

Enterprise Social Media: Current Capabilities and Future Possibilities

This article provides a platform-independent framework for considering the effects of social media on enterprises. The framework comprises the two fundamental capabilities of social media: establishing social networks and accessing digital content; and the two impacts these capabilities have on organizations—employee performance and user behavior. The article identifies the implications for managers as they consider the design decisions for an enterprise social media platform.¹

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The Potential of Enterprise Social Media

The use of social media has soared in popularity in recent years. Facebook has over 1.3 billion users, while Twitter and LinkedIn users number in the hundreds of millions. New social media platforms, like Pinterest and Snapchat, seem to appear rapidly and from out of nowhere. Organizations, however, have largely lagged the public in their adoption of social media platforms for business purposes. The focus of consumer-facing platforms is to keep users engaged with the platform so the social media company can gather more data and sell more advertising. The focus of enterprise social media, however, is not simply to encourage people to use the platform more, but to use it to accomplish business objectives more efficiently or effectively.

Companies typically begin by using social media for marketing, which means their initial foray often begins with communicating with their customers via consumer-facing platforms. For example, cookie giant Oreo released an advert via Twitter just minutes after a blackout at the 2013 Super Bowl, promising that “you can still dunk in the dark.” It generated over 500 million views. Companies, however, are increasingly using social media for internal collaboration, talent management and even operations. Multinational companies, such as BASF and State Street Bank, are using social media to help their global organizations work more effectively across geographic and cultural boundaries. Enterprise social media platforms such as Yammer and Chatter have begun to emerge to support these relationships.

Mandviwalla and Watson have recently described how companies can use existing social media infrastructures to build human, social, organizational, economic and symbolic capital.² A 2010 *MIS Quarterly Executive* special issue on industry and enterprise applications of social media provided some valuable case studies for readers seeking deeper insights into how



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¹ Dorothy Leidner is the accepting senior editor for this article.

² Mandviwalla, M. and Watson, R. “Generating Capital from Social Media,” *MIS Quarterly Executive* (13:2), 2014, pp. 97-113.

companies are using social media to achieve different business objectives, such as marketing,³ innovation,⁴ human resources⁵ and strategy.⁶

Complementing this earlier work, this article helps business and IT managers to begin thinking about the potential business applications of social media beyond the current widespread use of consumer-oriented platforms or enterprise-grade platforms modeled on them. Platforms designed for or modeled on consumer-facing platforms will not necessarily translate well into an organizational context that has different objectives. Furthermore, as enterprises begin to adopt social media for a variety of business purposes, such as innovation, operations and human relations, which platform is best will likely depend on the particular business purpose. While enterprise social media can look to consumer social media as a starting point, more radical developments may be necessary to support the types of business objectives most companies hope to realize with enterprise social media. This article provides an advance look about what is possible with using social media for business applications, what might be coming in the not-too-distant future and how to think about the changes social media will bring to the workplace.

To accomplish these goals, I apply and extend previously published insights.⁷ I augment this theoretical perspective with practical insights obtained through surveys of 4,700 executives worldwide and 18 interviews of social media business leaders at several top companies.⁸ This combination of rigorous academic work and

practical industry examples provides managers with a valuable resource for thinking about the current state and future possibilities of enterprise social media.

Social Media Capabilities and their Effects on Organizations

Although specific features differ widely, social media platforms provide users with two fundamental capabilities that can be beneficial for organizational applications. The first capability is the ability to *establish and manage social networks in novel ways*. Despite the long-recognized benefits of effective offline social networks to companies, research has shown that people are generally poor at understanding the structure of their social networks and their place in them. Social media platforms can overcome this problem by providing tools that allow users to visualize, analyze and navigate the structure of their social networks in ways that can maximize their value. For example, LinkedIn can list the business contacts two people have in common to provide a relational context for new connections. It can also enable users to plot the most effective path for making a desired connection by identifying the individual who provides the fewest degrees of separation to the desired connection. Similar capabilities might be used within an enterprise to identify people with particular skill sets or knowledge.

The second capability provided by social media platforms is the ability to *find and access digital content*. For years, executives in industries that increasingly rely on information have recognized that helping employees find the right information or expertise at the right time is important for competitive advantage. If employees answer questions on a social media platform instead of by email, that answer may be stored and searched in the future by other employees needing to answer the same question. For example, BASF found that the efficiency of project groups increased by 25% when using social media. An important source of this efficiency gain came from new group members getting up to speed more quickly by being able to access the history of group communication and decision making. When organizational communication occurs on social media platforms,

3 Gallagher, J. and Ransbotham, S. "Social Media and Customer Dialog Management at Starbucks," *MIS Quarterly Executive* (9:4), 2010, pp. 197-212.

4 DiGangi, P., Wasko, M. M. and Hooker, R. L. "Getting Customers' Ideas to Work for You: Learning From Dell How to Succeed With Online User Innovation Communities," *MIS Quarterly Executive* (9:4), 2010, pp. 163-177.

5 Leidner, D., Koch, H. and Gonzales, E. "Assimilating Generation Y IT New Hires into USAA's Workforce: The Role of an Enterprise 2.0 System," *MIS Quarterly Executive* (9:4), 2010, pp. 229-242.

6 Culnan, M. J., McHuch, P. J. and Zubillaga, J. I. "How Large U.S. Companies Can Use Twitter and Other Social Media to Gain Business Value," *MIS Quarterly Executive* (9:4), 2010, pp. 243-259.

7 Kane, G. C., Alavi, M., Labianca, G. and Borgatti, S. "What's Different About Social Media Networks? A Framework and Research Agenda," *MIS Quarterly* (38:1), 2014, pp. 275-304.

8 The interviews were conducted as part of a joint research initiative with Deloitte and *MIT Sloan Management Review*. I am grateful for the assistance of my colleagues in that effort, the results of which can be found at <http://sloanreview.mit.edu/big-ideas/social-business/>.

Table 1: A Framework for Considering How Social Media Affects Organizations

	Establish Networks	Access Content
How does platform design constrain user behavior?	1. Consider how platform design affects the way in which people interact	2. Consider how platform design affects the way people share and access content
How does platform use affect employee performance?	3. Consider how people will use the platform to network more or less effectively	4. Consider how people will share and protect content more or less effectively

the knowledge contained in that communication can become available to all members of the organization.

These two capabilities can influence organizations in two different ways. At the most basic level, they can influence *employee performance* by enabling more effective interactions with or among customers (e.g., marketing or customer service) or among employees (e.g., innovation or internal communication). Yet the long history of information systems research shows that simply possessing technology is not enough to influence employee performance. People must use information systems and use them effectively to achieve desired outcomes. Managers, however, should be wary of assuming that a performance effect will be positive, and they should beware of possible unintended outcomes. For example, although a social media platform theoretically allows people to communicate with more people, it could ultimately reduce the value of this communication if people only communicate with others who are like them.

The second influence is that social media platforms can *constrain employee behavior* in certain ways. These constraints create an environment that may be more or less conducive to accomplishing particular business objectives. Thus, enterprise platform design must align with business objectives. For example, Google designed its internal prediction market so that employee identities were not revealed to other users. The reason for this design choice was so users would feel free to make predictions, such as predicting whether a project they are working on would meet its benchmarks, without repercussions from their managers. If employee identities were

known, users might be unduly pressured to avoid unpopular predictions, which was precisely the information Google executives wanted.

In contrast, Denyer et al.⁹ describe a large multinational telecoms firm that chose a social media platform that allowed anonymity for enterprise communication. The result was that the communications on the platform became extremely divisive and political, an outcome that is echoed by previous research on online anonymity. This implies that the impact of a platform may be limited if its design matches poorly with the business purpose.

The two fundamental capabilities provided by social media (managing one's social network and accessing digital content) and how they affect organizations (i.e., influencing employee performance and constraining behavior) provide a practical and systematic framework for considering the distinctive questions and unique capabilities that social media introduce for the enterprise. This framework, which is summarized in Table 1, can help boil down the complex social media landscape into a manageable set of decision points, each of which must be considered when designing or choosing an effective enterprise social media platform. In turn, this can help managers become more sophisticated consumers of social media technologies and more effective leaders in environments that are increasingly governed by them. The four decision points that must be considered are now described in detail.

9 Denyer, D., Parry, E. and Flowers, P. "Social', 'open' and 'participative'? Exploring personal experiences and organizational effects of Enterprise 2.0 use," *Long Range Planning* (44), 2011, pp. 375-396.

1. Consider How Platform Design Affects the Way People Interact

When most people think of social media platforms, they usually think of the major consumer-facing players such as Facebook, LinkedIn and Twitter. A closer look at these platforms shows some important distinctions between how they support relationships among users. Likewise, companies can implement platforms to support many different types of relationships with customers and between employees. These differences can be described in terms of persistent relationships, multiple connection types and connection capabilities missing from current platforms. These features of platform design are described below, together with an outline of their possible organizational impacts and examples of how they are currently being used. The discussion of these features is summarized in Table 2.

Persistent Relationships

Today's social media platforms can support many different types of interpersonal connections. The connections perhaps most widely associated with social media are relationships—persistent connections in which a user subscribes to information updates from another user. Examples include Facebook friends and Twitter followers. These connections are valuable because the information originator does not need to specify the audience for the information, such as by addressing an email. Since the communication is not directly targeted to any individual, these digital relationships can reduce information overload and allow greater communication because people can connect only when they have the time and opportunity to read and respond.

In terms of persistent relationships, perhaps the most important issue is network boundaries—who is permitted to join a social media platform and what privileges they possess—as this will determine with whom users can connect. The enterprise social networking site Yammer limits an individual's network to other users who share the same corporate email domain. In contrast, the MITRE Corporation—a large research and development organization—

developed an internal social media platform that allows employees to invite external business partners to join. This feature not only enables companies to use the platform for conducting business with these partners, but it also creates opportunities to work together with partners to solve shared problems. Even small design differences about how platforms support connections can have important implications for how those networks are used and for what purpose.

Platform design can determine certain features of relationships that may affect how information is shared on social media. For example, LinkedIn users must confirm a connection, a feature known as “symmetry,” but Twitter users do not. This minor design difference can lead to very different types of user networks. Celebrities, business leaders and thought leaders frequently use the asymmetric ties supported by Twitter to communicate directly with interested followers, who can often number in the millions. It is unlikely that Twitter users could effectively manage these connections if they had to confirm each follower individually. On the other hand, people may prefer a platform with symmetric ties for sharing personal or sensitive information because they have better control over who will have access to that information.

Another design consideration is the number of relationships a user can maintain on a platform. Twitter allows an infinite number of followers, Facebook allows users to maintain 5,000 friends, Path allows 150 connections, and the Couple platform allows a connection with only one other user. While the general sentiment may be “more is better,” limiting the number of connections affects the purposes for which the platform is used. One might think marketers would resist being limited to 150 relationships with customers, but the market research firm Communispace derives deep customer insights from smaller customer communities.¹⁰ Likewise, maintaining over 150 connections on an enterprise social network may restrict the value of those connections because research has suggested that humans are cognitively limited in the number of relationships they can effectively maintain. Limiting the number of connections on an enterprise social

¹⁰ Keinan, A. *Communispace*, Harvard Business School Case 510-018, November 2009 (revised January 2010).

Table 2: Platform Design Affects How People Relate to Others

Feature	Description	Organizational Impact	Examples
Persistent Relationships	The platform enables persistent interpersonal connections. How these digital relationships are managed will influence who a user connects with and why.	<ul style="list-style-type: none"> • Network boundaries determine who can join the platform and with whom one can connect. • Restricting the number of ties may cultivate stronger, more intimate connections. • Symmetric ties provide greater control over who accesses a user's information but require more effort by the user. 	MITRE's Handshake platform uses expanded network boundaries, allowing non-employees to join the enterprise social network. The marketing firm Communispace limits the number of people in an online community to create more intimate interactions and generate deeper insights.
Multiple Connection Types	The platform can support multiple types of connections, which may be used in combination to support different types of connections.	<ul style="list-style-type: none"> • Interactions represent discrete exchanges, like email or direct messages. • Proximities capture digital groups that can create connections. • Flows represent information sharing without other types of connections. 	With no effective customer service channels to communicate with customers, KLM used a Twitter hashtag (an example of flows) to communicate with stranded passengers in the wake of the Icelandic volcano eruption in 2010, facilitating operations in this crisis.
Missing Connection Capabilities	The platform does not include features that are well-studied in offline social networks.	<ul style="list-style-type: none"> • Tie strength reflects the frequency and depth of a connection, whether close colleague or acquaintance. • Negative ties recognize that some organizational relationships are toxic and counterproductive. 	Most employees distinguish between acquaintances and close colleagues, but most platforms do not. Negative ties in one multinational telecoms firm led employees to use the platform for political and divisive behavior.

media platform may also reduce the amount of employee self-promotion, which was a problem at one of the studied organizations.

Multiple Connection Types

Although persistent relationships may be the most well-known type of connection supported by social media, many platforms support different

types of connections in combination. The three most common connection types are interactions, proximities and flows.

Interactions, the most familiar type of connection, are discrete exchanges on an electronic platform, such as email or direct messaging. These familiar types of interactions will not disappear with social media because

private messaging is supported by most social media platforms. The problem is that employees often use electronic interactions for all types of communication, even when they may not be the most effective medium. This overuse can create all sorts of information management problems, of which most employees are well aware. For example, collaboratively editing documents via email can create version control problems, a problem that is easily solved by several types of social media tools.

Proximities reflect whether users are close to one another in geographic or electronic space. For example, the financial services firm USAA found that new hires were better assimilated into the organization after it created an electronic group that enabled them to connect with one another.¹¹ This objective can be accomplished through simpler technologies that support digital proximities, such as discussion boards or chatrooms. Current platforms also can support geographic proximities through location-aware applications. The ride-sharing company Uber, for example, provides value through matching someone who needs a ride with a nearby driver. In a practice known as geofencing, companies are seeking to use digital proximities to help businesses know when customers are near business locations in order to send location-based messages or offers. These messages are a type of social connection.

Flows are a type of connection that captures the movement of information between users who may not share any other type of connection. For example, Twitter hashtags and trending topics allow people to share and view content of a particular type or about a particular subject without being connected to others sharing it. Flows allow rapid organization around matters of shared interest. They can be used to engage consumers who are observing a live event, such as Oreo's tweets during the Super Bowl blackout. They are also used to organize people in response to a crisis. The American Red Cross monitors information flows to determine when and where disasters strike by monitoring keywords, such as "tornado" or "earthquake," and organizes

volunteers using social media platforms.¹² In a similar vein, the Dutch airline KLM used Twitter hashtags to communicate with passengers stranded by the 2010 Iceland volcano eruption.¹³

Of course, information flows can also be used to organize customers wanting to complain. Companies as diverse as McDonald's,¹⁴ JP Morgan¹⁵ and the NYPD¹⁶ have attempted to use information flows to communicate with loyal customers, only to have them hijacked by disgruntled consumers who instead shared their negative experiences with the organization.

Missing Connection Capabilities

It may be worth considering which features are missing from social media platforms but that are valuable in offline social networks. For example, most employees have multiple colleagues, some of whom they are closer to or trust more than others. Most social media platforms, however, treat relationships as binary—either someone is a connection or they are not. Yet one of the most heavily researched relational characteristics in traditional social networks is *tie strength*, or how frequently and deeply someone interacts with someone else. Relationships of different strengths have different benefits and drawbacks. For example, weak ties are valuable for obtaining novel information, while strong ties are more valuable for trusting information obtained from others. Weak ties are more valuable for searching for information, while strong ties are more valuable for transferring knowledge, particularly tacit knowledge that is not easily articulated.¹⁷ There will be organizational situations where it would be beneficial to differentiate strong ties from

12 Kane, G. C. "The American Red Cross: Adding Digital Volunteers to Its Ranks," *MIT Sloan Management Review*, May 23, 2104; reprint #55409.

13 Kane, G. C. "Reimagining Customer Service at KLM Using Facebook and Twitter," *MIT Sloan Management Review*, April 30, 2014; reprint #55404.

14 Hill, K. #McDStories: When a Hashtag Becomes a Bashtag, *Forbes.com*, January 24, 2012, available at <http://www.forbes.com/sites/kashmirhill/2012/01/24/mcdstories-when-a-hashtag-becomes-a-bashtag/>.

15 Greenhouse, E. "JP Morgan's Twitter Mistake," *New Yorker*, November 17, 2013.

16 Ford, D. #D'oh! NYPD Twitter campaign backfires, *CNN*, April 24, 2014, available at <http://www.cnn.com/2014/04/22/tech/nypd-twitter-fail/>.

17 Hansen, M. T. "The Search-Transfer Problem: The Role of Weak Ties in Sharing Knowledge Across Organization Subunits," *Administrative Science Quarterly* (44:1), 1999, pp. 82-111.

11 Leidner, D., Koch, H. and Gonzales, E., op. cit., 2010.

weak ties, but most social media platforms do not recognize this important nuance.

Another missing feature in most social media platforms is a way of managing *negative relationships*, the people someone dislikes in a network. Research has shown that negative relationships are particularly important in organizations.¹⁸ Although they typically comprise only 3% to 8% of all organizational relationships, negative relationships are often disproportionately influential on employee performance, dragging down performance more than positive relationships improve it. Yet most social media platforms allow only relatively limited means for managing negative relationships, such as hiding or blocking them, which may be inappropriate in an organizational setting. One large multinational telecoms firm found that its social media platform became an avenue for complaining, negativity and political behavior by both leaders and employees.¹⁹ Without effective means to minimize the effects of negative relationships, social media platforms may amplify the adverse effects of negative ties on employee performance.

2. Consider How Platform Design Affects the Way People Share and Access Content

Just as the design of relational features can affect how people connect with others on a social media platform, so too can the various options for sharing content influence what types of content users share on the platform. Whether the platform encourages or discourages the sharing of a particular type of content influences the types of information users can access. Additionally, different platforms preserve different types of content shared by or about an individual, making this content more or less transparent to others in the network. What content the platform supports, what data it stores and how it allows individuals to present themselves all affect how people use the platform and its impact on organizations. These features of platform design are described below and summarized in Table 3.

¹⁸ Labianca, G. and Brass, D. J. "Exploring the Social Ledger: Negative Relationships and Negative Asymmetry in Social Networks in Organizations," *Academy of Management Review* (31:3), 2006, pp. 596-614.

¹⁹ Denyer, D., Parry, E. and Flowers, P., op. cit., 2011.

Content Support

The simplest example of how platform design affects what people will share is the type of content the platform supports. Some platforms support text, others support multimedia such as video, still others support hypermedia links and most support a combination of types. Researchers have long recognized that there is a tradeoff between reach and richness of digital content. The relatively thin content of Twitter, limited to 140 characters, may contain little information but is easily shared and searched. The richer content of a YouTube video may contain considerably more information, but the content is more difficult for users to skim or search.

It also may be important for a company to monitor or control what information employees share about the company on social media. Platforms like Hearsay Social provide banks of pre-approved content that employees can share on behalf of their company on social media platforms, a particularly valuable feature in regulated industries. This content can enhance the brand of both the employee and the firm.

Platforms can support different types of meta-content, such as rating and feedback mechanisms, that may influence how content is accessed and used. For example, most customers consult and trust online consumer ratings before making a purchase. The types of meta-content supported will lead to different types of evaluation. "Liking" content only allows people to express affirmation, while various voting mechanisms allow people to be critical or express ambivalence, and providing the ability to add comments allows people to engage in debate. These same methods may be used in an enterprise social media platform to validate knowledge contributed by employees, helping the firm to identify the most valuable knowledge contributed on the platform. Which approach is more desirable in an organization will likely depend on the purpose for which the platform is used.

Digital Trace

Social media not only support digital content that is explicitly shared but can also include content that the platform automatically generates. This digital trace can record a user's behavior on the platform, summarizing it for analysis by other users, such as how long the user has been

Table 3: Platform Design Affects How People Share and Access Content

Feature	Description	Organizational Impact	Example
Content Support	Different platforms allow users to contribute different types of content, such as text, multimedia and hypermedia.	<ul style="list-style-type: none"> • Thin content such as Twitter tweets contain less information but spread more easily. • Rich content, such as YouTube videos, contain more information but may spread less easily. 	Platforms like Hearsay Social provide employees in regulated industries with repositories of pre-approved content that can be used to support branding and sales.
Digital Trace	Many platforms capture and present a digital record of a user's activity on the platform, such as how long they have been a member and what content they have viewed.	<ul style="list-style-type: none"> • Strong digital traces preserve interactions so that others can use them at a later time. • Weak digital traces create channels that may be more suitable for sharing sensitive information. 	BASF found that new members of a project group could get up to speed faster when they had access to the digital trace of the team's communications.
Profile Authenticity	The extent to which a user's online identity corresponds to his or her offline identity is different across different platforms.	<ul style="list-style-type: none"> • Less anonymity allows accountability, but may make users reluctant to share potentially controversial ideas. • Greater anonymity leads to people contributing more creative or honest content but can lead to greater polarizing behavior. 	Google uses anonymity in its internal prediction market to encourage employees to make predictions that may be unpopular.

a member of the platform, when the user was last active, and what content the user has shared, commented on, liked or viewed while on the platform. For example, LinkedIn lets users know who has viewed their profile in recent days, and many messaging applications let users know if others are currently active on the platform.

Digital traces enable companies to analyze data generated by social media platforms. Recent research has shown that the ability to analyze social media data is the most important differentiator between companies that are and are not successful in using social media for

business purposes.²⁰ For example, healthcare company Kaiser Permanente analyzed customers' digital traces and realized that inadequate parking at its facilities was one of the most significant customer complaints. Digital tracing allowed the company to identify the overall issue and identify which facilities had the most acute problems. Similarly, EMC Corporation monitored feedback on a digital discussion board to gain

20 Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D. and Buckley, N. "Moving Beyond Marketing: Generating Social Business Value Across the Enterprise," *MIT Sloan Management Review* (Special Report), July 14, 2014.

insight into how employees were reacting to a proposed downsizing.²¹

However, a lack of a digital trace may also have benefits for collaboration. Snapchat, the photo-sharing app, provides neither a history of what content is shared nor with whom it is shared. While the popular press suggests that Snapchat's primary purpose is for teens and young adults to send inappropriate images, the real motivation is that Snapchat's users prefer a platform that makes it more difficult for the content they share to be used against them at a later time. Any professional who has carried out a conversation on a sensitive topic by phone or in person, rather than by email, will recognize potential applications for social media platforms that do not provide a strong digital trace.

Profile Authenticity

Profile authenticity, or whether a social media profile accurately represents the user's real-world (i.e., offline) identity, may influence what content is shared on social media. Many platforms build a strong connection between a user's online and offline identities. For example, Facebook goes to great lengths to design the platform in a way that encourages users to connect their Facebook profile with their real-world identity. Twitter also takes steps to explicitly verify a user's identity in certain settings. The connection to a user's offline identity means he or she has greater accountability for the content shared via the platform, and it may mean that other users trust this content more.

A potential downside of high authenticity is that it increases the chance of creating problematic interactions between online and offline identities. More than one employee has been fired (and many more likely not hired) for information posted online once that information was connected to their real-world identities. Many employees are fearful of using enterprise social media because of the possible impacts on their careers.

Other platforms, however, permit or require users to remain anonymous, providing no connection with the user's offline identity. Examples include Ask.fm and Whisper. Anonymity

may be used in business contexts to encourage honest employee feedback, as in Google's prediction market. Employees will be reluctant to express the opinion that their project is going to be late if their boss will know that they have shared that opinion with the whole company. In other situations, anonymity is less valuable. For example, one company did not allow anonymous contributions to its social media bookmarking system because knowing who bookmarked something was an important way to validate the importance of that content.²²

Studies have shown that anonymity encourages users to engage in inappropriate or polarizing behavior. *The New York Times* eventually decided to prohibit anonymity in article comments because of rampant inappropriate and divisive behavior by anonymous users. Instead, the company selected another option available on social media platforms, known as "pseudonymity." In this case, the user's online profile is not connected to his or her offline identity, but the user does develop a persistent online reputation associated with the online profile. Pseudonymity may provide many of the benefits of anonymity with fewer risks. Its risks, however, are that users may collude or game the system to improve their reputation scores. For example, the top users on the news aggregation site Digg were discovered to be supporting each other's content to keep them at the top of the leaderboard. Similar collusion will likely occur in organizations if they provide rewards or recognition to the most valuable contributors.

3. Consider How People Will Use the Platform to Network More or Less Effectively

Social media platforms provide many capabilities that allow users to network in ways that are difficult, if not impossible, either in offline settings (such as face-to-face discussions) or with previous communication technologies. Because of this, it is not yet clear whether and how employees will use the new capabilities to influence their networking behavior. Social

21 Davenport, T. H. and Manville, B. *Judgment Calls: Twelve Stories of Big Decisions and the Teams That Got Them Right*, Harvard Business Review Press, 2012.

22 Koch, H., Leidner, D. and Gonzalez, E. "Digitally Enabling Social Networks: Resolving IT-Culture Conflict," *Information Systems Journal* (23:6), 2013, pp. 501-523.

Table 4: People Will Use Platforms to Network More or Less Effectively

Feature	Description	Organizational Impact	Example
Network Transparency	Social media platforms can allow users to visualize the connections between users on a platform.	The effects of network transparency are unclear: <ul style="list-style-type: none"> • It could allow users to network strategically and create diverse networks that are more valuable for information sharing. • Or it could reinforce natural networking tendencies, which can create reinforcing networks of redundant connections that are less valuable for enterprise purposes. 	Enterprise platforms could use features already established in consumer platforms that allow users to identify mutual connections or the best path to connect with a desired user. This would aid networking in the organization.
Visualization	Social media platforms can create visualizations of the entire network of interactions.	Managers can use visualizations in two ways: <ul style="list-style-type: none"> • To get a better picture of how employees are working together • To assess whether interventions have the desired outcomes. 	Using network visualization techniques, one small technology firm was able to identify the cause of high turnover and take steps to mitigate it.
Recommendation Engines	Social media platforms can provide recommendations of others with whom it may be beneficial to connect.	Recommendation engines can be designed to help employees develop networks that are more valuable to both the enterprise and the employee.	LinkedIn provides the shortest path through the network that is most likely to make valuable connections, such as potential sales contacts.

media platforms provide the opportunity for employees to visualize their direct connections or to visualize the entire network. Research in both offline and online social networks suggests that people might use this information in ways that reinforce their natural networking tendencies, which often creates networks that are not ideal for an enterprise setting. Enterprise social media platforms should consider developing recommendation engines to mine existing data and make recommendations that counteract

these natural tendencies. These features of platform design are described below and summarized in Table 4.

Network Transparency

Network transparency—the ability to visualize the entire social network and one’s place in it—is a key capability provided by social media platforms. The most basic element of this transparency is the ability to see other users’ lists of connections, which may reveal information about relationships that would

otherwise have gone unnoticed. For example, Facebook informed me that a member of my project team was connected to one of my best friends, a connection we had not previously made despite having worked together for a year. Social media platforms can help surface similar types of relationships that might otherwise have gone unrecognized in traditional organizations, which can serve as connections to bridge different parts of the organization and remove information silos. Some research suggests that even a few such bridging relationships can have a significant effect on information-sharing outcomes.²³

Social media platforms can provide metrics about a user's network that can enable more strategic networking. These metrics may be simple counts of the number of friends or followers, which help users track the status of their social networks and compare them to others'. Alternatively, platforms may use complex algorithms to quantify the influence of various users in the network using multiple metrics. Marketers can use these metrics to identify influential customers. The online service Klout, for example, has partnered with the enterprise social media platform Yammer to provide influence metrics among employees within companies. Employees could use these metrics to help them network more effectively in the enterprise setting. Of course, these metrics could have downsides. Employees in one company used a social media platform primarily to boost their individual reputations, not for the intended purpose of information sharing.

Network Visualization

Outside parties can use the data about the social media network to help improve the network's structure by employing network visualization. When employees use social media platforms for communication, managers can use this information to better understand how their employees are working together. Numerous services allow managers to monitor and assess communication activity on consumer-oriented platforms. For example, applications such as Vizster and Gephi allow users to visualize their social networks easily, and similar services could

be used to provide insights for enterprise social media platforms. While previous generations of managers had to operate by "walking around," social media platforms can provide valuable insights through dashboards and other visualizations of various employee interactions on the organization's social media platform.

For example, one small technology company used network visualization techniques to identify the reason behind unexplained high turnover in the company. The core of the network turned out to be dominated by unmarried employees, who were unintentionally excluding their married colleagues from after-work activities. Network visualization allowed managers to identify the source of the problem and to design interventions that helped mitigate it, such as family-friendly extracurricular events. Subsequent visualization was used to assess the effectiveness of these interventions, based on their effect on the network structure.

Of course, it is important to design such monitoring tools while respecting employee privacy. For example, a manager may need to ensure that the marketing department communicates with the product development department. A dashboard could clearly show whether such communication is happening without identifying individual employees or revealing the content of their conversations. Facebook uses similar technology to reveal the essential information about its social network to its partners without compromising the personal information of any individual.²⁴ Information regarding the wider network structure could be invaluable for employees and managers seeking to create network structures that improve performance outcomes.

Recommendation Engines

Many consumer social media platforms provide recommendation engines that suggest other people with whom a user may want to connect. This could be used to help offset the detrimental tendencies of the way in which people network. They tend to seek out others who are like them on social media platforms, a principle known as "homophily." People also

23 Kane, G. C. and Alavi, M. "Information Technology and Organizational Learning: An Investigation of Exploration and Exploitation Processes," *Organization Science* (18:5), 2007, pp. 796-812.

24 Kane, G. C. "How Facebook Is Delivering Personalization on a Whole New Scale," *MIT Sloan Management Review*, August 5, 2014; reprint #56120.

tend to connect with mutual friends, a network tendency called “closure,” which is hastened by recommendation engines that readily identify mutual connections. Researchers have long recognized that greater homophily and closure in a social network can lead to inferior decision making,²⁵ as they tend to provide the illusion of diverse perspectives while reinforcing key biases of the group. These connections may lead to a more enjoyable experience for the user, but they reduce the opportunities for accessing diverse and valuable information.

Enterprise recommendation engines could be designed to counteract the natural tendencies toward homophily and closure by recommending people who are dissimilar from the user in important ways. Doing so could help users to participate in diverse networks that are more valuable for decision making. Instead of recommending people who are similar to a user—as do the most popular consumer platforms like Twitter, Facebook and LinkedIn—these engines could recommend people who have skills currently missing from the user’s network, such as expertise in a specific programming language. They could also suggest people it may be advantageous to connect with to accomplish a particular goal. For example, the platform could recognize that there are relatively few connections between the product development and marketing groups and suggest some possible connections between them based on employees’ mutual connections. Since people tend to naturally prefer homophilous and closure networks, it may be important to make transparent why certain recommendations are being made, which is a key insight from the literature on product recommendation engines.²⁶

Enterprise social media recommendation engines could provide better information about the strategic advantages of an individual’s existing network, allowing the user to better leverage those advantages. For example, the platform could make a user aware that he or she was the primary person bridging the marketing and product development groups or the Boston and New York offices. That user could then begin to play the bridging role more consciously,

creating greater advantage from that position. Considerable research has investigated product recommendation engines, and insights from this research could be used to better design enterprise social media recommendation engines.

4. Consider How People Will Share and Protect Content More or Less Effectively

Social media platforms provide many different tools for accessing the content available in networks, whether through automated newsfeeds, keyword searches or trending topics. Yet all content search and access capabilities are not created equal. Each has different effects on the type of information a platform provides and, in turn, on how this information will influence employee performance. Furthermore, individuals often want to share, or not share, certain content with particular audiences or stakeholders, and platforms need to be designed to support this privacy in an enterprise setting. These features of platform design are described below and summarized in Table 5.

Content Aggregation

Content aggregation mechanisms influence how users find and access content on a social media platform, with potentially significant differences in knowledge outcomes. For example, many newsfeed algorithms determine what information to provide based on the information that is most popular or the information the user has accessed in the past. By highlighting information that is likely to be useful to the user or that others have found useful, these mechanisms can be extremely helpful in reducing search costs for valuable content. On the other hand, limiting the search in such a way may reduce the likelihood of discovering new and valuable information that lies outside these predetermined preferences. James March describes this tradeoff in terms of exploitation versus exploration of knowledge.²⁷ With exploitation, the user leverages the knowledge he or she already possesses for greater short-term benefits, often at the cost of long-term outcomes. With exploration, the user tries to discover useful new knowledge, which will hinder short-term

25 Janis, I. L. *Victims of Groupthink*, Houghton Mifflin Company, 1972.

26 Xiao, B. and Benbasat, I. “E-Commerce Product Recommendation Agents: Use, Characteristics, and Impact,” *MIS Quarterly* (31:1), 2007, pp. 137-209.

27 March, J. G. “Exploration and Exploitation in Organizational Learning,” *Organization Science* (2:1), 1991, pp. 71-87.

Table 5: People Will Share and Protect Content More or Less Effectively

Feature	Description	Organizational Impact	Example
Content Aggregation	Social media platforms often aggregate shared content in different ways.	<ul style="list-style-type: none"> •Exploitation mechanisms (e.g., search) help users find information whose value is known in advance. •Exploration mechanisms (e.g., newsfeeds) help users find knowledge whose value may not be known in advance. 	Users of IBM's Practitioner Portal can search for previously successful proposals to use as templates, rather than creating them from scratch. Newsfeeds may reveal that a colleague is in town, leading to an unplanned meeting.
Privacy	Social media platforms typically allow users to protect contributed content from use by certain other users.	<ul style="list-style-type: none"> •Stronger privacy may entice users to contribute more but makes the information less available to others. •Weaker privacy makes information more available to others but may make people less willing to share. 	Most social media privacy research has been performed in the consumer setting. It is not clear how privacy will affect information sharing in the enterprise context.

performance but potentially have greater long-term benefits.

A balance between exploration and exploitation allows users to gain the most value from digital content. Multiple types of search mechanisms may need to be available on a platform to ensure that users are provided with a diversity of content types. Search algorithms are more valuable for finding and exploiting specific content in the network, such as a software problem that may have been solved by another user years earlier. Newsfeeds, in contrast, provide users with updated information on current and recent events in their network, allowing them to explore information whose value is not known in advance. Knowing that a business colleague will be visiting someone's city next week may prompt the user to recommend a lunch meeting that wouldn't have happened otherwise. The biggest impact on performance will likely come when employees use multiple content mechanisms that allow them to both explore and exploit the knowledge found on a platform.

Privacy

Most social media platforms provide some sort of privacy settings, allowing users to control which of their content other users can access.

Previous research suggests that these privacy settings may have a paradoxical effect on the overall amount of content available on the network. On the one hand, privacy protections restrict how content can flow across a network. As people increase their privacy settings, it necessarily limits the number of others who can find their content useful. On the other hand, the availability of privacy protections may make users more willing to contribute content, because they have some control over how that information is used. For example, online groups that are only accessible to members of a specific project team will likely encourage those users to share information about the project in ways they wouldn't if the content was available to other members of the company or the client. Thus, privacy settings may result in a net increase in the amount of valuable information on the platform if the privacy protections encourage people to contribute rather than restrict the flow of information.

Very little research has addressed the need for privacy in enterprise social media platforms. For example, in one company, the private and semi-private groups are used far more extensively than the groups that are open to all members of the organization. Our research suggests that these

groups are popular because they are shielded from the type of self-promoting behaviors that are common in the open groups. Employees will communicate differently if their boss is, or is not, part of the group, though there may be value in both types of communication. For example, employees or a project team may want to communicate without other members of the company being able to access that content. On the other hand, a project team might gain value from transparent communication where outsiders are free to comment or contribute potentially valuable knowledge. Managers also could monitor the contributions of employees who perform work on a social media platform more readily than in face-to-face settings.

Implications for Managers

The discussion in this article of how social media affect the enterprise has some specific implications for IT and business managers as they think about designing and implementing an enterprise social media platform. A colleague of mine says, “History is best understood from a running start,” meaning that it is easier to know where a technology trend is going if you understand how it got to where it currently is. This article positions social media as the natural evolution of previous generations of IT tools and explicitly recognizes older technologies as social media, treating email as digital interactions and chatrooms as digital proximities. However, it is difficult to come up with a definition of social media that includes new tools such as LinkedIn, Facebook or Twitter, but excludes older platforms like email, chatrooms and direct messaging. Nevertheless, this article recognizes that the newer social media tools provide capabilities that have not been previously available to organizations, such as the ability to view, analyze and navigate the organizational network structure. This broad view of social media has six main implications for managers.

1. Think about a Social Media Platform in Terms of What it Can Do for Your Company

Many business executives think of social media in terms of specific platforms: Do we need to be on Facebook, Twitter or Yammer? The

problem with this approach is the sheer number of possible choices it presents, even when the technical differences between the platforms may be negligible and often change as the platforms evolve. Many of the differences between platforms involve sociological factors, such as how they are adopted, by whom and for what purpose—differences that may not be relevant for an enterprise setting, because the sociological factors and purposes of enterprise social media will differ from consumer-facing applications.

Basing an enterprise’s social media strategy only on currently available tools, instead of on what these tools make possible, leaves the enterprise always playing catch up and at the whim of a constantly changing technology landscape. Instead, this article advocates an understanding of social media platforms in terms of their key capabilities of managing interpersonal networks and sharing content. Such an approach can help simplify the decision points in preparing to adopt social media in the enterprise and can make these decisions more robust with respect to changing platforms.

2. Your Company is Already Using Social Media, but are You Using it Well?

In this article, email is considered as a type of social media. Thus, if your employees are using email, you already are using social media within your organization. So, the managerial question is not *whether* to use social media, but *how* to use it best to support your business goals. Email is a great tool, but it is not the best one for all the myriad purposes for which most companies use it. For instance, most will likely have experienced a version control problem while collaboratively working on a document shared via email, a problem that can be solved through several social media tools. This shift in focus from whether to use social media to how best to use them is often a key motivation for justifying new initiatives.

3. Social Media Changes Some Things and Not Others

While social media introduce some new challenges for managers, it also means that many of the managerial issues associated with social media are consistent with previous generations of IT issues. For example, the current managerial

fears of employee time-wasting on social media is similar to concerns 20 years ago about email and the Internet. Beware the pundits who tell you that the social media revolution will change everything you know about business and IT. Some things will change with social media in an enterprise setting, but many will not.

4. Social Media Competes with Older Technologies for Time and Attention

Managers should plan for competition from older technologies when implementing social media platforms; many employees will revert to the old way of doing things because it's more comfortable and familiar. For example, BASF banned some project teams from using email to encourage employees to use new tools.²⁸ At another company, employees felt a need to duplicate communication on email and social media, increasing the effort associated with work. Employees may be reluctant to adopt social media just because they and their colleagues are accustomed to working another way.

5. Social Media is Intertwined with Other Digital Trends

Woven throughout this analysis are other digital trends beyond social media. For example, social media are now nearly inseparable from mobile technologies. Most social media platforms are accessed more on mobile devices than on traditional computers, and nearly two-thirds of Facebook's revenues now come from mobile devices.²⁹ Mobile devices influence how people network and share content through social media. For example, they are responsible for the proximity ties discussed earlier. The ability of mobile devices to capture rich content, like video, has also changed the type of content shared on social media platforms.

Likewise, it may be difficult to separate data analytics from social media. Research shows that the ability to analyze social media data is one of the biggest predictors of a company's social media maturity and, in turn, its ability to

derive business value from it.³⁰ Much of the value of digital trace data comes from the ability to analyze this data to provide insights and inform decision making. The network visualization tools and recommendation engines discussed earlier involve the integration of social media data and analytics. It would be a mistake to think of social media as separate from these related digital trends.

6. Technology is Only Part of the Story

The examples used throughout this article show that the key capabilities of social media—managing social networks and sharing digital content—can both help and hurt an organization. Social networks can be established in a way that provides access to rich and diverse sources of information that aids knowledge creation, or they can create a small, insular group of like-minded individuals that reinforce existing biases. Users can share content that improves employee performance or bolsters their company's brand reputation, or they can share divisive content or tarnish the organization's image in the eyes of the world. A sophisticated understanding of how social media technologies interact with the business environment can help maximize the positive outcomes and minimize the negative.

Concluding Comments

Based on a combination of insights published in a 2010 *MIS Quarterly Executive* special issue on industry and enterprise applications of social media and more recent practitioner research, this article has provided a framework for considering the design decisions for an enterprise social media platform. The framework provides a productive and simple way to think about the effect of social media on the enterprise that moves beyond a discussion of the merits of specific platforms or currently available features. The combination of rigorous academic research and practical examples provides business and IT managers with a valuable resource as they think about the future possibilities of enterprise social media.

28 Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D. and Buckley, N., op. cit., 2014.

29 Albergotti, R. "Facebook Answers Critics With Mobile-Ad Surge," *Wall Street Journal*, July 23, 2014.

30 Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D. and Buckley, N., op. cit., 2014.

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