landline telephones Colour television
1966 – 1980	**Generation X** Generation Golf Digital adaptives MTV generation The options generation	1976 - 1994	Video cassette/players Video games Cable TV First PC/Floppy disc/Ethernet Walkman
1981 – 1995	**Generation Y** The Millennials Digital natives Generation Why Generation Me	1991 - 2010	Satellite TV/DVD Mobile phones/SMS Portable PC/Home computers World Wide Web/Email Windows/CD/mp3 PlayStation/Xbox
1995 – 2010	**Generation Z** The New Millennials Digital integrators Screenagers	2007 -	WiFi/mobile internet Smart phones/Tablets Social networks Cloud computing Smart wearables

Source: synopsis from McCrindle, 2014; Oertel, 2007; Rump & Eilers, 2013; Tolbize, 2008; Twenge et al., 2010; Mangelsdorf, 2014

The lack of clear differentiation between generations and over-generalisation of attributes allocated to them are among major limitations criticised by some scholars (Bennet et al., 2008; Mangelsdorf, 2014; Twenge et al., 2010). It is questionable whether the characteristics allocated to generations are based on stereotypes and whether there is enough scientific proof (Sammer, 2014, p. 14) to use generation categories for research

studies. In addition, regional and national aspects are important when defining and describing generations (McCrindle, 2014), as they influence the demographic, sociographic, and psychographic commonalities of generations.

According to selected data for 28 EU countries drawn from the statistic database of the International Labour Organisation (www.ilo.org), in 2015 individuals aged 50 and older constituted 28.6% the of total labour force, 35-49 years old 38.7%, 20-34 years old 30.7%, and people 15-19 years old accounted for 2% of the labour force. The Baby Boomers, Generation X, and Generation Y form the majority of the current workforce.

Based on the earlier-discussed contradictory role of age and, in particular, generation constructs in adoption of technology, leadership, and communication styles, the following hypothesis is proposed to be verified as part of the empirical study:

H4: *There is a direct relationship between age (generation cohorts) and level of usage of ESN.*

Age response options are grouped according to four generations currently present in the workforce as follows: "younger than 20" will be interpreted as "generation Z", "21 – 35" as "generation Y", "36 – 50" as "generation X", and "older than 50" will be interpreted as "Baby Boomers". The results will be analysed along these generational clusters accordingly.

Building on the UTAUT model (Venkatesh et al., 2003), where age has shown a significant moderating effect on the components of behavioural intention construct, I propose to investigate whether age, taken in generation clusters has mediator effect on the 'perceived level of usefulness of ESN for leadership communication', 'the extend of individual usage of external social media platforms' and 'individual and organisational trust' as independent variables influencing ESN usage.

2.3 A case of Yammer ESN implementation in Canon EMEA

The survey was conducted in Canon EMEA[8], a subsidiary of Canon Inc. of Japan, a world-leading innovator and provider of imaging solutions. Canon EMEA was established in 1957, currently employs over 18,000 people, and operates in more than 110 countries across Europe, the Middle East, and Africa with headquarters based in London, UK (see www.canon-europe.com). In 2014, an organizational change process was initiated

[8] EMEA stands for Europe, Middle East and Africa

across the company, and since then it guides the corporate and leadership mind-set shifts towards 1) greater responsibility and outcome focus, 2) further business development and customer orientation, and 3) a more collaborative and dynamic way of working.

The intention to be more dynamic and collaborative in the way we work was one of the major arguments to invest in and roll out a new integrated enterprise 2.0 internal platform. A part of it, the Yammer ESN was launched across all regions in February 2015.

Yammer is a product of the Microsoft Office portfolio[9]. The concept of Yammer is similar to the already well-known social network Facebook and the microblogging solution Twitter and has its primary focus on corporate users. Yammer offers a secure closed network, where an employee can meet any other employee in the enterprise, can share and exchange their knowledge, post a question to the entire organization, or specifically search for subject matter experts. The Yammer solution claims to support knowledge management in an organization as well as improve employee engagement and collaboration.

Canon EMEA positioned Yammer as “a social media platform opening up collaborative conversations across the organization”. The Yammer ESN value for Canon was communicated to leaders and employees as follows:

- Allows teams to collaborate across geographies and business functions.
- Creates business value across Canon through the open sharing of knowledge, ideas, and good practices.
- Builds connections between colleagues.
- Allows problems to be discussed and solved in real time and kept so others can learn from them.
- Provides an equal voice for all employees.

The growing number of active users shows a stable trend, and at the moment of the survey — 1 year from implementation — almost 70% participation of total employees was achieved. The main areas for which this platform is used so far are: public announcements, Q&A, focus group discussion, microblogging, and file sharing. There is no data yet to analyse whether this platform is perceived by leaders and followers as added value or whether it is useful to locate leadership topics such as “employee motivation”, employee direction”, and “leading change”. Observed tendencies for senior leaders include

[9] www.yammer.com

low participation in discussions, a decreasing number of postings, and minimal feedback and participation in commentary activities.

Considering the above facts, this survey aims to shed more light on how Yammer is perceived by leaders in organisations and to better understand which factors may impact the adoption and usage of this social media tool. The results of the survey will help focus future efforts on supporting active usage of this enterprise social media in Canon EMEA and thus to strengthen e-leadership and virtual collaboration across regional organizations.

3 Empiric section

3.1 Research questions

The main empirical questions in this study are what factors influence adoption of newly introduced internal communication channel in organisation (ESN), and whether there is a difference in level of adoption between formal leaders and non-formal leaders.

Unified Theory of user Acceptance and Use of Technology (Venkatesh et al., 2003) reviewed in chapter 2.2, was considered as conceptual framework to look at technology adoption process. At this point, it is important to state that the scope of the empirical research was not to test this framework with regard to adoption of ESN, but rather to investigate single variables and their effect on ESN adoption. The results though might offer further indications for research and additional insights to the variables used in UTAUT model.

Thus, considering leadership aspect of communication and available communication channels, it is of interest to look whether perceived value of ESN communication channel as potential platform for purposeful leadership interactions has effect on the choice to utilize this media. Then, acknowledging that new internal enterprise social media solution is similar in its concept to public social media platforms and assuming that most of employees have previous experience with social media, the question is whether previous experience indeed relates to the level of usage of ESN.

In addition, trust as a factor that might affects the usage of social media technology was included in empirical study, and individual and organisational level of trust were hypothesized separately. And finally, recognizing the changing generation workforce structure and already highly disputed question on age as impact factor of technology adoption, the proposed hypotheses aim to test whether age has a larger significance as direct influence factor and whether age shows moderator effect on other above mentioned independent variables of this empiric research: ‘perceived level of usefulness of ESN for leadership communication’, ‘the extend of individual usage of external social media platforms’ and ‘individual and organisational trust’.

3.2 Data collection method

The web-based survey was constructed to test the hypotheses outlined above and to provide additional insights regarding current states of perception toward usage of newly

introduced ESM to the organizational survey stakeholder Canon EMEA. The collection method via the online survey tool www.surveymonkey.com offers anonymity and ease of participation in the survey—both online and via mobile phones—and it is easy to follow up on results, as all data are in one place and can be imported to statistic tools for further analysis with one click (Aschemann-Pilshofer, 2001).

The invitation to participate in the survey was distributed both via email and general posts on the company-wide timeline and in announcements in Yammer groups. Thus we could reach both employees who are already users of Yammer as well as those who have not yet registered. The survey was open for responses within the period of one month between the 14th of February and the 15th of March 2016. The full version of the survey can be seen in the appendix.

The questionnaire language was English. Although the majority of EMEA employees are located outside of the UK and English is not their mother tongue, I assumed that as part of an international company many employees would possess working levels of English and that those who do not would not be willing to take part in the survey. Thus we can assume that the understanding of questions was enough to ensure the validity of the results.

The survey consists of 15 questions, which is in line with recommendations for the optimal length of online surveys (Bosnijak & Batinic, 2001). Questions were formulated to address and assess the following topics:

1) Current perception of organizational communication strategy with regard to usage of social media for internal and external communication (Question 1) and on most frequently used (=adopted) communication media for internal communication (Question 5) as well as to get a snapshot of the proportion of registered and unregistered Yammer users among survey participants (Question 6).

The selection of items is based on real data provided by Canon EMEA and represents the current state of communication channels available to all employees, from classical ones such as face-to-face, email, and telephone to emerging web 2.0 social channels such as the ESN “Yammer”, Skype instant/video messaging, and conferences. Survey questions are built on samples from Lazazzara & Ghiringhelli (2015, p. 45). In order to measure the level of usage of external social networks, a five-point Likert-type scale answer scheme (“very frequently”, “frequently”, “infrequently”, “very infrequently”, and “do not use at all”) was used.

2) Previous experience of usage of external (public) social media platforms for business and private purposes (Questions 2 and 3) as well as the extent of usage of social media for private purposes in terms of amount of time spent on it per day (Question 4).
3) Attitude towards using the Yammer ESN for leadership communication (selected answer parts of Question 7) as well as overall attitude and current usage of Yammer for internal communication along with other available communication channels (Questions 11, 12, and 13/5).

Leadership communication was defined through several statements that describe communication behaviours of leaders that are associated with leadership: motivate and inspire employees, recognize and praise for successes, ask for feedback, and encourage idea sharing (Bass, 1990; Northouse, 2015).

4) Whether a respondent has a formal leadership position (Question 8) and whether this formal leader has to act as an e-leader because some of his direct subordinates work from different locations (Question 9 and 10).
5) Level of trust, which was defined through evaluative statements describing willingness to undertake behaviours that involve vulnerability and risk taking (Schoorman et al., 2007) associated with actions/reactions of others as well as statements evaluating how an individual perceives the level of trust in the organization (Question 13).

Selection of items was based on the Trust Items from Schoorman and Ballinger (2006; Schoorman et al., 2007, p. 352), which has shown an alpha level of .84 and is considered "to be the most prominent measure to date" (Schoorman et al., 2007, p. 348). Three of seven initial items were used and slightly adapted to relate to the organizational context of Canon EMEA. One additional item was created to describe willingness to be vulnerable in a social media environment. The full version of the Schoorman and Ballinger Trust Items is in the appendix.

6) Information about the respondent's age grouped according to generation classifications (Question 14) and geographical region (Question 15).

The question to identify gender was excluded from the questionnaire on request of Canon EMEA to guarantee anonymity, as in one region (Eurasia) there is only one female formal leader. In addition, gender was not a focus of this research and thus was excluded from the empirical section as well.

3.3 Sample description

In total 257 people responded to the online survey, but only the 249 fully completed results were used for further analysis.

Out of the 249 persons completed the survey, 106 (43%) regard themselves as formal leaders, and 46 (43%) of formal leaders confirmed the need to manage direct reports from other locations (e.g. while being on business trips) and 14 (13%) have to manage direct reports that are based in different from their location. Thus, it can be assumed that these leaders might exhibit e-leadership, given that they use AIT for their leadership communication with employees.

The age difference of respondents shows the following results: 48 (19%) participants represent “Generation Y”, 141 (57%)—the majority sample—belong to “Generation X”, and 60 (24%) respondents are older than 50 years and thus fall under the “Baby Boomers” generation category.

Table 2: Sample overview

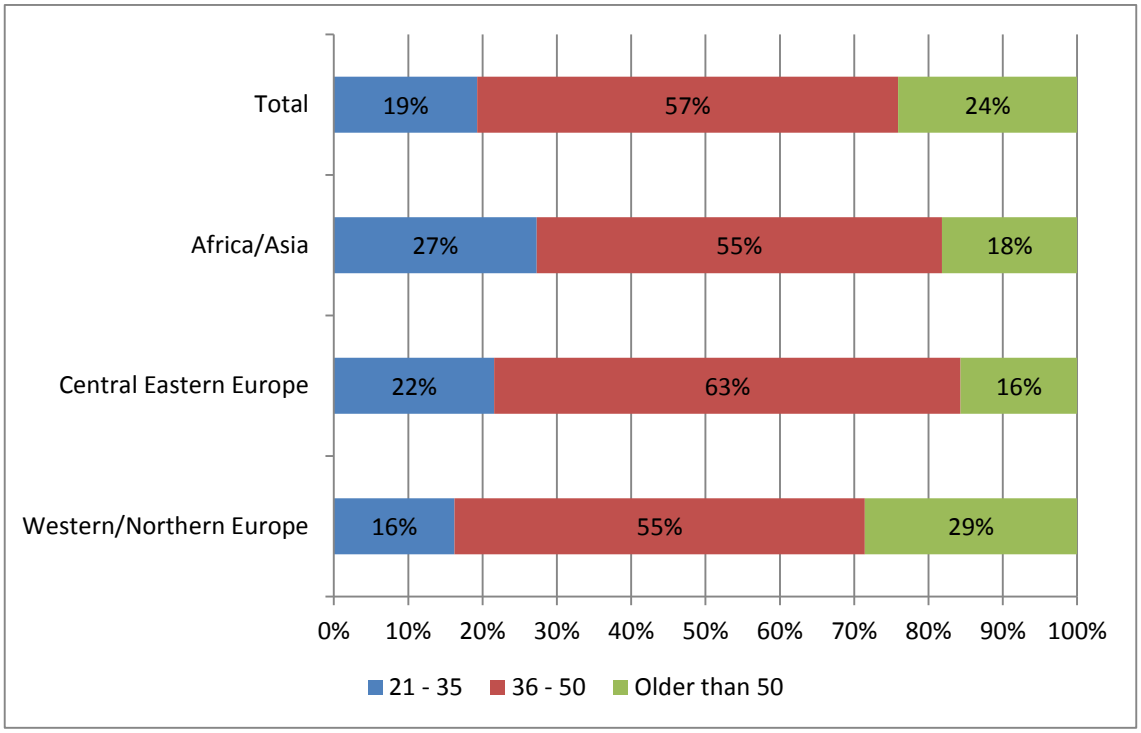
		N	%
Age	Younger than 20	0	0%
	21 – 35 („Generation Y“)	48	19%
	36 – 50 („Generation X“)	141	57%
	Older than 50 („Baby Boomers“)	60	24%
Region	Western/Northern Europe	154	62%
	Central Eastern Europe	51	20%
	Africa/Asia	44	18%

The survey participants represent five different regions, as structured by Canon EMEA, where 154 (62%) of respondents selected Western or Northern Europe as the location of their work base, 51 (20%) come from CEE – Central Eastern Europe countries, and 44 (18%) respondents represent Africa, the Middle East, and Eurasia regions. As the number of participants from the Middle East, Africa, and Eurasia was not significant enough to consider them separately, these three regions were grouped together and named “Africa/Asia” in the survey.

No statistically relevant relationship was found between age and region ($\chi^2(4)=6.18$, $p=.186$, $n=249$). 29% of Western and Northern Europeans are 50 years or older, while 16% of this group are younger than 35 years. In the CEE region, 16% are older than 50

and 22% are younger than 35, and in the group of survey participants from outside Europe, 18% are older than 50 and 27% are younger than 35 years.

Figure 6: Generation mix per region (data in percentage, n=249)



In the following, the individual parts of the questionnaire are presented by a descriptive data analysis. Where relevant, the questions were correlated to age respective to the region of participants, and it was analyzed whether the responses were dependent on age and region.

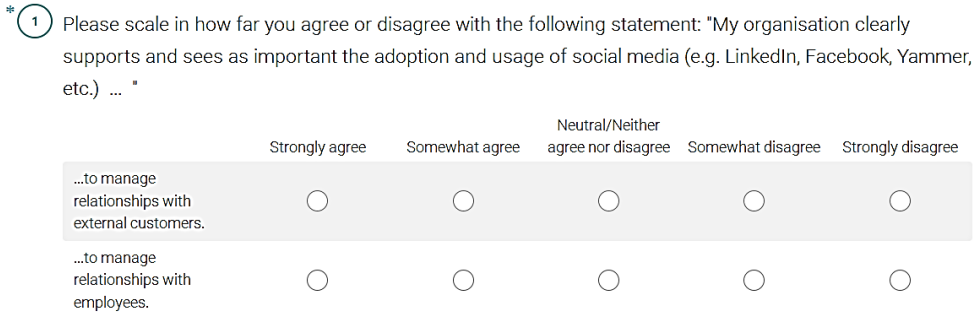
Here, it is necessary to emphasise that in this paper the nouns appropriation, adoption and usage as well as the respective predicates were utilized as synonyms. The literature research showed that in relation to technology usage – appropriation and adoption are often used to indicate the first or initial experience of usage of new technology, while usage is a general term used in the literature to describe the utilization of technology behaviours in short and in long term (Avolio & Kahai, 2001; Avolio et al. 2014; Morris & Venkatesh, 2000; Morris et al., 2005; Sinclair & Vogus, 2011; Banerjee & Dey, 2013; Venkatesh et al., 2003). As the study takes place during the first year of ESN implementation, both terms - usage and adoption should be considered as equal in the meaning.

4 Results

4.1 Description of results

The employees' perceptions of the appropriation of social media (SM) in the organization for external and internal relationship management was tested by means of Question 1 (see Figure 7). This question consisted of two five-point, Likert-type scale sub-items, where the value of one represented "strongly disagree", and the value 5 represented "strongly agree".

Figure 7: Question 1 of the online survey - example

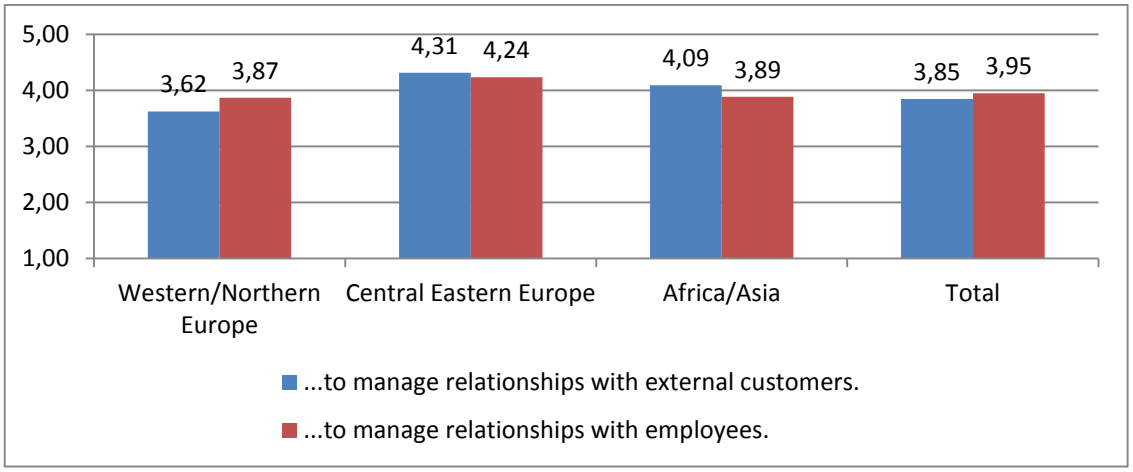


The first part of Question 1 investigated the importance of social media for maintaining customer relations and the mean value was 3.85 (SD=1.08). From the employee's perspective, the company values the application of social media for supporting customer relations. However, there was a significant difference between different regions of the participant ($F(2,246)=9.81$, $p<.001$). The highest level of agreement was observed between participants from the CEE region ($M=4.31$, $SD=0.84$); the lowest degree of agreement was found in the group of Western Northern Europeans respectively ($M=3.62$, $SD=1.10$). For employees from Africa and Asia, the mean value was 4.09 ($SD=1.05$). Post hoc tests with Bonferroni correction proved that the level of agreement between employees in Western and Northern Europe is significantly lower than in CEE ($p<.001$), and Africa/ Asia ($p=.028$). The difference between CEE and Africa/ Asia was not significant ($p=.904$).

The perceived level of adoption of social media for relationships with employees was investigated using the second part of the Question 1. For this question, the mean was 3.95 ($SD=1.07$) indicating that the agreement of the respondents was relatively high. Differences in these answers were not significantly dependent on the region ($F(2,246)=2.60$, $p=.076$). The degree of agreement within the group of participants from CEE was 4.24 ($SD=0.76$), the test persons from Western and Northern Europe provided

a mean value of 3.87 (SD=1.05), and those from Asia and Africa provided a value of 3.89 (SD=1.10). The overview of results from both parts of Question 1 is shown in Figure 8.

Figure 8: Mean value of perceived usage and importance of SM for customer and employee relations



The level of employees' usage of public social media platforms for business purposes was tested with Question 2. The choice of items was based on the social media platforms ranking by web traffic and the data analytic site www.alexa.com, and adopted to current regional and organizational usage according to internal data.

For business purposes, the most frequently used social media platform is LinkedIn (See Table 3). On a five-level, Likert-type scale from 0 (=do not use at all) to 4 (use very frequently), a mean of 2.09 (SD=1.4) was determined. Forty-two (16%) of the respondents use LinkedIn very often whereas 58 (23%) never use it. LinkedIn is followed by Facebook with a mean value of 1.18 (SD=1.43); Facebook is never used by more than half of the participants (n=131; 51%), and 24 (9%) use it frequently. The next most commonly used platforms are Twitter (M=0.73, SD=1.18) and Instagram (M=0.72, SD=1.21).

Table 3: Employees' usage of SM platforms for business purposes

	N	M	SD
Facebook	244	1.19	1.44
LinkedIn	249	2.08	1.39
Xing	221	0.52	1.05
Twitter	239	0.72	1.17
Google+	240	0.64	1.09
Flickr	227	0.23	0.63
Instagram	235	0.73	1.21

Comparing the level of usage of the four most commonly used social media platforms by age and region, the following results were identified: Facebook showed a significant difference depending on geographic regions (F(2,241)=10.11, p<.001). The level of usage was lowest in Western and Northern Europe (M=0.87, SD=1.30), highest in CEE (M=1.73, SD=1.52), and in Africa and Asia, a mean of 1.66 (SD=1.55) was calculated.

Post hoc Bonferroni tests ascertain that Western and Northern Europe differ significantly from Asia and Africa (p=.003) and CEE (P=.001) in the level of usage for commercial purposes. The difference between Africa and Asia and CEE was not significant (p=1), and LinkedIn (F(2,246)=1.49, p=.228) and Twitter (F(2,236)=0.09, p=.911) did not show significant differences. Concerning Instagram, a significant trend was noticeable (F(2,232)=2.92, p=.056): The level of usage is highest in Africa and Asia (M=1.07, SD=1.37) and lowest in Western and Northern Europe (M=0.59, SD=1.14).

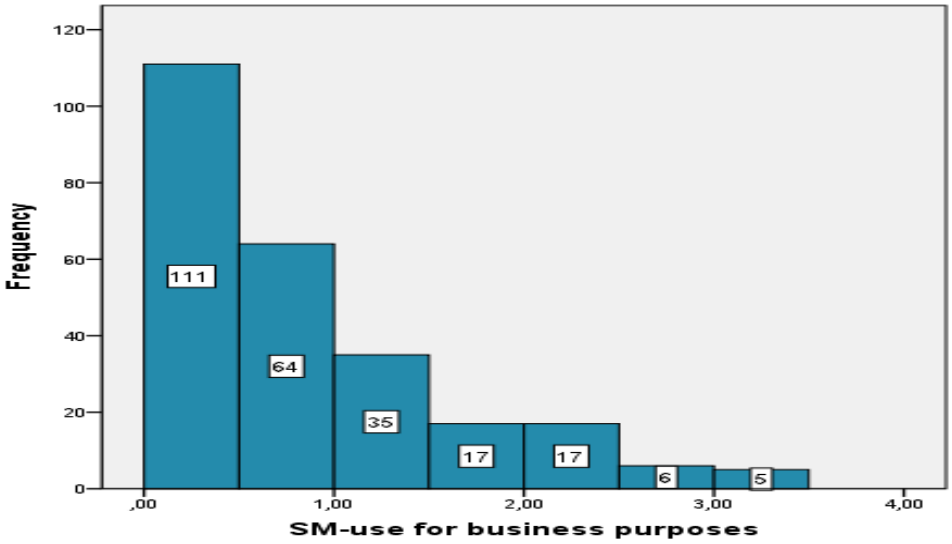
Facebook (2,241)=1.58, p=.209), Twitter (F(2,236)=0.76, p=.471), and Instagram (F(2,232)=1.00, p=.371) did not differ by generational age group (Table 4). LinkedIn showed a significant trend (F(2,246)=2.65, p=.072) in that it is mostly used by the Generation Y group (M=2.38, SD=1.23) and the Baby Boomers show the lowest degree of utilization. For the Generation X group, a mean value of 2.11 (SD=1.41) was established.

Table 4: Differences between the four most frequently used SM platforms according to generational age groups

	21-35			36-50			> 50			Total		
	N	M	SD	N	M	SD	N	M	SD	N	M	SD
Facebook	46	1.28	1.57	139	1.28	1.44	59	0.90	1.34	244	1.19	1.44
LinkedIn	48	2.38	1.23	141	2.11	1.41	60	1.77	1.45	249	2.08	1.40
Twitter	45	0.64	1.21	135	0.67	1.16	59	0.88	1.16	239	0.72	1.17
Instagram	46	0.91	1.35	133	0.73	1.23	56	0.57	1.08	235	0.73	1.22

For further analysis, means of the frequencies of usage of the nine investigated social media platforms were calculated (Figure 9). This is useful for practical reasons and from a statistical point of view, as there is a high level of internal consistence (Cronbach-α=.79). The corrected item total correlation was between .29 (Xing) and .67 (Instagram) and the total mean value was 0.81 (SD=0.77).

Figure 9: Histogram of the distribution of SM use for business purposes



As shown in Table 5, this total value significantly varies between the different geographic regions (F(2,246)=3.81, p=.024). The highest mean was found in the CEE area (M=1.00, SD=0.82) and the lowest mean was in the region of Western and Northern Europe (M=0.70, SD=0.71). For Asia and Africa, a mean value of 0.95 (SD=0.90) was established. Post hoc tests only determined a difference between Western and Northern Europe and the CEE region (p=0.49).

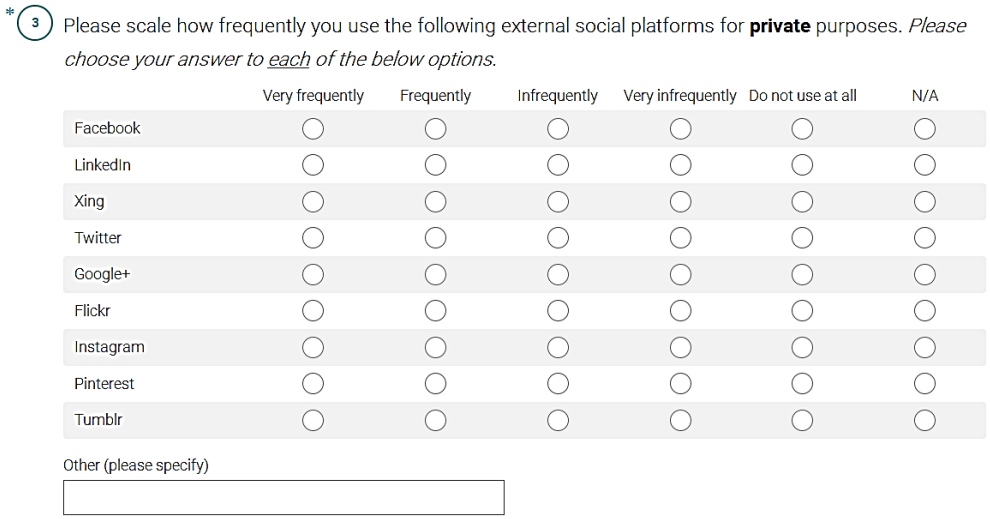
Table 5: SM platform usage for business purposes per regions

	M	SD	Std. Error	95% Confidence Interval for Mean		Min	Max
				Lower Bound	Upper Bound		
Western/Northern Europe	0.70	.70	.057	.59	.81	0.00	3.40
Central Eastern Europe	1.00	.82	.115	.77	1.23	0.00	3.25
Africa /Asia	0.95	.90	.13	.67	1.22	0.00	4.00
Total	0.81	.77	.049	.71	.90	0.00	4.00

No significant differences between age groups (F(2,246)=0.14, p=.867) were identified. The mean of the 21 to 35 year-old age group was 0.82 (SD=0.79) and the older group presented a mean value of 0.76 (SD=.77).

The level of employees' social media usage for private purposes was tested using Question 3 (Figure 10). The choice of items was identical to Question 2.

Figure 10: Example of items used to identify the current usage of SM



As demonstrated in Table 6, for private purposes, Facebook is the most frequently used social platform (M=2.45, SD=1.55), followed by LinkedIn (M=2.05, SD=1.35) and Instagram (M=1.19, SD=1.48).

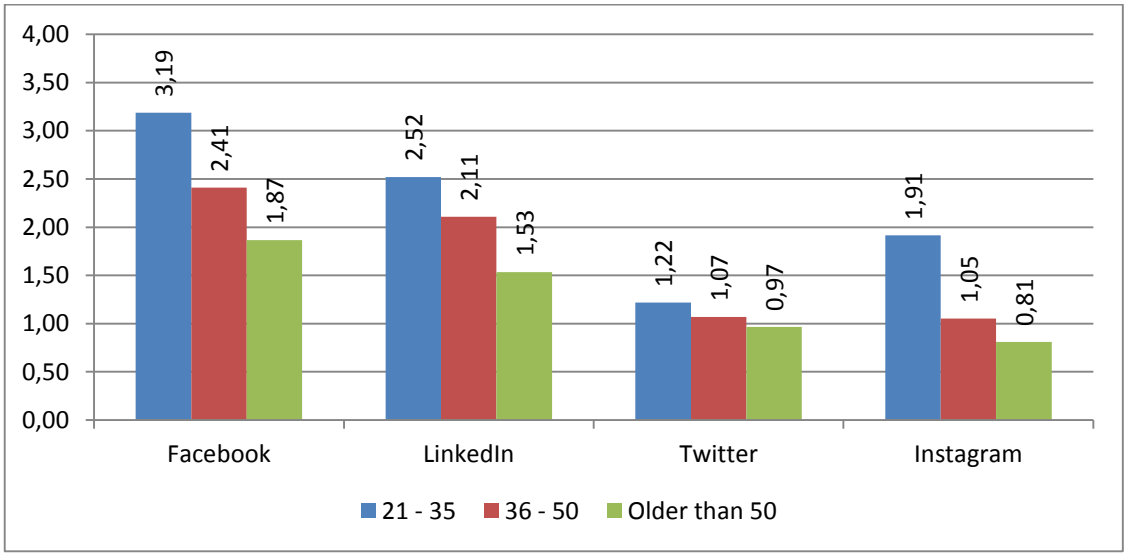
Table 6: Employees' usage of SM platforms for private purposes

	N	M	SD
Facebook	247	2.43	1.56
LinkedIn	248	2.05	1.35
Xing	217	0.52	1.03
Twitter	238	1.07	1.35
Google+	240	0.89	1.19
Flickr	228	0.32	0.73
Instagram	237	1.16	1.47
Pinterest	230	0.61	1.12
Tumblr	225	0.22	0.69

There were no significant differences between regions with regard to the level of usage of the four leading public social media platforms for private purposes (Facebook:

F(2,244)=1.52, p=.221; LinkedIn: F(2,245)=0.61, p=.542; Twitter: F(2,235)=1.68, p=.189; and Instagram (F(2,234)=2.17, p=.117). However, the different generations show significant variances among Facebook (F(2,245)=10.12, p<.001), LinkedIn (F(2,245)=7.83, p=.001), and Instagram (F(2,234)=8.67, p<.001). In general, the respondents belonging to Generation Y use all of the significant social media platforms most frequently and the Baby Boomers use them least frequently. Post hoc tests on Facebook proved that the youngest group of participants differs significantly from the two other groups (all p<=.007). For LinkedIn, the oldest group shows significant differences compared to the other two groups (all p<0.15). Significant differences between the youngest group and the other two groups were also calculated for Instagram (all p<.001).

Figure 11: Employees' usage of SM for private purposes per age group



Similar to the usage of social media for business purposes, a mean value was calculated for the usage of social media for private purposes. The reliability of this mean value was also high (Cronbach-α=.74), as the corrected item total correlation was between .73 (Xing) and .55 (Instagram). The mean value of SM usage for private purposes was 1.17 (SD=0.88). Comparing this value with the use of SM for business purposes (M=0.81, SD=0.76), the results show a clear significant difference (t test for paired samples: t(255)=-8.29, p<.001). As such, it is apparent that social media is used more frequently for private purposes than for business functions.

The different geographic regions did not show a difference in the frequency of SM usage for private purposes (F(2,246)=0.97, p=.381). For Western and Northern Europe, a mean value of 1.10 (SD=0.82) was estimated for the CEE area, the median was 1.15 (SD=0.87), and for the regions of Asia and Africa, the value was calculated at 1.31

(SD=1.03). A significant difference was observed between different age groups (F(2,247)=4.45, p=.013). The under 35 age group (Generation Y) uses social media for private purposes most frequently (M=1.41; SD=0,.87); the lowest level of utilization was observed in the 'Baby Boomer' generation age group (M=0.92, SD=0.73) . Post hoc tests also showed that only these two groups of participants differed in this value (p=.010). For the third group, a median of 1.16 was calculated (SD=0.90).

The extent of social media usage for private purposes was tested with Question 4. The majority of the survey respondents (135; 52%) used social media for less than 30 minutes per day. Seventy-seven respondents (30%) use them between 30 and 60 minutes per day, 30 (12%) spend between 1 and 3 hours on social media platforms, and three spend (1%) even more time. Twelve (5%) participants did not provide a response.

Table 7: Duration of SM usage for private purposes per day

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-30 min	135	52.5	55.1	55.1
	30-60 min	77	30.0	31.4	86.5
	1-3 hours	30	11.7	12.2	98.8
	3-5 hours	3	1.2	1.2	100.0
	no answer	12	95.3	100.0	
Missing	-9	11	4.3		
	System	1	.4		
	Total	12	4.7		
Total		257	100.0		

The extent of social media usage significantly differs according to the age of the investigated persons (Kruskal-Wallis-Test: $\chi^2(2)=8.74$, p=.013). The extent of social media usage decreases with the increasing age of participants. Twenty-one percent of the youngest age group, 15% of the middle-aged group, and only 5% of the oldest age group use the internet for at least one hour per day (see Table 8).

Table 8: Usage of external SM platforms (total value) for private purposes, by generation age groups

		% within age group			
		21 - 35	36 - 50	Older than 50	Total
For private purposes, i use social media platforms	0-30 min	37%	60%	61%	55.5%
	30-60 min	41%	26%	34%	30.7%
	1-3 hours	17%	14%	5%	12.6%
	3-5 hours	4%	1%		1.3%
Total		100.0%	100.0%	100.0%	100.0 %

No significant correlation between the duration of social media usage and region was found (Kruskal-Wallis: $\chi^2(2)=1.06$, $p=.589$). The degree of utilization of various social media platforms for internal communication in the organization was investigated through Question 5. This question consisted of items representing communication channels which are commonly adopted in the organization. Each item was rated with a Likert-type, five-level scale (0=not used at all; 4=very frequently). The most frequently used channel is email (M=3.84, SD=0.80), followed by telephone (M=3.23, SD=0.81), and face-to-face-meetings (M=3.19, SD=0.80). Yammer Post showed a mean value of 2.35 (SD=1.04), Yammer Message demonstrated mean of 1.91 (SD=1.08).

Table 9: The perceived level of usage of communication channels for internal communication in the organization

	N	M	SD
Telephone call (mobile/landline)	249	3.22	.81
Face to face meeting	249	3.21	.76
E-Mail	249	3.86	.36
Sms/What's up/Viber etc. message	247	1.77	1.20
Skype call	249	2.94	1.01
Skype video call	249	2.01	1.15
Skype instant message	249	2.51	1.18
Yammer post	248	2.34	1.03
Yammer message	248	1.91	1.08
Valid N total	247		

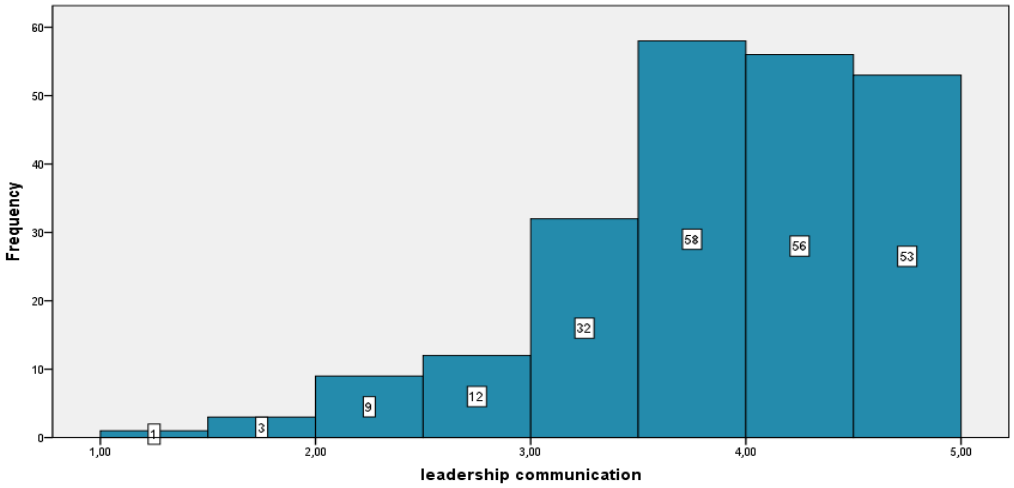
Using Question 7, employees' perceptions of the utility of Yammer ESN for different types of organizational activities were investigated. Eight items were provided and the selection of items was based on activities that are taking place on the Yammer platform. The format of the responses was a five-level Likert scale (1=strongly disagree, 5=strongly agree). The highest degree of agreement on the most appropriate purpose for the Yammer media channel was determined for the following statements: "...inform all colleagues on corporate news, achievements, big events" (M=4.03, SD=0.98) and "...share ideas, questions, and updates with coworkers and get their feedback" (M=4.02, SD=0.92). In addition, agreement was high for the proposition "...keep colleagues up to date: tweet and share on what's current in the team/department or business unit life" (M=3.96, SD=0.99) and "...ask a broad audience for advice or raise a discussion topic" (M=3.96, SD=0.92).

Table 10: Employees' perceived usefulness of Yammer ESN

	N	M	SD
From my perspective, Yammer is the most appropriate media channel to..			
...inform all colleagues on corporate news, achievements, big events.	249	4.03	.97
...keep colleagues up to date: tweet and share on what's current in the team/department or business unit life.	249	3.96	.96
...ask a broad audience for advice or raise a discussion topic.	249	3.96	.98
...share ideas, questions, and updates with coworkers and get their feedback.	249	4.02	.92
...motivate and inspire employees to take action.	249	3.50	1.11
...networking and connecting with other colleagues in the organization.	249	3.84	.95
...information (file) sharing.	249	3.26	1.12
...post cute cat pictures :).	249	2.39	1.31
Valid N total	249		

From the statements "...inform all colleagues on corporate news, achievements, big events", "...ask a broad audience for advice or raise a discussion topic", "...share ideas, questions, and updates with coworkers and get their feedback", and "...motivate and inspire employees to take action", an **index** to assert a **'leadership communication'** construct was established. The reliability coefficient for the **leadership communication** index can be determined as 'very good' by the Cronbach-α=.81. Figure 13 shows the distribution of the index in the form of a histogram.

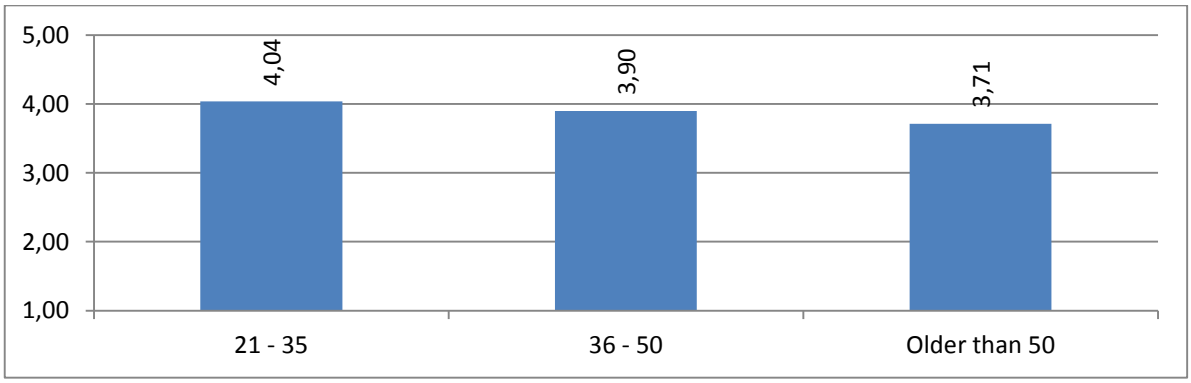
Figure 12: Histogram of the Leadership Communication Index



The factor of leadership communication does not differ between geographic regions (F(2,246)=2.20, p=.113). A mean of 3.85 (SD=0.84) was established for Western and Northern Europe, the mean value was 4.07 (SD=0.59) in the CEE area, and Africa and Asia had a mean value of 3.75 (SD=0.94).

In addition, 'leadership communication' showed no significant differences between age groups (F(2,246)=2.29, p=.104). The mean value of the youngest group was 4.04 (SD=0.85). For the middle-aged group, a mean of 3.90 (SD=0.77) was calculated and for the oldest group, the mean was 3.71.

Figure 12: Mean values for leadership communication per generation group



Question 8 served the purpose of identifying whether a respondent has the role of a **formal leader** in the organization by asking whether an employee has subordinates reporting directly to him (these employees are referred to as 'direct reports'). Of the 249 persons who participated in the survey, 106 (43%) regard themselves as formal leaders.

Questions 9 and 10 were allocated to respondents who selected the answer 'yes' to Question 8 and aimed to identify whether formal leaders have a need to lead their sub-ordinates remotely, assuming their use of virtual communication channels and their role as e-leaders.

Table 11: Formal leader and geographic region

	Region			Total
	Western/North-ern Europe	Central East-ern Europe	Africa/Asia	
Non formal leader	71%	51%	16%	57%
Formal leader	29%	49%	84%	43%
Total	100%	100%	100%	100%

Forty-six formal leaders (43%) confirmed the need to manage direct reports from other locations (e.g. while being on business trips) and 14 (13%) have to manage direct reports that are based in a location that is different than their own. The percentage of formal leaders to non-leaders in regions showed a significant difference ($\chi^2(2)=44.24$, $p<.001$). Of the respondents from Western and Northern Europe, 29% were defined as formal leaders; in the CEE region, 49% were formal leaders, and in Africa and Asia 84% were formal leaders. This formal leader factor showed a significant difference between ages as well ($\chi^2(2)=5.84$, $p=.054$). The proportion of formal leaders is lower in Generation Y group (27%) than in the Generation X group (46%) and "Baby Boomers" group (47%).

Table 12: Formal leader and generation cohorts

	Age groups			Total
	21 - 35	36 - 50	Older than 50	Total
Non-formal leader	73%	54%	53%	57%
Formal leader	27%	46%	47%	43%
Total	100.0%	100.0%	100.0%	100.0%

Questions 11 and 12 investigated the differences in the current level of adoption of different communication channels for communication with direct reports. The aim was to see whether formal leaders use different channels for communication with employees who work in the same location as them and with those who are working in remote locations. The items were identical to the items that were used in Question 8. Only formal leaders received these questions by means of automated allocation based on their answers to Question 8. The response options were based on a five-level, Likert-type scale (0=do not use at all; 4=very frequently).

With regard to the usage of communication channels for communications with direct reports working in the same office as a formal leader (Question 11), the most frequently chosen media was face-to-face meetings (M=3.74, SD=0.48), followed by email (M=3.42, SD=0.68) and telephone (M=2.68; SD=1.14). For Yammer post (M=1.07, SD=1.11) and Yammer message (M=0.93; SD=1.05), the lowest mean values were calculated.

Table 13: Formal leaders' usage of communication channels (same office)

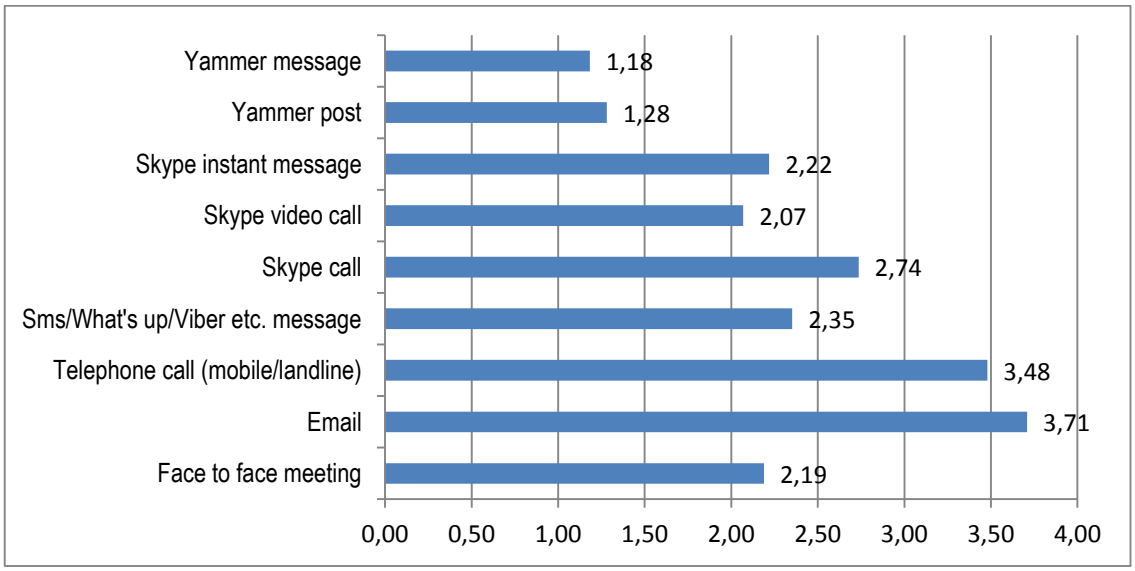
	N	M	SD
Face-to-face meeting	106	3,74	,484
Email	106	3,42	,675
Telephone call (mobile/landline)	106	2,68	1,143
Sms/What's up/Viber etc. message	105	2,04	1,270
Skype call	104	1,76	1,266
Skype video call	103	1,25	1,161
Skype instant message	105	2,02	1,308
Yammer post	104	1,07	1,108
Yammer message	104	,93	1,054
Valid N (listwise)	102		

An **ESN usage index** was created from Yammer post and Yammer message response data. The reliability coefficient was defined at Cronbach-α=.95, which is high. The **ESN usage index (same office)** provided a mean value of 1.00 (SD=1.06). This index (same

office) does not differ by region (F(2.101)=1.12, p=.369). A mean value of 1.17 (SD=1.11) was calculated for Western and Northern Europe, a mean of 0.85 (SD=0.94) was identified for the CEE region, a mean of 0.89 (SD=1.07) was found for Africa and Asia.

With regard to the usage of communication channels for communications with direct reports (Question 12) who work in different locations as a formal leader, the email channel is dominant (M=3.71, SD=0.49); this channel is followed by telephone use (M=3.48, SD=0.75). For Yammer post, a mean value of 1.28 (SD=1.19) was established and for Yammer message, the mean value was 1.18 (SD=1.18).

Figure 13: Formal leaders' usage of communication channels (different locations)



The **ESN Usage Index (different locations)** shows a high reliability coefficient of Cronbach-α=.95, and the mean of this index is 1.23 (SD=1.15). The level of usage of ESN for different locations does not differ from the level for same locations (t(70)=-.98, p=.330).

Depending on the region, there is a trend for a significant difference (F(2,68)=2.92, p=.061). In the Africa and Asia regions, the level of use is lower (M=0.80, SD=1.04) than in Western and Northern Europe (M=1.44, SD=1.13) or CEE (M=1.54, SD=1.23).

Table 14: Formal leaders ESN Usage (different locations) according to region

	N	M	SD
Western/Northern Europe	33	1.44	1.13
Central Eastern Europe	13	1.54	1.23
Africa/Asia	25	0.80	1.04
Total	71	1.23	1.15

The level of usage of Yammer ESN among all employees was tested using the Question 13 item “I actively use Yammer to communicate with my direct reports and/or peer colleagues”. The item was open for all respondents independent of their relation to leadership. For the use of ESN, a mean of 2.80 (SD=1.25) was determined.

The comparison of Yammer usage among employees vs formal leaders showed no significant difference ($t(247)=1.00$, $p=.319$). The mean value for formal leaders was 2.71 (SD=1.26) and for non-formal leaders, the mean value was 2.87 (SD=1.24).

Table 15: Comparison of the ESN usage of formal leaders vs non-formal leaders

	N	M	SD
Non-leader	143	2.87	1.24
Formal leader	106	2.71	1.26

The active usage of the Yammer Enterprise Social Network does not differ significantly by geographic region ($F(2,246)=0.27$, $p=.764$). The median for Western and Northern Europe was 2.84 (SD=1.31), and it was 2.78 (SD=1.14) for the CEE countries and 2.68 (SD=1.18) for the Africa and Asia regions. There was no significant difference between the three age groups for ESN use (different locations; ($F(2,68)=0.02$, $p=.981$). The mean for the age group of 21 to 35 was 1.19 (SD=0.92), for the age group of 36 to 50 the mean was 1.26 (SD=0.99), and the oldest group showed a value of 1.21 (SD=1.47). In addition, the ESN usage (same office) demonstrated no significant differences between generations ($F(2,101)=0.24$, $p=.790$). The mean values were 0.96 (SD=0.90) for the Generation Y group, 1.06 (SD=1.04) for the Generation X group, and 0.89 (SD=1.17) for the Baby Boomers group.

Table 16: **Yammer ESN usage by age groups**

	M	SD	Std. Error	95% Confidence Interval for Mean		Min	Max
				Lower Bound	Upper Bound		
21 - 35	2.81	1.142	.165	2.48	3.14	1	5
36 - 50	2.81	1.276	.107	2.60	3.02	1	5
Older than 50	2.77	1.280	.165	2.44	3.10	1	5
Total	2.80	1.248	.079	2.64	2.95	1	5

No significant differences in ESN usage among employees were found between the generation categories ($F(2,246)=0.03$, $p=.974$). The mean value for 21 to 35 years olds (Generation Y) was 2.81 (SD=1.14). For 36 to 50 year olds (Generation X), a mean value of 2.81 (SD=1.28) was calculated and in the oldest group (Baby Boomers), the mean value was 2.77 (SD=1.28). The comparison of usage communication channels that fall into the advanced information technology category, with the non-digitalized communication channels (face-to-face and landline telephone), shows a clear difference in usage ($t(105)=15.18$, $p<.001$). AIT communication channels (M=1.91; SD=0.83) were used less frequently than traditional channels (M=3.06, SD=0.54).

The trust level of employees was tested with Question 13. The mean values for the statements concerning trust varied between 3.18 (SD=1.64) for the assertion “I can express my opinion freely while posting in Corporate Social Networks (e.g. Yammer), without thinking I will be judged on it afterwards” and 4.45 (SD=0.78) for the declaration “If my direct manager asked why a problem occurred, I would speak freely even if I were partly to blame”.

Table 17: Mean values of the questions on trust

Question 13. Trust items *	N	M	SD
***** **I feel comfortable being creative because my direct manager understands that this involves risk, and creative solutions may not work.**	249	3,83	,954

*** My direct manager keeps my interests in mind when making decisions.**	249	3,71	1,002
*** If my direct manager asked why a problem occurred, I would speak freely even if I were partly to blame.**	249	4,45	,777
*** I can express my opinion freely while posting in Corporate Social Networks (e.g. Yammer), without thinking I will be judged on it afterwards.**	249	3,18	1,164
I believe we have a high level of trust in my organization.	249	3,47	1,055

From the trust items (marked with an asterisk in Table 17), an **Individual Trust Index** was calculated. The **individual trust index** shows a high reliability coefficient of a **α=**.73. The total mean value for trust was 3.79 (SD=0.73).

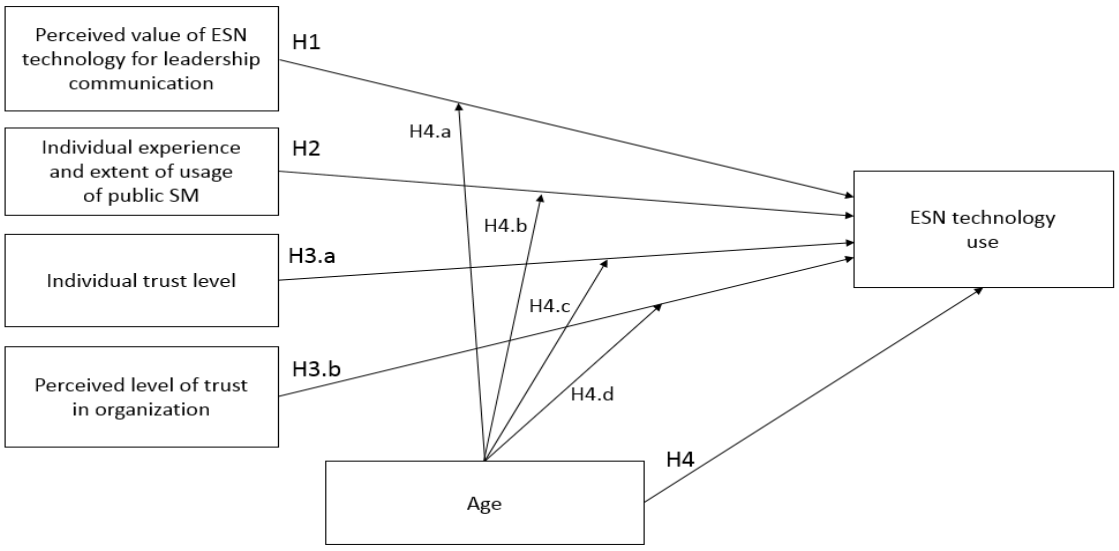
Concerning trust, significant differences between the different regions were found (F(2,246)=7.47, p=.001). Confidence is highest in Asia and Africa (M=4.10, SD=0.66) and lowest in Western and Northern Europe (M=3.66, SD=0.75). For the persons from CEE countries, a mean of 3.92 (SD=0.60) was established. Post hoc tests prove that Western and Northern Europe differs Africa and Asia (p=.001). The figures show that confidence is lowest in Western and Northern Europe and the difference between CEE and Asia and Africa was not significant (p=.700). In addition, the difference between Western and Northern Europe und CEE (p=.086) was not significant. According to age groups, there is no significant difference in trust (F(2,246)=0.31, p=.731). The mean for Generation Y was 3.75 (SD=0.74); it was 3.70 (SD=0.75) for Generation X and for the baby Boomers, a value of 3.79 (SD=0.72) was established.

4.2 Analysis of results vs hypotheses

The analysis of the results was carried out by means of a hierarchical regression model. In the first step, the direct effects of the independent variables, *leadership communication* (LC), *previous usage* (PU), *individual and organizational trust* (IT and OT), and *age* groups (generation cohorts) were included in the model (Model 1). In the second step, the moderation effect of age groups on LC, PU, and Ind/Org Trust was tested (Model 2).

The following framework (see. Figure 14) was thereby used to formulate the research hypotheses.

Figure 14: Research model



Below is an overview of the hypotheses:

H1: There is a direct relationship between the perceived level of usefulness of ESN for leadership communication and the level of usage of ESN.

H2: There is a direct relationship between the extent of the individual usage of external social media platforms and the level of usage of ESN.

H3: There is a direct relationship between trust and the level of usage of ESN

H3.a: Individual trust level positively relates to the level of usage of ESN

H3.b: The perceived level of trust in the organisation positively relates to the level of usage of ESN

H4: There is a direct relationship between age (generation cohorts) and level of usage of ESN.

In addition, it was hypothesized that age (generation cohorts) has a moderating effect on the 'perceived level of usefulness of ESN for leadership communication', 'the extent of individual usage of external social media platforms', and 'individual/organizational trust' variables.

The **level of ESN technology use (ESN) dependent variable** construct was conceptualized by agreement on selected items that were related to usage of Yammer in questions 11 and 12; it relates only to the usage of ESN by formal leaders as the question

was open only for employees who have direct reports. A common score from questions 11 and 12 built an average sum value. An item in Question 13, “I actively use Yammer to communicate with my direct reports and/or subordinates", was open to all employees. This item was considered a **level of ESN technology use (ESN-all) validation variable**, for which a second regression model was used as the test-dependent variable. Since this question was open for the total sample, whether the proposed research model relationships are equally valid for formal and non-formal leaders can be determined.

For further evaluation of the independent variables LC, PU, IT and OT mean-centered values were used. Moderating effects were studied as products of the mean-centered variables with the two dichotomous dummy variables for age (Baron & Kenny, 1986). **Previous usage (PU)** stands for the level of use of external social media for private and business purposes combined with the extent of social media use per day. The value for this variable was taken as an index of three mean-centered variables with regard to SM usage for private and business purposes and the extent of SM usage. Validation with Cronbach alpha showed a high coefficient of =.70. Moreover, **individual trust (IT)** stands for the level of trust that an employee has – the level to which an individual is willing to take risks and able to be vulnerable on an interpersonal level. The calculated index shows a reliability coefficient of “very good” (Cronbach-α=.73).

Organizational trust (OT) stands for the level of trust that an employee perceives exists in the organization. The total mean value for OT amounts to 3.79 (SD=0.73). **Leadership communication (LC)** stands for an employees’ perceived level of usefulness of ESN for leadership communication. This construct was conceptualized as discussed above, referring to the Leadership Communication Index (see Chapter 4.1). The reliability coefficient for this index was determined as “very good” (Cronbach-α=.81).

Further independent variable - **age** was tested in three sub-categories, representing three respective generations: Generation Y, Generation X, and Baby Boomers. The generation categories were transformed into three dichotomy age variables. The **Generation Y (21-35)** and **Baby Boomers (> 50)** generations were included in the model, and Generation X was considered a reference category.

The relationships between the variables of formal leaders and their level of ESN usage (see Table 18) were tested by means of a hierarchical regression model. The variables in the first part of regression led to a significant result ($F(6,97)=6.63$, $p<.001$). However, of the four independent variables, only LC ($B=0.36$, $beta=.33$, $p<.001$) and PU ($B=.33$, $beta=.32$, $p=.001$) revealed significant predictive power. Age and both trust variables did

not demonstrate any influence on the ESN variable. The explained variance proportion was 25% and the strength of the relationship could be considered strong.

After including age as the moderating factor in the second part of the regression, the model remained significant (F (14,89) remained = 3.77, p <.001). However, no substantial effect on ESN was discovered (F (8,89) = 1.44, p = .190). Thus, it can be stated that age did not affect the relationship of the dependent variable with the respective independent variables. Observing the regression coefficients in the entire model, it is clear that LC (B=0.35, beta=.32, p=.011) and PU (B=0.33, beta=.33, p=.003) remained significant.

Table 18: Regression model without (Model 1) and with (Model 2) interaction effects, non-standardized (standardized) regression coefficients, F-tests, dependent variable: ESN – only formal leaders

	Model 1	Model 2
(Constant)	0.95	0.92
21-35	-0.02 (-0.01)	-0.02 (-0.01)
> 50	0.36 (0.15)	0.57 (0.24)*
LC	0.36 (0.33)**	0.35 (0.32)*
IT	0.15 (0.12)	0.16 (0.13)
OT	-0.07 (-0.06)	-0.01 (-0.01)
PU	0.33 (0.32)**	0.33 (0.33)**
LC * 21-35		-0.42 (-0.13)
IT * 21-35		0.46 (0.13)
OT * 21-35		-0.52 (-0.17)
PU * 21-35		-0.4 (-0.13)
LC * > 50		0.07 (0.04)
IT * > 50		-0.37 (-0.16)
OT * > 50		-0.02 (-0.01)
PU * > 50		0.36 (0.17)
Df1,Df2	6,97	14,89
F	6.63	3.77
P	<.001	<.001
Fchange		1.44
p		.190
R2	.25	.27

Legend: *** p<.001; ** p>.001 and p<.01; * p>.01 and p<.05

Next, the results were tested with Question 13.5 (ESN-all) by means of the same model. Thus, the effects of independent variables on ESN usage for all of the samples could only be compared with the results of the formal leaders. The results for ESN-total sample-dependent variables correlate with ESN at r=.72 (p<.001).

With regression model with independent variables and moderato rage, a significant regression model can be validated (F(6.242)=12.75, p<.001). In this model the regression coefficients of LC (B=.40, beta=.32, p<.001) and individual trust (B=0.21, beta=.17, p=.032) are significant. Age, organizational trust, and PU did not demonstrate substantial significance. The explained variance proportion was 22%.

Including age as the moderating factor in the second part of the regression, no substantial effect on ESN could be discovered (F(8,234)=0.74, p=.654). The regression model remained significant (F(14,234)=5.94, p<.001) and the explained variance proportion was unchanged at 22%. Observing the regression coefficients in the entire model, only the regression model demonstrated significant effects on ESN-all (B=.46, beta=.37, p<.001).

Table 19: Regression model without (Model 1) and with (Model 2) interaction effects, non-standardized (standardized) regression coefficients, F-tests, dependent variable: ESN(all) – total sample

	Model 1	Model 2
(Constant)	2.81	2.81
21-35	-0.13 (-0.04)	-0.11 (-0.03)
> 50	0.05 (0.02)	0.07 (0.02)
LC	0.4 (0.32)***	0.46 (0.37)***
IT	0.21 (0.17)**	0.18 (0.14)
OT	0.07 (0.05)	0.07 (0.06)
PU	0.14 (0.11)	0.1 (0.08)
LC * 21-35		-0.22 (-0.08)
IT * 21-35		0.21 (0.08)
OT * 21-35		-0.24 (-0.08)
PU * 21-35		-0.03 (-0.01)
LC * > 50		-0.13 (-0.05)
IT * > 50		-0.06 (-0.02)
OT * > 50		0.18 (0.07)
PU * > 50		0.21 (0.08)

Df1,Df2	6,242	14,234
F	12.75	5.84
P	<.001	<.001
Fchange		0,74
p		.654
R2	.22	.22

Legend: *** p<.001; ** p>.001 and p<.01; * p>.01 and p<.05

Finally, the effects of independent variables on ESN usage for all sample separated for formal leaders and non-leaders were analyzed (Table 20).

Both for formal leaders and for non-leaders significant regression model can be observed (non-leaders: F(6,136)=8.39, p<.001), formal leaders: F(6,99)=5.86, p<.001).

Table 20: Regression model without (Model 1) and with (Model 2) interaction effects, non-standardized (standardized) regressions coefficients, F-Tests, dependent variable: ESN(all) – total sample, parted by leadership role

	Non leaders		Formal Leaders	
	Model 1	Model 2	Model 1	Model 2
(Constant)	3.05***	3.04***	2.57	2.58
21-35	-0.26 (-0.09)	-0.28 (-0.1)	-0.11 (-0.03)	-0.39 (-0.1)
> 50	-0.28 (-0.09)	-0.28 (-0.1)	0.4 (0.14)	0.51 (0.18)
LC	0.27 (0.23)*	0.31 (0.26)*	0.47 (0.36)***	0.55 (0.42)**
IT	0.35 (0.29)**	0.33 (0.28)	0.08 (0.06)	0.13 (0.09)
OT	0.03 (0.03)	0.05 (0.04)	0.23 (0.17)	0.17 (0.12)
PU	0.19 (0.15)	0.18 (0.14)	0.14 (0.12)	0.13 (0.11)
LC * 21-35		-0.09 (-0.04)		-0.55 (-0.15)
IT * 21-35		0.06 (0.03)		0.54 (0.12)
OT * 21-35		-0.16 (-0.06)		-0.14 (-0.04)
PU * 21-35		0.01 (0)		-0.51 (-0.14)
LC * > 50		-0.05 (-0.02)		-0.34 (-0.15)
IT * > 50		0 (0)		-0.56 (-0.2)
OT * > 50		0.12 (0.05)		0.37 (0.15)

PU * > 50		0.03 (0.01)		0.64 (0.25)
Df1,Df2	6,136	14,128	6,99	14,91
F	8.39***	3.49***	5.86***	3.29***
P	<.001	<.001	<.001	<.001
Fchange		0.01		1-27
p		.997		.269
R2	24	.20	.22	.23

Legend: *** p<.001; ** p>.001 and p<.01; * p>.01 and p<.05

The explained variance proportion for non-leaders was 24%, and it only differed slightly from the explained variance proportion for formal leaders 22%. For non-leaders LC (B=0.27; Beta=.23, p=.010) and individual trust (B=.35, beta=.29) demonstrated significance; for formal leaders, only LC demonstrated a significant regression coefficient (B=0.47, beta=.36, p<.001). After including age as the moderating factor in the second part of the regression, no substantial effect on ESN could be discovered (non-leaders: F(8,128)=0.14, p=.997; formal leaders: (F8,91)= 1.27, p=.269).

In addition, a significantly higher level of trust among formal leaders could be identified (t(247)=-4.25, p<.001). The mean value for formal leaders was 3.95 (SD=0.65), whereas the comparison group only showed a mean of 3.56. As a consequence of the established level of trust, higher values of acceptance of the ESN of formal leaders can be assumed.

This, however, cannot be proven using the set of data at hand, as the difference in leadership communication was not significant (t(247)=1.75, p=.081). The mean for non-leaders was 3.95 (SD=0.82) and for formal leaders, a mean of 3.78 (SD=0.76) was calculated. Furthermore, for active use, the difference was not significant (t(247)=1.00, p=.319). For non-leaders, there was a mean value of 2.87 (SD=1.24) and for formal leaders the mean was 2.71 (SD=1.26).

The results above demonstrate that few hypotheses could be confirmed or partially supported. Thus, Hypothesis 1, “there is a direct relationship between the perceived level of usefulness of ESN for leadership communication and the level of usage of ESN”, was supported by the results for the formal leader sample and LC (B=0.36, beta=.33, p<.001) showed significant predictive power. In addition, the validation test with the total sample resulted in a significant coefficient for formal leaders: LC (B=0.47, beta=.36, p<.001). Hypothesis 2, “there is a direct relationship between the extent of individual usage of external social media platforms and the level of usage of ESN” was supported for the

formal leader sample; PU (B=.33, beta=.32, p=.001) revealed significant predictive power. However, the validation with Question 13.5 did not provide substantial results for formal leaders' PU (B=.14, beta=.12, p=.001) or for non-leaders' PU (B=.19, beta=.15, p=.001).

The third hypothesis was partially supported. Although for formal leaders, neither the individual level of trust or the perceived level of trust in the organization could demonstrate a substantial influence on the ESN usage. The individual trust variable demonstrated significant results in the total sample: IT (B=.21, beta=.17, p=.001). Particularly for non-leaders', individual trust appeared to be a statistically significant contributor to usage of ESN (B=.35, beta=.29, p=.001).

Hypothesis 4, "there is a direct relationship between age (generation cohorts) and level of usage of ESN", was not supported. Only one part of the regression model, age, showed relative predictive power for the usage of ESN for the over 50 group (B=.57, beta=.24, p=.001). The moderating effect of age groups (generation cohorts) on the other independent variables, 'perceived level of usefulness of ESN for leadership communication', 'the extent of individual usage of external social media platforms', and 'individual/organizational trust' could not be confirmed. No substantial effect on ESN was discovered in the formal leaders' sample ($F(8.89) = 1.44$, $p = .190$) or in the total sample ($F(5.72) = 0.74$, $p = .654$).

5 Discussion

A growing number of international companies invest in enterprise social media solutions with the purpose of improving collaboration across regions, fostering internal communication and knowledge sharing, and supporting virtual leadership dynamics within organizations (Gatehouse, 2015; Gatehouse, 2016). As observed by many practitioners and scholars, the implementation of new technology often comes first - before the understanding of the impacts that it has on an organization and knowledge of factors that influence its successful adoption (Avolio et al., 2014).

The purpose of the empirical research of this paper was to investigate on factors that affect the adoption of ESN and whether there are differences between formal and non-formal leaders. Leadership can influence the appropriation of advanced information technology, and technology transforms leadership and the way that people lead (Avolio & Kahai, 2003). In particular, web 2.0 technologies and social media eliminate the borders between leaders and followers that are set by assigned powers; in a virtual context it becomes easier for anyone in an organisation to demonstrate leadership and act as an e-leader.

The results of the survey were obtained from a sample of respondents who were limited to one organisation: Canon EMEA. Further discussion and implications could be valid for this organization and potentially thought-provoking for organizations with similar characteristics. Thus, organizational strategy, with regard to social media as an important channel to connect with external customers, was seen as equally appropriate for relationships with employees if the total results for Canon EMEA are considered. In geographically spread regions such as Central Eastern Europe, Africa, and the Middle East, the perceived utilization of social media for relationships with external customers seemed to be greater than for Western and Northern European employees. This may indicate on the need for the organization to pay more attention to the appropriation of social media channels to foster business relationships in European markets.

Current preferences in the usage of public social media platforms by Canon employees vary depending on the purpose. For business purposes the leading platform was LinkedIn followed by Facebook and for private purposes, the leading platform was Facebook followed by LinkedIn, Twitter, and Instagram. CEE showed the highest frequency of usage of SM for business purposes and Western and Northern Europe showed the lowest usage. This relates to the previously mentioned perception of SM adoption by

organizations, and may mean that a lower level of utilization of SM in Western and Northern Europe is not only a perception, but a current practice, which may need to be internally addressed.

Among all available communication channels, employees name a representative of AIT, email, as the most commonly used media for internal communication, followed by non-digital media such as telephone call and face-to-face meeting. Twice as many respondents chose email (85%) as the most frequently utilized communication channel and only 38% of respondent see the face-to-face channel as most frequently used. Skype calls (M=2.94) and Skype instant messaging (M=2.51) are becoming a popular communication channel, followed by the newly implemented enterprise social network - Yammer (M=2.43).

Specifically examining the preferences of formal leaders' with regard to media that they use in communication with their direct reports, depending on whether the employees are located in the same office or in different locations, leaders prefer face-to-face communication (M=3.74) or email (M=3.71) as their first choice. ESN usage is seen as the last choice of media to communicate with employees who are located in the same office (ESN index =1.00, SD=.1.06, α=.95) and in remote locations (ESN index =1.23, SD=1.15, α=.95). The result of the test question which offered a broader interpretation, as it assumed the usage of Yammer for communication with direct reports and with colleagues was that the level of ESN usage by formal leaders demonstrated significantly higher mean values (M=2.71, SD=1.26). This may lead to an assumption that ESN is not yet an established media for leadership communication.

Proposing to view leadership communication as purposeful communication behaviours of leaders who are associated with the motivation and inspiration of employees, recognition and praise for successes, feedback, and encouragement of idea sharing (Bass, 1990; Northouse, 2015), the perceived usefulness of ESN for leadership communication among Canon EMEA employees was investigated through this survey. The results show that 1/3 of employees strongly agree that Yammer is the most appropriate platform to "...inform all colleagues on corporate news, achievements, big events" (M=4.03, SD=0.98), which confirms the current tendency towards Yammer utilization in Canon EMEA - mainly postings in regional groups informing on the successes or past events, lack of comments and feedback from others on these postings, very few discussions. Although the results show that employees were "neutral" or "somewhat agreed" when making their judgements on Yammer appropriation purposes, their average perception of Yammer as a platform for leadership communication was rather positive and did not

vary across the regions of Western and Northern Europe (M=3.85, SD=0.84), CEE (M=4.07,SD=0.59), and Africa and Asia (M=3.75, SD=0.94).

Whether this positive perception of Yammer as an appropriate communication channel for leadership communication could have predictive power for the usage of ESN was tested and confirmed by Hypothesis 1. The results suggest higher levels of perceived usefulness of ESN for leadership communication by an employee indicate higher levels of usage of ESN. This seems to be equally valid for all employees, independent of their formal leadership status in organization. This result is consistent with the UTAUT model (Venkatesh et al., 2003), which argues that perceived usefulness (as part of the performance expectancy factor) has high predictive power on technology usage. This finding can be used as grounds to recommend Canon EMEA devote greater efforts to position Yammer as a platform where leadership communication can take place to gain a higher level of leaders' activity on Yammer. The perceived usefulness of ESN may include components other than leadership communication, and this aspect leads to suggestion that further focused research needed which include all potential components composing ESN usefulness factor.

Another predictor of ESN usage tested in this study is the experience of the usage of public (external) social media for private and business purposes. Hypothesis 2 could only be confirmed for formal leaders and was not confirmed in the total sample. The recent research findings of Cha (2010) suggested that internet experience is a direct predictor of the usage of social networking sites. In the present research, social media was used as a predictor of ESN usage. It can be assumed that the specific features of SM, an intuitive interface and intra similarities of different social media, suggest relative ease of use and replicate the knowledge of SM use on other platforms such as Yammer ESN. Therefore, they may not play a predictive role in the level of usage of ESN. In the UTAUT model (Venkatesh et al., 2003), increasing experience with technology has proved to have a significant moderating effect on the intention to use and the actual usage of the technology. In the present research, experience was used as an independent variable and moderating effects were not studied, though this could be an opportunity for further research.

A suggestion that trust may directly influence the level of employees' usage of ESN comprised Hypothesis 3 of the empirical study, where respondents' level of trust – the level of individual's willingness to be vulnerable in interpersonal relationships as well as the employees' perceived level of trust in the organization was separately investigated. As discussed in the theory part of this thesis, a number of studies researched trust as a

predictor of behaviour (Mayer et al., 1995; Colquitt et al., 2007; Schoorman et al., 2007) and fewer reviewed the trust construct in a virtual context (Kanawattachai & Yoo, 2002; Greenberg, Greenberg & Antonucci, 2007) and in relation to e-leadership (Avolio et al., 2001). Trust as a factor influencing the adoption of technology and in particular social media is not yet a well-studied area (Hallikainen, 2015, p. 13).

Privacy concerns have been named by numerous scholars as factors influencing the adoption of web-based technologies (Cha, 2010; McGowan et al., 2012; Banerjee & Dey, 2013; Chung et al., 2010; Kupritz & Cowell, 2011). The proposition was to investigate an example of adoption of ESN and whether the level of trust correlates with the usage of enterprise social media. The hypothesis could not be fully confirmed. The individual trust variable demonstrated significant results in the total sample (B=.21, beta=.17, p=.001); particularly for non-leaders, individual trust appeared to be a statistically significant contributor to usage of ESN (B=.35, beta=.29, p=.001), but no significance was identified for formal leaders. Examining the mean values for the individual trust variable for the total sample, a rather high value is observed (M=3.79, SD=.73, α=.73). Hence seen separately, formal leaders demonstrated higher levels of trust (M=3.95, SD=.71) than the sample without a formal leadership role (M=3.56, SD=.79). Furthermore, on a regional level, trust showed significant differences; the results suggest that the trust level is highest in the Asia and Africa regions and lowest in Western and Northern Europe. This inconsistency indicates that further research is needed, which might be specifically dedicated to the trust construct evaluation. Another concern discussed in the literature is that the measurement of trust does not have a reliable generalized instrument that demonstrates substantial consistency over time (Schoorman et al., 2007), and this is recommended direction to developed context-specific models and measurements of trust (Schoorman et al., 2007, 359).

The last variables considered in the literature review and empirical part of this thesis were age and generation cohorts. It was hypothesized (Hypothesis 4) that age has a direct influence on the usage of ESN, and that there are differences in the influence of age on the level of ESN usage depending on generation cohorts. In addition, it was proposed that age has moderating effects on the other independent variables that were tested in this research. The direct effect of age and the moderating effect of age on the level of ESN usage could not be confirmed by the results. This confirms the findings of Chang et al. (2010, p.1682); in their research, age did not enhance the exploratory powers of the technology adaption model. In the academic literature, the relationship of age

to adoption of technology is a subject of research in a number of studies (Morris & Venkatesh, 2000; Morris et al., 2005; Blankenship, 1998) and the validity of using generations as variables is a topic of continuous disputes (Bennet et al., 2008). As noted in the Chapter 2.2, generational constructs lack clear differentiation and often suffer from over-generalizations of attributes allocated to them (Mangelsdorf, 2014; Twenge et al., 2010). Still for practitioners, looking at employees through generations lens became a common exercise - specifically with regard to technology and new digital world generations get many labels (McCrindle, 2014; Tolbitze, 2008).

The results of the present study revealed few patterns related to generations. For example, no differences between generations in the level of usage of SM for business purposes were identified. Hence for private purposes, Generation Y showed a significantly higher level of usage of SM. The extent of usage of SM in terms of hours spent per day on social media platforms also significantly relates to the age of participants. The results demonstrate that with the increasing age of participants, the extent of SM usage decreases. This may sound consonant with the attribute 'digital natives' allocated to younger generation concerning their affinity to digital media (McCrindle, 2014; Mangelsdorf, 2014). On the other hand, with regard to how employees perceive ESN as a platform for leadership communication, the results of the study did not reveal significant differences between generations ($F(2,246)=2.29$, $p=.104$). Moreover, the level of adoption of ESN and the level of trust did not vary among generations ($F(2,246)=0.03$, $p=.974$): Generation Y ($M=3.75$, $SD=.74$), Generation X ($M=3.70$, $SD=.75$), and Baby Boomers ($M=3.79$, $SD=.72$). Thus it can be concluded that although generation cohorts demonstrate differences in levels of social media usage, there is not enough evidence that generations have a direct and moderating effect on the usage of ESN in Canon EMEA. Future studies are recommended to further investigate the role of age in technology acceptance in specific technology contexts (Chang et al., 2010, p.1682).

Revising the results specifically for employees who are assuming a formal leadership role with those who are non-formal leaders, both groups perceive the usefulness of Yammer ESN for leadership communication equally. The mean for non-leaders was 3.95 ($SD=0.82$) and it was 3.78 ($SD=0.76$) for formal leaders. This finding may support the idea that in a virtual context, e-leadership is a social phenomenon where there the role of a leader can be played by anyone. Lazazzara and Ghiringhelli suggest that leaders should rethink the role of leadership in an organization towards more social kind of leadership, where the responsibility of leading is shared among members of a group or or-

ganization. They call this concept *social leadership* and argue that the construct is consistent with the e-leadership concept (Avolio et al., 2001) and shared leadership concept (Pearce & Conger, 2003). Social leadership according to them is a process of mutual influence among leaders and followers, where formal and informal leaders coexist and the self-organization process is enabled by a mutual feedback system based on social media (Lazazzara & Ghiringhelli, 2015, p. 33).

6 Conclusion

The study has several limitations, which will be explained below.

The empirical research was conducted as online survey which brings with it limitations attributed to this type of data collection. The study was conducted on a sample from one organisation, which might add additional internal bias to the validity of results. The survey content was presented only in English language – for those employees whose mother tongue is not English, wrongly understood question might lead to misinterpretations. The survey did not include gender as demographic factor – understanding of correlations between gender and used in the study variables could offer additional insight to the field of studies. The majority of questions and choice of items were self-constructed and might miss some information which could be relevant for respondents. For example, in Russian speaking territories of CEE another commonly used media platform - Vkontakte, was several times mentioned in optional field answers. XING social platform for business, which was included among choice items is mainly adopted in German speaking countries - this led to high discrepancies among respondents and N/A (not known) option was often chosen by respondents. These diversity of social media context brought the challenge to unify the selection of items. Although values of internal consistency for main indexes (Trust, Leadership communication, ESN usage) demonstrated high level of reliability, high mean levels of answers, especially on the questions of trust and current company strategy regarding social media in organisation suggest that subjective norm could influence the results – participants might have tended to select socially desirable answers rather than once indicating their individual opinion. Subjective norm could also have played a role in the answers of formal leaders when regarded to active use of ESN. As organisational leaders they are assumed to support communication strategy and implementation of new media channels. Thus the fact that formal leaders revealed high scores on this question and lower scores on choice option ESN as media to communicate with employees might be influenced by intention to demonstrate desirable behaviours in the organisation. Finally, the extent of researcher imposition to the topic as to what is and is not relevant could lead to missing additional information which might be of importance for the research topic.

Nevertheless, the study may enrich the e-leadership research by bringing updated overview on research status on e-leadership as well as new insights on how leaders adopt communication channels inclusive their preferences with regard to usage of AIT.

The literature review of this thesis reassure that there is a growing interest to the topic of e-leadership and actual need for further research on organizational impact of advanced information technologies on leadership and vice versa. Findings of the empirical research might add to the current knowledge of factors influencing enterprise social media adoption.

Nowadays, leaders in organisational context draw less and less a clear border in communication channels to be used in their collaborations with followers depending on whether employees located in the same office or in remoted locations. Both off-line and online, 'traditional' and digital channels are used in relations with colleagues independently of geographical disperse level. This leads to a proposal rather than looking at differentiators of e-leadership, to search for synergies in leadership and e-leadership research and look at modern way of leadership communication as a "Blended Leadership" lens, the term I borrow from educational learning approach that aims to view and combine benefits of online and face-to-face channels.

Practical observations and literature research showed that in most leadership programs, development of communication skills often play the central role (Steinhilber & Estrada, 2015). Another recommendation could be to focus organisational learning activities to develop knowledge and skills of leaders with regard to new communication media. It might be not a matter of age or generation, that leaders do not utilize the available blend of communication channels efficiently enough, but simply lack of awareness of opportunities linked to the new media and skills on how to use it a most efficient way.

Ultimately, leadership is about engaging people and directing them toward achieving common goal. At its basics, it is about communication and relationships between leaders and followers. Adoption of social media for internal organizational communication prompt rethinking of leadership construct adding greater aspect of shared leadership into it.

Finally, complexity of leadership as a phenomena multiplied by rapid advance and change of the context where leadership takes place – both virtual and face-to-face, appears to be a challenging but promising area of continuous future research.

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Appendix

Survey questionnaire

Introduction text

Question 1

* 1 Please scale in how far you agree or disagree with the following statement: "My organisation clearly supports and sees as important the adoption and usage of social media (e.g. LinkedIn, Facebook, Yammer, etc.) ... "

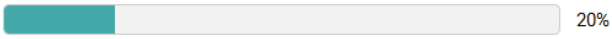
	Strongly agree	Somewhat agree	Neutral/Neither agree nor disagree	Somewhat disagree	Strongly disagree
...to manage relationships with external customers.	○	○	○	○	○
...to manage relationships with employees.	○	○	○	○	○

Question 2

* 2 Please scale how frequently you use the following external social platforms for **business** purposes. *Please choose your answer to <u>each</u> of the below options.*

	Very frequently	Frequently	Infrequently	Very infrequently	Do not use at all	N/A
Facebook	○	○	○	○	○	○
LinkedIn	○	○	○	○	○	○
Xing	○	○	○	○	○	○
Twitter	○	○	○	○	○	○
Google+	○	○	○	○	○	○
Flickr	○	○	○	○	○	○
Instagram	○	○	○	○	○	○
Pinterest	○	○	○	○	○	○
Tumblr	○	○	○	○	○	○

Other (please specify)



Question 3

* 3 Please scale how frequently you use the following external social platforms for **private** purposes. *Please choose your answer to each of the below options.*

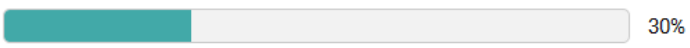
	Very frequently	Frequently	Infrequently	Very infrequently	Do not use at all	N/A
Facebook	○	○	○	○	○	○
LinkedIn	○	○	○	○	○	○
Xing	○	○	○	○	○	○
Twitter	○	○	○	○	○	○
Google+	○	○	○	○	○	○
Flickr	○	○	○	○	○	○
Instagram	○	○	○	○	○	○
Pinterest	○	○	○	○	○	○
Tumblr	○	○	○	○	○	○

Other (please specify)

Question 4

4 For private purposes, I use social media platforms...

- ○ ...0-30 minutes a day.
- ○ ...30-60 minutes a day.
- ○ ...1-3 hours a day.
- ○ ...3-5 hours a day.
- ○ ...more than 5 hours a day.
- ○ Other (please specify)



Question 5

* 5 Please scale how frequently, from your point of view, the following communication media are used in your organisation, **for internal communication**. *Please choose your answer to each of the below options.*

	Very frequently	Frequently	Infrequently	Very infrequently	Not in use at all	N/A
Telephone call (mobile/landline)	○	○	○	○	○	○
Face to face meeting	○	○	○	○	○	○
E-Mail	○	○	○	○	○	○
Sms/What's up/Viber etc. message	○	○	○	○	○	○
Skype call	○	○	○	○	○	○
Skype video call	○	○	○	○	○	○
Skype instant message	○	○	○	○	○	○
Yammer post	○	○	○	○	○	○
Yammer message	○	○	○	○	○	○

Question 6

* 6 I am a registered Yammer user.

- ○ Yes
- ○ No

Question 7

* 7 *Please evaluate the following statement and select your answer to each of the listed options:* "From my perspective, Yammer (Corporate Social Network) is the most appropriate media channel to..."

	Strongly agree	Somewhat agree	Neutral/Neither agree nor disagree	Somewhat disagree	Strongly disagree
...inform all colleagues on corporate news, achievements, big events.	○	○	○	○	○
...keep colleagues up to date: tweet and share on what's current in the team/department or business unit life.	○	○	○	○	○
...ask a broad audience for advice or raise a discussion topic.	○	○	○	○	○
...share ideas, questions, and updates with coworkers and get their feedback.	○	○	○	○	○
...motivate and inspire employees to take action.	○	○	○	○	○
...networking and connecting with other colleagues in the organisation.	○	○	○	○	○
...information (file) sharing.	○	○	○	○	○
...post cute cat pictures :).	○	○	○	○	○

Other (please specify)

Question 8

* 8 I have employees reporting directly to me.

- ◯ Yes
- ◯ No

Question 9

9 Some of my direct reports work from other locations

- ◯ Yes
- ◯ No
- ◯ Not applicable

Question 10

10 From time to time, I need to manage my direct reports remotely (e.g. while being on business trips).

- ◯ Yes
- ◯ No
- ◯ Not applicable

Question 11

* 11 I use the following media channels to communicate with my direct reports, who work **in the same office as me**

	Very frequently	Frequently	Infrequently	Very infrequently	Do not use at all	N/A
Face to face meeting	○	○	○	○	○	○
Email	○	○	○	○	○	○
Telephone call (mobile/landline)	○	○	○	○	○	○
Sms/What's up/Viber etc. message	○	○	○	○	○	○
Skype call	○	○	○	○	○	○
Skype video call	○	○	○	○	○	○
Skype instant message	○	○	○	○	○	○
Yammer post	○	○	○	○	○	○
Yammer message	○	○	○	○	○	○

Other (please specify)

Question 12

* 12 I use the following media channels to communicate with my direct reports, who work **in different locations**

	Very frequently	Frequently	Infrequently	Very infrequently	Do not use at all	N/A
Face to face meeting	○	○	○	○	○	○
Email	○	○	○	○	○	○
Telephone call (mobile/landline)	○	○	○	○	○	○
Sms/What's up/Viber etc. message	○	○	○	○	○	○
Skype call	○	○	○	○	○	○
Skype video call	○	○	○	○	○	○
Skype instant message	○	○	○	○	○	○
Yammer post	○	○	○	○	○	○
Yammer message	○	○	○	○	○	○

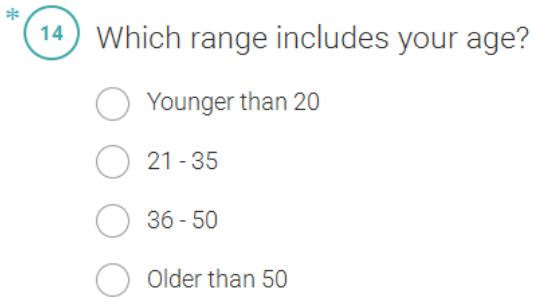
Other (please specify)

Question 13

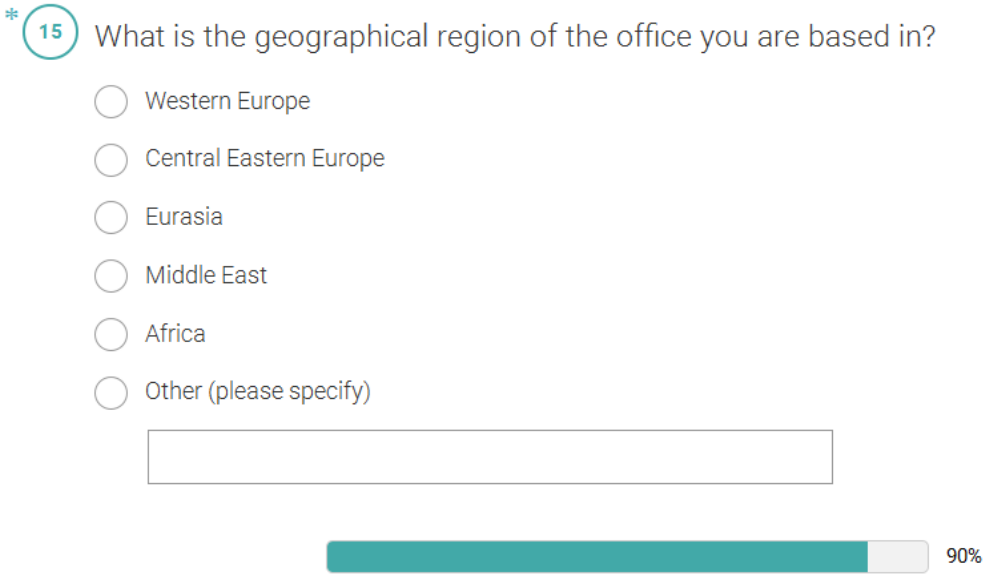
* 13 Please scale in how far you agree or disagree with *each* of the below statements.

	Strongly agree	Somewhat agree	Neutral/Neither agree nor disagree	Somewhat disagree	Strongly disagree
I feel comfortable being creative because my direct manager understands, that this involves risk, and creative solutions may not work.	○	○	○	○	○
My direct manager keeps my interests in mind when making decisions.	○	○	○	○	○
If my direct manager asked why a problem occurred, I would speak freely even if I were partly to blame.	○	○	○	○	○
I can express my opinion freely while posting in Corporate Social Networks (e.g. Yammer), without thinking I will be judged on it afterwards.	○	○	○	○	○
I actively use Yammer to communicate with my direct reports and/or peer colleagues.	○	○	○	○	○
I believe, we have a high level of trust in my organisation.	○	○	○	○	○

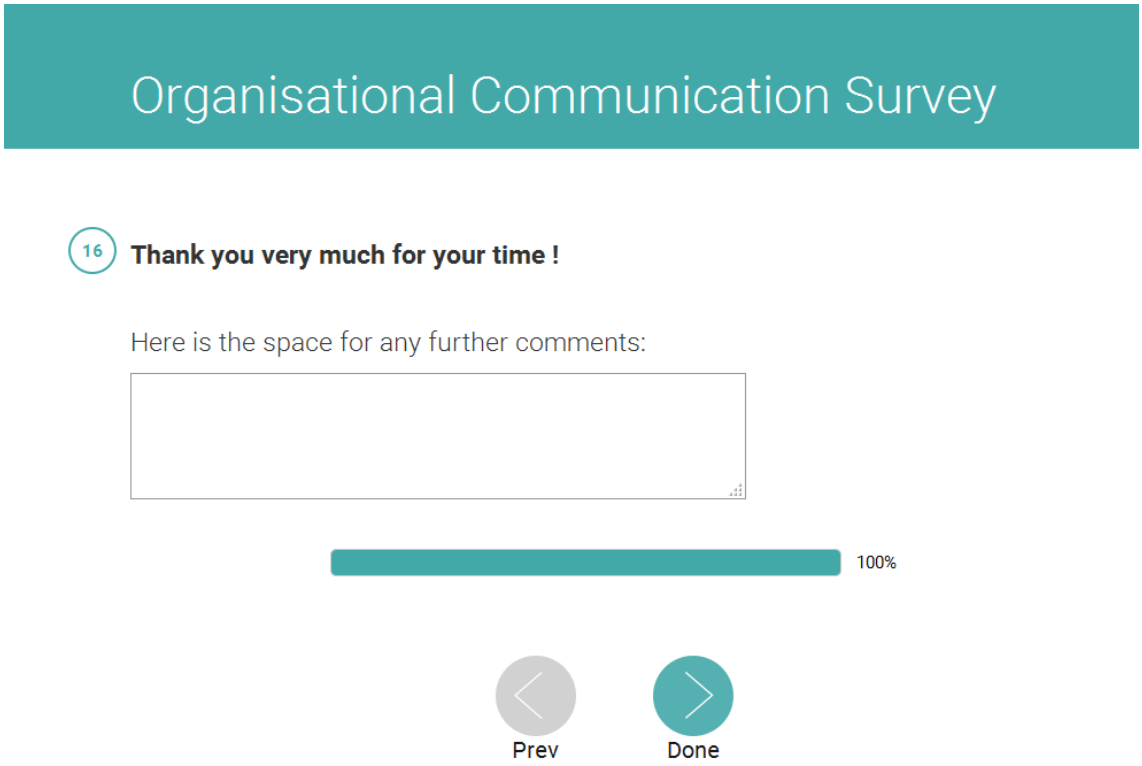
Question 14



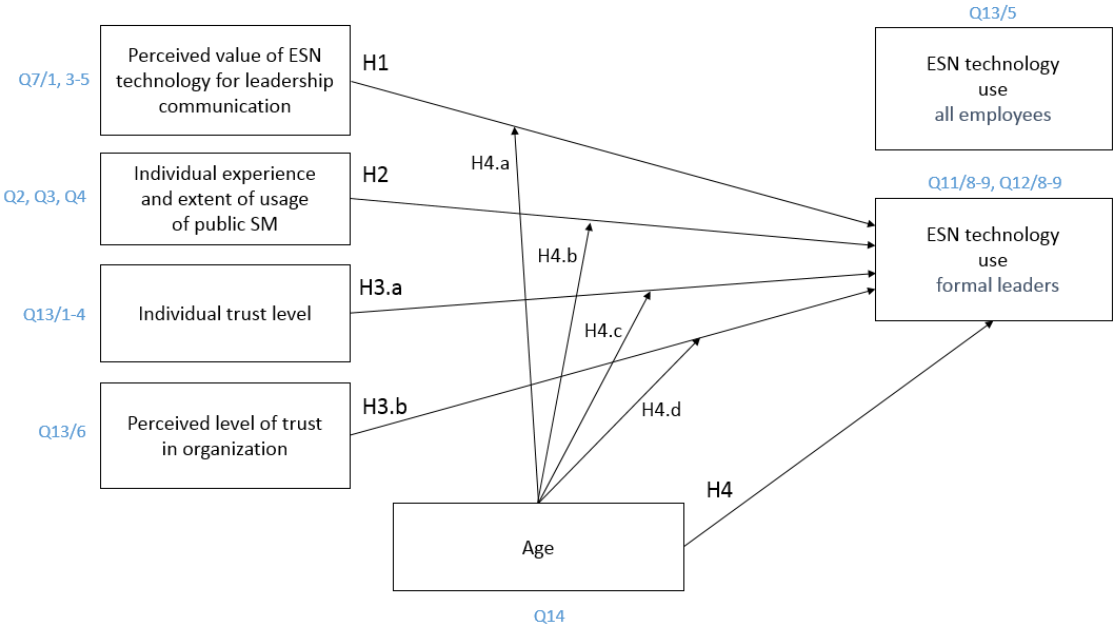
Question 15



Closing part of survey



Hypotheses overview and coding of questions



Trust items from Schoorman and Ballinger

Trust Items from Schoorman and Ballinger (2006)

____ My supervisor keeps my interests in mind when making decisions.
____ I would be willing to let my supervisor have complete control over my future in this company.
____ If my supervisor asked why a problem occurred, I would speak freely even if I were partly to blame.
____ I feel comfortable being creative because my supervisor understands that sometimes creative solutions do not work.
____ It is important for me to have a good way to keep an eye on my supervisor.
____ Increasing my vulnerability to criticism by my supervisor would be a mistake.
____ If I had my way, I wouldn't let my supervisor have any influence over decisions that are important to me.

Response Scale

1	2	3	4	5
strongly disagree	somewhat disagree	neither agree nor disagree	somewhat agree	strongly agree