

# Enterprise Social Media: Challenges and Opportunities for Organizational Communication and Collaboration

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## Abstract

*Given the large investments in Enterprise Social Media technologies in organizational settings, this paper sets out to explore the challenges and opportunities that ESM technologies provide for organizational communication. Merging existing conceptual work on ESM with findings from thirteen appreciative interviews with professionals from a large multinational organization, our papers offers six areas of opportunities and challenges—Social Capital Formation, Boundary Work, Attention Allocation, Social Analytics, Adoption and Use Incentives, and Governance and Control—that could guide researchers and practitioners in understanding and informing the use of social media technologies in their most productive and impactful ways.*

## 1. Introduction

Today, the proliferation of social media technologies in organizational contexts—frequently referred to as Enterprise Social Media (hereafter, ESM)—has profound implications for communication-based processes in organizations. ESM encompass a range of information and communication tools (ICTs) for supporting interaction, collaboration, and co-creation, such as blogs, content communities, and social network sites [1,2].

ESM further represent integrated platforms that encompass a range of formerly distinct social media capabilities including blogging, microblogging, social networking, and social tagging or bookmarking in addition to providing employees the ability to post and share documents and other digital artifacts [3]. Papers on ESM use suggest that these systems have the potential to support and improve various communication-based processes in workplace settings [3], namely Social Capital Formation (c.f., [4,5,6]), Boundary Work [3,7], Attention Allocation (c.f., [3,8, 9]), and Social Analytics (c.f., [3,10,11]).

Industry analysts and the business press have represented social media as one of the most transformative impacts of information technology for all aspects of business, from marketing, finance, and operations to human resource, knowledge, and innovation management [1]. Most importantly, social media is predicted to trigger unprecedented and dramatic changes in social interactions and exchanges within and beyond the organization's boundaries [3,12].

With four out of five companies using ESM at varying stages of maturity [13,14], now is the time to explore what the effect of ESM on these four communication-based processes in organizations and which other types of work-related activities and organizational processes are affected by the implementation of ESM technologies. Therefore, the purpose of this article is to explore, at this early date, what challenges and opportunities ESM aimed at supporting communication and interaction within the workplace may have for organizations.

Using findings from appreciative interviews with thirteen professionals within a multi-national office solution provider combined with theoretical insights from [3], we propose the following six areas of challenges and opportunities regarding ESM, namely Social Capital Formation, Boundary Work, Attention Allocation, Social Analytics, Adoption and Use Incentives, and Governance and Control. Our contribution is threefold. First, we empirically validate the conceptual classification of organizational processes that are affected by ESM as outlined by [3]. Second, we delineate additional work-related activities and organizational processes that are implicated by ESM to propose (six) people-technology relationships that are most useful for understanding the challenges and opportunities associated with ESM use. Third, we offer specific guidelines and structure for managers to better understand the rapidly evolving realm of ESM and address its associated challenges.

We begin by providing a definition and classification of ESM by looking at its historical

roots, technical specificities, and differences from public Social Media. Using [3]’s conceptual paper, we then briefly discuss four common communication-related processes in organizations that are affected by ESM. Following the presentation of our data collection and analysis methods, we then use our findings to empirically delineate challenges and opportunities that ESM technologies present for these four processes as well as identify two additional processes. Finally, after discussing the findings, implications for research and practice are provided.

## 2. Enterprise Social Media: A Definition and Brief History

Social media technologies are increasingly implemented in organizations for facilitating various activities involving communication, collaboration, and (co-)creation [1]. In the relatively short timeframe in which social media technologies have been available to organizations, the focus of attention in research on social media in organizations has been on two primary ways of interaction [3]. The first, and most commonly studied, involves communication with external stakeholders including customers, suppliers, and the public at large [12,15,3]. In this context, the emphasis has been on the transformative potential of social media—usually public—for instance for marketing. Furthermore, these studies have often emphasized the problems that may arise from the integration of personal and work lives as well as the risks of the inadvertent release of proprietary information [16,17].

The second, less commonly studied, form of interaction involves internal communications—usually through proprietary outsourced or in-house platforms—between managers and employees as well as among employees. In this context the focus has been on the transformative potential of social media for exchanging knowledge [18] and therewith for accelerating innovation and new product development [19]. These proprietary systems avoid the risk of accidental knowledge spillovers by virtue of being internal, closed and only accessible by employees [3].

Given the limited attention for the internal use of social media to date, our understanding of the role that ESM play in organizations is still embryonic. To illustrate, most studies on ESM to date have been conducted by scholars belonging to the domain of computer-supported cooperative work (CSCW) and human-computer interaction (HCI), hence, the focus has been on specific technologies and on providing detailed descriptions of how people use ESM with little focus on associated strategic implications [3]. Although information systems (IS) scholars have

begun to explore the domain of ESM, the focus has largely been on how it affects organizational performance in terms of marketing benefits, firm value (e.g., the recent special issue in Information Systems Research; [1]), and knowledge management [17]. Hence, although helpful in determining the business value of ESM at the macro-level, these studies have provided few insights to the effects of ESM use at the meso- and micro-level, that is, on behaviors and activities at the team, group, or individual level.

To lay the groundwork for our exploration of the challenges and opportunities ESM provides for various communication-based processes in organizational settings, we adopt the definition of enterprise social media as put forth by [3]: “*Web-based platforms that allow workers to (1) communicate messages with specific coworkers or broadcast messages to everyone in the organization; (2) explicitly indicate or implicitly reveal coworkers as communication partners; (3) post, edit, and sort text and files linked to themselves or others; and (4) view the messages, connections, text, and files communicated, posted, edited, and sorted by anyone else in the organization at any time of their choosing.*”

Although preceding technologies—such as email and video conferencing—have allowed workers to do one of the first three activities, ESM is unique and transformational in supporting these three activities as well as making these visible to one’s coworkers to view at any time in the future [20]. Examples of ESM tools include corporate blogs, wikis, and enterprise social network sites.

The ESM landscape is not only complex in the multiplicity of tools available for corporate use, but also in terms of the diversity of paths that the emergence of ESM has followed into organizational contexts [3]. The first of three paths has been through the use of publicly available sites like Facebook, Twitter, and Google+, which offered employees the ability to independently join, interact with coworkers, and exchange knowledge on public social media [17] as well as form groups. This path largely predated the establishment of internal-only ESM applications.

The second path has been the use of proprietary software. With the rise of enterprise social software and a growing market for these tools, many integrated services have emerged. These integrated platforms are unique in combining the full variety of social media functionalities including the creation, maintenance, and viewing of blogs, microblogs, wikis, status updates, and other collaborative functions. Examples of such tools include IBM’s Connections, Yammer, Oracle’s Social Buddy Network, Jive from Jive Software, Salesforce Buddy Media, Tibbr, Telligent, Kaltura,

Moxie Software, Salesforce Chatter, Cisco's Webex Social, and Microsoft's Sharepoint.

The third path has been the in-house development of proprietary solutions, such as IBM's Beehive (c.f., [4,5,6]) and HP's Watercooler [21,22] often mimicking many of the features and functionalities found on publicly available sites like Facebook [3].

### **3. Enterprise Social Media: Organizational Impacts**

The limited research to date on such internal social media system usage suggests that the strategic implications are significant, influencing how individuals access a wide range of resources within the enterprise but outside of their specific organizational units. More recently, [3] conceptualized four communication-related processes in organizations that are most likely affected by ESM, namely Social Capital Formation, Boundary Work, Attention Allocation, and Social Analytics—that are affected by ESM. In what follows, we will discuss each of these processes to lay the conceptual foundation for our empirical exploration of the opportunities and challenges that ESM poses for various forms of organization-based communication and collaboration.

Social Capital Formation, refers to the learning that occurs by third parties—not directly or immediately involved in a particular communication or information sharing process—as a result of the inherent visibility of relations and content on ESM; i.e., what [3] refer to as the “leaky pipes” metaphor of ESM. Although messages may be communicated for an intended audience, many others can learn about the communicators and the content of the communication, thereby offering significant advantages for an organization in terms of learning and knowledge sharing opportunities [23,24]. Other Social Capital Formation advantages of ESM for organizations include allowing people to keep up with what others are doing in an effortless way [3,25,21) as well as to establish new connections and better maintain those relationships over time [23].

Boundary work refers to the ability to effectively conduct work across boundaries between groups, teams, departments, and even various geographic locations within same organization. Traditionally, the literature on boundary spanning distinguishes three such activities, representation, coordination, and general information search [26]. Representation, involves the lobbying for individuals or team members up the hierarchy in order to create favorable impressions. Coordination involves the facilitation of effective decision-making through cross-boundary

strategizing, planning, and evaluation. General information search involves the scanning of the external team environment for relevant information, knowledge, and expertise. ESM, through enhanced visibility for individuals, groups, and their knowledge, can assist in creating awareness—i.e., representation; in enhancing cross-boundary communication and decision-making—i.e., coordination; and in locating relevant information and individuals and reaching out to them, whether serendipitously or purposely—i.e., information search [7].

Attention Allocation refers to the extent to which people seek or attend to novel knowledge or information from, perhaps unknown or unrelated, coworkers [3]. ESM, by expanding the domain in which individuals within the organization pay attention, grow people's awareness of knowledge [23] thereby potentially increasing knowledge sharing while reducing rework [27]. Furthermore, the profile information that users share can help to establish a personal connection and common identity thereby fostering the emergence of groups or communities [24; 23]. Additionally, [3] state that ESM—by focusing the attention on personal information or relevant knowledge—may lubricate social interactions thereby making it easier for people to connect to relevant people and content as well as join existing and ongoing conversations and threads.

Social Analytics refers to the analysis of the digital traces of communications to produce recommendations for novel connections for employees as well as to generate knowledge for managers about the informal information economy of their organization, including emergent communities that are not linked to formal departments [3]. ESM offers special opportunities for analyzing social relations and recommender systems that enable the exploration of novel connections, content, and, collaborations [9]. ESM analytics can also help to identify experts and other influencers using social network analysis approaches and methods [11]. Furthermore, through these social analytical tools, ESM increases the transparency of the social make-up of the organization thereby in turn accelerating new Social Capital Formation [3].

### **4. Methods**

To explore the empirical effects of ESM on these four communication-related processes—Social Capital Formation, Boundary Work, Attention Allocation, and Social Analytics—as well as identify additional work-related processes and behaviors that may be affected by ESM, we conducted thirteen appreciative interviews within a multi-national office solution

provider. In the following, we will discuss in detail our approach to interviewing, its appropriateness for the topic, the interview protocol, as well as descriptive statistics of the thirteen interviews and interviewees. However, before doing so, we will provide some background information on the organization in which we conducted the interviews and our sampling strategy.

#### 4.1. Organization: The Interview Setting

Our case organization (hereafter referred to as The Company) is a worldwide provider of workplace products, furnishings, and services. The company has approximately 10,000 employees around the world and is headquartered in the U.S. with offices and divisions in nearly 40 countries in North and South America, Europe, Africa, Asia, Oceania, and the Middle East.

In March 2012, the organization launched an ESS tool, which is based on the Jive Platform. Jive<sup>1</sup> is a provider of corporate social technologies that support business connections, communications, and collaborations among employees. Jive’s customer base includes many global corporations and institutions, including Nike, HP, T-Mobile, and the World Bank.

Product development and client consulting at the case organization (hereafter referred to as The Company) is provided through global teams that rely on a multiplicity of ICTs for collaboration, including Email, GoogleDocs, MSN, Sharepoint, Basecamp, and Skype. With the introduction of the ESM tool—which offers a large number of communication functionalities—the technology providers within The Company hope to offer an umbrella tool that can better support communication and collaboration processes inside virtual product development teams.

Following the ESM global launch in March 2012, the adoption and use has grown substantially, with a total user base of 9,247 users as of April, 2014 as well as 1,320 active group spaces and 533 active projects. Currently, about 10% of users actively create content (i.e., contributing users) and an additional 10% actively engages in other ways with content (i.e., participating users), showing that the power law distribution that holds for public social media, such as blogs and microblogs [28] also holds for ESM, albeit with a larger core.

#### 4.2. Sampling Approach and Participants

A purposive sampling approach was used for recruiting participants, focusing on extreme or “appreciative” cases in order to learn from success

stories or unique experiences with the use of the ESM tool [29]. Furthermore, since the initial generated sample was larger than we could handle—with a total of 46 respondents—we then tried to add further credibility to the sample by selecting respondents who span different functional departments and geographic locations in the company. The final list of participants is presented in Table 1.

**Table 1. Overview of interview participants**

Partic.	Functional Department	Location
1	Design Researcher	U.S. (mid-west; HQs <sup>*</sup> )
2	Design Researcher	China
3	Senior Researcher	U.S. (mid-west; HQs)
4	Senior Consultant	Brazil
5	Applied Research Consultant	Canada
6	Engineer	U.S. (mid-west; HQs)
7	Interior Designer	U.S. (west-coast)
8	Project Manager	Mexico
9	Consultant/Services	U.S. (mid-west;)
10	Engineer, Product Development	Malaysia
11	Sales	Hong Kong
12	Product Marketing	U.S. (mid-west; HQs)
13	Design Researcher	France

<sup>\*</sup>HQs = headquarters

#### 4.3. An Appreciative Interviewing Approach

The appreciative interviewing method is grounded in the positive discourse in the social sciences [30] and involves a search for the best in people and the relevant world around them, thereby highlighting positive change with respect to organizations and technologies [31].

The appreciative interviewing process alternates between retrospective and prospective reflection, eliciting high points in “what is” and emerging possibilities for “what might be” [31]. Although inherently focusing on the positive, appreciative interviewing does not deny deficiencies and criticism, but rather posits them as opportunities for positive change. Hence, the interview process provides respondents an opportunity to share unique personal experiences, thoughts about what works well, and desired future aspirations and states.

The appreciative interviewing method is particularly well-suited for examining core capabilities, design requirements, and success factors of novel IS and their implementation and use [31,32]. The appreciative interview allows for the identification of unrehearsed high points and success stories of the situated use of these novel IS tools. Hence, as such, the appreciative interview method was deemed most appropriate for this study where we aimed to understand the opportunities associated with ESM use

<sup>1</sup> <http://www.jivesoftware.com>

in an organizational setting as well as potential avenues for positive change in their future design and use.

Hereto, the interview protocol started out by asking people to share a particular unique personal experience of interaction or collaboration—i.e., an appreciative critical incident—describe the significance of this event to them personally, as well as the role or importance of the ESM in this event. Following this unique opportunity for positive story-telling and personal reflection, the interview protocol continued to focus on questions regarding (i) their usage of the ESM, (ii) advantages of the tool, (iii) its effects on their workplace interactions, sense of connectedness, and visibility of their individual or team activities, (iv) ideal use situations, and (v) desired future changes to the platform and its functionalities to improve its potential for communication and collaboration.

#### 4.4. Data Collection and Analysis

Interviews were conducted in the Spring of 2014 and lasted anywhere between 40 and 65 minutes. All interviews were transcribed verbatim and imported into a qualitative analysis software application, Atlas.ti, for coding and further thematic analysis.

The coding included a sequential process of selective, open, and axial coding. That is, initial coding was done selectively, by drawing on the themes identified by [3] regarding the four communication-related processes that are affected by ESM. Open coding was used to identify additional workplace activities that were impacted by ESM, but were not captured in the conceptual paper of [3]. Finally, axial coding was used to cluster novel themes from the open coding into meaningful and higher-level categories.

As a pruning criterion, a 20% threshold was set, which meant that marginal themes that were not addressed by at least three participants were disregarded for axial coding. Additionally, relevant interview excerpts were selected that could provide concrete illustrations of identified categories and themes. This coding and sorting process resulted in a final set of six categories of opportunities and challenges associated with ESM.

### 5. Opportunities and Challenges of ESM for Organizational Communication and Collaboration

As noted by [3], ESM can create both opportunities and challenges for organizations, and so where possible, we present both for each theme that emerged from the interview process. The four organizational

processes emphasized by [3] clearly and repeatedly emerged in the interviews (see Table 2), and so provide a useful organizing framework for our discussion of findings. We close with the identification of two additional themes that emerged from the interviews and that are not captured by these four categories.

**Table 2. Frequencies of categories and themes in interviews**

	# of Mentions
<b>1. Social Capital Formation</b>	
1.1. Network Benefits	7 (54%)
1.2. Background Check	6 (46%)
1.3. Relationship Building	7 (54%)
1.4. Conversation Starter	5 (38%)
<b>2. Boundary Work</b>	
2.1 Closedness (Privacy Concerns)	4 (31%)
2.2. Feeling Connected to Headquarters or Remote Locations	5 (38%)
2.3. Representation	5 (38%)
2.4. Information Search	3 (23%)
2.5. Coordination/Collaboration	3 (23%)
2.6. Context Collapse	3 (23%)
<b>3. Attention Allocation</b>	
3.1. Unique and Relevant Content	3 (23%)
3.2 Content Organization/Search Functionality	4 (31%)
3.3. Social Sharing	3 (23%)
3.4. What (Not) To Share?	3 (23%)
<b>4. Social Analytics</b>	
4.1 Gamification	4 (31%)
<b>5. Adoption and Use Incentives</b>	
<b>6. Governance and Control</b>	
	3 (23%)

#### 5.1. Social Capital Formation

Virtually all of the interviewees provided comments that reflected the ways that ESM influences their social capital formation processes at work, mainly by helping people learn about others in the organization who they did not know well or at all. Essentially, the ESM provided a more useful corporate yellow pages, in that users could not only glean from posts what another employee's interests and expertise is, but could also look up their profile to learn more about the person of interest. Several advantages that were mentioned in this context include that ESM helps figure out who experts are, helps to prepare for meetings with new people by performing a “background check”, or helps to form groups at workshops by researching participants.

*“So before I used to go into the address book and see okay who is this person, what do they do, who do they report to, and then try to make a decision based on that. But now, what’s really cool is I can go into [ESM] and see who they are and then that might be, oh hey I even know this person!”*

*And then I can even read about them and see oh okay, he's young or he's maybe older or he's been with [The Company] for a while or not and make [team] decisions [for the workshop] based on that."*

These comments parallel the "people sensemaking" findings reported by [4,5]. Interestingly, contrary to findings from a survey of Beehive users at IBM [6], the focus seemed more on using the ESM to learn about new connections than to maintain ties to existing connections. This may partially be related to the large diversity of tools available for more repeated interaction with already existing connections.

*"A team like mine will frequently find ourselves working with people from different parts of the company where we don't know them yet. [ESM] has improved the ramp up - [ESM] now gives me a quick easy way to choose to look at your profile, learn about you and background, maybe even in the days leading up to a project, get a sense of who you are. So I think [ESM] does enable us to form relationships a little bit easier - we have this quick blimp at each other."*

Furthermore, as several of the participants noted, what appears to make ESM the ideal tool for establishing new connections is the opportunity to post specific content—"blog about their area of interest"—that can help to seize and maintain the attention of targeted individuals that you want to build a relationship with.

Finally, the social capital formation benefits of ESM were not limited to the digital space, but extended to the offline space by providing "conversation starter" material.

*"More than likely instead of engaging with someone on [ESM] though, it will get you up to talking to people in your group to say, hey, by the way, did you guys see this? There was a change in our benefits - did you guys know about this? That's news everyone needs to know, and that tends to be more of the interactions than searching someone out."*

Despite these many benefits, several challenges to Social Capital Formation were identified repeatedly. One of the biggest challenges stems from the reluctance of some employees to actively post and share information—effectively they consume information but rarely contribute it. This makes it harder for others to learn about and follow those who avoid posting.

Cultural factors seem to play a role here, as noted by some of interviewees. In particular, interviews with respondents from Europe and Asia indicated the reluctance to share for two reasons. The first is a language barrier and general discomfort publishing content in English. Although posting in a specific language is not required, the visibility and audience for a post in one's native language would be limited. The second being what appeared to be greater concerns by users from these regions over the relevance and significance of their posts to the rest of the company.

*"I think Europe has been very silent. I don't know whether they have adopted into [ESM] different, I haven't really heard a lot from them maybe one to two feeds. Mexico, for example, they are much more into social stuff."*

*"I think I read in the paper somewhere that its just very different like an American company would tend to share and upload stuff and we would think, oh we [Asia] know something but it's very small and insignificant so we're not going to upload it."*

*"The primary activity on [ESM] is in [Headquarters]. We are a global company, anyone and everyone is able to contribute. But I bet the use of [ESM] just kind of follows our footprint - we are bigger, others are less active. Other locations, small, not hear anything."*

Additionally, it appears that some users do make a point of primarily following other employees they already know. If those being followed are not active, the system's email updates can seem old and dated, since these updates simply list the last ten posts regardless of when they occurred. This in turn may make the system appear "unengaging" and thereby discourage future active use and limit social capital benefits.

*"The email updates for the people you follow are not that great because there's no, like things only scroll off when there are more things coming up at the top, it doesn't scroll off when it's just old. So, you know, I get this list of twenty items, but some of them are three months old, in a weekly email. You know, that's not useful..."*

## 5.2. Boundary Work

To some extent, the social capital formation promoted by ESM also makes it easier for employees to work across boundaries, including project, unit, location, and cultural boundaries. To some extent, connecting across boundaries happens as a direct result of learning about others, as noted in the discussion about social capital formation. However, interviewees also commented on the value of simply receiving news from other locations on the ESM, which served to enhance feelings of connectedness to the more far-flung parts of the organization or perhaps rather invisible departments in the organization, such as manufacturing facilities.

*"I do, it enables us to easily share photos and videos - it is not like an instagram, it's not super easy, but any time communication becomes enriched with images and such, the connection just feels that much richer. I think it has gone a long way into making remote locations feel more connected with each other."*

In turn, for people located outside headquarters, ESM was viewed as an ideal way to learn about important news, updates, and events from the headquarters and feel connected to the core of the organization.

*"So being located in Monterrey, I think that it [ESM] is an awesome way to learn about what's happening everywhere and especially of course what's happening in [headquarters] which is of course our headquarter and all."*

On the other hand, the ESM did not appear to function as well in the area of project collaboration across boundaries. Most interviewees had comments on the difficulties they saw in using the ESM for project work. [7], in a study on the role of ESM for team boundary spanning, found that team activity on ESM was more likely to serve the team's *representation* (or ambassadorial) functions—i.e., a team's efforts to create favorable impressions externally—than explicit coordination, per se. Comments from interviewees here reflected this as well—the ESM was better at informing others of what a particular team or individual is working on than supporting collaborative work. Some expressed concern over the potential release of private information, even on a system only open to other employees. Especially noteworthy here were comments that highlighted the value of the ESM in supporting distributed groups engaged in more service-like activities where it made sense to make contributions public. However, for many of the respondents who conduct research, design, and consulting, concerns over the privacy of third-party (i.e. client) information as well as intellectual property for early-stage projects limited their utilization of ESM as a tool for collaborative activities outside “closed” team spaces.

*“We sure do some brainstorming via [ESM] to get ideas. I'm experimenting with launching a specific site to do some crowdsourcing. That won't really be active project work, it is certainly initial brainstorming work, to get discussion going. The secret sauce is that I can launch something, I don't have a clue who is interested, but I always hear from more or from others than I would have predicted.”*

Hence, ESM appears to be a useful tool for supporting boundary spanning through establishing a public presence through blogging and public announcements about achievements and ongoing projects—i.e., *representation*. Similarly, by being able to post questions and instantly create organization-wide visibility, not only can ESM help build a reputation—individually or at the team-level—but also open up possibilities for information search.

*“[ESM] is very effective when I don't know the answer and I need to connect with someone who knows the answer out there or who has an opinion. I'm not the expert, but I know I'll find someone who is.”*

However, concerns over privacy and confidentiality of project data restricts the usefulness of ESM for collaboration and coordination across team boundaries.

### 5.3. Attention Allocation

The ESM appears to function well in directing employee's attention to information that is relevant across the organization. In the words of one employee, the front page of the ESM offers “news you can use”, as such information creates common ground that can

help initiate conversations around the company. Most respondents therefore indicated that they make an effort to check the ESM newsfeed on a daily basis to get a quick snapshot of news and top posts.

Recent initiatives by the company seemed to be targeted at incentivizing employees to check the ESM on a daily basis. Several of our employees told how a recent change in health benefit policies was only shared with employees through the ESM as a way to generate unique content and establish a habit of checking the ESM.

On the other hand, some expressed concerns that information beyond the front page—i.e., newsfeed—can be easily missed, leading to misplaced allocation of attention to just the “blockbuster” news.

Some felt that the system's structure did not do enough to encourage exploration of content, which can further limit the ESM's ability to direct employees attention to relevant information. The lack of an easily understood file structure contributed to the challenges employees' faced in finding information. Hence, although the potential of ESM to become an organization-wide knowledge repository was emphasized repeatedly, the lack of adequate search, tagging, and archiving functionalities was emphasized as a significant barrier in this respect.

Similarly, respondents emphasized the lack of an organizational chart that could help one navigate the ESM to locate team or department-related spaces. The ESM is largely made up of groups, but the tool does neither offer an effective way to search and locate these groups nor provide an interactive chart of how these informal groups are linked to official departments or units in the organization.

Finally, interviewees expressed various concerns about what to share. For instance, they questioned how much sharing of personal information should occur on the system. They recognized the value of personal content in supporting relationships at work, but were concerned that it might lead some employees to believe that real work was not occurring on the system.

*“For many of us our work spills into our personal life, and the other way, it seems artificial to keep those separate. I want to feel like we are humans; it enriches the relationship when I share personal things. I like it when they do that too. We have more in common than just us working on a project.”*

*“Or if you think it is just something social or not valuable. Or if you hear your colleagues say things like it just like FB, we shouldn't be using it, that would discourage usage. I heard comments - it is just social media. Real work isn't happening on [ESM]. I don't believe those beliefs are widespread, but they are out there.”*

Another concern was that content posted publicly—rather than in closed group spaces—should be relevant and significant to the entire organization so as not to “clutter” the newsfeed unnecessarily. Hence,

although the discussion in [3] focuses on the importance of accurate and honest information, the majority of our respondents emphasized concerns for sharing only unique and useful content in order to avoid information overload.

*“Some of it is not necessarily for a privacy reason, but it is honoring what keeps [ESM] functioning. We shouldn't clutter [ESM] with minutes from our last meeting (...)Something that I share with the community at large, needs to be something that is of interest. It is inappropriate to start a discussion on something very specific”*

#### 5.4. Social Analytics

As suggested by [3], those involved in implementing the ESM at The Company are quite interested in using data from the system to help understand and improve information sharing and social interaction in the workplace. An initial attempt to encourage greater use by employees involved the application of labels or badges that highlighted the extent of users' activity on the system. Although research has shown that such badges can be powerful incentives for users of public media [33], it is not clear that such gamification strategies have the same impact in ESM. Indeed comments from a few interviewees suggested that they might have the effect of encouraging the posting of less relevant content to create the illusion of being an active contributor, a concern also expressed in [3].

*“I think that the whole gamification route is not encouraging. Oh you're a novice and then you're going to be a traveler or an expert or whatever the levels are, I feel like no one cares. What's that getting me? What's that mean? The only comments I've ever heard about that are like oh look I'm now whatever, who cares what does that mean? I think if there were ways, if actual benefits were demonstrated to teams then teams would use it”.*

#### 5.5. Adoption and Use Incentives

One major challenge that was identified by respondents and not adequately addressed in the existing literature on ESM is how to incentivize people to use ESM when there are many competing tools. The overall impression appears to be that except for the Social Capital Formation aspect of the ESM, all other activities are better performed on already existing platforms. Hence, the time, effort, and resources involved in learning a new platform that does not appear an improvement over available technologies limit its usage. Therefore, ensuring that an ESM offers unique and adequate functionalities is crucial to its subsequent adoption and use in the organization.

In this context, the organization also needs to be aware of infrastructural issues that may limit people's

motivation for using the software. For instance, our respondents from locations in Asia were saying that their Internet connection is too slow for the ESM to function optimally, further discouraging its usage.

Additionally, many of the respondents seemed to acknowledge that part of the reason for an only limited use of the ESM may be the lack of awareness of the functionalities and opportunities of the tool and emphasized how enhanced training could help overcome some of the barriers to adoption and use.

*“Clearly demonstrating the benefit is what's going to make it a much more engaging community.”*

#### 5.6. Governance and Control

The final theme that emerged repeatedly during the interviews is the lack of formalization of ESM communication and its democratizing effect on organizational interactions. Whereas previous corporate platforms, such as an intranet, required a formal process and approval to get content published thereby limiting the number of messages coming from general employees, now anyone *“can communicate in a way I never could before, people above and below me”*.

This lack of control and governance of the communication flows was emphasized by the respondents as an important benefit of ESM. To some extent, it is this lack of governance that provides people with an opportunity to form and maintain virtual communities of practice that remain effective and innovative when informal and uncontrolled.

### 6. Discussion

Social media has been represented as one of the most transformative technologies for organizations [1], in particular for their impact on communication and collaboration. In this article, we used the conceptual framework of [3]—and its four organizational processes of Social Capital Formation, Boundary Work, Attention Allocation, and Social Analytics—to empirically explore the challenges and opportunities of ESM for workplace communication and interaction.

Based on our findings (see Table 2) from 13 appreciative interviews with employees from a multinational organization, we find that ESM offers *opportunities* for Social Capital Formation, in the form of building relationships for Boundary Work, by offering opportunities for representation and information search, and for Attention Allocation, with ESM newsfeed creating conversation starter opportunities.

At the same time, we find that ESM poses several workplace *challenges*. For Social Capital Formation, cultural differences and language barriers may impede certain locations to share less than others. Furthermore,

non-engaging content can generate a vicious cycle of passive rather than active use of ESM. For Boundary Work, the superiority of other tools for supporting coordination and other collaborative activities may undermine individuals' and team's willingness to leverage ESM for higher-level boundary work. For Attention Allocation, the inherent messiness and randomness of newsfeeds may impede locating relevant information, individuals, or groups. Additionally, concerns over information overload limits sharing behaviors to only unique and relevant information. For Social Analytics, gamification strategies—that may incentivize use in public social media settings—results in judgments of unproductive use of ESM and undermines motivation to heavily use the system. For Adoption and Use Incentives, the broad spectrum of functionalities offered by ESM may limit its ability to compete with other targeted systems (e.g., co-authoring, conferencing, or project management tools) already in place. Finally, for Governance and Control the democratizing effect of ESM on organizational communication may make traditional monitoring or governance efforts counterproductive.

Our theoretical contribution is threefold. First, we empirically validate the conceptual classification of organizational processes that are affected by ESM as outlined by [3]. Not only did our empirical exploration confirm the importance of these four processes, it also offered further theoretical depth and breadth in our understanding of the opportunities and challenges associated with each of these processes. Second, we delineated two additional work-related activities and organizational processes that are implicated by ESM to propose a total of six people-technology relationships that are most useful for understanding the challenges and opportunities associated with ESM use in organizational settings.

From a strategic perspective, each of the six processes that have been identified and summarized can be a starting point for managers in identifying the most pressing challenges and exploring solutions. More specifically, based on the prominence of these themes in the interviews, there are six challenges that we want to highlight as requiring particular attention from organizations, managers, and designers today in order to guide the design and use of ESM in its most productive and impactful manner.

**Challenge 1:** ESM appears to lack overall utility for explicit coordination and collaboration. The underlying cause appears to be related to the lack of structure of interpersonal connections and the relatively “messy” nature in which data are stored and retrieved. Although this serendipity was anticipated to provide new opportunities for collaboration, the

benefits of ESM for collaboration do not seem to extend beyond broad awareness building for what is going on in organizations.

**Challenge 2:** Although organizations are organized around project teams, ESM is formed around groups. These groups seem to embody the basic elements of communities of practice (CoPs) as naturally evolving and dynamic entities with varying layers of public- and privateness. These groups, like CoPs are largely organized internally and supported or “nurtured” rather than controlled and managed externally [34,35]. Furthermore, these groups differ significantly from teams as their activities are largely citizenship- rather than project-oriented.

**Challenge 3:** As recognized by [3] and further evidenced in our interviews, individuals may believe that information they are attending to is representative of the entire organization even though certain individuals, locations, or cultures are more silent and therefore invisible in ESM. This may result in certain groups and locations to become isolated and central locations to become further in-group focused.

**Challenge 4:** Although there is a clear necessity to explore strategies for encouraging adoption and use—primarily given the many different tools that are competing for employees' attention and use—artificial encouragement using gamification strategies seems to work well for public social media but poses challenges in enterprise settings. If gamification strategies are not tied to explicit performance appraisal and reward practices, these strategies appear to be counterproductive and undermine motivation to use ESM.

**Challenge 5:** Although the issue of governance and control has been highlighted as significant and requiring further research [3,27], our study shows that the lack of governance may have a democratizing effect on content generation and may be conducive to the grassroots emergence of “virtual communities of practice”. Although previous research has shown a shift in organizational social media policies from risk management to value generation [27], most of these policies are concerned with managing employee use of public social media channels and presence. Whereas the governance of these public channels is crucial for managing brand identity and preventing public relations crises, it appears that the internal governance of ESM should be supportive and nurturing rather than controlling and managing.

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## 8. References

- [1] S. Aral, C. Dellarocas, D. Godes, D. (2013). "Introduction to the Special Issue-Social Media and Business Transformation: A Framework for Research," *Information Systems Research*, 24(1), pp. 3-13.
- [2] A.M. Kaplan, M. Haenlein (2010). "Users of the world, unite! The challenges and opportunities of Social Media," *Business Horizons*, 53(1), pp. 59-68.
- [3] P.M. Leonardi, M. Huysman, C.W. Steinfield (2013). "Enterprise Social Media: Definition, History, and Prospects for the Study of Social Technologies in Organizations," *Journal of Computer-Mediated Communication*, 19, pp. 1-19
- [4] J. DiMicco, W. Geyer, D.R. Millen, C. Dugan, B. Brownholtz (2009). "People sensemaking and relationship building on an enterprise social networking site," *Proceedings of HICSS 42*.
- [5] J. DiMicco, D.R. Millen, W. Geyer, C. Dugan, B. Brownholtz, M. Muller (2008). Motivations for social networking at work. *Proceedings of the 2008 Conference on Computer Supported Cooperative Work*, pp. 711-720.
- [6] C. Steinfield, J.M. DiMicco, N.B. Ellison, C. Lampe (2009). "Bowling online: Social networking and social capital within the organization," *Proceedings of the Fourth International Conference on Communities and Technologies*, New York, NY.
- [7] W. Van Osch, C.W. Steinfield (2013). "Boundary Spanning through Enterprise Social Software: An External Stakeholder Perspective". *Proceedings of the International Conference on Information Systems 2013 (ICIS)*, Milan, Italy.
- [8] P.J. Bateman, J.C. Pike, B.S. Butler (2011). To disclose or not: publicness in social networking sites. *Information Technology & People*, 24(1), pp. 78-100.
- [9] H.D. Green, N.S. Contractor, Y. Yao (2006, December). "CI-KNOW: Cyberinfrastructure Knowledge Networks on the Web," In *AGU Fall Meeting Abstracts (Vol. 1, p. 0909)*.
- [10] J.L. Gibbs, N.A. Rozaidi, J. Eisenberg (2013). "Overcoming the "Ideology of Openness": Probing Affordances of Social Media for Organizational Knowledge Sharing," *Journal of Computer-Mediated Communication*, 19, pp. 102-120.
- [11] J. Zhang, M.S. Ackerman L. Adamic (2007). "Expertise networks in online communities: structure, algorithms," *Proceedings of 16th international conference on World Wide Web (pp. 221-230)*. ACM.
- [12] W. Van Osch, C.K. Coursaris (2012). The Duality of Social Media: Structuration, Socialization through Organizational Communication. *Eleventh Annual Pre-ICIS Workshop HCI Research in MIS (SIGHCI)*.
- [13] E. Overby (2012). "Migrating processes from physical to virtual environments: Process virtualization theory," in Y.K. Dwivedi, M.R. Wade, S.L. Schneberger (Eds.), *Information systems theory: Explaining and predicting our digital society*, vol. 1, New York: Springer Publishing: 107-124.
- [14] D. Kiron, D. Palmer, A.N. Phillips, N. Kruschwitz, (2012). "Social business: What are companies really doing? 2012 social business global executive study, research project," *Sloan Management Review*. Summer.
- [15] W. Van Osch C.K. Coursaris, C (2013). *Organizational Social Media: A Comprehensive Framework, Research Agenda*. *Proceedings of HICSS 46*, Maui, Hawaii, USA, Jan 4-7, 2013.
- [16] Skeels, Meredith M., Jonathan Grudin. "When social networks cross boundaries: a case study of workplace use of facebook, linkedin." *Proceedings of the ACM 2009 international conference, Supporting group work*, pp. 95-104.
- [17] von Krogh, G. (2012). How does social software change knowledge management? Toward a strategic research agenda. *Journal of Strategic Information Systems*, 21, 154-164.
- [18] Benbya, H., Van Alstyne, M. (2013). How to find answers within your company. *MIT Sloan Management Review*, 52(2): 65-75.
- [19] Zwass, V. (2010). Co-Creation: Toward a taxonomy, an integrated research perspective: *International Journal of Electronic Commerce*, 15(1): 11-48.
- [20] Treem, J. W., Leonardi, P. M. (2012). Social media use in organizations. *Communication Yearbook*, 36, 143-189.
- [21] Brzozowski, M.J. (2009). Watercooler: exploring an organization through enterprise social media. *GROUP '09*.
- [22] Dai, Y., Kakkonen, T., Sutinen, E. (2011). SoMEST- a Model for Detecting Competitive Intelligence from Social Media. *Proceedings of the 15th MindTrek Conference*, Tampere, Finland: 241-248.
- [23] Fulk, J. Yuan, Y. C. 2013. Location, Motivation, and Social Capitalization via Enterprise Social Networking. *Journal of Computer-Mediated Communication*, (19:1), pp. 20-37.
- [24] Majchrzak, A., Faraj, S., Kane, G.C., Azad, B. (2013). The Contradictory Influence of Social Media Affordances on Online Communal Knowledge Sharing. *Journal of Computer-Mediated Communication*, 19: 38-55.
- [25] Zhao, D., Rosson, M. (2009). How and why people Twitter: The role that micro-blogging plays in informal communication at work. *Group '09 (pp. 243 - 252)*. ACM.
- [26] Ancona, D. G., Caldwell, D. F. 1992. "Bridging the boundary: External activity and performance in organizational teams," *Administrative science quarterly* (37), pp. 634-665.
- [27] Vaast, E., Kaganer, E. (2013). Social media affordances, governance in workplace: An examination of organizational policies. *Journal of Computer-Mediated Communication*, 19(1), 78-101.
- [28] Java, A., Song, X., Finin, T., Tseng, B. (2007). Why we twitter: understanding microblogging usage, communities. In *Proceedings of the 9th WebKDD and 1st SNA-KDD workshop on Web mining, social network analysis (pp. 56-65)*. ACM.
- [29] Patton, M.Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.
- [30] Avital, M., Boland, R. J., Lyytinen, K. (2009). Introduction to designing information and organizations with a positive lens. *Information and Organization*, 19(3), 153-161.
- [31] Schultze, U., Avital, M. (2011). Designing interviews to generate rich data for information systems research. *Information and Organization*, 21(1), 1-16.
- [32] Avital, M. (2003, January). Reexamining information systems success through the information technology professionals perspective. In *ECIS (pp. 88-102)*.
- [33] Antin, J., Churchill, E. F. (2011). Badges in social media: A social psychological perspective. In *CHI 2011 Gamification Workshop Proceedings (Vancouver, BC, Canada, 2011)*.
- [34] Lave, J., Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*. Cambridge University Press.
- [35] Wenger, E., McDermott, R., Snyder, W.M. (2002). *Cultivating Communities of Practice*. Harvard Business Press.