



The business side of social media



In a world increasingly dominated by social media, just how effective are social networking tools for collaboration and innovation within business? **Dr Wietske van Osch** explains her recent research on the effects of enterprise social media tools on business networking and interactions

Although many people are familiar with social media sites, the term enterprise social media (ESM) is less known. Could you introduce this type of social networking?

ESM is a class of web-based tools that enable employees to communicate or broadcast messages; to build, maintain and visualise their networks of co-workers; to post, edit, sort and link text and files within the system; and to view the content and connections of anyone else in the organisation. The core objective of these tools is to facilitate social capital formation; that is, the ability to identify unknown others in the organisation that have similar interests or complementary skills and expertise. As such, these tools have the potential to foster greater interaction, collaboration and innovation.

What encouraged you to focus your research on ESM?

I have always had a strong interest in innovation – particularly in collaborative innovation. The rise of ESM tools offers unprecedented opportunities for collaborative innovation; however, the hype around these tools and the vast investments businesses have made it particularly relevant to assess their impact. Furthermore, we now have access to vast amounts of behavioural data (what people actually say and do) and this opens up tremendous opportunities to measure actual behaviours and real performance impacts.

How are you and your team analysing data from ESM networks? Have you encountered any challenges with your approach to handling big data?

The inherent advantage – and complexity – of ESM is the variety of data that are available,

including content data, interaction (ie. network) data, timestamps, locational data, profile data and much more. Therefore, traditional approaches dominant in the organisation sciences – such as surveys and interviews – are obsolete. We have drawn upon related fields in computer science and engineering (artificial intelligence, natural language processing and machine learning) as well as computational social science methodologies (most importantly, large-scale social network analysis). The integration of these methodologies enables us to measure many different dimensions of the data and combine them in novel ways to produce intriguing findings to traditional organisation science questions.

What benefits are gained from having ESM networks within large or multi-national businesses?

I believe there are three key benefits for large global organisations. The first is to establish a shared identity and shared culture. Employees in large organisations easily feel alienated, especially those that do not reside in the core (headquarters). ESM provides an opportunity for these people to have a voice as well as to stay in touch with important news about the company and its many locations. It also enables them to share rich media – photos and videos – that give people a quick glimpse into what others do. Second, ESM facilitates knowledge and information sharing between members of the organisation that previously did not know each other, thereby creating opportunities for serendipitous encounters and discoveries. Third, ESM can be used as a platform for internal crowdsourcing, thereby enabling companies to harvest ideas from a much larger group of employees than those traditionally involved in innovation roles –

and potentially employees that are closer to the customer – resulting in products or services that have a greater likelihood of successful commercialisation.

How do you hope to expand your research on ESM systems in the future?

There are two primary ways: the first is by growing the number of companies and industries I currently work with, so that I can validate my frameworks in diverse settings and create more reliable algorithms and predictive models of boundary spanning, innovation and team project success. The second is by developing what I refer to as an intelligent innovation dashboard, which is something that we have begun working on recently. Currently, organisational teams are much like a car without a fuel metre; they have no way of knowing if they are going to collaborate and innovate successfully. Hence, through the algorithms that I have developed in collaboration with the rest of my research team, I hope to not only be able to accurately predict a team's innovativeness, but also use near real-time data from ESM and possibly other interaction tools. This is to give a team continuous feedback on the prospects of innovativeness and project success, as well as suggestions for how to increase the likelihood of successful innovation.



Spanning boundaries with enterprise social media tools



The adoption of enterprise social media tools within large multinational organisations is growing, but is there a measurable benefit? To answer this question, researchers from the Department of Media and Information at **Michigan State University**, USA, are investigating the impact of such tools on boundary-spanning activities

INTERACTING WITH SOCIAL media has become a daily habit for many of us. Indeed, 65 per cent of online adults in the US now use social networking sites, a nearly tenfold jump in usage in the past decade alone. It is therefore no surprise that businesses have started to see beyond using social media networks as marketing vehicles and are starting to employ enterprise social media (ESM) tools within their organisations. In fact, the global enterprise social software market is forecast to grow from US \$4.77 billion in 2014 to \$8.14 billion in 2019.

What is less certain at the moment is how successful ESM tools are at providing benefits to the business investing in them. "Although we believe these tools will improve the opportunities for interaction, collaboration and innovation, is this what is actually happening?" asks Dr Wietske van Osch from the Department of Media and Information at Michigan State University.

BOUNDARY-SPANNING ACTIVITIES

To gain insight on the potential advantages of ESM tools, van Osch and her team are

investigating the impact of ESM tools on boundary-spanning activities; that is, making connections with higher levels of management (vertical boundary spanning) or with peers (horizontal boundary spanning), within the organisation but outside of the team.

Boundary-spanning activities fall into three main categories: representation, seeking recognition and support from higher levels of management; information search, seeking knowledge and expertise from peers; and coordination, seeking ways to increase efficiency and effectiveness through synchronisation efforts with peers. "Boundary spanning is a critical antecedent to innovation and improved performance; teams that engage in more successful boundary spanning create more successful product and service innovations," clarifies van Osch.

Indeed, previous studies on the impact of boundary spanning have focused on innovation and operational effectiveness. Van Osch's research is examining for the first time whether the ESM interactions and boundary-spanning activities are successful in generating the

Van Osch's research is examining for the first time whether the Enterprise Social Media interactions and boundary-spanning activities are successful in generating the interactions that result in innovation and operational effectiveness

interactions that result in innovation and operational effectiveness.

COLLABORATION

The research required a collaborative partner that uses ESM tools and would agree to share large datasets from the

interactions on its ESM platform. van Osch forged a partnership with Steelcase, a large worldwide provider of workplace products and services. Headquartered in the US, the company has approximately 10,000 employees in nearly 40 countries and had launched an ESM platform in March 2012.

"It was clear that the primary strategic objectives for Steelcase were to use ESM to enable a greater sense of connectedness and 'sharedness' among employees; to foster enhanced information and knowledge sharing among dispersed individuals within the organisation; and to enable collaborative innovation through internal co-creation and crowdsourcing," says van Osch. "However, they had very limited ways of measuring their success."

DEVELOPING AN ALGORITHM

The first step of the collaboration was to develop a machine-learning algorithm to identify and measure actual, rather than self-reported, team boundary-spanning activities. To do this they coded each interaction from the 2,029 discussions and 6,500 threads that were retrieved from blogs and discussion threads of 415 groups.

The resulting algorithm had an accuracy of 86.2 per cent and showed that about two-thirds of interactions in ESM can be classified as one of the three boundary-spanning activities – representation, information search or coordination. This implies that ESM tools are relied upon by teams to obtain access to critical resources that reside elsewhere in the organisation. "Our research indicates that ESM has the potential to make an impact not only on how teams interact with each other, but also on the team's performance and therefore on the organisation's performance," concludes van Osch.

TYPES OF TEAMS

The research also found that different types of teams are more successful at different types of boundary spanning and innovations. "We found that open teams – where one does not need to be a team member to write content – are more successful at obtaining legitimisation and monetary support and more likely to produce incremental innovations. Whereas closed teams – where writing is the sole prerogative of team members – are more successful at information search and coordination, and are more likely to produce radical innovations," clarifies van Osch.

Around 30 per cent of all interactions coded in the current research were not categorised into any boundary-spanning activity. However, these interactions might lead to new social connections that, in the future, could result in boundary-spanning activities. In addition, van Osch has plans to investigate whether there are other, previously uncategorised, boundary-spanning activities encompassed by ESM.

INCREASING THE USAGE OF ENTERPRISE COLLABORATION TOOLS

Van Osch outlines the strategies that businesses can employ to increase usage of enterprise social media (ESM) tools:

1. Showing commitment from senior management is a critical success factor. Senior management need to demonstrate engagement and appropriate usage behaviours, which helps to alleviate any concerns employees have about appropriate usage that might keep them from participating
2. Showcasing success stories of collaborations or projects that were only successful as a result of conversations on ESM is another way to highlight the potential of ESM
3. Having an active community manager who creates diverse opportunities for the shy and reluctant to contribute is another critical strategy to increase adoption and use
4. Incentive structures, which can be as simple as celebrating the 'ESM user of the month' or a successful ESM-based project, is an important way for the company to show that they are truly valuing employees' engagement and contributions toward the system
5. Increase awareness: training users not just on how to use but, again, on the potential benefits associated with the system is crucial in growing the adoption and use of ESM technologies in the most productive and impactful manner



BETTER PREDICTING SUCCESS

Future research by van Osch and her team will leverage a combination of artificial intelligence, natural language processing and machine learning to create predictive models of innovation and success levels of organisational teams based upon their ESM interactions and boundary-spanning activity. The results will be used together with real-time data to suggest ways in which teams can collaborate and innovate more successfully, thereby demonstrating significant return on investment for businesses investing in ESM tools.



ENTERPRISE SOCIAL MEDIA

OBJECTIVE

To research the impact of enterprise social media (ESM) on boundary-spanning activities in large organisations.

KEY COLLABORATOR

Professor Charles Steinfield, Michigan State University, USA

PARTNER

Steelcase Inc., USA

FUNDING

US National Science Foundation

CONTACT

Dr Wietske van Osch
Assistant Professor

Department of Media and Information
Michigan State University
404 Wilson Road
436 Communication Arts and Sciences
East Lansing
Michigan 48824
USA

T +1 517 353 3122

E vanosch@msu.edu

<http://www.drvanosch.com>

[@wvosch1](https://twitter.com/wvosch1)

http://bit.ly/LI_WVO



DR WIETSKA VAN OSCH is Assistant Professor in Media and Information at Michigan State University and visiting Professor in Information Systems at the IESEG School of Management,

France. She studies ESM for collaboration, boundary spanning and innovation with a focus on the design of generative systems.

MICHIGAN STATE UNIVERSITY

