U.S. Department of Transportation

Handbook for Management Performance Audits

Second Edition
Revised
July 1988

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EXECUTIVE SUMMARY

HANDBOOK FOR MANAGEMENT PERFORMANCE AUDITS

The Institute for Urban Transportation/Transportation Research Center (IUT/TRC) developed this handbook to inform transit managers, state departments of transportation, local decision makers and organizations concerned with educating and training transit management about the uses and benefits of management performance audits. IUT/TRC also uses these guidelines when conducting managerial audits of transit systems. Because it contains the basic elements necessary in managing a transit system, this handbook can be used by educational institutions in teaching transit management.

A management performance audit is a comprehensive examination and evaluation of a transit system's goals and objectives and the procedures it uses to accomplish these goals and objectives. The audit process takes into account the resources with which the transit system has to work and the constraints under which it must operate. The audit has two purposes. First, it provides the system's management with information that can be used to improve its practices and procedures. Second, it heightens awareness of local decision makers and the public by informing them not only of how well public funds are being used but of the present status of transit in their community, potential benefits, and the costs of obtaining those benefits.

The accountability of public agencies in all levels of government has never been more important than it is today. Massive cutbacks at the federal level have forced a great deal of scrutiny of current programs. State departments of transportation, which are becoming more concerned with the performance of transit system that receive increasing amounts of state financial support, are learning how management performance audits can assess the efficiency of their transit systems. Local governments pressed by competing demands for tax revenue have begun to require that public services examine their performances closely when competing for public funds. In these cases, a management performance audit can be used to assess the system's performance and to inform the public about the system's use of tax dollars. Local decision makers, such as city council members, city managers, and mayors, can learn how management performance audits can be informative, both to the public and

themselves. An audit will help them to better understand the operation of their transit system and its potential for meeting community needs.

This handbook describes what a management performance audit is and how to conduct one. Transit managers can use the methods suggested, especially in the section on internal auditing, in developing improvements in the internal operations of their systems. The tasks described in each functional area will help guide this process. This handbook also elaborates on the relationships between each of the functional areas, which are particularly important in accomplishing system objectives. Using goals, objectives, and performance indicators, the handbook develops a framework for a management information system that provides the manager with the data needed to evaluate the performance of the system. Specific information about the use of these transit goals, objectives, and performance indicators is presented.

This edition borrows heavily from sources both within and outside the transit industry. We continue to seek management analysis techniques that would be useful to the managerial performance audit work that we do at the Institute. We have included the most useful techniques that have been tested and proved by experience and have provided references to others. We have also drawn on the techniques of other audit procedures, such as the Urban Mass Transportation Administration's (UMTA's) triennial review process, that a transit system is likely to be subject to. While UMTA's concerns are more in line with a grantee's compliance with UMTA policies and procedures, there are overlapping aspects that are most useful in conducting an independent managerial performance audit. The maintenance, procurement, and planning functional areas are examples of such overlaps. As a rule, the path to take in cases of such an overlap is to first follow that which is required by law, then any other approach that makes good business sense. This maximizes the usefulness of the management performance audit and helps prepare the system for other compliance audits.

This handbook is in two parts. Part I presents the theory and technique of doing a management performance audit. Chapter 1 introduces the history and benefits of the management performance audit. Chapter 2 describes the characteristics of a transit system including its social, political, and economic environment; its governing body; and its functional areas and the key tasks they perform. Chapter 3 presents the chronological steps for conducting a management performance audit. Part II is a field guide consisting of questionnaires used to conduct an audit. Questionnaires are provided for each characteristic of a transit system described in Chapter 2.

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INTRODUCTION

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Definition of a Management Performance Audit

A management performance audit is a comprehensive evaluation of the management planning and control processes within each of the transit system's functional areas.

Planning

Planning is a crucial management function especially in an environment where financial resources come under greater scrutiny from year to year while costs continue to rise steadily. Getting the most out of financial resources requires a well thought-out plan that includes specific, measurable goals and objectives. Policy makers, management, and staff participate in the development of these goals and objectives; priorities are set within available resources and constraints; then the organization sets off on a course designed to achieve them. Planning is used to focus the energy of the entire organization [1, p. 95]. The absence of any management planning indicates that the transit system is more likely to be a drain on resources than a coordinated public service with a clear mission. Such a system is clearly in business for itself and should not have access to scarce financial resources. The management performance audit seeks to evaluate the degree to which the transit system is focused, and how well management is able to take advantage of the scarce resources available to it in working toward clearly stated goals and objectives.

Controlling

Controlling is essential to monitoring the progress of the plan. In a sense, the control process sets the boundaries for a continual internal management performance audit process. It is unrealistic to expect that any plan should ever work that perfection; therefore, a monitoring process is established to allow for periodic assessment and adjustment when necessary. Standards or performance indicators are established during the planning process which are then used as benchmarks in assessing its progress. If the standard is met, the plan is likely to be on course. If the standard is not met, management must evaluate the reasons why not, and must either change the standard or alter the plan. A management performance audit assesses the applicability of standards and performance indicators and their relative usefulness in monitoring the system's plan.

Goals of the Handbook

This handbook describes a mass transit management performance audit and how to conduct one. The two goals of the second edition are:

1. To educate transit managers, state departments of transportation, local decision makers, and organizations concerned with educating and training transit management about the uses and benefits of management performance audits.

2. To provide managers of small- and medium-sized transit systems with tools for improving practices and procedures, and to provide management staff of larger systems with additional insights about the internal auditing function.

Education

Transit managers commonly conduct some type of formal, or informal, internal assessment in preparation for a management performance audit by an outside firm. Managers of small- and medium-sized systems can use this handbook to prepare for an outside audit. Because this handbook contains the basic elements that are necessary in managing a transit system, educational institutions can use it as a textbook for teaching transit management.

Management Tools

Transit managers can also use the methods suggested in this handbook to improve the internal operations of their transit systems. This handbook describes the tasks that should be accomplished within each functional area as well as the key relationships that must exist between individual functional areas such as transportation and maintenance.

Internal Auditing

This handbook can also be useful as a guide for the internal auditing function of a larger-sized transit system. One of the objectives of an internal audit function, in addition to improving the efficiency of the organization, is to prepare the transit system for an external audit. This handbook is useful in that regard because it draws on sources such as the UMTA triennial review process and the UMTA third party contracting guidelines. Taking a good look at the transit system from within the organization is one of the best ways to prepare for an external audit. It also makes good business sense.

Content and Organization

This handbook is in two parts. Part I presents the theory and technique of doing a management performance audit. Chapter 1 introduces the history and benefits of the management performance audit. Chapter 2 describes the characteristics of a transit system including its social, political, and economic environment; its governing body; and its functional areas and the key tasks they perform. Chapter 3 discusses the auditor's procedures and gives background information for using Part II.

Part II is a field guide consisting of questionnaires used to conduct an audit and is organized to coincide with the topics in Chapter 2. Chapter 4 contains questions about the environment in which a transit system must operate. Chapter 5 contains general questions that apply to all functional areas of a transit system. Chapters 6 through 15 contain questions for each functional area, broken down by the tasks described in Chapter 2.

Source for the Introduction

[1] Plunkett, W. Richard, <u>Introduction to Management</u>, Belmont, CA: Kent Publishing Company, 1983.

PART I

THEORY AND TECHNIQUE

CHAPTER 1

THE MANAGEMENT PERFORMANCE AUDIT

The Development of Management Performance Audits

Private Industry

Private industry long considered audits part of the accounting function because they examined primarily the financial condition of the company. As the scope of businesses expanded, and the competitive pressures increased, industry found a need for more internal controls, and responded with internal auditing departments. The primary goal of the performance audit in private industry is to increase profits. A newer and more immediate form of managerial assessment has been termed "management by walking around." Management by walking around involves a constant, informal, ongoing assessment of an organization by any layer of management, for the purpose of developing innovations or just plain doing things better [3].

Public Utilities

The rise in consumer awareness in the 1960s brought about a lack of trust in the management of public utilities. Fears of misusing influence and power resulted in mandates by regulating agencies for management performance audits. Despite early doubts, management soon realized that such audits not only helped to restore and maintain the public's trust, but often resulted in major benefits in performance for the utility as well as considerable cost savings.

Government Agencies

The public also demanded proof that government was operating efficiently. Responding to this demand for accountability, the General Accounting Office (GAO) issued standards for audits of governmental agencies in 1972 [6]. The GAO outlined three elements of the audit: use of financial resources and compliance with laws and regulations; the economy and efficiency of the agency; and the ability of the agency to achieve desired results.

Public Transit Systems

Transit systems are subject to a variety of performance requirements that are conditions of continued financial support from federal, state, and local funding sources. At the local level, transit must usually compete with other city services for

tax revenues. Local decision makers, government officials, state departments of transportation, and transit management have found that not only are management performance audits good tools for informing citizens of the system's use of these tax revenues, but that they also have considerable value in informing citizens of transit's role in the community. In addition, performance audits provide a source of information that may be used in developing service improvements.

Federal audit requirements. Section 9 of the Urban Mass Transportation Act of 1964, as amended, requires that the Urban Mass Transportation Administration (UMTA) conduct triennial reviews of all section 9 grantees. This process is used as a management tool in evaluating grant management performance in addition to the system's compliance with UMTA policies [5]. A triennial review is primarily a desk review, rather than an audit requiring actual observations in the field. Generally, triennial auditors only review grant administration and planning documents without any actual observations of operational procedures. UMTA makes extensive use of section 15 data in determining industry trends, maintenance expenses, and fleet use when comparing grantees to both their peers and their own past performance.

State audit requirements. Some states have passed laws requiring management performance audits for transit systems that receive state funds. In 1971, the California legislature passed the Transportation Development Act establishing the Local Transportation Fund. The act requires the regional transportation planning agencies to have performance audits conducted for those systems that receive money from the fund. The purpose of these audits is to measure the operator's performance and to ensure compliance with requirements for efficiency and effectiveness. Pennsylvania also has legislation requiring performance audits, while Iowa and New York have programs for providing funds on the basis of system performance.

Though not required by law, Indiana and Ohio have used management performance audits to improve transit operations. The Ohio Department of Transportation developed management performance audits as a transit evaluation program to provide management and marketing assistance to transit systems in small urban areas throughout the state. Management performance audits of at least two major urban transit systems were called for by their respective state governments. In one case, the audit was used by the system's management to identify its strengths and provide a method of communicating with the public, in addition to providing an overview of the system that helped employees better understand their roles. In the second case, an audit of a large-city transit system was commissioned by a steering committee composed of the state and local agencies that contributed to the funding of its operations. The steering committee contracted with a team of consultants to evaluate how well the system's management was fulfilling its goals within its budget constraints. The final report of the auditors recommended specific improvements in several functional areas.

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Local audit requirements. Though we are aware of no specific municipal performance audit requirements, at least one municipality had directed the board of directors of a medium-sized transit system to commission a management performance audit to assess the effectiveness of the current management team. In this case, the audit found that management had been doing a good job and the audit produced only minor recommendations.

Management-requested audits. Another common use of performance audits is to evaluate a system that has just been taken over by a new management team. In one case, a medium-sized transit system manager requested a thorough assessment of key functional areas which resulted in recommendations for improvement.

Management Performance Audits and the Planning Process

What follows is a brief discussion that is intended to familiarize the reader with the planning process. While it is easy to illustrate each step in the process, readers should realize that the process is more complicated in practice. The point of the discussion is to show that, regardless of the terminology used, the transit system operates in an environment serving a variety of constituencies and is accountable to an even larger number of people and organizations. How well the policymakers understand this and to what extent they shape the environment in which management is to operate is one crucial element that will determine the relative success of the transit system. Another element is the extent to which management is able to grasp what the policymakers have in mind, then translate that to the level of service delivery.

Strategic Plans

Strategic planning establishes a formal process in order to answer three questions:

1. Where are we?

2. Where do we want to go?

3. How can we get there? [1]

These questions are of primary concern to policymakers, politicians, community leaders, regulatory and funding agencies, and anyone else who plays a role in shaping the environment in which the system is to operate. Upper management may, or may not, have input to this process. Strategic planning establishes a basic direction for the transit system. One of the primary goals of this process is to blend the purpose of the system with the community's values. This goal is usually expressed in the form of a mission statement.

Tactical Plans

Tactical planning results in the establishment of intermediate objectives of roughly one year in scope; these are designed to provide direction in achieving the goals developed in the strategic planning process. "Management plans" or "management goals and objectives" are examples of tactical planning products.

Operating Plans

Operation planning, as distinguished from the operations planning functional area, translates tactical plans into action. Examples of the products of operation planning include programs, budgets, policies, procedures, and rules, each of which will now be reviewed in detail [4, p. 102].

Programs. A program is a single-use plan with a specific objective. Once the objective is attained the program ceases to exist. An example of a program would be a maintenance campaign whereby all destination signs in the fleet would be replaced by a particular department by a certain point in time. A specific individual or team would be responsible and they would have a budget of "x" number of dollars.

Budgets. A budget is another example of a single-use plan that identifies the sources of funds and provides a breakdown of how they will be used. Obviously there are different kinds of budgets depending on the level in the organization at which the plan will be executed.

Policy. A policy is an example of a continuous plan. Policies provide guidelines to be used in the decision-making process. An example of a policy would be to apply an in-depth analysis to routes that have performed below the system average in passengers per mile for six or more consecutive months.

Procedure. Procedures are tasks performed in a particular order that satisfy a particular objective. Procedures also represent a kind of continuing plan. Filling out purchase requisitions, orienting new employees, and documenting grant activities are all examples of procedures.

Rules. A rule is the most specific form of a continuous plan and is used as a direct control. Ideally there is no ambiguity in a rule and there should be little or no interpretation needed to follow it. An example of a rule is that a driver must inspect the trip plate in the farebox upon payment of each fare, to be sure that each passenger has paid the required fare.

Though it is not essential that the management of a transit system conduct itself using the framework described above, it is, however, important that management understand that the organization does not function in a vacuum. If the transit

system is able to serve its constituents effectively, adhere to all laws and regulations required of it appropriately, see its way into the future clearly, and run each of its functional areas efficiently, all in the absence of a rigid planning structure, then it is probably doing well. If, however, there are problems in meeting the needs of all of its constituents effectively or adhering to any compliance laws and regulations, or if there are any funding uncertainties, then a clear strategy that links each of the planning phases together is essential. This is one of the first questions that a management performance audit will seek to answer.

Goals and Objectives

Products of each of the planning processes are usually presented as realistic and workable goals and objectives. A management performance audit focuses on these goals and objectives in evaluating the progress of the organization because, in the absence of profit, a service agency can only be judged based on the expectations of its constituents. The audit encourages the governing body to set goals for the system so that management can develop objectives for both the system and each of its functional areas.

Goals. Goals are broad-scoped conditions that define, in general terms, what it is that the agency hopes to achieve in pursuit of the general strategic aims. Two examples are "provide mobility for the community" and "reduce air-pollution." Goals are an organization's broad targets, and a series of actions are required to reach them.

Objectives. Objectives define those actions by which an organization can achieve its goals. Objectives should be:

1. Clear, concise, and unambiguous.

2. Consistent with the organization's goals.

3. Measurable.

4. Attainable by a fixed date with a reasonable effort.

5. Assigned to a specific, responsible party.

In considering the internal environment, the audit focuses on the objectives in each of the system's functional areas and on how well they are aligned toward the system's goals. Recommendations in each functional area are presented in terms of objectives designed to improve the operation of the system.

Management Performance Audits and the Control Process

The second management function, after planning, is control. The control process develops standards that are used to assess

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the organization's and the functional area's progress toward
their respective goals. These standards are usually called
performance indicators.

Performance Indicators

Performance indicators are quantifiable measures used in
assessing management's success toward the achievement of system
objectives. A management performance audit uses performance
indicators in three ways. First, a time-trend analysis is
performed on various indicators to see how well the system
compares to itself over a series of years. Second, key
performance indicators are used to assess how well the system
compares with other systems in its class. This second use is
usually referred to as a peer group analysis. Third, performance
indicators are compared with an established standard for the
system, which is an essential element of the management by
objectives process.

There are seven characteristics of a useful performance
indicator: applicability, promptness, a critical exception
component, objectivity, clarity, economy, and a basis for action
[2, p. 502]. A discussion of each follows.

Applicability. Any performance indicator must have been
derived from a specific plan that has a specific objective. For
example, miles-between-road calls must relate back to the
maintenance plan or, more specifically, to the objective in the
maintenance plan that specifies the vehicle reliability standard.

Promptness. How quickly the information is made available
is another attribute of a good performance indicator. Setting a
cost per mile objective is of little value if cost information is
only available on a yearly basis. In general, the information
needed to derive an indicator should be available in time to
affect a change, otherwise it is practically useless.

A critical exception component. Tolerance limits that
clearly delineate exceptions must accompany the development of
each performance indicator. A 5% increase in vehicle cost per
mile may not be considered as an exception requiring some form of
action, yet a 5% increase in maintenance cost per mile may.

Objectivity. The process of control through the use of
performance indicators can only be effective if those indicators
are objectively based. This implies a strong connection to the
particular part of the management plan where a specific objective
was developed that supposedly outlined acceptable performance in
the form of a standard. This allows for objective, as compared
with subjective, analysis.

Clarity. This is particularly appropriate when a
performance indicator is used in a peer group analysis.
Operating cost per mile is a widely used indicator yet each
system tends to have its own approach to labeling costs. Section

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15 data reporting requirements are designed to standardize this process thus making the task of peer group comparison more viable. Peer group evaluations must always be viewed with caution, however, because of the possibility of unreliable data.

Economy. Calculating performance indicators should not impose an unnecessary financial burden on the transit system, nor should it require a sophisticated information system. Data inputs for all performance indicators should be readily available at a relatively economical cost.

Basis for action. The entire control process is rendered ineffective when there is no mechanism for taking action once performance has been judged to be below standard. Accountability for every standard should be clearly identified, and the role of individuals, in the case of sub-standard performance, should be clearly understood. This is the very essence of the management process.

Feed-Forward Performance Indicators

The use of performance indicators has traditionally been in the context of a feedback mechanism and could only be useful, at best, in steering a process based on its performance at some time in the past. The problem is that there are some instances where a crisis strikes before feedback is available. Feed-forward controls are used as a means of monitoring the inputs of a process so as to better ensure its successful outcome. One example includes updating a cash flow budget halfway through the budget cycle in order to meet the payroll at the end of the year. A second example is testing a newly rebuilt engine on a dynamometer before installing it in a vehicle. Thus, an input to a process was forecast in the case of the cash budget, and tested in the case of the engine, before each had to actually be relied upon, thus enhancing the probability of its successful application when put to use.

Management Performance Audits as a TSM Technique

In 1975, the Federal Highway Administration (FHWA) and UMTA jointly issued regulations for transportation planning in urbanized areas receiving federal capital or operating assistance. These regulations required that transportation plans include a transportation system management (TSM) element, which calls for low-cost capital improvements for transporting people efficiently. The aim of TSM is to make better use of existing facilities and capital resources.

Management performance audits are uniquely suited to accomplishing the objectives called for in the TSM regulations. For example, the regulations suggest actions to improve the efficiency of internal management and to improve transit services. A management performance audit meets the requirements of TSM in several ways. An audit examines each of the transit

system's functional areas, then auditors make recommendations, taking into account the resources available to the system and the constraints under which it must operate.

Management Performance Audits as a Management Tool

The audit's use of goals, objectives, and performance indicators gives management tools for effective decision making and communication. The audit does not recommend a drastic change that requires the transit system to use these tools immediately. Instead, it begins a process that may require several years before it works smoothly. The transit system can implement the audit's recommendations gradually, using available resources.

Many times the recommendations will be in a form consistent with the format of an objective. For example: "We recommend that Small City Transit System rewrite its procurement procedures in a modular format that can be updated as individual regulations change. This process should be completed over the next two years and should be the responsibility of the director of finance." It is up to management to decide whether or not it agrees with the recommendation, then to work actual implementation into a schedule that is realistic, holding accountable those it sees fit.

Another example of a recommendation might be: "We recommend that the transit system increase its capability of accepting incoming telephone requests for service, use an additional employee for scheduling trips, and investigate the acquisition of a more efficient, automated scheduling method to increase productivity without adding additional vehicles." This is a more long-term undertaking that management must first accept and then work into the budget process. Clearly, this cannot be accomplished in a relatively short period of time. The staffing recommendation alone is likely to take until the next budgeting cycle to carry out and it is certain to compete with other requests for scarce resources. In order to become a true objective, management must modify the recommendation to include specific tasks, assignments for particular employees, and target dates for completion.

Though one of the major tasks of an audit is to produce recommendations for improvements, an audit should never commit the resources of the organization without the complete concurrence of the policymakers and management team.

Other Benefits of Management Performance Audits

Informing the Public

Though the primary purpose of a management performance audit is to assist management, another major benefit can be to inform the public about the transit system. The audit explains how the

community's transit system operates and why it operates as it does. The audit also explains which community needs transit can satisfy. The community can then develop goals that make the best use of the transit system's services. The public's increased awareness and understanding may also affect the transit system favorably because the public can understand why the transit system needs certain resources and public support. The audit also makes the transit system accountable to its supporters--the taxpayers--because it informs the public of how the system uses its tax dollars.

Improving Efficiency and Effectiveness

Some of the improvements in efficiency and effectiveness made by an audit are subtle, such as improved management information and better communication within the system and between the system and the public. Other improvements are obvious. For example, when the transit system implements recommendations to improve the schedules or routes, results can be seen in better on-time performance or increased ridership. Specific recommendations for new marketing techniques, better public information, and improved maintenance procedures are also concrete measures that a transit system can use. Improved maintenance procedures can reduce mechanics' overtime or make equipment more reliable.

Sources for Chapter 1

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CHAPTER 2

CHARACTERISTICS OF A TRANSIT SYSTEM

Every transit system is unique in size, management, and local environment. This chapter describes the general characteristics of a transit system, the forces in the external environment that lend perspective to the audit, the responsibilities of the governing body, the functional areas of a transit system, and the tasks each functional area performs.

The External Environment

A complete change in the nature of the ownership and funding base of public transportation has resulted in a variety of issues that have a significant influence on the development of a transit agency's strategic planning process. Strategies now need to be developed to address the specific federal, state, and local requirements that are a condition of funding. As public agencies, operating on public funds, these systems must now emphasize and serve public interests. They must consider the special problems of the elderly, the handicapped, and of low-income citizens, and they must conduct business with the aim of reducing pollution, conserving energy, and revitalizing urban areas and American businesses. Privatizing portions of functional areas is a concept currently receiving much emphasis. Contract maintenance, the operation of individual routes, and payroll accounting services are examples.

All sources of subsidy come with a series of regulations and compliance requirements that somehow act as constraints on the management and operation of the transit system. If compliance with these regulations is worked into the strategic and management planning processes, then regulations will tend not to be a burden in managing the system. Conversely, if regulations are not taken into consideration during the planning phase, then they will surely surface as obstacles during the implementation of management's programs. Almost every management performance audit contains findings that are based on the failure to recognize a particular requirement of a funding source.

Federal Policy

Public and privately owned transit systems that receive federal funds must comply with a variety of federal rules and regulations that encompass much more than those established by the Urban Mass Transportation Act of 1964, as amended. Some of

the UMTA requirements include half fare for elderly and handicapped riders during off-peak hours, special efforts to serve elderly and handicapped persons, and uniform financial and operating reporting requirements. Laws, regulations, executive orders, and administrative requirements that were not established by UMTA, but that the transit system must still comply with, cover the protection of historically valuable property; contract work and safety standards; and wage rates for mechanics and laborers on construction projects. A more complete listing can usually be found in the grant application instructions.

State Policy

The decrease in federal funding levels throughout the 1980s resulted in the need for individual states to play a much greater role. As with most other funding sources, there is a considerable degree of compliance that must be met as a condition of receiving state funding. State transit policy is beginning to take on a much more operations-oriented approach than federal policy. Some state policies address specific productivity standards that their transit systems must achieve. Others use productivity-based allocation formulas in distributing state funds.

One particular state requires the governing board of each urban area to adopt specific staffing, productivity, and fiscal performance indicators, and provide for an automatic route use assessment. This state requires that these service and performance standards actually serve as goals for the transit system throughout the fiscal year. Required productivity indicators include vehicle miles per employee; passenger and employee accidents per 100,000 vehicle miles; on-time performance; and miles between road calls. Staffing ratios include administrative employees per operating employee, and the number of vehicles per mechanic. Fiscal performance indicators include operating cost per passenger; subsidy per passenger; and the operating recovery ratio. An interesting aspect of this approach is that at the end of each fiscal year, the transit system must prepare a report comparing planned performance levels with actual performance and submit it to the state department of transportation (DOT) by a specific date.

Though there may be disagreements about the choice of one performance indicator over another, the process described above is an excellent approach for adapting the basic management tasks of planning, organizing, staffing, and controlling into the transit environment. As was true in the case of federal requirements, if the requirements of the state are incorporated into the strategic and management planning processes, they are much more likely to be achieved during the normal course of business. If they are not incorporated in the planning phase, these requirements will surface during the execution of the deficient plan, and are sure to stop all progress.

Local Policy

Many local officials realize the value of any form of public transportation despite the fact that operating a transit system is far more sophisticated than it seems. Transit policy at the local level is usually not as well defined as federal and state policy. There does seem to be some correlation between a strong state policy and a strong local policy. In the absence of a strong state policy, transit system goals developed at the local level may not be the result of a formalized planning process but more a matter of tradition. Despite the lack of a clear policy, the auditor must carefully analyze the local environment in order to understand the implied influences under which the system must function.

The Governing Body

Organization and Membership

Most transit systems report to some form of governing body. State law determines the forms of organization that public transit systems can adopt; the appropriate governing body for each form of organization; and the membership, authority, responsibilities, and source of revenues for each type of governing body. Many transit systems are organized as city transit departments, for which the city council acts as the governing body. Some transit systems are divisions of other city departments such as the department of public works. A transit system may also be governed by a city or county transit board, whose members are appointed by the mayor, city council, or county commission. Sometimes other city departments handle certain functions for city transit departments such as human resources and financial control.

City, county or regional transit authorities are forms of organizations that typically have more authority and freedom to make policy decisions. These organizations also have access to a wide variety of funding sources such as property and sales taxes. The sources of revenue available to a transit system are an important consideration in determining the most appropriate form of organization and type of governing body. Transit authorities also have a broader base of representation than other forms of organizations and may serve multiple jurisdictions rather than a single political unit.

A governing body may have authority to acquire property, to enter into contracts, to operate a transit system in a designated service area, and to collect and spend revenues. Governing bodies usually have a chairperson, a vice-chairperson, a secretary treasurer, and a legal counsel. Governing bodies may also have committees to handle specific issues. For example, when a transit system is building a new garage, the governing body may form a construction committee. Most members of governing bodies are part-time volunteers. Some states pay

members for the time they spend in public meetings, primarily as an attendance incentive. Few states have governing bodies whose members are elected by the general public. Governing body membership is often determined by state law and usually consists of an odd number of members representing a cross section of the community. Some governing bodies require their members to represent transit riders as well as the non-riders whose tax dollars help support the system.

In some cases there may be an additional advisory group that is highly representative of the community which makes recommendations to the statutorily established board. This group provides valuable advice and also enables the governing board to remain at a reasonable size while still being able to monitor all facts of public concern.

Tasks

The governing body has seven tasks:

1. Establishing a strategy for the transit system.

2. Approving management objectives.

3. Establishing objectives for the governing body.

4. Resolving major issues.

5. Acting as an intermediary.

6. Obtaining revenues for the transit system.

7. Evaluating the management of the transit system.

Establishing a strategy for the transit system. It is the responsibility of the governing body to develop an overall strategy for the transit system. Issues might include whether to maximize the accessibility of the individual households to a conventional fixed-route system or to maximize mobility options through a more demand-responsive service. These are only two examples of strategy-related issues that a board might deal with. By-products of the strategic planning process are the goals and objectives that the system will strive to achieve. Broad, general goals and specific objectives provide a basis for the various forms of management planning. A governing body must know the community's wants and needs, in addition to its resources and constraints, in order to develop the strategy and establish goals for the transit system. Then the governing body must employ a management team that fully understands those goals and is capable of achieving them.

Approving management objectives. Once the governing body adopts a strategy and set of goals, management should develop objectives designed to achieve these goals. A review process occurs where the board reviews, negotiates the content of, and

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then formally adopts the plan that management will use in achieving the goals of the system. It is essential that the governing body fully understand what it expects of the system; that management derives a plan that the governing body understands and then adopts; and that the governing body hold management accountable to that plan yet stay completely out of the day-to-day tasks of running the system. There is a great deal of two-way interaction between the governing body of a transit organization and its management during the planning phases. However, once the goals are clear and the management plan is adopted, both bodies must get on with their responsibilities. Meddling by the governing body undermines its own confidence in the management team and challenges the integrity of the management plan.

Establishing objectives for the governing body. Part of the planning process described above includes setting the objectives that the governing body will seek to achieve. These objectives should be based directly on the goals established for the transit system and are developed by creating procedures and a structure for the work it must do. Relevant subject areas include setting policy for public meetings that precede service changes; periodic review of progress on the management plan; and establishing a better working relationship with the business community.

Resolving major issues. One of the primary responsibilities of a transit system's governing body is to resolve major issues and make decisions about policy. Policies aid management in decision-making and reduce the need for the governing body to make routine decisions. Policies should be flexible so that the system can easily adapt to new conditions. An example of a policy would be to evaluate all new services after a 90-day trial period. If the new service does not meet certain productivity standards then the service will be discontinued.

Federal and state laws require the governing body of a transit system to undertake certain tasks. An example of a federal requirement would be that the governing body must adopt a formal resolution authorizing the filing of a federal grant application. State laws sometimes require the specific approval of the governing board for expenditures above certain amounts. The governing body may delegate the responsibility of resolving other issues to management.

Acting as an intermediary. The governing body is an intermediary in that it communicates the public's views to management and management's views to the public. Effective intermediating ensures that the goals and objectives of the transit system meet the needs of the community; it also helps the governing body resolve major issues, and reassures the public that its interests are well represented.

Officials who appoint members of the governing body should recognize that the skills and experiences desirable in governing body members must change as the transit system expands. However,

two general qualifications should always be valued in members of the governing body: the ability to understand and relay public opinion, and the possession of general business skills. Because they represent the taxpayers, members of the governing body must understand the taxpayers' opinions about transit services. Members of the governing body must also understand sound, general business practices in order to protect the public's tax monies.

Obtaining revenues for the transit system. The governing body must secure enough revenue sources to ensure continued operation of the system. Adjusting the fare policy is one method of managing a revenue source. Another is petitioning or lobbying for dedicated funding from various state and local sources.

Evaluating the management of the transit system. Accountability for progress should be assessed at prescribed intervals over the course of the period covered by the management plan, and the plan may need to be readjusted accordingly. However, the plan must never be compromised at the whim of a member of the governing body. The only way to measure the success of a transit system that does not adhere to this planning process is to evaluate management using the frequency and severity of the crises that arise. This is clearly no way to run any kind of organization. Management and the board must agree on the specifics upon which management will be judged. The board should also know upon what basis it wants to be judged; in other words, it must understand and clarify the strategic ends it seeks with those who appoint or elect its members.

The governing body must have adequate information in order to evaluate management fairly. This information is usually available from only two sources: reports from management and financial audits conducted by independent auditing firms. There is a clear conflict of interest in evaluating management solely on information from its own reports, and financial audits measure only one aspect of a management team's performance. A management performance audit conducted by an independent auditing organization is an option that the governing body might use as a third source of detailed, impartial information about management's performance. The governing body should take appropriate actions based on its evaluation of management's performance and should monitor management's response to the evaluation.

The Functional Areas of a Transit System

Management and Organization

Management is responsible for coordinating the activities of the other functional areas to achieve the objectives of the transit system. Because the management function directs all other functional areas, it receives the most attention during a management performance audit.

The management function has six tasks:

1. Developing goals.

2. Establishing objectives.

3. Setting priorities.

4. Structuring the organization.

5. Controlling performance.

6. Ensuring good communication.

Developing goals. Management works with the governing body to establish a strategy for the system. The strategy includes a set of goals that the governing body wishes to accomplish. This is an important process because it is here that a link is forged between the transit system and its external environment. Management's participation is essential if these goals are to be realistic and attainable.

Establishing objectives. Once the governing body establishes and adopts goals, management develops an operating plan that includes the system's overall objectives for meeting those goals. The operating plan is based on information about the system's current performance and is supported by the governing body and the system's functional areas. Management must also continually review its resources and constraints to set attainable objectives.

Management also participates in establishing objectives for the functional areas or departments. Management recommends objectives to department heads that are consistent with the system's overall objectives, then reviews and approves, rejects, or modifies the objectives that are ultimately established for each functional area or department.

Setting priorities. After establishing the overall objectives for the system, management assigns priorities. Some objectives are more important to the community than others; therefore, management must assign priorities accordingly. It is quite possible that changes in the external environment, such as a change in funding levels, will cause these priorities to change as well. It is also common for the management and staff of the individual functional areas to maintain a "wish list" of objectives that may be of interest to them but are not seen as essential by upper management given the existing resources and constraints.

Structuring the organization. The structure of the organization should provide a framework within which functional areas and individuals can attain the system's goals and objectives. Management must assign authority and responsibility fairly and equally in order to make the division of work most

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effective.   Individuals must be held accountable for the successful completion of their assignments.

   Controlling performance.   Management uses the information it receives from the functional areas to monitor the transit system's progress toward attaining its overall objectives.   With effective planning, including budgeting, setting objectives, and developing performance indicators, management can measure each functional area's performance.   If the performance does not meet previously determined standards, management can take steps to revise the system's organizational structure, policies, and procedures accordingly.   Management can also evaluate employee performance and establish personnel practices that are consistent with the performance being sought.   To monitor performance, management must have good procedures for collecting and analyzing data.   Management should analyze data within the context of performance indicators limited to the established objectives of the system.

   Ensuring good communication.   Good management depends on good communication.   Effective communication is essential within the transit system, between the transit system and the governing body, and between the transit system and the community it serves. Objectives, organizational structure, and information inherently encourage communication in the system when they are shared among employees of the system.   Newsletters, memos, and staff meetings help to include employees in the communication network.

   Management must also ensure that the governing body understands the overall performance of the transit system. Management's reports to the governing body must be clear and comprehensive.   The governing body, in turn, must keep management informed about its current priorities.

   Management and the governing body must keep the community informed about the operation of the transit system.   As the primary spokesperson, management must communicate with the news media and participate in community affairs so that the public perceives transit as an important, necessary part of community life.

Operations Planning

   The goal of the operations planning function is to ensure a cost effective use of system assets--both capital and personnel-- since the characteristics of the service area and sources of funding change over time.   Operations planning has a responsibility to ensure that service characteristics reflect community needs and that a correct balance between farebox revenues and outside funding exists.   This balancing should be done within a defensible set of guidelines that need to be flexible enough to change as the operating environment changes. One primary responsibility of operations planning is to monitor changes in the physical operating environment and to anticipate events that will necessitate a reevaluation of service.   The

preparation of schedules is a critical component of operations planning. The key to successful scheduling is to remember that the primary purpose of transit service is to move people, not vehicles. It is for this reason that some transit agencies have placed scheduling within the marketing department.

The operations planning function has four tasks:

1. Analyzing markets.

2. Conducting research.

3. Planning facilities.

4. Planning service.

Analyzing markets. All operations planning activities should ultimately be affected by market analysis. Market analysis is responsible for spotting trends in changing demographics, tracking area growth or decay, and alerting other operations planning functions that a development which may require transit service is in the works. The market analysis activity includes maintaining close ties with both government and private sector groups that influence local development.

Conducting research. Research has two major purposes: (1) to provide a structured analysis of opportunities identified by market analysis, and (2) to provide comparative or background research to support changes proposed by the planning components of the operations planning function. Research provides an "arms length" analysis of proposed changes to existing services or facilities. Once a potential opportunity is identified through market analysis, research does the background work to determine the feasibility from a more structured and quantitative angle. Research is also responsible for gathering comparative data from other transit systems to provide a yardstick for measuring proposed changes.

Planning facilities. Facilities planning activities should include representing the interests of operations when dealing with developers, architects, engineering staff, or consultants. While facilities take at most two years to design, operating personnel must often live with decisions made during that time for the duration of their careers. Therefore, operations planning representatives should be involved in decisions about all new facilities from simple structures like bus shelters to major investments such as a bus garage.

Planning service. Service planning activities are perhaps the most visible aspects of operations planning from the point of view of the transit rider. Included are handling route changes and major changes to headways or schedules. Those responsible for service planning generally represent the transit system at public hearings and are responsible for making sure that UMTA requirements concerning service changes are met. Service

planning's major purpose is to keep fine tuning the service network. Service planning also includes coordinating the public hearing process that precedes major service changes. At these hearings, with the assistance of the other planning branches, service planning should have a concise, well-researched program to present to the public. These hearings should be scheduled and maintained keeping in mind some of the basic questions that UMTA will raise during the triennial review process.

Transportation

Transportation is the largest and most visible part of any transit system. The best marketing, the cleanest and best maintained buses, the finest facilities, and the best planning mean nothing if the service is not reliable and courteous. The transportation function is the final and critical link in accomplishing what is the ultimate goal of every transit system--moving people from one place to another as quickly as possible, with minimum customer effort and with maximum possible comfort and safety. There is little glamour in putting a bus on the street at its scheduled time day after day. As the number of captive riders has decreased and urbanization has taken on new, more automobile-oriented characteristics, the transportation function has assumed an increasingly visible role. A well-managed transportation function is the key to expanding market share and tapping new markets.

The transportation function has five tasks:

1. Ensuring reliable service.

2. Managing personnel.

3. Maintaining personnel records.

4. Communicating effectively with the maintenance function.

5. Training employees.

Ensuring reliable service. The most important aspect of any transit system is its reliability. There are two ways that the transportation function ensures schedule reliability: (1) by monitoring scheduled operations, and (2) by responding to rider complaints and abnormal ridership patterns.

Monitoring of schedule reliability is usually done by a transportation supervisor positioned at a timepoint who notes the operation of buses with respect to their scheduled time at those timepoints. Although various methods of electronic monitoring have been developed, having a person on the corner is still the most common method of monitoring schedule adherence. The effective transportation function has a well-defined procedure for dealing with buses operated ahead of schedule. Aggressive street supervision, where an operator is held back when operating ahead of schedule, is generally more effective than merely

recording an early departure and having the situation handled at a later time or date. Schedule adherence procedures must be clear, unambiguous, and biased in favor of the rider. It is a poor practice to show times on a public schedule that the vehicle operator is not held to.

Often, rider complaints will spur an investigation of schedule adherence. There must be a well-defined procedure for transmitting such complaints to transportation and an equally well-defined procedure governing the response to them. Any unusual data generated during the planning, revenue collection, or public hearing process should be communicated to transportation. The source of this unusual data should be investigated and an explanation produced. Lower than expected ridership, poor revenue production, or excessive complaints may all be the result of poor schedule adherence.

Managing personnel. Personnel management is one aspect of the transportation function that has undergone many changes over the last few years. New ideas about discipline, working hours, work rules, image, and supervisor/dispatcher responsibilities have all challenged the traditional transportation structure. Regardless of formal structure, however, an effective personnel management system will aid in directing transportation employees toward their primary purpose of providing reliable service. A quality personnel management function has well-defined methods constructed in such a way that accountability can be readily determined and system performance measured. There are several key concerns: operator performance monitoring, supervisor/ dispatcher performance responsibilities, and operator work assignments.

Traditionally, a strong disciplinary program has been the principle means of ensuring that operators adhere to company policy and procedures. There must be a program, ideally containing both positive and negative inducements, that encourages employees who violate company rules and procedures to change their behavior. This program should be constantly tested to determine its effectiveness. Too often a progressive discipline program involving time off and retraining is not only ineffective but also has a negative effect on transit system finances. A personnel management program that allows a particular violation or group of violations to occur repeatedly year after year, is not effective.

Nearly all transit systems have radios which are used for making service adjustments or communicating problems from the field to a central dispatch center. A quality personnel management program assigns an aggressive role to field supervisors and dispatchers. Supervisors and dispatchers must be more than note takers and should have a clear responsibility for maintaining service. The primary responsibility of supervisors and dispatchers should be to assist the operator in providing the best possible service to customers. Casting supervisors and

dispatchers in the role of inquisitors only serves to discourage communication that is needed to provide quality service.

Operator work assignments are a constant source of disagreements, grievances, and ill feelings. The tyranny of the clerk is well known in transportation. It is critical that work assignments are handled according to a plan that is fair and easily understood. A quality transportation function gives the person handling work assignments the flexibility to ensure that all personnel needs for service are met while making operators feel that work assignments are handled even-handedly and without vindictiveness.

Maintaining personnel records. Transportation includes both service and personnel management. In order to manage personnel correctly, an effective personnel information system is necessary. This system should include all aspects of an operator's past, present, and future personnel records. The information system should not duplicate the payroll system, but should record various items affecting personnel management as well as evidence of service commitment in the form of commendations and complaints.

Such an information system is an indispensable aid in the establishment of extra board requirements, for analyzing absenteeism, and for preparing the payroll. An operator who, during his or her probationary period, incurs numerous absences and fails to adhere to company rules, should not be hired as a permanent employee because of the organization's poor record-keeping. A pattern of absenteeism can be detected as part of a routine personnel analysis report generated by the personnel information system.

Communicating effectively with the maintenance function. Transportation, more than any other function, works closely with maintenance. In order to provide reliable service, it is essential that both routine and special communication between transportation and maintenance is handled effectively. There should be a well-defined system with built-in accountability and a procedure for resolving conflicts so that undue friction does not diminish the effectiveness of either function.

Vehicles that are pulling in with minor defects or potential problems that have been identified by transportation personnel must be brought to the attention of maintenance in such a way that the problem is clearly stated. Ideally, defects will be communicated to the appropriate maintenance personnel before a vehicle is removed from service.

Requests for extra vehicles or the rare request for a bus change must be handled through a procedure that is easy to use and understand. It is the responsibility of transportation to let maintenance know as soon as possible when vehicle requirements change.

Training employees. Operating a bus requires that the operator is constantly safety-conscious, for the operator's own protection and for that of the customers, pedestrians, and motorists. Customer relations training is vital to reinforce the notion that the rider is the customer and not the enemy.

Regular safety training is a part of any quality transportation program. A safety review is also a part of UMTA's triennial review process. Safety is more than merely introducing operators to new equipment. It is a comprehensive program of defensive driving, up-to-date safety techniques, and equipment safety. Participation in a safety review should be included in the data in the personnel information system. Operators who "slip by" because of time off, either scheduled or unscheduled, should be flagged and included in a safety review. An annual review will ensure that all operators have had an opportunity to encounter a potentially hazardous situation annually in the classroom so they will know what to do if the same thing happens out on the road.

A disturbing trend within any transportation function is the tendency, as time goes by, for operators to view the riders as "the enemy." Over time this can lead to no response or even a surly response to a genuinely baffled potential customer. Such treatment will discourage that person from using transit again-- even from making the trip in the first place. Despite concerted efforts to provide easy-to-understand vehicle information, the operator is still a major information source for many passengers. Knowing how to deal with the public in an informative and courteous manner is a win-win situation for both the operator and the customer. Ultimately the transit system as a whole benefits. It is important that operators have a regular opportunity to relearn and to refresh themselves regarding customer relations techniques. Retraining can help operators feel they are doing more than just "driving a bus"; it can also relieve some of the stress brought on by dealing with the public, and reemphasize the important role that operators have in making transit the transportation mode of choice.

Marketing

The public sector has only recently begun to understand the value of the marketing function and has started to invest accordingly. Unlike other public services that do not compete directly with the private sector, transit must deal with a variety of competitive factors such as the automobile, other mobility options, and simply the choice not to travel. Understanding these and other behavioral influences is the essence of marketing.

Transit has not enjoyed an image of prestige since the late 1940s, when it was the predominant mode of transportation. Suburban development and the availability of the automobile contributed to the erosion of the ridership base that had brought prosperity to transit properties. Equipment deteriorated,

service was curtailed, and the ridership base changed in nature from one of convenience and choice to one of dependency. When the ridership base was one of choice, transit's strategy was to serve those markets that were the most profitable. When the market changed to one of dependency, transit's strategy was to maximize its social welfare and cut costs. UMTA's capital and operating programs have enabled almost a complete renovation of transit's physical plant and have provided operating assistance to maintain respectable levels of service. The problem is that a strategy based on maximizing profit is no longer possible, while a strategy of maximizing social welfare is unable to justify the current level of subsidy necessary to support most fixed-route systems. A completely new strategy needs to be developed--one that concentrates on changing the attitudes of non-users and positions transit as a viable alternative for a wide range of mobility needs. The key to developing this strategy is to understand the variety of mobility needs in the service area, then to design and promote a service alternative to meet them. The term "fixed" was the predominant description of pre-World War II transit operations, and was applicable to both routes and markets. The term "flexible" is probably more appropriate today, placing a much greater emphasis on the marketing function.

The marketing function has six tasks:

1. Conducting research.

2. Developing a marketing strategy and marketing plan.

3. Designing transit service.

4. Developing schedules.

5. Pricing service.

6. Promoting service.

Conducting research. A transit system should collect and analyze data on current and potential transit riders and should use the results of the analysis as input to the system's strategic planning process. Market research should determine who rides transit, why, when, and where they ride. The research should also determine who does not use the transit system and why not. Finally, the research that marketing conducts should be coordinated with the research conducted by the operations planning function.

Developing a marketing strategy and marketing plan. Information gained through research is then used by management and policymakers in developing an overall strategy, or purpose, for the system. The strategy results in a series of goals that are then transformed into various operating plans.

One of the operating plans derived from the strategic plan is the marketing plan. The marketing plan takes the goals from

the strategic plan that were based on market research, then develops a specific set of objectives designed to accomplish these goals. The marketing plan specifies exactly what will be done, by whom, when, and at what specified cost. The marketing plan should refer to the system's goals, then address existing and anticipated conditions, alternative options, specific actions to be taken, the expected cost, and a control process for measuring progress [1, p. 240].

Designing transit service. Marketing should coordinate with operations planning in designing transit services that meet the transportation needs of current and potential riders. The marketing strategy should include the type, quality, and accessibility of service that the transit system should offer. Marketing should design both the fixed-route and demand responsive systems. Quality of service is determined by characteristics such as comfort, reliability, safety, driver and telephone information personnel courtesy, travel time, and through routing. Marketing should also ensure that transit service is accessible to all potential riders.

Developing schedules. There is a debate as to whether the scheduling function belongs in operations planning, marketing, or transportation. As a function of operations planning, the primary responsibility of scheduling is to maximize service within departmental service standards and minimize cost within the constraints of the labor contract. The resulting "schedules" should be responsive to the public's need for service, efficiently schedule personnel and equipment, and adhere to both the spirit and the letter of the labor contract.

Because of the complex balancing act it is required to do, schedules is an unnerving and tedious part of operations planning. A small service change can necessitate major schedule changes. Equipment and personnel considerations may pull the schedule process in opposite directions. Traditionally schedule-making has been directed primarily by equipment considerations. Since labor represents such a large proportion of transit operating costs, personnel utilization has received much more consideration than in the past. Finally, the new trend toward more customer-responsive transit networks has led to marketing having a much greater influence in schedule-making at many properties.

Pricing service. Marketing should also have a key input in the pricing of transit services. Fares should be tailored to the services offered and should maximize both ridership and revenue. The transit fare should compete with the costs of other modes of transportation and should be simple to collect. In addition to regular fares, marketing should consider special promotional fares, reduced off-peak fares; as well as the legal requirements of reduced fares for the elderly and handicapped market segments. Though marketing plays a key role in the pricing process, it is the governing body that must approve changes in the fare policy.

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Promoting service. Advertising, public information, and
community relations programs are tools available to the transit
system for communicating with the public. The marketing plan
should include an advertising component designed to increase
consumer awareness of the transit system. Advertising should
project a favorable image of transit that, in turn, will
stimulate demand. The advertising component of the marketing
plan should specify the medium to be used in addition to the
timing of each approach. Public information including maps,
schedules, bus stop signs, and other promotional materials, tells
the public how to use the transit system. Community relations
programs are used to inform the public about the transit system's
activities as well as to provide a forum for feedback about what
transit services the community wants. Marketing uses this
feedback in evaluating and improving the current marketing
program.

Effective public information inevitably helps to increase
ridership. People who know when and where to board a bus are
more likely to ride than people who are faced with the task of
looking the information up before they can consider the bus as an
option. Telephone information services, well-illustrated route
maps, and easy-to-read schedules are all used to convey
information to the public. Local radio stations should be used
to inform riders of service changes that occur day to day.

Maintenance

The maintenance function is responsible for protecting and
prolonging the useful life of the system's capital assets,
including both the physical plant and rolling stock, in a cost-
effective manner. The maintenance function also has certain basic
responsibilities in ensuring the system's reliability.
Maintenance must guarantee that the fleet is mechanically fit
enough to be operated safely and on schedule. A maintenance goal
should be the complete elimination of road calls and service
disruptions due to mechanical problems. Contrary to popular
belief, a road call is a marketing problem and not a maintenance
problem. It is also crucial that the fleet be kept aesthetically
pleasing in terms of cleanliness and appearance in order to
attract riders. To meet these responsibilities, the maintenance
function requires an effective maintenance management information
system.

The maintenance function has five tasks:

1.   Preparing a comprehensive maintenance plan.

2.   Developing a preventive maintenance focus.

3.   Providing for adequate diagnostic and repair
     facilities.

4.   Recruiting and developing personnel.

5. Developing and maintaining an effective maintenance management information system (MIS).

Preparing a comprehensive maintenance plan. All maintenance management functions are subordinate to the maintenance plan. UMTA's triennial review process stipulates that, "the grantee must maintain project property in good operating order" [2, p. 9]. One of the sources of information in the review process is the grantee's maintenance plan. Additional review items used to determine whether or not this requirement is being met include:

- A written statement of maintenance policy

- Compliance with manufacturers' warranty requirements and recommended maintenance procedures

- Provision for maintenance in the system's operating budget

- Road call trend information

- Visual checks of equipment during site visits

Developing a preventive maintenance focus. The objective of service reliability is dependent on an intimate working knowledge of the vehicle's components and subsystems. This intimate working knowledge is gained during periodic assessments of the useful life of the components where conditions can be monitored. Periodic assessments, combined with the routine procedures recommended by the manufacturer or learned through experience, form a basis for taking corrective action when a particular component or subsystem is not likely to perform as it should. Following the preventive maintenance guidelines outlined in the manufacturer's equipment manuals is often necessary in pursuing warranty claims. Preventive actions minimize the chances of unexpected failures and disruptions to service; therefore, preventive maintenance fully supports the objective of service reliability. Preventive maintenance is vital in ensuring the successful operation of components that support the operation of other components. A radiator failure may cause engine damage. A brake shoe failure may damage the drum beyond repair. Preventive maintenance, therefore, strongly supports the strategy of cost control.

Providing for adequate diagnostic and repair facilities. Complex equipment requires specific attention which implies the appropriate tools and facilities. The time to assess these needs is during the life-cycle costing phase of the equipment's procurement, even if life-cycle costing is not used in the bid assessment process. The increasing trend in electronic components has put an emphasis on diagnostics. Minimizing the time spent in assessing a problem also supports a strategy of cost control. Once diagnosed, adequate tools and facilities are essential in getting the problem corrected. Diagnostic and

repair facilities, therefore, support preventive maintenance which, in turn, supports the service reliability objective.

Recruiting and developing personnel. Skilled maintenance personnel are essential to an effective maintenance program. An understanding of current and future equipment complexity is needed in order to recruit the right candidates. The system's focus on training and internal career development defines the trade-offs that must be made in setting the desirable skills that the recruit should posses. With a solid internal training program and a clearly defined career path, the new recruit need only be familiar with the basics. In the absence of such programs, the system is faced with the much more difficult task of recruiting experienced specialists.

Though experience plays a key role in the development of a maintenance employee, it should be subordinate in importance to the exposure that the employee gets through a formal training program. Experience should come as a result of applying techniques and theories presented in an atmosphere that is conducive to learning. Focusing on on-the-job training as a sole source of experience creates an environment where the risk is too high and the consequences of a wrong decision are simply too great. This type of environment needlessly compromises the service reliability objective. Maintenance employees who have not had a formal training program will constantly be under a great deal of pressure which only serves to inhibit their performance, while all but eliminating their innovativeness.

Developing and maintaining an effective maintenance MIS. The basic management functions of planning and controlling cannot be performed without information. Improvements to the fleet cannot be made without a clear understanding of the fleet's specific shortcomings. This understanding can only be gained through an ongoing analysis of the trends which is derived from accurate information. Service reliability is enhanced when there is a complete understanding of those factors that result in road calls. Cost control is attained when a preventive maintenance program is in place that anticipates failure and wear-out patterns in advance. These patterns can be monitored only with good information.

The objective of an effective maintenance management information system is to act as the feedback mechanism in the maintenance planning and controlling process. Without such a process, the department's ability to support the system's service reliability and safety objectives is left completely to chance.

Safety and Training

The goal of the transit system's safety program is to ensure that the day-to-day operation is structured to avoid property damage and personal injury to employees, riders, and other members of the general public. Subordinate to this goal is the goal of protecting the system's assets against accidental damage. Safety

program objectives weigh heavily in the selection and training of bus operators and maintenance employees.

The safety and training function has two tasks:

1. Training bus operators, mechanics, and other employees.

2. Promoting safety and security.

Training bus operators, mechanics, and other employees. A transit system's bus operator training program should emphasize defensive driving in addition to the operator's role as the system's salesperson. The training program is designed to familiarize the new operator with the intricacies of the equipment and to point out the operating conditions that significantly increase the chances of personal injury or equipment damage. The National Safety Council has a defensive driving course that some systems have used successfully. UMTA also has a battery of tests for bus operators. The new bus operator is subject to one, and sometimes two, evaluation procedures upon completing the training program. The first procedure involves a demonstration of newly learned skills to the instructor. This is usually done by going through a structured routine designed to demonstrate key skills such as turning, backing up, troubleshooting, and operating the vehicle's various components. A written test often precedes the driving test and is designed to assess the new operator's comprehension of tasks covered during the training program. A second procedure a transit system often uses after the new bus operator qualifies is to have an observer, usually a retired bus operator, ride and observe new bus operators sometime within the first few weeks after they have been out on their own. The purpose of this procedure is to see how well new bus operators use the skills they have just learned, while not realizing that they are under observation.

Some systems provide human relations training for new bus operators in addition to safety-related training. Bus operators are key marketing tools for transit systems because they may be the only representatives of the system with which the passengers ever come in contact. Courtesy under a wide variety of circumstances is a skill that the bus operator must be well-versed in and requires specific attention during an ongoing training process.

Maintenance training is discussed more fully in the maintenance section of this chapter. Maintenance employees play a major role in the safety process not only in terms of safe shop and equipment operating procedures, but in terms of ensuring the safe operation of vehicles through the preventive maintenance process. Preventive maintenance inspections performed at basic intervals, usually whenever the oil is changed, are often called safety inspections. Safety inspections involve checking the components and subsystems that must perform in order to ensure the safe operation of the vehicle. These include brakes,

steering, windshield wipers, and any other component that might jeopardize public or employee safety. Other items addressed by the safety inspection include checking the condition of components whose operation is necessary for the proper functioning of other components, such as brake shoes that might start damaging drums or changing fuel filters to avoid having contaminants reach the engine.

Promoting safety and security. The Occupational Safety and Health Administration (OSHA) regulates the safety of working conditions for employees of the transit system. To meet OSHA's standards, transit systems should eliminate potential hazards in the garage and increase employee awareness of safety in general. A safety incentive award program is a typical means of enhancing awareness. Such a program makes use of various forms of recognition and cash bonuses for safety-related suggestions, safe driving and safe shop practices.

Procurement

Often in medium and small systems the procurement function is not a separate department. Several areas in the transit system may be collectively involved in the procurement of materials and supplies, equipment, tools, construction services, and professional, non-professional and consulting services. The primary objective of the procurement function is to ensure that all of the system's purchases are made within the legal and ethical boundaries of federal, state and local governmental regulations; the system's own internal goals and objectives; and good business sense.

The procurement function has six tasks:

1. Establishing procedures.

2. Coordinating the development of specifications.

3. Soliciting bids and proposals.

4. Developing criteria for selecting vendors.

5. Managing inventory.

6. Assuring quality.

Establishing procedures. It is unreasonable to require complete comprehension of each of the influencing factors on the part of every employee who needs to make a purchase; therefore, it is imperative that maintaining an up-to-date set of internal written procedures be a part of the procurement function. Part of this responsibility includes condensing the very specific legal requirements of each governing body, which often conflict, into a set of internal procurement procedures that are consistent

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with the system's objectives. The ability of the procurement
function to communicate effectively and work well with other
functional areas is essential.

Coordinating the development of specifications. It is a
common misconception that the most important function of
procurement is to make purchases at the most economical price. A
key aspect of a purchase where price plays a major role is a
clear specification of the materials or services being sought.
However, the procurement function is rarely in a position to
develop a technical specification without the input of the
ultimate user of the materials or services. One of the
responsibilities of the procurement function is to work with the
eventual users of the materials or services in developing clear
specifications, then maintaining them on-file for use as needed.

Soliciting bids and proposals. There are specific legal
requirements affecting both of these very different procedures.
UMTA regulations [3] are very specific here but they are usually
preempted by much more restrictive state and local regulations.
Soliciting bids involves the process of seeking price quotations
from vendors on items that can be clearly described in the form
of a written specification. Examples include nuts and bolts,
spare parts, office supplies, and cleaning supplies. Soliciting
proposals involves purchases that cannot be clearly specified,
such as architectural services and consulting services. The
eventual user has a specific idea of what needs to be
accomplished by these purchases yet leaves it to the vendor to
determine exactly what that service or product is to look like.

Developing criteria for selecting vendors. The selection
criteria used in choosing a vendor is part of the decision making
process in each procurement. This involves much more than price,
though price is certainly a factor. Whether or not the vendor's
product or services meets the specification is a factor, as is
the ability of the vendor to meet a delivery schedule.
Experience is another consideration. The most important factor
in developing selection criteria is that criteria should not
limit competition unfairly, and that they should be fully
understood by all vendors who may be interested in providing the
goods or services.

Managing inventory. Deriving inventory and control
requirements is another important aspect of the procurement
function. Determining the materials and supplies to be
monitored, and setting inventory levels and reorder points are
included in this process. Though the actual management of
inventory is usually the responsibility of the maintenance
department, it is still a task of the procurement function.

Assuring quality. An important final step in the
procurement process is following up on each transaction in order
to assess whether or not the product or service satisfied the
intent of the ultimate user. This is a crucial factor in the
procurement of spare parts, especially in cases where they

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conform to the technical specification yet are unsatisfactory due to poor workmanship or the use of inferior materials. Quality assurance is an important aspect in conforming to vehicle warranty provisions.

Finance

The finance function in a small-city transit organization is often the responsibility of the city controller. In larger urban areas, this function is usually performed by an accounting and finance department within the organization. Finance is responsible for budgeting, controlling cash flow, and protecting the organization's assets. Control and accountability are essential in spending public funds.

Finance has five tasks:

1. Budgeting and financial planning.

2. Monitoring revenues and expenditures.

3. Establishing and implementing protective controls.

4. Accounting for the payroll.

5. Complying with grant requirements.

Budgeting and financial planning. A budget is a plan that establishes a common understanding between the governing body, the general manager, and the department managers of each of the functional areas. Department managers should participate in establishing the annual budget for the transit system. Monthly or quarterly budget reports are usually used as a feedback and control mechanism. Objectives developed in the management planning process take on a cost dimension by being linked to specific items in the budget. In this manner, the budget becomes a tool for management to measure the progress of the transit system toward its objectives.

Monitoring revenues and expenditures. Finance should maintain the appropriate records for monitoring revenues and expenses. The system's revenue accounting procedures should include sound fare collection methods and provide internal control over revenues received. A detailed cost reporting process allows for the development and monitoring of specific cost control objectives. Service planning and scheduling uses cost information to develop cost effective services. Maintenance and repair costs, which are second only to payroll costs, are of key interest to the maintenance manager. A good relationship between finance and the procurement functions is essential in maintaining a good credit rating among spare parts vendors. In general, all functions have an interest in maintaining cost control data for the purpose of adhering to their own individual budgets.

Establishing and implementing protective controls.
Protective controls are the techniques used to safeguard the
transit system's physical assets. These assets include vehicles,
buildings, repair equipment, machinery, office equipment and
furniture, cash, and records. Protective controls might include
physically inventorying the system's assets on a regular schedule
or verifying cash handling procedures on a random basis. These
controls not only make good business sense but they are also
useful in tracking and monitoring the useful life of assets
acquired under various grant programs.

Accounting for the payroll. Wages are the single largest
operating expense of a transit system. Good procedures for
monitoring and accounting for payroll can help management
determine the most efficient level of staffing needed for the
system.

Complying with grant requirements. Finance must coordinate
with capital development and grant management to monitor the
progress of grant reporting requirements. Finance has a strong
interest in seeing that grant applications flow as they should
from a cash-flow perspective. Section 15 of the Urban Mass
Transportation Act of 1964, as amended, calls for uniform
financial reporting requirements for all systems receiving
section 9 operating assistance. The intent of the federal
government was to develop a database that it could use to see
what it was getting for its money.

Capital Development and Grant Management

There are no longer any self-supporting transit systems, so
each system has come to rely on a variety of public sector bodies
for operating and capital funding. While operating funds require
some measure of reporting, it is capital funding that demands the
most justification and progress reporting. The primary
responsibility of capital development and grant management is to
respond to the needs of the transportation and maintenance
departments in securing adequate funds for continuing capital
improvements consistent with the policy set forth by the transit
system's governing board.

The capital development and grant management function has
four key tasks:

1. Analyzing capital needs.

2. Applying for grants.

3. Handling special projects.

4. Administering grants.

Analyzing capital needs. Capital analysis is closely allied
with grant application, but it is more internally oriented.
Inevitably there will be more capital requests than available

money can support. The job of capital analysis is to provide some sense of priority for projects, seek out alternative funding sources for projects that may be eligible for funding under a special grant category, and to investigate non-capital alternatives to different problems.

Capital analysis works to quantify or establish reasonable justifications for projects. These justifications can be used to rank projects, as a part of the grant process. During UMTA's triennial reviews one of the items examined is the transit system's response to comments about capital projects. The capital analysis procedure enables the transit property to have a ready, defensible set of reasons for proposing a project.

Certain proposed projects may be eligible for special treatment by funding agencies. It is up to capital analysis to identify such projects and alert the grant application function and special projects function to these possibilities. It is critical that these special funding opportunities not be missed because they can relieve pressure on the capital development process and get projects funded earlier than they might otherwise be.

Applying for grants. Funding agencies, whether they be federal, state, or local usually have specific grant application and preparation requirements. These requirements, though sometimes tedious, are absolutely essential if funding is to be approved. The grant application function includes preparation of the Transportation Improvement Program (TIP) and the Program of Projects, and assurances that various capital planning responsibilities, with respect to outside agency review and including public hearings, are met. Questions raised at public hearings, after funding agency review, and by internal review, must be considered during grant application.

The grant application process also involves determining which projects to put into the capital plan. Funding availability can change on short notice due to any number of factors. There must always be a plan to add new projects or expand the scope of existing projects. Preparations must also be made to reduce the number or scope of projects.

Handling special projects. Capital development and grant management is always susceptible to new ideas and technology. Most funding for special projects is made available by the funding agencies but at times it is possible for the transit operator to have a special project funded outside the normal channels of capital development. The special projects function is responsible for carrying out ideas developed by capital analysis or by areas outside of capital development.

Once the opportunity for possible special project funding is identified, work must be done to meet the application requirements of the funding source. While the majority of special projects will end in a dead-end situation, the few that

are successful will enable the transit system to accomplish work that otherwise would have to be deferred or canceled.

Because of the often unique guidelines for special projects, the special projects function often includes both grant application and grant management responsibilities. Funding agencies usually require more stringent reporting requirements and may have requirements outside of the usual pattern and format of more typical projects.

Administering grants. Once a project is approved it becomes the responsibility of grant management to administer the project. The grant management function includes filing required progress reports, monitoring project draw-down of funds, and making sure that any work charged to the project is within the specified scope.

Progress reports are generally required according to a set schedule to help the funding agency track the flow of funds and anticipate actual funding balances. Since most capital funds require some kind of matching effort either in cash or in-kind services by the transit system, progress reports also alert the finance branch to projects that may be behind or ahead of schedule, and serve to aid finance in their efforts at cash management.

A well-written analysis of scope is essential to providing the grant management function with a reasonable standard to judge whether the work charged to a project is indeed related to that project. One aspect of UMTA's triennial review includes a look at private sector participation in transit projects. For example, while "force work" (using the transit system's own labor force) can be the most efficient way to accomplish a project, work done outside of the apparent scope of a project by in-house staff and charged to that project could be questioned. Grant management staff must be constantly vigilant to avoid having ineligible charges assigned to a project, either deliberately or inadvertently.

Human Resources

Human resources is a term that is used to encompass the personnel and labor relations functions. Human resources ensures that the transit organization recognizes the value of the people it employs. The public that transit serves comes in contact with the system's drivers and office employees on a daily basis while the responsibility of ensuring the vehicle's reliability rests with the maintenance staff. The good conduct and performance of these employees is a major part of marketing transit services effectively. Human resources must make sure that the transit system's personnel meet the organization's needs, that employees have the skills necessary to perform their duties and are adequately compensated, and that the organization maintains good labor relations with its employees.

The human resources function has five tasks:

1. Planning personnel needs.

2. Recruiting, screening, selecting, and training employees.

3. Evaluating employee performance.

4. Compensating employees.

5. Participating in overall labor relations.

Planning personnel needs. Monitoring the number and type of personnel needed by the transit system is the task of the human resources function. Personnel planning prepares the system for future needs. The first step in the process is job analysis which results in job specifications, job descriptions, and the criteria for job success. An abilities and skills record keeping system should act as an up-to-date inventory of the skills of the employees and can be used in developing preliminary objectives for future personnel needs.

Recruiting, screening, selecting, and training employees. Techniques used in recruiting, screening, and selecting employees come under the scrutiny of a variety of laws and regulations. Though it is not the purpose of this handbook to outline this process, it is the responsibility of human resources to ensure compliance for the organization. Once hired, new employees must go through an orientation process, usually the responsibility of the human resources department, then on to training that is more specific to the position they will occupy. Comparing the abilities and skills of the organization's employees with its objectives for the future allows the human resources department to develop training programs designed to meet deficiencies.

Evaluating employee performance. Developing evaluation criteria and maintaining the results of each evaluation are two more responsibilities of human resources. Evaluation criteria should be consistent with the transit system's objectives. Employees can then be held accountable for their contribution toward achieving these objectives. Actual evaluations should be carried out by the employee's immediate supervisor, and then reviewed by the human resources department for recommended action. These recommendations are also used by management in making decisions about training, compensating, promoting, or terminating employees.

Compensating employees. Human resources also has the responsibility of designing and administering an equitable compensation program. This program should be designed to motivate employees and should reflect the level of effort and skill required for each job. Human resources must also recommend the division of total funds for compensation between direct pay and benefits, including vacation, sick pay, holidays, insurance

coverage, and retirement provisions. The development of career paths and wage progression plans is another responsibility of human resources. The collective bargaining process between management and organized labor often determines this process for union members. Records of employee work hours and performance evaluations, used in compensating employees and administering benefits, are also maintained by human resources.

Participating in overall labor relations. The human resources function is responsible for ensuring that provisions of the collective bargaining agreement are met, although human resources does not usually participate in the actual negotiation process. Adherence to the collective bargaining agreement is most often accomplished through human resource's role in the grievance process.

Sources for Chapter 2

[1]   Kotler, Philip, <u>Marketing for Nonprofit Organizations</u>,
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[2]   U.S. Department of Transportation, "UMTA N 9010.1, Section
       9 Triennial Reviews," Appendix B, Washington, DC: U.S.
       DOT, UMTA, May 1985.

[3]   U.S. Department of Transportation, "UMTA C 4220.1A,
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CHAPTER 3

THE AUDITOR'S PROCEDURES

This chapter presents the sequential process for conducting a management performance audit. Throughout this handbook we have assumed that the auditors will be independent consultants from outside the transit system. However, in larger systems, internal auditors are now being used to help managers find better ways to manage their functional areas. Regardless of whether auditors are employees of the transit system or come from outside the system, they should view those they audit as customers. This chapter is written for auditors, to guide them in conducting an audit. It is also written for the management team and/or the audit sponsor so they too will have a better understanding of what the auditors will be doing.

This chapter will first describe the procedures auditors use to prepare for an audit, which include developing the objectives of the audit, planning the audit, reviewing documents, analyzing performance indicators, and working with the news media. The chapter then describes the procedures auditors follow during the fieldwork and analysis phases of the audit. These procedures include conducting interviews, identifying goals for functional areas, checking procedures of functional areas, analyzing data, making findings and recommendations, and conducting a review session. Finally, this chapter describes how to present the audit. Specific instructions for the auditor are identified by the symbol [].

Pre-Audit Procedures

Developing the Objectives of the Audit

Each transit system is unique and every audit has its own priorities and objectives. For example, a system may need to develop a secure source of funding before it can concentrate on improving policies and procedures. In this case, audit objectives might focus more on how the system relates to its external environment. Another example might involve a system that has adequate funding sources yet needs help in developing better maintenance and procurement procedures. In this case, the audit's objectives will be more operationally oriented.

The audit team needs to have a clear understanding of who it is working for before the audit's objectives can be developed. This understanding is also essential in developing

recommendations because the way they are presented largely depends on who the driving force will be in implementing them. This key group may include the general manager, the governing body, the city council, the board of works, and influential citizens. The audit team should work closely with the key group throughout the audit.

In developing the audit's objectives, auditors should:

[]   Consider the objectives of the sponsor.

[]   Consider the opinions of the key group.

[]   Consider the audit schedule.

[]   Consider the experience of the audit team.

[]   Use preliminary analyses of news clippings, system documents, and performance indicators to identify problem areas.

Once the audit team has established the audit's objectives, the auditors should reach an understanding on them with management, the key group, and the project's sponsor.

Planning the Audit

Good planning is essential to the success of the audit. Poor planning may cause a lack of resources and time, which puts pressure on the audit team, and may produce poor results. Once the audit's objectives are agreed upon, the audit team can develop the audit plan. This plan should result in five products:

1.   The scope of the audit.

2.   The kinds of information the auditors plan to collect.

3.   The audit team.

4.   The audit schedule.

5.   A budget.

The auditors should reach an understanding with management, the key group, and the project's sponsor on all five products.

The scope of the audit. The scope is based on the size, history, and goals of the transit system, taken in the context of the need for the audit. It is important that the audit team decide on the appropriate balance between examining the system's environment compared with examining the system's functional areas. An audit of a system that operates in a hostile political environment must seek to identify how this constraint influences the system's management. An audit of a system with significant

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deficiencies in its functional areas must seek to uncover their causes. Auditors should:

[] Discuss the purpose of the audit with the group or sponsoring agency that requested it. When a management performance audit is required by state law, its scope should be determined accordingly.

[] Develop an overview of the system's goals and objectives through discussions with the sponsor. Use any other documents that support this process either directly or indirectly.

[] Compile information about the history of the transit system and the major issues currently facing it. Develop a brief history of transit in the community gathered from discussions with key groups, news clippings, and other documents.

[] Determine the role of the Metropolitan Planning Organization (MPO) and whether or not it should be included in the audit.

[] Identify the basic characteristics of the system, such as the size of the fleet, annual vehicle miles, annual vehicle hours, and annual unlinked trips. This information will be useful during the peer group analysis.

[] Review the system's functional area chart, or organizational chart, to develop a feel for the number of functions, or departments; the variety of positions; and the flow of communication.

[] Estimate the time needed for interviews based on the number of employees and variety of positions.

[] When appropriate, establish a date and method of presentation to the governing body or city council.

Data collection. Based on the scope of the audit and their discussions with the audit sponsor about key issues, the auditors should develop a rough outline of the information they need to collect. Much information can be gathered and reviewed in advance. A list of information sources is presented later in this chapter.

Audit team. Two experienced auditors can usually audit systems of 300 or fewer buses. A good auditor must have a working knowledge of sound business practices, be familiar with transit management, communicate well, and understand human behavior. A minimum of two auditors, however, should make up the audit team regardless of the size of the system because:

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1. Two auditors can ensure a more impartial evaluation of the system since each can contest the reasonableness of the other's observations.

2. Two auditors can share the responsibility for interviewing and keeping detailed notes.

3. Two auditors provide a wider range of experience which helps improve the analysis of the findings.

Audit schedule. The scheduling of the audit project should be based on the scope of work, the priorities of the sponsor, the qualifications and experience of the team, and the size of the transit system. The schedule should include estimates of the time needed to complete each procedure, starting with a review of documents, through the production of the final report. Figure 3.1 is an example of a time schedule for an audit of a system with 57 buses.

[] Estimate how many interviews to conduct based on the organizational, or functional, chart and the number of groups in the external environment.

[] Plan for no more than four or five interviews per day.

[] Estimate the amount of time needed to trace procedures based on the requested level of concentration for each functional area.

[] Anticipate interruptions such as holidays, industry conferences, and vacations, and adjust the schedule accordingly.

[] Establish the date and time for the presentation to the sponsoring group well in advance.

The timing of the audit has an influence on the impact of its recommendations. Interest, awareness, and enthusiasm generated within the organization during the audit process increase the likelihood that final recommendations will be implemented. Because local interest is greatest during fieldwork, the written report should be available soon after the fieldwork is completed. For example, the written report may be made available at the time of the final public presentation.

In support of the team concept, all other staff members assigned to the project should be kept informed of the schedule as work progresses. The auditors should periodically inform the staff assigned to type, edit, and produce the final report of the progress of the project.
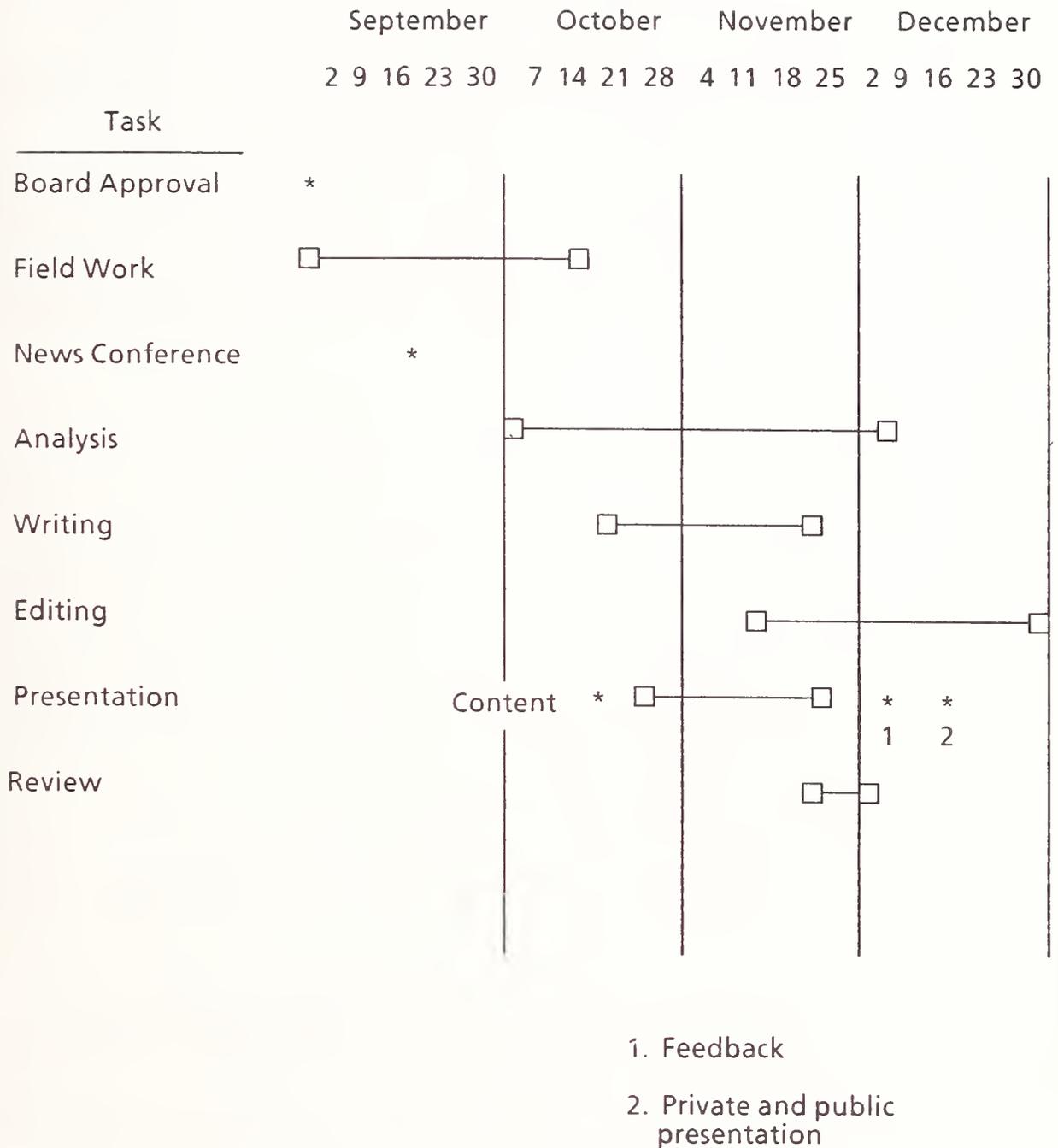
FIGURE 3.1 Example of a Schedule for a Management Performance Audit

Budget. The budget for a management performance audit is just as sensitive to overruns as is the operating budget of a transit property. Unforeseen circumstances that may arise during an audit include findings that were unanticipated and the uncovering of issues that were much more serious than expected. This is why it is so important that the scope of the audit is clearly defined, and that it includes a provision for changing it that is acceptable to both the audit team and the sponsor. This provision should address not only changes in the scope that do not affect the budget but also those that do.

[] Develop contingencies in the budget and schedule that allow for minor adjustments in the scope of the audit.

[] Include a provision in the contract with the sponsor that clearly prescribes the methods to be used in changing both the scope and budget of the project.

Reviewing Documents

Before beginning the fieldwork, auditors collect and start reviewing documents about the transit system.

[] Collect and review all documents that are relevant to the audit. Useful documents include, but are not limited to:

- budgets
- city map
- financial audit reports
- goals, objectives, and mission statement of the organization
- grant applications
- functional area charts
- organizational charts
- pertinent state laws and city ordinances
- phone books for the area
- procedural manuals for the functional areas
- route maps and schedules
- section 15 reports
- transportation systems management (TSM) element
- transportation improvement program (TIP)
- triennial review report for UMTA (most recent)
- unified planning work program (UPWP)

[] Refer to Part II for a list of general and specific documents for each functional area, and for the external environment.

These documents provide information on both the system and the community. This information also:

1. Speeds completion of the project.

2. Helps to focus interviews during the fieldwork phase, and confirm the information gained in them.

3. Clarifies the scope of the audit.

4. Serves as a reference throughout the project.

Analyzing Performance Indicators

A performance indicator is anything that can be used to measure performance in some kind of quantifiable way. Total ridership is a measure of performance and is therefore a performance indicator. In most cases, however, a performance indicator will be a ratio of some unit of input or output divided by another unit of input or output. (For example, passengers/ revenue mile or operating expense/passenger.) The use of a ratio eliminates the problem of scale and makes it easier to understand and analyze large groups of numbers quickly.

Performance indicators are frequently divided into three groups: efficiency, effectiveness, and financial indicators. The distinction is unnecessary and is sometimes misleading. What is important is the information a performance indicator provides, and not what name it is given.

Performance indicators are one of the most important tools available to an auditor because they provide a way of quantifying performance. They can be used to identify areas where performance is good or bad so that the auditor knows where to focus the most attention. Performance indicators are also valuable because they can be used to "sell" auditors' recommendations to upper management, the governing body, or the general public. (For example, after observing that management performance is lacking in some area, the auditors may also notice that the system has few management or administrative employees and, therefore, may believe it is important to create a new position. To justify the additional expense, it would be to the auditors' advantage to demonstrate that the ratio of administrative employees to drivers or to revenue miles is only 60% of the industry average.)

There are many uses for performance indicators and techniques for using them, but all of these uses fall into one of three categories: peer group evaluations, time trend evaluations, and comparison with an established standard. (Appendix 3A presents examples of all three types.)

Peer group evaluation. The auditor must first construct a peer group of similar-sized systems and then compare the performance of the transit system being audited with the performance of the group. Great care must be taken when selecting the peer group to ensure that abnormal or unusual systems are not included.

[] Use APTA Operating Reports or UMTA section 15 data to gather the data for the peer groups. Receiving data directly from the peer group members is preferable, but is not usually practical because of the difficulty in getting people to respond.

[] Select members of the peer group by searching for similar levels of revenue miles and revenue hours. Then, examine peak hour fleet, service area population, climate, and local service characteristics.

[] Try to find at least 15 systems with similar characteristics. Generally speaking, the more systems, the better. Too few systems allows one system with unusual characteristics to skew the average and distort the peer group standard.

[] Calculate as many indicators as possible for the initial review. Irrelevant indicators can be eliminated later. (This is easily done if using microcomputer technology.)

Time trend analysis. Probably the best indicator of all is an examination of the transit system's own performance over time. A time trend analysis can be used in conjunction with a peer group analysis to provide an excellent view of a transit system's performance. For example, revenue miles/road call may be above the peer group average, but if the number of miles between breakdowns has been falling for three years, this situation should probably be closely examined.

[] Be certain that all data used in a time trend analysis was collected in a consistent method. For example, if the system's definition of a road call changed three years ago, this may have a significant impact on the time trend analysis.

[] Try to collect reliable data for at least five years; so that changes can be identified as trends rather than normal fluctuations.

[] Use graphs as often as possible. Graphs make analysis much easier than tables of numbers. At the very least, indicate percentage change when using tables.

[] Examine monthly trends as well as annual trends. Seasonal variations can be very instructive.

Comparison with an established standard. Comparison with an established standard is an excellent tool for a transit system to use internally, but is not often used in a management performance audit. This method is essentially a management by objectives tool, in which departmental or individual performance is compared with an established target. A management performance auditor may be very interested in the process of how standards are set and

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how they are used, but a good performance auditor will not automatically accept a target standard as the appropriate level.

There are no absolute guidelines for establishing performance standards. It is an excellent idea to start with a peer group analysis to see what the "industry standard" is, then look the performance of the audited system over time and consider unique local conditions. There are also different philosophies about how to motivate employees by using performance standards. Some managers prefer to set high, or even unattainable, standards so that employees will have to work very hard. This can sometimes be discouraging and can also work to management's disadvantage if the media or the governing body wonders why the organization can never reach the objectives that have been set. Another philosophy is to set standards low enough that they can be easily attained. Unfortunately, some employees feel satisfied if they reach or nearly reach their objectives and feel little pressure to work harder to exceed those objectives. The ideal level for setting objectives probably falls somewhere between these two extremes.

[] Determine how the strategic planning process affects the formulation of the system's goals.

[] Examine the process of how objectives are established, how they are used by upper management, and how they are perceived by lower level management.

[] Use a peer group analysis and a time trend analysis to evaluate whether or not the performance objectives are close to the "industry standard."

Working with the News Media

Management performance audits of public agencies are much different from those of private companies. The spirit of the law affecting most public transit systems requires that the governing body conduct most of its business during meetings that are open to the general public. This open-door or "sunshine" requirement often comes into play when the audit is sponsored by the governing body of the transit system. Meetings between the audit team and members of the governing body for the purpose of developing audit objectives and presenting audit findings are usually open, public meetings.

A problem arises when the reason behind the poor performance of a functional area is due to the competency or personality of a particular individual. While it is never the purpose of a management performance audit to evaluate individuals, it is sometimes necessary to inform the governing body of uncomfortable situations involving personnel. These situations are clearly not a matter for public consumption and are usually handled through a meeting between the audit team and the chairperson of the governing body. Some state laws have a specific provision that exempts such meetings from the sunshine law.

A good working relationship with the media is a prerequisite in attaining one of the basic goals of an audit: informing the public. Two common methods of supporting this goal are through an initial press conference or by a public presentation upon completion. Having both a news conference before the audit and a public presentation upon its completion has four advantages:

1. People outside of the transit system may be more willing to be interviewed by the audit team because the news conference shows that the audit is important.

2. The news conference gives the public an idea of what to expect from the audit.

3. When the public is informed early of what to expect, it better understands the findings and recommendations given in the final, public presentation.

4. When local officials and the public are well-informed about the audit's findings and recommendations, the more likely and willing the system will be to carry out those recommendations.

Before the audit starts:

[] Establish a policy for talking with the news media including how the audit team plans to introduce the audit to the public.

[] Coordinate the policy with the audit sponsor as well as with management.

In conversations with reporters:

[] Give clear and accurate information.

[] Briefly state the important facts first.

[] Be positive and not defensive.

Before the news conference:

[] Coordinate with the key group and local city officials regarding the presentation's purpose, place, and time. Once all parties agree on the time and place they should commit themselves to attending the presentation.

[] Work with the key group, or manager, to arrange the news conference.

[] Have the key group, or manager, inform members of the local newspapers, and radio and television stations of the time, place and purpose of the news conference.

[] Write a one or two-page press release that gives the major points of the presentation including a name and telephone number of who to call for more information.

During the news conference:

[] Give a 10- to 15-minute statement about the purpose and procedures of an audit.

[] Use visual aids if possible.

After the news conference:

[] Hand out the press release.

[] Hold a question and answer session.

The presentation and press release should give reporters enough information to develop questions and write a story. When reporters do not ask questions they are probably insufficiently informed about the subject.

Fieldwork

Interviewing

Auditors learn the perceptions of employees, and of others outside of the system, through the interview process. Of particular interest here are the different perceptions that people have about of the same subject. Two auditors should conduct each interview to ensure that all information is documented properly and interpreted as impartially as possible.

The number of interviews and amount of time needed for interviewing depends on the number of employees, the functional areas, and the objectives of the audit.

General guidelines for auditors:

[] Conduct as many as 75 interviews for systems with 100, or fewer, buses.

[] Conduct at least two-thirds of these interviews with people from within the transit system and up to one-third with people from outside of the system, if the scope of the audit includes the external environment.

Examples of persons within the system:

- department managers
- dispatchers
- drivers
- general manager
- mechanics

- secretaries
　　　　　- supervisors

　　　　Examples of persons and groups outside the system:

　　　　　- board of public works members
　　　　　- chamber of commerce
　　　　　- city council members
　　　　　- city traffic engineer
　　　　　- governing body members
　　　　　- human service agencies
　　　　　- interested business groups
　　　　　- the mayor
　　　　　- MPO planners
　　　　　- special interest groups

[] Plan to interview all members of the governing body, and attend at least one of the meetings.

[] For interviews within the transit system, choose people from each functional area who represent most of the tasks and procedures.

[] Schedule each interview to last approximately one hour. Interviews with the general manager and members of the governing body will take two to three times longer and might require more than one interview session.

[] Schedule no more than five interviews for any one day.

Before the interviews:

[] Arrange to conduct all interviews in private. Never conduct an interview within hearing distance of anyone other than the auditors and the interviewee.

[] Coordinate the interviewing of employees of the system with the general manager and in cooperation with union leaders when appropriate.

[] Discuss the overall condition of the transit system with the general manager, and others in management, in preparation for the interviews. Background information about the current organizational structure, labor relations difficulties, and personality conflicts will help to put information gathered during the interviews into context.

[] When calling people you want to interview who are outside of the system, introduce yourself, explain who asked you to do the audit and why, then explain why you want to talk with the person.

[] Send letters to persons you wish to interview from outside the organization outlining the information that you will need. This step saves time during the interview and improves the quality of the information.

Preparing for interviews:

[] Conduct a preliminary peer group analysis to identify potential issues.

[] Review documents collected previously.

[] Formulate your interviews with persons outside the transit system using the questions in Chapter 4.

[] Formulate your interviews within the organization using the general questions in Chapter 5, and the specific questions for the functional areas in Chapters 6 through 15.

[] List the questions you plan to ask in each interview. A written list gives structure to the interview, helps keep the conversation on track, and ensures the information is complete.

During the interview:

[] Encourage communication by helping the persons you interview feel comfortable and relaxed.

- introduce yourselves;
- explain the purpose of the interview;
- explain the purpose of the audit; and
- stress that all interviews are confidential and that you will not identify the person being interviewed as a source of information.

[] Avoid violating your promise of confidentiality to the people that you interview by presenting information from earlier interviews to the person being interviewed by saying, "let's suppose" or "let's assume."

[] Get enough information to answer the relevant questions in Part II of this handbook.

[] Do not depend on memory to recall what information came from which sources. One of the interviewers should do most of the questioning and maintain the dialogue; the other should keep detailed notes, monitor the time, and make sure the process moves on.

[] Supplement interview notes with sample forms, records, and reports.

[] Check the accuracy and consistency of information:

- ask several different people to answer the same question; or
- ask one person several questions seeking the same information, but phrased differently.

When all interviews are completed:

[] Determine what you learned, what questions you have, and what information you still need.

[] Look for missing or inconsistent information within and among interviews.

[] Schedule follow-up interviews as needed.

Identifying Objectives of the Functional Areas

Through the interviews, the auditors should gain a clear understanding of the overall goals of the transit system and the objectives of each functional area--whether stated or implied-- for accomplishing those goals. If auditors have approached their interviews using the general questions in Chapter 5 as a guideline, then they should have a reasonable idea of what direction each functional area is headed in. Understanding where each functional area is trying to go is the key to assessing the day-to-day procedures it uses in getting there.

[] Identify the objectives of each functional area. Refer to the questions about objectives in Chapter 5.

Checking Procedures of the Functional Areas

A procedure is defined as a series of sequential actions that are used to reach a specific objective. One of the easiest ways of improving a deficiency in a functional area is to trace the sequence of actions that precede the poor performance. Achieving functional area objectives can only be done when good procedures are in place. Auditors collect information about the system's procedures from documents describing written procedures, interviews with the general manager and employees, and direct observations.

[] Determine the procedures that each functional area uses in meeting its tasks. Refer to Chapter 2 for a description of the key tasks of each functional area.

[] For each procedure, determine:

- Who is involved?
- Where is it followed?
- How often is it followed?
- What data does it provide?

- What records are kept?
- What happens upon completion?

[] Determine how the procedures for each functional area are coordinated within that function and with the procedures for other functional areas.

[] Draw a flowchart of each procedure that includes each step, the flow of information, who is involved in each step, and the forms and files used. Figure 3.2 is a flowchart of a procedure for scheduling preventive maintenance. Appendix 3B explains this flowcharting technique.

[] Use each flowchart to:

- determine whether the procedure makes sense;
- analyze complicated procedures such as cash handling;
- determine whether a step is missing or whether there are too many steps; and
- compare information about those procedures from documents, interviews, and personal observations.

[] Determine whether the use of these procedures will result in the functional area attaining its objectives.

Analyzing Data

Auditors analyze information from documents, performance indicators, interviews, and personal observations to evaluate management's success in directing the system toward its goals. Auditing compares the system's practices and procedures with accepted business practices and transit industry standards. The auditors then must determine what is best for the system within the environment that it operates in. When analyzing data, auditors must consider the system's goals, objectives, resources, and constraints.

Organizing information. All members of the audit team should organize the information they collected both before and during the fieldwork phase. Audit team members should:

[] Arrange the information on the transit system's environment so that it answers the questions in Chapter 4.

[] Arrange the information so that it answers the chapter questions for each functional area. Refer to Chapters 6 through 15.

[] Discuss and compare notes and observations with the other members of the audit team.

[] Decide whether the information is complete.
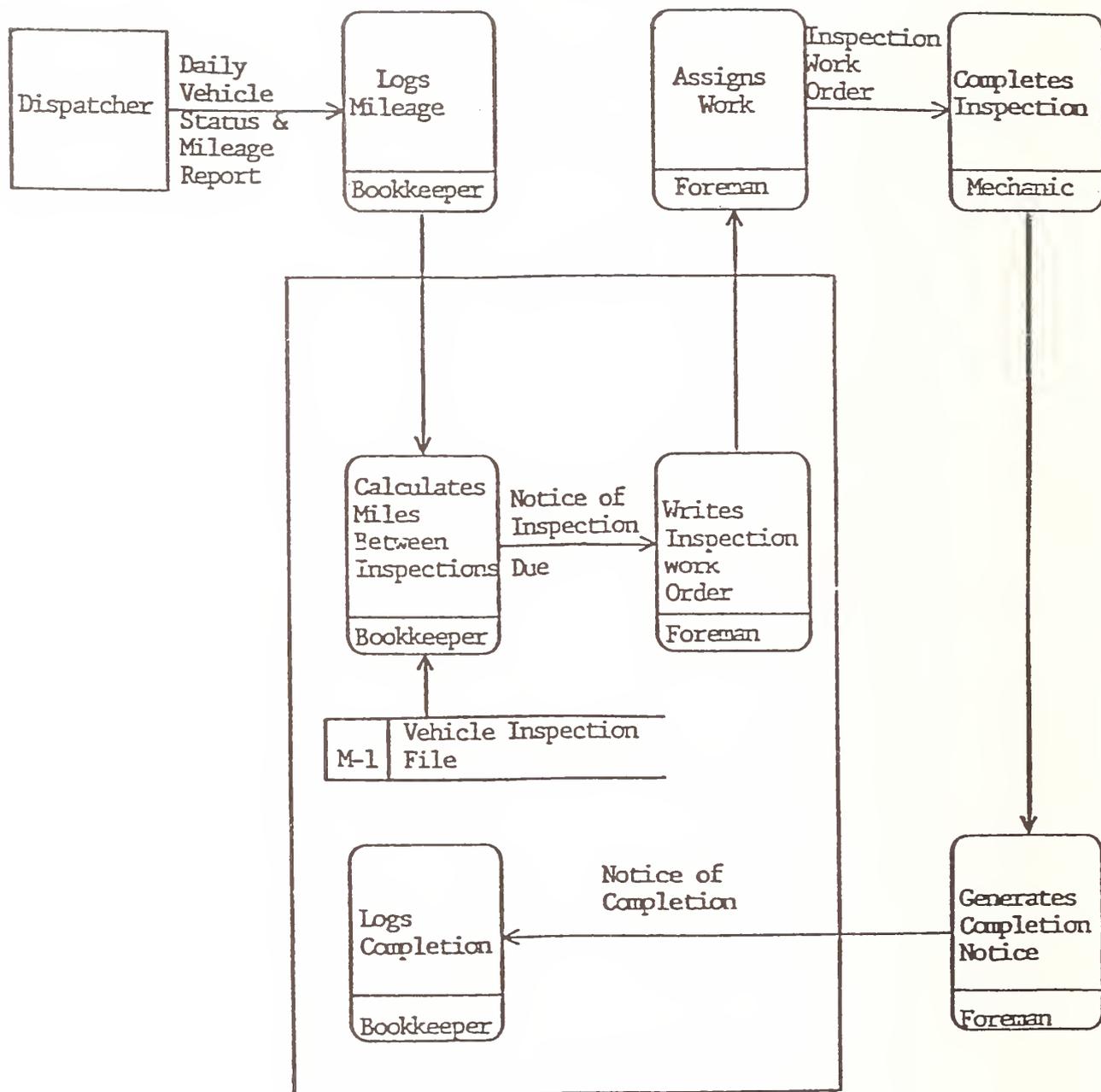
FIGURE 3.2 Flowchart of a Maintenance Procedure

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[] If more information is needed, schedule as many follow-up interviews as time allows.

Evaluating goals and objectives:

[] Analyze the system on the basis of its goals and objectives, whether they are formally stated or implicitly understood. Refer to Chapters 4 through 6.

[] Compare the actual performance with the intended performance that the objectives describe.

[] Consider the effect of the system's resources and constraints on actual performance.

Evaluating procedures. To determine whether the procedures a functional area uses will result in its attaining the functional objectives:

[] Check the procedures for speed and accuracy.

[] Review the flowcharts; add or subtract steps as needed.

[] Determine whether the procedures accomplish the tasks.

Evaluating the organizational structure. To determine whether the system is structured so that responsibility is clearly defined and work is properly divided:

[] Determine whether the system has clear and accurate job descriptions and specifications.

[] Trace the career paths through each functional area. Are they continuous and clearly delineated in terms of responsibility or are they fragmented, unclear, and really more a function of seniority?

[] Determine whether reporting relationships are clear and whether duties overlap or efforts are duplicated among functional areas.

[] Compare your observations with the organizational chart to see if they are the same.

Evaluating overall performance. After auditors have evaluated each functional area, they should determine the system's overall performance.

[] Reevaluate the analysis of performance indicators in light of all the data.

[] Evaluate the system's image in the community in light of the system's goals and objectives.

[] Evaluate the system's patronage in light of the system's goals and objectives.

Making Findings and Recommendations

Throughout the fieldwork, the audit team should hold discussions with appropriate representatives of the transit system about emerging findings and evaluations to confirm the accuracy of the auditors' understanding, and to elicit management's collaboration in developing recommendations. After these discussions the audit team should carefully prepare the findings and recommendations. The recommendations, which are the most important part of the report, should:

1. Identify the potential for improving and strengthening management's procedures and practices.

2. Be stated in a positive style and directed to the future. Note: when a recommendation could adversely affect a current employee of the system, discuss it with the general manager but do not include it in the written report.

3. Be practical and attainable considering available resources in the system and the constraints under which the system must work. For example, if a system is under budget constraints that may be less severe in the future, then separate the essential and immediate recommendations from those that can be accomplished in the future.

Recommendations are of little use without a plan for their implementation. Recommendations should be put into a format that accommodates their being worked into the system's strategic, tactical, and operating plans. Regardless of the terminology used, they should be presented to include the scope, the functional areas and employees that are affected, the responsibility for implementation, the monitoring mechanism in the form of a performance indicator, and the specific milestones at which point progress will be assessed. Auditors should:

[] Develop an implementation plan of approximately one typewritten paragraph for each recommendation.

[] Include specific actions for each recommendation, along with target dates for implementation.

Conducting a Review Session

After determining findings and recommendations, but before preparing the public presentation and the written report, auditors should meet with the general manager to review the facts, findings and preliminary recommendations of the audit. When the manager agrees with the facts, the audit team and management present a solid front to the governing board and the

general public. Concurrence will also serve to strengthen the auditors' findings. It is not at all unusual for the manager to disagree with the auditors' interpretation of some of the facts. When this occurs, the auditors should listen to the manager's concerns then either stand firm or concede the point as they see fit. A review session also serves to prepare the general manager for the public presentation so that there are no surprises.

[] Meet with the general manager in private.

[] Stress that the general manager's opinions and comments are valuable.

[] Schedule two to four hours for the session to allow enough time to discuss the findings and preliminary recommendations.

[] Present the findings tactfully so that the general manager will not take them as personal criticism.

[] Highlight the costs and benefits of the recommendations.

Audit Presentation

The Private Presentation

After meeting with the general manager, the auditors should meet with the management team and some part of the governing body. Again, meeting with any or all of the governing body may be strictly regulated by state law so this must be done in complete compliance with the appropriate laws and with the approval of the sponsor of the audit. The purpose of this private presentation is to inform the management team and governing body of findings and recommendations before the public presentation. This allows them enough time to develop appropriate responses to concerns that the public and media might express during the public presentation. This preparation is actually very healthy in that it enhances both the public's faith in the management of the system and the likelihood that the recommendations will be implemented. The system's image will be enhanced if management is in a position to report on the steps that have already been taken toward improving a situation that will be presented as a finding at the public presentation.

[] Upon completion of the fieldwork phase, give a private presentation to the management team and governing body (to whatever extent it is legal to do so) so that they can prepare for questions at the public presentation.

The Public Presentation

A public presentation of the auditor's findings and recommendations is an optional part of every audit. The decision whether or not to have one is obviously up to the sponsor, but

this decision should be made before the audit starts and should be included in the agreement between the sponsor and the auditors. When the sponsor is an outside agency or the board of directors, it may prefer to have a public presentation. When the audit is called for by management, a public presentation is sometimes waived. Avoiding the public presentation may sometimes be perceived as a cover-up and the false impression of trying to hide something can be as damaging as actual wrongdoing. The sponsor must evaluate the local climate and local media relations and then decide what the best option is.

The public presentation can be very valuable because it informs all governing body members and local officials of the major findings and recommendations of the audit. It also provides a context for the audit's findings and recommendations that a quick reading of the written report would not provide. Context is crucial because it shapes the public's interpretation and the news media's coverage of the audit.

General guidelines for auditors:

[] Schedule the public presentation as soon as possible after you finish fieldwork, but allow yourselves sufficient preparation time.

[] Arrange to give the public presentation at a public meeting that is convenient for the sponsors.

[] Plan the presentation to last no more than one hour.

[] Practice giving your talk and showing your materials in front of an audience such as members of your organization who can provide constructive criticism. Time the presentation.

[] Reserve time at the end of the presentation for questions.

[] Have management, or the audit's sponsor, inform the media of the date, time, and place of the final presentation.

[] Present the audit's major findings and recommendations.

[] Have two people give the presentation because a change of speakers makes a presentation easier to follow, and the speakers can alternate answering questions based on their areas of expertise.

Visual aids. Visual aids, such as slides, transparencies, charts, and tables help to keep the audience's interest and illustrate the main points. When using slides:

[] Limit each slide to one subject.

[] Use short phrases and key words on slides.

[] Include several slides that explain key performance indicators.

[] End the presentation with slides of the audit's major recommendations.

The Written Report

The written report is the only permanent record of the audit and it serves as a guide for management to use in implementing the recommendations. The report should be easy to read and understand. Include a short summary of findings and recommendations at the beginning of the report to give the reader an overview of the audit. A brief section should describe the procedures used by the audit team. The report should include sufficient information to support the findings and recommendations.

[] State recommendations clearly and persuasively.

[] Include an implementation plan that contains advice on how management might incorporate those recommendations.

APPENDIX 3A

EXAMPLES OF PERFORMANCE INDICATOR APPLICATIONS

Chapter 3 describes three types of applications for performance indicators. This appendix gives examples of the three ways performance indicators can be used to evaluate system performance. As a general rule, the analysis should be simple and should not require extensive use of assumptions. For example, we once used standard deviations and Z-scores to develop percentile ranks for use in peer group analysis. Most people could not understand the procedure and were suspicious of the results. The use of this statistical method did not uncover any findings about performance that could not be otherwise demonstrated in a more straightforward and intuitive method, so we discontinued its use.

Comparison with a Standard

Comparison with a standard--any kind of standard--is one use of performance indicators. This use is the very basis of management by objectives. The standard may be established in any number of ways. Typically, a gut feeling based upon a knowledge of the industry average is used to establish the standard and the standard is then adjusted based upon historical performance. Whatever method is used to establish the standard, current performance of the system, department, or individual is then compared against this standard, or objective.

Figure 3A.1 shows the first page of the "Service Standard Report" used by the Ann Arbor Transportation Authority in 1983. The report lists service standards in 13 categories, the system and/or route performance in each category, and a narrative description of why performance is above or below the standard. Figure 3A.2 is an excerpt from a quarterly report used by the Regional Transit Authority (Chicago, IL). This example uses graphs to compare actual passengers/mile to budgeted passengers/mile (the budgeted value serves as the target for performance). The graph also compares 1987 performance with the previous year.

**Ann Arbor
Transportation Authority**

3700 Carpenter Road, Ypsilanti, Michigan 48197   (313) 973-6500

SERVICE STANDARD REPORT
Quarter Ending December 31, 1983

SERVICE LEVELS

1. Coverage: A minimum of ninety percent (90%) of Ann Arbor
    dwelling units shall be within one-quarter (1/4) mile of
    a fixed-route bus route.

    Ninety-three percent (93%) of City of Ann Arbor dwelling
    units are within one-quarter (1/4) mile of AATA fixed-
    route service.

2. Frequency: The maximum interval between scheduled fixed-
    route buses shall be sixty (60) minutes.

    The following table indicates the service frequencies of
    routes comprising the AATA fixed-route systems:

	Weekday			Saturday
	Peak	Off-Peak	Evening	
15 minute	4	0	0	0
30 minute	9	11(a)	0	7
60 minute	2	4	15	6

SERVICE QUALITY

3. Reliability: Ninety-five percent (95%) of all scheduled bus
    trips shall be operated on time. This is defined as leaving
    scheduled time points no earlier than and up to five (5)
    minutes after the time stated in the published schedule.

    Schedule adherence checks made during the quarter indicated
    that 88.9% of all trips met the stated on-time criteria. For
    the quarter, 961 random schedule adherence checks were made.
    Vehicles met the on-time service standard criteria in 854 of
    the 961 checks.

    The lower than usual ontime performance was due primarily to
    poor weather conditions and heavy holiday traffic.

(a) Two of these routes operated on sixty (60) minute
     frequencies in Ypsilanti.

FIGURE 3A.1 A Service Standard Report

CTA Passengers Per Mile
1987 Actual/Budget/1986 Actual
YTD September 1987

4.8 4.9 5.0   6.1 6.3 6.3   2.9 2.8 3.0

System   Bus   Rail

■ 1987 Actual   □ 1987 Budget   ▨ 1986 Actual
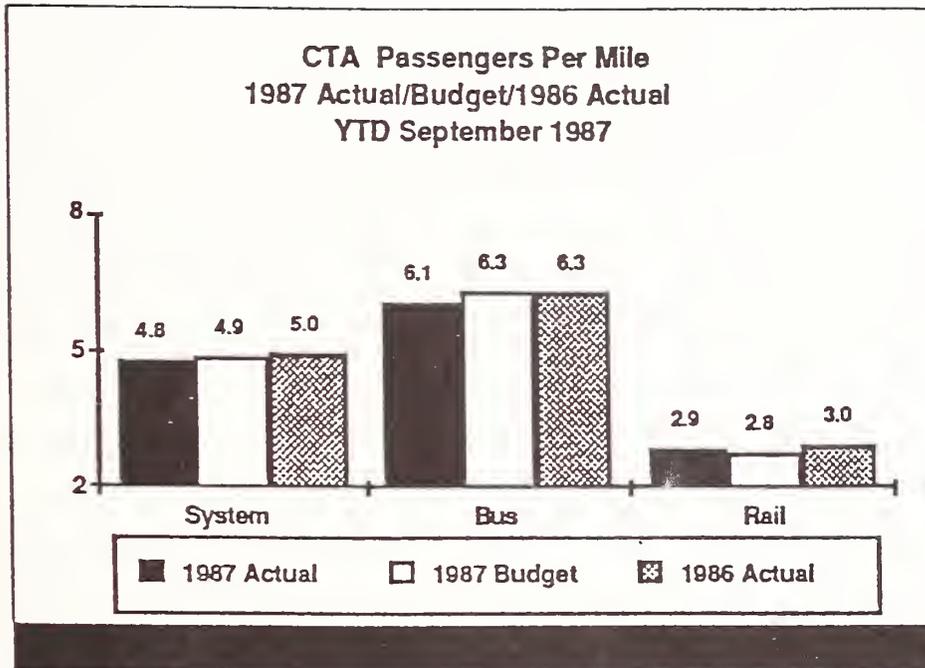
Service Effectiveness

The major measure of service effectiveness discussed in this report is passengers per mile. Through the third quarter of 1987, passengers per mile for the CTA system were slightly below the budgeted amount, and 4.0%, or 0.2 below 1986 performance through September. Bus passengers per mile were unfavorable to budget by 3.0%, or 0.2. Through the second quarter, bus passengers per mile were running under budget by about 1.6%. The decline through the third quarter is primarily due to the decrease in ridership during the school strike. Rail passengers per mile are favorable to budget by 3.6%, but remain slightly behind 1986 performance through September.

FIGURE 3A.2 Comparison of Actual with Budgeted Performance

Peer Group Analysis

A peer group analysis is an excellent method to use to establish standards of performance for a transit system. The variety of combinations of data that can be used to create ratios for performance indicators is almost limitless when transit systems have good record-keeping systems. Even though a few indicators stand out as better overall tools for evaluation than others, and are more commonly used, it is difficult to know what the appropriate standard of performance is for these indicators. For example, what is the appropriate standard for the number of passengers that should be carried in one mile of revenue service? There is no single standard that is appropriate for all systems. Even within the same system, different routes may need different standards because they are targeted at different market segments. Because all of this is true, we collect data from a large group of transit systems and then compare performance of the system being audited to the peer group average.

Availability of Data

The most reliable and comprehensive source of data about transit performance is the National Urban Mass Transportation Statistics Section 15 Annual Report. Section 15 of the Urban Mass Transportation Act of 1964, as amended, creates a uniform system of transit accounts and record keeping; recipients of federal aid from UMTA are subject to these reporting requirements. These annual reports compile extensive data from more than 400 public and private providers of public transportation. Unfortunately, the most current available data is always about almost two years old. Another good source of data is the American Public Transit Association (APTA). APTA reports are not as comprehensive as to the amount of information from each system or in the number of responding systems, but the data is more current.

Selecting the Peer Group

When selecting the peer group, place the greatest emphasis on vehicle hours and vehicle miles. Vehicle hours and miles are measures of the amount of service offered and are better measures of a system's size than the number of peak hour vehicles or the service area population. A system that makes better use of its existing fleet may provide considerably more service in terms of vehicle hours than another system with a similar size peak hour fleet. Likewise, two cities of equal service area population may have very different levels of service. Also consider the type of service provided (e.g., demand-responsive, fixed-route, trolley bus, etc.), climate, and any other available service characteristics. Exclude any systems that have an abnormal characteristic which affects their performance, but do not exclude a system just because it is well-managed.

Performance Index

One very simple and effective tool to use in a peer group analysis is a performance index. This index is the ratio of the appropriate transit system's value divided by the same value for the peer group average. The result of this ratio is a number that is usually close to 1.0. A value of 1.0 means that the transit system's performance is exactly equal to the peer group average. A value greater than 1.0 means the transit system's performance exceeds the peer group average; a value less than 1.0 means performance falls below the peer group average. The degree to which the index varies from 1.0 indicates the degree that the transit system's value differs from the peer group average. For example, a value of 1.15 means the transit system's value exceeds the peer group average by 0.15 or 15%. A value of .95 means the transit system's value is 0.05 or 5% less than the peer group average. Table 3A.1 shows an example of a simple peer group analysis using the performance index.

Managers always hope that their systems will be better than average in performance, but a larger index is not necessarily better. For some indicators, an average performance is acceptable. For example, revenue vehicle miles/revenue vehicle hours (also known as average scheduled system speed) usually approximates 13 miles/hour, but it makes little difference how your speed compares to this average. However, for most indicators it is universally accepted that it is preferable to either be above or below average, depending on the situation of course. Generally, it is preferable for any system to minimize expenses, and therefore, any indicator with expenses in the numerator should be as low as possible (e.g., $35 is better than $40 for operating expense/revenue vehicle hour). For other indicators, such as unlinked passengers/revenue vehicle hour, it is preferable that this figure be as high as possible. Each indicator must be looked at individually to determine what the preferred standard of performance is. In some cases, the standard is purely arbitrary and can only be established through policy decisions.

An example of a policy-based standard is passenger revenue/unlinked passenger. Passenger revenue per unlinked passenger is totally dependent upon established fare policy and transfer policy. On the other hand, passenger revenue/revenue vehicle hour is also dependent upon the number of passengers using the service, so it is dependent upon policy, but it is also dependent upon the efficiency of the system.

Time Trend Analysis

A time trend analysis can be the most valuable and reliable analysis of all. Every system is unique and every system has its own history. No peer group, no matter how well-defined and constructed, can account for all of the local resources and constraints that make each system and each system's goals and objectives unique.

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TABLE 3A.1  Peer Group Analysis Using a Performance Index
-------------------------------------------------------------------------------
                                                           System/Peers
                                                 Peer
                                                 Group
                                        System   Average    Index
-------------------------------------------------------------------------------

Operating Expense/Unlink  Pass Trip      $1.27    $1.11      1.14

   /Rev Vehicle Mile                     $2.91    $3.40      0.86

   /Rev Vehicle Hour                    $38.51   $44.70      0.86

Operating Revenue/Unlink  Pass Trip      0.17     0.36       0.47

   /Rev Vehicle Mile                     $0.68    $1.11      0.61

   /Rev Vehicle Hour                     $9.05   $14.55      0.62

Subsidy/Passenger                        $0.55    $0.75      0.73

Operating Revenue/Operating Expense      23%      33%        0.70

Unlink Trips/Rev Vehicle Mile            4.02     3.06       1.31

   /Rev Vehicle Hour                    53.17    40.16       1.32

   /Service Area Population             41.48    28.76       1.44

Revenue Vehicle Miles/Road Call (000s)   2.02     2.14       0.94

   /Mechanical Road Call (000s)          2.20     2.90       0.76

   /Employee (000s)                     12.53    11.71       1.07

   /Vehicle Operator (000s)             19.21    19.93       0.96

   /Trans Non Veh Operator             132.03   145.58       0.91

   /Vehicle Maint Mechanic             116.90    88.11       1.33

   /Administrative Employee            234.50   136.49       1.72

   /Service Area Population              10.32     9.40       1.10

   /Revenue Vehicle Hour                13.23    13.13       1.01

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The most important thing to strive for when collecting data for a time trend analysis is consistency. Make sure that if the method for collecting data changed during the period of your examination, you are aware of it. Try to collect a minimum of five year's data so that increases or decreases in the value of performance indicators can be identified as trends rather than merely a normal fluctuation. Graph the values whenever possible. With the easy availability of microcomputers and graphic software you should definitely use graphs for reports or presentations. (See Figure 3A.3 for a sample). You will sometimes need access to the actual numbers, but for general analysis of trends, the graph is nearly always sufficient and is always easier to comprehend.

Summary

Just as you should never use only one performance indicator, but should examine several, you should also never, or at least rarely, use only one type of performance indicator analysis. There is no single "best" technique; the appropriate technique depends upon a specific question. When you are conducting a comprehensive audit, there are many questions to be answered and the best method then, should be to use as many techniques in combination as possible. Table 3A.2 shows a combination of a time trend and peer group analysis. The time trend of the peer group in comparison to the transit system is graphically displayed for one indicator in Figure 3A.4.

UNSCHEDULED ABSENCES / OPERATOR

Ojective: < 2.0/Emp/Month

Absences

Months in FY 1983 — 1987

J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D

FIGURE 3A.3 Graph of a Time Trend Analysis

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TABLE 3A.2  Peer Group and Time Trend Analysis
-------------------------------------------------------------------------------
        Indicator              1981     1982     1983     1984     1985
-------------------------------------------------------------------------------
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Indicator	1981	1982	1983	1984	1985
Operating Expense/Unl Pass Trip					
System	$0.75	$0.99	$1.01	$0.84	$0.72
Peer Group Average	$0.73	$0.85	$0.97	$1.11	$1.11
Index	1.03	1.16	1.04	0.76	0.65
Operating Expense/Rev Vehicle Mile					
System	$2.30	$2.61	$2.65	$2.78	$2.91
Peer Group Average	$2.29	$2.74	$3.01	$3.40	$3.40
Index	1.00	0.95	0.88	0.82	0.86
Operating Expense/Rev Vehicle Hour					
System	$30.30	$39.12	$35.33	$37.04	$38.51
Peer Group Average	$30.19	$34.90	$39.84	$43.80	$44.70
Index	1.00	1.12	0.89	0.85	0.86
Operating Revenue/Unl Pass Trip					
System	$0.18	$0.26	$0.26	$0.21	$0.17
Peer Group Average	$0.24	$0.28	$0.31	$0.35	$0.36
Index	0.75	0.93	0.84	0.60	0.47
Operating Revenue/Rev Vehicle Mile					
System	$0.54	$0.69	$0.68	$0.68	$0.68
Peer Group Average	$0.75	$0.90	$0.95	$1.07	$1.11
Index	0.72	0.77	0.72	0.64	0.61
Operating Revenue/Rev Vehicle Hour					
System	$7.16	$10.42	$9.00	$9.00	$9.05
Peer Group Averaage	$9.92	$11.42	$12.58	$13.84	$14.55
Index	0.72	0.91	0.72	0.65	0.62
Subsidy/Unlinked Passenger					
System	$0.58	$0.72	$0.75	$0.64	$0.55
Peer Group Average	$0.49	$0.57	$0.66	$0.76	$0.75
Index	1.18	1.26	1.14	0.84	0.73
Operating Revenue/Operating Expense					
System	24%	27%	25%	24%	23%
Peer Group Average	33%	33%	32%	32%	33%
Index	0.73	0.82	0.78	0.75	0.70

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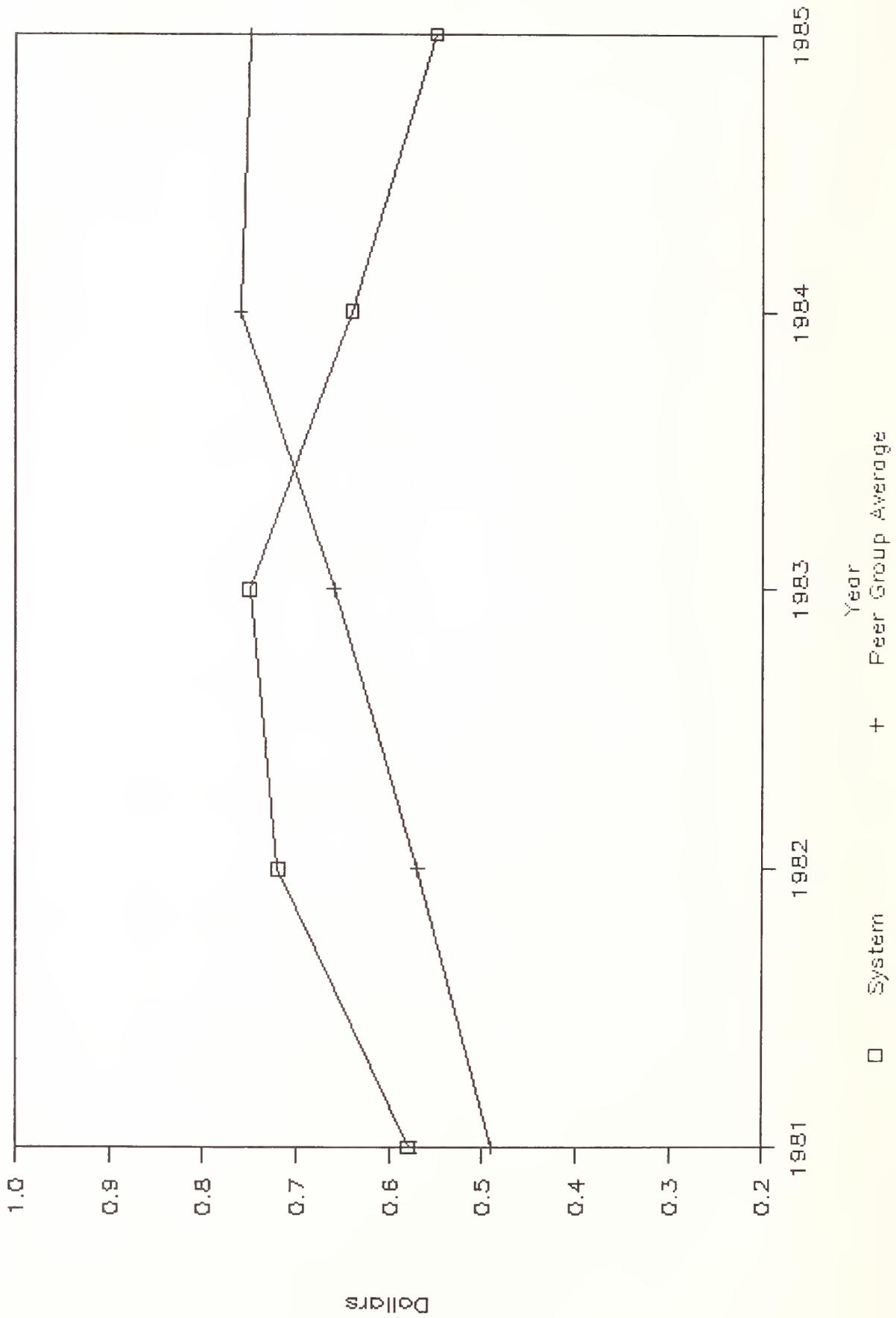
FIGURE 3A.4 Graph of a Time Trend Analysis Using a Peer Group

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APPENDIX 3B

EXAMPLE OF FLOWCHARTING A PROCEDURE

The technique for flowcharting any procedure uses four simple symbols [1].
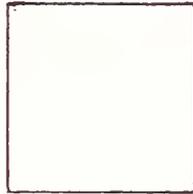
- Represents the source or destination of data.

- Represents the flow of data.
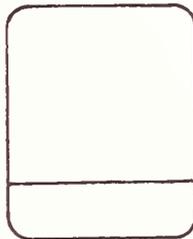
- The process that transforms the flow of data. The area at the bottom of the symbol can be used to indicate the person or functional area responsible for the process.
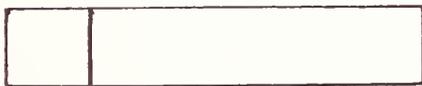
Represents a data file. The square at the left of the symbol can be used to identify a specific file.

A procedure for reporting defects is described below. Figure 3B.1 is a flowchart of this procedure.

1. A bus operator notes a defect on the bus operator defect report, which is then sent to the foreman.

2. The foreman fills out a work order and assigns it to the mechanic.

3. The mechanic corrects the problem, notes the action taken on the work order, then sends it back to the foreman.

4. The foreman logs the completion of the work in the bus maintenance history ledger--in this case file M1--sends the completed work order to the bookkeeper, then sends a copy to the bus operator.

5. The bookkeeper assigns direct costs to the materials and labor then updates the annual vehicle cost ledger--in this case file M2. At the end of each month, the bookkeeper processes a monthly summary report on the maintenance costs of all vehicles in the fleet, then sends it to management.
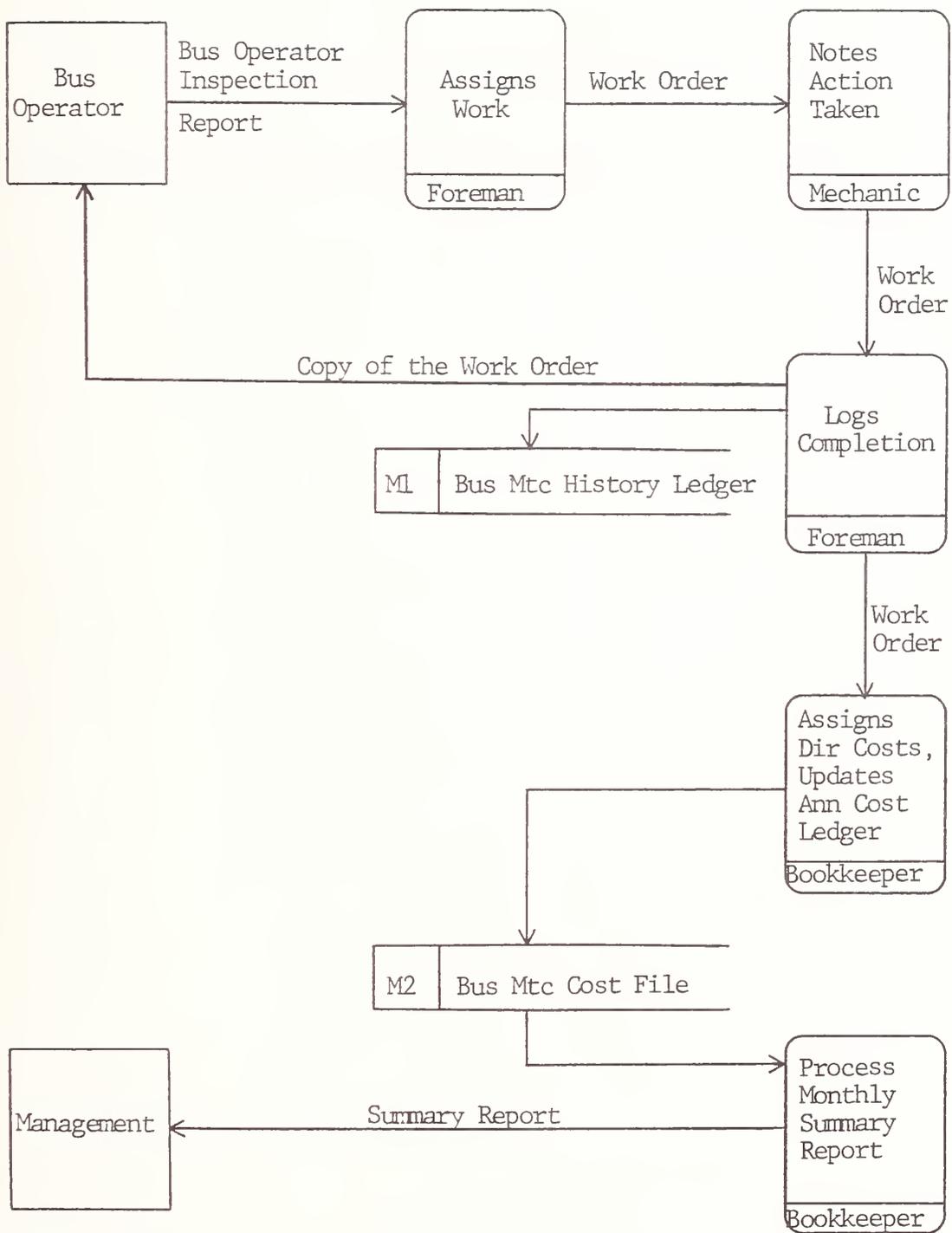
FIGURE 3B.1 Flowchart of a Procedure for Reporting Defects

Source for Appendix 3B

[1] Gane, Chris and Trish Sarson, <u>Structured Systems Analysis:
     Tools & Techniques</u>, St. Louis, MO: McDonnell-Douglas
     Corporation, October 1977.

PART II

FIELD GUIDE
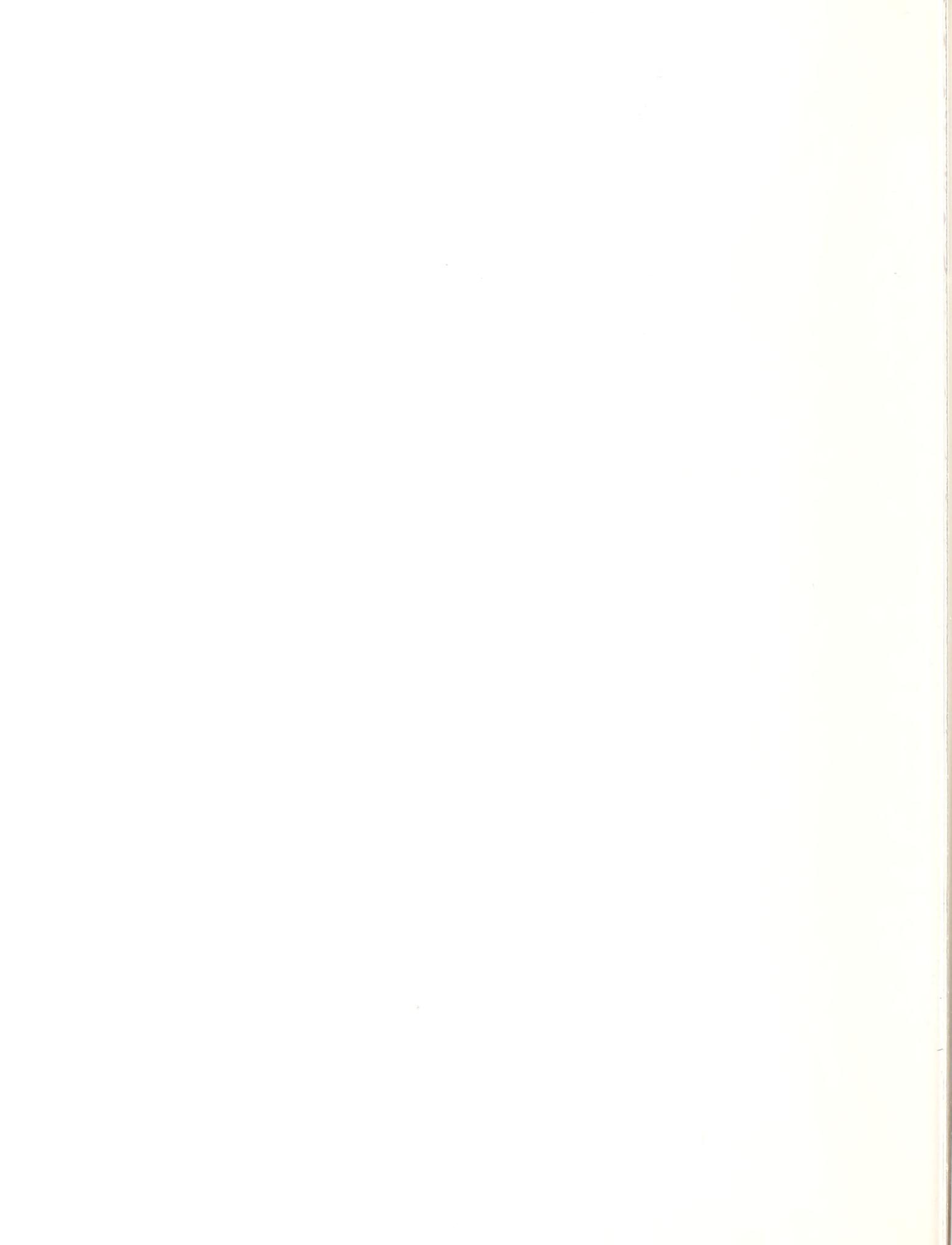
CHAPTER 4

THE TRANSIT ENVIRONMENT

The External Environment

Federal Policy

1. What federal resources does the agency take advantage of?

2. To what extent are federal policies a part of the strategic planning process?

3. Are there any indications of problems in complying with federal rules or regulations?

State Policy

4. What state resources does the agency take advantage of?

5. To what extent are state policies a part of the strategic planning process?

6. Are there any indications of problems in complying with state rules or regulations?

Local Policy

7. What local resources does the agency take advantage of?

8. To what extent are local policies a part of the strategic planning process?

9. Are there any indications of problems in complying with local rules or regulations?

[]   *Before answering questions 10 through 17, refer to Chapter 3 for examples of persons (groups) to interview from the community.*

10.   How much interest in transit for the community does the person have?

11.   How much support does the person give to transit for the community?

12.   What role does the person see for transit in the community?

13.   What goals does the person support for the transit system?

14.   How does the person communicate these goals to the transit system?

15.   Does this person participate in establishing the goals of the transit system?

16.   What future does the person believe transit has in the community?

17.   How does the person recommend service be improved?

18.   Does the community believe the transit system is well-managed?

19.   Does the community believe the transit system is designed to meet the community's goals?

20.   How do the resources and constraints (listed below) affect the transit system in reaching its goals?

   a.   The community's attitude toward transit

   b.   The political environment

   c.   The socioeconomic and demographic characteristics of the community

   d.   The geographic characteristics of the service area

   e.   The history of the transit system

   f.   The transit system's form of organization, and the form of governing body such organization requires

The Governing Body

Organization and Membership

21. Under state law, what forms of organization could this transit system take?

22. What is the transit system's form of organization?

23. Why was the current form of organization chosen?

24. What form of governing body does this system have?

25. How many members are on the governing body of the system?

26. Are members of the governing body elected or appointed?

27. What qualifications must members of the governing body have?

28. What are the backgrounds and skills of members of the governing body?

29. How does the system's governing body influence the possible goals of the system?

30. How does the governing body help the system to reach the system's goals?

31. How does the system's governing body influence the resources and constraints of the system?

32. Under state law what are the duties of the governing body?

33. How do the resources and constraints listed below affect the governing body in attaining its objectives?

    a. The system's form of organization

    b. The laws and regulations that govern the system

    c. The political environment

    d. The sources of revenue for the system

    e. The capital, human, physical, and financial resources available to the system

34. Do any specific advisory groups serve the system?

Establishing a strategy for the transit system:

35. What role does the governing body play in developing the strategy of the transit system?

36. Are the transit system's goals derived from this strategic planning process?

37. How does the governing body establish the system's goals?

38. How are these goals formally adopted?

39. Are any organizations outside of the system required to approve the system's goals?

40. How does the transit system's management participate in establishing goals for the system?

41. How does the community participate in establishing goals for the transit system?

42. How does the governing body get information about what services the community wants?

43. What goals has the community voiced?

44. What goals have local elected officials voiced?

Approving management objectives:

45. Does the transit system's management team have a formal process for developing objectives?

46. What is the governing body's role in the development of management objectives?

47. Is there a management pay incentive linked to meeting organizational objectives?

48. If so, what are the criteria?

Establishing objectives for the governing body:

49. What objectives does the governing body set for itself?

50. How does the governing body evaluate its performance?

Resolving major issues:

51. What issues is the governing body legally required to resolve?

52. What other issues does the governing body resolve?

53. What issues does the governing body delegate to the management of the transit system to resolve?

54. How does the governing body decide which issues to delegate to management?

55. How does the governing body determine whether management has resolved these issues?

    Acting as an intermediary:

56. How does the community participate in the governing body?

57. How does the governing body communicate with the community?

58. How does the governing body communicate with the transit system's management?

59. How well does it communicate with management?

60. What other sources of information about the system's management are available to the governing body?

61. How does the governing body act as an intermediary through which the community and the system's management communicate?

62. Is the governing body an effective intermediary?

    Obtaining revenues for the transit system:

63. How does the governing body pass resolutions to apply for grants and other funds?

64. What funding sources are available under local, state, and federal laws?

65. How does the governing body decide which funding sources to use?

66. Has the governing body been successful in obtaining funding for the system?

67. How does the governing body delegate responsibility for obtaining funds?

68. To whom does it delegate responsibility?

69. How does the governing body delegate responsibility for using funds?

70. To whom does it delegate this responsibility?

Evaluating the management of the transit system:

71. How does the governing body evaluate management's performance?

72. When the governing body uses objectives to evaluate management, are these objectives quantified by performance indicators?

73. What kinds of reports does the governing body get from management?

74. May management respond to the results of the performance evaluation?

75. How does management use information from the evaluation?

76. How does management inform the governing body of the actions that will result from the evaluation?

77. How does the governing body monitor the actions management takes as a result of the evaluation?

78. How often does the governing body monitor management's actions?

79. What actions may the governing body take on the basis of its evaluation of management's performance?

80. What documents describe the evaluation process?

Documents for the External Environment

Budgets of the transit system

Costs of the transit system

The governing body's evaluations of management

Goals and objectives for the transit system

Information from the chamber of commerce

Map of the community

Minutes from meetings of the governing body

Newspaper articles

Objectives for the governing body

Performance indicators for the transit system

Phone book

Procedures for the transit system

Records of management's actions taken in response to the governing body's evaluations

Reports to management

Reports from financial audits conducted by firms outside the transit system

Resolutions passed by the governing body

State enabling legislation

CHAPTER 5

GENERAL QUESTIONS FOR ALL FUNCTIONAL AREAS

This chapter presents general questions that apply to all functional areas of a transit system. Specific questions for each functional area are in Chapters 6 through 15.

Goals and Objectives

Goals

1. Does the organization have goals?

2. Are the goals written?

3. How do the organization's goals affect this function?

4. Which goals affect this function?

5. Do employees of this function know the organization's goals?

6. How does the function communicate the organization's goals to new employees?

7. Do employees of the function understand how to use goals?

Objectives

8. Does the function have objectives?

9. Are the objectives written?

10. How do these objectives affect the function?

11. Do employees understand the functional objectives?

12. Did employees participate in establishing the objectives?

13. How does the function communicate objectives to its new employees?

14. Is the communications procedure formal or informal?

15. Do employees of the function understand how to use objectives?

16. Are the function's objectives clear, concise, attainable, and measurable?

17. Is it clear who is responsible for attaining objectives and by what date?

18. How can the objectives be improved?

19. Are the objectives consistent with the organization's goals?

20. How are the function's objectives coordinated with the objectives of the organization and the objectives of other functional areas?

21. Have the function's objectives been communicated to other persons throughout the organization?

22. Are the objectives of the function reviewed on a regular basis?

23. Are objectives assigned priorities?

24. Is accomplishment reported regularly?

25. Is progress reviewed with management?

Resources and Constraints

Organization

26. How is the function carried out?

27. What is the position of the function in the organizational chart?

28. What is the relationship between the function and other functional areas?

30. Are there discrepancies among the relationships?

31. What effect do these discrepancies have on the organization?

32. What changes in relationships would make the organization more effective?

33. What is the relationship between this function and agencies outside the transit system?

Human Resources

34. How does this function determine its personnel needs?

35. Who is responsible for hiring employees for the function?

36. How much discretion does the function have in hiring employees?

37. How many employees are available for the function?

38. Does the function have enough employees to attain its objectives?

39. Do function employees require specialized education, training or experience?

40. If the function's effectiveness hinges on only a few persons or on just one person, are others being trained for these critical positions?

41. What unions represent the function's employees?

42. What training programs are in effect?

43. To what extent has a program of job rotation and cross training been carried out?

44. Are key activities and result areas defined and assigned to specific persons?

45. Do assigned key activity and result areas appear to be adequately addressed by actual practices of the function?

46. Does every person within the function have a copy of his or her job description?

47. Do such persons clearly understand their authority and accountablility as outlined by these job descriptions?

48. Do persons and organizational entities understand their reporting and working relationships?

49. Are there no or very few "assistant to" positions within the function?

50. Has decision making authority been delegated to the lowest-ranking appropriate person(s) within the function?

Planning

51. Does the function have an annual operating plan?

52. Does the function have a long-range operating plan?

53. Are the plans broken down into definable projects?

54. Do these projects have detailed schedules?

55. Are plans and projects developed by people who are responsible for implementing them?

56. Are all persons involved in the function aware of the plans?

57. Are responsibilities specifically assigned for carrying out the defined projects?

58. Are standards or measures used to compare actual versus planned performance?

59. Are oral or written reports of progress ever issued?

60. How often are changes in the plans made?

61. How are changes in the plan communicated?

Budgeting

62. What are the sources of funding for this function?

63. Does the function prepare an annual budget?

64. Is the annual budget coordinated with the annual plan?

65. Are budgets developed by persons responsible for adhering to them?

66. Who approves the budget?

67. Does the function receive regular reports showing actual costs and variances?

68. Are significant variances explained?

69. Does the budget provide sufficient expenditures in all areas that are necessary for the effective implementation of the annual plan?

70. How often is the budget reviewed to determine if changes are necessary?

71. Who conducts such a review?

72. Who has the authority to approve budget revisions?

Facilities, Equipment, Layout, and Location

73. Is the department located near the people it serves and near the people it comes in frequent contact with?

74. Are the quarters adequate in terms of:

    a. Space?

    b. Noise level?

    c. Lighting?

    d. Heating?

    e. Cooling?

    f. Ventilation?

    g. Cleanliness?

    h. Other (specify)?

75. Is the layout of the department convenient and logical?

76. Are employees in good view of their supervisors?

77. Is equipment up-to-date and adequate to do the work efficiently and accurately?

Computer Resources

78. If the function is not computerized, would computer resources be beneficial for the function in the performance of its tasks?

79. Does the function have adequate access to computer resources?

80. If so, how does the function use computer resources?

81. If not, how could the function use computer resources?

82. Does the function have the expertise to use computer resources effectively?

Outside Agencies and Firms

83. Does the function use the services of agencies or firms outside the transit system in performing its tasks?

84. If not, how could the function use these agencies or firms?

85. What percentage of the function's tasks are performed entirely or in part by agencies or firms outside the transit system?

86. How is the work of these agencies or firms coordinated with the work of the function's employees?

87. What are the guidelines for using outside agencies or firms?

88. Are these guidelines incorporated into a formal contract?

Regulations

89. What regulations affect the function?

90. What documents describe these regulations?

Tasks

[] *Refer to Chapter 2 for a description of the key tasks that each functional area performs within a transit system. Specific questions about these tasks are in Chapters 6 through 15. General questions about tasks follow:*

91. Does the function have written procedures for at least its basic tasks?

92. Are the procedures organized in the form of a manual?

93. For each procedure:

    a. Who is involved?

    b. Where is it followed?

    c. How often is it followed?

    d. What data does it provide?

e. What records are kept?

f. What happens when it is complete?

94. Do controls exist to ensure the updating of procedures?

95. How are procedures monitored for compliance?

96. How are the procedures for the function coordinated within that function and with the procedures for other functional areas?

97. Do the procedures result in the function attaining its objectives?

Performance Evaluation

98. Is data collected for management to use in monitoring and evaluating the function's performance?

99. Who decided what data to collect and what motivated the decision?

100. Is the data useful to management?

101. Is the data accurate, relevant, and timely?

102. Do managers receive enough information to manage their function?

103. If not, what additional information is needed?

104. How does management use the data?

105. How is the data analyzed?

106. Is the data analyzed by hand? By computer?

107. Are performance indicators for a specific function used?

108. Are performance indicators linked to objectives?

109. What reports are prepared from the data?

110. Who prepares the reports?

111. Who distributes the reports?

112. Who gets the reports?

113. How often are the reports generated?

114. Do these reports require action or are they informational only?

115. Is there any evidence of use being made of these reports?

116. How are data presented in the reports?

117. Are the charts and tables clear and easy to understand?

118. What reports do you receive?

119. Which do you use and which could you do without?

120. Who uses the information in the reports?

121. Is there an established procedure which initiates corrective action based upon the data?

Documents for All Functional Areas

Goals for the transit system

Objectives for the transit system

Objectives for the function

Procedures for the function

Budgets of the function

Costs of the function

Regulations for the function

Minutes from meetings of the governing body

Performance indicators for the function

Reports the function gives to management

Management's evaluations of the function's performance

Actions the function takes in response to management's evaluations

[] *Refer to Chapters 6 through 15 for documents for a particular functional area.*

[] *Refer to Appendix 5A for supplementary surveys pertaining to all functional areas.*

APPENDIX 5A

EMPLOYEE SURVEYS

Diagnosing organizational problems is sometimes difficult because the interview process may be biased toward yielding what employees think the interviewer wants to hear. One way to assess the extent to which this occurs is through the use of employee surveys. One of the criticisms of employee surveys is that employees never really understand "the big picture," and that their responses will inevitably need to be taken in that context--yet that is precisely the point. Gauging the gap between what management sets out to accomplish and what employees perceive as "the big picture" is crucial to understanding why the organization functions as well, or as poorly, as it does.

This appendix presents four surveys designed to be completed by individual employees. The surveys deal with the employees' perceptions of the organization's managerial practices, communications effectiveness, goal-setting process, and cultural attributes. It is impractical to survey all employees in an organization regardless of its size, yet the questionnaires that follow may be useful in situations where the auditors are having difficulty in pinpointing the root of a problem. The questionnaires are written for the internal auditing function of a large-sized system; however, with slight modification they can be used in any size organization.

Special thanks are given to Larry Conley and Cinthia Vossburg of the Port Authority of Allegheny County for providing these questionnaires.

PORT AUTHORITY OF ALLEGHENY COUNTY

INTERNAL AUDIT

MANAGERIAL PRACTICES SURVEY

Name of your manager _____
                          (Do not sign your name)

Instructions:

Answer each question in terms of the extent to which it
characterizes your manager.

Questions: To what extent . . . 5   Always
                                 4   Mostly
                                 3   Sometimes
                                 2 · Rarely
                                 1   Never

1. Does your manager have the necessary   1   2   3   4   5
    influence with his/her superior?

2. Has your manager helped you to plan   1   2   3   4   5
    your career opportunities in the
    organization?

3. Does your manager give you freedom   1   2   3   4   5
    to determine the details of how you
    go about doing your job?

4. Has your manager built a cohesive team   1   2   3   4   5
    of those people reporting to him/her?

5. Does your manager encourage feedback   1   2   3   4   5
    from subordinates on his/her
    performance?

6. Does your manager deal with the   1   2   3   4   5
    important issues at team meetings?

7. Does your manager give you challenging   1   2   3   4   5
    work assignments?

8. Does your manager shield your unit from   1   2   3   4   5
    excessive outside pressures?

9. Does your manager have concern for you   1   2   3   4   5
    and your professional well-being?

10. Does your manager allow you to have influence on decisions important to you?   1   2   3   4   5

11. Does your manager encourage subordinates to help each other?   1   2   3   4   5

12. Does your manager talk openly about any difficulties the two of you have in working together?   1   2   3   4   5

13. Is the purpose of each agenda item clear at the meetings your manager runs?   1   2   3   4   5

14. Does your manager insist on high standards of performance?   1   2   3   4   5

15. Can your manager get his/her peers to cooperate when necessary?   1   2   3   4   5

16. Does your manager give you timely and honest feedback on how well you are performing?   1   2   3   4   5

17. Does your manager allow you latitude to make and learn from mistakes?   1   2   3   4   5

18. Are all members of your manager's team pulling together to achieve the same goals?   1   2   3   4   5

19. Does your manager try to see the merits of your ideas when they differ from his/hers?   1   2   3   4   5

20. Do decisions made at the meetings your manager runs get implemented?   1   2   3   4   5

21. Does your manager inspire you to give your best efforts?   1   2   3   4   5

22. Is your manager effective in promoting departmental interests with others outside your unit?   1   2   3   4   5

23. Does your manager coach you in ways that help you perform better?   1   2   3   4   5

24. Does your manager encourage disagreement with his/her ideas and proposals?   1   2   3   4   5

Managerial Practices Survey, continued.

25. Does your manager foster team   1   2   3   4   5
    involvement in solving crucial
    departmental problems?

26. Does your manager genuinely listen   1   2   3   4   5
    to you and your ideas?

27. At meetings your manager runs, to   1   2   3   4   5
    what extent are decisions of
    high quality?

28. Has your manager articulated exciting 1   2   3   4   5
    or challenging department goals?

29. Can your manager get needed resources 1   2   3   4   5
    for the department?

30. Does your manager encourage you to   1   2   3   4   5
    develop new skills and abilities?

31. Does your manager allow you to take   1   2   3   4   5
    actions without having to check with
    him/her first?

32. Does your manager help team members   1   2   3   4   5
    constructively confront differences
    among themselves?

33. Does your manager give you all the   1   2   3   4   5
    information you need to know to
    get your job done?

34. At the meetings your manager runs,   1   2   3   4   5
    do members honestly express how they
    feel about the issues being discussed?

35. Is your manager enthusiastic when   1   2   3   4   5
    talking about the objectives of the
    department?

36. Does your manager seek out the ideas   1   2   3   4   5
    and opinions of others?

37. Is your manager one of the top   1   2   3   4   5
    producers of results?

38. Does your manager continually ask   1   2   3   4   5
    the question, "How can something
    be done a better way?"

39. Does your manager go out of his or   1   2   3   4   5
    her to help others?

Managerial Practices Survey, continued.

40. Have your manager's projects made   1   2   3   4   5
    a significant contribution to the
    department?

41. Has your manager changed the whole   1   2   3   4   5
    approach to his work?

42. Does your manager seek consensus in   1   2   3   4   5
    settling disagreements?

43. Does your manager gamble on good odds   1   2   3   4   5
    anytime?

44. Does your manager introduce more new   1   2   3   4   5
    ideas than his associates?

45. Is your manager's ability to work with 1   2   3   4   5
    people excellent?

46. Does your manager plan his work and   1   2   3   4   5
    hold performance to schedule?

47. Are your manager's ideas the ones   1   2   3   4   5
    used?

48. Does your manager enjoy making   1   2   3   4   5
    decisions and is he almost always
    correct?

49. If your manager wants something done,   1   2   3   4   5
    does he find a way to get it completed?

50. Are most of the ideas your manager   1   2   3   4   5
    works on worthwhile?

PORT AUTHORITY OF ALLEGHENY COUNTY

INTERNAL AUDIT

COMMUNICATIONS SURVEY

Listed below are fifteen questions about the quality of communications within our organization (as you perceive it). Rate the quality of communications using the following scale:

5   Always
4   Mostly
3   Sometimes
2   Rarely
1   Never

1. Do you believe that you are a part of a team?

    5   4   3   2   1

2. Do you believe that you have a part in a team effort?

    5   4   3   2   1

3. Do you believe that you are adequately informed on PAT goals and long-range plans?

    5   4   3   2   1

4. Do you think that present information channels are adequate?

    5   4   3   2   1

5. Do appropriate members of management participate in divisional (or departmental) meetings?

    5   4   3   2   1

6. Are you involved in divisional (or departmental) planning?

    5   4   3   2   1

Communications Survey, continued.

7. Is your authority equal to your responsibility?

   5   4   3   2   1

8. Do you feel free to seek counsel on problems related to
   your job?

   5   4   3   2   1

9. Do you have rapport with both your co-workers and the
   people who supervise you?

   5   4   3   2   1

10. Is recognition given generally to proper and deserving
    individuals?

    5   4   3   2   1

11. Are promotions given to proper and deserving individuals?

    5   4   3   2   1

12. Do you receive proper tools, information, and incentives to
    function as part of a team?

    5   4   3   2   1

13. Is cooperation and contact with other departments
    satisfactory?

    5   4   3   2   1

14. Does management inform you adequately about the industry,
    the company, financial standing, and proposed changes?

    5   4   3   2   1

15. A genuine effort is made by management to inform you fully
    and promptly about any matters of interest or importance?

    5   4   3   2   1

PORT AUTHORITY OF ALLEGHENY COUNTY

INTERNAL AUDIT

GOAL SETTING SURVEY

1. I understand exactly what I am supposed to do on my job.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

2. I have specific, clear goals to aim for on my job.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

3. The goals I have on this job are challenging but
    reasonable (neither too hard nor too easy).

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

4. I understand how my performance is measured on this job.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

5. I have deadlines for accomplishing my goals on this job.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

6. If I have more than one goal to accomplish, I know
    which ones are most important and which are least
    important.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

7. My manager clearly explains to me what my goals are.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

8. My manager tells me the reasons for giving me the goals I
    have.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

Goal Setting Survey, continued.

9. My manager is supportive with respect to encouraging me to
    reach my goals.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

10. My manager lets me participate in the setting of my goals.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

11. My manager lets me have some say in deciding how I will
    go about implementing my goals.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

12. If I reach my goals, I know that my manager will be pleased.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

13. I get credit and recognition when I attain my goals.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

14. Trying for goals makes my job more fun than it would be
    without goals.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

15. I feel proud when I get feedback indicating that I have
    reached my goals.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

16. The other people I work with encourage me to attain my goals.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

17. I sometimes compete with my co-workers to see who can do
    the best job in reaching their goals.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

Goal Setting Survey, continued.

18. If I reach my goals, I feel that this will enhance my job security.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

19. If I reach my goals, it increases my chances for a pay raise.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

20. If I reach my goals, it increases my chances for a promotion.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

21. I usually feel that I have a suitable or effective action plan or plans for reaching my goals.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

22. I get regular feedback indicating how I am performing in relation to my goals.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

23. I feel that my job training was good enough so that I am capable of reaching my job goals.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

24. Company policies here help rather than hurt goal attainment.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

25. Work teams here pull together to attain goals.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

26. This organization provides sufficient resources (e.g., time, money, equipment, co-workers) to make goal setting work.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

Goal Setting Survey, continued.

27. In performance appraisal sessions with my manager, he/she stresses problem-solving rather than criticism.

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

28. During performance appraisal interviews my manager:

    a. explains the purpose of the meeting to me

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

    b. asks me to tell him or her what I have done that
        deserves recognition

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

    c. asks me if there are any areas of the job on which
        he or she can assist me

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

    d. tells me what he or she thinks I have done that
        deserves recognition

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

    e. if there are problems with my performance, never
        brings up more than two of them at once

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

    f. listens openly to my explanations and concerns
        regarding any performance problems

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

    g. comes to agreement with me on steps to be taken by
        each of us to solve any performance problems

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

    h. makes sure that at the end of the interview I have a
        specific goal or goals in mind that I am to achieve
        in the future

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

    i. schedules a follow-up meeting so that we can discuss
        progress in relation to the goals

    ALMOST NEVER   1   2   3   4   5   ALMOST ALWAYS

Goal Setting Survey, continued.

29. I find working toward my goals to be very stressful.

   ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

30. My goals are much too difficult.

   ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

31. I often fail to attain my goals.

   ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

32. My manager acts nonsupportively when I fail to reach my
     goals.

   ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

33. I have too many goals on this job (I am overloaded).

   ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

34. Some of my goals conflict with my personal values.

   ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

35. I am given incompatible or conflicting goals by different
     people (or even by the same person).

   ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

36. I have unclear goals on this job.

   ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

37. My job goals lead me to take excessive risks.

   ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

38. My job goals serve to limit rather than raise my
     performance.

   ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

Goal Setting Survey, continued.

39. The goals I have on this job lead me to ignore other
     important aspects of my job.

     ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

40. The goals I have on this job focus only on short-range
     accomplishments and ignore important long-range
     consequences.

     ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

41. The pressure to achieve goals here leads to considerable
     dishonesty and cheating.

     ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

42. The top people here do not set a very good example for
     the employees since they are dishonest themselves.

     ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

43. Goals in this organization are used more to punish you
     than to help you do your job well.

     ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

44. My manager wants me to avoid mentioning negative
     information or problems regarding my goals or action plans.

     ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

45. If my manager makes a mistake that affects my ability to
     attain my goals, he or she refuses to admit it or discuss
     it.

     ALMOST ALWAYS   1   2   3   4   5   ALMOST NEVER

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PORT AUTHORITY OF ALLEGHENY COUNTY

INTERNAL AUDIT

CULTURAL ATTRIBUTES SURVEY

Listed below are eight attributes and their characteristics common among excellent organizations. Rate, both your organization as a whole and your department, on each characteristic using the following scale:

     5 - This characteristic is <u>always</u> present

     4 - This characteristic is present <u>most of the time</u>

     3 - This characteristic is <u>sometimes</u> present

     2 - This characteristic is <u>rarely</u> present

     1 - This characteristic is <u>never</u> present

Total the scores of the characteristics for each attribute. Then, divide by the number of characteristics under that particular attribute. This will give you an overall rating for each attribute.

Cultural Attributes Survey, continued.

I.   Risk and Experimentation (A Bias Toward Action)

1. _____   Concrete action is taken early.

2. _____   Prototypes or samples are provided for customers (users); they can experiment. (Reference 145, 181)

3. _____   Risk-taking is supported by a tolerance for failure (within limits, of course). (Reference 149, 141)

4. _____   Physical layout and tools, such as conference rooms, blackboards, and flip charts invite interaction, impromptu problem solving, and "good news story swapping."

5. _____   Resources are willingly shifted as required to get the job done. (Reference 125)

6. _____   Small teams of volunteers solve problems or develop new products, and then dissolve.

7. _____   A free-wheeling informality prevails, and the "glue" is a common purpose.

8. _____   "One page only" memos, five page new product proposals, and an aversion to planning documents and reports create an action-oriented environment. (Reference 105-154)

Total

Divide the total by 8.

Mark your score on the scale below.

1	2	3	4	5
	1.5	2.5	3.5	4.5

There is not a bias   There is is a bias toward
toward action.   action. (Things get done)

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Cultural Attributes Survey, continued.

II. Customers (Users) are full partners. (Close to the customer)

    1._____ Quality and service are number one priority.

    2._____ Products/Services are good values from the customer's standpoint. (Reference 161)

    3._____ Sales and service people put themselves in the customer's shoes.

    4._____ Satisfaction guaranteed is sales and service philosophy.

    5._____ Senior managers know and care about customers.

    6._____ Customers participate in experiments with prototypes.

    7._____ Innovations and improvements ideas come from the customer.

Total

Divide the total by 7.

Mark your score on the scale below.

1	2	3	4	5
1.5	2.5	3.5	4.5	
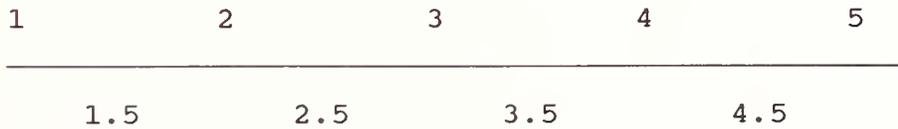
Customers receive   Customers are
little consideration.   treated as full
                               partners.

III. Innovation through Intrapreneurship. (Autonomy and Intrapreneurship)

1._____ Self-initiated, self-directed experimentation is encouraged. (Reference 204, 206)

2._____ The creative fanatic is tolerated.

3._____ People who have the know-how, energy, daring, and staying power to implement ideas (the champions) are rewarded.

4._____ Ownership and share of success is provided. (Reference "Passion for Excellence" 252)

5._____ Support systems are evident to get the job done.

6._____ The burden of proof is transferred to those who want to prove an idea will not work.

Total

Divide the total by 6.

Mark your score on the scale below.

1	2	3	4	5
1.5	2.5	3.5	4.5	
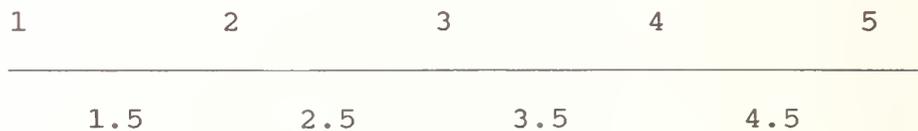
Innovation is   Innovation is
not encouraged.   encouraged within
                                    the organization.

IV. Motivating people to choose productivity. (Productivity Through People)

1._____ Respect for the individuals is the number one operating philosophy. (Reference 238, 239)

2._____ There is dedication to training people.

3._____ Reasonable, clear expectations are established for each person.

4._____ Lots of feedback and celebrating is present.

5._____ There is a great deal of positive reinforcement

6._____ There is an everyday commitment to helping people become winners.

7._____ People are treated like adults.

Total

Divide the total by 7.

Mark your score on the scale below.

1	2	3	4	5
1.5	2.5	3.5	4.5	
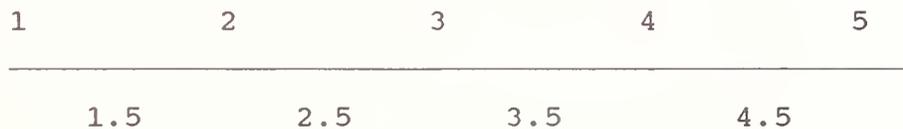
There is a lack of   People are
motivation within   motivated to be
the organization.   productive.

V. Shaping a powerful value system.   (Hands-On, Value-Driven)

1._____   There is a simple, clear, compelling description
            of what the organization stands for. (Reference
            279, 280)

2._____   People do not have to change their value systems
            when they come to work.

3._____   Goals of the organization are not only financial.
            (Reference 281)

4._____   Leadership does not concentrate on sheer survival.

5._____   Managers walk around and reinforce shared values
            "on the floor," "with the people."   (Reference
            288)

6._____   Leaders are masters of two ends of the spectrum--
            abstract visioning and mundane details.
            (Reference 287-288)

Total

Divide the total by 6.

Mark your score on the scale below.

1	2	3	4	5
1.5	2.5	3.5	4.5	
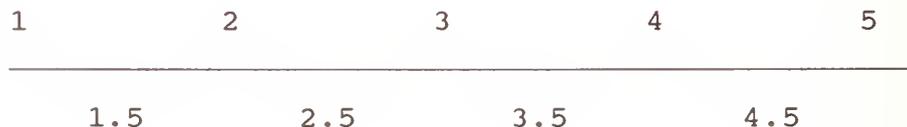
Lack of powerful   A meaningful value
value system to   system is throughout
guide behavior.   the organization.

Cultural Attributes Survey, continued.

VI. Staying in the business you know. (Sticking to the Knitting)

   1._____   The majority of attention, energy, and resources is focused on the mainstream activity.

   2._____   Cultures and value systems of new programs and additional functions merge easily with the original organization.

   3._____   Credible management is provided for new programs and additional functions.

   4._____   Ventures into new areas are set up as manageable experiments with a commitment to discontinue early if the signs of successful integration fail to materialize.

   Total

   Divide the total by 4.

   Mark your score on the scale below.

   1   2   3   4   5
   _____
        1.5   2.5   3.5   4.5
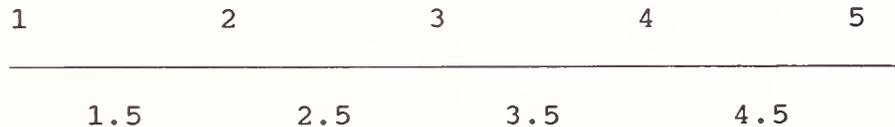
   New programs and   New programs and
   additional functions   additional functions
   take away from the   are handled well.
   original activity.

Cultural Attributes Survey, continued.

VII. Structure is simple and managers "manage." (Simple Form, Lean Support Staff) (Reference 306)

1._____ Bureaucratic layers are minimal, with little red tape required to get things done.

2._____ People are provided with a fairly stable organizational structure that makes sense and works for them. (Reference 308)

3._____ Flexibility is fostered by creating small subunits and creating short-term task forces to address problems and develop innovation. (Reference 308)

4._____ Resources are focused on the action line. The organization is not top-heavy. (Reference 311)

5._____ Power, energy and decision making reside at the logical point of concern for a problem. Problem-solving is done at the lowest possible organizational level. (Reference 310)

6._____ Central office staff size is limited and traditional head office functions are decentralized. (Reference 311)

Total

Divide the total by 6.

Mark your score on the scale below.

1	2	3	4	5
1.5	2.5	3.5	4.5	

There is complex structure with line managers having little responsibility.

The basic structure is simple and the driving force comes from line management.

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Cultural Attributes Survey, continued.

VIII. Liberating talent within parameters. (Simultaneous Loose-Tight Properties.)

1._____ Stable, well-defined expectations are provided at the top.

2._____ A meaningful value system is promoted throughout the organization that inherently defines appropriate action.

3._____ Employee involvement is allowed to function as a powerful productivity force.

4._____ "Quality versus cost" and "efficiency versus effectiveness" arguments are denied in favor of liberating ordinary people to innovate and produce the highest quality product every time.

Total

Divide the total by 4.

Mark your score on the scale below.

1	2	3	4	5
1.5	2.5	3.5	4.5	

Personal autonomy is low and central. Direction is lacking (People feel personally constrained, at the same time, they feel there is no organizational direction.)

There is coexistence of firm, central direction with maximum individual autonomy.

Cultural Attributes Survey, continued.

ADAPTED FROM:

Work of Dr. George Mannin, University of Northern Kentucky.

NOTE:

All References are pages in In Search of Excellence by Tom Peters and Robert Waterman unless otherwise noted.

CHAPTER 6

MANAGEMENT AND ORGANIZATION

Goals, Objectives, Resources, and Constraints

[] *Refer to Chapter 5 for general questions about goals, objectives, resources, and constraints.*

Tasks

Developing Goals

1. How does management assist in developing possible goals for the organization?

2. What criteria does management use in evaluating current and possible goals for the organization?

3. Does management consult with representatives from the community, special interest groups, local governmental units, and with transit system employees?

4. How often does management recommend goals to the governing body?

5. What are the criteria used by the governing body in reviewing management's recommendations?

Establishing Objectives

Establishing objectives for the organization:

6. How does management develop possible objectives for the organization?

7. Are objectives based on the goals of the organization?

8. How does management ensure objectives are clear, concise, measurable, attainable by a specific target date, consistent with other objectives and with goals, and adequate to meet the goals?

9. How does management go about implementing the organization's objectives?

10. Does the governing body review or approve the objectives management has established for the system?

   Inventorying resources and constraints:

11. How does management get information about the resources and constraints of the organization and of each of the functional areas?

12. In the past, has management been able to get the necessary resources for attaining the organization's objectives?

13. How does management justify its requests for additional financial resources to the governing body?

   Establishing objectives for the functional areas:

14. What is management's role in establishing objectives for each functional area or department?

15. How does management ensure that the objectives of each functional area or department are consistent with the objectives for the system?

16. How are the objectives for the functional areas or departments made official?

17. Do functional areas or departments revise objectives regularly?

18. Does every employee have objectives?

Setting Priorities

   Assigning priorities to objectives:

19. From the goals and objectives, does management know what direction the system should take?

20. Has management developed procedures for attaining the system's objectives?

21. Does management assign priorities to the system's objectives?

22. What criteria do they use?

23. How often does management evaluate these priorities?

24. Does management assign priorities to the objectives of the functional areas or departments?

25. Does the governing body participate in assigning priorities?

    Assigning resources to objectives:

26. How does management use objectives and their priorities to determine what resources the system needs to attain its objectives?

27. How are resources allocated?
    For example: by objectives, by budgets from previous years, by functional area, by department.

28. How are the gaps between resources available and resources needed filled?

Structuring the Organization

    Allocating work among employees:

29. How is the structure of the organization determined?

30. What are the criteria used in dividing work among employees?

31. How is work divided among departments?

    Assigning responsibility and authority:

32. Is responsibility and authority assigned according to level of command?

33. Does each job description outline the position's responsibility and authority?

34. Is the authority assigned equal to the responsibility assigned?

35. Are individuals responsible for fulfilling specific objectives?

36. What are the rewards for successful performance?

37. What are the consequences of poor performance?

    Coordinating work:

38. Does management regularly review the organizational structure and revise it as needed?

39. Is communication among employees good?

40. Do employees who are responsible for attaining a single objective coordinate their work?

Controlling Performance

Supervising the organization's planning and budgeting:

41. What is management's role in planning and budgeting for the organization?

42. How does management ensure that the organization's plans and budgets are consistent with the organization's objectives?

43. How does management ensure that the objectives of the functional areas are consistent with the organization's plans and budgets?

44. What are the procedures for changing the organization's plans and budgets?

45. Who approves the organization's plans and budgets?

46. What criteria are used to approve plans and budgets?

47. Who has the final approval of plans and budgets?

48. How does management ensure that plans are implemented and that budgets are followed?

49. What can management do when plans and budgets are not being followed?

50. How does management ensure that the system's plans and budgets are completed?

Monitoring overall performance:

51. What data is collected for management to use in monitoring the system's performance?

52. How does management use the data?

53. What performance indicators are used to analyze data?

54. Who develops these indicators?

55. Is there a process for evaluating each indicator?

56. What historical data are analyzed?

57. What reports are prepared from the analyzed data?

58. Do the functional areas or departments report to management on their progress on each objective?

59. Does management regularly report to the governing body on the progress of the system's objectives?

60. Are the reports useful to management?

61. What are the procedures for changing the methods for collecting, analyzing, and reporting data?

Evaluating employee performance:

62. How does management review the performance of the system's functional areas or departments?

63. Does management recognize the relationship between the performance of employees and the performance of their respective functional areas or departments?

64. How does management review employees whose performance exceeds or falls short of the objectives?

65. Do these employees have a chance to respond to their performance reviews?

66. Does management base the employee's compensation and promotions on the performance review?

67. What documents are produced from this review?

Revising procedures:

68. What is management's role after the performance evaluations?

69. Does management use the performance evaluations to revise objectives?

70. Does the employee use them to revise objectives?

71. Does management use the performance evaluations to revise the structure of the organization?

72. How does the review affect the system's plans and budgets?

73. Do the functional areas or departments use the information from the performance reviews to revise procedures?

74. How are the results of the review monitored?

Ensuring Good Communication

Communication within the transit system:

75. How does communication take place within the system?

76. How does communication take place within each functional area or department?

77. In general is communication within the system effective?

78. How could communication be improved?

Communication between the system and the governing body:

79. How does management communicate with the governing body?

80. How does management communicate with local governmental units?

81. What formal reports does management give to the governing body and to local governmental units?

82. How does management keep members of the governing body and local governmental units informed in between formal reports?

83. How does management coordinate community and media relations with the governing body and with local governmental units?

Communication between the system and the community:

84. Does the system have a community relations program?

85. Are all management personnel involved?

86. What other functional areas are involved?

87. Does the system have a media relations program?

88. What is management's procedure for ensuring that comments from persons inside the system made to groups outside the organization are consistent?

89. Is there a designated spokesperson for the transit system other than management?

Documents for Management and Organization

Applicable grant circulars

The governing body's evaluations of the system's performance

Job descriptions and specifications

Management's evaluation of the system's functional areas and departments

Newspaper clippings

News releases

Organizational charts

Public relations material

Records of actions of functional areas or departments in response to management's evaluations

Reports of performance of all functional areas and departments

State enabling legislation

[]   *Refer to Chapter 5 for documents pertaining to all functional areas.*

CHAPTER 7

OPERATIONS PLANNING

Goals, Objectives, Resources, and Constraints

[]   *Refer to Chapter 5 for general questions about goals,
    objectives, resources, and constraints. Specific
    questions about resources and constraints follow:*

1. How is operations planning coordinated with other planning
    activities that affect the transit system?

2. Who is responsible for coordinating these activities?

3. What documents describe these relationships?

4. What are the system's routes?

Tasks

Analyzing Markets

5. How are demographic patterns monitored both within and
    adjacent to the transit system's service area?

6. What areas are currently being developed?

7. What are their scheduled completion dates?

8. What is the relationship between and among the transit
    system, the government, and the developers?

9. Are transit alternatives being considered in these
    developments?

10. What resources are available to fund these alternatives?

Conducting Research

11. What data does operations planning collect?

12. Does operations planning use the data collected by marketing or other functional areas?

13. How is the data analyzed?

14. How does operations planning predict the system's future resources and constraints?

15. What criteria are used?

16. What resources and constraints does operations planning predict will stay the same in the next year?

17. What resources and constraints does operations planning predict will change in the next year?

18. What new capital equipment and facility needs will the system have in the next year?

19. To what extent is data from peer group systems used in the research process?

Planning Facilities

20. To what extent is operations planning involved in planning for the system's facility needs?

21. Are there operational inadequacies in any of the system's existing facilities?

Planning Service

22. Have there been any major service changes within the last year?

23. If so, were there any implementation problems?

24. Were any issues raised during the public hearing process?

25. Have comments opposing the service change been adequately addressed?

26. Were service change guidelines from the Urban Mass Transportation Administration (UMTA) adhered to?

27. How does operations planning update the system's Transportation Improvement Program (TIP)?

28. How does operations planning update the system's Transportation System Management (TSM)?

29. Do operations planning employees know the regulations that the system's plans must comply with?

30. How does operations planning ensure that the system's plans comply with regulations?

31. According to UMTA's records of certification review for the past three years, has the system's planning complied with the relevant regulations?

32. Do operations planning's employees know the legal and physical restrictions on the service?

33. Who is responsible for planning the system's routes?

34. Do operations planning employees understand how to design transit service?

35. How are the system's services designed?

36. How does operations planning get information about the performance of the present service?

37. How does operations planning compare actual performance with the planned performance?

38. How does operations planning determine which services need to be improved?

39. How does operations planning determine how other functional areas need to improve service?

40. What is operations planning's role in ensuring that the system's plans are consistent with the budget?

41. When the plans and the budget are not consistent, who decides what to do?

Coordination with Other Functional Areas

All Functional Areas

42. How do operations planning and other functional areas determine what they must do to meet planning regulations?

43. How do operations planning and other functional areas ensure that budgets and plans are consistent?

44. How does operations planning coordinate the planning of the functional areas.

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45. How does operations planning coordinate the planning included in the TIP and TSM?

46. How does operations planning coordinate other plans?

Finance

47. How do operations planning and finance coordinate the budgeting and planning processes?

48. How do operations planning and finance determine funding requirements and ensure that funding is available?

49. Does operations planning prepare a single planning document?

Marketing

50. How do marketing and operations planning coordinate to conduct research and to design transit service?

Documents for Operations Planning

Analyses of resources and constraints

Comments from customers

Data about the service area (by system, by others)

Documents from outside firms about operations planning

Evaluations of present service

Grant award letters

Information on revenue

Information on ridership

Planning documents

Proposals for improving service

Proposals submitted, approved and disapproved, and administration records/reports

Records of UMTA certification review

System maps and schedules

TIPs and TSMs

*[]   Refer to Chapter 5 for documents pertaining to all
      functional areas.*

CHAPTER 8

TRANSPORTATION

Goals, Objectives, Resources, and Constraints

[] *Refer to Chapter 5 for general questions about goals,
   objectives, resources, and constraints. Specific questions
   about resources and constraints follow:*

1. Is radio equipment used?

2. What types of streets and patterns of traffic are in the
    system's service area?

3. What are the characteristics of the system's vehicles?

4. What types of vehicles will the system use within one year?

5. Will new vehicles be accessible to handicapped persons?

Tasks

Ensuring Reliable Service

6. How is on-time performance monitored?

7. How is the bus operator's adherence to the route monitored?

8. What are the duties of the dispatchers and the road
    supervisors?

9. What reports do the dispatchers and the road supervisors
    prepare?

10. Do these reports include observations of the operators'
     performance?

11. Who gets these reports?

12. What techniques are used to restore service due to a delay?

13. Do bus operators keep a passenger count?

14. How are passenger safety and bus operator courtesy monitored?

15. Do other functional areas monitor drivers' performance?

16. Is there a written procedure for handling complaints?

17. What is transportation's role in the complaint process?

18. Who monitors transportation's handling of complaints?

Managing Personnel

19. How many classifications of bus operators are used?

20. Who supervises drivers?

21. How is the performance of each individual bus operator monitored?

22. Is there a progressive discipline process?

23. If so, how does it work?

24. How is the performance of bus operators' supervisors monitored?

25. To what extent is the supervision of bus operators decentralized?

26. What role does radio communication play in this process?

27. How well are supervisors and dispatchers trained in interpersonal skills?

28. Is the need for bus operators different during peak and off-peak hours?

29. How does transportation assign drivers to runs?

30. How often are runs assigned?

31. How do drivers report to work and leave from work?

32. Is a time clock used?

33. Do certain runs use special vehicles?

34. How are vehicles assigned to specific routes?

35. Are the same buses assigned to the same operator each day?

Maintaining Personnel Records

36. What types of individual employee records does transportation maintain?

37. How is absenteeism tracked?

38. How long are progressive discipline documents kept?

39. How are passenger complaints handled?

40. How are passenger commendations handled?

Communicating Effectively with the Maintenance Function

41. What routine communication takes place between transportation and maintenance?

42. Is this an effective process?

43. Is a mechanism in place that facilitates nonroutine communication?

44. What are some examples of nonroutine communication?

45. Are reports that operators have made regarding defective equipment monitored?

46. What is the process used in resolving conflict between transportation and maintenance?

47. Are there recent examples of conflict?

48. How was it resolved?

49. Are pre-trip and post-trip inspections required of the bus operator?

50. Are bus operators trained to recognize potential equipment problems?

51. Are bus operators trained in mechanical troubleshooting techniques?

52. Are road call procedures well-defined and adhered to?

53. Who informs maintenance when a vehicle breaks down?

54. What happens to the passengers when the vehicle breaks down?

55. Are bus operators trained to handle emergencies involving the equipment?

56. What procedures are used to report accidents?

57. How does transportation notify maintenance of anticipated changes in equipment needs?

58. Who is responsible for equipment assignment for special events?

59. Are runs that have been missed due to equipment unavailability monitored?

Training Employees

60. What does the new bus operator training program consist of?

61. Is the bus operator training program consistent with the system's goals?

62. How is safety emphasized in the training program for new bus operators?

63. How is safety emphasized during day-to-day operations?

64. How are training programs for new vehicles developed?

65. How is training for new routes and schedules handled?

66. How is retraining handled?

67. Are bus operators trained to handle the variety of interactions with passengers that they might be expected to encounter?

68. Does the training program include a customer relations component?

69. Are bus operators sensitive to the range of physical and mental handicaps that they are likely to encounter in their customers?

70. How are the system's goals communicated to bus operators and supervisors?

71. Are bus operators trained to manage stress?

Coordination with Other Functional Areas

All Functional Areas

72. What data does transportation give to other functional areas?

Finance

73. What role does transportation play in the payroll process?

74. What does transportation do when personnel costs go over budget?

Marketing

75. Does the schedule inherently compromise the principles of defensive driving?

76. Do bus operators understand their role in the marketing process?

77. What role does transportation play in the scheduling process?

Documents for Transportation

Absenteeism reports

Comments from customers

Dispatchers' and road supervisors' reports

Disciplinary summaries

Drivers' daily passenger counts

Investigations and analyses of accidents

Operating statistics

Reports on breakdowns and security problems

Reports on number of riders and revenue by route and by time of day (peak and off-peak hours)

Reports on activity of the vehicles

[] *Refer to Chapter 5 for documents pertaining to all functional areas.*

CHAPTER 9

MARKETING

Goals, Objectives, Resources, and Constraints

[]   *Refer to Chapter 5 for general questions about goals,
     objectives, resources, and constraints.*

Tasks

Conducting Research

1.   What data does marketing collect?

2.   How does marketing collect data?

3.   How is data verified?

4.   When marketing uses questionnaires to collect data, what
     guidelines does it follow for sampling and administering the
     questionnaires?

5.   What data does marketing routinely collect?

6.   What questions is marketing trying to answer through
     research?

7.   How does marketing analyze data?

8.   How does marketing use the results of the analyses?

9.   Is the system's marketing research useful for designing
     service, developing schedules, recommending fares, and
     promoting service?

10. How does marketing determine whether its research is useful?

Developing a Marketing Strategy and Marketing Plan

11. How is marketing addressed in the strategic plan?

12. Does the organization have an overall marketing plan?

13. Does this plan include research, scheduling, service design, pricing, and promotions?

14. Is the marketing program for one year, two years, or five years?

15. Do marketing employees understand the objectives of the marketing program?

16. Who is responsible for ensuring adherence to the program?

17. How often is the program reviewed?

18. Who is responsible for collecting information about the current marketing program?

19. What does the data include?

20. What are the implications for next year's programs?

Designing Transit Service

21. Who is responsible for planning routes and schedules?

22. Do marketing employees understand how to design service?

23. What criteria are used to design service?

24. What are the physical restrictions for service?

25. Are there different services such as fixed route, demand responsive, etc?

26. What are the market segments for the service?

Developing Schedules

27. What are the present service scheduling standards for each route?

28. Are any of the schedules based on the demand for service?

29. Are any of the schedules based on a policy or guideline of management or the governing body?

30. Are the runs cut by computer or by hand?

31. If the runs are cut by computer, what program is used?

32. Who is trained to run the program?

33. If the runs are cut by hand, who is trained to do it?

34. What type of training is necessary?

35. How does the system recruit these individuals?

36. Are trained employees available in case a scheduler is absent?

37. How are labor restrictions taken into account?

38. What types of data does scheduling collect?

Pricing Service

39. Do marketing employees know the local, state, and federal regulations for fares?

40. How is service priced?

41. Do the system's policies affect the fares?

42. What are the current fares?

43. Is there an exact-fare program?

44. Are there tokens or tickets?

45. Where are tokens or tickets distributed?

46. Are there passes?

47. Are there transfers?

48. Are there free zones?

49. What is the incidental charter rate and how was it derived?

50. What are the guidelines for charters?

51. What are the reduced fares for elderly and handicapped riders?

52. How long have the current fares been in effect?

53. Who established the fares?

54. How often is the fare structure reviewed?

55. Is a change in fares planned within the next year?

56. Who can change the fares?

Promoting Service

57. How does the system promote each of its services?

58. What is the current advertising plan?

59. How does marketing use billboards, car cards, newspapers, radio, and television to advertise transit service?

60. What criteria are used to evaluate the advertising plan?

61. What is the system's policy for accepting public service advertising in or on the buses?

62. What is the nature of the system's current community relations program?

63. What is the nature of the system's public information program?

64. Does the system have printed schedules?

65. What information is on the schedules?

66. Are the schedules easy to read and understand?

67. Where are the schedules distributed?

68. Is the transit system's telephone number in the directory?

69. Is the telephone number on bus signs?

70. Is there a telephone information service?

71. Is a map of the routes in the telephone directory?

72. What information is posted at bus stops?

Coordination with Other Functional Areas

Finance

73. What is the relationship between marketing and finance in offering current, planned, and promotional fares; and in accounting for other promotional costs?

74. Is there a connection between fare levels and the cost of service?

<u>Maintenance and Transportation</u>

75. How does marketing get comments from customers about current service from these two functional areas?

76. How does marketing work with transportation to cut runs and monitor service?

<u>Operations Planning</u>

77. How does marketing work with operations planning to design, place, price, and promote current and future services?

<u>Documents for Marketing</u>

Complaints from customers and responses from the system

Data about service area

Data from planning agencies

Data collected for scheduling

Documents from outside firms (e.g., consulting reports)

Forms used in passenger checks

Labor costs (overtime, straight time)

Marketing programs

News releases

Records of number of riders

Route maps and schedules

Route signs and information at ordinary stops, major stops, and terminals

[] *Refer to Chapter 5 for documents pertaining to all functional areas.*

CHAPTER 10

MAINTENANCE

Goals, Objectives, Resources, and Constraints

[] *Refer to Chapter 5 for general questions about goals,
    objectives, resources, and constraints.*

Tasks

Preparing a Comprehensive Maintenance Plan

1. Is there a written statement of maintenance policy?

2. Is there a written maintenance plan?

3. Does the plan consist of comprehensive components addressing
    planning, organization of the department, staffing, and
    controlling the department?

4. Are maintenance programs, policies, procedures, and rules
    consistent with maintenance objectives?

5. Are maintenance functions organized into activity centers?

6. Is the maintenance function adequately provided for in the
    operating budget?

7. Have controls been developed and implemented to assess
    progress toward achieving maintenance objectives?

8. Does the maintenance plan address compliance with
    manufacturers' warranty requirements and recommended
    maintenance procedures?

9. Is any deviation from the manufacturer's recommendation
    supported by test or experience?

10. Does the plan specifically address road call trend analysis?

11. Was the plan acceptable to UMTA during the most recent
    triennial review?

12. Are safety-related components given top priority during inspection and repair?

Developing a Preventive Maintenance Focus

13. What percentages of the maintenance budget are spent on preventive and corrective maintenance?

14. What is the basis of all fixed-mileage maintenance intervals?

15. To what extent is condition monitoring and trend monitoring used?

16. What grade of mechanic is used to do preventive maintenance (PM) inspections?

17. Do all those who come in contact with the vehicle have a clearly defined role in the preventive maintenance process?

18. Are all those who have a role in the preventive maintenance process adequately trained and held accountable for their judgment?

19. Are reported defects formally diagnosed, and materials and labor inputs estimated prior to actual corrective maintenance work?

20. What are the internal and external vehicle cleaning policies?

21. Are fluid levels and safety items checked daily?

22. What is the control mechanism for the preventive maintenance program?

23. Is oil analysis used?

Providing for Adequate Diagnostic and Repair Facilities

24. Does the system have, or have access to, diagnostic tools and facilities that are appropriate for its fleet mix?

25. Does the system have, or have access to, repair facilities that are appropriate for its fleet mix?

26. How are deficiencies in diagnostic and repair facilities accounted for?

Recruiting and Developing Personnel

27. What are the maintenance function's entry level positions and how are they filled?

28. Is there a formal internal maintenance training plan that supports the function's objectives?

29. Have career paths and training needs to support them been identified?

30. Is advantage taken of apprenticeship programs in local technical schools?

31. Is there an abilities and skills record keeping system in place?

32. To what extent is on-the-job training used as compared with more structured training? ·

33. Is there an adequate maintenance training budget?

34. Is an employee suggestion plan in place?

Developing and Maintaining an Effective Maintenance MIS

35. Does a maintenance management information system (MIS) exist?

36. Is it modified as conditions and information needs change?

37. Does it provide useful input to the planning and control process?

38. Does the information system support the maintenance function's specific objectives?

39. How are preventive maintenance intervals tracked?

40. How is parts usage monitored?

41. How is labor productivity monitored?

42. How are vehicle histories maintained?

Coordination with Other Functional Areas

Transportation

43. Are bus operators trained in diagnosing and writing up problems with the vehicle?

44. Is there a bus operator's defect report reconciliation process?

45. Is there a road call reconciliation process in place that tracks road calls by bus operators?

46. Are defects cleared up before the bus is put back into service?

Safety and Training

47. What are the key safety issues that the maintenance function must deal with?

Procurement

48. Are the procedures for charging out and requisitioning parts current and up-to-date?

49. Is purchase authority clearly defined?

50. Are maintenance personnel briefed on the current procurement procedures that affect them?

51. Does everyone with purchase authority understand small purchase procedures?

52. Are receiving personnel fully aware of receiving procedures?

53. Are only lubricants, fluids, and materials that meet, or exceed, manufacturer's standards used?

Marketing

54. Do all maintenance employees understand that a road call is a marketing problem and not just a maintenance problem?

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Documents for Maintenance

Bus operator inspection reports with their respective correction work orders

Bus servicer inspection reports

Daily fluid reports

Daily vehicle status reports

Inspection record logs

Manufacturers' directives and recall notices

Passenger complaints and responses to complaints

Road call reports

Vehicle maintenance history ledgers

[] Refer to Chapter 5 for documents pertaining to all functional areas.

CHAPTER 11

SAFETY AND TRAINING

Goals, Objectives, Resources, and Constraints

[] *Refer to Chapter 5 for general questions about goals, objectives, resources, and constraints. Specific questions about resources and constraints follow:*

1. What equipment does the system use for maintaining, repairing, and storing vehicles?

2. Is this equipment dangerous or potentially dangerous?

3. What facilities does the system use for maintaining, repairing, and storing vehicles?

4. Are the facilities dangerous or potentially dangerous?

5. Has the Occupational Health and Safety Administration (OSHA) inspected facilities?

6. What did OSHA recommend?

7. What types of vehicles does the system use?

8. What types of vehicles does it plan to use within the next five years?

9. Are any additional modes of service being planned?

10. If so, is there a program to train maintenance and operating personnel?

11. Will they be selected based on seniority or aptitude?

Tasks

Training Bus Operators, Mechanics, and Other Employees

12. What are the regulations for training:

    a. Bus operators?

b. Mechanics?

c. Supervisors?

d. Other employees?

13. How long is the training program for:

a. Bus operators?

b. Mechanics?

c. Supervisors?

d. Other employees?

14. What methods of instruction are used for:

a. Bus operators?

b. Mechanics?

c. Supervisors?

d. Other employees?

15. What criteria must trainees meet to qualify for full-time work?

16. Are trainees given feedback on the program and on their performance?

17. What types of reports are made about training?

18. What are the regulations for reviewing the training of:

a. Bus operators?

b. Mechanics?

c. Supervisors?

d. Other employees?

19. What documents are used to review employee performance?

20. How are the findings of these reviews reported?

21. What effect has the training program had on the system's accident rate?

22. When are employees retrained?

23. What employees supervise the retraining program?

24. What employees participate in the retraining program?

25. How is retraining different from training?

26. What criteria must retrainees meet to qualify for full-time work?

27. What happens when a person fails the retraining program?

28. What types of reports are made about retraining?

29. Is there a specific human relations component of the bus operator training program?

30. Do bus operators understand their role in the marketing process?

Promoting Safety and Security

31. Are there specific employee training programs to ensure the safety and security of passengers on the transit vehicles and of employees at the system's facilities?

32. Are employees given special training in first aid, CPR, evacuation of a vehicle in case of fire or accident, etc.?

33. What methods of instruction are used?

34. Are buses equipped with alarms?

35. Is there a separate transit security force?

36. How closely does the system work with the local police department?

37. Is there a rule book on safety?

38. Are employees required to know the rule book?

39. How often is equipment inspected?

40. What role does safety and training play in security inspections?

41. What role does safety and training play in accident investigations?

42. Does safety and training work with other agencies in an investigation?

43. Are specially trained employees available from within the system for these investigations?

44. During an investigation, what is the relationship between the investigators and other employees?

45. After the investigation, what happens to the findings?

Coordination with Other Functional Areas

Maintenance and Transportation

46. How do these two functional areas coordinate with safety and training to hire, train, and retrain employees and, to promote safety and security?

Human Resources

47. What requirements must safety and training meet for hiring, selecting, training, and retraining employees, and for promoting safety and security?

Documents for Safety and Training

Inspection check lists and reports

Reference materials, procedure manuals, and handbooks

Reports on investigations and analyses of accidents

Reports on investigations and analyses of security problems

Reports on training and retraining

Rule books for employees

Statistical records

Teaching materials and manuals

[] *Refer to Chapter 5 for documents pertaining to all functional areas.*

CHAPTER 12

PROCUREMENT

Goals, Objectives, Resources, and Constraints

[] *Refer to Chapter 5 for general questions about goals, objectives, resources, and constraints.*

Tasks

Establishing Procedures

1. Who initiates the procurement process?

2. What approvals are necessary for particular types of items and amounts in terms of either quantities of dollar value?

3. What types of forms are used?

4. How are supplementary approvals handled when actual purchase costs exceed original estimates?

5. What provisions exist for changes in quantity and/or price?

6. Are purchase orders required for all items?

7. Are blanket purchase orders used for repetitively purchased items?

8. Is lead time information communicated to requisitioning functions?

9. Are items procured in economic purchase quantities?

10. Are economic purchase quantities properly determined?

11. Are adequate terms and conditions and important data stated on orders, such as:

    a. Complete description or model number?

    b. Pricing information?

     c.   Discount and payment terms?

     d.   Unit of measure and quantity?

     e.   Free-on-board, routing, and delivery requirements and provisions?

     f.   Cancellation and termination provisions?

12. Is consolidated buying of items common to one location encouraged and performed?

13. Are order-releasing and follow-up procedures adequate so that instances of materials or parts shortages are limited?

14. Are alternative suppliers of critical materials and parts identified for use on a contingency basis in the event of serious disruption from primary suppliers?

15. Are purchasing records adequate and do proper files exist for purchase requisitions, quotation requests, quotation responses, specification purchase orders, and amendments?

16. Are purchase order forms prenumbered and controlled to prevent unauthorized usage?

17. Are company purchase orders prohibited for personal purchases?

18. Are the quality and condition of goods received verified at time of receipt by personnel independent of the purchasing function?

19. Do these personnel prepare prenumbered receiving reports of such receipts?

20. Are copies of receiving reports furnished to the purchasing and accounting departments?

21. Does purchasing identify purchase orders for which receiving reports have not been received when due, so that investigation of the vendor can begin?

22. Are internal records and files adequate in terms of special purpose and relation to other records and procedures?

23. Are internal records maintained efficiently?

24. Is the total purchase cycle adequately controlled as to receipt of authorization, assignment of buyer, the acutal purchase, follow-up, and completion--so that the status of individual procurements can be easily determined?

25. Are purchasing actions being processed on a timely basis?

26. Are lease/buy analyses done when possible?

27. What criteria are used in these analyses?

28. What records are maintained on methods used by personnel to determine when expediting is needed?

29. What kind of regular reports are issued with regard to the expediting function?

30. Where problems are created because of a supplier's inability to meet delivery schedules, what action is taken to improve the situation?

31. What is the gross dollar value of all purchases made this past fiscal year?

32. What are the main categories of purchases?
    For example: construction services, materials and supplies, professional/non-professional and consulting services.

33. What is the percentage breakdown for each of the main purchasing categories?

Coordinating the Development of Specifications

34. Are complete specifications provided for all purchased goods and services?

35. Is a coordinated attempt made to standardize parts/ services with common usage?

36. Are specifications standardized between divisions of the organization?

37. What provisions are there for changes in specifications due to advances in technology or revisions in quality or quantity of materials/services being procured?

38. What review process exists in terms of specification development, i.e., authorizations?

39. Are specifications written in a generic sense, e.g., nonrestrictive as to specific brand names?

40. What percentage of all procurements are made without purchasing's input regarding material selection, specifications, or suppliers?

Soliciting Bids and Proposals

41. Are enough sources of materials and parts approved to make bidding competitive?

42. Are criteria established by which certain items require competitive bidding?

43. Are competitive bids solicited in all required purchases?

44. How are competitive bids solicited?

45. Are bids invited from at least three qualified vendors?

46. Are bids always received from the same supplier?

47. What purchases are routinely made from the same vendor?

48. Are all factors that are directly or indirectly related to value properly considered?

49. If price lists of vendors are used, are they updated with reasonable frequency?

50. With respect to negotiated purchase prices:

    a. Is the need to purchase on this basis adequately justified?

    b. Are adequate cost breakdowns made available as a basis for negotiation?

    c. Are all possible cross-checks used to compare products involving similar materials and processing, or to compare with "in-house" estimates?

51. What percentage of all purchases conforms to written company purchasing guidelines?

52. What percentage of transit system purchases is made on the basis of fully evaluated and tested bids?

53. What percentage of major purchases does purchasing management personally negotiate with suppliers?

54. What percentage of all purchases does this negotiated total represent?

55. Are there guidelines for "small" purchases?

56. Has an analysis of purchases made outside the purchasing department confirmed that purchases fall within guidelines as to price and value?

Developing Criteria for Selecting Vendors

57. Do criteria exist for analyzing major vendors?

58. Is an evaluation of major vendors performed at least once a year?

59. Does vendor evaluation include:

    a. Adherence to quality standards?

    b. Adherence to delivery schedules?

    c. Response to emergency needs?

    d. Reasonableness of price and price adjustments?

    e. The meeting of warranty obligations?

    f. Adherence to DBE/MBE requirements?

60. Are measurements made of purchasing cost performance, such as evaluations against purchase price indexes or cost goals?

61. Is reporting of actual performance and activities performed periodically?

62. Is there a value analysis program providing for substitutions of comparable-quality components at lower cost?

63. Are competitive quotations and actual purchases analyzed?

64. Is communication maintained between buyers and vendors regarding new product offerings that may be beneficial to the organization?

65. How are these new offerings communicated to end users within the organization?

Managing Inventory

66. What criteria are used to decide whether to stock a part?

67. What criteria are used to determine the inventory level of a part?

68. What is the method of determining reorder points?

69. How often are physical inventories taken?

70. Who is responsible for ensuring the accuracy of inventories?

71. How are discrepancies investigated?

72. Is an adequate materials receiving procedure in place?

73. How accurate is the parts charge-out process?

74. Is the inventory storage area adequate and secure?

75. How frequent is the inventory posting process?

76. How accurate are the records of the levels of parts on hand?

77. Is the inventory control system computerized?

Assuring Quality

78. Are the following areas included as part of the quality control program?

    a. Purchased parts and materials

    b. Machinery and equipment

    c. Revenue vehicles

    d. Non-revenue vehicles

79. What types of documentation of quality control activity exists for items of unacceptable quality?

80. Does quality control identify its inspection points and methods before parts, assemblies, or materials go into use?

81. Are the following procedures provided?

    a. Receiving inspection

    b. Maintenance parts inspection

    c. Machinery and equipment inspection

    d. Tool inspection

    e. Rework procedures

    f. Salvage and scrap procedures

    g. Shipping inspection

82. Are rejected materials properly segregated so that they cannot be used unless reworked?

Coordination with Other Functional Areas

All Functional Areas

83. Are the procedures for making small purchases accurate, up-to-date, and accessible to all employees who need to make them?

Maintenance

84. Is there a good working relationship with the maintenance function in terms of parts availability?

Capital Development and Grant Management

85. Does procurement assist in determining the correct methods and procedures for each major purchase?

Documents for Procurement

Job descriptions

Performance standards

The procurement manual

Proposals approved or disapproved, and administration records/ reports

Proposals for improving performance

Recent performance evaluations for procurement

Records of material and equipment performance

Records of UMTA certification and periodic reviews

Reports to management

Responses to recent evaluations

[] *Refer to Chapter 5 for documents pertaining to all functional areas.*

Acknowledgement for Chapter 12

CHAPTER 13

FINANCE

Goals, Objectives, Resources, and Constraints

[] *Refer to Chapter 5 for general questions about goals,
    objectives, resources, and constraints. Specific questions
    about resources and constraints follow:*

1. What are the system's sources of revenue?

2. What data is collected?

3. How often is data collected or compiled?

4. How is the data verified?

5. What data does finance supply?

6. How does finance analyze data?

7. Are actual expenditures compared with estimated
    expenditures?

8. Are performance indicators used for analyses?

Tasks

Budgeting and Financial Planning

9. What is finance's role in determining what resources
    the system needs?

10. What overall direction or objectives does finance get
    from management?

11. How does finance keep management informed of the financial
    status of the grant?

12. Who initiates budgeting?

13. How is the preliminary budget prepared?

14. What supporting evidence is provided for budget amounts?

15. Who reviews the preliminary budgets?

16. Is the performance review of the system part of the budget review?

17. What happens when the proposed budget is accepted?

18. How and when is the final budget prepared?

19. What are the legal requirements for making budgets final?

Monitoring Revenues and Expenditures

20. What percentage does each source of revenue make up in the system's total budget?

21. Does the system use registering fareboxes?

22. Who removes the vaults from the fareboxes?

23. Who is present when valuts are removed?

24. When are vaults removed?

25. Where are vaults taken and kept before the money is removed, counted, and taken to the bank?

26. Who takes the vaults to the place they are stored?

27. How long does it take to get to the storage place?

28. Is this storage place kept locked?

29. Who has a key or the combination to the lock?

30. Where is the key kept?

31. Who opens the vaults and counts the money from the vaults?

32. How many persons are present?

33. Are fares counted by route?

34. Who verifies the farebox reading with the actual count?

35. Does the same person take vault readings and count the money?

36. How, and when, is the money taken to the bank?

37. Who fills out the deposit slip?

38. Who makes the deposit?

39. Are the deposit slips verified with the day's revenue?

40. Are transfers used?

41. Is there a charge for transfers?

42. Is there a time limit on transfers?

43. Are transfers coded for day and route?

44. What records are kept for use of transfers?

45. Are tokens or tickets used?

46. What is the charge for tokens or tickets?

47. What records are kept for tokens or tickets?

48. Are there special fares?

49. What identification is required to obtain a special fare?

50. Are passes used?

51. What records of passes are kept?

52. How is pass usage monitored?

53. What records does finance keep for revenues and expenditures?

54. Who keeps the records?

55. When are the amounts recorded?

56. What supporting documents are used for cash payments?

57. How are they verified?

58. What supporting documentation is used in posting inventory control records of cash purchases?

59. Are cash discounts taken?

60. What forms are used for cash receipts?

61. How often are totals of revenues and expenditures checked?

62. Does the system have a petty cash fund?

63. What are the system's policies and procedures for petty cash?

64. How often is finance audited?

65. If an outside organization does the auditing, how is the audit conducted?

66. What action is taken regarding the findings of the audit?

67. Can inventory records be used to verify actual counts of what is in stock?

68. What financial documents does finance prepare?

69. Can these documents be cross-referenced with section 15 reports?

70. Who gets these financial documents?

71. What financial reports is the system required to submit?

Establishing and Implementing Protective Controls

72. Have points where loss of an asset could occur been identified?

73. Have procedural and/or physical controls been established for these points?

74. Do procedures exist so that no employee has undue control over any record or transaction?

75. Are employees in sensitive positions periodically rotated from job to job?

76. Is the work of all employees in sensitive areas reviewed periodically?

77. How does the system handle the documents relating to the public bidding process?

78. Who receives the sealed bids?

79. Where are bids stored?

80. Who has access to them?

81. Has any audit or appraisal ever been made of the purchasing department or portions of its activities?

Accounting for the Payroll

82. What percentage of the system's total cost is accounted for by payroll?

83. What percentage of the system's total cost is accounted for by fringe benefits?

84. Are pay rates negotiated with a union?

85. Who negotiates with the union?

86. Are maintenance employees and drivers covered by the same collective bargaining agreement?

87. Are any other employees covered by the collective bargaining agreement?

88. If there is no collective bargaining agreement, how are issues decided?

89. Are supervisory employees (e.g., dispatchers, foremen) salaried or hourly?

90. How is overtime defined in the collective bargaining agreement?

91. How much overtime is built into the runs?

92. How much time paid for is actually worked?

93. Are records kept of:

    a. Pull-out time?

    b. Pull-in time?

    c. Report time?

94. How much overtime is paid for each position?

95. Would additional staff reduce overtime?

96. Does management use overtime to raise wages?

97. Is this practice justified by the local labor market?

Complying with Grant Requirements

98. Do finance employees know the regulations for receiving and using funds from local, state, and federal sources?

99. How does finance ensure that the system complies with regulations?

100. Do finance employees know the reporting requirements of the federal, state, and local governments?

101. How does finance keep informed about current requirements?

102. What section 15 level must the system report?

103. Was the last report made by the transit system in compliance with section 15 regulations?

104. Is there an annual report?

105. What other financial reports are prepared?

106. Is a capital assets ledger maintained?

Coordination with Other Functional Areas

All Functional Areas

107. How does finance get information about cost and preliminary objectives?

108. What is finance's role in the overall budgeting of the system?

109. What is the role of other functional areas in the system's overall budgeting?

110. How does finance monitor receipts and expenditures?

Operations Planning

111. What is finance's role in obtaining future funding for the transit system?

112. What is the role of budgeting in the system's overall planning?

Procurement

113. What procedures has finance established to control procurement's use of funds?

114. Does finance monitor procurement's actions?

115. What are procurement's procedures for reporting inventory
      to finance?

Management

116. What is management's role in budgeting?

117. What are the relationships among budgeting, planning, and
      setting objectives?

Documents for Finance

Balance sheet, income statements

Bank receipts

Budgets for the system and each functional area

Cost allocation formulas

Financial and nonfinancial documents

Grant applications

Inventory reports

Invoices, vouchers, and records of cash transactions

List of data gathered and analyzed

Procedures and results of audits

Purchase orders

Remittance advices

Route receipts and ticket sale forms

Sales invoices

Section 15 reports

Wages and salaries

[] *Refer to Chapter 5 for documents pertaining to all
    functional areas.*

CHAPTER 14

CAPITAL DEVELOPMENT AND GRANT MANAGEMENT

Goals, Objectives, Resources, and Constraints

[] *Refer to Chapter 5 for general questions about goals, objectives, resources, and constraints.*

Tasks

Analyzing Capital Needs

1. Does the transit system undertake any kind of capital analysis?

2. What is the average age of the fleet?

3. Are maintenance, storage, and repair facilities adequate for those activities that are performed in-house?

4. Have the system's facility and equipment needs been forecasted into the future?

5. Have priorities been established for facility and equipment needs?

6. Are priorities established for facility and equipment needs with respect to the availability of different funding sources?

7. Does the system have available to it a particular mechanism that can be used to accumulate capital funds?

8. Is a capital asset ledger maintained?

Applying for Grants

9. Who is responsible for preparing grant applications?

10. Is there a formal review of a grant application before it is submitted?

11. Who monitors the application's progress after it has been submitted?

12. Does the transit system take advantage of all forms of grant assistance available to it?

13. Does the transit system have a good record of filing applications that are complete, correct, and on time?

14. Are there any federal statutory or administrative requirements that the transit system has had difficulty in meeting?

15. Are there any state statutory or administrative requirements that the transit system has had difficulty in meeting?

16. Are there any local statutory or administrative requirements that the transit system has had difficulty in meeting?

17. Has UMTA held up the awarding of a grant because of any compliance problems?

18. Is the transit system involved in any litigation with respect to the current program of projects?

19. Does the transit system have a good relationship with its Metropolitan Planning Organization (MPO)?

Handling Special Projects

20. Has the system applied for any special projects, such as demonstration grants, in the last five years?

21. Have any special projects been funded?

22. Are any ideas being developed within the system that may have potential for special funding?

Administering Grants

23. Who is responsible for filing grants?

24. Who is responsible for monitoring the progress of a grant?

25. Are grant progress reports filed on time?

26. Are fund draw-downs timed to coincide with the system's cash flow needs?

27. What controls are in place to ensure that work and materials

charged to the project are consistent with its scope?

Coordination with Other Functional Areas

Finance

28. Are grant progress reports communicated to the finance department so that internal cash flow needs can be forecasted?

Maintenance

29. Has the requirement for a maintenance plan been communicated to the maintenance department and has that requirement been met?

Operations Planning, Marketing, and Finance

30. Is the information required by section 15 prepared in a timely manner?

Procurement

31. Are procurement requirements kept up-to-date and communicated to all those involved in making purchases?

Documents for Capital Development and Grant Management

The maintenance plan

The most recent section 15 report

The most recent UMTA triennial review report

Procurement procedures

Quarterly progress reports for all active grants

The Transportation Improvement Plan (TIP)

The Unified Planning Work Program (UPWP)

[] *Refer to Chapter 5 for documents pertaining to all functional areas.*

CHAPTER 15

HUMAN RESOURCES

Goals, Objectives, Resources, and Constraints

[] Refer to Chapter 5 for general questions about goals, objectives, resources, and constraints. Specific questions about resources and constraints follow:

1. Where does the organization get its employees?

2. What changes in the labor market are expected within the human resources planning period?

3. Are there constraints imposed on recruiting by outside forces?

4. How do the organization's long-term plans affect human resources?

5. What labor problems has the system had?

6. What were the major causes of these problems?

7. What has been done to solve these problems?

Tasks

Planning Personnel Needs

8. Who is responsible for analyzing jobs?

9. Has the organization analyzed every job?

10. From these analyses, has human resources developed job descriptions and criteria for job success?

11. Are job descriptions distributed to employees?

12. Has human resources developed job specifications from the job descriptions and success criteria?

13. Does human resources inventory the skills of its present employees?

14. How are these inventories used in other human resources activities?

15. How does human resources get information about the system's objectives and plans?

16. Who determines personnel needs?

17. Are objectives used to determine the organization's preliminary need for employees?

18. What is the system's annual turnover rate for each position?

19. What is the cause of the turnovers?

20. Are exit interviews used?

Recruiting, Screening, Selecting, and Training Employees

21. How does human resources determine the organization's recruitment needs?

22. How does human resources recruit employees?

23. How are candidates screened?

24. How are successful candidates selected and hired?

25. What are the selection criteria?

26. Do human resources employees know the regulations for Equal Employment Opportunity (EEO), Affirmative Action (AA), and the Hatch Act?

27. How does human resources ensure that the organization adheres to these regulations?

28. Who is responsible for ensuring compliance?

29. Does human resources process the required EEO and AA reports?

30. Does the system have a program for introducing new employees to the system?

31. Do all new employees participate in the program?

32. Who is responsible for the orientation program?

33. What programs does the organization have for training new administrative employees?

34. What retraining and continuing education programs does the organization have for operating employees and for administrative employees?

35. Does higher management appear to be genuinely interested in developing employees' skills, and broadening their background?

36. Are advancement opportunities within the organization clearly defined?

37. How are employees informed of these opportunities?

38. Does the organization promote its employees?

39. Are jobs rotated?

Evaluating Employee Performance

40. What criteria are used to evaluate employees?

41. How are these criteria established?

42. Are the criteria for performance measurement carefully explained and consistently applied?

43. How often are these criteria reviewed and revised?

44. Who reviews the criteria?

45. How is an employee's performance compared with criteria?

46. Who evaluates employees and how often does this occur?

47. What recommendations can human resources make based on these comparisons?

48. To whom are these recommendations made?

49. Are employees given feedback about their performance?

50. Are cases of below standard performance treated in a constructive way, for example:

    a. Are they reviewed thoroughly with the employee?

    b. Are they reviewed with respect to the adequacy of existing policies?

    c. Does the documentation remain in the employee's file indefinitely or is it purged after a certain period?

Compensating Employees

51. Is there a collective bargaining agreement?

52. How does the union contract affect wages and salaries?

53. Are the wages and salaries affected by the local government or by state civil service law?

54. Are salaries and wages linked with performance evaluations?

55. What benefits are in the collective bargaining agreement?

56. What optional benefits does the organization offer?

57. Are benefits offered as a package?

58. What recommendations may human resources make for these packages?

59. Do human resources employees know what regulations affect the administration of benefits?

60. How are these benefits administered?

61. Is career counseling available for employees?

62. Is an employee assistance program available?

Participating in Overall Labor Relations

63. Who is responsible for bargaining and negotiations?

64. How is the initial offer prepared?

65. When do these preparations begin?

66. Do human resources employees know the provisions of the present collective bargaining agreement?

67. How does human resources ensure that the transit system and the union adhere to the collective bargaining agreement?

68. What are the present disciplinary procedures?

69. What are the grievance procedures?

70. What are the arbitration procedures?

71. What is human resources's role in each of these procedures?

72. Do human resources employees know the regulations covering labor relations?

73. How does human resources ensure that the transit system and the union adhere to these regulations?

Coordination with Other Functional Areas

All Functional Areas

74. How does human resources determine the functional areas' needs for employees?

75. Does the system use drug and alcohol testing?

Finance

76. Does finance analyze overtime?

Operations Planning

77. How does human resources get preliminary information about long-range planning?

Safety and Training

78. How do human resources and safety coordinate procedures for screening and training employees?

Documents for Human Resources

Arbitration findings

Employment applications

Employee evaluations (e.g., criteria, measurements, comparisons, recommendations)

Employee grievance records

Employee training reports

Job analyses, descriptions, success criteria, and specifications

Human resources files

Human resources inventories

Human resources plans

Records and reports for recruitment, selection, orientation, career development, benefits, and labor relations

Title VI documents, affirmative action plans

Union contracts

[] *Refer to Chapter 5 for general documents pertaining to all functional areas.*

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