|  |
| --- |
| **Waco Case Report** |
| CIS 410-01 |
|  |
| Case 5-2 The Incident at Waco Manufacturing |
|  |
| **Jordan Shields** |
| **10/15/2014** |
|  |

**Abstract**

Waco Manufacturing is a leading manufacturer of custom-machined parts for the automotive industry that utilizes cutting-edge information technology to empower its manufacturing plants. Supplying custom parts to a narrow market segment would require embracing the focus generic strategy. These parts (while custom) can be replicated by other manufacturers; so it would be logical that Waco would embrace the cost-focus strategy over the differentiation-focus strategy which focuses on unique attributes that are valued by customers.

The organizational structure of Waco Manufacturing is unclear in this case. If we assume that each manufacturing plant produces the same custom-machined parts by utilizing the same processes then a holographic structure is plausible. If each manufacturing plant specializes in certain parts or processes then a divisional, matrix, or some combination of the two structures is probable. Some manufacturing companies utilize the benefits of a matrix structure closer to manufacturing processes while upper level remains functional or divisional.

**Main Problem Area**

The primary issue in this case is unforeseen consequences that resulted from incomplete planning/forecasting before and after the implementation of a security and information system in one of Waco Manufacturing’s manufacturing plants. “This technology supported almost continuous tracking of the location of each employee… For example, a telephone call to an employee would ring at the phone nearest that person” (Cash, 2012). The focus of this case is the ineffective (or plausibly nonexistent) communication that occurred between the plant’s engineering manager and three of his engineers. “IT is leading to changes in our relationships with the organization and its members, in how we conduct our work, and in how we are supervised and evaluated.” (Cash, 2012). According to the engineering manager Monk Barber, he had met repeatedly with the three engineers to ‘impress’ upon them the importance of a certain design set to no avail; when the three engineers were confronted about this, they proclaimed they had no idea of the project’s importance. When the IT system was consulted, upper management discovered that Barber and the three engineers hadn’t all been in the same room since the beginning of the year.

**Porter’s Five Forces Analysis**

An analysis of Waco Manufacturing utilizing Porter’s five forces reveals the following:

**Bargaining power of customers:** **Very High**. Waco Manufacturing produces and supplies custom-machine parts; custom parts forecast a very narrow market segment since only select purchasers can even utilize such parts. If these purchasers decided they didn’t need these parts (because newer models didn’t require them for instance), Waco would be stuck with an inventory of custom parts whose value is equivalent to scrap. The potential for products to become obsolete has the potential to devastatingly offset customer loyalty (which is typically high under the cost-focused generic strategy).

**Bargaining power of suppliers**: **Medium**. Waco Manufacturing requires raw materials, machines, and labor to conduct its operations. While raw materials and unskilled labor (IE: assembly line workers) may be substitutable, Waco may find skilled labor (IE: Engineers) and the machines necessary to produce custom-machine parts harder to come by. However, if turnover for skilled labor remains low and routine maintenance is performed on the machines, the bargaining power of suppliers will be at a minimum for this organization. Since details on these subjects are not provided, the assumption will be that the power of suppliers is relatively medium.

**Threat of new entrants**: **Low**. Waco Manufacturing is, “a leading supplier of custom-machined parts to the automotive industry” (Cash, 2012); the cost of required manufacturing resources coupled with medium supplier and high buyer power make the prospect of entering this market segment seem bleak at best.

**Threat of substitute products or services**: **Medium-Low**. While Waco is proclaimed as the leading supplier of custom-machined parts to the automotive industry, this doesn’t necessarily mean they are the only manufacturers that produce or are capable of producing these parts. This is why Waco has adopted the cost-focused generic strategy.

**Intensity of competitive rivalry**: **There is not enough information to say for certain**. However, if we take into consideration Waco’s ability to invest in this security and information system, it would seem derivative that the degree of rivalry has not had a significant impact on profitability (which leads to investment capabilities). Additionally, if we take the following quote into consideration, “Waco Manufacturing, a leading supplier…” (Cash, 2012) it would also seem logical that, to be a leader, there must be followers; thus, there must be (at a minimum) a small degree of competitive rivalry

**Key Stakeholders**

**Executive Management of Waco** - This group comprises the executive staff at Waco’s headquarters. They are responsible for making investment and other financial decisions as well as implement policies. The results of installing the security and information system at one of their plants will affect future decisions regarding its continued utilization and possible implementation at other facilities. “Technology can be used to increase the power of those at the periphery or local levels of the organization by providing them with more comprehensive, immediate, and relevant data relating to their work, facilitating self-control rather than centralized control.” (Morgan, 2006); however, one should also consider that, “in practice, the technology is often used to sustain or to increase power at the center.” (Morgan, 2006).

**Middle managers of Waco** - This group is comprised of the middle management at the individual manufacturing plants, such as Monique Salt, area manager, and Monk Barber, plant engineering manager. They are responsible for creating and/or implementing processes and procedures surrounding the implementation and meaningful utilization of new systems such as the security and information system. “[Managers] have been acutely aware of the power in information, decentralizing certain activities while centralizing ongoing surveillance over their performance.” (Morgan, 2006).

**Non-Managerial employees of Waco** - This group is affected by decisions to implement new systems and the concurring processes and procedures that surround that system. While they don’t make the decisions, their jobs and personal hygiene (in the psychological sense) are most directly affected by these decisions. According to Morgan, employees will find ways to utilize technological control to their benefit, “Technology designed to direct and control the work of employees frequently becomes a tool of workers’ control!” (Morgan, 2006).

**Alternative Courses of Action**

1. **Do Nothing.**

Under this course of action, the communication issues that occurred between Barber and his engineers are liable to reoccur with varying possibilities for the root cause of the situation. The way this case is illustrated provides three primary scenarios of varying plausibility.

First and least plausible, the three engineers are all telling the same lie; while this is possible, it would be difficult to accomplish without some form of collaboration between the engineers. However, it’s plausible that the engineers felt some form of resentment towards Barber and are lying in an effort to make him look bad in the eyes of his superiors. “Although resentments may seem petty, they are often powerful forces in organizational life.” (Morgan, 2006). If this is indeed the root cause, then the issue may be subject to reoccur since the integrity of the engineers has been compromised; on the relatively brighter side, recurrences of this issue will begin to develop in a pattern around the engineers, eventually exposing their deceit.

The second scenario is that Monk Barber, the engineering manager, is lying; we will explore this scenario further in the next alternate course of action; however, if this is the root cause, this issue is also subject to recur and potentially manifest since the integrity of a manager has been compromised. As with the engineers, recurrences of this issue will begin to develop in a pattern around Barber, eventually exposing his deceit.

The third and most likely scenario is that everyone is telling the truth (and not simply because we live in a jolly and sincere world in which this is always the case). We will explore this option in the third alternate course of action; however, if this is true, this issue will recur until the root cause is identified and some form of corrective action is taken.

Under all three scenarios, Waco’s executive management will have not have fulfilled its duty to act in the best interest of the company by taking appropriate action to identify and rectify the root cause; leading to inaccurate information regarding future implementation decisions for the security and information system. Waco’s middle management will likewise have not taken action against this issue and will continue to dwell in its almost inevitable recurrences and their resulting consequences. Employees of Waco will continue as before and not be affected since no changes have been made.

1. **Disciple the engineering manager Monk Barber.**

In this scenario, the underlying premise is that Monk Barber is lying about repeatedly meeting with the engineers to ‘impress’ the importance of this project upon them when confronted by Monique Saltz, area manager, about the designs for composite-based products. “[Managers] have been taught not to admit to weaknesses or lapses in their own knowledge or understanding” (Cash, 2012). Depending on a variety of factors (including scarcity of required skills and company value) a punishment should be enacted to discourage this behavior in the future. Since Barber’s integrity has been compromised, the ideal punishment is termination.

Under this course of action, executive management will have no reason to believe the security and information system is at fault and can continue plans for implementation at additional locations in that regard. Middle management will have eliminated the integrity issue and thusly will have eliminated the root cause of the issue, effectively preventing future occurrences (at least from that individual) while discouraging such practices. Employees will continue as before with a newfound respect for the emphasis Waco places on integrity.

1. **Review the residual outcomes of the security and information system and take corrective actions.**

The underlying premise of this scenario is that everyone is telling the truth and the issue stems from unforeseen consequences surrounding the installation and integration of the security and information system. Considering the final words from the following excerpt clearly portrays that this issue stems from the system, “[The Waco Manufacturing case] illustrates an even more pervasive form of employee monitoring, and a dilemma posed by its use.” (Cash, 2012). If this is the case, and Barber did meet with the three engineers and the three engineers have no recollection of the events, then there must be a barrier to effective communication. Under this course of action, a comparison of pre and post-system operating methods would be recommended to determine the root cause of this communications barrier. Corrective action would then be taken to rectify the issue.

Executive management would benefit from this solution if they had planned to implement the security and information system at other manufacturing plants; the actions required to rectify this issue would have to be balanced with its other costs and benefits when making future implementation decisions. Middle management would have to implement the corrective action(s) by changing processes and policies accordingly. Employees would also need to participate in any changes made to processes and/or policies that resulted from the corrective action.

**Recommendation**

The recommended course of action is alternative three. Doing nothing to rectify the issue means that the issue will persist; which is undesirable. There is no way to say for sure that Barber was lying (since there wasn’t enough forethought to have the system also track conversations); and punishing him for something he may or may not have done is an undesirable alternative since it’s essentially a shot in the dark in attempt to rectify the issue (I.e. the issue could persist and Waco would be out an honest plant engineering manager).

Let’s evaluate the core issue by considering the following logical derivatives. It would seem logical that the engineering team would have knowledge of the security and information system since they likely (at a minimum) assisted in its installation. It would also seem derivative that the engineers realize their location can be tracked and recorded. Equipped with this knowledge, it seems logical the engineers would spend more time on the plant floor (working) rather than loafing about. “Electronic monitoring systems can help improve efficiency and reduce errors.” (Cash, 2012). Barber, on the other hand, would likely have access (as a manager) to utilize this system to locate or track the whereabouts of his employees. Although Barber (likely) has access to utilize the system, it’s also relevant to note that, “few organizations earmark more than a tiny fraction of their technology expenditure for training of any sort.” (Cash, 2012). Without proper training, improper utilization is subject to occur.

Now let’s pretend we are Barber and have something important to tell our engineers, what do we do? It’s important, so we don’t call them, we meet them in person; in the past (before the system), we had meetings where everyone gathered to discuss important projects and relay information; but now we have a system that can locate employees all the time, so, instead of calling everyone away from their work for a meeting (and reduce efficiencies), we use the system to locate each individual and find they are in various locations across the plant floor. “Besides shaping definitions of organizational realities or exercising control, knowledge and information can be used to weave patterns of dependency.” (Morgan, 2006). Now, we go to each employee and relay the important message. What’s the problem with that? Well, the typical manufacturing plant floor is a very noisy environment; ear protection is often utilized to drown out the buzzing and humming of the various machines. Not only that, the engineers Barber wishes to meet with are busy working on an assignment (unless they are simply loafing around the plant floor, which the system would be able to detect). “Information technology symbolically renders processes, objects, behaviors, and events so that they become visible, knowable, and shareable in a new way.” (Cash, 2012). When we consider this, it’s quite possible that Barber met with the three engineers repeatedly to relay the importance of the composite-based product designs; on the other hand, being busy working coupled with the ongoing noise of the surrounding machines could easily have cause barriers to effective communication resulting in the engineers not fully comprehending or even remembering what Barber told them.

The intention of the security and information system was not to eliminate effective communication between the engineering team members and their manager; however, this unforeseen consequence has resulted from its utilization (and the forgoing of meetings). The following excerpt makes it clear that there were no formal meetings between Barber and the engineering team, “since the beginning of 1987, Barber, McCoy, Frank, and Gorgan had never all been in the same room at the same time.” (Cash, 2012). It seems that, in this case, utilizing the system to track down employees has replaced the necessity to meet formally; likely because formal meetings require taking employees away from their duties. Yet, the real benefit to formal meetings stems from the effective communication that can occur in such an environment (versus on the plant floor). Thus, the recommended corrective action would be to require formal meetings at set intervals (or under select circumstances) in an environment that is conducive to effective communication.

Executive management could utilize this action as a policy to coincide with implementation of this system at other plant locations to fully recognize its benefits while preventing a potential consequence. Middle management could take action to implement this policy to prevent future issues of this nature from occurring. Employees and middle management alike would participate in these meetings and would benefit from an environment that is conducive to effective communication. Employees would thusly be able to focus their efforts according to what management deems important. “Using the technology to its full potential means using human beings to their full potential” (Cash, 2012). Yet, no matter the direction, effective communication is a primal necessity for successful business operations.

# Works Cited

Cash. (2012). *Management of Information Systems.*

Morgan, G. (2006). *Images of Organization.* Sage Publications, Inc.