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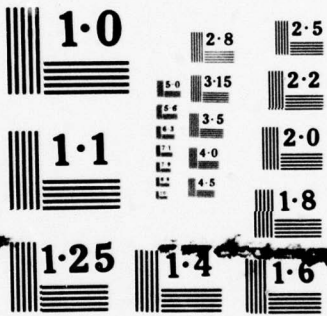
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THESIS

A FLEXTIME FEASIBILITY ANALYSIS MODEL
FOR

PRODUCTION ORIENTED ORGANIZATIONS

Stewart Greaves Folkman

and

Kenneth David Lantta

Thesis Advisor: June 1978 J. W. Creighton

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A Flexitime Feasibility Analysis Model
for
Production Oriented Organizations

by

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Lieutenant, United States Navy
B.S., Utah State University, 1970

and

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Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

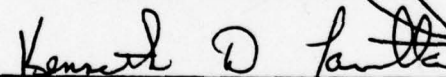
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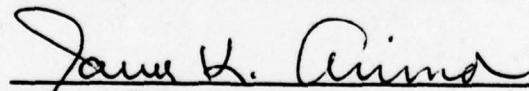
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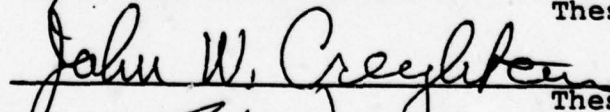
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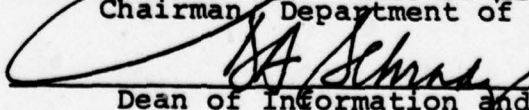
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ABSTRACT

The objective of this thesis was to develop a flexitime feasibility analysis model for production oriented organizations. Current literature on flexitime was reviewed to give insight into the background and growth of the flexitime concept. Laws and regulations restricting full utilization of the flexitime system are examined and discussed, as well as the common fears and misconceptions of management, supervisors, and organized labor. Further clarification on analyzing the feasibility of flexitime was gained from interviews with administrators, managers, and employees in organizations utilizing flexitime. In those organizations where genuine employer - employee trust and cooperation abound, the authors noted that few difficulties were encountered in applying or administering the concept of flexitime. Flexitime is not a cure for poor management - labor relations. However, given an organization where progressive management techniques are in practice, flexitime can result in greater employee motivation and higher productivity.

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I. INTRODUCTION

In the last two centuries, at first in Europe and later in much of the rest of the world, work has become time-oriented. It has been divorced from the task. For those who are employed, the amount of work to be performed is endless. The worker is tied to the clock; he starts at a fixed time; he takes his breaks at predetermined intervals; and he stops when the whistle blows. The eight-hour day, five-day workweek, usually rigidly scheduled within an 8:00 am to 5:00 pm time period, has been the standard in the United States for over thirty years. This problem was pointed out by Professor Paul Samuelson, Nobel Prize winning economist, when he wrote:

"(In contrast to our) freedom in the spending of the money we earn, the modern industrial regime denies us a similar freedom in choosing the work routine by which we earn those dollars . . ." (U. S. Congress, 1975)

The employment system, as conceived in traditional terms, is inflexible to many segments of our population. For being inflexible and unaccommodating, we either deny the input of many talented and gifted individuals who might otherwise contribute their skills and energy, or we force many of those who must work to twist and bend their lives in order to conform to our arbitrary time restrictions. Those who are gainfully employed are too often only those who are able to adjust to the rigid schedule or those trying to adjust and becoming ground up in the process.

Employee's attitudes toward their jobs are changing.

The special Federal task force on "Work in America" found:

"Young workers appear to be as committed to the institution of work as their elders have been, but many are rebelling against the anachronistic authoritarianism of the work place." (Morgan, 1977)

Employees anticipate more than improved wages and working conditions. A job is expected to be compatible with other needs as well, such as family and social requirements. Alvin Toffler, in his bestseller, Future Shock, states:

"Faced with colliding value systems, confronted with a blinding array of new consumer goods, services, educational, occupational, and recreational options, the people of the future are driven to make choices in a new way. They begin to consume life styles the way people of an earlier, less choice-choked time consumed ordinary products." (Toffler, 1970)

In dealing with these changing attitudes and values, it becomes a matter of relaxing traditional, rigid practices and recognizing that there must be a more compatible relationship between work and leisure time activities. Organizations need to respond to the needs of their employees and the community.

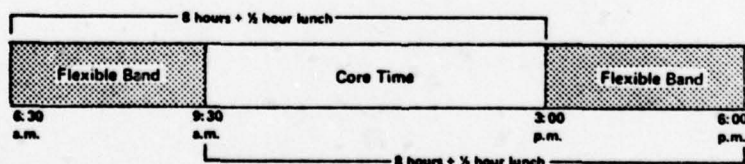
A. SUBJECT OF THE STUDY

In thousands of companies throughout the world, managements are relinquishing rigid control of working time by sharing control with workers through arrangements known as flexible-working-hours or flexitime. In most of these cases fixed-working-hours systems seem to have been abandoned relatively easily for a number of reasons: (1) there is no necessarily positive relationship between punctuality and performance;

(2) time at work and productivity are not necessarily positively correlated; (3) rigid time-control systems have often caused counter-productivity; and (4) control systems imposed upon the individual do not appear to be universally applicable or effective. (Elbing, et al, 1975)

Flexitime is an arrangement that gives employees some freedom in choosing the hours each day during which they will work. Fixed times of arrival and departure and even lunch breaks are replaced by a working day which is composed of two different types of time: core time and flexible time. Core time is the number of hours designated during which all employees must be present and usually corresponds with peak work load periods. On the other hand, flexible time is all the time designated as part of the schedule of work hours within which the employee may choose his time of arrival, departure, and lunch break. Figure 1 is an example of two possible arrangements of a flexible-working-hours schedule.

Example 1:



Example 2:

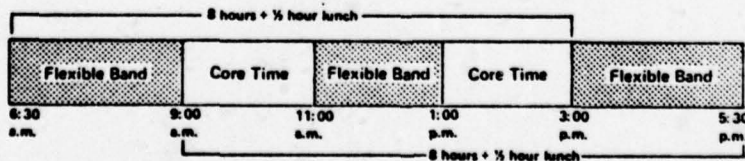


Figure 1. Two Possible Schedule Arrangements

The requirements of flexitime are then: (1) the employee must be present during core time, and (2) he must account for the total number of required hours each work period. Beyond this, the precise working hours can be selected in accordance with the wishes and individual circumstances of each organization and employee.

B. PURPOSE OF THE STUDY

The purpose of this study is to develop a feasibility analysis model which hopefully will be useful to organizations, be they public or private sector, which are considering the implementation of a flexible-working-hours system. The feasibility analysis model is envisioned as a guide or road map that can be followed to a successful conclusion or decision. It is intended to help identify areas and aspects of the organization that should be considered and studied as a prelude to introducing flexitime. The study is also expected to identify many common problems that are encountered and suggest possible alternative solutions. The authors feel that flexitime's social and economic benefits will become apparent to those who read it. Flexitime's contributions in the areas of additional leisure, greater productivity, greater use of capital equipment, increased use of available labor resources, improved commuting conditions, and improved employee morale are discussed. It is hoped that this study will at least make people aware of the benefits that may be available to the innovative companies and workers willing to undertake this new approach to work scheduling.

C. SCOPE OF THE STUDY

The scope of the study includes a brief background and history, tracing flexitime from its inception in Germany, to its spread throughout Europe, and finally its introduction into the United States. The experiences of some of the early organizations who have tried flexitime are addressed, as well as its development and growth during the 1970's.

Following the background and history of flexitime, a detailed feasibility analysis model is provided. In narrative form, this model attempts to lead an interested organization through the process of determining whether or not flexitime is adaptable to the various departments and workcenters within it. It will help identify what changes in organizational structure might be necessary and what problems should be anticipated. Finally, the feasibility analysis model will assist in developing measures of effectiveness by which the success or failure of the new system can be judged.

This study next covers the pros and cons of a flexitime system. Various problems are discussed such as union attitudes, labor law constraints, management styles, and supervisory techniques. Variations of flexitime are suggested as possible solutions to some problems, while attitude change may be necessary to solve others.

The study is culminated by making a very limited and general test of the feasibility analysis model on the Raychem Corporation, Menlo Park, CA. Their interest in the subject is

addressed as well as a brief synopsis of their management style. The completeness and usefulness of the feasibility analysis model is examined and the findings of the limited application are discussed as a series of questions and comments, rather than recommendations and conclusions.

II. BACKGROUND

Organizations have introduced many different programs designed to solve the problem of job dissatisfaction and discontent among employees. Flexitime is one such program developed to address these problems by giving employees more latitude and discretion in setting up work schedules. Flexitime originated in Germany in the late 1960s and spread to over 5000 companies and 2.5 million workers worldwide by 1973. Numerous practitioners and researchers are now predicting that flexitime may be the way of the future. (Hamner, et al, 1976)

Flexitime had its roots in West Germany's Wirtschaftswunder, the economic miracle, of the 1950s and 1960s. In that economic boom, labor was so scarce that even with the influx of more than 2 million foreign workers, there were generally three times as many jobs available as applicants to fill them.

Christel Kaemmerer, a political economist and management consultant from the town of Koenigswinter-on-the-Rhine, who in 1965 published an article that spelled out the basic concept of flexible working time, has been credited with inventing flexitime. (Dornberg, 1977) Her primary motive was to draw more housewives and mothers into the economy to alleviate the labor shortage. To induce them to take jobs, she theorized, they would have to be offered some flexibility in their starting and quitting times so they could cope with their household chores and child rearing duties. Her formula: a core period extending through most of the day, and flexible

periods in the morning and afternoon during which employees could come and go without supervisory approval, provided they put in at least an 8-hour day or 40-hour week.

Besides the obvious attraction to women, she pointed out other advantages. It would take the pressure off the usual rush hours that were choking municipal traffic, appeal to those whose "inner clocks" are not attuned to starting work early, inspire workers with a sense of codetermination and responsibility and eliminate wasted time, and certainly improve morale.

Ms. Kaemmerer began propogating her theories and by early 1976, several West German municipal administrations, the power plants of the city of Kassel and a dozen or so smaller factories, wholesalers and retailers in a variety of fields had adopted various modifications of flexitime. Then Messershmitt-Boelkow-Blohm (MBB) -- makers of space satelites, helicopters, aircraft, missiles and high-speed railway equipment-- decided to experiment.

For MBB's personnel manager, Alfred Hillert, flexitime initially seemed to offer a specific solution to a specific problem. Located in the Munich suburb of Ottobrunn, far from any public transportation, and drawing its employees from a radius of 25 and more miles, the plant was threatened with suffocation from the traffic jams on its parking lots and only access road every morning and evening. In May 1967, Hillert introduced flexitime on a trial basis in one department,

and in September extended the system to the entire Ottobrunn installation which, at the time, employed 2500 people.

The rest of German-speaking Europe was quick to follow the German experience, and in Sweden, Denmark, Norway and Finland the flexible working hours concept rapidly gained popularity. Perhaps the most surprising use of the system is not in Europe, but in Japan, where it was first introduced in 1971. Upon initial introduction, many doomed it to rapid failure on the premise that the flexible schedule system would violate Japan's working traditions. However, and much to the delight of the Japanese Ministry of Trade, the system is still employed and working well. In the crowded cities and paternalistic companies that characterize Japan, the value of flexible working hours is high.

The introduction of flexitime into the United States has been a much more recent phenomenon. A few early pioneers, including the Waltham Massachusetts plant of Hewlett-Packard and Control Data Corporation of Minneapolis, began implementing flexitime in 1972. During this same period several multi-national organizations with plants and offices in both Europe and the U. S., introduced flexitime into their American operations. Most installations of flexitime in the U. S. have occurred since 1973, however. Although precise figures are not available, it is estimated that more than a million American workers now have some form of a flexible hours system. (Louviere, 1976) Among the leaders in the U. S. flexitime

movement are Exxon Corporation, John Hancock Mutual Life Insurance Company, Pacific Gas and Electric Company, Nestle Company, Northwestern Mutual Life Insurance Company, and SmithKline Corporation, in addition to Control Data and Hewlett-Packard.

The Federal Government has implemented flexitime through the U. S. Civil Service Commission in numerous public sector organizations. Among these, the Social Security Administration, in April 1974, initiated an experiment with flexible working hours for 4500 of 9000 employees located in metropolitan Baltimore. Flexitime seemed to be an appropriate work schedule for this workforce, since its composition was 80% women, who were both heavy users of sick leave and short-term absences and also were heavily dependent on local transportation.

During the next few years other federal agencies began implementing flexitime on experimental bases. The most notable of these have been:

<u>Activity</u>	<u>Number of affected employees</u>
U. S. Geological Survey, Reston VA	3100
U. S. Army Tank and Automotive Command	4900
Naval Weapons Station, Concord, CA	1500
Navy Ship Weapon Eng. Sta., Port Hueneme, CA	900
Navy Electronics Eng. Ctr., Portsmouth, VA	230

A recent General Accounting Office study showed that within the Federal Government, 140,000 workers in 90 governmental agencies or departments are on flexitime. This marks a climb from zero to 5 percent of the 2.8 million person federal work force in approximately four years. (Cattani, 1977)

Although both private and public sector organizations have been implementing flexitime in the U. S. since the early 1970's, albeit on an experimental basis in certain cases, current federal legislation prevents the degree of flexibility that can be attained in Europe. The Fair Labor Standards Act (FLSA) prevents many employees from working more than 40 hours in any one week without receiving an overtime pay premium. The Contract Work Hours and Safety Standards Act and the Walsh-Healy Public Contracts Act further limit federal employees and those organizations who contract to the Federal government from working either more than 8 hours in one day or 40 hours per week. Various articles of Title 5 U. S. Code further restrict federal employees in their latitude of working hours. These regulations prevent or severely limit many employees from banking hours from day to day or week to week.

Various articles and bills have been introduced before the U. S. Congress during the past two sessions to revise or amend these regulations. Although at this writing none of these bills has received approval from both the House and Senate, it is anticipated that during the next few years a flexitime measure will be enacted to amend the Fair Labor Standards Act and the Walsh-Healy Act.

The past decade has seen a shift from Taylor's scientific approach to management toward the more participative management styles stressing job enrichment. Although supervisors and managers may not be intimately familiar with the theories of F. W. Taylor, the traditional roles of the supervisor have indeed been influenced by his views on management efficiency in an autocratic atmosphere. Thus a change in the managerial and supervisory techniques has alarmed many as a casting aside of tradition.

Flexitime can indeed be a viable source of enhancement for employee motivation and morale, as has been seen by its increasingly widespread acceptance throughout the world. Its introduction into the United States has coincided with the recent trends toward greater employee involvement and participative management, through organizational development and management-by-objectives techniques. However, since flexitime is a departure from tradition, implementation cannot be done on the spurious whim of a particular level within the management hierarchy. A thorough and critical feasibility analysis involving all echelons of the organization must first be completed. Not only does this approach determine the applicability of flexitime for the organization, it further promotes the concept of team decision making and the break from Tayloristic tradition.

III. FEASIBILITY ANALYSIS

Introducing a work schedule change into an organization can have an impact of varying proportions. To increase the chances of success and avoid the turmoil and problems that can arise anytime changes are made in an organization, conscientious analysis and planning are a must. M. E. Jacobson from Northwestern Mutual Life Insurance Company stressed this need for thinking through and carefully planning a change when he issued these words of caution at a conference held recently on the alternatives in working time:

"Don't just decide that next week in your company or government office you will install some sort of flexible hours program. Before embarking on such a program you must first determine if you have a suitable environment in your organization; second, involve your total organization, not selected departments; . . ." (Kuper, 1976)

Before beginning the feasibility analysis, it might be wise to reflect for a moment on two important questions; how ready is the organization for change, and what are the people in a position to decide willing to do? It is almost a waste of time to go through a feasibility analysis if the hierarchy is inflexible and resistant to change. It may be, however, that the feasibility analysis can be used to change opinion or reinforce a weak commitment from the head office. In any case, once it is felt that the atmosphere within the organization is favorable or at least encouraging, the feasibility analysis should follow.

A. STEPS IN THE ANALYSIS

1. Set Objectives

The first step in making a policy change is to determine for a surety that the change is desirable and will be beneficial to the organization. This is what the feasibility analysis hopes to accomplish. By identifying the objectives for going to a flexible-hours schedule at the outset of the analysis, it is possible to acquire a better perspective of what is hoped to be gained by adopting the new policy and thereby give direction to the study.

The objectives which appear most frequently in surveys of installations that have adopted alternative working schedules are: (1) to reduce employee absenteeism; (2) to increase the utilization of facilities and equipment; (3) to increase productivity; and (4) to improve employee morale. (Stewart, et al, 1976) At any rate, the objectives should be clear from the beginning and the remainder of the analysis and planning approached with them in mind.

2. Form a Study Group

The feasibility analysis is often begun by forming a study group. This action should be accompanied by a notice to all employees defining the concept of flexitime and informing them that this study group will be looking at the feasibility of adopting such a system. The initial study group should consist of three to five selected individuals who are familiar with the organization. The size and makeup of the group, of

course, will depend on the organization being considered, but should provide a broad overview. The group may be expanded a little later, if necessary, to ensure that each segment of the organization is represented. This group will be considering and analyzing a variety of variables and the success of the feasibility analysis and the ultimate decision or conclusion will depend on the care taken in this initial selection.

It may be of particular importance, for example, to involve a representative of the union from the beginning of the analysis. It could be disheartening to complete the feasibility analysis successfully, only to find the union opposes the plan. Unions can be very skeptical of any proposed change that comes from management. By allowing the union to participate in the feasibility analysis, the chances of achieving their support are greatly enhanced.

3. Conduct a Personnel Audit

The feasibility study group should begin its analysis by conducting an audit of personnel by department. This should include such things as total number of people in each department, the workforce make-up (men, women, full-time, part-time, salaried, or hourly), and the number of supervisors in each workcenter. This information will become useful as the feasibility analysis progresses and other aspects of the organization are considered.

The numbers and make-up of the workforce will probably have a bearing on the amount of flexibility that each department will be able to incorporate, especially when considered in light

of a number of other variables which need to be addressed. For example, current trends in the composition of the workforce indicate that there will be more women workers in the future, and that more of these workers will be the mothers of small children. In the 1970's married women with children have made up the largest portion of the increase in the civilian labor force. (U.S. Congress, 1975) These women are faced with unique problems and need the option of deciding for themselves how they can best meet their dual obligations. The personnel audit should look at this aspect and identify to what degree it affects the organization.

Consideration, during the personnel audit, should be given to the federal laws and regulations that govern certain types of workers and work situations. These current regulations may have an effect on how much flexibility the organization can consider adopting.

Another area to look at for example, might be the amount of supervisory coverage. Will flexitime put a strain on the organization because of inadequate supervision during the extended work-day? What is the potential within the organization for expanding the supervisory ranks, if needed, to allow adequate coverage?

All of these things need to be weighed and analyzed as a part of the personnel audit so that the organization is not suprised down stream.

4. Determine the Type of Process

There are several more questions that should be asked

by the study group concerning the various departments and workcenters within the organization. The idea here is to develop a scenario of the organization, describing the various functional areas and their interrelationships. This is an extremely important part of the feasibility analysis. Many of the difficulties that can arise during implementation of a flexible working schedule can be identified and dealt with in advance.

When preparing a scenario of the organization, one important aspect that must be considered is the type of work or production process that is employed in each department or workcenter. Is the operation a piece-work, job-shop, or continuous process? Are the jobs performed by the various employees within the department interdependent? Does the process or equipment require a team of workers? A flexitime system will have varying effects and implications when applied to these different production processes or work situations. For example, a policy of allowing complete flexibility outside of core-time would be readily adaptable to a situation where workers jobs are completely independent, but might have a disastrous effect on a continuous process production line with employees coming and going at different times.

From the department or workcenter the analysis should be expanded to determine the independence or interdependence of each department within the organization. To overlook this point could result in a real stumbling block later on. The feasibility analysis should take into account the flow of

production through the organization as well as through each department or workcenter. This helps to emphasize an important point. It is very likely that no one flexitime schedule or policy will be applicable to the entire organization. Situations, such as the continuous process production line, will require management ingenuity and a modification or variation of the flexitime theme.

Investigation has revealed flexitime successfully adapted to manufacturing firms with even very highly interdependent operations. Provisions for inprocess inventory, or buffer stock between operations, break-up of linear assembly lines into subassemblies produced by teams and allowance for employees to pace and space themselves as they see fit as long as they make the connections necessary to maintain work flow, have shown that interdependence may take many forms. (Elbing, et al, 1975) An analysis should be performed to determine if the advantages of making such a change would outweigh the disadvantages in view of the objectives set at the outset. Flexitime is flexible and an open mind and some imagination should be used when performing the feasibility analysis. (Variations of flexible schedules are discussed further in Chapter IV).

5. Study Employee Social/Work Interaction

Because it is quite likely that different variations of flexitime will be introduced into the organization, the feasibility analysis should consider the interaction of employees within the organization, both at work and socially. Problems

can develop, for example, when people in one part of the organization are enjoying more flexibility than those in another. It may be necessary to educate the employees so that they understand the reasons for the differences. The feasibility analysis can help identify potential problem areas and allow enough time to prepare an approach aimed at improving employee understanding.

An analysis of employee interaction can probably best be done with the aid of an employee survey of questionnaire (see Appendix A). This survey should develop data concerning the current state of employee interaction in addition to soliciting his/her reactions and comments. A cover letter should accompany the questionnaire highlighting again the concept of flexitime and spelling out for the employee, how the survey results are going to be used. It is important also, to make sure they are kept informed of the progress of the survey and that they understand that the results will be published for them to see. Many problems or perceived problems, as well as good suggestions and areas for further analysis can come from a well prepared survey of this kind. For example, a survey could provide an a'priori look at the changes that might be expected in the use of public transportation or car pooling if a flexitime system were adopted. Perhaps insights could be gained into the amount of cross-training that may become necessary under the new system in order to cover all aspects of the organizations work requirements. A survey can

be useful in answering any number of questions that may be felt are important while doing the feasibility study.

6. Look at Record Keeping

Sometime during the feasibility analysis of a flexible working hours system the question of recording the work time should be addressed. There are at least five different methods now in use. The most simple are self-recording systems maintained by the individual employee. In one, he keeps his own record and balances it himself; in another, he signs in and out at some central point, but the balance is kept by someone else. A third system uses the classical time clock, which mechanically checks and records the employees punctuality.

A fourth system uses a special time-recording meter which, unlike the time clock, is merely an accounting machine that provides the employee with a correct tally but does not store or use the information. Finally, some organizations use a centralized computer with visual displays located in easily accessible places throughout the building; employees can record and check their own time at their convenience. (Elbing, et al, 1974)

The feasibility analysis must address the adaptability of the present recording systems for use under flexitime. Along with this, an idea of how much control the organization feels it needs over its employees, or conversely, how much control it is willing to give up if and when the new flexible schedule is adopted needs to be determined. Although some companies

skip the equipment and allow employees or their supervisors to keep time cards because of potential resentment to punching a time clock, most find mechanical recording systems provide better control for both workers and managers. In numerous experiments, those willing to try mechanical recording equipment often ended up preferring it. (Stein, et a., 1976) Again, this is a question the feasibility analysis should address and each organization must determine for itself what is needed in it's particular set of circumstances.

B. MEASURES OF EFFECTIVENESS

As the feasibility anlysis becomes more complete and the results of the study begin to fall into place, the study group, along with management, should have a feel for whether flexitime will work for the organization and whether it should be tried. If the prospects for implementation are good, then the study group has one last task to perform, that of determining what measures of effectiveness are to be used in judging the success or failure of the new policy.

1. The Criteria

There are a considerable number of criteria by which organizations can evaluate their use of flexitime. Which measures are used will vary from one organization to another, depending on the type of work process, the size of the organization, and its objectives.

In order to make a comparison and thereby determine the success or failure of the program, it will be necessary

for the study group to compile current data on the selected measures. This data can then be gaged against data collected during the first few months of operations under the new flexitime system. This comparison will give an indication of how well the new system is working toward accomplishing the objectives of the organization and may give clues as to needed alterations in the program.

The measures of effectiveness should be just that, measures. In order to be compared, they must be quantifiable. Criteria that might be considered as measures of effectiveness could include:

1. Unit productivity, such as labor cost per unit of output, plant capacity utilization, or output volume.
2. The quality of work as expressed in terms of wastage, rework costs, or customer complaints.
3. Employee turnover rate.
4. The extent of scheduling problems encountered.
5. The level or rate of absenteeism, tardiness, and sick leave.
6. The number and kind of grievances heard.
7. The use of transportation facilities and car pools.
8. The amount of overtime used. (U.S.C.S.C., 1974)

In addition, it is possible to quantify such things as employee morale, attitudes towards the work environment, and supervisors evaluation of flexitime by using a post implementation survey (see Appendix A) and comparing the results against the survey done during the feasibility analysis.

2. Some Examples of Effectiveness

The success reported by various organizations indicates that flexitime is more than just a cosmetic attempt at improving the work environment. Stuart Schuck, speaking on behalf of Social Security Administration management, explained:

"We realized immediate productivity increases, and these have been sustained. We eliminated tardiness. People get down to their work sooner in the mornings and get up from it later in the afternoons. We seem to have made some inroads on the problem of short-term leave usage . . . (a) by unstructuring the work day we have assisted our employees in the areas of transportation, child care, and career development." (Kuper, 1976)

The Civil Service Commission is presently monitoring organizations using flexitime and results from a number of them indicate positive findings. Objective productivity data gathered by some of these organizations show increases of 2 to 5 percent after the introduction of flexitime. (Cowley, et al, 1977) The U. S. Social Security Administration, on the other hand, measured productivity increases averaging 20 percent in three different departments after flexitime was implemented (Stein, et al, 1976)

Organizations using flexitime point to a number of reasons for these productivity gains. Hewlett-Packard Company, for example, feels that employees do not feel watched all the time; a less rigid atmosphere is more conducive to productivity. They also feel that people work on a physiological clock. Some employees work best in the morning, while others are more productive when they start work later in the day. By allowing them the flexibility to adjust their

schedules, they find employee productivity increases. One of the most frequently noted reasons for increased productivity mentioned by Hewlett-Packard employees is that they are better able to work during the quiet times which tend to develop during the early and late hours of the flexible schedule. During these hours, fewer employees are at work, and because these hours are outside of the peak periods, there are fewer phone calls, and less noise and other distractions. (Zawacki, et al, 1976)

Others have reported encouraging results from initiating a flexible work schedule. Berol Corporation reports that though productivity had remained unchanged during the trial period, absenteeism declined 50 percent and tardiness was reduced from 5 percent to less than 1 percent after introducing flexitime. As a result of its experience, Berol is implementing flexitime in all its operations. (Morgan, 1977)

Northwestern Mutual Life Insurance Company of Milwaukee also found tangible results following the implementation of flexitime. They report the number of days lost per employee dropped from 5.8 in 1974 to 4.7 in 1975, the lowest average since 1969. The turnover rate of non-management employees in 1975 was 13.7 percent; down from 33.9 percent in 1968 and the lowest since World War II. (Commerce, 1977)

These examples are only a few of those reported by companies and organizations that have implemented a flexitime system. The results are almost unanimously positive and encouraging. These firms were able to determine the success

of their programs because they took the time to carefully gather data on various measures of effectiveness prior to introducing the new system. This allows comparison and analysis aimed at determining how well their objectives were being realized.

The feasibility analysis is an important part of making a work schedule change. How well it is done and how much unbiased attention is paid to the variables will have a direct effect on the smoothness of the transition and the success or failure of the flexitime program. Organizations that have approached flexitime with an open, receptive attitude and have been sincere in their desires to improve the work environment have met with success and enjoyed numerous unexpected benefits. The firm that employs progressive management techniques, with an eye toward organizational development, seem to adapt readily to the changes brought about by flexitime. Those more rigid and authoritarian in their approach to management have had more problems and realized less satisfaction from the innovation. These however have been few, because this type of management tends to steer clear of change and so have not experienced the new technique in large numbers. This all emphasises the point made at the beginning of this chapter; before pursuing an innovative and revolutionary concept like flexitime, be sure the support of those who make the decisions is there.

IV. PERCEPTIONS OF AND ATTITUDES TOWARD FLEXTIME

The changing workweek is no longer just an idea, it is a reality, and one that appears to be here to stay. Management, supervisors, workers and unions are actively engaged in discussion and trying out new systems that represent permanent shifts away the classic 5-day, 9 to 5, 40-hour week.

As with change in any facet of an organization, revising the working schedule creates the potential for a wide variety of problems, all of which must be recognized and dealt with to ensure the successful implementation of that change. These problems must be analyzed and alternative solutions investigated as an integral part of the feasibility analysis. As with the quantitative portion of the feasibility analysis, all levels of management must be supportive of and involved in this program from the outset.

The flexible working hours program is not a viable source of enhancement of the work environment in all departments of all organizations. Therefore careful consideration must be given to the myriad of possible advantages and disadvantages and a determination made as to which are appropriate for each department or organization. Only after completion of a careful examination of these areas should the decision of whether to implement flexitime be made.

Throughout the current literature on flexitime, numerous arguments for or against the subject are discussed, analyzed and presented with a variety of conclusions dependent upon the

author's viewpoint or frame of reference. An attempt will be made here to discuss these "areas of concern" from the neutral standpoint of a manager while determining the feasibility of a flexible working schedule for his organization.

A. MANAGEMENT ATTITUDES

When discussing flexible working hours, most managers inevitably say, "That's all very well, but is it appropriate for my organization?" This question is usually followed by a series of reasons why the cited examples of flexible working hours are limited to special cases, or why the individual concerned considers his own potential application a unique case.

The historic origins of flexible working hours indicate that is is an appropriate system in a research and development setting. Further, the system can easily accommodate relatively professional employees who work on an independent basis rather than in interdependent teams. More probing usually reveals that many clerical activities can also be handled quite well under flexitime. The extension of this premise to a production oriented organization, however, must be carefully analyzed and often modifications must be made to the existing processes and methods.

To succeed, the flexible working hours system requires that members of an organization have mutual trust and confidence. In particular, management must believe that employees will not abuse the trust placed in them. Unlike other benefits, which

are "given" to employees and are passively accepted, flexible working hours requires an active response; employees must live up to their part of the bargain. Also, employees must believe that management does, in fact, trust them.

On the other hand, persons in positions of management must be made aware that their "rank has its privileges" status is not being eroded. The stereotyped setting often has the employees on rigid and fixed working schedules with those in managerial positions relatively free to set their own hours, so long as their position responsibilities are being met. With the implementation of flexitime, and this freedom extended within bounds to all employees, there have been instances of middle managers feeling slighted. Through education and awareness prior to implementation, the more successful organizations have minimized this adverse middle management reaction.

The perceived introduction of flexitime into an organization can have further unsettling effects on the manager's environment. They often feel that they will have to deal with a new, bewildering set of problems. To overcome this mental state, the ground rules, the policies for handling vacations, holidays and absences, as well as the procedures for dealing with specific problems related to the abuse of the system must be formalized in advance. This formalization has the effect of providing a new structure and set of norms that the managers can adopt and which gives them a sense of comfort and structure.

Several studies have shown that a surprising number of managers at all levels of the organization manifest very risk abersive behavior, and if they perceive flexitime as a potential risk, they will be likely to resist it. (Morgan, 1977) One of the most effective means to reduce the perceived risk is to implement the program initially on a trial basis for a few months. The trial provides a psychological "escape valve" and reduces the level of the imagined risk. It must be pointed out, however, that only in rare instances has an organization returned to a traditional, fixed working schedule once flexitime has been implemented, albeit on a "trial basis". The perception, in a manager's eyes, of a temporary evaluation period can indeed provide a noncommittal feeling toward the program. One must be cautioned, however, that the overall effects on an organization from a failure during this period could be devastating in terms of employee morale, motivation and faith in the management. Thus, if the trial period is adopted, it must not be viewed as a haven for detecting and rectifying errors overlooked during the planning phase.

In general, the very thought of the introduction of a program requiring the degree of employer - employee trust that is required with a flexitime program can have an unnerving effect on the middle and upper level managers of an organization. This is not an unnatural reaction in view of the traditional managerial techniques carried over from the scientific management theories of F. W. Taylor. Even today, many organizations lean

toward an autocratic atmosphere in the name of production efficiency and have not yet begun exploring the more participative styles of management that have been promoted by the social scientists during the 1970s.

While conducting research for this study, it was found that organizations that had successfully implemented flexitime were also frontrunners in exploring employee oriented management techniques. Prior to the coming of flexitime, managers were already closely working with supervisors and employees in mutually determining the courses of action for meeting the goals of the organization. Thus the employee - employer trust had already been fostered and flexitime did not require a radical change from the norm.

B. SUPERVISOR'S ATTITUDES

The supervisors within an organization often feel the most threatened by the concept of flexible working hours. Perceiving pressure from top management as a demand to "control" subordinates, supervisors often take refuge in one of the oldest organizational myths - presence equals performance. When all else fails, they can take comfort from insisting on attendance and punctuality. This attitude prevails in this comment from a 50 year old bank supervisor:

"It's very important that I know when people are in, and when they're not in, and what they're doing. If I don't monitor them, some will try to pull the wool over my eyes . . . Those people who come in before me may slack off when I'm not there. When the cat's away the mice will play." (Stein, et al, 1976)

Under flexible working hours, first line supervisors are deprived of recourse to this time honored tool of demanding punctuality, and are asked instead to trust their subordinates before they acquire the reassuring experience that the subordinates will honor that trust.

These types of initial supervisory reactions have been observed in many of the organizations now employing flexitime. In some cases the supervisors fear something will happen when they are not present, so they initially react by increasing their own working hours. In other cases, supervisors try to learn each other's jobs so they can rely on colleagues "to cover them" during the flexible time periods. Eventually, however, supervisors learn the benefits of having employees organize their own schedules and workloads, and are then free to concentrate on long range planning and assisting in employee growth.

To administer the system properly, the first-line supervisors must be completely familiar with all the operational details. Experience indicates that the best prepared supervisor is the one who helps design the system before it is installed. In developing the details of a system, it is desirable to have as much interaction as possible between the first-line supervisor and his superior. Sometimes the development work and training of the first-line supervisors is done by staff persons from the accounting or personnel departments. While these specialists should be available, direct involvement of the

supervisor's boss signifies management support and commitment to the new system. Involvement of the supervisor provides an opportunity to identify and cope with the real or fancied problems that the new system may create.

An interesting comment made by several organizations during research in this area, was the feeling on management's part that, following implementation of flexible working schedules, a notable increase was observed in the quality of performance of the supervisors. As the supervisors gained freedom from "ensuring punctuality," they not only were allowed additional time for long range planning but also became more keenly aware of the overall operation of their particular work center. Awareness of employee motivational and morale factors increased on the supervisor's part and the "lead" or assistant to the supervisor was given additional responsibilities of overseeing the operation during the flexible hours, thus training and grooming the individual for eventual supervisory positions. Thus the supervisors who originally perceived the system with the greatest apprehension actually were the individuals who benefited most in terms of professional growth and development.

C. LEGAL ASPECTS

As greater flexibility is introduced into the system allowing employees additional freedom in choosing work schedules within a day, week or month, several laws governing overtime pay and length of a workday become effective. As

the concept of flexitime gains greater acceptance and support, change will be seen in these regulations. For this reason, only a brief overview of existing regulations will be presented here.

The Fair Labor Standards Act, as amended in 1974, requires premium pay after a 40 hour week for Federal, State and local government workers as well as for employees of those companies engaged in interstate commerce. In addition to requiring that nonexempt employees be paid overtime for work exceeding 40 hours per week, the FLSA may also render compensatory time inappropriate for federal employees. These requirements do not allow employees to maintain credit and debit balances in their work-week accounts. For example, given a 2-week work period, an employee in nonovertime status could not work more than 40 hours the first week and expect to work fewer than 40 the next week.

Chapter 61 of Title 5, United States Code, is even more specific with respect to federal employees. It requires that unless an organization would be seriously handicapped in carrying out its functions or the costs would be substantially increased, the work schedule shall provide that: "(A) assignments to tours of duty are scheduled in advance over periods of not less than 1 week; (b) the basic 40-hour work week is scheduled on 5 days, Monday through Friday when possible, . . .; (C) the working hours in each day in the basic work week are the same; and (D) the basic nonovertime work day may not exceed 8 hours; . . ." (U. S. Congress, 1976)

The Contract Work Hours and Safety Standards Act and the Walsh-Healy Act further restrict federal government employees. These Acts require a premium be paid anytime an employee exceeds either 8 hours in a day or 40 hours in a week.

Initiatives to amend Federal legislation on overtime hours and premium pay in order to enlarge the degree of freedom feasible under flexitime began in 1975. An administration sponsored bill was introduced in the 94th Congress to test a limited number of new flexitime models in the Federal Government. This bill would have modified overtime provisions of the Federal Pay Act and the Fair Labor Standards Act to permit employees to work more than 8 hours a day or 40 hours a week as a matter of personal preference, without the government incurring a liability for payment of a premium wage. The bill passed the House, but failed to get Senate action.

The General Accounting Office, in a report to Congress, recommended that in connection with legislation proposals to amend the Contract Work Hours and Safety Standards Act and the Walsh-Healy Act, consideration be given to permitting flexitime employees to exceed 8 hours of work per day and 40 hours per week for their own convenience, without obligating their employer to pay overtime premiums. The report also recommended that the Fair Labor Standards Act be amended to permit flexitime employees of Federal Contractors (and in the long run, all flexitime employees) to work more than 40 hours a week by their choice, without receiving premium pay. No

congressional action was taken on these recommendations.

(Hedges, 1977)

The finding that the more flexible systems yield better results in employee morale and productivity has led supporters of flexitime to view as an obstacle those laws and regulations that curtail the possibility of working longer and shorter days and weeks. However as employee - employer relations improve through mutual trust and understanding fostered by the flexitime environment, the full impact of these regulations is diminished. Furthermore, as flexitime gains wider acceptance and utilization, it is anticipated the Congress will approve accommodating amendments.

D. PERCEPTIONS BY UNIONS AND LABOR ORGANIZATIONS

The unions attitude toward a flexible working schedule tends to be conditioned by the treatment the union gets in a new scheduling scheme, as well as by the "bread-and-butter" issues raised for the membership by flexible hours. Negative reactions by some unions in this country may be ascribed, in part, to the fact that such schemes have typically been sponsored by employers. There is evidence, from European experience, that if the employer introduces the system without involving the union in its design and implementation, a negative union attitude is likely to develop. (Owen, 1977)

Labor union spokesmen have argued that under some circumstances, flexitime will increase the amount of time given by

the employee for the same weekly wage, reduce the employee's monthly earnings while increasing the intensity of his work, and encourage longer hours of work. They have also claimed that flexitime increases management profits without raising wage rates, although the increase derives from a more effective and often a more intensive use of labor.

A further issue is whether the rights of workers, in regard to overtime and shift differentials, can be protected under flexitime. Can management-ordered overtime be clearly distinguished from the longer hours that an employee works for personal convenience? Or will employees be directed, or persuaded, to "volunteer" for a longer day or week so that peak loads can be handled at regular wage rates?

Employees working under a flexitime system may spontaneously decide to stay late in order to finish a job, voluntarily offset these hours by taking time off in a slack period on another day, and so reduce overtime costs (at least if overtime premiums are calculated on the basis of weekly or monthly, rather than daily hours). Or they may simply work more effectively while on the job (presumably because they are at work at times when they are psychologically prepared rather than at times determined by a time clock), and hence need less overtime to complete their tasks. In either case, union reaction may be unfavorable. If the employer's overtime payments are reduced, this means there has been a reduction in the gross earnings of employees, and if management is also obtaining the same amount

of work from employees as before, this may mean that there has been an increase in the intensity of work.

Another possible source of controversy for labor and management is over the distribution of benefits. Even if makeup time, loss of overtime and similar problems are resolved in a satisfactory manner (at least in the sense that most workers feel that the gains far outweigh the losses in being able to modify their own working hours), union leaders may question the rationale for permitting management to retain all residual benefits from the introduction of flexitime. They argue that insofar as high productivity, and thus greater organizational output, results from a more intensive or efficient use of labor under flexitime, at least a portion of the resulting gain should be distributed to labor in the form of higher earnings. A division of these productivity gains may be a key point in gaining organized labor's acceptance of flexitime.

Although unions fully support the concept of flexitime to allow employees the benefits of greater freedom, reduced traffic congestion and improved morale, the management of an organization must be aware of the possibility of initial union opposition. It has been noted, however, that if management consults and works with the officials of organized labor throughout the feasibility analysis, many of the aforementioned problems and misconceptions may be alleviated. Flexitime may then be viewed as a program for the employees.

E. VARIATIONS OF A FLEXTIME PROGRAM

Just how flexible a flexitime system is varies from one installation to another. The degree of flexibility in a particular system depends on the amount of control management is willing to transfer to workers, the relative isolation or interdependence in which a worker functions, the constraints imposed by the laws and collective bargaining agreements that cover specific groups of employees and their employers and the interaction of these laws and agreements with scheduled hours of work.

The degree of flexibility elected by workers under such scheduling options also varies. It has been found that some workers use flexible working hours daily; others only occasionally and the majority, for the most part, adhere to a set routine.

Depending upon the type of organization, work force composition, type of production process or a myriad of smaller peculiarities to that organization, the basic flexitime premises can be slightly modified and yet fulfill the needs of employees and management alike.

True flexible schedules on a daily basis are highly feasible in situations in which employees work in isolation from each other. The 300 employees in the highly publicized experiment of the Social Security Administration in Baltimore, who compare material displayed on an individually controlled viewing machine with typed material on their desks, provide

a perfect example. Their interaction with fellow workers was minimal. (Elbing, et al, 1974)

Even in other, more complex jobs, if only a part of the day must be spent in contact with others, the remaining worktime can be spent in isolation on a flexible schedule. As long as confining the necessary interaction to the core periods does not impose a cost, flexitime can be introduced without reducing efficiency. In yet other situations, workers can be isolated from each other at a relatively small cost. In batch production layouts, for example, buffer stocks can be built up between each work station so as to permit schedule flexibility.

In addition to the independence of each worker, the number of people doing, or able to do, the same job plays a role in determining the feasibility and the variation of flexitime. In a batch-type production layout, for example, if there are 50 operators at each step in the production process, a buffer stock need only be kept between each group of 50 workers. If flexitime is introduced, the buffer would have to be increased, but only in a relatively minor proportion since the variabilities in the schedules of the individual workers would tend to offset each other.

The applicability of flexitime can be further broadened by modifying the freedom given to employees under the system or by changing the organization of the work. The simplest modification is to permit employees to choose a nonstandard

schedule, but then insist that each individual adhere to his or her new schedule for a specific period, usually from a week to a month. Although this modification does not fulfill the definition of flexitime in the strictest sense of the word, it never the less does provide an employee with a far greater degree of flexibility and freedom of choice than does a rigid work schedule.

Another possible modification-- and one that is often much more highly praised by the advocates of flexitime -- is for central management to insist that whatever schedule arrangements are chosen and however often they are changed, productivity must not suffer. Under this modification, each work center and its supervisors must arrange hours and workflow in such a way that the individual employee is allowed the flexibility he or she values most, while still maintaining the productivity of the group.

When analyzing the feasibility of flexitime for a particular organization, management must consider the possible variations that may better suit the particular situation. The key to flexitime is flexibility on the part of both management and employees. Through participative decision making at the work center level, an equitable solution can be found.

F. FLEXITIME: ADVANTAGES AND DISADVANTAGES

While analyzing the feasibility of flexitime for an organization, a wide variety of possible advantages and disadvantages must be considered. Chapter III discussed the

quantifiable variables that enter into the analysis. This chapter has thus far considered what have been found to be the major qualitative points for consideration by the management of the organization.

Following is a brief summary of other advantages and disadvantages of a flexitime program:

1. Advantages

- a. Employees and work teams can manage their own schedules to align with their biological clocks and to schedule personal matters.
- b. Peak traffic conditions can be avoided; thus, less time is spent commuting and employees arrive at work less irritable.
- c. Deceptive use of sick leave as well as tardiness virtually disappear. Should an individual abuse flexitime benefits, management can easily return to a rigid schedule.
- d. The working mother can adjust her working hours to coincide with the schedules of her spouse and family.
- e. Flexitime is a significant recruitment incentive.
- f. Increased utilization of automatic data processing equipment, facilities and other capital intensive assets has been noted.
- g. Cross country communications are more easily facilitated during the early morning or late afternoon hours.
- h. Many executives have noted an increase in the quality of reports and letters prepared during the quiet flexible hours.

i. Increased job satisfaction usually leads to decreased turnover.

2. Disadvantages

a. Record keeping costs may increase in preparing the payroll.

b. Heat, light and power overhead costs may increase slightly.

c. Meetings and conferences must be scheduled during core time.

d. Extension of flexitime benefits to certain employees and not others may be a source of dissatisfaction.

As discussed in Chapter III, a steering committee is usually formed to analyze the feasibility of a flexitime schedule for the organization. Upon consideration of these problems and alternative solutions and weighing the advantages and disadvantages, the committee and management will be able to conclusively decide whether a flexitime schedule will be of benefit to their organization.

V. VALIDITY TEST OF THE FEASIBILITY ANALYSIS MODEL

This portion of the study will ascertain the validity of the flexitime feasibility analysis as developed in Chapters III and IV. The key points discussed in those chapters will be applied to a manufacturing division of a private sector firm. It must be pointed out, however, that this is not a feasibility analysis of flexitime for the firm per se. By definition, the actual analysis must be accomplished by a study group consisting of individuals who can represent each segment of the organization. The applicability of the feasibility analysis to this firm, however, was accomplished and is discussed in this chapter. Thus, this firm or any similar production oriented organization could use this analysis in determining the feasibility of flexitime in their particular organization.

The firm for this study, Raychem Corporation of Menlo Park, California, is engaged in the research, design, development and production of highly specialized electrical and electronic components. The workforce of the organization encompasses the complete spectrum from three-shift, continuous-process operations to job shop, single-shift manufacturing work centers, to highly skilled engineers engaged strictly in research and development. Raychem Corporation has employees engaged in all possible work environments and thus provides an ideal situation for this validity test.

Raychem Corporation is a multinational organization with nearly 5000 employees worldwide. The corporation's beginning, and the key to its growth and success, has centered around the pioneering of products utilizing modified and irradiated plastic materials. This technology has expanded to include cross-linked polymer chemistry, heat-recoverable polymers, heat-recoverable metals, specialty polymers, conductive polymer systems and adhesive systems. Throughout its history, Raychem has been the technological leader in developing new applications for these products in such diverse fields as the aerospace and aircraft industries, commercial and military electronics industries, petroleum exploration and refining industries, the electrical power industries and the telecommunications industries.

Beyond this, Raychem is a "people oriented" corporation. As the corporation founder and president, Mr. Paul M. Cook, states in the handbook of Corporate Objectives:

"Since the inception of Raychem, the company's development has been based upon a strong philosophical belief in the dignity and worth of the individual. This has been the keystone for decisions and actions concerning our business, our people, our growth and profit objectives and our working environment. As the company evolved from its small and pioneering origins into an important industrial concern, through periods of rapid social and economic change, this essential philosophy has endured."

It was noted during research for this study, that Raychem provides their employees better than average wages, excellent fringe benefits, bonus plans and job security virtually unequaled. These material benefits coupled with genuine

employee awareness on the part of management have fostered true intrinsic motivation for each individual within the organization. In the authors' view, employee - employer relations are truly an ongoing day-to-day mode of operation within Raychem; it is participative management in action.

A. ANALYSIS OF THE U. S. INTERCONNECT DIVISION

For this study, a closer look was taken at one major division of Raychem Corporation, the U. S. Interconnect Division, which employs approximately 650 employees in its Menlo Park facilities. The U. S. Interconnect Division is composed of five subdivisions: Wire and Cable, Special Devices, Connectors, Application Equipment and the Harness Shop. Each subdivision, although engaged in a manufacturing operation, has a unique combination of production processes, workforce composition and skill level, and supervisory considerations.

1. Wire and Cable Division

The Wire and Cable Division is the largest of the five subdivisions of the U. S. Interconnect Division with some 300 employees working on a 3-shift per day schedule. Portions of Wire and Cable have a true continuous process type operation. This is most evident in the extrusion process. In this area, the costs associated with start-up and shut-down are relatively high, thus necessitating a face-to-face, on-site shift turnover. Many of the machines require only one operator, thus the crucial worker interaction is the shift turnover rather than large teams of employees working together on each shift

as might be the case on an assembly line. The skill, training, and experience levels required of the employees in each process is quite high. Therefore there is little cross-training between the various processes in Wire and Cable.

Other operations, such as spooling, allow the employees (also a one-machine, one-person station) more independence and flexibility. Start-up costs are negligible and workload scheduling is planned in advance. The skill and experience levels remain very high in this area, thus an employee from elsewhere in the division could not "cover" for a spooler operator.

Throughout the Wire and Cable division the most critical evolution is the scheduling of raw materials in and work-in-process and finished goods out. This does, however, give the various machine operators a guide by which they can exercise the latitude allowed by the process. In keeping with Raychem's philosophy, the employees are encouraged to utilize this latitude and to suggest methods for even further improvement.

2. Special Devices Division

The Special Devices division has approximately 150 employees working on a 2-shift per day schedule. In general, the Special Devices work center could be classified as having a "job shop" environment. The division produces approximately 1500 unique line items; however, at any given time only a few different types are being manufactured to fulfill specific job orders. The production run and interval between runs varies from product to product depending upon demand.

Special Devices utilizes temporary employees, approximately 50% of the workforce, to a much greater extent than any other U. S. Interconnect division. This policy ensures job security for the permanent employees and further enhances their intrinsic motivation.

The permanent employees in the division are fully cross-trained to operate any machine or to perform any of the inspection or packaging functions. The machines used in the manufacturing operations, for the most part, require only two operators, one of whom may be a temporary. Furthermore, on most shifts only a portion of time is spent with machine operations; the remainder of the shift is devoted to inspection and packaging tasks which involves no teamwork. The high degree of cross-training allows the employees to rotate from job to job at various intervals to reduce fatigue and monotony.

As in the Wire and Cable division, scheduling plays a crucial role in the smooth and efficient operation of the work center. In the Special Devices division, the accurate and timely scheduling further allows the employees to be apprised, in advance, of the coming workload and specific orders to be filled. The employees thus have the opportunity to pace and prioritize their individual work schedules.

3. Connectors Division

The Connectors division is very similiar to the Special Devices division in size, workforce composition and type of production process. Connectors has approximately

150 employees working on a 2-shift per day schedule. The process involves some machine operations requiring only small teams; however, the major portion of the operation involves assembly stations with one employee per station. The assembly operation is performed on individual components rather than an assembly line. Since the components are produced in large quantities without an extremely high unit cost, buffer stocks between stations are economically acceptable.

As is the case in the Special Devices division, not only are the employees cross-trained, which enhances unit cohesiveness, most are close personal friends off the job. Thus, in general, the employees in these work centers tend to freely exchange ideas and thoughts and to easily work as a unit.

4. Application Equipment Division

The Application Equipment division is considerably smaller than the other U. S. Interconnect divisions heretofore described. The Application Equipment division employs approximately 50 people for a one-shift assembly operation. The division produces various tools and small electrical appliances required by the consumer in the application of other Raychem products. The assembly operation is accomplished at independent stations where the complete device is assembled by one individual. Inspection and packaging functions are likewise performed by individuals working independently. The employees within the work center are experienced and trained to perform all tasks for each of the products.

Within the past six months, the Application Equipment division has abandoned the use of time clocks. This action has been noted to enhance employee motivation and to promote the concept of task orientation for the work center as a whole.

5. Harness Shop

The Harness shop, formerly a part of the Special Devices division, is the smallest of the U.S. Interconnect divisions with 12 employees working on a single-shift operation. This work center fabricates and assembles wire and cable harnesses, usually on a special order basis. The process often requires the teamwork of three to four individuals.

This work center is somewhat unique in that the majority of the employees are salaried rather than on an hourly wage scale. Furthermore, when the Harness shop was separated from the Special Devices division, time clocks were done away with. This feeling of uniqueness has given the employees a sense of pride and autonomy and has served to attract highly qualified individuals from other Raychem divisions.

B. CONSIDERATIONS IN APPLYING THE FEASIBILITY ANALYSIS

As stated earlier in this chapter, an actual feasibility analysis of flexitime for Raychem Corporation must be accomplished by a study group or steering committee. This group would represent management, supervisors, and employees from throughout the organization. The general analysis model developed in Chapters III and IV could be used by this committee in evaluating the costs and benefits of flexitime for Raychem.

Following are several areas of particular interest, as noted by the authors, in analyzing the applicability of this model to Raychem. Although these observations are geared toward the U. S. Interconnect Division of Raychem, they have comparable merit for any production oriented organization.

- Raychem is a very progressive, employee-oriented and highly successful organization. People, at all levels, are the key to this success. Management is genuinely interested in job enrichment for the employees and the employees are equally motivated in meeting the objectives of the corporation. Cooperative employee-employer relationships and mutual trust, which are prerequisites for the success of flexitime, are the order of the day at Raychem.

- From the outset, the members of the steering committee must strive to inform, educate and solicit suggestions from employees throughout the organization. Since Raychem is a very "close" company, with strong friendship and family relationships crossing division lines, a variation in the working schedule of one division may impact upon employees in another division.

- Raychem's use of temporary employees as a flexible workforce accounts for the very high job security enjoyed by the permanent employees. Careful consideration must be given to the interaction of the permanent and temporary employees. Should flexitime be found feasible, whether or not to extend it to the temporary employees would have to be considered.

- Employee cross training has been found to significantly enhance the applicability of flexitime in those organizations where it has been implemented. Several of the U. S. Interconnect Divisions already have this type training program in use.

- In general, flexitime is more difficult to adapt to production areas requiring teamwork. The teams observed in the Raychem divisions appeared to the authors to function as autonomous groups, thus difficulties adapting some flexibility to these workers may be minimal.

The limited application of the feasibility analysis is encouraging. A full scale study, however, should still be

performed by Raychem prior to considering implementation of a flexible working hours system. The authors are grateful to Raychem Corporation for the opportunity to interview their personnel and apply this thesis to the U. S. Interconnect Division.

VI. SUMMARY AND CONCLUSIONS

The concept of flexitime is still new and, although the number of full-time American workers currently on flexitime, or a similar schedule, is admittedly small, their numbers are growing daily. More and more corporations, businesses, and government agencies are moving toward a more participative management style. Various plans to provide workers with satisfaction and the enterprise with increased performance have been proposed and tried; job enrichment, work teams, organizational development, and management-by-objectives just to name a few. Flexitime should also be considered a participative system since it places some burden of responsibility on the employee for accomplishing the organization's objectives while allowing the freedom, within certain limits, to choose his or her own work schedule.

The concept of flexitime had its beginning in West Germany in the mid-1960's. Basically, the idea was to divide the work day into two parts; core time and flexible time. Core time corresponded to the peak work load period when all employees were expected to be present and flexible time being the other periods within the work day when an employee could choose his or her own starting and departure times. By allowing the employee this degree of freedom, numerous unexpected benefits were noted, such as improved productivity and reduced tardiness and absenteeism.

With flexitime quickly spreading throughout Germany and parts of Europe, it soon came to the attention of several North American corporations with international holdings. These companies first implemented the concept in their European plants. Being impressed with the results, they then introduced flexitime into the United States by adopting it corporate wide.

In this study, a feasibility analysis model was developed with an eye toward assisting production oriented organizations determine if flexitime could be adapted to their particular operation. Several areas of analysis, as well as potential problems, were discussed in an attempt to give those considering flexitime an insight into the kinds of things that one should look at and expect when making a policy change such as this. As a result of extensive research and several interviews with firms and agencies currently employing the concept, a few important points consistantly came to light. A discussion of these points seems an appropriate conclusion to this effort.

Flexitime, with its numerous benefits and documented successes, in itself is no panacea. A company with poor employee relations, mistrust, and close supervisory controls would have difficulty implementing flexitime and benefitting from it. Supervisors would be reluctant to relinquish control and employees would conceive it as just another manipulative device of management. Success depends on innovative and cooperative concepts of management, with the key being a mature, trustful relationship between employer and employee.

Both supervisors and workers must be trained to use the system. Supervisors and workers alike must recognize the increased responsibilities each has as a result of the proposed new work schedule. It is imperative that managements expectations and the employees responsibilities be clearly conveyed and understood.

First-line supervisors must play a key role in the planning and operations of a flexible-working-hours schedule; it is they who represent to their subordinates the operational meaning of policies announced by higher levels of management.

The employee, on the other hand, has the opportunity to take some responsibility for his or her own performance and to coordinate personal time with work time. Managers must still set the goals, including what is to be produced and where, but the responsibility for how and when the job gets done should be left as much as possible to the worker.

There are some jobs where the flexitime system may not seem appropriate. In these cases, analysis of the jobs and their interdependencies is critical; flexible working hours can often be tailored to many of those interdependencies. Each division or workcenter, or even segments within a workcenter, will very likely not have the same flexibility as a result of this adaptation, and the reasons for this should be made clear to the employees.

The degree of flexibility elected by workers under a common flexitime system varies. Some use it daily, others

only occasionally, but most adhere to their former schedules or one very similar. This fact helps alleviate some of the initial uncertainty about the new scheduling concept as peoples habits become known. Even though employees do not vary their schedules significantly once they select a preferred starting time, flexitime allows them to do so if and when it is necessary.

It is the finding of this study, that some degree of flexibility can be extended to all but a very small minority of employees in a few selected jobs, such as security or perhaps switchboard operators. The key to success is cooperation, communication, and mutual trust between all levels of the organization.

The Raychem Corporation proved to be an ideal opportunity to conduct a limited application of the feasibility analysis model. The various workcenters within the U. S. Interconnect Division are broadly differentiated as to the type of production process being employed, the number and types of employees, and even the style of management being used. It was readily apparent, even with the limited application of the feasibility model, that variations would exist, between workcenters, in the degree of flexibility that could be adopted. This was not viewed as a barrier to implementing a flexible-working-hours schedule, however.

In interviews with employees from Hewlett-Packard Corporation, where very similar operating characteristics

were encountered, they indicated that many of these apparent obstacles and problems were overcome by permitting the employees and supervisors within each workcenter to work out their own schedules as their circumstances permitted. In this manner, flexibility was extended to a large number of employees whose jobs are quite interdependent. (Williams, 1978)

Flexitime is a viable alternative to the rigid work schedule. The feasibility analysis model developed in this study has had a limited test of its applicability performed on a production related organization, and has proven self valid. The feasibility analysis model is admittedly general in nature. It has been purposely kept this way so that it might have a broader application. An organization with an innovative, participative management style should have no difficulty applying the model and reaping the benefits and satisfaction that comes from adopting flexitime as a way of life.

APPENDIX A

SAMPLE FLEXITIME SURVEY QUESTIONNAIRE

1. I currently work in the following department/workcenter:
_____.
2. I am presently employed:
 As a full-time, permanent employee.
 On some other basis (Part-time, temporary, etc.).
3. I presently work:
 Regular hours.
 On a shift.
4. I now get to work by this method:
 Drive alone.
 Car pool
 Public transportation.
 Walk.
 Bicycle.
 Other. Specify _____.
5. If fléxitime was introduced, I would most often get to work by this method:
 Drive alone.
 Car pool.
 Public transportation.
 Walk.
 Bicycle.
 Other. Specify _____.
6. If flexitime was introduced, I would usually:
 Maintain my present schedule.
 Start work earlier.
 Start work later.
 Vary my start time.
7. If flexitime was introduced, I would usually:
 Maintain my present schedule.
 Leave work earlier.
 Leave work later.
 Vary my quitting time.
8. If a flexible period was available during the noon break, I would usually:
 Maintain my present lunch break.
 Take a longer lunch break.
 Take a shorter lunch break.
 Vary my break from day to day.

9. I would prefer a flexible period at midday:
 Yes.
 No.
 Indiffernt.
10. Considering the kind of work you do, what effect do you think flexitime would have on your work?
 Very positive.
 Positive.
 Remain about the same.
 Negative.
 Adverse.
11. Considering the kind of work performed by your workcenter, what effect do you think flexitime would have on the workcenter as a group?
 Very positive.
 Positive.
 Remain about the same.
 Negative.
 Adverse.
12. Considering what I now know about flexitime.
 I strongly favor it.
 I favor it.
 No opinion.
 I oppose it.
 I strongly oppose it.

ADDITIONAL QUESTIONS FOR SUPERVISORS

13. As a supervisor, how many employees do you directly supervise? _____.

14. Would functional limitations restrict flexitimes use among the employees you directly supervise?

Yes.
 No.

If yes, approximately how many of your employees would not be able to use flexitime? _____.

15. Are core times given in the cover letter adequate for your workcenter?

Yes.
 No.

If no, what times do you suggest? _____.

16. Do you feel your employee's productivity would be enhanced under flexitime?

- Quite a bit.
- A little.
- Very little.
- Not at all.
- No. Would adversely affect productivity.

17. As a supervisor, how do you favor the idea of flexitime?

- Extremely interested.
- Quite interested.
- Interested.
- Very little interest.
- Not at all.

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