

Operations management essay sample



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1. Problem Definition

Field Service Divisions are important parts of organizations operating in manufacturing industries. As technology becomes more and more involved in the production process and the after sales services, it is crucial for companies to develop their Field Service business processes. In the DMI Field Service Case, the company has troubles meeting the customer demands in a timely manner. The quality of the service remains as an important task to improve for the DMI Company and we will be analyzing the issues related with the reengineering process of the FSD.

2. Process Analysis

3. 1. Current System

Current process flow of DMI Warranty is very simple. Every step is done by people, except for dispatching calls to regional center via computers. Total amount of employees that answers phone (i. e. call takers and dispatchers) is 64 which is a relatively small number with respect to 3500 calls per day. Exhibit 1 shows the process flow chart of current system.

3. 2. Examining Delays and Queues

In the existing system, there are 3 waiting points. First one is just after the customer call while call taker enters the information of the customer (location, name, machine type) into the computer. We cannot completely call it as a delay, but at that point the customer waits while call takers operates. This waiting time can be reduced in two ways; the customer enters the information by his/herself via phone (by dialing) or giving every customer a

personal code that can be used to achieve all the information on a database, which is shown in Exhibit 2. Second waiting point occurs when the tech personnel calls the dispatch center.

It is stated that technicians complain about waiting on the phone too long just after lunch, late in the day or early in morning. The basic solution to this could be increasing the number of dispatchers and make shifts so that there would always be someone answering the phone. Third waiting occurs while the techs wait for the needed parts to come. Again, the basic solution is to increase the inventory level of each technician. However, that can be costly. So the current system can be assumed as optimal about inventory and shipping.

3. 3. Process Reengineering

The key points of BPR are that solutions have to be radical, fundamental and dramatic. By doing 3 changes, we can reengineer the processes. First of all, DMI has to move to the database system that every customer has a personal code in which necessary information is stored. Once there is a call, the customer enters his code and then requests a call taker. With this system, we avoid entering necessary information. Having received the call, if call taker cannot solve the problem, he/she enters the information to a DSS which finds the closest and suitable technician and assigns him to the job by entering call information into the database where a tech can see.

Plus, every technician should have a personal code and an iPhone instead of a regular phone so that they can achieve the newly assigned jobs, close the previous jobs. Also, the management can locate them by using the GPS
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module in iPhone. Therefore we remove regional dispatch centers. It is up to the management that these 24 dispatchers are fired or continue as call takers in Denver. The BPR of the whole system is presented in Exhibit 3.

3. Consolidating Regional Dispatch Centers Into One Location Dispatch unit acts as the interface between the DMI and the technicians. There are 5 regions in total and 24 dispatchers working to assign the best candidates for solving the problems. But there are two major problems. As it can be seen in the flow chart, there is a frequent need of communication or acknowledgement between the tech and the dispatcher. If the tech cannot reach the dispatcher due to long waiting times on phones, then the process is delayed.

The main reason for the delays is people working in the regional dispatch buildings not answering the phone in the mornings, after lunch and late in the day. This covers a lot of time for such a critical process. If a tech cannot reach the dispatcher, he cannot inform the situation of the service or call them for the next call. As informed in the case, a tech is capable of getting 4 service calls per day, whereas the mean of service calls is 2.1. Hence, we can say that the ongoing communication problem between techs and dispatchers plays some role on the undesirable utilization rate of techs. Consolidating all dispatch centers into one might alleviate the problem.

The reasoning behind this is, if there are 24 people working on the same building, people can work on shifts more comfortably since as the number of people increases, compensating others are easier and the allocation of the dispatchers can be applied. For instance, if the upper east coast region is

having a busy day, more dispatchers can lean towards that region. This way the unfrequented regions will help others to lessen the delay times. Besides, a centralized unit will be more manageable than 5 different places scattered all around the country. Dispatchers who causes the delays can be spotted more easily. Overall consolidation of the regional dispatch centers seems favorable for the company.

4. Field Service Performance Measurement

Analysis on the issue shows that DMI should measure the field service performance to meet the customer demand on time, improve the quality of service provided by the technicians and be more efficient in fulfilling customer requirements. In order to measure performance, the company needs to overview certain aspects of their business process and spot the problematic areas in their operations cycle. The utilization rate is a good indicator of performance for the field service decision which is decreasing for DMI, 2. 1 service calls per day on average.

The decreasing trend shows that the company is doing poorly in helping their customers and therefore receiving fewer calls per day which may be interpreted as the company losing their customers to the competition. DMI should focus on utilizing their technicians by providing them more sophisticated training, and focus on their IT practices to reduce the wasted time between the departments. Another indicator of performance is the number of techs available when a service call is received.

In Field Service Division at DMI, the number of techs is not sufficient enough to handle the work load so the company should hire more techs in order to

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meet the customer demand and respond the service calls faster. In addition to that, the techs are not doing well in using the return parts which also indicates that the company is not doing well on return logistics. Travel times along with the response times are also good indicators of performance. In order to perform better and acquire a better position in the market, the company should focus on these issues.

5. Strategic Issues for DMI and FSD

DMI and its FSD are facing numerous strategic issues and they need to make important strategic decisions since competition is emerging in the market. The company is not doing well on customer satisfaction; therefore there is a high chance that fierce competition will put them out of the market. The company should set its operations objectives by careful consideration of their current performance. The percentage of customers who are happy with their product should increase and in doing this; use of product development teams is essential. The company has troubles understanding the main issue however; they have an effort to solve their problems.

The reengineering team formed by the company, involving individuals from different departments show that they are ready to adopt a systemic view that will help them improve on their business related issues. It is emphasized in the case that the area service managers try to meet each of their 20 techs once a month which is not enough. Evidence shows that communication between the top management and the employees at the bottom is a crucial element in understanding the problems.

Physical gaps between the departments should be avoided and this is an important strategic issue for the DMI. Focusing on Operations Management Cycle of the company will help the company improve customer satisfaction, financial performance and reduce the interdepartmental problems. In order to gain competitive advantage; the field service division should assign a distinctive competence that will differentiate the quality of their services from other companies in the industry.

As stated earlier, an analysis over the issue shows that the company should develop better training practices for their technicians and call takers in order to be more efficient and keep their customers happy. There is a need to work closely with the customers and fulfill their requirements therefore the company should adopt a customer oriented approach.

6. Becoming More of a Learning Organization

First what is a learning organization? “ There is not... a consensus on the definition of a learning organization” as remarked by Sandra Kerka in 1995 and has little changed since. The most prominent definitions of the term are; Learning organizations [are] organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together. (Senge 1990: 3) Learning organizations are characterized by total employee involvement in a process of collaboratively conducted, collectively accountable change directed towards shared values or principles. (Watkins and Marsick 1992: 118)

If we look closely into these two definitions, an organization can be a learning organization if it can adapt itself to change through its agents, the employees. So how can DMI be more of a learning organization? We know there are the five elements defined by Senge (Systems thinking, Personal mastery, Mental models, Shared vision, Team learning) but we will concentrate on the ones we thought most practical and required on the case of DMI. The most important factors are long term thinking instead of short term problem solving (mental models) and vast interaction between every dependent organ within the organization (shared vision). The communication between divisions and individuals will create the necessary environment for the emergence of seeing the whole thing approach.

In this manner a technician and a dispatcher should freely express their ideas and realize that they are the different elements of a team trying to solve the same issue. This brings another issue on the table. Every employee should see himself or herself as an important part of the whole and her duty as well. The call taker –dispatcher- technician- managers should work in harmony and try to create gray zones of communication apart from their duty zones. Because if both communicating parties only focuses on his/her side, there will always be lack of collaboration. These gray zones should provide exchange of ideas and interface between two organs making them understand each other comfortably. We said that a learning organization should concentrate more on long term rather than short term.

This brings the idea of one loop learning, double loop learning or triple loop learning. As far as observed in the case of DMI, the company is heavily dependent on one loop learning which is the least effective. It is merely <https://assignbuster.com/operations-management-essay-sample-essay-samples/>

giving reactions to actions taken. These reactions might alleviate the current issue but might be the reasons of many others. The technician is not asking about why he cannot reach the dispatcher in certain times and he rather relies on calling them later. If he had communicated with managers or the dispatchers about the reasons behind this delay, a more long term solution could be produced instead of accepting the delays.

There is also the Hitachi example in front of the DMI. Hitachi is superior to them technology wise and DMI is just shipping Hitachi products with DMI labels on them as a way of competition. This clearly underlines the problematic approach of the company. But what the managers should ponder on is why they cannot be like Hitachi. They should analyze the factors that brought them to that point. A short term loss of market share could be observed but on the long run the necessary transition, evolution required for a learning organization can be experienced. After this approach they can evaluate how they defined their mistakes and how they leaned towards problems in long term.

This approach is learning from learning and is quite crucial to become a learning organization since it creates a very favorable environment for handling upcoming issues. Huber (1991) notes: An entity learns if, through its processing of information, the range of its potential behaviors is changed. This statement by Huber takes a more practical way to see how and when an entity learns.

A learning organization should be able to add new methods of problem solving through experience. In the DMI case one-loop learning will not likely

provide this since in that case an entity solves a problem but does not know why the problem emerged in the first place or how it is solved. It is as if putting a piece of paper under the unbalanced stand of a table. If you do not care to think how it balanced the table, you will not be able to implement it somewhere else and it means you have not really learned it. A learning organization must not have the luxury of looking for a solution they have already found. It should accumulate the findings to transform itself into a more pressure-resistant entity.

7. Recommended Action Plan

The reengineering team that the management put together consists of a division VP, a regional manager, a technician, a call-taker, a dispatcher, an IS person, an accounting person and an outside consultant, all working in Denver. Since this team has employees from very different divisions, they can come up with the right vision for this business, considering every aspect of the issue. The action plan we suggest is shown in Exhibit 4.

7. 1. New Technologies

DMI is open to following and implementing technological developments since its management consists of mostly engineers. DMI has already invested highly in developing new technologies, such as finding expert systems for problem diagnosis to be used by techs in the field and assigning and scheduling techs and also geographic positioning system to locate techs. DMI should continue investing in these technological improvements because especially an easier system for problem diagnosis in the field would be really

efficient for techs as in time consumption and gaining credit and trust from the customers.

7. 2. Customer Code System

There are only 40 call-takers at the National Service Center (NSC) of DMI and they receive around 2, 000 calls about emergency maintenance. The rate of answering a call and noting the information is very low and inefficient in this situation. The fact that their wages are not so high and that they work on staggered shifts to cover the working hours for both coasts reduces the employee satisfaction and utilization. If they apply the customer code system to NSC, the call-takers can answer more calls per hour and this would reduce possible mistakes and misunderstandings about the customers' problems.

7. 3. Single Dispatching Center

DMI has 24 dispatchers in 5 regional dispatch centers who work on assigning the most suitable tech for field services. There is an obvious lack of communication between the dispatchers and techs and this problem results in lack of information about the service quality and the whereabouts of the techs. Consolidating regional dispatch centers into one location would be very advantageous in terms of reducing delays and increasing the work efficiency of the techs.

7. 4. Better Performance Measurement System

The current performance measurement system uses the percent of service calls that make the target response time. However, there are some gaps in <https://assignbuster.com/operations-management-essay-sample-essay-samples/>

this system, for instance a tech can always attain the target response time, but he can do only one field work per day. These kinds of situations may mislead the management in this performance measurement system. Therefore, some other factors should be taken into consideration. Increasing the recent 2.1 service calls per tech per day can be achieved by high service quality and customer satisfaction. At this point, improving new technologies play an important role.

Customers complain about getting the service late and not being informed about it. If there is no communication problem between techs and dispatchers due to having a single dispatching center and with improved technologies, techs can make the target response time and finish their services quickly. In this case the customers would be more satisfied and this would result in an increase in received service calls. Therefore, the number of service calls and of completed service calls per tech per day should also be taken into account in terms of performance measurement system.

7. 5. Higher Utilization

Higher utilization rate is a result of the action plan stated above. The right vision for this business consists of new technological improvements, customer code system, a single dispatching center and a better performance measurement system. If all of these are achieved, the customers would be happier from the field services; techs and call-takers could work more efficiently; the delays in the whole operation process would decrease significantly and there would be less tension derived from the lack of

communication. Customer satisfaction should be the priority in Field Service Division.

More satisfied customers would increase average service calls per day, resulting more efficient working techs and a higher utilization of the field service system. Considering the finance of these operations, the biggest investment would be in implementing a single dispatching center. Managers have already decided to invest a lot in new technological improvements, they should only continue with their decision. The customer code system and the performance measurement system don't need a big investment. These improvements should be applied in order to keep up with the competitors.

References:

* Kerka, S. (1995) 'the learning organization: myths and realities' * Senge, P. et. al. (1994) the Fifth Discipline Fieldbook: Strategies and Tools for Building a Learning Organization * Watkins, K. and Marsick, V. (1992) 'Building the learning organization: a new role for human resource developers', Studies in Continuing Education Appendix 1. Flow Charts