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**FAIRSHARE: An Investigation Into Driving A Pay For Performance
System With The Multi-Criteria Measurement Technique**

by

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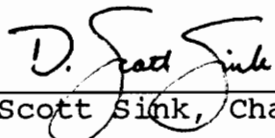
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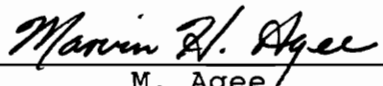
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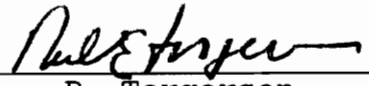
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**FAIRSHARE: AN INVESTIGATION INTO DRIVING A PAY FOR PERFORMANCE
SYSTEM WITH THE MULTI-CRITERIA MEASUREMENT TECHNIQUE**

by

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(ABSTRACT)

Pay for performance systems are types of financial incentive program that attempts to motivate an employee by rewarding on the basis of individual and group performance. While these systems have enjoyed increased visibility in recent years, they have not enjoyed increased success. This is due to the lack of an effective performance measurement system, the validating factor in establishing a pay for performance system.

An investigation was conducted at Systec Services, Inc. to see how a pay for performance system might be implemented. A performance measurement system was constructed under the basic principles of the Multi-Criteria Measurement Methodology. Further, a methodology was constructed for applying performance measurement to create a valid incentive system. This methodology was termed "FAIRSHARE".

A description of the investigation, the various techniques used, a mock implementation and some conclusions drawn by the author are included.

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0.0 INTRODUCTION

0.1 Report Statement

This paper is an investigation into the customizing of an incentive program to a small service organization. An incentive is "a reward, financial or otherwise, that compensates the worker for high and/or continued performance above standard. [It is] also used as a motivating influence to induce efforts above normal" (Henderson, 1989). The methodology developed for this investigation is called FAIRSHARE. FAIRSHARE strives to link financial and non-financial rewards to both individual and group performance. The purpose of FAIRSHARE is to incentivize the work in an effort to improve employee performance, improve the quality of the employee's work life, and increase the employee's commitment to the company.

Systec Services, Inc. will be used to illustrate FAIRSHARE. Systec Services, Inc. is a consulting firm that specializes in human resource acquisition, placement, and program management.

0.2 Motivating Employees With "Gainsharing".

Looking for ways to motivate an employee to work harder and/or smarter is nothing new. In America, the first formalized attempt to do so was in the 1930's, with the introduction of the Scanlon Plan (Ross and Hauck, 1984). Basically an employee involvement and suggestion system developed by Joe Scanlon (a steelworker of the 30's), this plan stressed commitment from employees at all levels to the improvement of the organization. Money saved as a result of increased employee involvement and implemented improvement suggestions was given to the employees as an incentive to continue to give exemplary effort. This was termed "Gainsharing". Gainsharing is a sharing of financial gains with employees. These financial gains are created by bottom line performance improvements (individual and/or group) that cut costs and/or increase profits, as well as by any process changes that create these same type of gains (Henderson, 1989).

0.2.1 THE SCANLON PLAN

The Scanlon plan is a not a formal plan as much as a philosophy or style of management. Its' strength is the simplicity with which it is used. The Scanlon plan is made up

Introduction

of three elements: Cooperation, involvement, and the sharing-of-benefits formula. Cooperation refers to the high levels of teamwork stimulated by the Scanlon Plan. Employees cooperate because they understand that economic rewards are contingent on honest cooperation (Moore and Ross, 1978). The involvement system is designed to increase efficiency (increase the labor and/or machine utilization rate) and reduce costs. It relies on information sharing to cultivate employee improvement suggestions. The sharing-of-benefits formula is a simple way that profits gained from improvement, involvement and cooperation are distributed among the employees. A percentage of profit ($[\text{total revenue} - \text{total cost}] * X\%$) is distributed to the employees on a monthly or bimonthly basis. That percentage is then modified by applying a performance measure value to determine the percentage of the aforementioned percentage that will be allotted as a bonus. A more comprehensive look at this calculation is given on page 68.

0.2.2 HOW GAINSHARING AND THE SCANLON PLAN RELATE TO

FAIRSHARE

FAIRSHARE is classified as a pay-for-performance methodology in the "profit sharing" arena. While a gainsharing system allocates bonuses for performance and/or process

improvements that cut costs and/or increase profits, pay-for-performance systems link a portion of an employee's paycheck directly to individual or group performance. While gainsharing rewards employees for cost cuts and increased labor utilization, FAIRSHARE concentrates on rewarding exemplary performance that results in greater profit. Profit sharing in the context of this report is classified as a gainsharing program that only concentrates on increased or sustained profit, and does not concern itself with the cost cutting and process improvements that "pure" gainsharing extols. FAIRSHARE uses the Scanlon plan sharing-of-benefits formula to accomplish this by determining the profit available for sharing, and then determining the financial amount paid to each employee due to their individual or group performance level. FAIRSHARE does not formally specify the way cooperation and employee involvement (two necessary components of the Scanlon plan) are integrated and stimulated in an existing organizational culture. These are assumed to be present before the actual implementation of FAIRSHARE, and are required for the successful implementation of any such incentive plan.

0.2.3 PAY FOR PERFORMANCE SYSTEMS

Pay for performance systems have received high visibility in recent years (Rossler, 1988, Lawler, 1983, Kilmann, 1984). Pay for performance incentive programs are methods of connecting an employee's salary to his or her individual performance, or the performance of his or her work group. Behavior reinforcement theories state that, when rewards are linked with positive behaviors, those behaviors will be stimulated and perpetuated (Gibson, et.al., 1984, Hamner W.C. and Hamner E.P., 1976). So, when an employee perceives that pay is linked directly with his or her performance, that performance will improve because of increased financial compensation. Lawler states that "There is a continuing belief on the part of the American public that pay should be linked to performance." The motivating factors in these cases are not just financial. When properly designed and administered, pay for performance programs can relate to an entirely different set of employee behavioral factors than do wages and salaries (Henderson, 1989, Ross and Hauck, 1984). Herzberg states that these behavioral factors are the most important things involved in motivating the employee. These are such things as a sense of achievement in the work accomplished, recognition by peers, or just satisfaction in the work itself. In the case of pay for performance,

recognition is imbedded in the system through timely, visible feedback.

0.3 Performance Measurement and Evaluation

The main cause of failure in the many unsuccessfully implemented pay for performance systems is valid performance measurement (Lawler, 1988, Rossler, 1988). To simplify the development of performance measures catered to an organization, the author developed an information matrix. This matrix defines four variables that can be used to observe the qualities of different types of information, and therefore the qualities that performance measures must have to generate these different information types.

0.3.1 THE INFORMATION MATRIX

The information matrix that determines the measurement used for its respective information type was developed from the Wallace Research Wheel (for information see section 4.1, pg 75) and is shown in Figure 1. The Wallace Research Wheel classifies research by the types of information that it generates. Using the premise behind the Wallace Wheel, the author developed four variables that define information: Quantitative, Qualitative, Objective and Subjective.

	Objective	Subjective
Quantitative	HARD	SOFT
Qualitative	SOFT	<i>Perceptual</i>

Figure 1. The Information Matrix

Quantitative and Qualitative describe information as it is gathered. Quantitative information is gathered through empirical methods, and is associated with numbers and numerical relationships (formulas). Qualitative information is gathered through logic methods as opposed to empirical data gathering.

Objective and Subjective describe the bias of information as it is portrayed and perceived. Objective information refers to the deductive application of theory to observations and the knowledge of observations (Wallace, ---). Objective information is impersonal in nature. Subjective information is inductive, and consists more of an understanding of what is observed. Subjective information involves a personal value placement on the observation. The four information variables interact to give the three types of information gathering as they relate to performance measurement. They are classified as "Hard", "Soft", and "Perceptual" measurement.

0.3.1.1 "Hard" Measures of Performance.

"Hard" measures of performance are quantitative and objective in nature, and are best exemplarized by empirical data gathering and numerical manipulation. "Quantity X produced in time component Y" is a good example of a "Hard"

measure. This type of performance measure does not allow for personal interpretation of the subject matter within the portrayal of the numerical data. Personal judgement of what the information means takes place after the information has been portrayed.

0.3.1.2 "Soft" Measures Of Performance.

"Soft" measures involve some type of personal value added to either quantitative or objective information. With quantitative information, the value added is in the portrayal. Subjectivity is added to empirical data collecting techniques. An example of this is: "On a five point scale, with 5 being excellent and 1 being poor, the quality of X was Y". With Objective information, empirical impersonal methods are used to measure value placement of observation. An example of this is: "X% of dentists prefer product Y". The information is an empirically created impersonal observation of qualitative value. Overlapping is very evident in a "Soft" measure of performance because quantity is objective in nature, and quality is often subjective in nature.

0.3.1.3 "Perceptual" Measures Of Performance.

"Perceptual" measures of performance are qualitative and subjective in nature, and deal with logic methods applying value to observation. This area is nebulous and is exemplified by subjective value placement terms, such as "good" and "bad". Perceptual measures use personal judgement, feelings and experience to give value to observation. An example of this is: "The job was done well because the customer was satisfied". Because of the variety of interpretations that can be made from perceptual statements, "perceptual" measures by themselves are ineffective in applying value to performance. They can be made useful through the application of the Multi-Criteria performance measurement technique.

0.3.2 THE MULTI-CRITERIA PERFORMANCE MEASUREMENT TECHNIQUE.

The Multi-Criteria Performance Measurement Technique (MCPMT) is an innovative way to measure individual and group performance by defining the Major Performance Dimensions (MPD's) that make up the task(s) of the individual/group, and measure the attributes (qualitative or quantitative components) of the work that relate to the MPD'S. In this way, a family of performance measures is developed to explain

performance in the organizational system (Sink, 1989). More information on the MCPMT is given in section 4.2.2 (page 78). FAIRSHARE uses the MCPMT to explain the variety of ways performance can be measured ("Hard", "Soft", and "Perceptual") but concentrates on applications to the "Soft" and "Perceptual" information arenas. Quantitative information by itself is not enough to drive any effective incentive plan, especially in a service environment (Kilmann, 1984). Qualitative and subjective information are essential to describe work in the service sector. The MCPMT applies a value to these different types of information and integrates them through the use of transformation curves.

0.3.2.1 Transformation Curves.

Transformation curves are convenient to transform both qualitative and quantitative data (or information) to a common unit of measure on an ordinal scale. Sample transformation curves are shown in Figure 2. As used in this report, transformation curves are both judgementally assigned and assigned based on empirical data, to give a common denominator to all countable aspects of performance. When the curves are judgementally assigned, consensus with the employees whose work is being evaluated must be used in the design of the actual curves. Acceptance of the transformation curve as a

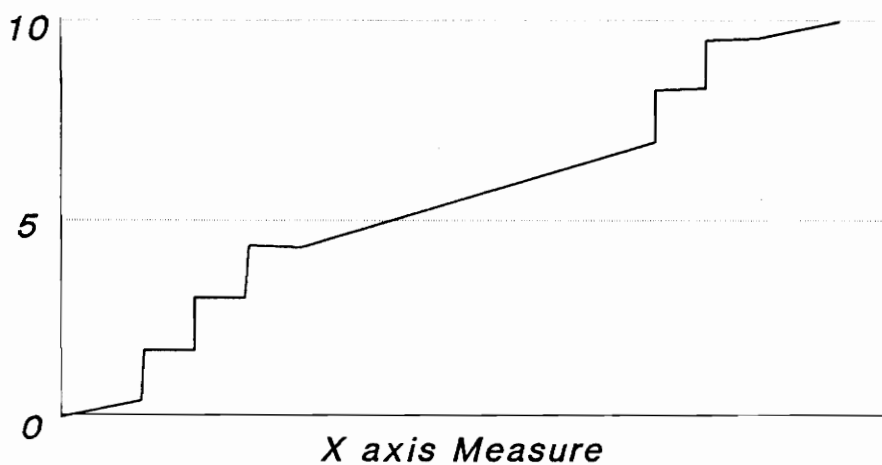
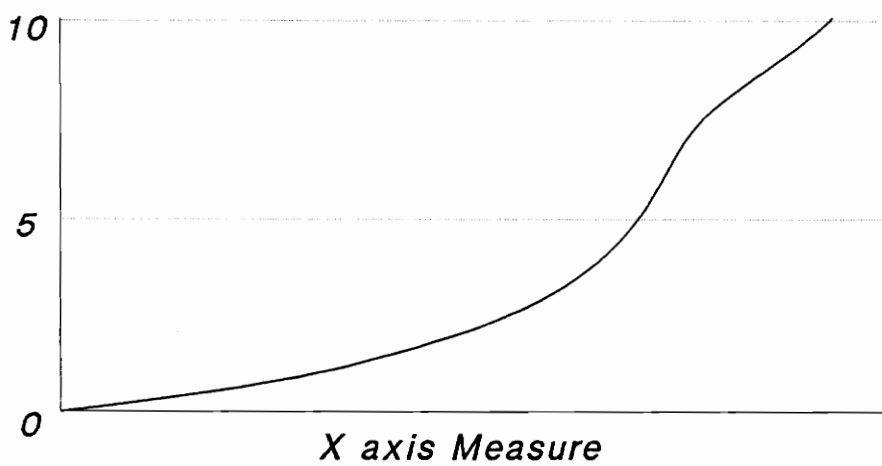
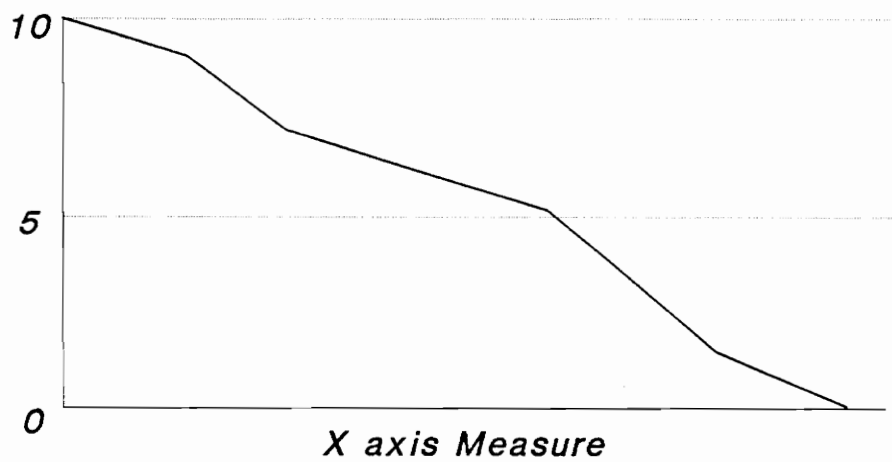


Figure 2. Sample Transformation Curves

valid evaluation of performance at all levels of the organization is essential to the MCPMT, and therefore to the incentive system.

On a transformation curve (as illustrated), the X axis represents the measure that is being transformed on a numerical scale. This scale can be points added, percentages, value perceptions or hard data aggregates; anything that defines performance within the organization. The Y axis is the representation of performance on an arbitrary scale. The value of performance increases as the number on the Y axis increases. In this report, the Y axis scale will be from 0 to 10 for all examples. The curve itself is a graphic representation of the ratio that the specific measure used relates to an accepted performance value, such as excellent performance (10), adequate performance (5), or totally unacceptable performance (0). After, the transformation curve is used to assign values to performance on a scale of 0 to 10, these values are aggregated to give one number that describes the total performance of the individual or group. The aggregation of performance values is demonstrated in the system description and implementation example.

0.4 FAIRSHARE System Objectives

This system strives to:

- * Target MPD's that the organization credits as essential to its long term success. This means defining the essential components of work that drive the organization, and defining them in terms of individual and group performance. In this way FAIRSHARE strives to create an operational definition of organizational performance.
- * Develop attributes that pertain to those MPD's that are task/construct (not readily quantifiable attributes like leadership) oriented. This breaks down personal and group performance into quantitative (objective, numerically quantifiable) and qualitative (subjective) components.
- * Develop valid measures that relate directly to those components of performance.
- * Apply a transformation process to convert those numerical values, both quantitatively and qualitatively oriented, into numbers that relate directly to the evaluation of individual and group performance.

* Pay employees on the basis of those numerical values.

* Foster employee commitment to the incentive system through involvement with the system and cooperation with each other.

0.5 System Assumptions

Assumptions made while developing the FAIRSHARE methodology were:

1. Worker motivation is multifaceted but can be financially linked (Lawler, 1988, Kilmann 1984).
2. Performance measurement is essential to the employee and the manager alike (Sink, 1989).
3. A fair performance appraisal system has many motivational benefits to the employee (Sink, 1989, Herzberg, 1968).
4. The system must be visible and provide feedback if it is to be effective (Lawler, 1988).

5. Reasonable people behave in a reasonable fashion to reasonable stimuli (Process motivation) (Henderson, 1989, Scarpello and Ledvinka, 1988).
6. Pay is a powerful motivator when tied directly to performance (Kilmann, 1984, Lawler, 1983).
7. The implementer(s) of the system is(are) an active managerial participant(s) with the authority to keep it running. This means that the champion of the measurement system must be able to keep the system running, reward on the basis of performance measurement and modify the system when it needs to be changed. In the FAIRSHARE system, while employees are actively involved in the initial development of the system, its continuation is dependent on top management commitment.

0.6 Outline of The Report

The report will first describe FAIRSHARE. A brief overview of all aspects of the incentive program will be given. Then, this paper will review Systec Services, Inc., describing all aspects of the organization. An implementation example using FAIRSHARE will then be given to show the way FAIRSHARE integrates different forms of performance

measurement and pays on that basis. Finally, this report will give a discussion of methods, procedures, and details used in the formulation of the system, along with the results of the study and a critique of FAIRSHARE.

It is important to note that information in the areas of compensation management, performance measurement, performance appraisal, gainsharing, human behavior, and group processes have all been researched. References used and/or relevant to the immediate work have been cited.

1.0 THE FAIRSHARE PERFORMANCE MEASUREMENT AND REWARD SYSTEM

1.0.1 BACKGROUND INFORMATION

FAIRSHARE strives to measure and reward all aspects of performance in the service organization. It uses the MCPMT to come up with aggregate values of individual and group performance, and uses those values to help determine the portion of bonus that goes to the employee as a reward. The actual financial amount of the reward, "x" for example, is determined by integrating the aggregate numerical performance value into the Scanlon plan bonus calculation. This reward will come as a bonus allocated to the individual or work group at the end of a designated pay period. In this report, the designated bonus pay period is every month, and the author recommends that the pay period be on a relatively frequent basis so that employees can connect their performance improvements to immediate financial gains. The bonus for a work group can be a direct financial reward (check for ("x" dollars/number of workers in group "y") given to each member of group "y") or an indirect financial reward (quality of work life improvement having a monetary value of "x" dollars made at office of group "y"). Rewards for individual performance work the same way. The decision of how to allocate "x" dollars is left up to top management discretion, but the

reward will always have a value of "x" dollars. The amount that will be allocated to the profit sharing fund every month will differ from organization to organization. In this report, it is recommended that if the profit made by the organization (Systec Services, Inc.) is greater than or equal to 15% at any given pay period, then no less than 10% will be allocated to the profit sharing fund. If the organization makes less than 15% profit, it is recommended that half of that will be allocated to the profit sharing fund. If the company made no profit or took a loss, then money from the reserve pool (see section 1.3.2, page 31) established by the Scanlon method for distributing bonuses will pay the loss, provide a fund for rewarding exemplary performance, or do both depending on the size of the reserve pool. The author recommends that the amount of money set aside for the profit sharing calculation be specified as a set percentage of profit. In this way the employee has a degree of visibility and control over the system. This section of the report will briefly cover FAIRSHARE, its performance measures, and the way it links pay to performance with the Scanlon calculation.

1.0.2 INDIVIDUAL AND GROUP DETERMINATIONS

The decision to measure and reward at the individual or group level will be made relative to the nature of the work

The FAIRSHARE Measurement and Reward System

itself. If a position is team-oriented, then that employee will be measured and rewarded as a part of the work group. If the position is individual-oriented, with no team influence, then the measurement and reward will be geared toward the individual.

1.1 The Performance Measures

Performance measures in FAIRSHARE are categorized into three areas: "Hard", "Soft", and "Perceptual". These classifications should not be regarded as "the absolute truth"; overlaps may occur where direct classification is not possible. These classifications were developed for the sole purpose of helping to facilitate the generation of performance measures in an organization.

1.1.1 "HARD" MEASURES

"Hard" measures relate to performance that can be portrayed quantitatively and objectively. "Hard" measures are numerical in nature; the information is empirically gathered and numerically portrayed. In FAIRSHARE, "Hard" measures are typified by statistical data aggregates. An example of this is "Quantity of X processed daily". When taking this kind of information, data must be taken beforehand to assure that the

system or process is in control. For this example a process in statistical control is defined as a process that does not exceed three standard deviations above or below the mean (see Figure 3) in variation. This means that there are no errors or special problems within the process that prevent a steady flow of work from week to week. If the system is not in control, then any pay decisions based on statistical measurement will probably be invalid and/or unaccepted by employees. An example of how a transformation curve can be applied to statistical data is shown in Figure 4. It is important to note that transformation curves of this nature can be determined through regression analysis or labor utilization analysis to determine optimum rates of processing, but in this example the curve was determined judgementally.

1.1.2 "SOFT" MEASURES

"Soft" measures are those that are quantitative and subjective, or qualitative and objective in nature. This means that the measure will have both a personal value interpretation and a numerical representation. An example of this might be "Percentage of product X not meeting documented quality standards during time period Y" (see Figure 5). This differs from the "Hard" measure in that, while the "Hard" measure by its numerical nature has some kind of scaled value,

C Chart Example "Quantity X Processed per Day"

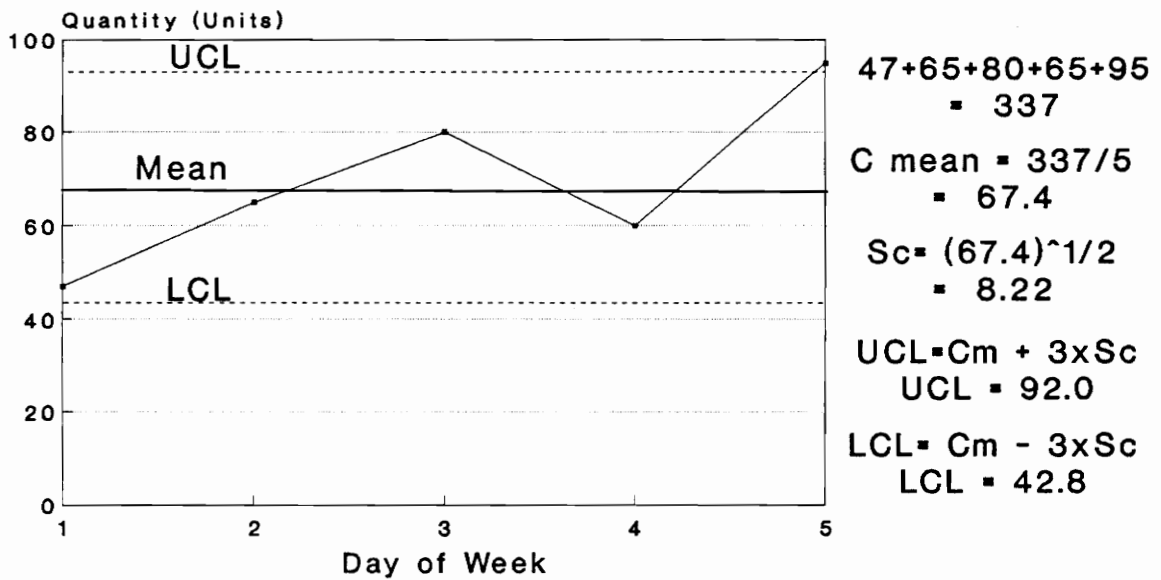


Figure 3. Statistical Data Example

67.4 Transforms into a Performance Value of 6.1

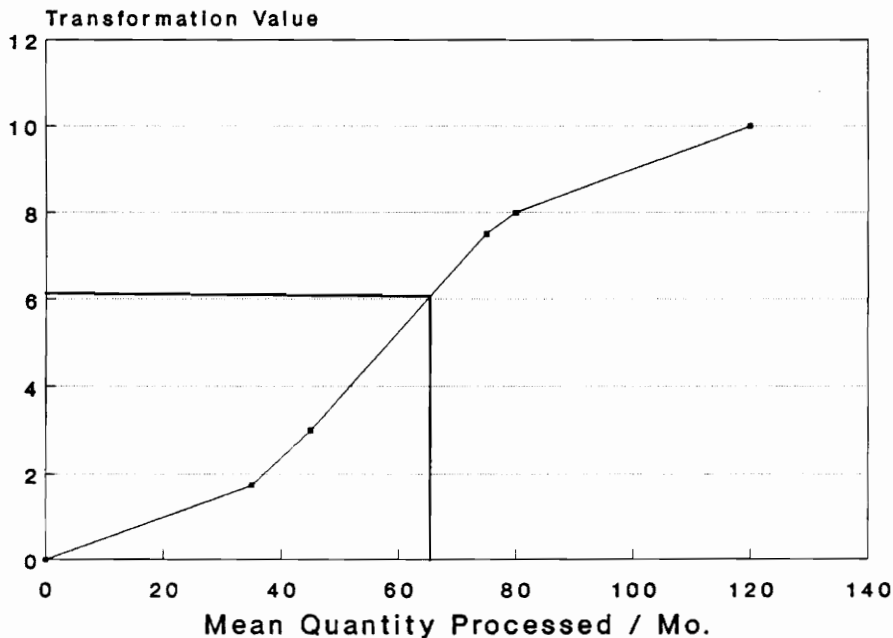


Figure 4. Transformed Statistical Data

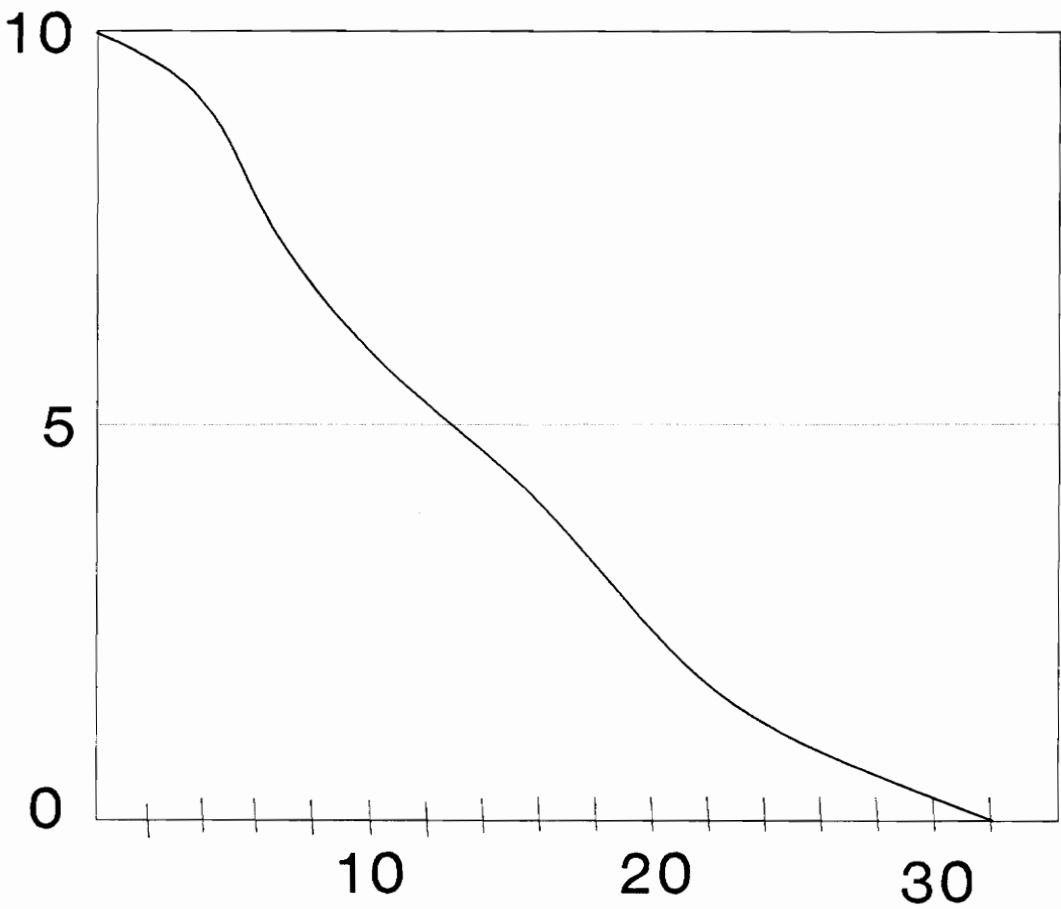
the value given to any "Soft" measure is given through the MCPMT. In this example, the conditions for what is acceptable are judgmentally assigned, and then the data as a whole is quantitatively assessed.

1.1.3 "PERCEPTUAL" MEASURES

"Perceptual" measures will come directly from customer perceptions. A checklist of behaviors that result in customer satisfaction will be developed because customer satisfaction is the downstream goal of the service organization. In FAIRSHARE, customer interaction is a large component for satisfying this measurement requirement. Points will be awarded for every behavior that the customer recognizes that contributed to his satisfaction with the final deliverable. Possible behaviors that might result in customer satisfaction are shown below. These were compiled from different articles on successfully implemented customer satisfaction programs (Gulledge, 1988, Kabak and Rohde, 1987, Kohnke, 1990) and are not necessarily the only behaviors that the customer will target, making customer interaction in the design of this measurement component essential. The example behaviors are:

- * Appearance. The customer perceives the employee as well groomed, clean and appropriately dressed.

"Soft" Measures are instantly given performance value through their transformation



*Percentage of Product X Not Meeting
Quality Criteria Y ($X=N$ Deficient/Total)*

Figure 5. "Soft" Measurement Example

- * Honesty. The customer perceives the employee as honest, truthful, and trustworthy.
- * Flexibility. The employee is perceived as available at the customers' convenience, and ready to change the deliverable at the customers discretion.
- * Consistency. The employee does not say one thing and do another.
- * Understanding Wants and Needs. The customer does not have to inconvenience him/herself to make clear exactly what he or she desires.
- * Providing Extras. The customer gets more than just the specified product with the culmination of the deliverable, and the addition is desirable.
- * Product/Service Knowledge. The employee has a working knowledge of standard products and/or services, and does not waste the customer's time by seeking out assistance on standard questions. This is seen as Competence.
- * Courtesy. The customer feels welcome and comfortable dealing with employees.
- * Professionalism. The employee conducts him/herself in a professional manner and does not let other events of the day affect customer/employee relations.
- * Responsiveness. The employee acts in a timely manner to service customer requests.

*Points Earned From Summing The Behaviors
That the Customers Recognized*

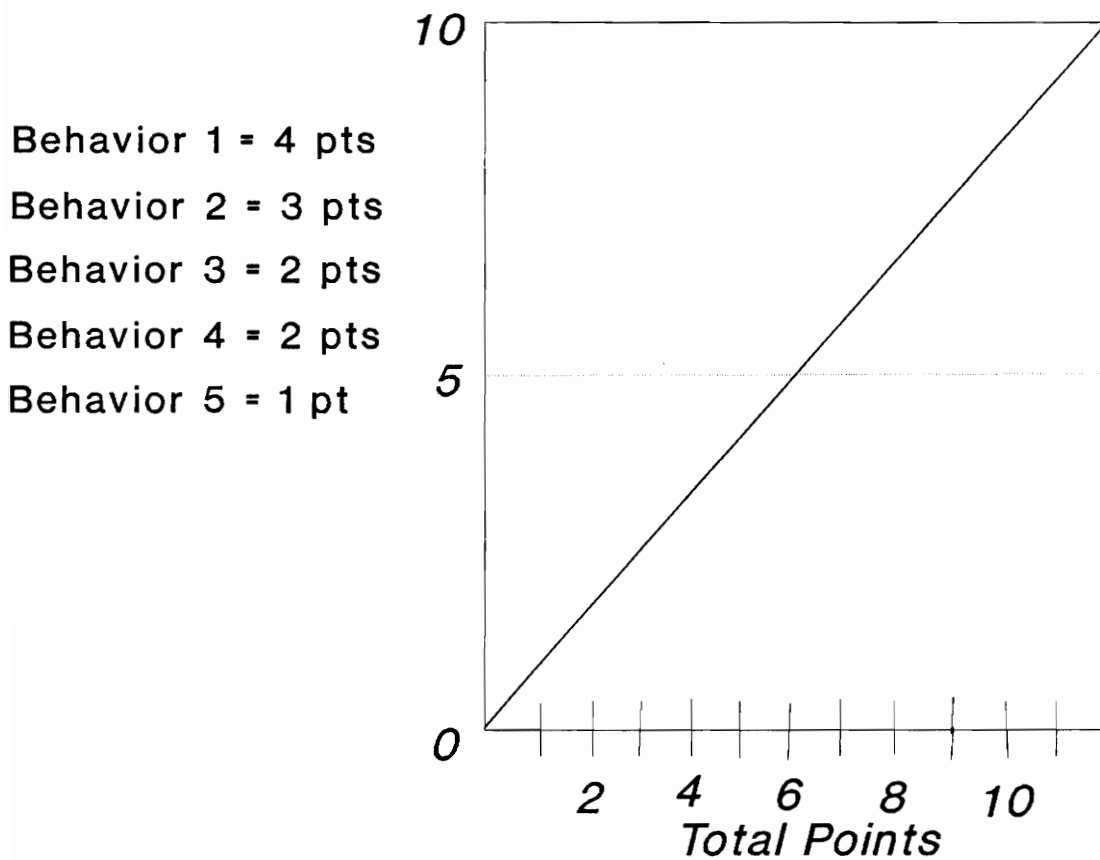


Figure 6. "Perceptual" Checklist of Behaviors Example

These behaviors are linked to a financial reward as well as recognition, and are therefore reinforced. Reinforced behaviors are ranked based on the customer perception of what the most valuable behaviors are, and assigned points on that basis. A transformation curve is then applied to the point total to give a value to performance based on customer perceptions. An example of how points might be assigned for different behaviors and how a transformation curve might be applied is given in Figure 6. This segment of the measurement system is the toughest to link numerically to pay. The worker has behaviors that are beneficial to the organization but are not readily specified as essential to the completion of a task. Behaviors in this example are anything affecting the final product and/or customer interactions.

1.1.4 VALIDATION OF MEASUREMENT

Involvement is essential to gainsharing efforts, especially in the way that performance measurement is perceived as valid. For this report, the author defines a valid measure as one that is perceived as measuring what it is supposed to, uninfluenced by extraneous factors, and further, that it evaluates that component of performance on a fair, unbiased basis. For this, a balance must exist not only between management and employee but between management, **The FAIRSHARE Measurement and Reward System**

customer and employee. If the customer expects things that are totally unreasonable (or management for that matter), then the employee will not perceive that a system based on those expectations has any validity. Hence, the Scanlon concept of cooperation extends not only to all levels of the organization, but to the customer as well. This cooperation extends to the design and development of FAIRSHARE.

1.2 Integrate the Measures

After valid measures of performance have been established, the process of ranking the components in order of importance, rating them from 100 (most important) down to x (least important) and weighting them respectively. The performance measures are integrated to give an aggregate value to overall performance (individual or group). In this way, dollar amounts can be assigned relative to the performance values.

1.2.2 RANK, RATE AND ASSIGN RESPECTIVE WEIGHTS TO THE PERFORMANCE MEASURES

Assuming that meaningful, valid performance measures have been defined at each organizational level, these measures should be ranked according to their importance in accomplishing corporate objectives. At each level where

The FAIRSHARE Measurement and Reward System

measurement takes place, all performance measures are ranked on a scale 1 through X (X = total number of measures at that level). The measures are then rated. The most important measure is given a value of 100, and the other performance measures are rated as they relate to the first performance measure. These values are assigned judgementally, and again involvement and cooperation are recommended for the ratings to be perceived as valid. After each measure is rated, the weight of each measure relative to the total points involved from the rating is determined. An example of the process is shown in Table 1.

1.2.2.1 Aggregate The Performance Measurement Values.

After each performance measure has been assigned its respective weight, the transformed performance measurement values are multiplied times their respective weight, and then added together. In this way, the measurement values are summed together relative to their importance, resulting in a single number that describes performance on the 0 to 10 transformation scale.

Table 1: Measures are Ranked, Rated and Weighted

Assume 5 Measures: **MEAS1**
 MEAS2
 MEAS3
 MEAS4
 MEAS5

1. These measures are ranked in order of importance in achieving Corporate objectives.

- 1. MEAS3**
- 2. MEAS1**
- 3. MEAS2**
- 4. MEAS5**
- 5. MEAS4**

2. Measures are then rated, by assigning a value of 100 to the top ranked measure, and then each measure is rated relative to that fixed measure.

- | | | |
|-----------|--------------|------------|
| 1. | MEAS3 | 100 |
| 2. | MEAS1 | 85 |
| 3. | MEAS2 | 85 |
| 4. | MEAS5 | 80 |
| 5. | MEAS4 | 70 |

3. Finally, measures are weighted by taking the total point value and dividing it into each measures' respective rating.

$$100 + 85 + 85 + 80 + 70 = 420$$

- | | | |
|-----------|--------------|------------------------------------|
| 1. | MEAS3 | $100/420 = .238$ |
| 2. | MEAS1 | $85/420 = .202$ |
| 3. | MEAS2 | $85/420 = .202$ |
| 4. | MEAS5 | $80/420 = .190$ |
| 5. | MEAS4 | $70/420 = .167$ |

1.3 Assign Dollar Amounts

1.3.1 ESTABLISH THE PROFIT SHARING FUND

The rationale for establishing the profit sharing fund (the pool out of which every employee is rewarded on the basis of individual and/or group performance) should remain at the discretion of top management. Once set, however, the profit sharing allocation should be consistent, and the policy for its determination should be steady and visible to the employees. In this report, the policy for determining the profit sharing fund has already been suggested. Any net profit above or equalling 15% determines an allocation of 10% profit to the profit sharing fund. Any profit below 15% determines an allocation of half the profit amount. Unprofitable contracts will not be considered in this report, but a policy for that situation has also been suggested.

1.3.2 DETERMINE PROFIT SHARING AMOUNTS FOR FAIRSHARE

PARTICIPANTS

Suppose three organizational levels are to be participants in the FAIRSHARE system, and for some particular allocation period, \$X dollars will be distributed as the total profit sharing fund. The proportion allocated to each

organizational unit is a judgmental decision made by top management based on the influence each level had on customer satisfaction. Again, balance between the three validating components (management, employee, and customer) must be present for the effective implementation of this step. For example, assume the proportions are 20%, 40%, and 40% for levels 1, 2, and 3, respectively. That proportion is multiplied by the number from 0 to 10 that represents the total performance aggregate at each level (and then divided by ten) to give the percentage of the gainsharing fund allocated to that level. To continue the example, assume level 3 had a total performance aggregate value of 8. The percentage of the profit sharing fund would be:

$$(8 / 10) * .40 = .32$$

So, 32% of \$X dollars would go to level three. The other levels are determined in the same fashion. If level 3 represented a work group, that money would be divided between the members if a direct financial bonus was given. A more comprehensive example is shown in section 3.2.1, page 69. The surplus that is developed because total performance is not perfect (10) goes into a bonus reserve fund, to be used at times the organization does not have a profit, or to be distributed as an end of the year bonus. The bonus reserve is used at the discretion of top management to reward employees or to provide insurance for the continuation of the pay for

performance plan.

2.0 SYSTEC SERVICES, INC.

Systec Services defines itself as a Human Resource Management Systems and Methodologies consulting firm. Basically, Systec deals in labor acquisition, labor allocation, and if necessary, labor management for outside clients. Systec works on a contract basis, setting the price for the services they provide beforehand. Systec's services are divided into three areas: Personnel acquisition and allocation, personnel and program management, and consulting services.

2.1 The Services Systec Provides

2.1.1 PERSONNEL ACQUISITION AND ALLOCATION

Personnel acquisition and allocation can be defined more commonly as recruiting and placement.

2.1.1.1 Candidate Sourcing Through the Hiring Phase.

Wherever a client has contracted for personnel packages, Systec stays in touch with changing candidate skill requirements throughout the business cycle. This means that Systec handles changing client needs until the client feels **Systec Services, Inc.**

that the contract has been fulfilled.

2.1.1.2 High Quality, High Volume, Low Cost Candidate Sourcing.

Systec can put together a package of high potential candidates ready for hire for less cost than their competitors. Systec has support staff involved in an extensive screening process that assures high quality by matching candidate skills to client specifications.

2.1.1.3 Resume Services.

Systec can provide a distribution of candidate resumes to personnel managers and staffing centers. They can provide them in skill group packages (engineers, project managers, etc.). For selected candidates, current availability is verified by direct mail contact every 90-120 days.

2.1.1.4 Gems.

Systec maintains a data base of candidates and thus, when a client has an immediate need for a person or has a need for a person with "hard-to-find" qualifications, Systec can usually fill this need faster than the client could on his or
Systec Services, Inc.

her own.

2.1.2 PERSONNEL AND PROGRAM MANAGEMENT

This refers to all aspects of labor management and the development of specific deliverables to the client. As will be explained subsequently, Systec's Services range from providing the client with personnel for a certain project to Systec bidding the project itself and providing the final product as a deliverable.

2.1.2.1 Integrated Human Resource Management Systems.

For some clients, Systec will go in and become their Human Resources Department and fulfill all recruiting needs, as well as project future personnel needs.

2.1.2.2 Project Management And Development.

Systec has the capability to set up project teams for clients and manage them until deliverable completion. This service encompasses a wide array of technical aspects. Alternatively, for clients that hire project teams for full time work, Systec can provide training, management and operational facilities for members of such teams.

2.1.2.3 Special Services.

This category covers a range of client needs that are not readily categorized. An example of this service would be the organization of a job fair exclusive to space station candidates for the GE Astrospace program.

2.1.3 CONSULTING SERVICES

Systemec provides a number of consulting services pertaining to project completion as well as existing client human resource management (HRM) practices.

2.1.3.1 Peripheral Consulting Services.

Systemec, if requested, will analyze and improve a client's existing HRM practices, including state of the art technology improvements as well as methodology improvements.

2.1.3.2 Reduction Of Redundant Administrative Activities And Their Associated Costs.

Systemec can provide investigative studies (methods engineering) of administrative activities to determine manpower requirements, appropriate task allocations, and least

Systemec Services, Inc.

cost path determinations for certain tasks.

2.1.3.3 Management Measurement Tools.

Systec provides clients with information tools that help them manage projects as well as evaluate their own performance. In this case, a management tool is anything that gives the manager information relevant to his decision needs.

2.2. Systec's Internal Administrative Components

Systec's organizational chart is shown on the next page (Figure 7). Notice that only the Valley Forge Office has been targeted for analysis, as well as Field Services. This has been done to make the project more manageable. In a real FAIRSHARE implementation, each component would be analyzed so that their respective measurement components could be customized.

2.2.1 CORPORATE MANAGER

The Corporate Manager (CM) of Systec Services, Inc. is also the owner of the firm. He has four primary responsibilities.

Systec Services, Inc.

Corporate Chart

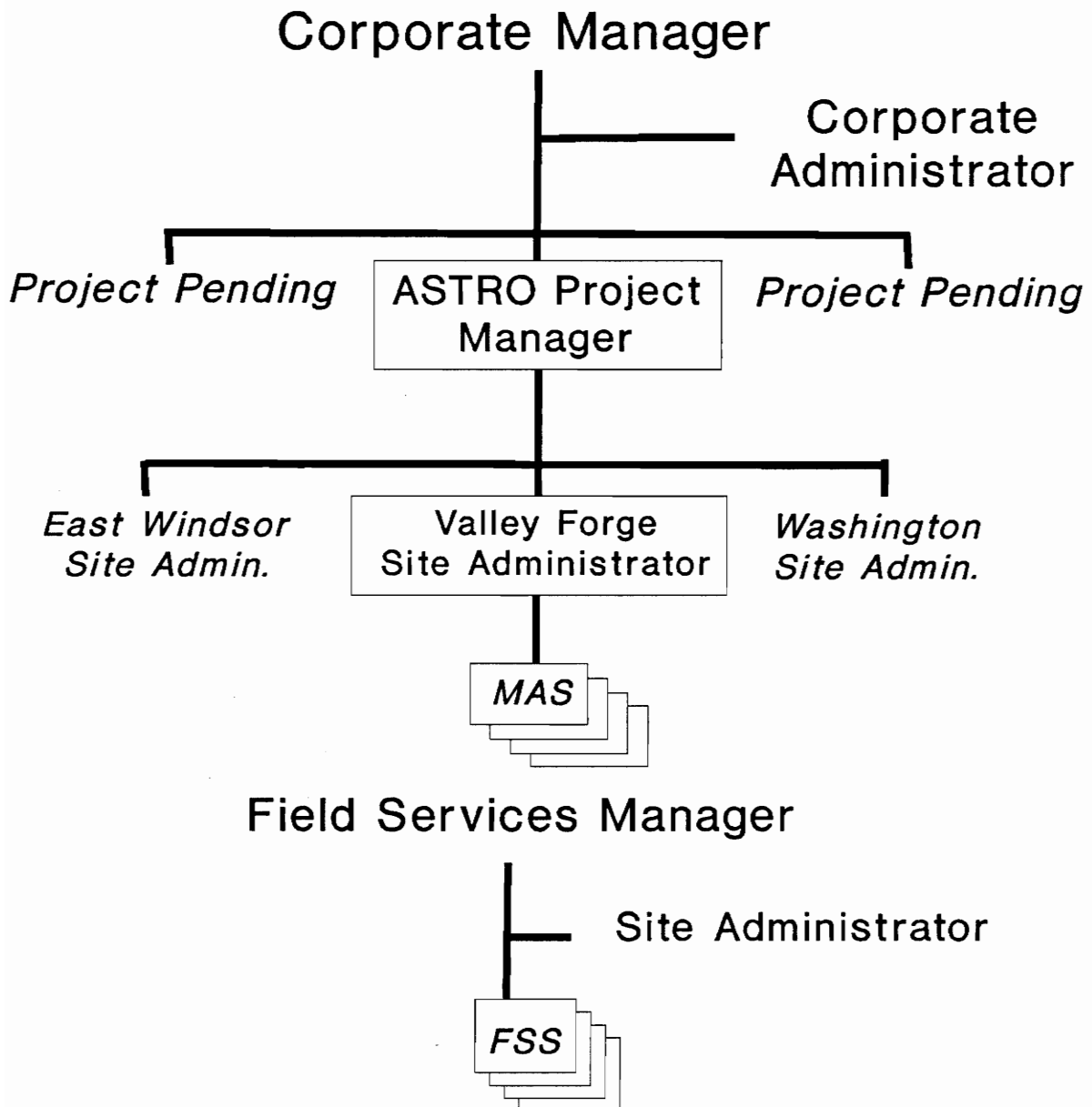


Figure 7. Systec Services, Inc. Corporate Chart

2.2.1.1 Inside Consultant Acting As An Expert.

The CM provides technical and managerial assistance to any ongoing activities at Systec. In addition, he individually performs a variety of activities. He is involved to some degree in all products delivered to clients.

2.2.1.2 Business Gatherer.

The CM is heavily involved with marketing, the acquisition of new business, and contract development.

2.2.1.3 Fireman.

The CM is also involved with emergencies that arise and directs prompt resolutions to crisis situations.

2.2.1.4 Performance Evaluator.

He also acts as an informal and subjective performance evaluator, taking action as he sees fit to correct poor or misdirected performance as well as to recognize excellence.

2.2.2 CORPORATE ADMINISTRATOR

The Corporate Administrator (CA) makes sure that all internal aspects and processes of Systec are running smoothly. She is knowledgeable in all aspects of the organization and also functions as a troubleshooter and problem solver within the organization. She oversees the effective coordination between Field Services and Administrative Services.

2.2.3 ASTRO PROJECT MANAGER

ASTRO is an acronym for the one of the aerospace divisions of GE (General Electric) and there are many different projects within ASTRO that are coordinated by the Project Manager (PM). The PM has a great deal of interfacing with the client(s), and is responsible for presenting the deliverables to the client.

2.2.4 SITE ADMINISTRATOR

It is the Site Administrator's (SA) responsibility to ensure that all things run smoothly at his or her particular site. This means making sure that the support staff have everything they need to work effectively and efficiently, and making sure that any customer interactions and requests that **Systec Services, Inc.**

take place at that site are handled smoothly and courteously. The SA's responsibilities vary from site to site. Sometimes, they will be the manager of a special project team working to develop a specified product for the customer; other times, their main responsibility will consist of reordering office supplies and sending customer service requests up the chain of command. At Valley Forge, there is no formally recognized SA. The responsibilities of this position are being handled on a "line-of-sight" basis. That is, as soon as anyone recognizes a deficiency in inventory, they take care of it. Since the CM and CA are both located at the Valley Forge office, there is no urgency to formalize a supervisory position. For the purpose of the implementation example, the SA position will be recognized to show the interface between group and individual performance measurement, as well as to provide three levels of FAIRSHARE participants.

2.2.5 ADMINISTRATIVE SUPPORT STAFF

Administrative staff (MAS-Member of Administrative Staff) support the SA. While no formal job descriptions exists, they all have common skill requirements; receptionist and data entry skills are among these. MAS personnel fill in the gaps, enter resumes into the data base, take messages, schedule appointments and interviews, and do anything else that the SA

Systec Services, Inc.

needs done to effectively interact with the client or with the PM. They have little contact with the client except within the logistic duties mentioned.

2.3 Systec's External Field Component

2.3.0.1 Field Services Description.

Field Services concentrates on adding candidates to the data base, and ranking them in conjunction with client needs. The major concern is resume processing. They want to gather, scan, edit, process and rate the highest quantity of candidate resumes possible into the administrative data base. They can also service client needs directly by providing candidates for hire from the main database.

Field Services fills their candidate data base through in-house and out-of-house resume acquisition. In-house acquisition refers to candidates gathered through job fairs, interviews, referrals, newspaper ads, and direct mailing. Out-of-house refers to data base enlargement through interaction with "Headhunting" firms (organizations that concentrate primarily in labor placement). Processing is an important part of the total process, and involves an "ABC" ranking procedure. An "A-cut" candidate immediately meets all

Systec Services, Inc.

of the client requirements and is the highest potential candidate that can be selected for that position. A "B-cut" candidate does not fulfill all client requirements, but is still available for interviewing and probably worth calling. Depending on the amount of "A-cuts" available, B's may or may not be sent to a client as prospective interviewees. "C-cuts" are people that are entered into the data base for some future need, who presently fulfill little to no requirements for the current client need. Field operations also fulfill special services such as setting up mini-staffing centers for personnel managers where benefits orientation can take place for any number of candidates hired. Field services also provides preliminary screening, interviewing and drug testing for the client. Field services consist of the following two components: The Field Services Manager and the Field Services Support Staff.

2.3.1 FIELD SERVICES MANAGER

The Field Services Manager reports directly to the CM. He reviews about 70-85% of all resumes personally and rates them on the ABC basis for each project they have been gathered for. For a number of contracts he deals directly with the client to solve staffing needs. He handles all aspects of Field Services personally, and deals directly with all **Systec Services, Inc.**

recruiting efforts.

2.3.2 FIELD SERVICE SUPPORT

Field Service Support (FSS) handles anything the Field Services Manager does not deal with directly as well as perform logistical duties. Currently there is only one full time operational member of support personnel, but others are hired on a part-time basis when justified by need (primarily college students). FSS personnel will also attend job fairs when the Field Services Manager is unavailable.

2.4 The Current Compensation System at Systec

The current compensation system has a base pay component, a formal recognition component, an informal reward component, and a benefits package. It has no gainsharing or profit sharing component. Each month of the year contains two pay periods, the first and sixteenth day of the month. Employees are classified in three ways: Full-time benefitted, leased benefitted, and hourly/non-benefitted.

2.4.0.1 Full-Time Benefitted.

These employees are the full-time salaried employees of Systec. They are provided full benefits. Full time benefitted employees can be found at every level of the organization, although the majority are at Site Administrator level and below. There are currently 19 full time employees. Full time employees will be participants in the FAIRSHARE pay for performance system.

2.4.0.2 Leased Benefitted.

Leased employees are "part-time" Systec employees with special skills who function on an "as needed" basis. They are provided benefits for the time they put into the Systec organization, including paid personal days and vacation time. Leased employees are valued for their knowledge skills as well as their personal reputation, and function with Systec in conjunction with their other personal activities. Leased employees usually function as program managers. They are included as participants in FAIRSHARE because their jobs are important to organizational success.

2.4.0.3 Part-Timers/ Hourly Non-benefitted.

The criteria for these employees vary because the jobs they may hold are so diverse. A part-time Systec employee is paid by the hour and does not receive benefits. Part-timers are project team people as well as support staff people. A part-timer is included in the FAIRSHARE system only as far as his/her work contributes to any final product being evaluated.

2.4.1 BASE PAY COMPONENT

Every employee receives this component. Base pay comes in the form of annual salary for full time and leased time, and in the form of hourly wage for part time.

2.4.2 FORMAL REWARD COMPONENT

This is a small part of the compensation system and one not received by all levels in the organization. It is composed of a periodic, direct financial reward (the bonus check) and a non-financial component (peer recognition) for a single employee. At periodic corporate meetings, a person is recognized in front of everyone as an exemplary performer and given a bonus check based on that recognition. Criteria for exemplary performance are not specified, thus when recognition

Systec Services, Inc.

is given, it may not be perceived as valid. The CM feels that this is an ineffective way to reward performance.

2.4.3 INFORMAL REWARD COMPONENT

There is an informal non-financial reward component. Each office is a small social system. In this kind of atmosphere, if an excellent job is done, then peer recognition and status improvement will be evident to the worker who has done the excellent job. The fun in working in a small company is that you get to interact on a personal basis with your coworkers. Recognition and feedback are valuable elements in this environment.

2.4.4 BENEFITS PACKAGE

The benefits package allotted to fully benefitted employees consists of various components.

2.4.4.1 Hospitalization.

Blue Cross/Blue Shield medical coverage is co-paid up to a \$350 deductible reimbursement to the eligible employee.

2.4.4.2 Medical Benefits For Disabled Employees.

Reduced hospital premiums are offered to all employees that qualify for partial or long-term disability. For a long-term disability there is a six month waiting period for the benefits to begin. It pays 60% of covered monthly earnings to a maximum monthly benefit of \$5000.00. Payments not taken care of in the first six months are handled by Blue Cross short term disability payments.

Along with disability, full maternity coverage and a \$100 minimum monthly benefit for short term disabled employees are offered. All coverage is subject to satisfactory health evidence.

2.4.4.3 Dental Service And Eye Care.

The dental care program takes care of basic diagnostic, preventive and restorative services. Fundamental services are paid 100%. There is a calendar year maximum of \$1000 per person. No gold foil fillings or replacement dentures are covered.

Optical services cover 100% of exam costs, frames not to exceed \$24, Single lenses up to \$24, bifocals up to \$36,
Systec Services, Inc.

trifocals up to \$46, and aphakic lenses up to \$72 dollars. Contacts are covered up to \$48.00.

2.4.4.4 Days Off With Pay.

Sick days with pay, paid vacation days and personal emergency days are all earned through time spent with the company. Three sick days are offered each calendar year, and 1.5 are earned per six months time. If more are taken and not filed under disability, then the time needed to earn the extra days are owed to Systec. Ten paid working days vacation is earned every calendar year, five every six months. Pay cannot be substituted for vacation time. If vacation time is not taken at the end of a calendar year, it is lost. No vacation time above 10 days per calendar year is allotted. One paid personal emergency day is awarded every six calendar months. Emergency days cannot be used in conjunction with sick or vacation days, and if an emergency day is not used within the six month period it is lost. Formally recognized holidays are awarded all employees, as well as an optional unrecognized paid holiday awarded every calendar year.

2.5 Current Measurement and Evaluation at Systec

There is no formal visible measurement and evaluation process at Systec. The CM engages in informal performance measurement, in that the employee is not necessarily aware that he/she is being evaluated.

2.5.1 SUBJECTIVE EVALUATION

Simply by noting work completed on schedule, analyzing employee's work sheets to see if they have been processing enough resumes, and informally inspecting the quality of service by walking around, The CM stays in touch with his people and the progress of his organization. He tries to get a feel for the smooth flow of work and information throughout the organization.

2.5.2 OBJECTIVE EVALUATION

For a more objective evaluation of performance, he engages in random sampling of data items, like processed resumes. He does this to make sure that they are completed in a timely and accurate fashion. Another type of random sampling would be to look at the "log-in" sheets of his personnel on the mainframe for time utilization analysis.

3.0 SYSTEC IMPLEMENTATION EXAMPLE

The primary objective of this investigative study at Systec Services, Inc. was to develop general guidelines which would assist the Corporate Manager in establishing an employee gainsharing program. Secondary objectives were to suggest a specific methodology and recommend performance measures that would provide a structure for the program. The example that follows is for the purpose of illustrating the guidelines, the recommended performance measures, and the methodology that links pay to performance measurement. The example is limited, however, to the administrative portion of Systec and within that is limited to certain levels of the organization. In particular, the example is concerned with the GE ASTRO project, and further narrows that project down to the Valley Forge Site (one of three working on that specific project). The implementation only covers three levels of the organization: The Program Manager, the Site Administrator, and the Administrative Support Personnel.

3.0.1 ASSUMPTIONS

In the example, the following basic assumptions apply:

- 1) A customer questionnaire has been conducted, and a checklist of behaviors that stimulate customer satisfaction has been developed.
- 2) The transformation curves for the performance measures have been designed through cooperation and are perceived as valid.
- 3) The total profit made for the pay period involved was 17% (a numerical value of \$5100 left after all expenses were paid on a \$30000 contract). Following the guidelines set for establishing the profit sharing fund, 10% (\$3000) of this profit is allocated to the profit sharing fund, leaving 7% (\$2100) available for company investment.
- 4) Gainsharing allocations for this contract were distributed at 20% for the Program Manager (Level 1), 30% for the site Administrators (Level 2), and 50% for Sites (Level 3). These percentages were determined by the perceived contribution to the final deliverable, and for the example were accepted by all levels of the organization.












Other assumptions related to these basic assumptions will be mentioned in the sections that follow.

3.1 The Performance Measures

To help facilitate understanding this example, individual and group measurement must be defined for each level, as well as the types of measurement being performed at these levels. Table 2 shows these relations. As seen in Table 2, The MAS is being measured and evaluated on the basis of his or her work group at all three levels of performance: "Hard", "Soft", and "Perceptual". The lowest levels of the organization are the easiest ones to develop measures for; their jobs are better defined in terms of responsibilities and task completion.

The SA is being measured at both the individual and group level, and he also is being measured at all three levels, but not directly. Because the SA acts as the liaison between the work group and the program manager, his performance is not easy to track. In this example, the SA's performance evaluation is a function of both the MAS's total performance evaluation and the PM's total performance evaluation. The SA performance value is a function of the MAS evaluation because that value reflects directly on the SA's management skills. The SA performance value is a function of the PM's evaluation because it reflects directly on his responsibility as liaison between the two levels.

Table 2. FAIRSHARE Participants / Performance Measures

ORGANIZATIONAL POSITION	NATURE OF MEASURE			LEVEL OF MEASUREMENT	
	Hard	Soft	Percept.	Individual	Group
ASTRO Project Manager					
Site Administrator					
Administrative Support Staff					



Indirect Measurement and Evaluation



Direct Measurement and Evaluation

Assume for this example that the CM has determined that the SA's total performance value will be:

$$\text{SAPERF(TOT)} = 0.8 * (\text{MAS performance aggregate}) + \\ 0.2 * (\text{PM performance aggregate})$$

The PM is measured on an individual basis on a perceptual level. This is because her responsibilities are so diverse. The bottom line in her position is customer satisfaction with the final deliverable, so it is valid that the customer have direct input to her performance evaluation.

3.1.1 "HARD" MEASURES OF PERFORMANCE

As shown in Table 2, the only "Hard" performance measurement takes place at the MAS level. The measure was "Resumes Processed by the Valley Forge Site / Week", and looked at MAS productivity (output/input). Because of the enormous backlog of resumes, input for the example is near infinite and therefore discounted from the measurement, leaving only output to be considered.

The statistical chart (a "c" chart) as well as the transformed measurement value are shown in Figure 8. Again, the data points as well as the transformation curve are

Systec Implementation Example

C Chart Example Resumes Processed per Week

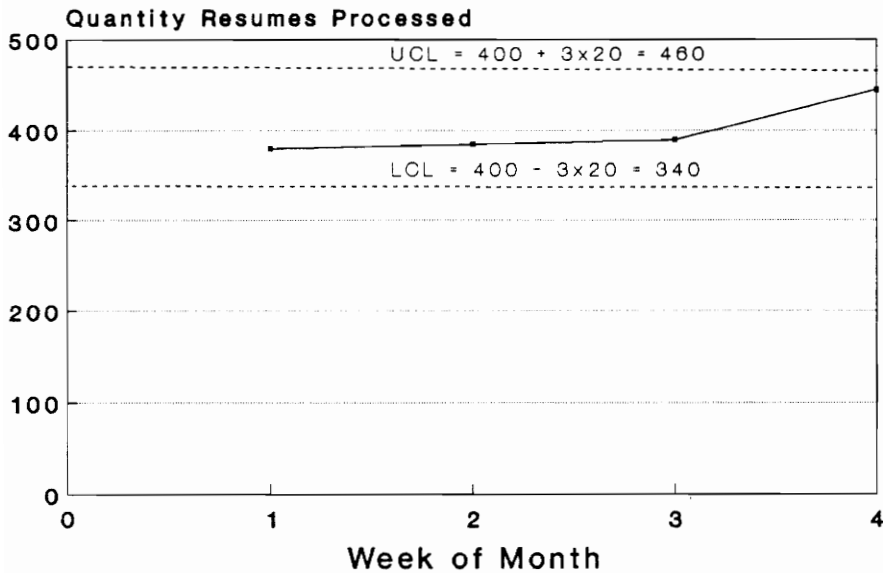
$$380 + 385 + 390 + 445 = 1600$$

Mean Resumes Processed

$$= 1600/4$$

Mean Resumes = 400/Wk

$$S_c = (400)^{1/2} = 20$$



400 Resumes per Week results in a performance value of 7.5 relating to MAS productivity

Resume Processing Transformation Value

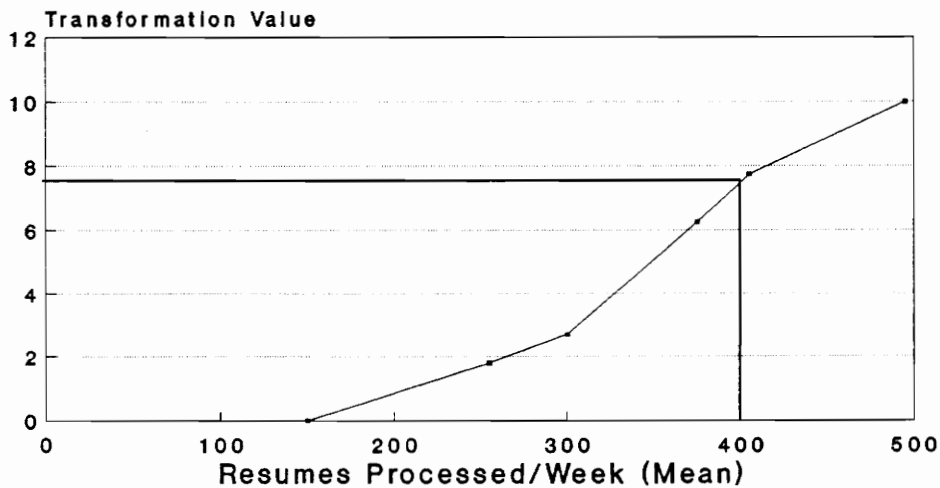


Figure 8. Hard Measures at The MAS Level

arbitrarily determined values created to demonstrate the functioning of the system. As is shown, the mean value of resumes processed, 400/ week, is relatively constant over the four week period. For the sake of this example, we will assume that the process is in control, and that the control limits of plus and minus 3 sigma have been established and validated through regression analysis and previous observation. The mean value of 400 resumes processed per week transforms into a relative performance value of 7.5 on the 0 to 10 scale. The weight of this measure and how it integrates with other measures to form a total performance aggregate is shown in section 3.1.4.

3.1.2 "SOFT" MEASURES OF PERFORMANCE

"Soft" measurement only took place at the MAS level for the example. This measure was **"Percentage Errors in Batch of Resumes Processed / Month"**. Every week Systec Services sends every candidate whose resume was processed a letter signifying that they are now in the Systec data base. Through the use of a computer program, each candidate's name and address are taken from the computer file and printed on a one-sided stick pad that is placed on a form letter envelope. Errors in the processing force MAS personnel to look back in the files to find the correct name and/or address of the candidate. This

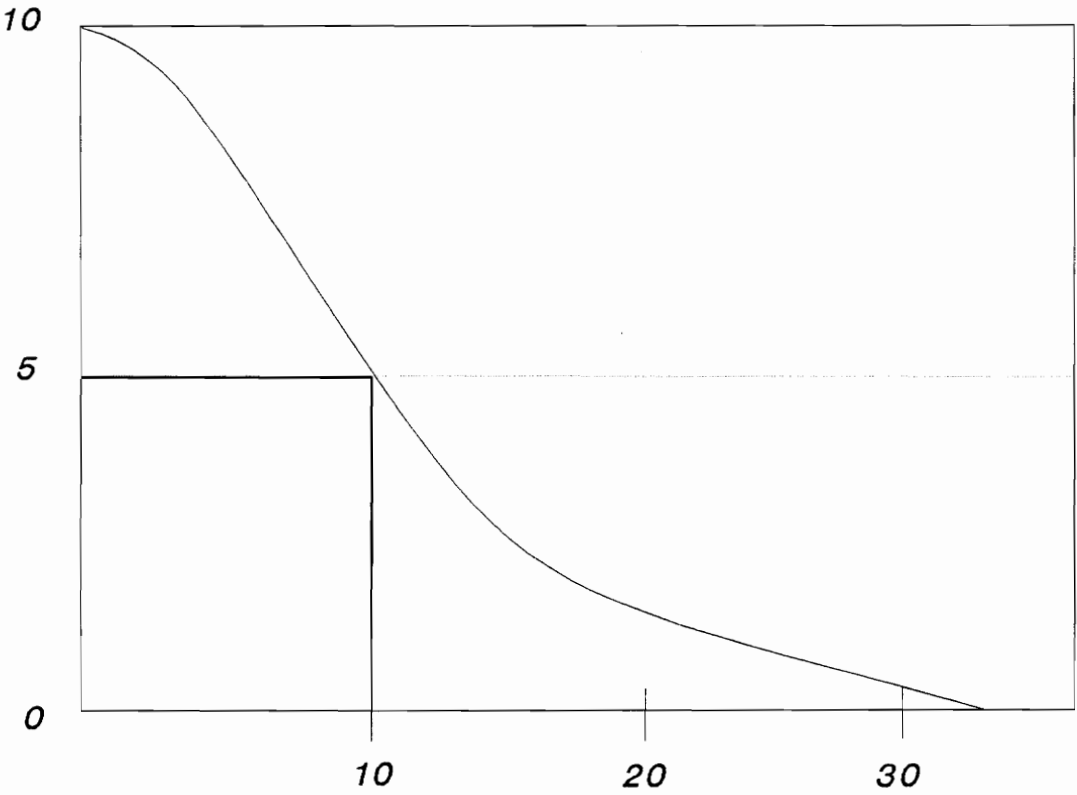
Systec Implementation Example

measure shows how effectively MAS personnel edit resumes, and is shown in Figure 9. For this example, the transformation curve as well as the measurement value were set up arbitrarily by the author.

3.1.3 PERCEPTUAL MEASURES OF PERFORMANCE

"Perceptual" measurement in this example takes place at all levels of the organization. Recall that the corporate goal of Systec Services, Inc. is Customer Satisfaction. Since SA evaluation is indirect, sample questionnaires were developed at the MAS and PM levels only. For convenience, both customer questionnaires were designed based on the examples of behaviors that might result in customer satisfaction (pg. 25, 27). To facilitate ease of calculation for the example, each behavior targeted was given a point value of two points each, with the exception of the PM question "Are you satisfied with the product as it relates to the money you spent for it?" This question was placed in this example to demonstrate that financial matters should be covered in a customer questionnaire. All questions are yes/no, so that the questionnaire itself resembles a checklist of behaviors that affect customer satisfaction.

A 10% error rating at the end of a month translates into a performance value of 5.0



Percentage of Errors in Batch of Resumes
Processed / Month

Figure 9. Soft Measures at the MAS Level

3.1.3.1 Customer Checklist For The Program Manager.

The checklist for the example is as follows, including the customer responses that result in the total and the resulting performance value (see Fig. 10). The points per question would not show up on the customer version of the checklist. The questions are:

1. Are you satisfied with the final product as it relates to the money you spent for it? (5 pts)

YES +5 points

2. Did the final product greatly exceed your expectations, and provide future incentive for doing business with Systec? (2 pts)

NO 0 points

3. Did you feel welcome and comfortable dealing with Systec? (2 pts)

YES +2 points

4. Did your Systec representative respond to contract changes in a timely manner? (2 pts)

NO 0 points

9 Customer Satisfaction points results in a performance rating of 6.0

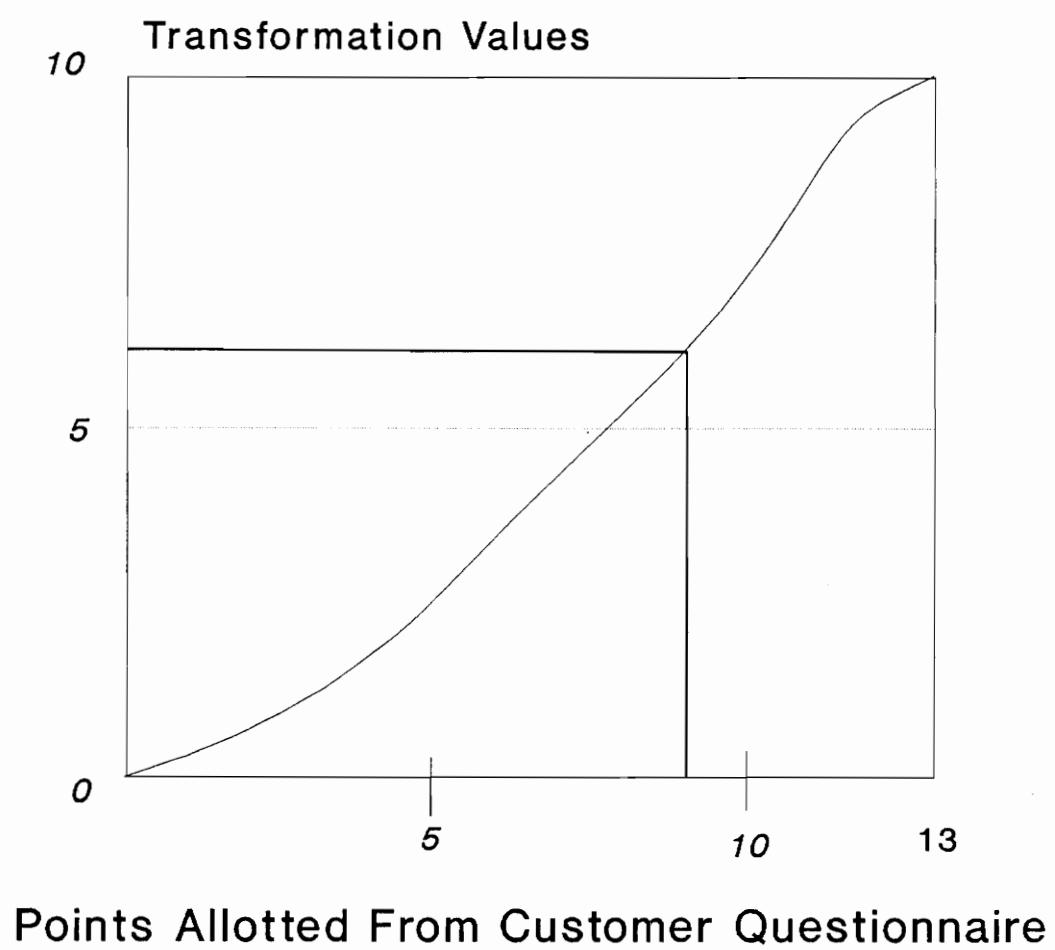


Figure 10. Program Manager "Perceptual" Performance Evaluation

5. Did you feel you could rely on Systec to fill many different candidate requirements? (2 pts)

YES +2 points

The total point value from the questionnaire in this case example is 9 points out of 13 possible points. This transforms into a performance value of 6.0 (see Fig. 10).

3.1.3.2 Checklist Evaluations For The Site/MAS Personnel.

The following list describes the questions that could be on the questionnaire to evaluate MAS performance, and is only used here as an example of how the checklist can be used to evaluate MAS performance. No ranking of these questions took place. For the convenience of the example, they have all been assigned a value of two points. Figure 11 shows the transformation curve for this measure.

1. Did our Site personnel treat you in a courteous, friendly manner? (2 pts)

YES +2 points

2. Did the employee(s) that you spoke with have a general understanding of your situation? (2 pts)

YES +2 points

3. Was he/she able to assist you in a timely fashion? (2 pts)

YES +2 points

4. Did he/she act in a completely professional manner at all times? (2 pts)

YES +2 points

5. Did he/she provide you with different ways to get the things you requested from him/her? (2 pts)

YES +2 points

As is shown, the Valley Forge Site performed very well in dealing with the customer, and their overall performance rating is a 10.

In this case, points are proportional to the performance evaluation; the performance rating is 10

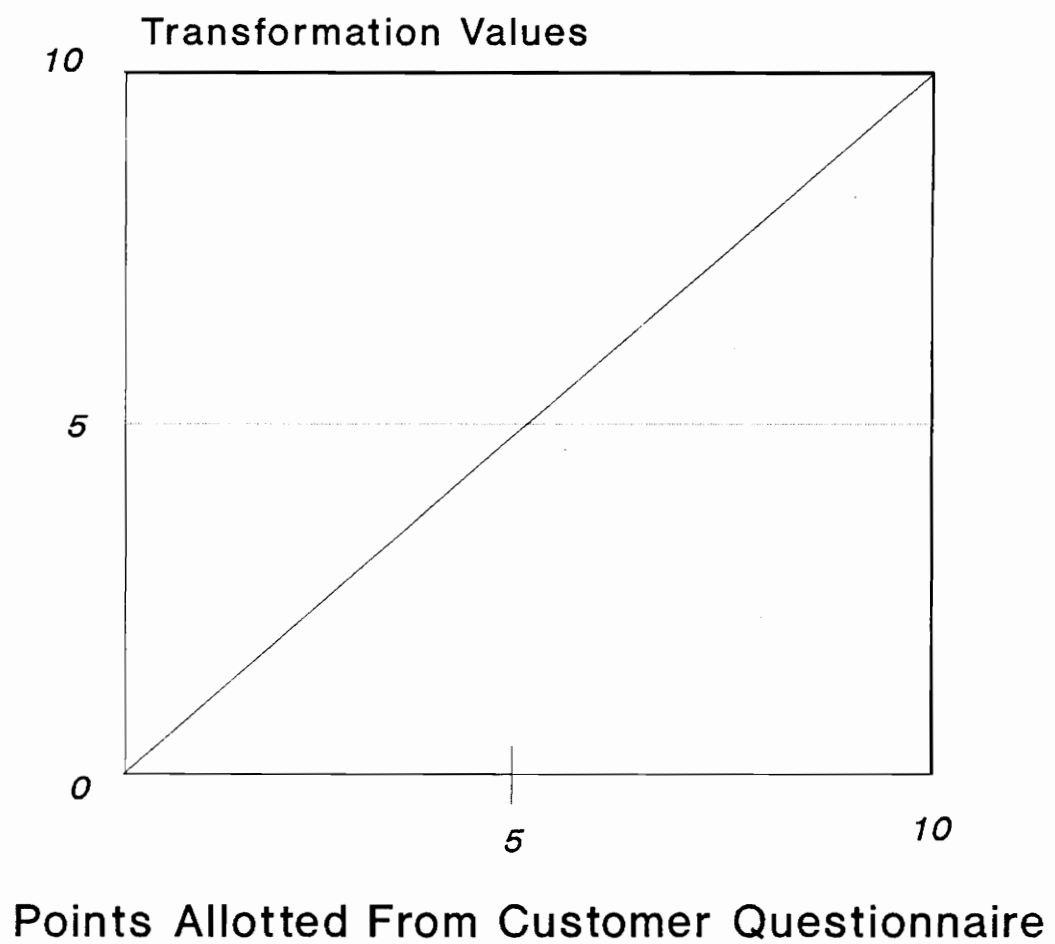


Figure 11. Points Allotted MAS/Site Personnel Based on Customer Questionnaire

3.1.4 DEVELOP AGGREGATE PERFORMANCE VALUES AT THE THREE ORGANIZATIONAL LEVELS

Total performance values are developed at the MAS and PM levels by ranking, rating, and weighting the singular performance values at each level (for the PM, this step is discounted).

Using these aggregates of total performance, the SA performance descriptor is determined. In this way the total aggregates of performance are determined for all levels of the organization, and monetary values can then be assigned accordingly.

3.1.4.1 Aggregate Performance Values For The PM.

The only way the example defined PM performance was through the customer. The "Perceptual" measure becomes the only measure defining performance at the PM level. That value is 6.0.

3.1.4.2 Aggregate Performance Values For Site (MAS) Personnel.

For this segment of the example, assume the ranking, rating and weighting process has been completed. What follows

Systec Implementation Example

is an arbitrary interpretation of how that might look (see Table 3).

Table 3: MAS Performance Attributes are Ranked, Rated, and Weighted.

ATTRIBUTE	RANK	RATING	WEIGHT
Customer Service (Questionnaire)	1	100	$100/265 = .377$
Productivity (Resumes Processed)	3	80	$80/265 = .302$
Effectiveness (Errors/Month)	2	85	$85/265 = .321$
Total 265			1.000

MAS performance values are then multiplied to their respective weights and added together to give an overall performance rating of the Site. This equation is as follows:

$$\begin{aligned}
 &.377 * 10.0 \quad (\text{Customer Service /} \\
 &\quad \text{Satisfaction Checklist}) \\
 &+ .321 * 5.0 \quad (\text{Errors in Resume Batch / Effectiveness}) \\
 &+ .302 * 7.5 \quad (\text{Resume Processing / Productivity}) \\
 &= 3.77 + 1.605 + 2.265 = 7.640
 \end{aligned}$$

So, 7.640 is the MAS aggregate of performance.

3.1.4.3 Determine The SA Aggregate Performance Value.

The SA's total performance value is defined in this example as a function of both the MAS performance and the PM performance.

$$\begin{aligned}
 &.8 * (7.640) \text{ MAS} + .2 * (6.0) \text{ PM} = \\
 &\quad 6.112 \quad + \quad 1.2 \quad = 7.212
 \end{aligned}$$

So, 7.212 is the aggregate value of SA performance. Now that all three levels have total performance descriptors, a financial value can be assigned at each organization level representing the reward.

3.2 Assigning a Monetary Value

As stated in the work assumptions, the CM has decided that out of the total profit sharing amount (\$3000), the program managers will get 20%, the Site administrators 30%, and the sites will be allotted 50%. This is a straight percentage which is decided upon during the design of the system. Since there are three sites, each Site Administrator will get a 10% distribution and each Site will get a 16.66% distribution of the fund as a whole. Assume for the example that each Site has 4 MAS personnel. If there were an uneven distribution of Site personnel, then each Site would be evaluated based on its contribution, and rewarded on that basis.

3.2.1 SAMPLE CALCULATION

Table Four shows a sample calculation of the exact monetary amounts that the CM will invest in each level of FAIRSHARE participants. This calculation is concerned with assigning money only to the PM, SA and MAS personnel at the Valley Forge Site. The aggregates of performance determined earlier will serve as pay guidelines, linking pay to performance.

To sum up, the aggregate performance values were (on a scale of 0 to 10, 10 being the value of excellence):

MAS Performance = 7.64

SA Performance = 7.212

PM Performance = 6.0

As shown in Table 4, the PM was allotted a bonus of \$360.00 out of a possible \$600.00 (if the total performance aggregate value was 10), leaving \$240.00 for the reserve fund. The SA was allotted \$216.36 out of a possible \$300.00 (recall that there are three sites), leaving a bonus reserve pool value of \$83.64. The Valley Forge Site was rewarded \$382.00 (\$95.60 per person) out of a possible \$500.00, leaving a bonus reserve pool value of \$118.00. The total leftover bonus placed in the reserve pool for these components is \$441.64. This is not the total bonus reserve pool value for this pay period because money allotted the other sites was not calculated. This component value was calculated to demonstrate that the reserve pool bonus, if left to accumulate, can act as quite a buffer against non-profitable contracts, and therefore as insurance that employees will always have some financial reward linked to performance.

Table 4. Sample Bonus Calculation

**Note that the amounts being determined will only pertain to the participants of the implementation example*

1. Determine Allocation to Profit Sharing Fund.

Assume the amount of profit was \$5100.00 from a \$30000.00 contract. \$5100.00 is 17% of \$30000.00.

*The CM has determined that 10% will go to the profit sharing fund in the case of 15% or greater profit, so the allocation amount is **\$3000.00**.*

2. Determine Initial Financial Allocation to Each Organizational Level Participating.

- 1) PM allocation $.20 \times \$3000.00 = \600.00
- 2) SA allocation $.30 \times \$3000.00 = \900.00
- 3) MAS allocation $.50 \times \$3000.00 = \1500.00

As is shown, the initial financial allocation for each level amounts to the total profit sharing fund. Now individual and group financial amounts need to be determined based on the total performance value.

- 1) PM allocation $\$600.00 \times (6.0/10) = \360.00

The reserve pool bonus for this segment is:

$$\$600.00 - \$360.00 = \$240.00$$

- 2) SA allocation $\$900.00/3 = \300.00 (per site)
 $\$300.00 \times (7.212/10) = 216.36$

The reserve pool fund here is:

$$\$300.00 - \$216.36 = \$83.64$$

- 3) MAS allocation (Valley Forge Site only)

$$\$1500.00/3 = \$500.00 \text{ (3 sites)}$$

$$\$500.00 \times (7.64/10) = \$382.00$$

The reserve pool fund is:

$$\$500.00 - \$382.00 = \$118.00$$

Rewards that the CM may wish to give could be:

- * A weekend trip
- * Work life improvements
- * A straight monetary value
- * An extra day off

While the reward is at the discretion of the corporate manager, it will always have the financial value linked through the Scanlon calculation. It is also recommended that the reward given be something that has the most value to the employee within the constraints of the allotted reward amount.

4.0 CLOSURE

4.0.1 JUSTIFICATION FOR THE SUGGESTED PAY ALLOTMENT

PERCENTAGES

In this FAIRSHARE implementation example, the manager has the final say in the amount allocated to the profit-sharing fund. The recommendation for the allotment of at least 10%, leaving more up to the discretion of the CM was made because:

- 1) The client is making a profit on most contracts upward of 15%, and any profit he makes above 15% he must give back to his customers.
- 2) Gainsharing is overhead (Profit sharing is a gainsharing effort).
- 3) The client wants to justify his expenditures, linking them to rewards and performance improvements.
- 4) The client is currently not engaged in any type of gainsharing plan, but believes it has value.

- 5) The client believes that any effective effort to save money within the organization should be rewarded with the profit that comes from that effort.
- 6) The client is an active manager who understands all aspects of his organizations performance.
- 7) The client believes that group motivational factors as well as loyalty to the company can be developed by linking discretionary direct and indirect financial rewards to individual and/or group performance.
- 8) The client's customers expect him to have an accelerated incentive plan of some kind. This helps his image.

4.0.2 JUSTIFICATION OF SUBJECTIVITY IN PERFORMANCE MEASUREMENT

"Only in a simple machine view of the world can one believe that objective measures present the whole picture" (Kilmann, 1984). Subjectivity is needed to define the many aspects of performance in the service sector, because the responsibilities and work efforts are so diverse. The productivity of a sales manager cannot be measured by "Quantity X produced / Hour". This also extends to the nature of the information gathering itself. A qualitative view of

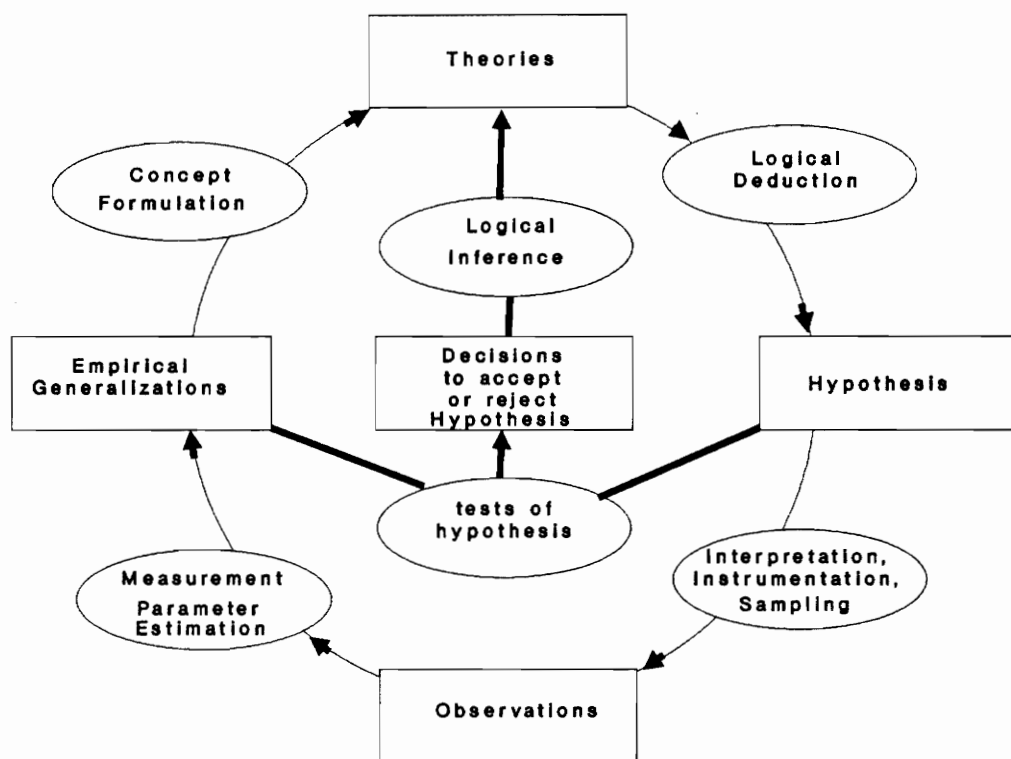
performance is essential to the success of a pay for performance system (Kilman, 1984).

4.1 The Wallace Research Wheel

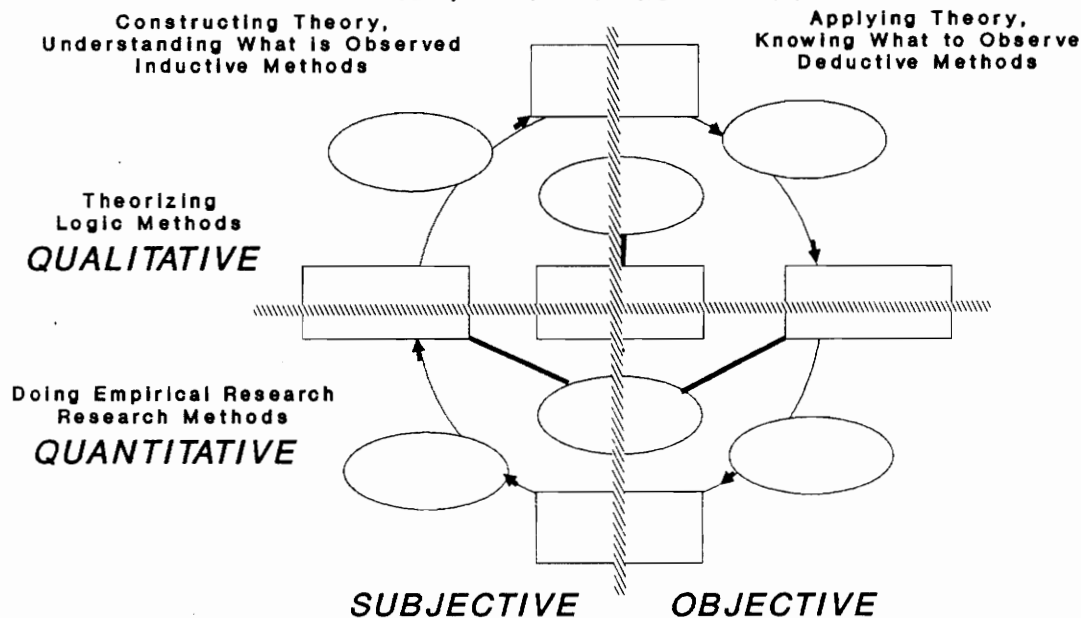
The Wallace Wheel was an attempt to show graphically the "types of statements about events in the world of human experience" (Wallace, ---), and is today one of the definitive models of information generation (see Figure 12). Wallace defined the scientific process of information generation as a cyclical interaction between five information components, six methodological controls, and the information transformations that are a part of the scientific process. As is shown in the figure, the Wallace Wheel can also be broken down into more conventional terms. It is from this breakdown that the author developed the four information variables defining the types of information. These are also shown in the figure.

4.2 Background on FAIRSHARE Measurement

"Pay and other forms of compensation cannot be linked to performance if performance cannot be measured in a convincing manner" (Kilman, 1984).



12a) The Wallace Wheel



12b) More Conventional Terms

Figure 12. The Wallace Wheel

4.2.1 THE GENERAL MEASUREMENT METHODOLOGY

The methodology behind measurement can be broken down into three steps (Sink and Tuttle, 1989):

1. Identify Information Needs.
2. Identify Data Requirements for needed information.
3. Determine how to Collect, Store, Retrieve, Process and Portray the Information.

Identifying information needs is finding out what information the manager needs to make a certain decision. In this case, the information needs are tied to the employee's performance.

Identifying data requirements is the next step in the measurement process. After determining what the manager needs to base his decision (In this case, "How can specific performance be quantified in a way that allows for a total performance aggregate to be developed?") the next level is drawn out. If an information need is productivity, then the data needs are specified outputs and the inputs that affect the respective outputs.

Finally, one must determine how to collect, store, process and portray the information. This is important because after the data to information transferral is complete, the information must be portrayed in such a way as to be interpretable by the measurement audience. If no one understands the rating system, or if every value breaks down into different units of analysis so as to be incompatible, then the measure developed was useless. The MCPMT, and therefore FAIRSHARE, is good for this step.

4.2.2 THE MULTI-CRITERIA MEASUREMENT TECHNIQUE

The MCPMT involves setting up an objectives matrix (Felix and Riggs, 1983) that allows management to track their performance against a family of measures, and equalize the measures using transformation/preference curves. Sometimes one attribute will be more determinant of the overall measure than another, so it will be weighted heavier in the average. In the example with Systec, both subjective and objective measurement criteria were established. Having both objective and subjective aspects of performance is an essential component to a reward system's success (Kilmann, 1984, Lawler, 1988).

The first step in the Multi-Criteria process is determining the level and depth of the information requirements for measurement. For this application of the technique, measurement was performed at a depth that was determined by the position in the organization of the FAIRSHARE participant. Depth in this case also refers to "Hard", "Soft", and "Perceptual" measurement types. The levels in the example were the bottom three organizational levels.

The next step is developing the measures, indicators and criteria that are going to be used in the evaluation of performance. This is best done by addressing all group(s), the measurement affects, and enlisting cooperation and involvement at all levels of the organization which will be affected, and gathering their input.

Units of measure can vary greatly from one criteria to another, and these numbers are not always easily interpretable. Transformation/preference curves are used to convert the raw data or partial information into usable information. Note that in the transformation curves shown in the example (fig. 2), the score assigned is between zero and ten. A value of zero assigned is a completely unacceptable level of performance. Conversely, a value of ten conveys excellence. A score of five denotes adequate performance.

Preference curves come in all different shapes and are formed by the evaluator(s) in conjunction with the work group, but the three anchor points remain the same for each curve transformation, providing compatibility throughout the system. Again, consensus is recommended because of the extremely subjective nature of these curves.

Once the measures have been transformed (everything between (0-10), then ranking, rating, and weighting of each measure, attribute, and criteria must take place. This means that each criteria must be ranked in order of importance to overall performance, and then rated. Assigning a value of 100 to the top criterion, the group then assigns values downward, as they relate to that first value. Several criterion may be rated at 100. As with the other steps, this is a highly subjective procedure, and should be handled by consensus building techniques. Criteria are then weighed by dividing the individual rating by the total number of points generated. This procedure is used for dividing up criteria into attributes, and so forth. Criteria values, when generated, are multiplied by their respective weights and added together, giving an overall picture of performance for that group corresponding to the same scale of 0 to 10. At the end of the MCPMT, a complete and accepted picture defining performance has been generated.

4.3 Results

4.3.1 SYSTEM BENEFITS AND SHORTCOMINGS

This system allows for some very real benefits. Among these is a commitment to performance measurement. Sink says that "you cannot manage what you cannot measure" (Sink, 1985).

An organization committed to measurement knows how it is doing and what it needs to improve. Hand in hand with this is the planning process. To effectively implement FAIRSHARE, an organization must know its goals and objectives. Planning is an essential duty of a measurement committed organization, and intrinsic to an organization's long term success. The Multi Criteria process is adaptable to changes in the organization and should drive the incentive system fairly.

On the downside, a climate conducive to measurement must be present before system implementation. Trust is a major component of this climate. Top management must be committed to it's employees and to the process or the system will not work. The Scanlon principles of involvement and cooperation must also be present, or the system will fail. The establishment of measurement and reward validity is a real problem with this system due to the subjective nature of the evaluations, as well as who exactly is doing the measurement

and evaluation. In an incentive system, the prevailing school of thought is that employees are involved in all parts of the system, including measurement. In the case of Systec, the CM keeps a tight control over all aspects of the system. At this point, the author has no recommendations except to proceed with caution and concern. Finally, benefits in a small organization are social and informal in nature. It is the author's concern that if a formalized measurement and evaluation system is not implanted carefully, those social benefits intrinsic to the work itself will be lost. One is tempted to remark, "if it isn't broke, don't fix it". The "rub" comes in that a company needs to be making a profit to implement a profit sharing program, and if a company wants to reward excellent performance, it must have something to reward it with. This concern voiced, it is still the author's opinion that the benefits of a carefully implemented program that holds the welfare of the employees within its objectives far outweighs the risks.

Systec currently plans on implementing the FAIRSHARE methodology as the method of linking pay to performance for it's employees.

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