Title: Project Team Building in Manufacturing and Service Organizations

Course:
Year: 1992
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Report No: P92024

ETM OFFICE USE ONLY
Report No.: See Above
Type: Student Project
Note: This project is in the filing cabinet in the ETM department office.

Abstract: Autonomous work groups dedicated to specific goals have been used in some applications and in some industries. These are loosely referred to as work groups. This paper explores the use of these teams within diverse industries in an attempt to discover the applications for which these teams are being used, how these teams are staffed, how their successes or failures are measured, and what attributes have been associated with successful and less successful teams. The result of this study was to identify factors associated with successful teams and suggest why these factors contributed to success.

PROJECT TEAM BUILDING IN MANUFACTURING AND SERVICE ORGANIZATIONS

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EMP-P9224

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I. ABSTRACT

Autonomous work groups dedicated to specific goals have been used in some applications and in some industries. These are loosely referred to as self-directed work groups. This paper explores the use of these teams within diverse industries in an attempt to discover the applications for which these teams are being used, how these teams are staffed, how their successes or failures are measured, and what attributes have been associated with successful and less successful teams. The outcome of this study is to identify factors associated with successful teams and suggest why these factors contributed to success.

II. INTRODUCTION

An essential part of project management is to bring together individuals and groups to form a project team. This group of people may be from different functional areas and organizations in a company. Each of the team members contributes to the project effort by bringing with him the skills and knowledge in his particular area of expertise. Prior to beginning our discussion of how teams are presently formed and directed, let's review the history of teams in general.

The concept of forming teams to accomplish tasks is not a new one. Anthropologists tell us that in their early hunting/gathering activities people learned to survive through teamwork. The growth of civilization and the centering of population brought about the rise of the specialist. It was not until the Industrial Revolution and the rise of bureaucracy that people began to feel like a "cog" in a wheel. This was what Karl Marx referred to as the separation of the laborer from the output of his labors. With its history of frontier development, the United States seemed to focus in particular on the individual rather than on teams. The use of teams in this century received new life with World War II and the use of teams for a variety of special tasks such as the Manhattan Project. Ever since then, the team focus has remained confined to certain organizations that, due to the nature of their work, were most likely to use a team approach.

In the 1960s and later there was a new focus on teams due somewhat to the advent of the concept of "synergy", which basically states that the sum of the parts is greater than the whole. Later concepts such as brainstorming also added value to the team concept.

Teamwork is becoming increasingly important to companies wishing to stay ahead of their competition in the future. Flatter organizational structures, the drive for higher production output, and the need for quality are pushing organizations into taking a much closer look at how to build effective project teams. The organization must create environments and strategies that encourage teamwork.

In order to maintain their competitive edge, many companies have turned to the area of self-directed work teams. A self-directed team is a small group of employees responsible for an entire work process or segment. To varying degrees, team members work together to improve their operation or product, plan and control their work, and handle day-to-day problems. They often become involved in company-wide issues such as vendor quality and business planning.

The self-directed work team differs from the more traditional project team in that it incorporates a much wider range of employee levels. For example, production line workers may be on the same team as accountants, engineers, or marketing professionals. They are expected to participate in unfamiliar decision making processes on an equal basis. Successful integration of these diverse elements may require more emphasis on team building processes for the success of these teams.

Project managers deal with technical specialists, staff personnel, managers, and other highly trained people. As the models of Fiedler and Hersey and Blanchard conclude, the most effective leadership style for these types of groups is a participating style. Project managers face many challenges in the formation of these teams, which may be variously referred to as ad hoc committees, self-directed teams, or task forces. These may be semi or fully autonomous.

Project team building can be a tough challenge to someone who has never done it before. This paper will relate team building processes with project success. Identification and communication of these key elements and associated relationships is the objective of this work.Early knowledge of the factors that have been used in forming successful teams will help project managers in their team building efforts. The findings of this paper will be useful in avoiding the pitfalls that other project teams have been through.

III. DISCUSSION

A. Journal Articles

Relevant articles were found using the library database and key words such as teamwork, self-directed work teams, and participatory management.

A review of the relevant literature shows that more and more companies are using autonomous work teams as a means to boost productivity. It is also apparent that the use of self-directed (autonomous) work teams goes hand in hand with employee empowerment. Experience in industry with these work teams has shown that productivity levels have soared in most cases, and, in a majority of cases, the overall quality has improved. In many cases, though, some new and unique problems have occurred. For example, inter-group conflict has been a problem where reward systems recognized team efforts exclusive of other teams or the organization's goals. Indeed, some articles maintain that the research and studies indicating great gains in productivity are flawed and that any advantages to this self-directed team concept are outweighed by new problems that arise from this approach.

A general consensus can be obtained from the literature that the demands on employees working in self-directed teams are different from those of employees in more traditional roles. This has usually resulted in employers having to invest more money in training their employees. In providing team-oriented training, the employers have found that it is often necessary to teach basic reading and writing skills to their employees as a first step so that they will understand the concepts, reading materials, and procedures required for successful teamwork.

The cost to implement this training is high, and the level of management commitment required to make it work is also high. However, companies like Motorola, Square D, Onan, etc., that have done it question how other companies can afford not to.

The following are examples of successful teamwork utilization in manufacturing companies:

1. Cadillac Motor Car Division, Hamtramck, Michigan

When this plant opened in 1985, it had serious problems with unproven and misapplied technology. Robots painted each other; robots designed to install windshields smashed them instead; software for controlling assembly lines needed debugging, resulting in shutting down the line; and vehicles being assembled were damaged when robots didn't function properly. Today, the plant has progressed because employee involvement was instituted. There has been a 73% reduction in discrepancies per vehicle, a 65% improvement in productivity, a 50% decrease in warranty

frequencies, and a 50% reduction in problems per hundred vehicles. Process improvements as a result of employee suggestions included reducing the number of fasteners used to assemble a bumper from 217 to 34 and doing statistical analysis of fits for doors, hoods, and deck lids. These represent just some of the hundreds of improvements that focused on quality, productivity, and cost advantages.

2. Steelcase Inc., Kentwood, Michigan

Even before this plant was built, the company management had the foresight to let employees, not management, run the day-to-day operations. Instead of just working on one component of a piece of office furniture, a team member can run up to six different machines as part of a team. The team decides the best way to do things and what they need. Employees at this new plant came from three existing plants and brought with them years of experience. With the chance to share ideas, they were able to make significant changes in the way the production process had been operating.

In a case of work area layout and equipment purchase, the operator, setup man, and maintenance man were brought in together. Using teamwork they made decisions on what to buy and were to put it. Measurable improvements included: desktop production time reduced from 20 hours to 30 minutes using automation; die change time reduced to 6-8 minutes from 60-75 minutes; and emissions reduced to one-half of those by other Steelcase plants. The firm's goal is to give workers the tools they need, the accountability, and the responsibility. Eventually, workers will have full autonomy on the product and a complete set of tools to meet customer needs.

3. Power Team Division of SPX, Owatonna, Minnesota

As a new division in 1987, this company started out by making sure that all employees understood the need for continuous improvement and just-in-time practice. Operators were trained through a formal Operator Certification Program. Cumbersome and time-consuming inspections were eliminated because each machinist inspects his own work. Audits are done as a check on machinists and part of ongoing process improvement. If a machinist does not pass 40 consecutive audits, he must be recertified. When shorter lead times were needed, a team got together to try to improve the process. The incentive was that if they could produce the small order, a much larger order would be placed.The team was able to reduce lead time from two weeks to five days. This company places high emphasis on empowerment and has had excellent results.

4. Lord Corp., Dayton, Ohio

This company was on the brink of demise in 1985. The work force was feeling hindered. As a last ditch effort, management decided to go to their experts, the workers, for help. They asked what the workers would change to make this place perfect, a place they could tell their friends that this is a good place to work. What they found out from the workers was that even though they (the managers) preached empowerment, they weren't letting the workers do it. Worker involvement teams were immediately formed to work on problems at the plant. They worked on small problems first such as reducing the scrap rate. A work-cell team was formed to make a helicopter part. The team designed the cell, laid it out, and put the equipment in where they wanted it. The team reduced scrap from $350,000 to zero; work-in-process inventory was reduced from $3.5 million to $150,000; and lead time went down from 160 to 32 days. Because of the success of this pilot project, seven more teams were formed with similar results. Behind all this were thousands of hours of training: every operator received technical training so that they are able to do all the work in a work cell. Management support of the teams continues.

In the previous examples, companies that were successful in getting employees involved had many of the ingredients necessary to do so. Top management supported their efforts from the very beginning, extensive training was done, and team focus was on the continuous improvement of work processes. Management was able to respond to what the workers wanted and then stepped back to let it happen. In the case of Cadillac, a change was needed to make the plant operate smoothly. At Steelcase and Power Team, the management thought ahead and established employee participation right away. Lord Corp. needed a near disaster to turn it around.

A "significant emotional event" should not be the reason why employees become empowered. Instead, management needs to look ahead to see the large benefits that employee involvement can give to them. Team building is used to improve group problem solving and group work efforts. When the backgrounds and responsibilities of team members are varied, there is a great need for team building.

B. Training and Education

A structured approach must be taken to ensure success of an employee self-directed team program. Effective employee involvement depends on proper training. Letting workers take control of their jobs means that an investment in education and training will have to be made. A company investment of time and money in this area will have a big payback when employees put their new skills to work.

Training in teamwork is also needed for all participants. In addition, training in simple problem solving must be done. A procedure for problem solving that gives guidelines for all levels of workers should be provided. Once basic skills are mastered, training can be initiated in areas such as group problem solving. The technique of brainstorming might be used as the next step to generate a list of potential problems. The problems that the team feels they can solve are identified and worked on.

C. Empowerment/Employee Involvement

The future success of many companies in business today will be determined by the way and to what extent they involve their workers. No more than 10% of the American work force is presently organized into teams, but during the next five years executives surveyed believe that up to 50% of jobs will have a team format. What this means is that those companies which effectively implement and maintain employee involvement programs will be the leaders of tomorrow. Global competitiveness will force companies to look at employee involvement as one of the ways to stay on the cutting edge. Even when a company is at the top, it should examine itself and not get complacent. It is better to get the system in place before it has to be used as a matter of survival. The need for collaboration among the many levels in a company makes it imperative that a system be put in place that can be used throughout the entire organization. The implementation of such a system starts with the support of top management.

Empowering employees is more than just giving employees more say and getting managers to delegate more. It also means that overall direction, plans, priorities, and ground rules must be provided. Without purpose and direction, empowerment cannot happen. Managers still need to be involved in employee empowerment. Expectations should be set, standards communicated, checkpoints agreed upon, and follow-up done. With an accountability system in place, the employees will move in the direction that best suits the organization and team goals.

IV. QUESTIONNAIRE FORMATION

In order to identify factors associated with successful self-directed work teams and assemble data that could be used to model these teams, we decided early in this project that it would be good to contrast manufacturing organizations' use of self-directed teams against service organizations' use of them.

We designed a survey to address the goals of the project. Each question was tailored to address a particular theme relating to one of the following:

- Types of teams that a particular organization has used
- Organizational norms that are used by the teams, if any
- Way in which teams are formed
- Types of team tasks they perform

- Manner in which the teams are evaluated
- Team attributes associated with successful and unsuccessful teams.

The survey questions are structured to be as specific as possible, not allowing too wide a range of responses, which would make analysis difficult. A sample questionnaire is in the Appendix.

V. COMPANY SELECTION/RESOURCES USED

In order to figure which organizations to target in our survey and to make for less than an exhaustive list, we confined our target companies to those listed on the Top 25 Area Engineering Firms and the Top 25 Area Manufacturing Firms as reported by the *Business Journal.* Companies on these lists are generally highest in sales volume in the Pacific Northwest and, consequently, would be among the leaders in implementing technologies such as work teams. Industries represented included electronics, transportation, and aircraft, while the consultants included electrical, mechanical and civil engineering. In addition, we decided to employ personal industry contacts known through the Engineering Management Program.

VI. ANALYSIS

This study analysis has three major parts:

- Description of the target population that was used for the data collection.
- Definition of the methods of team development and use within that population.
- Evaluation of the measurement and success of the teams used by the companies in the survey base.

The target study population was generally defined as manufacturing and engineering consulting companies. These were selected because of the utility to be derived by the researchers from the more in-depth knowledge gained from this population, because of the longer use of self-directed work teams within this population, and because of a broader base of data available within the geographic and time constraints of this study. Other users of work teams such as hospitals and universities were excluded primarily because of undefined relationships within the work teams as a result of technological or environmental factors.

Telephone interviews were conducted with selected engineers, managers, and executives within these targeted companies to complete the eighteen questions used to collect the study data. The individuals were further selected because of their familiarity with self-directed work teams in the project management environment. Distribution of the companies and respondents is as follows:

RESPONDENT	MANUFACTURING	CONSULTING	TOTAL
Executive	4	1	5
Manager	2	0	2
Technical/Professional	6	2	8
Total	**12**	**3**	**15**

In some cases respondents have held positions among several of the target companies. The above table reflects the most current position and company.

The following data includes multiple responses from the same respondent and from more than one firm.

The second part of the data analysis addresses the types of work teams that were used, methods of implementation, and types of developmental activities employed. Respondents were asked what kinds of teams were used and were given a choice of types. The results were as follows:

I.A. Are teams used?	
TYPE OF TEAM	FREQUENCY OF USE
Task forces	11
Self-directed	8
Ad hoc	1
Other	7

The other category included business teams, departmental teams, multi-discipline individuals, and all others. Three mechanisms were used for team implementation. Management direction was the most prevalent, with 12 of the 21 responses showing this approach. Two responses identified volunteering as a method. The other alternative was the evolutionary process that occurs as a part of normal business practice, and 7 of the 21 responses indicated this was used. Team member and leader selection process and criteria were evaluated through the use of such open-ended questions as, "How are they selected", in order to identify the salient issues. The responses were classified into seven categories common to the two questions. The results are tabulated as follows:

How are individuals in your organization selected for such teams? How are the team leaders selected?		
SELECTION CRITERIA	**TEAM MEMBER**	**TEAM LEADER**
Experience	10	11
Management selection	5	1
Availability	3	3
Group consensus	3	3
Team diversity	4	0
Team management skills	0	3
Other	3	5
Totals	28	26

Overall, the selection criteria seem as expected; the emphasis on group consensus corresponds to other reading that indicates that good relationships are fundamental to successful project managers. The other category includes miscellaneous comments such as cost, transferred out, or rotated tasks.

Team building activities were evaluated, and we expected some emphasis on the importance of these and some specific comments on type and amount of training. The interview data, however, presents a fairly diffuse picture:

How are/were teams initiated/implemented?	
TYPE OF TEAM BUILDING	**USAGE**
Special training	11
Seminars	5
None	3
Consultants	2
Offsite exercises	1
Other	4

Although special training is frequent, the interviews led to few specific identifications. It is also surprising that there are two "no training" responses.

The final question in this part attempted to identify more specifically the types of activities that teams accomplish. Respondents were asked to choose one of six choices of possible types of activities. These are shown in the following:

What specific activities do these teams perform?	
SPECIFIC ACTIVITY	**RESPONSES**
Spend money	6
Customer contact	3
Team member selection	3
Performance reviews	2
Compensation	0
Other	17

The large number of responses in the "Other" category led to further evaluation of the responses. They were further classified as shown in the following table:

If these teams are utilized for only certain functions or for special (non-routine) functions, why was this type of "team" selected for that function?	
TYPE OF ACTIVITY	**PARTICIPANTS**
Decision Making	27
Advisory	6
Other	1

This analysis indicates that the self-directed work teams have significant levels of authority.

The third part of this section looks at the contribution and performance of the work teams. The interviewees were asked to evaluate how the teams have contributed to business success against three criteria involving product delivery, introduction, or service. The following table presents the results:

In what ways have these teams contributed to business success?	
PERFORMANCE FACTOR	**RESPONSES**
Reduced Cost	6
Improved product introduction	4
Improved product delivery	3
Other	10

In addition to the tangible impacts on product delivery and introduction, the teams make contributions through developing strategic plans, generating additional business, improving quality and improving the working environment, all items noted under the "other" category. An open-ended question was used to define the mechanisms used to monitor team performance. Twenty-two responses were recorded. Of these, ten indicated that meeting objectives was the most important, eight indicated that reports and subjective evaluations were important, and the remaining four were divided between none and other. The respondents were then asked to evaluate the teams against these performance measures using a scale of less than, as, or better than expected. Results are as follows:

How have teams performed against these measures?

MEASURE	RESPONSES	PERCENTAGE
Better than expected	6	40%
As expected	5	33%
Less than expected	2	13%
Other	2	13%

The combined performance of 77% for "as expected" or "better than expected" indicates that the work teams are successful.

In order to get more definition of the factors that have made teams successful, two open-ended questions were asked. The first was, "What three attributes have made the teams (un)successful?" In addition, both responses were totaled to form a frequency distribution of the key words "focus", "teamwork", and "motivation/initiative" are clearly the most salient factors for team performance. The results were coded and are shown below:

What three attributes of these teams have made them particularly successful?
What three attributes of these teams have made them particularly unsuccessful?

SUCCESS FACTOR	SUCCESSFUL TEAMS	UNSUCCESSFUL TEAMS	COMBINED
Focus	8	6	14
Teamwork	3	8	11
Motivation/Initiative	3	7	10
Lack of management	4	2	6
Quality	2	2	4

What three attributes of these teams have made them particularly successful? What three attributes of these teams have made them particularly unsuccessful?			
SUCCESS FACTOR	**SUCCESSFUL TEAMS**	**UNSUCCESSFUL TEAMS**	**COMBINED**
Leadership	2	2	4
Resources	3	0	3
Other	0	3	3
Recognition	1	1	2
Performance	1	1	2
Communications	1	1	2

Combining these factors as well as the previous performance measures led to the following question: "Overall, how would you rate the success of these teams?" The results, tabulated into a five-point scale, follow:

Overall, how would you rate the success of self-directed work, groups?	
RATING	**RESPONSES**
Above average	3
	3
Good	9
	9
Less than expected	1

The survey responses were also classified by four major categories found in the research literature. These categories included training education, employee empowerment, corporate commitment, and recognition. A cross tabulation to explore the relationship between these factors and the success rating from the preceding table was formed. Taking the average for each of the success ratings by the success factors indicates some correlation between the research literature and the survey results. The results are shown in the following tables.

SUCCESS RATING							SUCCESS FACTOR					
	LOW				HIGH							
RESPONDENT	1	2	3	4	5	SUM	COUN	1	2	3	4	5
8						0	0					
5	1					1	2			X		X
14		2				2	2			X	X	
2			3			3	0					
11			3			3	0	X		X		
9			3			3	2			X	X	
15			3			3	2			X		
7			3			3	1		X	X		
6			3			3	2	X		X		
3			3			3	2	X		X		X
4				4		4	3	X		X		X
13				4		4	3	X		X		
10					5	5	3	X	X	X		
12					5	5	1	X				
1					5	5	2	X		X		

SUCCESS FACTORS:

1 = Training and education
2 = Employee empowerment
3 = Corporate commitment
4 = Recognition
5 = Other

SUMMARY			
RATING	FREQUENCY	TOTAL	RATIO
0	1	1	1
1	1	2	2
2	1	2	2
3	7	12	1.7
4	2	5	2.5
5	3	6	2

The final question requested an evaluation of future use of teams: less, more, or the same. Eight of the fourteen responses expected more use, four predicted the same level, and the balance were split between less use and no response.

VII. RECOMMENDATIONS

A. The time frame for this project permitted only exploratory research on this topic. In depth study of this topic via extensive literature search and a much larger population sample of survey results would be required in order to make realistic recommendations about a topic this important.

B. The survey results do indicate the following success factors that were present among the majority of teams that considered themselves successful. These factors are focus, teamwork, and motivation. Focus pertains to going after the goals and objectives identified by the project team. Teamwork is the cohesiveness of the team. Motivation pertains to the team being empowered and able to set their own direction.

VIII. CONCLUSION

A. A decision to use self-directed work teams in an organization in which they have not been used before will require studying what impact the change will make both on the individuals that will be a part of the team and on the organization as a whole. The change starts with an attitude change by top management, along with recognition of the fact that an organizational and cultural change must be the result if employee involvement is to work.

B. The corporation should be committed from top management all the way down that it is going to accept and work with self-directed teams for whatever tasks they are selected. If commitment is lacking, there might be some advantage to trying the concept on a task or set of tasks where the impact to the team and to the organization will be minimal. If the firm is going after self-directed teams in a big way, it should plan on a long-term commitment. The changes that will be brought about in the organization will require the long term for the organization to attain equilibrium.

C. Communication between the organization and the self-directed teams must be very open, and the quality of communication must be good. Otherwise, the teams and the organization will always be headed in different directions.

D. The reason for using self-directed work teams and the procedures, goals and objectives for them must be clearly spelled out. Ideally, the organization will state its goals and objectives and allow the self-directed teams to develop their own procedures, goals, and objectives consistent with the organization's. The

companies most successful in implementing employee involvement have furnished enough information to the employees. Types of information might include unit operating results, new technology, fellow employee's pay, and competitor performance. In addition to training, procedures manuals, formal measures, written employee involvement policy, and written management objectives are supplied. The unsuccessful companies had unclear objectives, did not have a champion for the cause, and did not show workers what sort of tangible improvements to expect. Business strategy and employee involvement must be linked together.

E. If a decision to implement self-directed work teams is made by an organization, thought should be given as to the appropriate means of assessing and rewarding team performance. This means must then be looked at vis-a-vis its impact on the rest of the organization.

A reward system that promotes the team concept — pay for knowledge bonuses, promotions, career paths — needs to be put in place. Traditional reward systems, pay, promotion and career path options, must be changed to reflect the change in management of workers. While complaints of unfairness, jealousy, and bigger raises will always be a management issue, the design of a reward system can help minimize these problems.

Reward and recognition for team involvement are important for benefits to continue. New methods of compensation and reward must accompany the shift to employee involvement. One type of reward system could involve tying quality improvements to a worker's pay. Bonuses and performance reviews can have substantial impact. Basing a bonus on the results of a group effort is also a means of reward. Extra pay for learning a new skill or when goals are reached would also be done.

Several areas should be looked at related to reward systems for team work. First, the performance appraisal and merit pay systems should be examined to make sure that they are not undermining teamwork. Added to the appraisal should be measures of cooperation between teams and other quality indicators. The system should be redesigned to minimize competition among employees. Second, rewards should fit the purpose, authority, and life span of the team. Some teams are set up for temporary periods only, while others involve long-term commitments. Third, not only pay, but career paths should be looked at. New job title and job descriptions may be needed when employees participate in more of the decision making. Fourth, set up a system that rewards team cooperation. When team involvement creates a success story, people will hear about it. This type of promotion will serve to encourage greater participation by others. Simple recognition for a job well done can promote additional improvement. When a person's suggestion is used, it can be publicized in the company newsletter. Ideas that save the company money can be rewarded through non-cash bonuses in the form of merchandise. The fact that management shows a willingness to

compliment people who have come up with good ideas makes the employees more loyal. Recognition is something that can be given without great cost.

F. Management must look at employees not as people who need constant monitoring and direction to produce, but as persons possessing valuable skills that can be effective on their own. A balance must be found between control and autonomy. Participating management must allow employees to have a sense of "ownership" in the product or process in which they are involved. An environment should be created that encourages ideas to flow freely. Once ideas are accepted, the company must be ready to implement the best of those ideas.

G. Involving employees means changes in the way the company is organized. A flatter organizational structure is what is needed to promote self-directed teams. A more hierarchical structure tends to reduce the horizontal flow of ideas and information which these teams depend on.

H. The value of differences between members of the team is that they each bring something different to the problem, situation, or project. Their total contribution is more than if people of the same type were brought together. Each person sees different aspects of a situation and directs his action to different ends. Work that is boring and dull to some individuals would be interesting and rewarding to others. Having a variety of people on a team, each with different experiences, backgrounds, and interests, can lead to higher effectiveness, better decisions, and more satisfaction. The wide range of experience ensures the cooperation of represented departments.

I. In the selection of team members, the project manager must understand the psychological differences among individuals. People perceive, organize, and think in fundamentally different ways. If team members are able to learn how to work together in spite of psychological or personality differences, they will be more effective. One tool to help in the team building process is the Myers Briggs Type Indicator MBTI. Recognition of differences in the type of person each team member is will help them understand themselves as well as their teammates.

J. <u>What is in it for the Company?</u>

When an organization asks, "Why should we ever use self-directed teams," the answer that can be given on the basis of this research is: "How can you afford not to?" Evidence is clear that in companies in which teamwork has been implemented in a planned, intelligent manner, the benefits have been staggering. In order to implement teamwork, the entire organization must go through a paradigm shift of sorts. A self-directed work team cannot be successful unless the team members are "empowered" to make decisions, are given the material and educational tools required to do their jobs, and are given firm direction and commitment by management. The literature is also full of stories about companies

who looked at team work as the current "buzzword" or a panacea and thought that it could be implemented "over here" in one place without impacting the rest of the organization. It is not possible to randomly empower employees, educate employees, reward employees, and demand more of employees without it impacting those employees who, for whatever reason, were never given the opportunity.

The benefits of employee teamwork programs are many. They:

- Break down barriers between departments
- Bring products to market more quickly
- Focus on prevention rather than detection
- Produce higher quality products
- Promote faster error resolution, and foster innovative improvements.

They also provide better decisions, better work coordination, greater cost reductions, and increased business volume.

When employees find out that their ideas are being used, they are more likely to continue to be productive and happy.

Worldwide competition has become more intense than ever before. In order to survive, employee involvement through the use of teamwork must become a part of the life of a company. A long-term commitment is necessary for success.

IX. APPENDIX

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B. SAMPLE QUESTIONNAIRE

SELF-DIRECTED WORK GROUPS

A self-directed work group is a semi or fully autonomous group of individuals that are brought together as a team to accomplish a specific function. These team is either fully or partly autonomous in that it can be a greater or lesser extent prescribe its rules and methodologies as long as these are in conformance to the overall organizational goals and mission.

I. ARE TEAMS USED?

A. What is your experience with self-directed teams that are similar to that described above within your own organization?

B. What types of teams do you use:

1. Ad hoc committees
2. Self-directed teams
3. Task forces
4. Other

C. What specific activities do these teams perform:

1. Spend money
2. Performance reviews
3. Customer contact
4. Team member selection
5. Compensation
6. Other

D. If these teams are utilized for only certain functions or for special (non-routine) functions, why was this type of "team" selected for that function?

II. HOW ARE TEAMS FORMED?

A. What type of operational guidelines are used by these teams? (Work on own time, offsite)

B. How are individuals in your organization selected for such teams?

C. How are the team leaders selected?

D. Do individual team participants come from different departments?

E. How are/were teams initiated/implemented?

1. Corporate direction
2. Normal process
3. Entrepreneurial empowerment
4. Other

F. What team building activities are used?

1. None
2. Consultants
3. Seminars
4. Special training
5. Other

III. HOW IS TEAM PERFORMANCE MEASURED?

A. What mechanism is used for assessing the performance of these teams?

B. How have teams performed against these measures?

- Less than expected
- As expected
- Better than expected

C. What three attributes of these teams have made them particularly successful?

D. What three attributes of these teams have made them particularly unsuccessful?

IV. HOW SUCCESSFUL ARE THESE SELF-DIRECTED WORK TEAMS?

A. In what ways have these teams contributed to business success?

1. Reduced product/service cost
2. Improved new product/service introduction
3. Improved product/service delivery
4. Other

B. Have these teams been an obstacle to business success?

C. Overall, how would you rate the success of self-directed work groups?

D. In the future do you see more or less use of these type of self-directed teams? Why?

EMGT 545 INTERVIEW CHECKLIST		
COMPANY NAME:		
INTERVIEWEE POSITION/TITLE:		
LENGTH OF EMPLOYMENT WITH COMPANY:		
DATE OF INTERVIEW:		
PRELIMINARY INTERVIEWS		
Kun	CH_2M Hill Northwest, Inc. Intel Corp.	Engineering Manufacturing
David	Harris Group, Inc. CRS Sirrine, Inc. OTAK, Inc. Jeddeloh, Hays, Inc. James River Corp. Boise Cascade Corp. Seton-Johnson-Odel	Engineering Engineering Engineering Engineering Manufacturing Manufacturing Engineering
Alper	OTAK, Inc. Tektronix, Inc. Precision Castparts Corp. Sequent Computer Systems, Inc. Washington County IBM	Engineering Manufacturing Manufacturing Manufacturing Governmental Manufacturing