Collaborative Technology

MANAGEMENT REPORT SUMMARY

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Collaboration is inevitable in the business world, whether talking with a customer or to a colleague; in some way throughout the day some form of collaboration will take place.

Collaboration involves working with a team, or with someone, in order to create or produce a product or service. Overtime, with the help of information technology (IT), new forms of collaboration have been introduced to the world and have allowed employees and businesses to interact with each other in ways that were previously not possible.

Collaborative technologies (CT) make it possible for organizations to quickly bring together remote workers into virtual teams to perform a variety of tasks (Samarah, 2006). Businesses and fellow employees from all across the world have the ability to link in with one another, share their data, and work on projects at their own convenience. CT involves the use of the Internet, or some other form of technology, to share information with one another. These collaborative technologies have the ability to eliminate face-to-face conversation and can boost productivity if implemented correctly. The employees collaborating need to be familiar with the systems and develop a skill known as collaboration know-how. Collaboration know-how is the ability of an individual to communicate his or her ideas and combine them with group members in order to enhance the success of the team (Zhang, Venkatesh, & Brown, 2011).
Major Elements/Components

For years, information technology (IT) has been a helpful supplement for companies when it comes to buying, selling, paying bills, and payroll. Recently, with the help of IT, new innovative forms of collaborative technology (CT) have been created. Examples of collaborative technology being used include:

- Mobile phone
- Video conferencing
- Emailing
- Instant messaging
- E-learning

(Samarah, 2006).

Collaborative technology has the ability to change the way workers interact socially. Group Support Systems (GSS) are systems that support virtual team group work. Group Support Systems offers two forms of support: communication support and process structuring support (Samarah, 2006).

- Communication support is a program that enhances collaboration among team members.

Examples of communication support include emailing, online chat forums, and instant
messaging. Communication support is one of the most popular forms of GSS in the business world today.

- Process structuring support (PSS) provides an agenda for employees and gives the group due dates for when their work should be completed and turned in (Samarah, 2006). Smart sheet is an example of PSS. Smart sheet is a project management tool used by employees in virtual teams. With Smartsheet employees can track and manage various types of work, including: team projects, to do lists, customer information, sales information, schedules of events, and business methods. (A. Mishra & D. Mishra, 2013)

What does it do?

According to Smith and Mckeen (2011), “A study on what makes widely isolated virtual teams effective found that, contrary to popular belief; technology was a significant factor in facilitating their success” (pg.244). Collaborative technology (CT) gives the impression to the user of “real time” interaction with someone who is a remote distance away. CT has created opportunities within businesses for employees to interact with each other without being in the same room. Collaborative technologies have also connected the customers to the businesses. Before collaborative technology it was difficult for businesses to gather feedback from their customers. Collaborative technology has also allowed businesses to reach out internationally to countries
like China. China can produce quality products at a much lower price than the United States. This directly affects the price companies can charge and makes their products more affordable to the low to middle class.

**Benefits**

Many opportunities have been created with real-time sharing and anytime-anywhere access to information. These qualities of collaborative technology give organizations ways to:

- Have effective teams
- Cut costs
- Access people and information internationally

(Smith & McKeen, 2011).

**Effective Teams**

The addition of collaborative technology can have benefits to a company, such as increasing interaction between employees and improving overall performance (Turel & Zhang, 2008).

Teams that have access to some type of collaborative technology are able to share information and communicate within the group even if they are not physically in the same room. They could even be in different time zones. A company included in Smith and McKeen’s (2011) study encourages the use of social media for employees. The interaction on social media enables the
group to learn more about their co-workers and understand their customs and culture. The use of social media within the company has successfully connected employees, located all over the world (Smith & McKeen, 2011). The increased amount of interaction between collaborative technology group members will help build personal relationships. When personal relationships grow, the trust between the employees grows too. Employees can then be more open to others ideas and actions. Collaborative technology can help build strong team relationships with employees working anywhere in the world.

**Cutting Costs**

As team work improves and the use of collaborative technology (CT) increases, CT can cut cost for a company and the employees. Companies in Smith & McKeen’s study cut costs by “compressing work flow, reducing development costs, increasing communication, minimizing misunderstandings, improving coordination between groups, and enabling linkages with vendors, suppliers, and customers which speed up the supply chain and other work processes” (Smith, H. & McKeen, J., 2011, p. 245). These are seven different potential cost saving areas. Some of these cost saving areas also relate to each other, such as increased communication can cause a reduction of misunderstandings. For example, if a manager and employee communicate clear expectations at the beginning of a project, then the likelihood of a project that does not meet the requirements is reduced. Another area of cost savings, improving coordination between groups,
can save money and time by having employees commute less and improve daily productivity (Smith & McKeen, 2011). If employees worked from home, then they could spend the possible two hours commuting to and from work actually working on an assignment. However, this is not an option for some positions and would be situational to the job task.

**Limitations**

When working with collaborative technologies, employees may have complications when the technology is not able to perform a specific process. Employees who connect virtually rely on their connection to the Internet. However, this can be a limitation if an employee does not have a reliable Internet connection at home or located where Wi-Fi is not available. If members of the team are highly mobile or working globally, then they need have a reliable connection available. A consequence to not having the Internet connection could mean a halt in the work process and potentially missing deadlines. For employees to get their work done, they need to be able to share and access information. In some cases, gaining the information is not a limiting factor for the employee.

It is essential for businesses to share information among the different departments. When information is shared it ensures all departments are essentially using the same data (Brown, et. al, 2011). Issues emerge when there are large amounts of disorganized information. In Smith and
McKeen’s study (2011), many of the companies could benefit from improving their file organization. One manager states, “Our Intranet is just a garbage scow of information…The same document can exist in literally hundreds of places. Another noted, while our corporate level content is well-managed, it gets messier the lower down in the organization you go” (Smith & McKeen, 2011, p.246).

**Risks**

Companies that would like to integrate more collaborative technologies further into their company should consider the following risks:

- Employee acceptance
- Security of the corporation’s information

(Smith & McKeen, 2011).

**Employees**

When new technology is introduced into a company, the business also has the responsibility of ensuring employees are aware and satisfied with any changes. It is becoming common that employees, in any part of a business, will use some type of technology to communicate with their co-workers. However, there is some resistance from employees who choose not to use the collaborative technology. When this is the case, the individual and company are missing out on
the potential benefits (Turel & Zhang, 2008). An employees’ reason for avoiding the use of collaborative technology can stem from a variety of areas. Some reasons may be they are not familiar with the collaboration tools or they have a different personal preference for a particular task (Turel & Zhang, 2008). To help minimize the risk of employee resistance, companies should ensure full training of all management and staff who will be interacting with the collaborative technology. The more confident the employee is with using the technology, the more productive their work can be, and the more benefits (ex. improved innovation) the company will receive.

**Security**

Collaborative technologies have increased the capacity of sharing information. However, some companies believe when they increase the information they share the likelihood of something bad happening also increases. The vulnerability causes companies to not want to share (Smith & McKeen, 2011). This is a legitimate concern for companies have. Sensitive information in the wrong hands could be severely disruptive to a company. Security functions must evolve alongside collaborative technology to find a balance between sharing information and the risk (Smith & McKeen, 2011). An option for companies who are in the market for a collaborative system is to use tools such as identity recognition to minimize risk. An example would be employees using a specific user log-in to get into the system (Boughzala, 2011). This can minimize unauthorized access (Brown, et. al, 2011). As collaborative technology continues to
evolve, the task of protecting the system becomes progressively more difficult. Some risk cannot be completely eliminated, but being aware of the risks can help to organize a plan of action.

Top Vendors

Sharing ideas is a form of collaboration that is accomplished through communication. Every department in the modern era communicates using virtual collaboration (Malhotra, 2009). For example, many human resource departments use virtual interviews for candidates who are out of state, so it is cheaper and more efficient than bringing the candidate in for an interview (Malhotra, 2009). In the past, before virtual technology, when candidates were out of state, the company would have to pay for travel expenses. Today companies have the option to use a video conference with the candidate which reduces prices.

There are two popular vendors that have developed new ways of virtual collaboration. They are known for creating and developing new advances for connecting virtual teams, Cisco and Clinked.

Cisco

Cisco is an American company that develops, designs, and creates networking equipment (Cisco, 2015). Cisco has recently brought new advances to their company that make virtual team communication simple. Some new advances include:

- video, cloud and hybrid collaboration solutions
• midsize collaboration solutions- developed for smaller businesses
• Mobile collaboration- apps on company phones that keep employees connected

Today almost every device and computer has a camera on it. Cisco believed that when their video products are being used, teams are able to connect in any location, at any time, with any person in a face to face collaboration (Cisco, 2015). Cisco has developed better software to make the video conversations clearer and simplified troubleshooting. With the new advances, Cisco customers are able to use instant messaging, screen sharing and web/video conferencing (Cisco, 2015). They have also welcomed cloud and hybrid collaboration solutions. By using “cloud connect”, teams can use the cloud to share information privately and easily. Their new advancements have made their WebEx Cloud more secure. All of these new advances save a company money and time. Instead of having to wait to get into the office to respond to a simple question, a manager or employee can be of assistance when they are out of the office.

Clinked

A new collaborative product for teams is a vendor called Clinked. Clinked is a database that allows clients and teams to keep their information in one place and current. It also allows users to engage with one another actively and creatively, and capture ideas (Clinked, 2015). Clinked, a wiki-based virtual collaboration software allows coworkers who work together to share files and their latest documents wherever they are working. It helps team members to keep
up to date regarding timelines and developments on the project. There is a huge market for Virtual Teams from Businesses, schools, and everyday life. Most of these devices are simple and free of charge. Clinked, like many other software, are becoming more popular in work spaces and help people connect with one another without being close to them.

**Company Examples**

**NASA**

Both NASA and Boeing, like many other organizations, are developing new advances to make work simple. Boeing and NASA use virtual team collaboration in different ways to communicate. NASA uses virtual collaboration with e-learning (Bussey 2013). Through an intensive application process, NASA has selected nine research teams from different states for a new institute that will bring researchers together in a collaborative virtual setting to focus on questions concerning space science and human space exploration (Bussey 2013). Their e-learning classes allow employees to learn from top researchers and professors from around the world (Bussey 2013). Instead of having employees fly to a classroom or institute to learn for an extended amount of time, NASA employees are able to learn from the comfort of their work offices or even at home.
Boeing

Boeing uses Virtual Technology in a different way to expand the knowledge of their employees. Teams at Boeing collaborate virtually with research teams. Employees are split into teams where team members are located in different physical offices (Malhotra, 2009). These teams meet once a week, virtually via video conferencing. Without Collaborative Technology, this would not be possible, at least not as time and price efficient. After one year of these virtual teams, Boeing managers found that all ten of the virtual teams were a success. This is a result of reducing groupthink and developing research within closer proximity. They have been using these teams for several years now and have expanded it to different departments within the company (Malhotra, 2009).

Conclusion

Collaborative technology will be both beneficial and extremely useful for our team and the company. Collaboration through the virtual world will make communication easier and cheaper. All departments within the company, from accounting to human resources, could use virtual technology to save time and resources. Because employees can communicate from different locations without being present, they can maintain personal efficiency while reducing company turnover. There are several steps that our team would like to accomplish within the fiscal year in order to reach a more Virtual collaborative team. They are:
1. Partner with Clinked and Cisco to use their devices and databases. Every employee, if not already, will receive a Computer equipped with video chat and a work cell phone. When employees are not in the office, they can have a conference call or video steam to contribute to team meetings.

2. Contact Boeing and set up a conference meeting in order to gain their insight on E-Learning. By using E-Learning, our employees can learn from the office, reducing travel time and costs.

3. We will need to grow our IT Department to develop a knowledgeable team to avoid potential pitfalls, such as a crashing databases, unorganized information, or faulty Wi-Fi.

We strongly believe that using Team Collaborative Technology will enhance and grow our company.
References


