“By using the VTN to locate and leverage needed knowledge and expertise throughout the organization, we have been able to create a global community that not only feels included but also is able to make problems visible and solve them faster, accelerate decision making, and increase innovation.”

Enabling a New Way of Working through Inclusion and Social Media

A Case Study

By Robert Guenard, Judith Katz, Samantha Bruno, and Marty Lipa

Introduction

During the past several years the emergence of social media has significantly transformed how people connect and interact with one another. There are many examples of this impact: friends and family staying connected through Facebook, professionals networking via LinkedIn, and people communicating through the microblogging capabilities of Twitter. The social media revolution may have started with a more social purpose by enabling personal and professional networks, but it has also had a major societal impact in instances such as the Arab Spring (Khondker, 2011). In addition, many organizations are now using social media to engage in market research, advertise products and services, ask for and listen to customer feedback, catalyze open innovation through “crowdsourcing,” and increase connectivity and collaboration within their workforce (McAfee, 2009). As such, there is a growing movement to use social media tools within enterprises to become more productive, to better serve customer needs, and to engage people (O’Dell & Hubert, 2011). In our experience, the need for a highly collaborative environment has become increasingly important as a result of an increasingly global workforce and the demands of doing more with less.

One of social media’s most important advantages is the democratization of knowledge: like the Internet itself, social media represent a disruptive change in how we both communicate and share information and knowledge with one another. By directly connecting individuals (nodes) in a network, social media can largely remove the historical barriers of knowledge flow.

One factor in the rapid viral adoption of social media is that they intrinsically include people in a public dialogue. Specifically, people have an avenue to make their voices heard and their ideas shared, resulting in a high level of personal engagement, which in turn can lead to very rich input and outcomes. This type of dialogue requires an underpinning of values about how people engage and interact with one another.

One particularly effective way to frame the necessary values is what we call Inclusion as the HOW®—inclusion not simply as a “nice thing to do,” but as an essential lever for achieving higher performance and accelerating bottom-line results. Regarded as a HOW, inclusion becomes a way of life that underpins everything the organization does: how it develops strategy, sets goals, makes decisions, runs meetings, solves problems, and engages people, and how people interact.

Within the Inclusion as the HOW framework, people have a sense of belonging: they feel respected, valued, and seen for who they are as individuals; there is a level of supportive energy and commitment from leaders, colleagues, and others so that people—individually and collectively—can do their best work (Katz & Miller, 1995). Combining social media technologies and the power of an inclusive work culture facilitates a new way of working that enables organizations
to unleash the knowledge and creativity of their people.

In this case study we describe the implementation and adoption of social media tools along with inclusive behaviors to create a Virtual Technical Network (VTN) in the technical function of a multinational organization to enable a new and better way of working. By using the VTN to locate and leverage needed knowledge and expertise throughout the organization, we have been able to create a global community that not only feels included but also is able to make problems visible and solve them faster, accelerate decision making, and increase innovation. The success stories range from individuals who are better connected in the organization and can make new connections on demand, to improvements in knowledge transfer and application, to quantified business benefits measured by increased efficiencies and cost reductions.

The Issue: Tacit Knowledge Flow

The Science, Technology, and Commercialization function (STC) in Merck performs late-stage product development, launch, and ongoing technical support of the manufacture of all pharmaceutical products. The business also provides manufacturing operations for clinical studies and commercial supply. The function is comprised of approximately 3,000 highly skilled scientists, engineers, and support individuals who are dispersed in more than 50 locations and 20 countries around the globe.

A big challenge for the STC function, as with many knowledge-rich organizations, is the restriction and obstruction of knowledge flow across people in the organization. According to the principles of knowledge management (KM), roughly 20% of organizational knowledge is explicit (easily documented and transferred) and 80% is tacit (in people’s heads and not easily captured) (O’Dell & Hubert, 2011). The flow of tacit knowledge requires connections between and among individuals. Studies have shown that people are five times more likely to seek knowledge from other people than from repositories of inanimate information (Allen, 1995). Some barriers to this knowledge seeking include physical distance, organizational boundaries, technology limitations, and cultural/behavioral norms (Hansen, 2009).

Within the STC function, connections among experts, explicit sources of knowledge, and colleagues were inconsistent and informal at best, depending largely on individual personal networks and the operating paradigm of “it’s who you know.” In addition to the knowledge flow challenge, Merck recently had undergone a significant merger, doubling the size and scope of the company and thus making the information challenge that much more difficult, because the STC function also had doubled in size. Indeed, at the beginning of the merger, individuals were placed in the position of not knowing half or more of the people in the combined organization, even within their own area of expertise. Clearly, personal networks—the norm in both legacy companies—would not be sustainably effective in such a large, globally dispersed organization.

As an operating principle in the STC function, we sought to make problems visible and solve them quickly and collaboratively at the root cause. To accomplish this in the combined organization, we needed to connect the right people in the organization at the right time. The intent was to create and implement a solution that would:

1. Create a sense of connectedness and identity in the newly merged organization;
2. Maximize the flow of tacit knowledge so that the collective experience of people could be harnessed; and
3. Serve as an avenue and enabler for creating an inclusive global community in which all people in the STC function could individually and collectively do their best work.

To fulfill these objectives, we implemented the Virtual Technical Network (VTN) (Figure 1), a business capability based on a combination of social media tools and knowledge management principles with an underlying foundation of inclusive mindsets and behaviors.

The VTN Solution

The VTN solution uses both physical technology (social media tools) and social technologies (KM principles, network theory, behaviors, cultural norms, etc.) to achieve the intent we were seeking. The social media technologies included...
two major online elements: expertise profiles and virtual communities of practice. Both are part of the standard enterprise-wide portal, to which all individuals in the company had access at any time from their workstations.

Creating expertise profiles. As part of the VTN each person was asked to complete an expertise profile, which provided a way for people to connect with and learn about other people in the organization. Individuals seeking people with a certain expertise, education, or experience can connect to others quickly via an enterprise-level search. This expands an individual’s connections to include all others in the enterprise; one does not need to personally know who is in the network, and connections can be made anytime one can access the system. To maximize the value of the profile, we recommended that everyone in the organization capture a standardized, minimum set of information, including their education, prior experience (particularly regarding technologies and products), current work, professional interests, and a photo of themselves. The result resembled the faculty profile pages found on websites of many universities.

Developing communities of practice. Communities of practice (or topic communities), the other major element of the VTN, are virtual collaboration spaces where individuals with common interests and needs can seek and/or share information around a specific topic. Within these communities, members can pose questions to subject matter experts, connect to explicit knowledge, share information, co-create, and build a community point of view. Each community has a community steward, for which a standard role description was created. This steward is charged with setting the vision and scope for the community (including its link to improved business outcomes), making interpersonal connections, guiding the conversation of its members, and providing overall energy for the group. The role of community steward is extremely important for a healthy, productive community; the identification of stewards requires a certain degree of formality and structure to ensure that the stewards selected have the time, competency, and motivation to provide the necessary leadership. Similarly, the scope of the community must be carefully devised to ensure there will be a critical mass of people with the energy to actively participate.

The role of community steward is extremely important for a healthy, productive community; the identification of stewards requires a certain degree of formality and structure to ensure that the stewards selected have the time, competency, and motivation to provide the necessary leadership. Similarly, the scope of the community must be carefully devised to ensure there will be a critical mass of people with the energy to actively participate.

In addition, our Enterprise Portal Team has made the enterprise-wide portal available via smartphone and tablet. As part of this program, we are now piloting an application that allows mobile access to the VTN. Once this application is fully implemented, the opportunity for people to monitor and contribute to the VTN will increase dramatically as they will not be constrained by physical location or by time of day. For example, many of our technical experts travel to our numerous plant sites around the globe. Mobile VTN access enables them to monitor the activity and contribute anywhere in the world including waiting in line at the airport or riding in a cab on their way to a plant. It will make collaboration on the VTN as accessible as the email on our mobile devices we are accustomed to.

Inclusion as the HOW: The Catalyst of the VTN

Commonly, knowledge management solutions fail because the technology is designed, developed, and implemented with little focus on (or out of sequence with) considerations of people, process, and content. In the STC function, we have found that starting with process—what knowledge needs to flow across the business—is critical. Also important is understanding how people interact around the KM solution because, for tacit knowledge to flow, people will need to have the right mindsets and behaviors to seek connections with others and to share with them (Hansen, 2009).

At the outset, we identified a strong connection between the KM work being done to pilot the VTN and our efforts to make inclusion a foundational element of our new operating model. Because we are implementing inclusion as the way to inspire and engage people, improve performance, and boost productivity to new levels, we recognized that inclusion would quite naturally enable the VTN to fully realize its intent. Conversely, the VTN—with its capacity to connect people across functions around the globe—provided an excellent opportunity to enable inclusion on a global scale and across functional boundaries.

To build inclusion into the VTN, we created foundational “rules of engagement” based on the 12 Inclusive Behaviors (Katz & Miller, 1995). These rules were designed to set a common expectation and create an environment that would motivate people to do their best work while collaborating using the VTN. The rules of engagement (see Tables 1 and 2) also provided clearly established boundaries for engaging in safe, positive, and effective ways. These rules were presented to the users in multiple ways at the launch of the VTN and on an ongoing basis, including: general VTN awareness and marketing efforts; lunch-and-learn and other enrollment sessions; and clear visibility via a
central location on the VTN home page. In addition many of the VTN mindsets and behaviors had been shared previously as part of the work on Inclusion as the HOW—so most people were familiar with their elements in their day to day interactions and working.

Stewards actively monitor how people are engaging in the community. Often the stewards will highlight how people are applying the rules of engagement and provide acknowledgement to individuals who actively contribute to the community. This acknowledgement can take place on line or via Peer Awards and other recognition mechanisms.

Implementing the Change

Because the VTN was designed to transform how we work together, its implementation necessitated the use of systematic change execution methods and tools. In addition, particularly in the wake of the merger, the human factor presented both our biggest risk and our greatest opportunity.

By performing the proper due diligence around the change, we identified several major challenges in the existing environment to maximizing the benefits of the VTN. In order for the VTN to be successful, the environment would need to value people who willingly and proactively exhibited knowledge-seeking and knowledge-sharing behaviors.

Specifically, we found two primary categories of challenges to implementing this fundamental change in the way we work:

1. Those related to implementing social computing technology for increased collaboration in our existing culture
2. Those specific to an environment of immense change, owing to the merger as well as transformation in the industry

In terms of social computing (using social media), people raised significant concerns about making problems visible to others outside of their areas of responsibility. Our organizational culture combines a high regard for technical excellence with a historically hierarchical structure and business practices. The concern was that these cultural elements could cause people to hesitate before putting their issues out in the open, because the perception that someone was “not knowing” could potentially damage that person’s reputation of scientific excellence. In addition, by making problems visible on the VTN, people could be seen as “going around” the normal business practice of keeping the issue within the functional management chain. We also identified some aspects of a “not invented here” culture, which encourages people to invent what they need instead of seeking and leveraging existing knowledge first.

Also important to adopting social media is gaining a critical mass of users and their activity level to make the social network valuable. With only a limited number of users, the VTN would not hold much more value for people than their own personal networks.

The second change dilemma essentially involved the capacity of the organization to absorb immense change. Amid

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<tr>
<th>Table 1: VTN Mindsets and Behaviors</th>
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<tr>
<td>• Need to build trust in the community (honoring and respecting each other).</td>
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<td>• Be willing to share information.</td>
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<td>• Be willing to put yourself out there and ask questions.</td>
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<td>• Listen as an ally:</td>
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<tr>
<td>o We want to be a learning community.</td>
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<td>o All questions are good (respond constructively).</td>
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<td>o Do not talk about people’s postings in a negative way.</td>
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<td>• Create a sense of safety for yourself and others:</td>
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<td>o No negative consequences for speaking up.</td>
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<td>o Give positive feedback for exhibiting good behavior.</td>
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<td>• Create a 360-degree vision and accept people’s frame of reference as true for them:</td>
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<tr>
<td>o Problems are complex and we want many perspectives on them to get the power of collaboration.</td>
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<tr>
<td>• Ask who else needs to be in the room.</td>
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<td>• Who else needs to be in the conversation to build out the solution.</td>
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<th>Table 2: VTN Do’s and Don’ts</th>
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<td><strong>DO</strong></td>
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<tr>
<td>• Listen to what others are saying.</td>
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<tr>
<td>• Ask clarifying questions.</td>
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<tr>
<td>• Share what you know and think.</td>
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<tr>
<td>• Give energy back to people.</td>
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<td>• Link off of others’ ideas.</td>
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<tr>
<td>• Post what you learn (e.g., email chain).</td>
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<td>• Give people the context of your comments.</td>
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all the transformation (including the merger—going from 30 to 90 plants and doubling in size) that was taking place in both the company and the pharmaceutical industry and changes to health care itself, there was a clear lack of appetite for another initiative. As such, we needed to minimize the impact of any change where possible and quickly generate visible value to both the individuals and the organization. To do this it was critical that the VTN was seen as a part of getting work done and in the workflow.

Approach to the Change: Structural Elements

Like many change efforts, the development of the VTN included several necessary structural elements. The sponsorship of senior leaders was never in question, as our senior vice president provided resources, removed barriers to implementation, and influenced the organization with a compelling case for change. The core team managed the change and acted as the governing body for the network. To build the system, we adapted the enterprise portal technology to fulfill VTN objectives. An introductory training program was developed and delivered via e-learning and live sessions. The core team provided on-demand support, and all questions and answers were archived in the VTN for anyone to access.

The formation of initiative teams in the VTN effort is of particular note, because it used the same principles of inclusion that we emphasized within the network itself. Two primary teams were chartered: a core team and a design team. The core team consisted of a cross-disciplinary group representing our KM office, IT department, and change management program support. The design team, which included representation across the business areas, was equipped to provide the “voice of the business” to the core team’s efforts. At the same time, each representative of a business area served as a primary point of contact for VTN information during the implementation process. Also, the core team interfaced with the enterprise portal team to bring the “voice of the VTN” into future technology discussions. All of these steps made the process as inclusive as the VTN was to be—enabling the teams to gain a 360-degree vision of each issue by hearing from many perspectives, and ensuring that the right people were doing the right work at the right time from start to finish.

Approach to the Change: Creating a Movement

Often, after the installation of structural elements like those mentioned above, leaders declare, mission accomplished—and subsequently come up short in return on
investment. To realize and sustain the benefits of a well-connected virtual workforce, we believed it was necessary to unleash the energy of the human network: to create a movement. It was critical to engage people so that they wanted to join and participate in the network and dramatically change the way they were interacting and solving problems. The concern was that if we rolled out the VTN like any other program, few people would join or change their interactions. We knew we had to do something different—to signal that indeed the VTN itself was different from other programs. This is where inclusion and social computing also connected.

The overall drivers for and against the change are shown in Figure 2.

The Pilot

To test this change approach, we ran a pilot of the VTN with five communities, featuring five different business topics, and 250 people. This pilot, which lasted five months, helped us to uncover challenges with the technology, gauge people’s ability to collaborate via the network, and identify which attributes of the communities of practice would create healthy activity. The five topic communities were selected through a structured approach, using a filter that considered such attributes as breadth of interest, potential business value, urgency to the business, level of existing expertise, and population impact. These first five topics included the following knowledge domains: powders processing; analytical sciences; product stability; designed experiments; and equipment cleaning practices.

One of the most important factors in selecting the topics was whether there was a critical mass of people who were passionate about each topic. We knew that we would need passionate individuals to become community stewards, so significant effort was spent identifying and recruiting them.

The Community Stewards were not necessarily the top SMEs (subject matter experts) for a given topic but were selected for their ability to connect people, their energy and willingness to be visible in the community, and their overall knowledge of the topic and where expertise exists across the company. These stewards were initially identified via selection by senior management and in later communities by the community sponsors. Often, multiple stewards are selected for a community to help ensure rapid response to user posts and broader, diverse knowledge of the topic.

During the pilot, we were able to discern how well people could use the technology and collaborate. The key learnings included:

1. People would need the right training on how to use the system.
2. The predicted cultural barriers to seeking and sharing knowledge manifested themselves and would need to be overcome.
3. The communities would need strong local sponsorship to shift behaviors. This involved the quality and energy of the steward and rewards to stewards for spending time on the VTN in addition to their day-to-day responsibilities. Ultimately the goal is to make stewardship part of their daily work.
4. For a significant number of community members, the VTN represented an entirely new experience. Many individuals in the STC function did not use tools like Facebook and Twitter in their personal lives.
5. Because communities have unique characteristics and differences, people must use the principles of inclusion and knowledge management to maximize the synergy and business impact of each community.

With these learnings we constructed a full launch strategy to install and realize the VTN.

The Full Launch

Based on what we learned from many organizations that have implemented social computing (Bradley, 2011; Stouffer & Smith, 2011; Wilker, 2011; APQC, 2011; APQC, 2012), we sought to ease people into the new way of working. Initially, we focused on a communication campaign encouraging people to complete their expertise profiles and teaching them how to search for others. As an incentive for people to complete their profiles, we held a contest to win an iPad that generated a lot of excitement and represented a way to make this a movement rather than just another program or tool. Complementing the iPad contest was an online scavenger hunt that challenged people to use the system to find information.

Once a critical mass of people had completed profiles, we focused our strategy more intently on collaboration in the communities themselves. Concurrently we continued to work to create a movement and energize the human network so that we could reach the point at which the VTN would be self-sustaining.

Establishing an Energized Human Network

On its own, installation of information technology is a necessary but insufficient step toward realizing the full potential of social computing. The additional required elements were more cultural: they started with identifying the required mindsets and behaviors of the individuals in the network. To realize the full potential of the VTN, we developed the following approach:

1. **Energize the early adopters and first followers** (such as stewards and natural change agents). We began this effort by selecting key change agents—a majority of whom were also existing connectors and brokers in the STC human network—to be the first group of community stewards. To energize them we tapped into their intrinsic motivators of serving a higher purpose and sharing their technical mastery. Initially we enrolled them in the VTN intent and the case for change, charging them to create early energy for themselves as pioneers, as well as inspiring others as first followers to take the journey with them (Sivers, 2010). Purposeful inclusive interventions by the core team provided positive consequences such as verbal and written appreciation and sharing of successes with other stewards and leadership. As such, the core team gave supportive energy back to the
stewards, let them know they were not alone in this journey, and communicated that their work with first followers was critical to the change and future success of the organization.

2. **Work to engage the entire organization in the change.** Complementing the work with the stewards and first followers was a more typical approach to enroll the entire organization in the change and create an environment for the new way of working. The key theme of the communication campaign (mentioned in the previous section) was that the VTN represented a new way of working that would benefit individuals by providing answers to their questions quickly and effectively. These communications were particularly effective in connecting the VTN with inclusive behaviors.

Though two years may seem like a long time, it actually represents a rapid transformation, given the amount of change that needed to occur and the environment in which the change was implemented. This is especially true given that the latency for a large change in our organization averages three to five years. We attribute this acceleration to the energized network approach, committed sponsorship, and integration of inclusion as part of the VTN strategy.

3. **Leverage encouragement and support from the senior leader.** In his travels around the globe, whether in one-on-ones or in town hall presentations, the senior leader was consistently visible in his sponsorship of the VTN, continually restating the case for change and asking people if they had engaged via the VTN to date. This dedicated sponsorship, together with positive feedback and reinforcement from the organization’s leadership team, enabled managers to feel comfortable with people making problems visible on the VTN—a major breakthrough that was essential to the entire effort.

4. **Make the VTN user friendly and built into the workflow.** A self-paced computer-based training program was developed to acquaint people with the system. Efforts were made to identify places where the VTN could be put into the natural flow of work rather than used as an additional step or an afterthought. An example of this involved adding a step to an investigation business practice, reminding the user to check the VTN for potential insights or solutions—to make the problem visible to others.

5. **Share and facilitate success stories.** The challenge was to make these successes visible to everyone in the organization while providing a way to make it easy for people to share their stories of success. To accomplish this, we created a discussion board on the VTN, an easy avenue for people to share their success stories, and a visible link was placed on each community site for people to share and read such success stories to create further relevance and interest. These stories are also highlighted in the STC monthly newsletter, reaching more than 5000 people, and during meetings when we share success stories as part of our Inclusive Meeting Norms (Miller & Katz, 2012). Success stories are powerful for telling the new story and creating energy in the organization, they are also an excellent indicator of the tangible value that the VTN provides, and the practical application VTN achieves across the organization. The core team tracks and (where possible) completes a financial benefit statement on these success stories as realization indicators.

**Conclusion**

With all of the efforts made during the last two years, the VTN is now a critical avenue for making problems visible and solving them collaboratively. In a recent survey, most people in the organization indicated that the VTN is a valuable new way of working and a primary source of knowledge that they would recommend to others. Many indicators show that we are realizing benefits from the change, including a large bank of success stories, many of which have substantial and quantifiable business value, in addition to many un-quantified benefits in terms of employee engagement and other intangibles.

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To date, the VTN has accomplished and sustained what it was designed to do: create a global inclusive community. Through the VTN, people have facilitated the connections necessary to create breakthroughs, accelerating problem solving and decision making. Success stories have ranged from people increasing their personal network via their interactions using the VTN to solving significant technical business challenges with people from around the globe to assure reliable and compliant supply of medicines to our patients. We have logged many success stories which have generated significant business impact in terms of financial savings, production facility uptime, and employee engagement, among others. As both membership and usage increase, we believe this partnership of social computing and inclusive behaviors will provide even more benefit to the people who use it and, by extension, to Merck as a whole.
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