

Chapter

Measuring ROI in an Absenteeism Reduction Program

Metro Transit Authority

This case illustrates how changes in human resource policies and selection processes can reduce absenteeism and prevent major problems in business operations. Because of unscheduled absences, the unavailability of bus drivers caused route schedule delays and bottlenecks, which resulted in dissatisfied customers, a loss of revenue, and increased operating costs. New guidelines and disciplinary policies for unscheduled absences, as well as a change in hiring practices, were initiated to correct the situation. The ability to demonstrate the costs associated with the absenteeism problem led to the two solutions being implemented. The evaluation team was able to isolate the effects of each of the two HR initiatives and calculate the operational savings to demonstrate an impressive return on investment.

BACKGROUND

The Metro Transit Authority (MTA) operates a comprehensive transportation system in a large metropolitan area. Over 1,000 buses operate regularly, providing essential transportation to citizens in the metro area. Many passengers depend on the bus system for their commute to and from work, as well as other essential travel. MTA employs over 2,900 drivers to operate the bus system around the clock.

This case was prepared to serve as a basis for discussion rather than to illustrate either effective or ineffective administrative and management practices. The authors, dates, places, names and organizations may have been disguised at the request of the author or organization.

As with many transit systems, Metro has been experiencing excessive absenteeism with drivers and the problem continues to grow. Just three years ago, absenteeism was 7 percent compared to the most recent 3-month period of 8.7 percent - too excessive to keep the transit system operating in a consistent manner.

To ensure that buses run on time, a pool of substitute drivers are employed to fill in for unexpected absences. The number of drivers in the pool is a function of the absenteeism rate. At present, the pool consists of 231 substitute drivers. When the drivers in the pool are not utilized in a substitute assignment, they perform almost no essential work for the Transit Authority although they are required to report to work. When a substitute driver is used, there is usually a delay in the bus schedule, as the bus is late for subsequent stops.

Causes of Problems and Solutions

To determine the cause of absenteeism, an analysis was conducted using focus groups, interviews, and an analysis of human resources records. Focus groups included drivers and their supervisors. Interviews were conducted with supervisors and managers. HR records were examined for trends and patterns in absenteeism. The conclusions from the analysis were as follows:

- Individuals who are frequently absent have a pattern of absenteeism that dates back to the beginning of their employment and in most cases, was present in other employment situations.
- Many of the absences could be avoided. The problem is primarily a motivation and discipline issue.
- The prevailing attitude among employees is to take advantage of the system whenever possible, up to the threshold of being terminated.

As a result of these findings, Metro initiated two processes:

1. **A no-fault disciplinary system was implemented.** With this policy, an employee who experiences more than six unexpected (unplanned) incidences in a six-month period was terminated— no questions asked. A sickness that extends more than one day was considered

on incidence. Thus, the policy would not unfairly penalize those who are absent for legitimate sickness or for scheduled surgery and other medical attention. The no-fault system was implemented after extensive negotiations with the union. When union officials realized the impact of excessive absenteeism, they agreed with the new policy.

2. **The selection process for new drivers was modified.** During the initial screening, a list of questions was developed and used to screen out applicants who had a history of absenteeism dating back to their high school days. The questions, with scoring and interpretation, were added to the current selection process and required approximately 30 minutes of additional time during the initial employment interview.

To bring appropriate attention to the absenteeism issue and to generate results as soon as possible, both solutions were implemented at the same time.

Objectives of the Solutions

The expected outcomes were established early in the form of implementation and impact objectives. The objectives of the two initiatives were to:

- Communicate the no-fault policy, including how the policy would be applied and the rationale for it
- Experience little or no adverse reaction from current employees as the no-fault absenteeism policy was implemented
- Maintain present level of job satisfaction as the absenteeism solutions were implemented and applied
- Use the new screening process for each selection decision so that a systematic and consistent selection process would be in place
- Implement and enforce the no-fault policy consistently throughout all operating units
- Reduce driver absenteeism at least 2 percent during the first year of implementation of the two solutions
- Improve customer service and satisfaction with a reduction in schedule delays caused by absenteeism

Supervisors were required to conduct meetings with their employees to explain the need for the policy and how it would be applied. Supervisors completed a meeting report form after the meeting and returned it to HR department.

The no-fault policy has the potential of influencing employment termination, essentially increasing employee turnover, which could create problems for some supervisors. Because of this, it was important to demonstrate to the management team that these programs are effective when they are administered properly. Also, senior management was interested in knowing the payoff for these types of initiatives; they need to be convinced that there is an adequate return on investment.

ROI PLANNING

Data Collection Plan

Figure 10-1 shows the Data Collection Plan for the absenteeism reduction initiatives at Metro Transit Authority. The objectives are defined and the data collection methods selected are typical for those types of programs. For Level 4 data, absenteeism is monitored on a post-program basis and compared to pre-program data. Table 10-1 shows the absenteeism for the year prior to and after implementing both the no-fault policy and the new selection process. A complete year of data was collected to show the full impact of both initiatives to capture the delayed effect in influencing the absenteeism measure. In addition, schedule delays of more than 5 minutes caused by unexpected absenteeism was monitored and is reported in Table 10-1.

Also, for implementation and business measures, a questionnaire was developed and administered to a sample of supervisors to determine the extent to which the programs have been implemented and are perceived to be operating effectively. Input was sought on problems and issues as well as success stories and changes in job satisfaction.

Learning measures were taken with a simple ten-item, true/false test. To ensure that employees understood the policy, the test was developed to be administered by supervisors in their meetings with employees. Scores were attached with the record of the meeting along with the time, place, and agenda and a list of the attendees. A sample of the test scores revealed an average value above the minimum acceptable level of 70.

Reaction measures were taken with a simple questionnaire using an objective format. The questionnaire was distributed at the meetings to obtain reaction to the no-fault policy.

Figure 10-1. Data Collection Plan

Level	Broad Program Objective(s)	Measures	Data Collection Method/Instruments	Data Sources	Timing	Responsibilities
1	REACTION & SATISFACTION Positive Employee Reaction to the No Fault Policy	Positive reaction from employees	Feedback Questionnaire	Employees	At the end of employee meetings	Supervisors
2	LEARNING Employee understanding of the policy	Score on post test, at least 70	True/False test	Employees	At the end of the employee meetings	Supervisors
3	APPLICATION/IMPLEMENTATION - Effective and consistent implementation and enforcement of the programs - Little or no adverse reaction from current employees regarding No Fault policy - Use the new screening process	- Supervisors' response on program's influence - Employee complaints and union cooperation	& 2. Follow-up questionnaire to supervisors (2 sample groups) - Sample review of interview and selection records	- Supervisors - Company records	- Following emp. meetings, sample 1 group at 3 months and another group at 6 months - Three mos. and six mos. after implementation	HR Program Coordinator

Figure 10-1. Data Collection Plan (continued)

4	BUSINESS IMPACT 1. Reduce driver absenteeism at least 2% during first year 2. Maintain present level of job satisfaction as new policy is implemented 3. Improved customer service and satisfaction with reduction in schedule delays	1. Absenteeism 2. Employee Satisfaction 3. Delays impact on customer service	1. Monitor absenteeism 2. Follow-up questionnaire to supervisors 3. Monitor bus schedule delays	1. Company records 2. Supervisors 3. Dispatch records	1. Monitor monthly analyze 1 year pre and 1 year post imp 2. Three months and six months after employee meetings 3. Monthly	HR Program Coordinator
5	ROI Target ROI $\geq$ 25%	Comments: 				

Table 10-1. Absenteeism and Bus Delays Before and After Implementation

	Unscheduled Absenteeism		Absenteeism Related Bus Delays	
	<i>Percent of Scheduled Days Worked</i>		<i>Percent of All Delays</i>	
	PRE	POST	PRE	POST
July	7.2	6.3	23.3	18.3
August	7.4	5.6	24.7	18.0
September	7.1	5.0	24.9	17.5
October	7.8	5.9	26.1	18.2
November	8.1	5.3	25.4	16.7
December	8.4	5.2	26.3	15.9
January	8.7	5.4	27.1	15.4
February	8.5	4.8	26.9	14.9
March	8.6	4.9	26.8	14.7
April	8.5	4.9	27.8	14.4
May	8.8	4.0	27.0	13.6
June	8.8	4.9	26.4	13.7
Three-Month Average	8.7%	4.8%	27.1%	13.9%

Figure 10-2 shows the ROI analysis plan for evaluation of the absenteeism reduction initiatives. Major elements of the plan are discussed below.

Isolating the Effects of the Solutions

Several approaches were considered for the purpose of isolating the effects of the two solutions. Initially, a control group arrangement was considered, but was quickly discarded for three important reasons:

1. To purposefully withhold the policy change for a group of employees could create contractual and morale problems for the individuals in the control group.
2. Because the new policy would be known to all employees, contamination would occur in the control group, at least temporarily, as employees learned about the “crackdown” on absenteeism. The policy would have the short-term effect of reducing absenteeism in those areas where it is not implemented.
3. Because of the operational problems and customer service issues associated with absenteeism, it was not desirable to withhold a needed solution just for experimental purposes.

Trend line analysis was initially feasible since only a small amount of variance was noticeable in the pre-program trend data that had

Figure 10-2. ROI Analysis Plan

Program: Absenteeism Reduction				Responsibility:		Date:	
Data Items (Usually Level 4)	Methods for Isolating the Effects of the Program/ Process	Methods of Converting Data to Monetary Values	Cost Categories	Intangible Benefits	Communication Targets for Final Report	Other Influences/ Issues During Application	Comments
1. Absenteeism	1. Trend line analysis and Supervisor Estimates	1. Wages & benefits and standard values	<u>Screening Process</u> - Development - Interviewer preparation - Administration - Materials	- Sustain employee satisfaction - Improve employee morale - Improve customer satisfaction - Fewer disruptive bottlenecks in transportation grid - Ease of implementation by supervisors	- Senior management - Managers and supervisors - Union representatives - HR staff	- Concern about supervisors consistent administration - Partner with Union reps on how to communicate results of study to employees	
2. Employee Job Satisfaction	2. Supervisor estimates	N/A	<u>No Fault Policy</u> - Development - Implementation - Materials				
3. Bus Schedule Delays (Influence on Customer Satisfaction)	3. Management estimates	N/A					

developed. Because of the possibility of this option, in the planning stage, trend line analysis was considered as a method to estimate the impact of both absenteeism initiatives. However, because multiple influences on absenteeism later developed, such as a change in economic conditions, the trend line analysis was aborted.

Finally, as a backup strategy, estimations were taken directly from supervisors as they completed the follow-up questionnaire. Supervisors were asked to identify various factors, which had influenced the absenteeism rate and allocate percentages to each of the factors, including the new screening process and no fault policy.

Converting Data to Monetary Values

Since the primary business measure is absenteeism, a monetary value had to be developed for the cost of an unexpected absence. The value could subsequently be used to calculate the total cost of the absenteeism improvement. While there are several approaches to determine the cost of absenteeism, the analysis at Metro was based on the cost of replacement driver staffing.

Substitute drivers, as well as the regular drivers, are expected to work an average of 240 days per year, leaving 20 days for vacation, holidays, and sick days. The average wages for the substitute drivers is \$33,500 per year and the employee benefits factor is 38% of payroll. When a regular driver is unexpectedly absent, he or she may charge the absence either to sick leave or vacation, thus substituting a planned paid day (vacation) for the unexpected absence.

The number of substitute drivers planned was a function of expected absenteeism. Consequently, the substitute driver staffing level did not always meet the exact level needed for a specific day's unscheduled absences. Because of the service problems that could develop as a result of understaffing, the company planned for an excessive number of substitute drivers for most days.

To minimize potential delays, all substitute drivers are required to report to work each day. Substitute drivers not utilized in driver seats essentially perform no productive work that could be counted as added value. During the previous year, over staffing occurred about 75 percent of the time for

weekdays and non-holidays. This overstaffing represented 4,230 days of wasted time. During the weekends and holidays, which represent 114 days, overstaffing occurred almost half of the time, representing a total of 570 wasted days.

On some days, there was actually a shortage of substitute drivers, which causes the buses to run late and overtime must be used to make the adjustment. During the last year there had been 65 instances where a driver was not available, and it was estimated that in 45 of those situations, a regular driver was paid double time to fill in the schedule. In the other 15 situations, the bus route was cancelled.

Average daily cost of wages and benefits for a substitute driver:

$$\$33,500 \times 1.38 \div 240 = \$192.63$$

Approximate cost of overstaffing, weekdays:

$$192.63 \times 4,230 = \$814,800$$

Approximate cost of overstaffing, weekends and holidays:

$$192.63 \times 570 = \$109,800$$

Approximate cost of understaffing, overtime (only one salary is used for double-time pay):

$$192.63 \times 45 = \$8,670$$

Approximate cost of recruiting, training, maintaining, and supervising pool of drivers:

$$33,500 \times 231 \times 0.25 = \$1,934,600$$

Costs for Solutions

The cost for the new screening process contains four components: development, interviewer preparation, administrative time, and materials.

The total development cost, including pilot testing, was \$20,000. An additional \$5,000 was charged for preparing the interviewers to administer the test. The materials and time were variable costs, depending on the number of drivers employed. About 400 drivers were hired each year. For each new driver hired, an average of three candidates are interviewed. Thus, 1,200 interviews are conducted each year, with an average time of 30 minutes each. The average hourly wage for the interviewers is \$14.50 per hour. The materials are \$2 per test. Table 10-2 shows the cost of the screening process.

Table 10-2. Cost of Screening Process

Development cost	\$20,000
Interviewer preparation	\$5,000
Administrative time (1,200 x ½ x \$14.50)	\$8,700
Materials (1,200 @ \$2.00)	<u>\$2,400</u>
Total	\$36,100

The cost for the no-fault policy included development and implementation. The development cost was incurred internally and was estimated to be \$11,000, representing the time of internal specialists. The material distributed to employees accounted for another \$3,800. The costs of meetings with all supervisors and with employees were estimated at \$16,500. The cost for routine administration was not included because the alternative to continue to administer the no-fault policy is to administer a progressive discipline process, and the two should take about the same amount of time. Table 10-3 shows the cost of the no-fault policy.

Table 10-3. Cost of No-Fault Policy

Development cost	\$11,000
Materials	\$3,800
Meeting time	<u>\$16,500</u>
Total	\$31,300

RESULTS

Reaction, Learning, and Application Data

Employees expressed some concern about the new policy, but the overall reaction to the change was favorable. They perceived the new policy to be

fair and equitable. In addition, employees scored an average of 78 on the true /false test about the no-fault policy. A score of 70 on the end-of-meeting test was considered acceptable.

A follow-up questionnaire, administered anonymously to a sample of supervisors, indicated that the policy had been implemented in each area and had been applied consistently. Although supervisors reported some initial resistance from the habitual absenteeism violators, the majority of employees perceived the policy to be effective and fair. The supervisors also reported that the new policy took less time to administer than the previously used progressive discipline approach.

A review of HR records indicated that 95 percent of the supervisors conducted the meeting with employees and completed a meeting report form. In addition, a review of a sample of interviews and selection records indicated that the new screening process was used in every case.

Business Impact

Absenteeism dramatically declined after implementing both processes, yielding an average absenteeism rate of 4.6 percent for the last 3 months of the evaluation period compared to the pre-program rate of 8.7 percent for the same period one year earlier. In the MTA situation, a reduction in absenteeism generates a cost savings only if the substitute driver pool is reduced. Because the pool staffing was directly linked to absenteeism, a significant reduction was realized. Table 10-4 shows the cost savings realized, using the approach to develop calculations described earlier in Table 10-3.

Table 10-4. Cost of Absenteeism Comparisons

Cost Item	One Year Prior to Initiatives	One Year After Initiatives
Cost of overstaffing, weekdays	\$814,000	\$602,400
Cost of overstaffing, weekends and holidays	\$109,800	\$51,500
Cost of understaffing	\$8,670	\$4,340
Cost of recruiting, training, and maintaining driver pool	<u>\$1,934,600</u>	<u>\$1,287,750</u>
Total cost of absenteeism	\$2,867,070	\$1,945,990

In addition, on the questionnaires, supervisors estimated and allocated percentages for the contribution of each factor to absenteeism reduction. The results are presented in Table 10-5.

The bus schedule delays caused by absenteeism declined from an average of 27.1 percent for the three months prior to the initiatives to 13.9 percent for the last three months of the evaluation period.

In addition, several intangible measures were identified, including increased moral, improved customer service, and fewer bottlenecks in the entire system.

Table 10-5. Supervisor Estimates to Isolate the Effects of the Solutions

Factor	Contribution Percentage	Confidence Percentage
No-fault policy	67%	84%
Screening	22%	71%
Economic Conditions	11%	65%
Other	1%	90%

Monetary Benefits

Because the total cost of absenteeism for drivers is known on a before-and-after basis (as shown in Table 10-4) the total savings can be developed as follows:

Pre-Program	\$ 2,867,070
Post-Program	<u>\$ 1,945,990</u>
Savings	\$ 921,080

The contribution of the no fault policy:

$$\text{\$ 921,080} \times 67\% \times 84\% = \text{\$ 518,383} = \text{\$ 518,000}$$

The contribution of the new screening process:

$$\text{\$ 921,080} \times 22\% \times 71\% = \text{\$ 143,873} = \text{\$ 144,000}$$

$$\text{Total First Year Benefit} = \text{\$ 518,000} + \text{\$ 144,000} = \text{\$ 662,000}$$

Costs

The total costs for both initiatives (shown in Tables 2 and 3) are as follows:

$$\text{Total Costs} = \$ 36,100 + \$ 31,300 = \$ 67,400$$

ROI Calculation

The benefits-cost ratio (BCR) and ROI are calculated as follows:

$$\text{BCR} = \frac{\$662,000}{\$67,400} = 9.82$$

$$\text{ROI (\%)} = \frac{\$662,000 - \$67,400}{\$67,400} \times 100 = 882\%$$

Questions for Discussion

1. What are feasible ways to isolate the effects of the solutions?
2. Can the cost of absenteeism be developed for MTA? Explain.
3. Are the costs of the solutions adequate? Explain.
4. Critique the actual monetary benefits of the reduction in absenteeism.
5. Is this study methodology credible? Explain.
6. Is the ROI value realistic? Explain.
7. How should the results be communicated to various groups?