ROUNDTABLE REPORT

Building a Behavior Analytics Dashboard: Visualizing Complex Dynamics of ESNs

SNAPSHOT

SPEAKERS
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COMPETENCIES
Strategy

MATURITY PHASES
CMM3, CMM4

HIGHLIGHTS

1. **Interested in learning which strategic objectives worked for Steelcase's dashboard?** Wietske shared their 3 practical objectives.
2. **Looking for a dashboard measurement approach?** Wietske offered 2 approaches that worked well for Steelcase.
3. **Want a high-level overview of the results of Steelcase's analytics dashboard?** Wietske summed up 8 proven benefits.

OVERVIEW

- **Background – Lori Harrison-Smith.** Lori is the Internal Community Strategist for Steelcase's 8000 member Spark community, which has been in existence since 2012.
    - Wietske came in to assist with their Workspace Futures Group, which is responsible for research and user insights within Steelcase. They wanted to learn how to measure innovation and collaboration within the company using the Sparks Community.
    - In 2016, they engaged with TheCR. Rachel helped them to develop a strategy and some key behaviors from that discussion, namely Share, Ask, and Find.
    - Next they had the chance to work directly with Wietske and her team. The outcome of that effort was learning how to measure behaviors that they wanted to see on the platform through a dashboard. Unfortunately, Steelcase didn't get to use the dashboard because once it was finally up and running, Steelcase changed platforms.
    - Wietske is now helping them to transition from Jive to Igloo with the data they have gathered so that they can actually put this dashboard into the reporting moving

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CASE STUDY

- **Background.** Wietske is an Associate Professor at Michigan State University in the Department of Media and Information and the Department of Accounting and Information Systems. Her interest in working with the Workspace Futures Team at Steelcase was to learn how to visually depict complex behaviors within enterprise communities, such as knowledge sharing, innovation and creative collaboration.
    - Wietske came from the Netherlands in 2012 to join MSU. At the time, she was interested in public online communities and specifically what makes some of these communities very innovative and successful while other communities die out.
    - Companies began experimenting with enterprise social media and the data showed that 80% of companies had some form of internal community. However, despite this high-level of adoption, there wasn't any research that measured the impact that it had on organizations. Wietske approached Steelcase, who had just implemented Spark and the Jive platform. Their goal was 3 strategic objectives, Connect, Content and Collaborate.

- **Strategic objectives.** The Workspace Futures Team was interested in partnering with MSU to translate the following objectives in a way that was measurable using the conversations from within Spark.
    - ***Connect.*** Steelcase as an organization was interested in the extent to which these internal community platforms could be leveraged to establish and connect a shared culture and identity. The reason this was so important was that Steelcase expanded as a company mainly through acquisition. The idea was to use the platform to foster a shared organizational culture and identity that encompassed staff who previously worked for a different brand.
        - Another benefit was to help break down silos using the Spark platform. Steelcase as an organization was very headquarter-centric. Most of the attention was focused on Headquarters, leaving others in the periphery to feel less important. The platform helped those people to have more of a voice.
    - ***Content.*** The second strategic objective was referred to as "content". This helped to facilitate knowledge sharing, particularly a type of knowledge sharing that the Workspace Futures Team referred to as "boundary spending". This meant shared knowledge across

difficult-to-overcome boundaries, such as knowledge sharing between different geographic locations, departments, etc.

- ***Collaborate.*** This was really phrased in terms of "collaborative innovation". In other words, allowing ideas to flow from places that people don't traditionally think of for innovation and design.

CASE STUDY, CONT.

- **Measurement approaches.** Two approaches were used to help move towards specific measurements. Wietske's team received funding from the National Science Foundation to do a portion of this research. As a result, they initially took a very research-driven and theory-driven approach. However, once they started working with Lori, they soon realized the potential to develop a dashboard around some of these goals. Consequently, the second approach was a more user-centric approach taken as a way to understand the other types of behaviors that could be important to visualize.
  - A focus on complex sentiment analysis was required with the Connect strategic objective as a way to break down silos. With traditional sentiment analysis, the idea is to observe key words that might be negatively or positively anchored. However, what made this more complex was the need to understand the diverse group within Steelcase, i.e. those in the peripheral locations and whether or not a true divide between blue and white collar workers actually existed.
    - The other area they were interested in was the proportion of work-to-social conversations. The reason this was important was the Workplace Futures Team was conducting research into organizational wellbeing. They wanted people to feel happy in the workplace, to experience trust and, therefore, be more creative, more collaborative and more productive. To foster that, the opportunity to be able to talk socially on the platform was needed. The sticking point with executives is that they don't always see the need for this type of interaction. However, even in face-to-face business meetings, the first few minutes are used for social pleasantries. So, why should the platform be any different? Social conversations are important for subsequent collaborative engagements to take place. Armed with that belief, the first part of the sentiment analysis focused on the development of advanced

sentiment algorithms that could help classify conversations as either work-related or socially-oriented.

➢ **Algorithm development.** With respect to the content, which was all about knowledge sharing, Wietske's team developed a machine learning algorithm that classified the different types of knowledge. For the collaborative strategy, they used the same process as knowledge sharing, but instead classified the interactions as a specific type of knowledge sharing. Here they classified various interactions within teams or between individuals as representing different forms of creative conversations.

CASE STUDY, CONT.

- **Machine learning.** This algorithm gathers all the content created on the platform. In the case of the Jive platform at the time, there were 4 different content types: posts, discussions, documents and ideas. They took this data, made it anonymous by replacing names with ID numbers and then manually classified it.
    - MSU students were trained to recognize the different types of knowledge sharing and conversations. They went through 10,000 pieces of content and classified 15% or 1500 conversations. They classified these pieces of content as belonging to one of the above content types.
    - Once the algorithm is trained, it can be compared to the remainder of the data to see how reliable the algorithm was in predicting a particular type of conversation. The reliability was around 96%, meaning that in 96% of cases, the algorithm agreed with how a trained expert would have classified the conversation. In the field of machine learning, 80% is considered high.
    - This exercise suggested that 1/3 of the conversations were not related to any of the types of knowledge sharing that had been identified from theory. From that 33%, 21% of conversations were not work-related, i.e. 1 in every 5 conversations on the platform were social conversations and 12% were work-related, but didn't belong in one of the pre-determined categories.

- **Laying the foundation.** The information architecture must be laid out prior to creating the dashboard. They decided on an Overview Page and then 3 other pages for the strategic objectives of Connect, Content and Collaborate. Lori further defined these with TheCR's classifications of Define, Ask and Share so that a community manager could measure the extent to which different locations, different departments and different users engaged in these 3 sets of activities. Lastly, they developed a style guide that fit with the Steelcase branding.

- **Connect page and use cases.** Wietske worked with Lori to include the pieces of information that she wanted to see as soon as the dashboard was opened, i.e. Find, Ask, Share and the combined sum of these activities. They made it look like Google Analytics or other types of dashboards to help it to be intuitive.
    - The top of the dashboard shows the total number of activities and the number of active users. It also shows a measure of the number of polls that were generated in the community and how many of these polls received responses.
    - It then shows a very brief or immediate observation of the current sentiment within the community. It also shows a ratio of positive-oriented content vs. negative-oriented content.
    - Next it outlines Define, Ask and Share with a brief summary of the commonality of the activities.

CASE STUDY, CONT.

- The bottom displays an overview of the number of times the community was active in the past 24 hours.
- The main purpose of the Connect page was to measure sentiment, as well as the amount of work-to-social conversations.
    - If a major strategic or organizational change happened in the organization – a new CEO, a change to a policy or, specific to Steelcase, the community migration from Jive to Igloo, etc. – the numbers would change because people get frustrated and/or worried. A community manager can monitor what happens to sentiment in

the organization prior to and immediately following a particular change. The sentiment can be analyzed by keywords, such as "Igloo" to see what people are saying about the new platform.

- **Collaborate page.** The dashboard can help community managers analyze when social conversations become the starting point for work-related collaboration. This is very important from a community manager's point of view because that's an opportunity to illustrate the ROI of these platforms.

- **Content page.** This page showcases the number of posts that include elements of boundary spending vs. non-boundary spending, the different kinds of boundary spending that occurred, where they take place within the organization and how the boundary spending evolved over time. For instance, the algorithm categorized the posts as someone asking for help with innovation, coordination of schedules, timelines, budgets, etc. The algorithm defined another post as a representation post. Representation is a type of information sharing where people showcase the things that they've accomplished as a team. That has 2 purposes. It showcases to the organization the types of projects performed as a team so that if someone needs help, they know where to go. It also helps a team establish their legitimacy, which helps when asking leadership for resources.

- **User-driven additions.** The Spark community that accomplished successful vs. unsuccessful projects used these 3 activities in very different sequences. Successful projects begin by asking questions and collecting information about the project in terms of client needs. Next they went on to coordinate activities. When they were successful, they highlighted their achievements to the organization. This is important to know because the dashboard can monitor how different groups in the organization engage in various forms of knowledge sharing. If the pattern maps successful projects, it can show when certain projects may be coming off the rails and support can be offered to get these teams back on track. In this case, the dashboard becomes more than just a visual for the type of collaboration that is occurring. It can actually become a tool for monitoring whether or not collaboration is optimal or sub-optimal.

- For Steelcase, the Collaboration page looks similar to the Content page. However, instead of classifying different forms of creative collaboration, they classify different forms of creative dialogues, i.e. creative collaborations. The easiest way to think about it is through the use of the term "combination expense". This highlights when ideas emerge in a mostly incremental way. So, either by combining existing ideas or by taking existing ideas from one context to another context and then reframing it, it tends to be a more radical form of innovation. In this case, perhaps the question being asked is the wrong question and it should be asked differently in order to help find a solution.
- The dashboard showed that 10-20% of all conversations within Spark are focused on creativity and creative collaboration. The tool could also be used to monitor how teams are engaging in very radical innovation, i.e. whether or not a team has the successful characteristics that match the goal of creative collaboration. If not, they can be steered in the right direction in order to maximize their potential.

➢ **Filters for user manipulation.** The dashboard can highlight the data by region in order to show how active regions are in terms of sharing, finding or asking. The community manager can discover if different regions behave in different ways. For instance, generally speaking, within Steelcase the Asia Pacific Region is more passive. They may use the system to find information, but they are not as likely to share content until recently when Steelcase did a strategy jam with senior management. All of a sudden there was a spike in the sharing activity in this region because it was endorsed by senior management.

- For Steelcase, they filter the data in 3 ways. Regions, date ranges or department. All these filters can be applied across on the different pages of the dashboard.

➢ **Additional features.** Wietske created logins with different user rights. As well, there is the ability to create a report. The final page of the dashboard is particularly helpful for community managers because instead of creating a report manually, the community manager can click the plus sign at the bottom of the chart to automatically add it to the reporting page. Then on the reporting page, they can drag and drop the charts in different sequences and size them based on importance. They can also store templates. For instance, if Lori only wants the charts for Define, Ask and Share for her monthly report and then once a year she wants a chart for the amount of creative collaboration that happens, she could create a template for her monthly report. Every time she logs in monthly it would automatically update the content of these charts for her annual report.

CASE STUDY, CONT.

- **Result.** Wietske summed up the strengths of the platform.
  - It is user-driven.
  - They adopted the look and feel of the dashboards to the brand using the custom style guide.
  - The algorithms are different than the types of customized reports available from Jive or Igloo, etc. in that only a portion of their measures come directly from the data. The dashboards analyze the community conversations and build the metrics from these conversations. This creates highly curated, specific content.
  - There is an easy-to-use reporting functionality. There is a page to build custom reports, save templates, export the report to PDF, etc., which makes the data easier to share.
  - It aligns the dashboard with Steelcase's corporate strategy. They also enabled different user groups with different user rights. Since everything is custom built, they can add everything and anything to the dashboard.
  - In terms of future directions, Lori's immediate need is to redesign the dashboard for Igloo. This means figuring out how to move it away from a platform that was mostly relationship based – Jive followed people – to a platform that is more content-oriented. They also want to make the dashboard available commercially so that other companies can use it, as well. Perhaps something could be built into the product by some of these vendors so that it is an add-on product that companies could choose to have for monitoring and measuring.
  - Wietske would also like to enable near real-time capabilities. Instead of the charts updating on a daily basis at the end of the day when the API has finished spooling, it's something they'd like to enable in real-time so that if a crisis happens or something fun or interesting, the community manager could immediately see what people are talking about and support the conversation.
  - Lastly, Wietske would like to use the dashboard to help make teams and users more productive, more creative and more successful in the organization by showing them that sometimes the way they collaborate might not be the most optimal way. The metaphor Wietske uses for this is driving a car without a fuel meter. So, being able to monitor how these emotions or how these activities change over time in the organization may help improve these behaviors by making users aware of discrepancies between their goals and their behaviors vs. waiting until the "gas tank is empty".

LESSONS LEARNED

- The extent to which executives feel comfortable about social conversations within a community does depend on company culture. In Steelcase when they implemented Jive initially, there weren't very many policies in place for the types of acceptable conversations permitted in the community. As a result, most people felt comfortable. However, keep in mind that that freedom may work in some cultures, but not others. For example, North America vs. Asia Pacific. Overall, the freedom approach helps people feel comfortable sharing diverse content that is not all work-related. In other cultural regions, however, it might undermine the likelihood of people contributing social content or content of any kind.
    - An argument to help executives to understand the need for social content in communities is to compare it to a face-to-face interaction. Most people do kick-start their meetings with some type of social pleasantry.

- Universities - specifically business schools within the universities – are interested in working with companies as a connection to the real world. There is a passion in the research community to be able to work and collaborate with companies, but it's hard to create that connection and the pace is different. Academia works much slower than the business world. A good intermediate solution would be if companies could provide a little bit of seed money to get the research started. During that start-up phase, the research group could then apply for funding from funding agencies to help bridge the gap. The benefit is that academic research can provide a much better ROI than consulting investment because academia already has a job. They don't want to do this research for the money. They want to do the research to support students and the infrastructure.

- Wietske gave a few suggestions for evolving the dashboard:
    - Set up a larger network of organizations around this dashboard not just to test it in different locations/companies, but also to learn from other community managers. By discovering the different strategic questions that are unique to each organization, it can help others to learn which questions to ask in various scenarios.
    - Take time to understand the different strategic questions at each level of a community's maturity so that someone who is just starting out doesn't need to create an elaborate dashboard. They can use a monitoring tool to suggest the best time to move to the next level of maturity. This can help an organization identify the tipping point for moving from one level to the next level.

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RESOURCES

- As mentioned in the discussion: https://bit.ly/2O104fM