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## THE MANAGEMENT OF CHANGE: A CASE STUDY

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### **ABSTRACT**

Many manufacturing organizations in the United States are currently facing serious challenges to their ability to compete and survive. Increased foreign competition, the global market, increased demands for quality and efficiency, and the greatly increasing pace of change are all challenges the modern manufacturer must deal with effectively.

In this research a literature review was conducted to identify some of the requirements for competitiveness and change that are currently being promoted by experts and leaders in the manufacturing field. A survey was developed based on the literature review and subsequently administered, via the case study method, at a midwestern agricultural chemicals firm in order to determine the company's degree of compliance with the recommendations of the literature. To a large degree, the company did comply with the requirements for change and competitiveness identified in the literature.

The paper presented here was derived from a Master's thesis completed in the Department of Engineering Management at the University of Missouri-Rolla.

### **BACKGROUND**

At the close of World War II the economies of Europe and Japan were

devastated. The United States had not suffered war damage at home, and had a vast supply of natural resources. These advantages along with superior technology left America with a strong competitive edge into the 1970's. During this period, slow technological change made new product development straight forward and simple. [1] The United States set the pace for the world to follow, and had very little foreign competition to deal with. Many industries were regulated, which protected them from competition. [2] These factors made it relatively easy to monitor and deal with changes in the external market. [1]

World War II, however, did leave American companies with a shortage of effective managers, which they needed during the rapid growth after the war. This led to the development of the command and control organization in the 1950's and 1960's. Power and authority in this type of organization was focussed toward upper management. It assumed that most managers were not dependable, and required a rigid oversight system to impose and enforce management from the top. This produced middle and lower level managers that possessed strong technical and functional skills, but lacked managerial skills and an overall understanding of the organization. Middle level managers were required to obtain approval for the smallest expenditures, and were rarely involved in corporate strategy. This command and control type of organization required little coordination at lower levels, and as a result demanded less competence and

commitment from most workers. Union-management relations were also poor partially as a result of the scientific management era of the early 1900's.

In scientific management workers were viewed as a source of error not an asset. The system was designed to free itself of human error or intervention. Management could handle any unexpected events that did occur. [3] Managers did not trust hourly workers to do their jobs, and frustration and lack of commitment grew. Hourly worker's input and opinion were not wanted, and they were only allowed to perform their one narrow function they had been assigned. This type of management lead to a rigid, slow reacting organization, with a great deal of frustration and mistrust.

The command and control organization of the post World War II era was adequate because of America's competitive advantage at that time, and because changes in markets occurred relatively slowly during that period. [1] When problems such as profitability did occur, small changes such as replacing a manager or two were usually enough to correct the problem. [4] However, as foreign competition greatly increased during the 1970's, and the speed of technological changes accelerated, this type of organization could no longer excel in the new world market. The fast pace of innovation that now exists requires companies to be more responsive to the forces of change than they were in the past. [5] New concepts in manufacturing management must be utilized if companies are to improve competitiveness and reaction time.

### **THE PROBLEM AND OBJECTIVE**

Many American companies now realize that new, more effective, ideas concerning manufacturing management

must be identified and implemented if they are to compete effectively in the world market of today. The fact that a company realizes this, and is willing to attempt change is often not enough to insure that successful change will occur. Many companies attempt poorly planned, ineffective change programs that are not successful. This type of effort often leaves the company weaker than it was before the change was attempted. A major problem appears to be that many companies are not aware of, or do not understand, the methods and requirements necessary to change and become more competitive. [1]

The purpose of this research was to determine some of the requirements necessary for companies to survive and excel in today's global market. In order to accomplish this task, a review of literature concerning effective change and improved competitiveness in manufacturing was used to identify some of the requirements that appear to be necessary for effective change. In addition, the intended effect of the requirements on the manufacturing organization's work force are also identified.

### **METHOD**

Once the requirements and intended effects were identified and documented, a specific organization was analyzed. The purpose of this analysis was to determine if there are indications that the organization follows the requirements identified in the literature review. The analysis also identified some of the characteristics and attitudes of the employees in the organization. Furthermore, the information provides insight concerning whether employees characteristics and attitudes are connected with the company's compliance with the requirements for competitiveness.

A case study conducted among employees at a midwestern agricultural

chemicals company was the vehicle used to gather data and provide insight concerning the specific organization. Public concern for the environment has increased in the past years, and many state legislatures have considered regulations to improve the environmental impact of packaging. This has prompted many companies to increase their environmental packaging efforts. The company studied here produces a variety of pesticides and herbicides, and has been striving to make its package more "environment friendly" for some time.

With "environment friendly" packaging identified as the catalyst for change, a survey was developed, based on the findings from the literature review, and used to indicate if the company prescribes to the general strategy accepted by experts and successfully revitalized companies for succeeding in today's competitive markets. The survey consisted of sixteen questions, asked during personal interviews with thirteen employees at the company. Participants were selected by job position to give an even representation from four general areas of the company to include external functions (marketing and purchasing), manufacturing management, technical supervision, and line workers and technicians.

The following section presents the six basic principles of change and competitiveness that were identified from a review of the literature.

### **THE SIX BASIC PRINCIPLES OF CHANGE AND COMPETITIVENESS**

The purpose of the literature review was to gather current thinking from experts and company leaders concerning the need for change, and the requirements for competitiveness in the manufacturing organization. The information was

gathered from a variety of sources such as journal articles, books, and academic research concerning the topic. From this review, six basic principles of change and competitiveness have been identified.

It is becoming clear that a majority of experts and analysts agree that American industry must change in order to survive. Though details may vary from situation to situation, there seems to be consensus among analysts and company leaders on the basic changes that need to be made.

Six basic principles, and their intended effects, can be identified from material dealing with managing change and being competitive in today's environment. The following paragraphs identify each of the principles and their intended effect on employees. The upper case letter in parentheses refers to a given principle, i.e. (A) refers to principle A.

(A) More respect and communication is required between management and labor. Communication should be greatly improved so a better understanding of how and why decisions are made develops. [1,6] This type of atmosphere also promotes better cooperation. [1]

(B) Lower level managers and workers should be given more responsibility and participation in decision making to improve commitment and ability to make changes and improvements. [3,7]

(C) Workers should accomplish things in teams that draw on the best of each members ability. This improves overall understanding and commitment, and encourages innovation. [1,3]

(D) Workers should be exposed to other areas of the company and understand their company's competition. This improves employee's understanding

of the markets and customers of their company. [1]

(E) Companies should focus more on long term strategy rather than on short term profits. [3,8] This encourages people to be willing to make changes and innovations. [3]

(F) Work performance should be evaluated more on how the employee improves the company as a whole instead of being graded on the performance of one narrow job. This type of atmosphere fosters innovation and a sense of community and loyalty. [3]

### CASE STUDY

In order to determine how closely the agricultural chemicals company follows (or not) the six basic principles of competitiveness and change a general survey was developed. The survey contained 16 broad questions which are given below:

Question 1: When did the company first emphasize the importance of selecting packaging materials that were environment friendly (materials which can be recycled or disposed of with minimal environmental impact)?

Question 2: Does the company have a clear strategy on improving the environmental impact of its packaging?

Question 3: If this strategy changes from time to time, is it explained why?

Question 4: Has the company made progress in improving the environmental impact of its packaging?

Question 5: If you were aware of an improvement in a product or process that needed to be made would you pursue it? Why or Why not?

Question 6: Do you think you could be successful in initiating a change or improvement? Why or Why not?

Question 7: What is the biggest roadblock you face when attempting to make a change or improvement at the company? Could anything be done to reduce this roadblock?

Question 8: When the company identifies the need for a change in policy or procedure, are you given a voice in planing the change, or are you only told that the change has been made?

Question 9: Do you have the decision making authority you need to perform your job without constantly being required to seek approval from your superiors?

Question 10: Do you ever work in groups or teams to accomplish tasks or coordinate activities? If so are the group or team members all from your area or are some of them from other areas?

Question 11: Do you think there is anything you or people in your area could do to improve the environmental effect of packaging?

Question 12: Are you aware of your competitors' strengths and weaknesses in the agricultural chemicals business, and do you consider this when making decisions at the company?

Question 13: Do you ever work with individuals outside your area?

Question 14: Do you get regular briefings on the companies business activities and strategies, and the activities and strategies of competitors?

Question 15: Does the company concentrate more on long term issues such as developing new products or markets, or

short term issues such as next quarters sales and profits?

Question 16: Explain how your job performance is evaluated. Is it based more on solving problems for the company and helping to improve competitiveness, or more on how you perform the basic tasks required for your job?

An analysis of the survey responses showed that all of the six basic principles seem to be followed at the company to some degree. Principle A seems to be followed in most cases. But, it does appear that strategy is not communicated strongly to all employees.

Principle B seems to be complied with strongly at the company. Employees have the decision making authority they need to perform their jobs effectively. However, many employees feel they are not given much input when changes are initiated by upper management. Principle C is definitely complied with at the company. Most employees are involved with teams or groups that perform tasks and solve problems.

Principle D is also supported at the company. Employees often work with individuals or team members from other areas of the company. Most employees do get regular briefings on the company's business activities and strategies, however most of the employees surveyed said they did not receive regular briefings on the activities and strategies of their competitors.

Principle E is complied with at the company. Most of the employees surveyed said the company concentrates on long term issues or has good balance between long and short term issues. Principle F is followed to some degree at the company. Most employees felt they were evaluated mostly on problem solving ability or both

problem solving ability and basic tasks. However, several people said they were evaluated mostly on how well they performed the basic tasks of their job.

Another purpose of the survey was to determine the attitudes, characteristics, and abilities of employees at the company. Employees are aware of issues in other areas of the company and can effectively work with people from other areas as demonstrated by questions 1, 11, and 13. Most of the employees surveyed understand the company's strategy concerning environmental issues, however several employees are unclear on this issue as illustrated by question 2. Employees are willing to attempt changes and improvements, and can be successful in doing so as demonstrated by questions 4, 5, and 6. Employees are loyal to the company and fellow employees as indicated by question 5. Employees have authority and decision making ability as indicated by questions 5, 6, and 9. Most of the employees surveyed understand their competitors' strengths and weaknesses and consider this when making decisions at the company as demonstrated by question 12.

## **CONCLUSIONS**

The competitive environment in which American manufacturing must operate would seem to indicate that the ability to change or adapt to change is a necessary prerequisite to insure success. However, the desire to change and the ability to do so is not necessarily a simple task. A review of the literature indentified six basic principles of change and competitiveness, that, if followed, may lead to success. A case study was used in this research to determine how well an agricultural chemicals company complied with the six principles.

An analysis has shown that the company observed in this research does, to a large degree, comply with all six basic principles of change and competitiveness identified from the literature. However, there were some areas where the company does not comply with the principles as strongly as in other areas. For instance, company strategy is not always communicated clearly to employees, and some employees do not believe they are given a voice in planning changes initiated from higher levels.

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