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Mass Transit Management: A Handbook for Small Cities

Part 1: Goals, Support and Finance

Third Edition
Revised
February 1988

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Third Edition, Revised
February 1988

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Susan Hobbs
Maria Lee

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INTRODUCTION TO THE THIRD EDITION, REVISED

In most fields of transportation, management--rather than equipment, location, or operating rights--is the key to success. Urban mass transportation is no exception. Despite its importance, transit management has received surprisingly little attention, especially in terms of modern business practices. The aim of this handbook is to provide information for the management of mass transit, particularly for small-scale operations in smaller cities in the United States. For the purposes of this handbook, a small city is defined as one that operates 101 buses or fewer. This cutoff point for small transit systems is one used by the federal government. Because of the scale of transit enterprises involved, the handbook assumes that management faces two major constraints: (1) the amount of money available, and (2) the degree of specialization possible with the limited manpower of a small enterprise.

Staff members at the Institute for Urban Transportation (IUT) in Bloomington, Indiana, investigated the practices of smaller transit systems in many parts of the United States to discover firsthand some of the methods and problems of such properties. The best methods used by these properties have been included in this handbook. In addition, a modern, systematic approach to the management of transit firms has been worked into the material as an improvement on the conventional practices of the transit industry. Extensive experience in providing local and statewide technical assistance in Indiana, providing management training for the transit industry, and conducting management performance audits of transit properties has given IUT's staff substantial insight into transit management.

The consumer-oriented approach to business is strongly emphasized in this handbook. The consumer-oriented approach is the major business approach of American business firms. This marketing management technique has been in use since the end of World War II. By adopting this powerful, strategic concept, this handbook is very much a marketing-oriented document. The justifications for this approach seem compelling because the transit industry has traditionally suffered from a lack of marketing expertise and effort. Today, the transit industry still is primarily operations-oriented but it is clear that, nationwide, transit properties of all sizes are becoming more marketing-oriented.

The handbook is divided into four sections. Part I: Goals, Support, and Finance (Chapters 1-3) includes sections on establishing goals and objectives, understanding the consumer, gaining public support and public action for transit, institutionalizing transit as an integral part of the community, and financing transit. Part II: Management and Control (Chapters 4 and 5) focuses on management itself and the control and information devices needed for effective management. Part III: Operations (Chapters 6-11) covers important areas of day-to-day operation, coordinated as the product element in the marketing mix. Part IV: Marketing (Chapters 12-15) deals with the marketing program and promotional activities.

Because this handbook is intended to serve more as a reference work than a textbook, care has been taken to produce chapters that are complete in and of themselves. Some repetition is inevitable when using this technique, but every effort has been made to reduce duplication by cross-referencing and providing a detailed table of contents. Appendixes are included with some chapters to give more detail on certain subjects without interrupting the flow of the text. A short but relevant bibliography is provided at the end of each chapter.

The handbook aims to promote the concept of results-oriented management as well as marketing orientation. Early in this handbook, the need to establish goals and objectives is stressed. The concept of management by objectives (MBO) is discussed in some detail. MBO recommendations are given for policy-making bodies as well as management. A detailed explanation of how to use MBO for transit management is provided.

The critical concept of consumer orientation through marketing is reflected throughout the handbook, but perhaps most strongly in Chapters 1 and 12. Chapter 1 discusses the goals and objectives of a transit enterprise. It covers consumer behavior as it may be applied to mass transportation and recommends the development of a general marketing-management strategy for transit management. In Chapter 12, the marketing program suggested for the small transit property is developed fully. The relationship between all parts of the transit enterprise is built around a marketing-oriented firm. The marketing mix--product, price, and promotion--is the concept that shapes managerial action in meeting consumer needs. MBO is the means by which results can be attained reasonably.

Throughout this handbook, careful attention has been paid to the consumer and to gearing management thought and the service provided by the transit firm to meet the desires and needs of consumers. Service quality is a key factor with the costs carefully controlled and all aspects of the enterprise planned with specific ends in mind. The aim is to encourage, not a minimum of service at the lowest possible cost, but service that meets consumer needs and desires at a cost carefully calculated and controlled. The ideas and concepts are applicable to both private and publicly owned transit services. Most of the principal ideas are straight from the private sector.

In addition to covering broad strategic concepts of management and matters of systematic, day-to-day operation, this handbook deals with critical factors including public support, finance, and various forms of public ownership. A fair proportion of the contents, therefore, is directed not only toward transit managers, but also toward public-spirited citizens and public officials who wish to inaugurate or improve transit services through public action.

This handbook should be considered a draft, as were the first two editions. It combines the tried-and-true methods--where these appeared to be the best possible practices--with innovation, in the application of modern business techniques to transit. In a world of fast-moving managerial and technical innovation, nothing stays up to date for more than two or three years. What is contained here may be subject to fairly rapid obsolescence.

We sincerely hope that by using this handbook managers of existing smaller transit properties will find many good ideas and suggestions that they may adopt easily to serve the urban traveling public effectively and efficiently. We also wish the very best to persons working in transit, a difficult but highly rewarding field of effort.

PART I

GOALS, SUPPORT, AND FINANCE

In the beginning, urban mass transportation in the United States was almost exclusively provided by private firms in pursuit of profit. The public's interest in transit was recognized through economic regulation of mass transportation, usually by a state public utility commission that controlled entry into the transit business, the rates the public might be charged, and the quality and quantity of service offered. In recent years, because of financial losses to private transit firms in the face of continued need for mass transit service, transit has become mostly a public service. Today, the majority of transit service is supported by fares paid by users and by public funds from local, state, and federal sources. In the 1980s there has been a push to contract with competitive private firms to provide some parts of the services. The purpose is to help control costs competitively rather than through services offered solely by a monopolistic, public enterprise.

Before any kind of transit enterprise can begin operating, it must come to grips with such matters as setting goals and obtaining public support and finance. Part I includes matters that are not only important managerial concerns, but that are also major public policy considerations and necessary foundation steps at the beginning of operations.

The keynote of the entire handbook is struck in Chapter 1, with its emphasis on setting goals and objectives for the transit enterprise. As obvious as it seems, this critical factor is often overlooked in many businesses. The consumer-oriented concept of business is also introduced in Chapter 1. Included is a description of consumer behavior and a discussion of those factors that transit management must deal with to serve the public well and to do its job properly. Understanding consumer behavior also leads to the formulation of an overall managerial strategy for the transit agency wishing to perform in the public interest. This strategy includes being sensitive to public needs and desires, and using the most modern and effective business practices.

Chapter 2 is aimed especially at public officials or public-spirited citizens who see a need for new or improved transit operations in their cities. It provides guidelines and suggestions for building the public support needed to promote favorable action toward transit. It also gives suggestions on how to institutionalize mass transportation so that it becomes an integral part of community life.

Chapter 3 includes information related to transit finance. Attention is given to the private and public forms ofownership and to securing the necessary funding.

The transit management program, including functions, management by objectives, organization and planning, is introducted in Chapter 4.

CHAPTER 1

OBJECTIVES AND STRATEGY

Introduction

This chapter has been written for those involved in creating new transit enterprises and for those wishing to make changes in existing transit systems to better serve the public. The principal points made in this chapter are as follows:

1. Transit management--or public officials contemplating transit operations--must be specific about what their enterprise is supposed to do, by establishing goals and objectives. The discussion of goals and objectives is aimed at setting the broad, general tone of the transit enterprise, not the detailed efforts necessary for day-to-day management; that will be found in a later chapter.

2. Transit management must understand consumer behavior because transit is a consumer service.

3. Transit management must develop a rational strategy to guide it through all aspects of its tasks.

Establishing Goals and Objectives

Goals and objectives are critical for any enterprise because they help:

1. Guide effort.

2. Provide effectiveness as well as efficiency in management.

3. Act as a yardstick for performance.

4. Upgrade performance in public service organizations that lack the profit-and-loss discipline of private enterprise.

Goals and objectives act as a target for effort. Management can then develop policies and undertake activities designed to reach the desired results. For a transit firm the goal(s) selected will do much to shape its approach to the day-to-day operations of the enterprise.

Setting goals and objectives is not easy. For example, general goals may seems obvious: Transit service should be better. But what does "better" mean, and how does a manager know when such a goal has been achieved? Because goal-setting is not an easy process, time and care should be devoted to making goals as precise and useful as possible. Care taken in devising goals will yield dividends because it will be easier to develop objectives necessary to guide the precise actions taken to achieve the goals.

The goals and objectives of an enterprise are affected by the values of the surrounding society and the importance society gives to various factors. The social environment will have a definite and inescapable impact on those persons who guide the fortunes of a transit enterprise either as policymakers or managers. The values of society not only affect the nature of the goals and objectives but also the priorities assigned to them. For example, in the United States the automobile has been valued above public transit for many years. Given the value placed on improved transportation systems, it is no small wonder that much time, effort, and money has been expended to improve our highways. The difficulty of obtaining vigorous support for improvements to publicly owned and operated mass transit stems in part from the fact that we regard private enterprise in such high esteem.

Goals

Knowing the difference between goals and objectives is important. Goals are broader and more general than objectives. Goals are desirable conditions of broad scope. The following are examples of some broad, general goals for mass transit that are supported by many persons in the nation today:

1. Provide mobility for all.
2. Improve the environment.
3. Conserve energy.
4. Sustain and enhance economic growth and vitality.
5. Provide maximum feasible safety.
6. Cover a reasonable proportion of the costs from the farebox.

Local values and local problems and events will help to sharpen the focus of transit goals. For example, in a community worried about its economic performance, the fourth goal--sustain and enhance economic growth and vitality--may be translated as "aid downtown renewal."

The realization of a goal generally will not be attained by the satisfactory completion of any one objective. Each of the above goals focuses on an area of needed accomplishment. Although mass transportation has an obvious role to play in helping to achieve each goal, it is clear that mass transit alone, even under the most favorable conditions, cannot ensure the attainment of the desirable end. The statement of goals provides a sense of direction, but to be useful in a strategic sense, there must be priorities.

Priorities are the order in which goals and objectives will be pursued. Priorities are affected by the values of the society, as noted earlier, and also by the degree of understanding that exists for a situation. A matter that is not completely understood probably will not be given a high priority because its values are not fully appreciated. One of the reasons why transit often has faced difficulties in gaining necessary public support is that its value to society is not always well understood. As long as this situation exists in the competition for scarce resources, transit will tend to receive less than its proponents believe is needed.

<u>Objectives</u>

Objectives are precise statements of what is to be done to reach a goal. In practice, once a goal has been selected and the priorities between several goals established, objectives will be set to help attain each of the goals. A good statement of an objective must have precision; it must be:

1. Clear, concise, and unambiguous.
2. Measurable and attainable in a reasonable period of time and with reasonable effort.
3. Consistent with goals and priorities.
4. Assigned a target date for accomplishment.
5. Assigned to an individual or group who will be responsible for its accomplishment.

For example, a goal might be established calling for the overall improvement in the quality of transit service. One objective derived from this goal might be to make the operations manager responsible for seeing that 96% of the service is operated no more than two minutes late, by a certain date 18 months in the future. Such an objective would help attain the goal. Other objectives and action plans would have to be established to attain the objective noted above. Matters concerning maintenance, supervision, fare collection, and new equipment would have to be considered and steps taken in each area to see that the service reliability goal is met.

Using Goals and Objectives

Of course, a firm or institution may be trying to achieve a number of major and minor goals simultaneously. As long as they are not in conflict with one another, multiple goals should pose no great problem. For example, in transit, goals for growth, in terms of number of passengers carried per annum, and for the provision of high-quality service, with precise statements defining dimensions of quality, are not in conflict. However, a goal of minimizing maintenance expenditures would be likely to conflict with the goal of keeping every bus in service for 20 years. Objectives, too, must be consistent with each other. For example, an objective of covering 65% of cost from the farebox within two years may be in direct conflict with an objective to increase ridership by 40% in three years.

General goals. The general goals that all enterprises strive for include the basic need to survive. Once survival is assured, the next general goal is growth. Once some degree of growth is attained, the higher level goals of prestige or recognition are sought. (The process is outlined in Figure 1.1.)

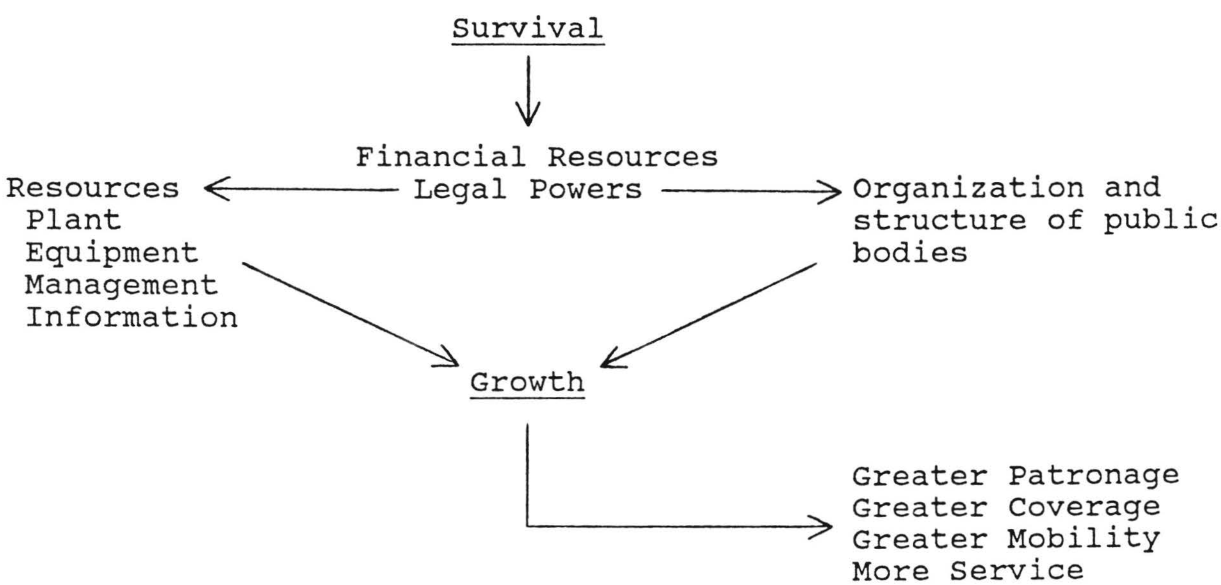


FIGURE 1.1 Survival and Growth Process

The world in Figure 1.1 is, of course, simplistic and assumes a favorable environment. However, the environment is complex, including such factors as customer attitudes, experience, and perceptions; attitudes toward and ease of use of competing modes; and public policy on the national, state, and local levels. Growth can take place only if the needs of riders are met and if there are sufficient financial resources. Nevertheless, it is a useful example.

For many transit properties, survival is not only the first goal but the only goal. Many transit operations are run on the proverbial shoestring, whether publicly or privately owned. Survival of the transit property depends upon legal powers that provide a means of gathering sufficient financial resources to meet the needs of the property. For a private transit firm, this means possession of an operating franchise. For the public transit enterprise, legal powers grant official status and the right to issue bonds or levy taxes. Perhaps most important is the authority to operate over the entire relevant area of an urban place.

In addition, the legal powers may contain provision for taxing powers or other powers necessary to acquire the funds needed to operate and to build, buy, or rent facilities and equipment. From the legal powers flow the organization and structure of the public body that will either oversee the operation of the transit property or actually conduct the operation. The organization includes the structure of the policymaking board, which may be a board of an independent or quasi-independent transit authority, a transit board as part of local government (alternately, the policy tasks might be handled by a utilities board or equivalent as a part of its duties), or the members of a city council. The policy board will use its financial means to buy or hire the other resources needed to operate. Management may be provided by a private company or by those who are employees of the transit agency. Another option is to hire a professional transit management firm to manage a publicly acquired property. Using the financial resources available, the transit property acquires the plant and equipment needed, hires the management and the personnel, and establishes an information structure and system needed to carry on the business.

Growth goals. Once the hurdle of survival is surmounted and continuation of the transit enterprise is assured or expected, the next move is the goal of growth. Growth depends upon the organization and structure of the local public transit body and the resources available to make transit improvements. Improvements may be made to the physical facilities of the plant (garage, maintenance facilities, terminals, shelters), the equipment (rolling stock, maintenance equipment, office equipment), human resources, and information. Personnel includes both the employees needed to carry out the tasks and the skilled management necessary to oversee the use of the resources.

Information also is included because good information is essential to the management and operation of and, therefore, to the growth of successful transit operations.

The growth of the transit enterprise should lead to greater patronage, which means that more people will be enjoying greater mobility. Growth also means that the coverage offered by the transit agency will increase in both extent and depth. That is, a wider area will be covered by service, and more frequent service will be offered throughout the entire transit system. A greater variety of services will probably be offered, such as special service for various events, service for the elderly and handicapped, subscription bus services for commuters, express service, and so forth.

With survival assured and growth taking place, the transit system is then ready to aim toward the goal of prestige or recognition. Prestige means that the property is considered valuable in the community and is cited for the contribution to community well-being and the skill with which it is managed and operated. Public notice and appreciation of exemplary service in a variety of media are part of the factor, along with the winning of awards and statewide or national notice for excellence. Considering the difficulty of having all the elements fall into place, and the proper and necessary combination of material and human resources, few transit properties have achieved this enviable position.

Other goals. The goals of private firms are likely to differ from those of publicly owned enterprises. The private firm, obviously, must have profit as its major goal if it is to continue in business. In the transit business, profit will be earned only if the firm offers a public service of some quality and controls its costs carefully. The publicly owned firm probably will consider public service to be its major goal. However, a publicly owned operation may have profit (or surplus) as one of its objectives just as a private enterprise would. Even so, most public enterprises aim at serving the public while either breaking even or minimizing losses. A goal of covering a given portion of costs out of the farebox may be adopted by policymakers or imposed by state or local government.

Some reasonable community-oriented goals for a publicly owned, service-oriented transit operation might be:

1. Provide transportation services to those without regular access to an automobile.

2. Help relieve traffic congestion.

3. Minimize use of land for parking.

4. Increase interaction between all parts of the community.

5. Aid in shaping community development toward ends established through comprehensive planning.

6. Help reduce the costs of transportation to the community and its residents.

7. Enhance the image of the community.

8. Extend the labor market and increase job opportunities available to workers.

9. Help maintain downtown property values through improved access.

10. Attract new business to the area.

For private transit operators, a suitable goal is making the rate of return from a transit operation equal to or greater than a similar rate of return earned through a secure investment such as a savings account or government security. In other words, if $100,000 invested in transit earns $3,000 a year compared with possible earnings of $6,000 from a bank savings certificate, investment in the certificate is preferable. However, a one-year comparison is perhaps unfair; no reasonable manager should expect an immediate profit or adequate rate of return on transit in a short period of time. The same holds true for any goal because goals are intended to be long-range propositions.

A reasonable return on investment should be high enough to ensure that expansion and replacement of the enterprise's assets can be achieved by internal financing. Many transit operators work in states where the public utility commission or local ordinance sets the maximum rate of return that may be earned. Almost without exception today, most transit enterprises have difficulty in reaching this maximum. Only a small proportion of transit service is provided by unsubsidized private firms.

Regardless of the ownership of a transit firm, both private and public enterprise hold common goals. Both aim to increase ridership and serve the public as well as they can - as long as doing so boosts profits, reduces the need for public funds, or helps attain the goal of public service. Both try to maximize profits or control costs as much as possible, two goals that are completely compatible with a goal of public service, especially over the long term.

Evaluating Goals and Objectives

Over time, goals and the objectives to achieve them are subject to evaluation and change. This fact is necessary for any undertaking that expects to maintain any degree of dynamism. The truly flexible enterprise must be able to adjust goals as well as implement objectives to achieve them. This latter course is more difficult.

The establishment of goals and their respective objectives is a continuous process. Goals and objectives must be evaluated regularly. The following questions must be asked:

1. Are the goals and objectives still correct for the particular situation in the local environment, or the state, regional or national environment?

2. Has the environment changed and, if so, how has it changed?

3. Is the implementation process working? (This point is especially important for the objectives.)

Scrutiny of the goals, objectives, and implementation as an ongoing process is shown in Figure 1.2. The goals and objectives are implemented through organization, planning, and the establishment of guidelines and controls. Errors are detected through the collection and analysis of information from operations and other sources. Revision of goals, objectives, or the process of implementation is then carried out, based on comparison of desired performance, actual measured performance, and the evaluation of various options. This evaluative process should be continued on a regular basis. At the very least, a formal review should take place each year.

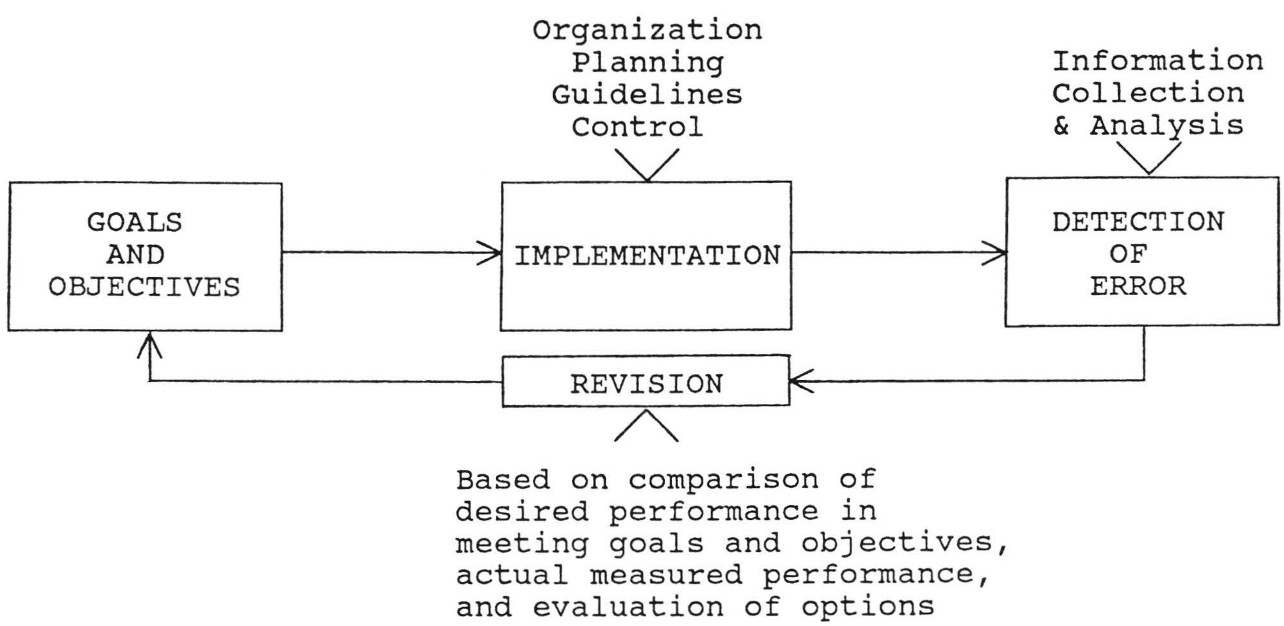


FIGURE 1.2 Reviewing Goals and Objectives

Policies

Policies are guidelines to ensure that a transit agency's objectives are being met. For example, to improve the process of recruiting, and thereby to ensure a ready supply of qualified maintenance personnel, a policy may be adopted of working with local vocational high schools to encourage young people to study diesel engines. This may include having high school students work in the transit property's maintenance department as part-time apprentices to ensure familiarity with real-world problems. The students are easily recruited for full-time jobs when they finish school. Another objective may be for better public information, resulting in a policy that calls for all transit vehicles to be equipped with destination signs on the front, rear, and both sides so that the destination of the vehicle is visible to patrons approaching from any direction.

As with goals and objectives, policies should be subjected to regular scrutiny as part of the overall evaluation process. Transit firms must be especially sensitive to government rules and regulations in the establishment and evaluation of all policies. A long-standing policy of only hiring male bus drivers between the ages of 28 and 35 will obviously violate current federal regulations mandating that there be no discrimination in hiring on the basis of sex or age.

Consumer Behavior

Much of what any transit enterprise must do to reach its goals is directly related to public attitudes and actions toward the service and public use of the service. It is important to find out what makes people act the way they do. This investigation should provide valuable clues to transit management in marketing its service, particularly in terms of understanding and meeting transportation needs of the public. Because the aim of a service enterprise such as transit is to serve the public, careful consideration of the consumer is essential. Understanding the consumer will help shape the strategy of the transit property, and help to mold the goals and, especially, the objectives.

Management should do its best to know precisely what consumers of transportation service desire. This need goes beyond mere demographic information to investigation of what given groups (market segments) look for in public transportation. Transit management then may determine what the property must do to satisfy the desires of some or all of the population segments. Transit demand can be forecast on this basis, along with the cost of serving the demand. Estimates of revenues or costs can be made, and adjustments in plan or practice can be undertaken to arrive at the best short-term alternative for transit, in view of its goals and objectives.

In considering consumer behavior, the first step will be to examine a simple behavioral model. This model will then be applied as a transportation decision-making model. Although it often seems that consumers do not act rationally, all behavior has as its motivation the solution to problems. Some of the problems require travel as a solution, and there may be a role for transit in such cases.

A Simple Model of Behavior

A diagram illustrating the simple model of consumer behavior is shown in Figure 1.3.

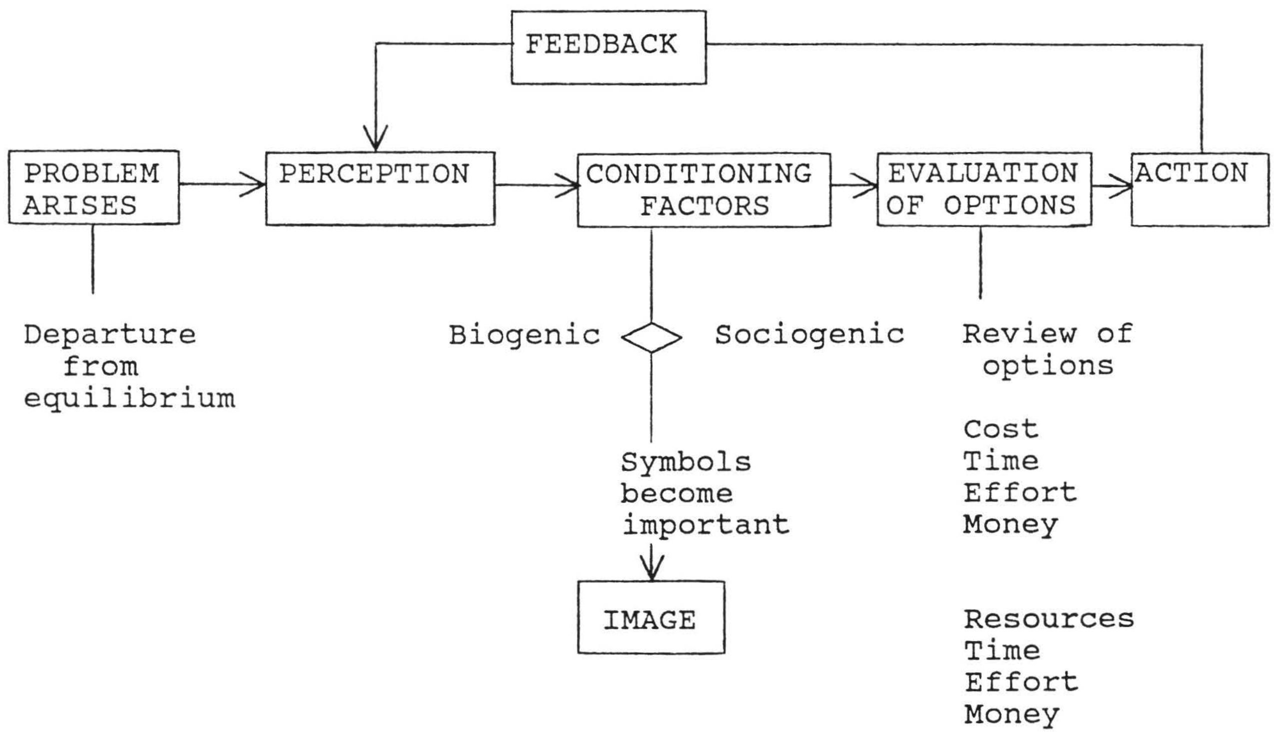


FIGURE 1.3 Simple Behavioral Model

Problem. Starting at the left of Figure 1.3, we see that all of us are constantly beset with big and small problems. They may range from severe physical pain or situations of physical danger to the more ordinary problems of life. In the latter category would be such things as being hungry, thirsty, too hot, too cold, and so forth. These problems are pulling and tugging at us constantly, and pulling us as consumers away from the desired state of equilibrium. Some of these problems may be solved through the purchase of a good or service.

Perception. At times one of these problems becomes significant enough so that the individual perceives that some action is needed to solve the problem. Concern for all other problems ends and the process of focusing on one problem and its solution begins. Once the problem is perceived, several steps remain in the problem solving process. Comprehension of these factors is critical for management.

Conditioning factors. Before a consumer can act on his perceptions of a problem, there are certain conditioning factors that influence his attitude. These factors act as a kind of preprogramming or filter that will affect action by helping the consumer determine what is acceptable. Some of the conditioning factors are biogenic; they are related to physical factors determined by size, strength, age, and so forth. Biogenic factors will naturally rule out certain actions to solve problems. For example, elderly persons who have difficulty walking will filter out any solutions that demand much walking.

The most important conditioning factors are the sociogenic ones, that is, those elements affecting behavior that are determined by the society in which a consumer lives. All people get hungry, but what they eat, and when, and how they eat it, are products of the society in which they live. Persons in the United States are conditioned by Western civilization and the Judeo-Christian ethic. They also are affected by national and regional conditioning factors. For example, for breakfast in Philadelphia or eastern Pennsylvania one might have scrapple; in the South one might have grits. Specific areas also have conditioning factors and clues as to what is acceptable. Using public transit is quite acceptable to persons in all walks of life in New York City; the same might not be true in Kokomo, Phoenix, or Des Moines. On a more personal level, there is the peer group to which a person belongs and the pressures of the peer group to conform to its patterns and interests. Finally, there is the reference group, containing those people with whom a person wishes to identify. As an example, riding commuter trains is often identified with success because in the public mind commuter railroads service affluent suburbs where successful persons dwell; this may make riding a commuter train acceptable (even if the train does not serve an affluent community).

As a filter for what is acceptable, the conditioning factors are extremely important. In the behavioral process, as the model shows, activities or products may be eliminated because of social forces at work pressing consumers to accept or reject certain actions. Moreover, symbols become important in relation to the conditioning factors. For example, if one's peers drive certain types of cars, one feels pressure to drive a similar type of car. Image also becomes an important factor. There is a general tendency among younger Americans to be interested in the new and the different. The image of modernity is, therefore, essential in the process of selling certain types of goods or services to younger people. For this reason, sellers of all kinds of goods and services constantly advertise their products as "new and improved."

Evaluation of options. The next step in the behavioral process for the consumer is the evaluation of options. The conditioning factors filter out the unacceptable. Of the options remaining, the consumer must review the costs of each in terms of the time needed to carry out the various acceptable actions, the amount of effort that will be required for each option, and the money cost. Acceptable, affordable options are those that the consumer is most apt to select. For both the conditioning factors and the evaluation of options, the options must be known to the consumer. Unknown options, no matter how good, cannot be considered.

Action and feedback. After evaluating various options, the consumer will choose one. He will then take action to solve the perceived problem. The results of the action will provide feedback on whether the original problem has been solved. If the consumer is satisfied, he can return to a state of equilibrium; if not, he must repeat the process to find another action that will provide a suitable solution. Actions that provide reasonably good solutions to problems and require modest resources are likely to become habitual. Once a satisfactory solution has been found it may be difficult to encourage consumers to try different actions to solve their problems.

Using the Behavioral Model

Transit managers and policymakers must understand and be sensitive toward several areas in the behavioral model. The conditioning factors are extremely critical. Transit does not have a generally good image in the United States today. Transit is apt to be filtered out of acceptable behavior, especially by the middle class which perceives transit as a service for the poor or the unfortunate. A blue collar worker may think he needs to drive an automobile as a status symbol. Peer group pressure may also make it difficult for many consumers, who would otherwise seriously consider using transit service, to use it. The same is true of the reference group. Except for commuter rail service from affluent suburbs, it is unlikely that most consumers will have referents who are mass transportation users. Or, put in terms of popular culture, how many television or movie heroes use the bus to go to work? Indeed, popular culture may place transit in a bad light if it is touched upon at all. Clearly, much work has to be done to improve transit's image. This is not an effort that will be accomplished easily on the local level, particularly where resources are slim. Work on overcoming the image problem of transit is a national problem.

Consumer evaluation of options is another area that requires understanding and work by transit management. It is essential that consumers be provided with as much information as possible so that in their calculation of time, effort, and money costs they may consider transit as a viable travel choice. Providing information on transit as an alternative is probably easier than working on the problem of image, but it is still a challenge.

Both the conditioning factors and the consideration of transit as an alternative require a management strategy directly related to consumer behavior. The service must be shaped to meet not only consumer needs but also the ways in which consumers make consumption decisions.

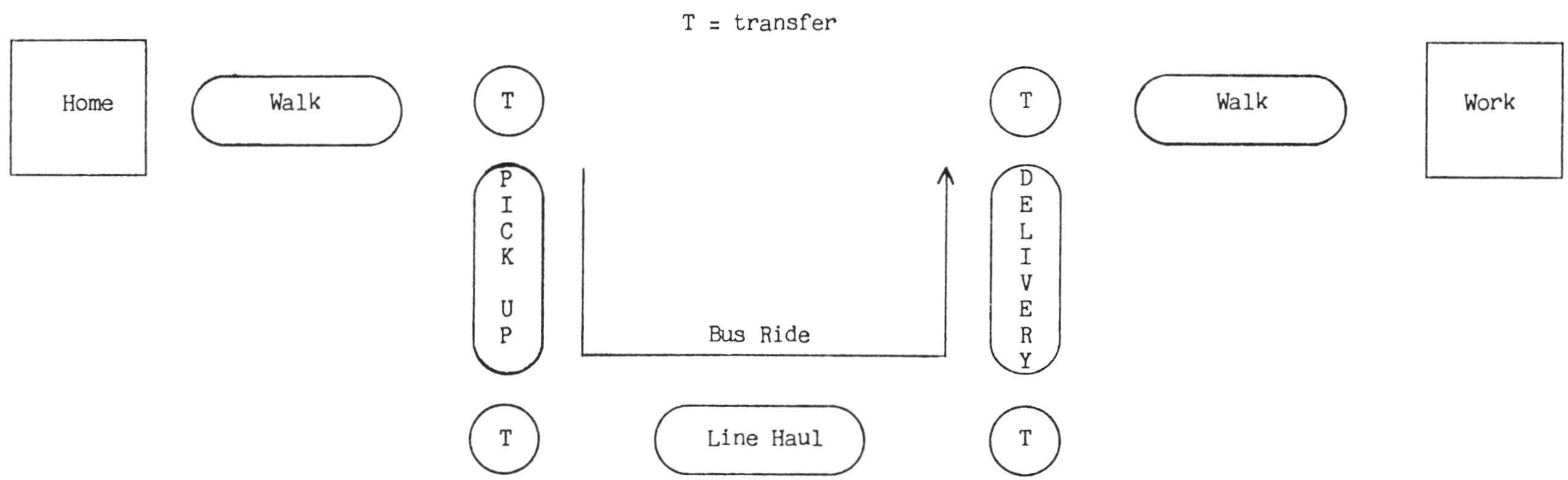
Transit management should make vigorous efforts to change public attitudes so that mass transportation becomes more acceptable in the eyes of the public. In setting goals and establishing policy, therefore, practices that will improve transit's image and acceptability should be carefully considered. Through advertising, community relations efforts, and exemplary performance, the attitudes toward mass transportation may be affected positively. Such activity must be recognized as part of the goal and objective structure of the transit agency.

Promoting mass transportation as a reasonable travel alternative offers particularly fertile ground for goal setting and policy effort. By careful manipulation of the various tools at the manager's command (such as routing and scheduling, equipment selection, personnel, and so forth), it is possible to change the time, money, and energy costs of public transportation and to provide a better and more useful service that will appeal to a larger slice of the traveling public.

Journey Analysis

It would be useful to look at the component parts of a trip to see where and how action may be taken to improve the position of transit as an alternative. One way to do this is to view a journey as a series of pieces that fit together as one trip. Figure 1.4 illustrates this approach. Please note that time, effort, and, to some extent, money costs are associated with each of the pieces. Transit management can affect all parts of a journey. By reviewing and analyzing each of the parts of the journey in terms of the established goals, a manager may spot areas in which use of the factors under his control might enable him to make service more attractive by reducing the time, money, and effort costs.

An illustration would be running a bus in local service in residential areas, operating as an express on a freeway, and then operating local service in the central business district; such a practice would provide service close to residences and work places and cut the need to transfer between local and express operations. This subject will be discussed again in later chapters. It is mentioned here as an example of the areas a transit manager may consider that can affect consumer demand.



Time Cost Effort Cost Money Cost	Walk from home	Transfer to pick up	Pick up	Transfer to line haul	Line haul	Transfer to delivery	Delivery	Transfer to walk	Walk to work

FIGURE 1.4 Journey Analysis: Time and Energy Costs

The Need To Institutionalize Transit

It is not enough to gain early support for transit initiation or improvement. To ensure continued support from the community, especially financial support, it is essential that transit be made an integral part of community life. In brief, transit must be institutionalized.

Organization or Institution

The words "organization" and "institution" often are thought to be synonymous; however, there is a significant difference between an organization and an institution. An organization is a mechanism for accomplishing some purpose. It involves given practices, an administrative unit, and interdependent action of people and things to attain implied or expressed goals and objectives. A bank, a grocery store, or a transit agency is an organization, but it is not necessarily an institution.

An institution, on the other hand, is more nearly a natural product of social needs and pressure. It is an adaptive organism that is responsive to needs. Moreover, the people associated with an institution--both employees and those who use it--gain personal satisfaction because of the values represented by the institution, not just from the tasks it performs. A mere organization with a technical function to perform becomes an institution as it takes on values above and beyond its technical function and comes to symbolize the community's aspirations and sense of identity. When an organization takes on symbolic meaning in a community, it has some claim on that community to protect and enrich it, on more than technical or economic grounds. In addition, if some organization or entity is seen as good for a community because it is a vital part of that community, the community will be inclined to support it. Therefore, because transit requires public financial support, it is essential that it be viewed by the community with favor, as an institution, so as to receive continued support.

Process of Institutionalization

The process of institutionalization requires:

1. Leadership--a skillful and highly committed management of both internal and external relationships.

2. Doctrine--a set of themes, images, and expectations about the goals of the institution and the styles of action.

3. Program--the translation of doctrine into concrete action.

4. Resources--the human and material means to achieve the established goals.

5. Internal structure--the organizational structure and processes necessary to take action.

Transit management and policymakers will recognize that the community lacks positive attitudes toward transit and will take steps to correct the situation through the process of institutionalization. Their efforts may be thwarted by the personal characteristics of the top transit manager, who may lack the skills needed to work with other agencies and institutions in institutionalizing the transit agency. Time also is likely to be a problem: managers usually have only enough time to fight fires and handle day-to-day problems; this is often the situation for small transit properties with very limited staff. The need for the manager to become involved in the community--a vital component of the institutionalization process--may be forfeited because of lack of time. Managers obviously will concentrate efforts on operations and service improvement; however, unless institutionalization is identified as a goal, the process may stop here. Managers must spend time outside the transit firm in the community, as well as time inside its operations. Support of the manager's efforts by the policymaking board is obviously essential.

In addition to a lack of goals and lack of time, management's efforts at institutionalization will be hampered by a lack of funds to carry out institutionalizing actions, politics that preclude certain actions, bureaucratic red tape, and an overall lack of leadership and direction from policymakers and political leaders. The institution-building process is neither easy nor quick. It can happen by chance but it is not likely to occur unless the intent is to build an institution.

Building the support needed for institutionalization means doing many things correctly and doing some of them very well. Involvement is one aspect of the process of institution building. Every person in the community should be made to feel some sense of involvement with the transit system. The effort to involve people from many different segments of society requires the use of mass media as well as personal, grass roots relationships with as large a public as possible.

Responsiveness to public needs is another essential part of institution building. This means caring about individuals and their problems through operational responsiveness and by meeting important community and individual needs. Responsiveness means doing many little extra things, such as answering every complaint as personally as possible, providing community groups with information and speakers about transit, and otherwise showing the value of transit in the life of the community.

United and vigorous team action on the part of transit management is a necessity. External groups and persons who can help transit must be aggressively identified and pursued; the initiative lies with transit personnel, particularly top management. Seeking ways to become involved also means that transit must act rather than react to situations. This involves taking risks, and the transit organization must appreciate that innovation is desirable in meeting public needs and in making transit an important element of the lives of individuals and an asset to the community.

Carrying the ball in building support should involve both management and policymakers. Members of the policy-making body, whether it be the board of directors of a public transit agency or members of a city council, are usually well known in the community; their attitudes and interests may have strong influence. Unfortunately, the members of a policy-making body may have limited time to spend on the process of institutionalization. Furthermore, transit management can work on building support only if there are sufficient personnel and time to do things other than care for day-to-day operations.

Strategies for Institutionalization

Four strategies may be adopted in the process of institutionalization: (1) improving operations, (2) improving service, (3) educating the public, and (4) integrating transit with community goals.

Improving operations. This strategy is based on the philosophy that only by the public using the service can real support and belief in the value of transit be built. Part of the basis of this philosophy is the knowledge that there is a close relationship between the amount of service provided and use of that service. The quality and quantity of the service provided must be of such a level that the public will see that transit is a practical alternative to the automobile. The fact that the transit agency is doing the best job possible to build a convenient and useful service of real quality must be conveyed not only to the public but to the employees of the transit entity, so that the employees recognize the value of their work. Inherent in all actions must be the knowledge that the transit system management wants to do the best job possible.

Improving service. A second strategy is one that depends largely on external events. The philosophy is that improving service is all that can be done. The transit agency is thus ready when some desirable, external, uncontrollable event occurs and thrusts the agency into a position of such value in the community that institutionalization takes place. Such an event may be a shortage of gasoline for automobiles or lower personal disposable income. In either case, the public must turn to transit. This strategy depends primarily on a reaction to outside events rather than action by the transit agency.

Educating the public. A third strategy involves improvement of operations and an effort to educate the public about transit. The most important aspect of this strategy is its direct attack on the problem of lack of public understanding of mass transportation, especially on the part of nonriders. Upgrading operations is an integral part of this approach. It is joined by a top-notch communications plan and system. Ideally, this strategy calls for a fast, intensive program that effectively reaches all the people in the community and provides good indoctrination on the values of transit. More possible and likely is a comprehensive educational and marketing program designed to increase awareness of transit over an extended period of time. The outreach program would include such elements as:

1. Educating children through the schools.
2. Using advertising that educates the public on the value of transit as well as attracts and induces additional ridership.
3. Inspiring every pro-transit person to do some personal crusading.
4. Training employees to develop a set of pro-transit values and pass those values on to the community.
5. Providing direct information on a variety of transit-related topics to the transit employees.
6. Helping to develop a positive image in the community for the employees.

Integrating transit with community goals. The fourth strategy involves improving operations, increasing understanding, and promoting social change regarded as important to the community in which the transit property operates. In this approach the strongest emphasis is on the integration of transit with overall community growth and development goals. In essence, transit is involved in upgrading the quality of life in the community by helping to limit urban and suburban sprawl and cut the levels of pollution or congestion, or by playing some other part in community life where transit can fulfill an existing need. This strategy includes all the aspects of the third strategy and combines transit with community goals.

Of the four strategies, the last two are the best and also the most difficult. The first, which is based on improving the quality and quantity of transit, is the obvious base of all the others but it lacks any overt outreach and does not attempt to pursue means of educating the public or publicize the values of transit to the community. The second strategy is useful only if the external, uncontrollable event takes place; otherwise it is mere wishful thinking. The last two strategies require much effort and time on the part of management and a continuing commitment because the results may not be seen for a long period of time. Indeed, it may take years of effort to achieve the desired end.

Assuming policymakers support transit, the most important element in the process of following a strategy to produce institutionalization is the capability and personality of the general manager, the person who is the obvious force in moving the system forward. The ideal general manager is a person with a high level of interested foresight, one who can act as a catalyst in getting other people and groups active in supplementing and extending his ideas. Coupled with these attributes is that mark of the successful executive: the ability to make positive use of a negative event and to view problems as opportunities. On top of everything else, good luck helps.

Managerial Strategy for Mass Transit

The purpose of this first chapter has been to discuss matters of critical importance to transit for consideration by policymakers as well as managers. The stress on establishing goals and objectives for transit at the beginning is to point out the importance of direction and a sense of real purpose to transit operators. The discussion on consumer behavior was introduced to stress the basic need to recognize that transit is a consumer service; concern for the consumer is absolutely essential if transit is to succeed in serving the public. The aim of transit is not running buses up and down the street; the broad goal of transit is helping to provide mobility to people.

To do an effective job, transit management needs a strategy to use as a set of basic principles by which to direct its efforts. Figure 1.5 illustrates this strategy. The figure shows the major elements of concern that affect the overall strategy. It then shows how the strategy is interpreted into action.

An effective transit strategy must be consumer-oriented. This means that policymakers and managers must, to the best of their abilities, gear transit service to the consumer. To meet consumer needs most effectively, transit management must understand the underlying factors of consumer behavior. In addition to the factors of time, effort, and money cost that affect the choices a consumer makes, careful thought must be given to quality elements of transit that are critical to the consumer. These elements include dependability of service, flexibility, and access. Dependable service is essential to attract and hold customers to transit; it means, very simply, running on time. Flexibility means being able to shape service quickly to meet changing consumer needs. Access means that the transit service should be within easy reach. This may be achieved either by routing schemes, the provision of good interchange between routes or modes, or offering door-to-door services.

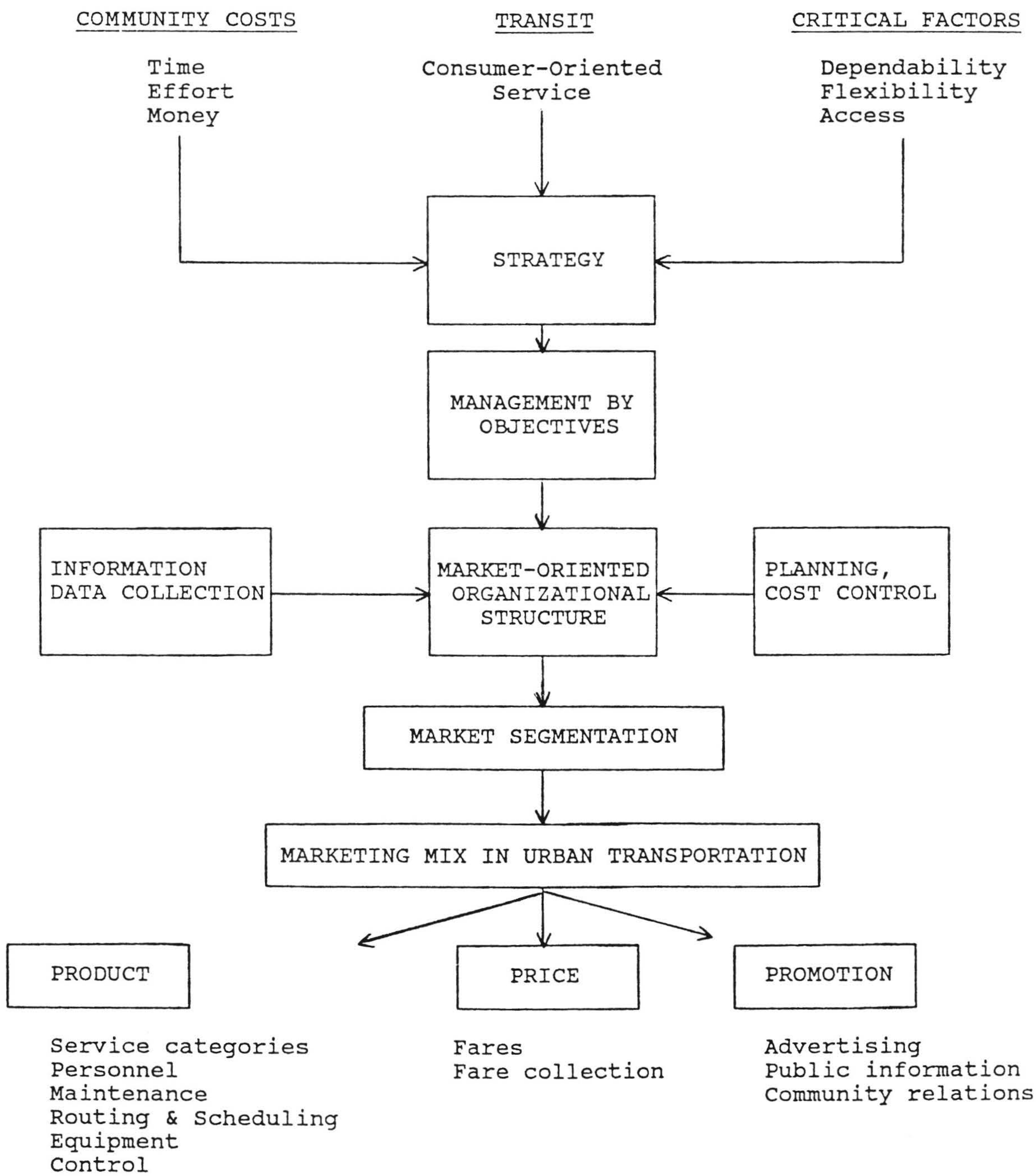


FIGURE 1.5 Strategy for Management

Management by objectives provides the means of formulating a definite approach to the task of converting the wishes of consumers into a plan of action. Establishing goals based on consumer orientation and other necessary factors helps set the tone and direction for the transit property. Setting objectives provides a disciplined approach to taking action that will meet the goals.

To do its job properly, the transit organization must be structured in a market-oriented way; transit organizations are typically structured around the operation of the service, rather than marketing concerns. A market orientation implies that the organization and activities of transit are geared toward meeting the needs of consumers rather than meeting the needs of the transit operating agency. Combined with a market orientation is the need for tight managerial controls based on good data collection and information, and for close adherence to guidelines, objectives, and other yardsticks of performance.

The marketing mix is the means of implementing the marketing orientation to be carried out through the segmentation of the market. Product, price and promotion are the elements of the mix that may be applied in various combinations to meet the needs of the consumers in the various market segments. This subject will be covered in great detail in the section on marketing transit. In the remainder of the handbook the elements shown under each of the major marketing mix headings of product, price, and promotion, will be covered in detail.

Not to be forgotten is the need to make institutionalization an explicit goal. Without that goal, institutionalization can happen only by accident and not by design. Because public support depends on the community seeing transit as one of its vital and integral parts, not making institutionalization a specific goal is a serious mistake.

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The numbers in parentheses are National Technical Information Service (NTIS) order numbers.

CHAPTER 2

THE FIRST STEP: GAINING PUBLIC INTEREST AND SUPPORT FOR TRANSIT

Introduction

It is extremely difficult to operate mass transportation as a profit-making, private enterprise in the United States today. Continuation (not to mention improvement) almost always requires public funds. In cities without transit, it is rare for an entrepreneur to come forward to offer service.

This chapter is not addressed to managers or to the process of management. Rather, it is aimed primarily at public officials or groups interested in starting or revitalizing a transit system through public action. This chapter suggests ways of identifying need and mustering support for mass transportation so that public officials may take the needed action.

Although the principal thrust of this chapter is toward public action, it does not rule out a private entrepreneur's use of some of the suggestions and guidelines. It is assumed that an entrepreneur would see the opportunity for a reasonable return on investment in a given situation and take the appropriate business action. Nonetheless, the entrepreneur will need some public support for his enterprise, and public action is usually necessary for the franchise to operate on the public streets.

A Community's Need for Transit Service

The Problem of the Small City Environment

The need for mass transportation is often difficult to appraise objectively in the small city environment, whereas the need for mass transportation is generally quite obvious in a large city. Mass transportation is generally (improperly) assumed to be a service almost exclusively for those who have no alternative transportation available.[1] However, even though transit should be geared to meet the needs of all city residents, it is practical to begin building a case for transit on the basis of the most obvious and easily detected need.

This task is relatively simple in a large city because many people lack alternatives to public transportation. Those without easy access to an automobile are the old, the young, the handicapped, and the poor. To this group should be added the substantial number of single-car families in which one member of the family has no car available for a large portion of the week. While their total number may represent a minority of the population in a large city, transit riders are generally visible, often vocal, and may be a potent force at the ballot box. In their quest for reelection, big city politicians usually consider it wise to court and win the support of these groups. Moreover, large cities have the concentration of population and economic activity that makes a high level of transit service feasible as well as necessary. Because the need for transit is readily identifiable, large cities are likely to take the necessary steps needed to preserve and improve the service.

It is harder to tell when transit is needed in a small city and, therefore, harder to gain public support for it. Even a small city will have its share of the aged, the young, the poor, and other groups who do not regularly enjoy the mobility afforded by the automobile. Chances are, however, that these groups will be less visible, less vocal, and less organized than their peers in the big city. Without strong pressure from the general public as well as from groups to whom transit is absolutely essential, local government is not likely to meet the mobility needs of the population.

However, local pride in growth and size and the desire for a progressive image may be powerful enough to foster serious consideration of transit service or its improvement, as a symbol of growth and progress as well as a necessary public service. The task of those promoting transit in smaller cities is to determine if the need for new or improved transit service exists and can be documented.[2] The next job is to build a strong case to convince the community and the local government that transit can play a vital role in the small city.

Predicting transit needs or demands appears to be as much an art as it is a science. Even relatively sophisticated means of predicting demand appear uncertain. Furthermore, it may be difficult to get the public to consider transit seriously in a community without transit; it is an unknown option. In addition, the cost of in-depth research, review, and analysis of some of the more accurate predictors of demand simply may be too steep to be considered in the early stages of transit promotion and development in small cities. Federal funds are available to conduct transit planning studies, but only public bodies can apply for such funds. It is necessary to get the cooperation of local government to apply for the funds and to pay the local matching share of project cost required by federal law.

Those who wish to promote transit before gaining local government interest must fall back on the second-best alternative open to them. They must develop a case based on relatively inexpensive and readily available information. For example, basing an argument for transit service strictly on the potential need of those without access to automobiles is narrow and shortsighted; it neglects a potential clientele among car owners. It is a conventional approach to a conventional problem, which, if followed to its conventional conclusion, will lead to conventional service and eventual failure. Yet, under conditions of limited funds--certainly not unrealistic in the small city situation--focusing on the portion of the public without access to automobiles may be the only realistic alternative. The critical point is not to become trapped in the bounds of the conventional approach after the first hurdle is cleared.

In any case, the group interested in promoting transit must recognize that the public's needs and wishes may be relatively obscure. Easy-to-obtain information, coupled with some particular local condition, both pointing to a clear need for transit service, is needed to stimulate public interest and support. After initial support is gained from local government, application can be made for federal funds to carry out a more formal and complete study.

The Need for Transit

The first task is to put the need for transit in some quantifiable form so that it has meaning for the members of the community at large. Data are required that give an indication of the number and location of the people within the metropolitan area who are most likely to have a vital need for a public transportation system. Such information is not likely to be readily available even in the smaller city. Transit promoters must use the best available information that supports their case in a reasonable manner.

Groups in need of transit must be identified and documented. Documentation should include information on those younger than 16 years of age, those older than 65 years of age, the number of persons or families without automobiles, the number of single-car families, and the number of families living at or below the poverty level established by the federal government. Data on the proportion of income expended on transportation by low-income groups also are important. It is of great value to have information on how many persons in the community cannot go to jobs, medical services, shopping, or recreation facilities because of a lack of transportation.

Sources of Information

Excellent information may be gathered from at least eight sources.

The Census of the United States. The decennial census provides a gold mine of information. The statistics on income, age, and car ownership are useful in making rough predictions of need. The main weakness is the time span between the taking of the census and the period during which action is sought.

Furthermore, in smaller cities the data breakdown--into relatively small census blocks--may not be done, increasing the difficulty in pinpointing the location of need.

City planning department. If the city has a vigorous planning department, or even a single city planner, that resource probably has information on the various segments of population for whom transit may be needed. Growth patterns and probable future mobility problems also may be available here, as well as the location of persons needing transit. If the population of the city is large enough (more than 50,000), a federally supported comprehensive land use and transportation plan will have been undertaken for purposes of receiving federal funds. This plan should prove of enormous value and may contain all necessary information.

City engineer. If the city has no planning body, the city engineer's office may have valuable information, particularly on the location and type of housing and other structures. This office also may have data on traffic flows within the city.

State highway department. The state highway department often routinely collects basic information on personal travel flows through their regular origin/destination planning studies. The value of the material will depend upon the demographic detail gathered in conjunction with the origin/destination study, as well as how recently it was performed.

State welfare agencies. These agencies often collect information on income and related matters that would be of value in determining transit need, especially for identifying the location of residents without automobile transport.

State departments of labor or economic development. These agencies often collect data on various aspects of the urban situation that may be helpful to transit including income, employment, and growth rates. Often, these agencies will have prepared useful economic base studies.

University research bureaus. Most major state universities have a bureau of business and economic research, which may have demographic and economic information available for the asking. They also may have prepared economic base studies of many of the cities within the state, or have studied various trends on a regional basis. Some universities have urban affairs centers, or similar bodies, which concentrate their efforts on urban matters. Furthermore, theses and dissertations by graduate students, although unpublished, are available at university libraries and may provide valuable information.

Transit company data. If a transit company already is in operation, it should have information available on ridership or other potentially useful data on transit need or demand. The information is apt to be sketchy for the smaller transit properties.

Other sources. The information that can be gleaned from some of these sources often will be inadequate in one way or another, usually because the information is not broken down finely enough. For example, some states and state agencies may not collect information by city, but by county. It may be very difficult to put together a good case for a given city when only aggregate countywide figures are provided. Usually, the larger the community in question, the better the available information. Any place in which some degree of planning has been carried out by professional planners should have the basic information available for those hoping to build a case for transit.

A number of groups may help gather supplementary information. Surveys may be conducted by volunteers from service clubs in the community. For example, the League of Women Voters, the Jaycees, fraternal organizations, and service clubs often may provide service in collecting information of vital importance to a community. Indeed, some of these local civic associations may have useful information already available that they may be willing to share. City departments also may be enlisted--depending upon the interest of the city in the promotion of transit--to collect or otherwise make information available. (Useful information may come from the most unlikely sources; it often is difficult to know where to begin, hence, the need for early cooperation from at least one public official.)

The financial support of concerned interest groups would be very useful at this stage. New or improved transit service is one way to improve access to the downtown area, and a downtown merchants' association or chamber of commerce, worried about the threat of suburban shopping centers to investment in central city property and businesses, might provide support. If one of these organizations could be induced to offer some professional or financial assistance, even on a modest scale, it could be used to assimilate the available facts and prepare a more sophisticated case for transit improvement. Voluntary contributions by interested citizens are another means of finding money. Other potentially interested groups may include senior citizens, environmental protection organizations, human service agencies, or combinations of all three.

The Catalyst

Even with the problems of inadequate information, a fairly good case may be put together in terms of the current or potential need for new or improved transit service. But mere information may not be enough to convince or enable local government to act. Bold and imaginative action by public officials on the local level in the United States is rare, because such officials usually choose not to act ahead of their constituents. The American public appears to want things that way; it is not a reflection on public officials whose jobs depend on meeting the wishes of the public. As a result, some event is often needed to help legitimize any sort of out-of-the-ordinary action supporting public transit.

What must be done, therefore, is to find some event or group of events that may be related to the transit issue. The event can be used as a catalyst to stir action that will not only gain public support for transit, but also help the city fathers and public officials to act. The event need not be something totally unexpected or undesired by public officials. Indeed, many officials will seek ways to promote an event dramatizing a need so that they can legitimately take the needed action. Some possibilities are listed below.

Minimal business activity. Failure of a business to expand within a town may be blamed on lack of room for both plant expansion and for parking areas needed to accomodate increased numbers of workers, many of whom will travel by automobile to work. The loss of potential jobs can cause a very obvious and serious inherent economic loss to a community.

Decreased economic consumption. Falling retail sales in the central business district (CBD) can be clearly linked to the difficulty persons have in access to center city stores. (Care must be exercised in using this factor, because mass transportation service is only part of the package of action needed to boost a sagging CBD.) The movement of a well-established downtown business to a suburban location is another event that may dramatize the need for transit.

Urban renewal. Urban renewal may spark the consciousness of public officials, influential persons, and the entire population, thereby inducing a general renewal of all aspects of the city's life, including transportation. Examples of successful renewal efforts involving transit in other cities, particularly ones close by, can have pronounced postive effects.

Community spirit. Desire to improve the city and its image may stimulate a community to rebuild not only physically, but psychologically. Economic growth may be the desirable end result, but along the way the community builds pride, vigor, and support from having the finest possible parks, recreation programs, schools, and mass transit.

Employee discontent. An employees' strike at a privately owned transit firm may force the firm out of business or cause such a loss in patronage and revenue that failure is inevitable. The need for public action can be seen quite clearly.

Immobility and job market. The jobless or underemployed may need greater mobility to find jobs or to find the best job they are capable of holding. Studies and reports from various groups--on a national, statewide, or local basis--may be available. Again, transit is merely part of a package for helping the jobless find prospective employers. The argument always can be made that it is better for people to be taxpayers rather than tax users, and that money spent on providing needed support services is a wise investment.

Reduced economic growth. Loss of a potential new enterprise to some other community may occur because of the lack of public transportation or because urban services desired by a firm may be lacking. In the competition to attract new enterprise, cities must provide a complete package of urban services. This loss can be dramatized by an example of what the new enterprise would have meant to the community.

External funding. The promise of outside financial aid may please local politicians who like to have outside funds come into their city. The promise of federal grant funds or perhaps state funds for transit improvement always is a welcome event and one that may help you sell the entire transit program.

This list is not meant to be exhaustive. What the catalyst might be depends on the given community. In any case, some event is needed that dramatizes the need for action related to transit. It must be carefully handled to gain the maximum mileage as a key part of the case for transit.

The People To Have in Transit's Corner

Many problems and much of the opposition to transit or transit improvements result from lack of information and understanding. In proposing any plan for the initiation of transit service or for a major improvement to transit, it pays to have the following people briefed and on your side: (1) city officials, (2) other public officials, (3) state and national political leaders, (4) local power brokers, (5) organizations, (6) news media, and (7) other influential people.

City officials. The mayor, city manager, key councilmen, and the heads of city departments must be kept informed.

Other public officials. The need for transit does not stop at city limits. The support and cooperation of county and other officials of adjacent government jurisdictions may be necessary to formulate any sort of reasonable transit program.

State and national political leaders. Support by members of the state legislature, the office of the governor, and members of Congress is especially vital if there is hope for state or federal action in gaining needed funds or legislation.

Local power brokers. Lawyers, businessmen, and others, who are rarely in public office but who strongly influence the decisions made by local government, may comprise a very small group or a fairly large one, depending upon the community. Anyone involved in the community for any length of time certainly would know who these people were. Their support is critical. As a corollary the professional opponents to any change must be quietly placated or defused as an opposition force by the intercession of the power brokers.

Organizations. The local chamber of commerce and other organizations that are generally interested in promoting the community and its welfare should be included.

News media. The news media should be contacted early on and should be kept well informed of all that goes on. The media, particularly newspapers, can be a vital force in focusing community interest and action on transit.

Other influential people. This group might include members of old families whose opinions are respected, labor leaders who may speak for a fairly large percentage of the community, leaders of minority groups, prominent businessmen, and other respected persons speaking as individuals and as members of key groups.

Opposition to Transit Improvement

Opposition to pro-transit plans may develop. The general nature of the most likely opposition and the counterarguments are listed below.

Resistance to public expenditures. Some individuals may be opposed to public expenditures for what traditionally has been a service of private enterprise. This is perhaps the most common point of opposition. Many persons who remember transit as a business for profit assume the current or expected deficits of a transit operation are a local anomaly. It is generally conceded throughout the United States that transit cannot continue as a private enterprise. All businesses confer benefits to the public that do not find their way into the revenue accounts, but, as long as revenues exceed costs, there is little need to worry about these external benefits. Urban transit is rich in externalities--greater mobility for all citizens, better access to downtown areas, and so forth--and always has been. Today, however, transit is caught in a cost squeeze. Raising fares to increase revenues and cutting back service to cut costs drives riders away, further reducing revenues and lowering productivity. Rather than forego general mobility and other benefits of transit, it is best to support transit publicly. The public benefits will outweigh the costs.

Opposition from taxpayers. Certain groups may complain that they are being taxed to help support the service and claim they will not use it. These groups must be made to feel that they are an integral part of the community. Because mass transportation is for everyone, all members of the community stand to benefit, and those who benefit should pay. Even families with more than one car will find it useful as a standby and may be relieved from having to ferry about children or aged relatives. Most important, however, are the general benefits to the community such as improved mobility in terms of economic development, greater access to employment, shopping, and recreation centers.

Also, it should be noted that the automobile is subsidized. The costs of snow removal, auto-related police service, and traffic signal and control systems usually are paid for by the property owner, not the motorist. The subsidy for these services may be larger by far than any subsidy for transit.

Costliness of the program. Some people may claim that transit improvement will cost too much. This argument can be resolved when people realize that not having mass transportation service may be even more costly than providing the service. A particular catalytic event that helped dramatize the need for mass transportation service may fit into the counterargument. Particularly effective would be the loss of a new enterprise because of deficient community services, including transit. The income loss to the community, in terms of both wages and taxes, is a strong counterargument.

Those favoring transit improvement must stress their strongest arguments. If a community's influential individuals are firmly on the side of transit, opposition usually can be minimized, especially if the opposition is merely playing with politics. At all times, the emphasis should be on the benefits of improved mobility to all members of the community. The damage from arguments about the cost of transit improvement can be removed somewhat by the likelihood of aid from the federal and state governments. Other positive arguments on behalf of transit may center on pollution and energy. The strength of the pollution argument depends upon the local importance of the issue; if air pollution is not a real issue locally it will be a relatively weak argument in favor of transit. The energy argument is not one that will catch fire, unless the availability of fuel decreases or its price becomes much higher than current levels. Energy arguments may carry more weight if the city in question was seriously affected by a fuel shortage resulting from the oil embargo of 1973-74, suffered shortages in the summer of 1979, or if there is a significant number of influential citizens seriously concerned about energy.

The Heart of the Argument for Transit

Once the active promoters of transit, concerned citizens, and key public officials deem the establishment or improvement of transit service necessary, support must be developed from a broad cross-section of the community. To gain this support, the arguments in behalf of improved transit must be developed carefully. The facts and figures mustered in support of improved transit should be brought together at this point and combined with the catalyst discussed earlier.

Economic and social problems of individuals and the community which have resulted from the lack of good transit service should be well-publicized. For example, the problem may be the relocation of a large downtown retail business to a suburban shopping center. Declining sales, attributed to difficulties of downtown access and parking, may have prompted the move.

Relocations of businesses can be shown to have a harmful effect on the economic vitality of the downtown area and the city's tax base.[3]

Other transit-related problems should be publicized, such as the fact that citizens without automobiles are severely limited in terms of employment opportunities. Unemployment may cost a community more in welfare and other costs than would provision of a transit service. Perhaps one-third of the population is literally taken out of circulation because of a lack of mobility. However, great care must be taken not to advocate transit merely as another form of welfare. Rather, the benefits to the entire community should be emphasized.

Transit proponents must not claim more than transit can reasonably be expected to deliver. In particular, they should make it quite clear at the outset that many of the benefits of an improved transit system will not translate directly into dollars and cents. For example, improving access to the downtown shopping area for a larger proportion of the population may have a strong influence on downtown vitality, financial success of businesses, and the taxable value of the land. However, unless a good deal of careful research and analysis is carried out (which may be most expensive), it is unlikely that the downtown merchants or anyone else will realize the importance of improved access to downtown areas until after that access has become a reality. In short, the benefits may not be realized immediately or in highly visible forms.

Similarly, improved access to recreational facilities may help reduce the rate of juvenile delinquency, or may broaden considerably the social contacts available to senior citizens. However, the direct value of the service can be determined only with extreme difficulty. Even though these values cannot be quantified, they must be clearly and convincingly brought to the attention of the public.

Another issue that must be faced squarely is the quality of service. With the long-range view in mind, when the job of transit improvement is done properly, the undertaking will not be cheap. It must be emphasized that to reap any substantial community benefit whatsoever, transit improvements should be entered into wholeheartedly and with the willingness to make relatively large expenditures. To do less than the best possible job with mass transit within various ranges of cost is an invitation to disaster. Furthermore, to delay the implementation of a program favoring mass transportation practically ensures that the overall undertaking will be more costly than first expected. The arguments should be expressed in terms of need, potential benefits, and the necessity for prompt action.

In all cases, positive arguments must be stressed. Cost, the major negative argument, should not be glossed over, but it must be made clear that the benefits outweigh the costs.

Presenting the Argument for Transit

The platform for the presentation of the ideas and arguments in favor of public action toward transit is important. Various sources within the community which may prove to be supportive and instrumental toward transit should be targeted.

City council. Discussion of transit by the city council, or presentations before that body, usually attract wide attention.

Newspapers. A series of articles, as well as interviews with key promoters of transit, is a valuable way to publicize transit.

Radio and television. When possible, informed proponents of transit should present their ideas and plans through radio and television. On television, films of attractive and successful transit services should be used.

Meetings of civic and social groups. Meetings of the Rotary, Kiwanis, Jaycees, and other groups are excellent forums for discussing local issues such as transit. The presentation should be prepared carefully, and the use of slides and transparencies will improve effectiveness and impact.

Transit Feasibility Studies

Should a Feasibility Study Be Conducted?

Public officials may attach a great deal of weight to an official feasibility study for mass transportation to strengthen the arguments supporting transit improvement. Such studies can be quite time-consuming, however. If the situation is at all critical, it may be more frustrating to the public to wait for the completion of a study than to go ahead on less information. The time-honored practice of studying an issue to death to circumvent the need for a meaningful decision should be avoided at all costs. Once the process of building public enthusiasm has started, it should not be interrupted.

Even so, to receive a capital facilities improvement grant from the Urban Mass Transportation Administration, (UMTA), a municipality must have planning completed. (The requirements and procedures for application for the various types of federal grants for transit are covered in detail in the chapter on financing transit.)

If a transit feasibility study is considered necessary, a federal technical studies grant can be obtained to cover 80% of the cost. However, it should be recognized that the process of applying for and receiving a decision on a federal grant is also time-consuming. Frustrations can mount, and the local community may lose its zest for transit improvement.

The main point is not to let feasibility and other studies be used as a means of delay. Such work should only be performed if it is useful and valid in advancing the cause of transit. The wisest course, if any sizable study is to be carried out, is to conduct a federally funded planning project that will gain federal approval for a capital grant and other federal aid, where planning is a key qualifying activity.

Where Should Expert Advice Be Sought?

In achieving support for transit from the community and public officials, no official study or plan is necessary. Formal planning is needed for a federal capital grant or operating aid. In either case, however, expert advice is of value and is obviously needed in any sort of formal planning effort. This handbook is designed to provide such help to interested communities. A volume such as this has to be written in general terms because of the many differences between individual communities and their needs; additional help should always be sought.

In helping to build local support, one source of "live" aid may be provided by higher level management personnel from a transit firm in the general area. Transit management people can give advice and information on the possibilities of transit and on experience in other places. Great care should be exercised in selecting these people, because their expertise often lies within a very narrow sector of the transit field. Moreover, there is no point in asking for yesterday's competence to meet today's needs. Transit proponents should not be afraid of looking far afield for the best calibre of aid from this source.

A nearby college or university may have business, economic, or government faculty who could quickly, and at relatively low cost, provide at least a shirt-tail analysis, furnish certain types of information on what has happened elswhere and, perhaps, help formulate the details of an action program. Information on federal and state programs and how to apply for aid may also be provided. Interest in and knowledge of the transit business is still rather rare in institutions of higher learning, but the trend is moving in the right direction. This source of help is worth investigating. A large state university is most likely to be of help.

Some departments of state government may also be able to lend a hand. The state planning office--if there is one--may have expert personnel who are willing to work with a community in providing information, advice, and perhaps help in formal planning for various urban-oriented programs on the federal and state level. An increasing number of states are forming departments of transportation, which may provide local technical assistance. The scope of activity of these agencies varies widely, but it may include planning as well as some financial aid.

Consulting firms may also be used to provide both advice and formal planning. The problem with using a consulting firm, particularly a large, well-known one, is that they are usually fairly expensive and may be somewhat slow in making a final report. The bigger and more prestigious firms are geared to handle projects of a very large scale, and, frankly, may possess capabilities that are not needed by smaller cities. In the early stages of the development of transit strategy, it would be best to check out a number of firms to decide which can do the job quickly and in a way that suits the particular needs of the situation. Newer, smaller consulting firms may do an excellent job quickly and at low cost, provided they are knowledgeable about the field of transit. Some of the professional transit management firms will provide local technical assistance and planning services. Such firms certainly will have a deep knowledge of transit and should be on top of the latest federal and state programs. In all cases, care should be used in selecting a consultant. Any worthwhile consultant will be happy to furnish references from past clients.

Consulting firms working in the transit field may be most easily located through the advertisements in Passenger Transport, a weekly newspaper published by the American Public Transit Association (APTA). Other transit publications such as Mass Transit, Metro, and Bus Ride provide additional information. Information on consultants may also be gained from officials of large nearby transit agencies or from planners.

The Result

The result of the effort mounted by promoters of improved transit will be action by a public body. One action should be a formal resolution to move ahead with a mass transit program. At the least, it should be a move to seek expert advice. Most desirable would be the action of a city council to establish a transit district, transit authority, city transit department, public corporation, or other similar device. This body would have the responsibility of carrying through further needed effort in planning, grant application, and other tasks necessary to either start transit service or improve it. In subsequent chapters, this handbook offers information on various transit bodies and advice on which types may best suit the needs of a given community.

The ordinance or other legislation establishing the transit body should grant liberal powers to the undertaking so the transit agency will not be hampered in its efforts. The legislation should be prepared by proper legal counsel, in accordance with state laws. It may be wise to discuss some of the provisions of proposed transit legislation in the public meetings and other parts of the campaign for transit. To facilitate matters, and to make sure transit gets the treatment it deserves, transit advocates should try to have a draft ordinance prepared for consideration and debate by the city council. This practice is usual for interest groups in all legislative efforts, and is quite common in the formulation of acts of Congress.

Variations in state laws make it difficult to generalize about the contents of transit ordinances. At the very least, however, the ordinance should follow these guidelines:

1. The transit operation should be empowered to cover the entire urban area. It should have considerable freedom to extend operations as the community grows; operations should be possible beyond the boundaries of the city. Charter service should not only be permitted, but encouraged, within the context of federal rules and regulations regarding charters.

2. The public transport undertaking should have taxing and bonding authority.

3. There should be no mandate that transit operations be financed solely from the farebox.

4. The management and board of directors of the transit undertaking should have complete freedom to establish and change routes, schedules, and fares.

5. The transportation of schoolchildren at reduced fares should be fully reimbursed by the school board.

6. The transit agency should have a large degree of control over parking along the streets it uses and in terminal areas, and should be able to acquire or obtain easements for the use of private property, when the quality or safety of transit service can be improved by so doing.

7. The local transit agency should be empowered to contract with other levels of government, either to provide transit service or to receive grants from federal orstate agencies.

Following the guidelines in this chapter and achieving the desired and necessary public action is just the first step. The real work of initiating, preserving or improving mass transportation service can now get underway. Most of the remainder of this handbook will be devoted to spelling out in detail how to carry out the strategy developed here.

Notes for Chapter 2

1. In very large cities, such as New York or Chicago, many persons who do have alternate transportation available are regular users of mass transportation service. Driving or parking is either so difficult, time-consuming, expensive, or unpleasant that many persons are discouraged from using their automobiles. Regardless of city size, it is unwise to assume that captive riders--those with no travel alternative except transit--will be the only ones to use transit service. The real success of transit service depends upon serving a broad spectrum of riders, and it is a major purpose of this handbook to aid transit management in providing a service that will be generally attractive to all. A convenient and useful mass transit system serving as many persons as possible is essential in the long run, considering that public taxes are used to support transit. The emphasis in this chapter on the "nonautomobile" sector of the urban population is made because it is easier to identify this segment and easier to predict its need for transit service.

2. "Those promoting transit" may include almost anyone within a community. In the early stages it is likely to be a group that chooses itself. It is also likely to be a group that includes members of minority groups or community leaders. No definitive prescription is available for the group's composition; it may include persons of all political stripes, often motivated by complex reasons. Members must be willing, however, to work diligently to gain a broad base of support; the task is made much easier if the support of some leading citizens and public officials is included early in the game.

3. The declining downtown area is used merely as an example because it is common in smaller cities, not because it is the most critical problem. Note, however, that the steps taken in the argument for transit may be applied to many situations.

CHAPTER 3

ESTABLISHING AND FINANCING MASS TRANSIT AGENCIES

Introduction

The public transit industry of the United States has undergone significant changes since World War II. Before World War II most public transit service was provided by privately owned, for-profit firms. In the years following World War II many of these for-profit firms faced a cycle of decreasing patronage and increasing costs. As a transit firm cut back on service to reduce its costs, the service became less attractive, leading to a further decline in patronage. Given this setting, many privately owned for-profit transit firms either sold out to a local government agency or abandoned transit service entirely.

By the early 1970s most public transit service in the United States was being provided by government-owned transit systems. An extensive program of public assistance to transit evolved during the 1970s. The federal government provided the bulk of the financial assistance for transit service programs. The federal government also attempted to influence various aspects of transit service offerings through the regulations and requirements associated with its various programs. Changes in the philosophy regarding the role of the federal government in the provision of certain types of services, including public transit, have resulted in a modification of such federal programs.

Public transit is viewed by some policymakers as a function which is more appropriately funded and controlled at the local level of government. The mid-1980s have also seen claims that public transit service can be provided more efficiently by privately owned and managed firms. At the time of the writing of this edition of the handbook, such private sector participation in the direct provision of transit service has been generally limited to situations possessing highly favorable conditions, which are discussed in more detail later in this chapter. The level of private enterprise participation in various aspects of local transit will likely expand as the Urban Mass Transportation Administration pursues its privatization policy. Persons interested in the public transit area will need to be familiar with any guidelines or regulations adopted by UMTA as part of its public/private partnership efforts.

The purpose of this chapter is to provide information on the different forms of financing available for mass transportation and to suggest funding options for small cities and small transit operators. This chapter also includes a section on the various grant programs provided by the federal government under the Urban Mass Transportation Act of 1964, as amended.

Privately Financed Transit

It is assumed that any entrepreneur wanting to enter the urban mass transportation field has sufficiently studied the situation to be aware of the profit potential of transit operations in a given area and fully understands the high risk of this business to private capital. It is further assumed that, over the long term, the rate of return on investment will be reasonable. In other words, the earnings from the investment will at least equal the current rate of interest on time deposits in a bank or the current rate of interest on securities in which the entrepreneur might have invested.

Unless the entrepreneur has substantial personal monetary resources, he or she will have to depend upon various outside sources of financing for such an undertaking. Some of those sources are described below.

Equity Capital

The corporate device of business ownership has many attractions. One of the most important is the limitation of liability to the amount of money a shareholder has invested. Individual proprietorships hold proprietors liable to the full extent of their property; in a partnership the partners are all fully liable for each other's actions in the course of the business. As transit is generally assumed to be a very risky business in today's world, incorporation makes good sense, even if the entrepreneur has sufficient funds to cover the requirements of the business and sees no need to seek financial aid from other investors. To ensure that only the amount of the investment will be lost in the event of business failure, it is wise to incorporate the transit firm and have very few persons or one family hold all the shares of stock. The limited distribution of the stock reduces the possibility of a loss of control by the business founder.

The incorporation of a privately owned transit firm is generally not a difficult matter. However, the particular rules, regulations, and circumstances associated with incorporation depend largely on the laws of the state involved and the rules and regulations of the state regulatory body that oversees transit operations. Usually, firms wishing to operate as a common carrier of passengers are required to secure a certificate of public convenience and necessity from a state regulatory agency.

A franchise for operation may be required by a municipality. Seeking lawyer's assistance in filing incorporation papers and gaining operating authority is advised.

If securities are to be sold to the public through the mail or other similar means, registration with the federal Securities and Exchange Commission (SEC) is required. There are several exceptions to this rule and further advice should be sought from a competent financial advisor.

Stock that represents shares of ownership in a firm may be sold privately to a single purchaser or to an institution such as an insurance company, or it may be sold publicly to interested individuals. However, raising initial capital through the sale of stock is usually a feasible alternative only for growth companies, because only firms with a reasonable potential for profit are likely to obtain needed funds in this manner. Of course, with sufficient publicity, a public sale may be successful in the local community. As a result, local citizens may retain more than a casual interest and voice in their local mass transit operation.

The chance for success in public sales of stock is quite limited. An established transit firm with a good reputation and good earnings probably would have little difficulty in selling new securities; a new transit operator attempting to get started probably would be unsuccessful.

Another possibility is private sale to a local bank, foundation, or other group with an interest in transit. Even so, such a purchase would be more of a charitable act rather than a good business proposition. There is, of course, no guarantee of any return from the purchase of stock in any kind of enterprise. Although the purchaser's liability is limited to the amount invested in the shares, considering the sparse earnings of transit firms in the recent past, private sale of shares is likely to be unsuccessful.

In addition to conventional common stock, another option is preferred stock. Preferred stock, usually carrying a stipulated rate of dividend that must be paid before dividends on common stock, is usually cumulative and may have voting rights. It obviously offers less risk than common stock, which is a residual claimant on the profits of a firm or the proceeds of its liquidation. (Common stock follows after the claims of those who possess debt obligations of the firm and preferred shares.)

It is doubtful whether an entrepreneur can raise the needed capital through either the public or private sale of stock. The best use of the corporate device is as a means of limiting the liability of the owner of the transit firm who will be the sole owner of equity capital.

Long-term Debt

Long-term debt is any financial obligation due after one year from the end of the current fiscal period.

Loans. Loans, and the conditions under which they may be granted, vary widely according to the situation involved. In general, loans may take the form of a promissory note or a line of credit. Loans are usually secured through commercial banks, but other institutions may offer loans--perhaps at a lower rate of interest. However, a commercial bank is usually easier to work with and can often supply funds on short notice.

Bonds. Bonds, which are a popular type of debt capital, represent an obligation to pay (as opposed to stocks, which are owned). Bonds may be offered to the general public or on a private basis to a few institutional investors. Various types of bonds may be used for financing small firms. The debenture, which is secured on the general worth of the firm, is one of the most popular types of debt capital for business in general. Mortgage bonds use the borrower's property as security while income bonds require payment only when the firm makes a profit.

Long-term Leases

Generally, leases do not run for long periods of time, especially in the case of equipment leasing arrangements. However, long-term leases are not unusual where land and buildings are involved. For example, a municipality wishing to attract a private transit operator might construct necessary facilities, issue bonds to cover the construction costs, and then lease the facilities to the private operator at a charge sufficient to pay off the bonds and the interest. Leasing is an attractive way to reduce the amount of capital needed to enter the transit business. Another advantage of leasing is that many municipalities typically may borrow--through bonds in this case--at a lower rate of interest than may private individuals or firms.

Short-term Debt

Short-term debt is often necessary because of seasonal or emergency fluctuations in income or disbursements. For financing in the form of short-term loans, a commercial bank is the most commonly used source. In general, dealings are unsecured, but most banks require balances to be kept in the borrower's bank account. As a rule, such loans run for less than one year, and may be for a time period as short as 60 to 90 days.

Equipment Trust Obligations

Transportation firms have often resorted to equipment trusts as a means of financing a part of their capital needs. Under this technique, a financial institution is the nominal owner; the operating company pays essentially a rental fee. When the total fees equal the equipment costs plus the interest charges, the operating company becomes owner. Equipment trusts are considered to be high-grade securities because they are secured by specific assets that are usually portable and easily resalable. In this way a small transit firm can obtain modern equipment without a great deal of capital, provided that earnings are sufficient to meet the payments on the equipment trust.

Reducing Financial Risk

General standards. To obtain any sort of financing, the private firm must attempt to meet certain goals or standards that appear to reduce the risk to individuals or institutions that purchase stock or provide funds through one of the several forms of debt capital. The commonly accepted standards are listed below.

1. Reputable management. The management of the firm must possess good character. This requirement may be easily fulfilled if one of the managers is a well-known individual in a relatively small community.

2. Management expertise. The management must have demonstrated its ability to operate a business successfully. It should be noted that management's reputation need not have been established in the transit business.

3. Sufficient initial capital. The transit company must be properly capitalized. In other words, capital already in the business must be sufficient so that any additional funds will further strengthen the company's ability to operate on a sound financial basis. An entrepreneur attempting to start a transit operation probably would need a substantial personal investment in the business before this qualification could be met.

4. Solvency. The transit property's record of past earnings and its prospects for future earnings must ensure that the funds will be repayable out of the income of the business. This point is closely related to the other three, except that it is future-oriented. Potential difficulty might be encountered here because of the generally poor financial performance of transit firms throughout the United States during the post World War II period.

5. Fiscal guarantee. The current emphasis on reinvolving the private sector in furnishing local transit service can help reduce the risk for a private operator. A transit service contract (for one year or more) with a local government unit can provide a guarantee to the private operator of a financial commitment from the community. Such an arrangement may make it easier for an entrepreneur to obtain financing to start a transit operation and to provide the necessary assurances to keep it going. The arrangement needs to be structured to

ensure that the municipality has some control over what it is paying for. The total reimbursement of all of an operator's costs without regard to the validity of those expenses or the quality of service provided is not a desirable arrangement from the community's standpoint.

Obstacles. Financing a privately owned transit firm is likely to be quite difficult. Even if a transit firm has abundant capital and is managed by a successful entrepreneur enjoying a good business reputation, the outlook for private entrepreneurs is not optomistic. There are several primary reasons.

1. Reputation. Transit has a poor financial reputation nationally. Since 1945, the transit industry has suffered financial difficulties. The industry's problems are not secret, and it may be difficult to interest investors and money lenders.

2. Investment. A fairly large investment is needed. The capitalneed for a transit undertaking is likely to be quite formidable. In the range of transit properties covered by this handbook, anywhere from 1 or 2 to 100 vehicles may be needed, along with adequate facilities. With new, standard, transit-type buses ranging in cost from $100,000 to $150,000 each, several millions of dollars may be needed to invest in rolling stock alone.

3. Insufficient private funds. The market for sufficient stocks or bonds to meet the needs of the firm may be limited or nonexistent because of the uncertainty involved. Private financing may be extraordinarily difficult.

Conditions Mitigating Risk

The overall national reputation of the mass transit industry will probably hinder the entrepreneur most in attempting to finance a transit business. However, certain points are in favor of transit operation--and these hold true whether the transit enterprise is publicly or privately owned--and may be used as arguments to prove that the opportunities for profitable private operation are quite good. Some of the most powerful arguments include residential density, strong economic activity, and relatively balanced demand.

Residential density. Many areas have a relatively large population of low-income families, with minimal automobile ownership. These people depend on transit for personal mobility.

Strong economic activity. Transit works most easily and efficiently when it can shuttle between areas of fairly high residential density and relatively strong economic activity.

concentration of the residences, work places, and shopping areas of a dependent group makes it possible to provide high-quality service without the need to run extensive transit vehicle miles or to operate through sparsely populated areas. This factor is favorable in serving even those portions of the population that do not fall into the low-income category.

Relatively balanced demand. The peaking of demand at the morning and afternoon rush hours is one of the principal causes of financial difficulty in the transit business. Assets and personnel are required to handle relatively large demands placed on the system for only brief time periods. To succeed, a transit firm must be able to spread its costs over more than just the trip to and from work. Some of the ways demand may be spread more evenly throughout the day are by charters, special services, and off-peak movement of school-children carried under contract to the school districts. Whatever the reasons, they are likely to spell the difference between a profitable private transit system and one that requires public aid.

Publicly Financed Transit

The question of public ownership or public support of transit in the United States always has been controversial. Public ownership, control, or subsidies to private firms appear most desirable under one or more of the following conditions:

1. When there are many external benefits and costs that do not find their way into the farebox as revenue or onto the income statement as an expense.

2. When the service is inherently a monopoly.

3. When public costs of operation are not much different from those of private firms.

4. When there are no private funds available.

Public ownership of mass transportation service may be carried out in a number of ways. Before discussing the means of financing publicly owned transit, it would be wise to examine the major forms of public ownership.

Municipal Department

Placing a publicly owned transit system within a municipal department is very common in small or medium sized cities. The municipal transit department usually is a separate entity, created solely to provide mass transportation and operating on an equal footing with the other departments of the municipality. In some communities the transit undertaking may be part of another department, most often the department of public works.

Municipal transit departments often are controlled by the city council, which acts as a board of directors would act in a corporation. Unless state law dictates otherwise, the city council controls rates, fares, and services. It would also make decisions on matters of overall policy.

In some communities, the transit department may be placed under a transit board. In most cases, the board is appointed by the mayor with the approval of the city council, often with the requirement that the board be bipartisan. The situation varies from community to community, but generally the transit board is free to run the transit system without recourse to the mayor or city council. However, in some cases, a transit board may be responsible to the mayor or the city council.

As with a private transit firm, the governing body appoints a general manager to handle the day-to-day operations. The municipal department should operate much like a private firm or other form of publicly owned transit operation. At times, however, the municipal transit department can rely on other municipal departments to provide many of its needs. Legal services can be handled by the municipal attorney, and financing may be arranged by the municipal controller. Servicing and maintenance of transit vehicles might be performed by the municipal garage. Purchases and payroll may also be handled by other parts of the municipal organization. This sharing is a decided cost advantage. Unfortunately, unless the transit board or management is alert, sharing services may also obscure the real costs of transit operation. Such an arrangement may also preclude the transit manager's control over such operations. Another possible disadvantage is that the transit system may become a haven for political hacks or be used as a reward for political service to persons without any knowledge of transit.

One of the major constraints of transit under a municipal department is the limitation on the geographical area it serves. Because the department is very much an arm of the municipality, usually financed directly out of municipal funds, it is awkward to operate in jurisdictions outside the municipal limits.

Another deficiency, particularly evident in the area of finance, is that, in states granting only limited bonding authority to a municipality, the transit operations are bound by the overall limitations on the municipality. With constant pressures on the municipality for many other public services, the transit operation may suffer from fiscal malnutrition.

Separate Public Transit Agency

A transit authority--like other public authorities--is a specially incorporated government body designated to carry out a specific, revenue-producing enterprise. As a rule, the authority only has those powers granted to it by the governmental body that created it. However, once it has been established, the authority typically has considerable freedom to operate within its particular area without intervention by other agencies of government, including the one that created it.

The laws of the particular state in which the transit service will be operated specify the powers and restrictions that a transit authority must function under. The laws regarding transit authorities vary from state to state; therefore, it is essential that the applicable state's statutes be checked early in the process of establishing a public transit operation.

In addition, some states also allow the formation of transit districts. There is no uniform definition of transit district or transit authority. Generally, a transit district covers a larger geographical area and may have increased powers of financing relative to those of transit authority. In states which provide for the establishment of transit authorities and transit districts the determination of which type to establish may be specified by the population of the area under consideration. Once again, the applicable state's statutes should be reviewed early on in the process of establishing a public transit system in a community.

A separate public transit agency has some general advantages over the municipal department arrangement that has made its use attractive in many states. The following discussion generally applies to both transit authorities and transit districts. For convenience we shall use authority to refer to both transit authorities and transit districts.

Funding. On the local level it may be easier to finance transit by means of a transit authority than by other means. Many states impose a constitutional debt limitation on lower governmental jurisdictions, and authorities are often created to circumvent these limitations. Many authorities are given the power to issue revenue bonds, which normally do not fall under the debt limitations imposed upon the municipality in which the authority functions. Also, transit authorities often have independent taxing powers, which make them relatively free to pursue activities with little political interference and to provide service deemed best by the board of directors.

Independent administration. The authority provides an independent means of administering what essentially is a commercial, but not necessarily profit-making, enterprise. The service provided by the authority generates revenues that can be used to offset expenses, and the relative independence of an authority enables it to function in a more businesslike manner than can the municipal transit department, which typically is more politically oriented.

Multiple jurisdictions. Transit authorities are often able to overcome the problems caused by the many complex political units that comprise most metropolitan areas, even those of modest size. This virtue is particularly true of the transit authority as opposed to the municipal department, because transit needs and services should not be limited by the artificial political boundaries of the city, but should serve the whole of the urbanized or rural area. Multiple-jurisdictional transit authorities are often desirable and are made relatively easy to accomplish through the authority device, as opposed to the municipal department.

Establishing a Transit Authority

Organization

Board of directors. At the top of an organization of a transit authority is the board of directors. The directors usually are appointed by either the mayor and/or the city council. If all members are appointed by the mayor, approval of the city council is often required.

If the transit authority is intended to cover a number of governmental jurisdictions, the board should have members from several of the constituencies, selected according to a formula included in the legislation creating the district. Most formulas are based on the population of the area or on a combination of population along with at least one representative from each separate jurisidiction. However, if many jurisdictions are involved, the board may be of an unwieldy size. Whenever possible, representation should be adjusted so that the total number of board members does not exceed nine.

General manager. Like any board of directors, the transit board establishes long-range goals and sets necessary policies for meeting those goals. The day-to-day transit operations are handled by the general manager, who is appointed by the board of directors. The general manager and any assistants should have as free a hand as possible in handling operational matters. It is essential that board members not interfere in routine matters of management; the board's function is overall guidance, not supervision of operations and matters of detail (see Chapter 4).

Contract management firm. The transit authority may choose to hire a management firm to operate the system. Under such an arrangement, the authority contracts with a firm for a given time period--typically three years--to provide a given service and to manage daily operations. The assets used in providing service are generally owned by the transit authority. The management firm is usually paid a flat fee for its services.

There are a number of perceived advantages in hiring a management firm. The most important is the assurance of having truly professional and experienced management. Good management is always a scarce resource. A management firm guarantees the availability of skilled, professional transit managers who are backed by a central staff that provides specialized staff support in such areas as marketing, labor negotiations, maintenance, and the construction of facilities.

A management firm relieves the transit board of the responsibility of dealing with many mundane matters, but it also may take away some degree of control during the life of the contract. Also, management by contract may be costly, in that the managing firm is in business for profit. The taxpayers supporting a transit authority may take a dim view of guaranteeing a profit to a private firm for operating what probably is a money-losing enterprise. At the same time, it would appear that the overall package of management provided by a professional management firm, including central staff support, may be far better than that available through the use of purely local resources. It is difficult for smaller communities to attract the best managers and afford to fill the staff functions that need to be performed.

A recent study found that the relative performance measured by several indicators of efficiency was no better for transit properties using management firms than for transit properties that did not use a management firm [3]. In most traditional contract situations the management firm is not exposed to any financial risk as a result of its management activities during the life of the contract. As stated above, most contracts are on a fixed fee arrangement. The management firm is paid a specified amount per year for its services regardless of the level of performance of the transit system. (It is noted elsewhere in this handbook that the measurement of the quality of performance of a transit system can be a difficult matter.) The only incentive to a management firm is that its contract might not be renewed upon expiration by the transit property's governing board if the firm's management performance is not considered satisfactory. One way to promote efficiency is through the use of incentive contracts. Under such an arrangement the financial compensation to the management firm is based upon the performance (however measured) of the transit property while under the administration of the management firm. It is also argued that in most situations the management team at a transit system represents only a small portion of the total staff and that the transit property still acts as a public agency.

The concept of "turnkey" systems has gained increasing popularity in the public transit industry. Under a "turnkey" arrangement a community (local government) contracts with a private firm to provide the complete transit package, instead of just management services. The firm supplies the assets (vehicles, maintenance facility, etc.), the operating personnel (drivers and maintenance staff), and the managerial employees. In this way the management firm has a greater stake in the success of the transit service and also has greater control over the provision of that service. Thus, a better quality and more cost efficient transit service is provided to the community.

Characteristics of the Board of Directors

The appointing officials should carefully consider the skills and abilities required of transit board members. It is as important to select persons who can help channel public opinion to the board, as it is to enlist those with some specialized skill or knowledge.

Size. The transit board should not be too large; nine members is about the largest manageable size. Boards of more than nine members are unwieldy; however, boards with fewer than five members may be too small as a wide variety of skills and representative community views are necessary.

Influence. Different skills on the board are needed at different points in the life cycle of a public transit agency. For example, the first-generation board may need far different skills than subsequent boards. At the time of the transit authority's initiation, it would be wise to have board members who are particularly skilled in financial matters as well as in communicating the objectives of the authority effectively to the public. They should also have sufficient grasp of the community's needs and its long-range goals, so that the goals for transit fit within the framework of what the city wants.

The first board selected may be the easiest to fill with the "movers and shakers"--the influential and progressive leaders of the community at large. The issue of transit is apt to loom large at the starting point, and the best talents of the community may be willing to give their time as a public service to help transit. When the transit authority or agency is well-established, major community leaders may wish to move on to other challenging activities. Subsequent boards may be less talented or have less community influence. If an existing transit authority needs stimulation, the appointing officials may wish to place top community leaders on the board to provide the needed prestige and influence.

Awareness. Whether on the initial board or subsequent boards, transit board members must do their best to understand the intricacies of transit. They must understand that their job does not involve participating in day-to-day management decisions. Board members should be skilled in listening to the public's opinions and needs and communicating them to transit management. In formulating policy, the board should fine-tune itself to meet public needs at given points in time without losing sight of long-range objectives. To do this, the board must be aware of what tasks and opportunities lie before it, and how it must educate itself, shape itself, or otherwise meet its challenges. This also means that board members must convince those who have the power of appointment of the need for certain types of persons as board members at different points in the life of a transit agency.

Representation. On the matter of representation, it is not always feasible to try to represent every constituency on a board of reasonable size. Where broad communication and representation of public opinion are found necessary, a large, representative advisory board can be appointed to provide community input to the board of directors.

The following, in no particular order of priority, are suggestions for persons to include on the board:

- A representative of the local news media.

- A representative of local retailers.

- A representative with a legal background.

- A representative experienced in accounting and cost-control functions.

- Representatives of ethnic and racial minority groups.

- Representatives from various areas of the metropolitan area, including those outside the city limits who are served by the transit operations.

- A representative of a planning agency.

- A woman who will stress women's needs.

- A representative of business with the knowledge, the power, and the connections to bring about successful acceptance and operation of a public enterprise. (If possible, a local power broker should be included.)

- A senior citizen.

- A representative of youth.

- A representative of the handicapped.

- A representative of central business district's interests.

Obviously, many boards will not and should not contain enough members to provide all these viewpoints, but every attempt should be made to have relevant groups represented. For example, in an urban area with many retired senior citizens, it would make sense to include a representative of that group. In a city with a large ethnic population, it would be wise to have major ethnic groups represented on the board. At least one elected official should be included to represent, in a sense, a cross section of citizens.

The problem of representation of all interested parties can be solved through the appointment of a relatively large advisory committee, which would meet regularly with the board to offer advice and convey information to the legally constituted board. The advisory committee members could act as a sounding board and could also convey information to their particular constituencies.

The two-way transmission of information would also increase public knowledge and input, and help raise the credibility of the transit agency.

The representation of pertinent constituencies and areas of knowledge can also be achieved by requiring that certain persons be ex officio board members. This group might include the mayor, the president of the city council, the municipal planner or the municipal engineer, the municipal attorney and/or the municipal controller, and, of course, the general manager of the transit operation. Whether they are voting or nonvoting members, these persons can bring knowledge and expertise to the deliberations of the board.

Chairperson. It is debatable whether a transit board should select its own chairperson. When the chairperson is selected by an elected official, some of the prestige of the elected official is inescapably transferred to the appointee. A board that elects its own chairperson is apt to have a better idea of the qualities of leadership that are necessary at certain stages in a board's lifespan. Whatever the means of choice, selection of a chairperson is not a task to be taken lightly. In addition to being a good spokesperson, the chairperson should have leadership qualities, a broad knowledge of the community and its hopes and needs, an acquaintance with the important officials and power brokers in a community, and sufficient time and interest to devote to what may be a difficult task.

Term of office. The issue of the term of office for board members is an important one. It is best to have members serve for a relatively long period of time, surely no less than four years, and probably longer. For example, a board of nine members might have a nine-year term of office with a new board member appointed each year. This would tend to ensure experience on the part of the board; turnover could be assured by mandating that a board member could only serve one term. Such a practice could guard against quick turnover of a board for strictly political purposes. On the other hand, care must taken in selecting board members, because those who turn out to be unproductive are likely to be in place for a long time.

The "Ideal" Institutional Establishment

It is difficult to suggest an "ideal" institutional establishment for a publicly owned transit system, because of the variety of state laws affecting such agencies. In some states, it may be impossible to approach the ideal under existing statutes. In general, however, the following guidelines should be followed:

1. The transit agency's jurisdiction should cover the entire metropolitan area, with freedom to expand service as needed.

2. The transit agency should have both taxing and bonding authority.

3. There should be no mandate to cover all costs from farebox revenues.

4. Directors and managers should have complete freedom to establish and change routes, schedules, and fares.

5. School and human services transportation should be paid for by the appropriate agency; it should not be a cost borne by the transit agency.

6. The transit agency should have as much control over its operating environment as possible (roads and streets, bus stop zones, traffic signals, and so forth).

7. The transit agency should have power to contract with other levels of government, and to receive financial support from them.

Sources of Funds

Overview

Revenues to cover the expenses of operating a public transit service will likely come from a number of different sources. Passenger fares, sales taxes, and property taxes are some sources of transit revenues. There are several reasons for using multiple funding sources. One is the belief that transit service benefits the entire community, not just the direct consumers (riders) of the transit service. Real estate developers benefit from the access to their property provided by various forms of transportation, including public transit. Merchants similarly benefit from such access to their retail establishments. Residents of high density areas may benefit from reduced automobile congestion. Employers may be able to reduce the size (and therefore the cost) of employee parking lots through employee use of public transit.

As the benefits of public transit are shared by both users (riders) and nonusers it would seem equitable to seek payment for the cost of providing the service from both groups. The question of the allocation of the benefits, and therefore, the costs, of public transit service is a very difficult one to answer. The measurement of benefits is subjective at best. What should be remembered is that the benefits of the transit service are shared by all and that the cost of providing the transit service should be similarily shared. The exact division of the different sources of revenue will likely be determined by various attributes of the local community. The commitment to public transit of the local and state governments, major employers, merchants, and developers and the general attitude of the citizens of the community will affect the mixture and relative share of the transit funding mechanisms that are used.

Public assistance or government assistance for transit recognizes that nonusers of transit service also benefit. Therefore, such nonusers should help pay a portion of the cost of providing transit service. Generally this contribution is collected through a tax.

This source of funding can come from a variety of options. First of all, the source of the funds may be at several (and probably a combination of) different levels of government. Federal, state, and local are the primarly divisions of government from which assistance might be available. Funding assistance might come from the general revenues of the governmental unit. In other instances, funding assistance may be obtained through a dedicated tax, the proceeds of which are used only for some specified purpose such as transit service.

The federal government provides financial assistance to transit through a program administered by the Urban Mass Transportation Administration (UMTA) which is part of the Department of Transportation. The federal assistance program is detailed later in this chapter. In addition, a number of states provide financial or other assistance to transit operations within the state. It is beyond the scope of this handbook to detail the assistance available from each state. Your state department of transportation (or comparable agency) is a good source of information on this matter.

The focus of this handbook is on the operation of a transit service at the local level. We therefore concentrate on revenue generation options available at the local level. It is assumed in this chapter that mechanisms by which the federal and state level governments raise their portion of the public assistance funds for transit are beyond the direct control of the local transit property. In some states, the state government collects the revenues statewide from a dedicated tax (such as a portion of state sales tax receipts) and then distributes these funds to local transit operations. Through collective action transit properties might be able to achieve a similar arrangement in states currently lacking a funding mechanism for transit assistance.

An important form of aid to publicly provided transit is subsidies, from local and/or state sources, used in conjunction with federal funds. The use of municipal revenues either for publicly or privately owned transit firms has become common in recent years. Sometimes, the municipality will merely agree to pick up the deficit of the transit operation, whatever that might be. At other times, the subsidy is for a specified amount each year. Typically, the amount involved is negotiated, based on the needs of the transit agency (or subsidized private firm) and the funds available from local taxes and other sources.

Federal, state, and local revenues for private firms, at least in the United States, have generally been used as an interim means of providing funds for transit while a long-run solution is being sought. Indeed, unless the transit operation is very small or the sum needed a very modest one, smaller cities usually cannot afford to subsidize a transit operation out of general tax revenues. The use of a subsidy to keep a financially troubled private transit system in operation is a wise move in the short run to prevent service from deteriorating seriously. The best long-run solution, however, is some form of public institution that can support itself out of a combination of farebox revenues and taxes.

There is no best answer to the question of whether to subsidize a private operation. Local circumstances will dictate what is to be done. An important point to remember is that subsidies are not handouts, and should not be thought of as negative. The government is paying to provide service that will benefit local citizens.

Fares

Consumers of the transit service pay for a portion of the cost of that service through the fares charged. Passenger fare revenues may be generated in a variety of ways. Cash fares and prepaid passes are just two examples of such user-fee revenues. Chapter 12 provides a more extensive discussion of this topic. The passenger fare is a user fee, as is the toll charged to use a toll road or bridge.

Recovery of the entire transit service's operating and capital costs through the farebox is extremely difficult except in isolated specific situations possessing ideal characteristics. Thus, sources other than passenger fares will also have to be relied upon for funding public transit service in a community.

Local Tax Sources

In selecting a tax source for transit funding there are certain principles which have been generally accepted as criteria of a fair taxation method [1].

1. Adequacy of financing. Sufficient revenue must be generated from the tax to cover the required subsidy for the transit service.

2. Equality of treatment. Individuals in similar situations should be treated in a similar manner by the taxing mechanism.

3. Relationship to benefits. Tax assessments should be related to the benefits received from the use of publicly provided services.

4. Ability to pay taxes. Tax assessments should be related to the financial capability to pay such taxes.

5. Minimal cost of tax collection. Tax funding mechanisms which require minimal effort to implement and administer should be selected.

Property taxes. Property taxes have been the usual means of financing local public undertakings for many years. If property taxes have no other merit, at least they are understandable and have the blessing of being familiar to taxpayers. Collection procedures are usually well-established, and the concept is not complicated. Property taxes are, therefore, the probable foundation of public support of transit in most cities.

On the minus side, property taxes often do not reflect changes in cost or revenue needs quickly or effectively. Also, because they are usually paid in one or two installments they seem to impose a very visible burden upon the taxpayer. Despite the fact that they are generally levied throughout the community, property taxes are typically unpopular, even though they may be generally fair in application. Adding to their unpopularity is the regressive nature of property taxes and the burden placed on those with fixed incomes, such as the retired elderly.

It is difficult to generalize the means of levying taxes on an areawide basis through the transit authority; this matter depends largely upon the powers granted to such institutions by state laws. If an authority cannot levy taxes upon communities outside the boundary of the governmental body that created it, it may be able to achieve the same end by entering into contracts with other municipalities to provide transit service in those communities. The agreement then would permit those areas to levy taxes to meet contract obligations within the limits of the law.

Income taxes. While not yet commonly used in the funding of municipal undertakings, the income tax is another means of providing funds for transit and other public purposes. This tax category includes both employer payroll taxes and employee income taxes. The freedom of a local government or authority to use such taxes usually depends upon state or municipal laws. One of the strongest points in favor of income/payroll taxes is that they are usually levied in biweekly or monthly installments as deductions from paychecks or on an employer's biweekly or monthly payroll amount. This should result in a steady flow of revenue into the tax coffers. The installment plan collection also removes some of the sting from the imposition of the tax--something that is certainly not true in the case of most property taxes.

The income/payroll tax is also fair because it tends to fall most heavily upon those who are most able to pay. This may be particularly important in a transit undertaking that is obliged to pay a large proportion of its costs out of the farebox. If the majority of riders are from low-income groups, they are not as heavily burdened by what is, in essence, dual taxation--the farebox and income tax.

Sales and excise taxes. Once again the ability of a local government to use a tax (or taxes) of this type will depend on the laws of the state in which the community is located. Sales and excise taxes can take a variety of forms. Some taxes apply to most items and services with only a few exemptions from the tax. Other taxes are selectively assessed on specific products, such as alcoholic beverages and tobacco. Generally a sales or excise tax is relatively easy to administer. Usually this form of tax responds positively to inflation (tax receipts will increase). However tax collections will decrease if consumption of the taxed item declines because of other factors such as reduced demand for the item.

Two arguments militate against the use of sales or excise taxes for funding transit. First, these taxes are frequently regressive: persons with lower incomes pay a higher percentage of their income in such taxes than do persons with a higher level of income. This inequity can be somewhat reduced by exempting purchases of basic necessities (such as food and medicine) from the items subject to the sales tax. Second, depending upon the item to be taxed, there may be little relationship between the payment of the tax and receipt of the benefit of transit service. An example is an excise tax on cigarettes; some smokers are nonriders, and not all transit riders are smokers.

Taxing difficulties. The difficulty with using any tax is that it may become unpopular. Great care has to be used in promoting the application and use of such taxes to avoid alienating the public. An overt transit tax that is considered to be a nuisance may give transit a bad name in a community.

The argument in favor of a dedicated tax is more acceptable if some relatively close tie-in can be demonstrated between what or who is to be taxed and the benefits to be gained. That is, a wheel tax levied against automobiles for the purpose of improving streets, while unpleasant, is at least dedicated to providing better streets for those who have automobiles. The connection between the taxpayer and the individual who benefits is quite clear, and taxpayers are less likely to resent the expenditures they must make.

If a dedicated tax (or taxes) is used, probably the wisest course is to call the dedicated transit tax, however imposed, a "mobility tax," with the proceeds used for the general enhancement of mobility. Most of the proceeds would go to offset any losses of the transit operation or to provide capital for transit operations. Other portions of the fund could be used for purposes generally related to mobility--to provide stop signs or traffic signals, to install turn lanes at intersections, to provide off-street parking, or to help support special services for the elderly and handicapped. Offering broad benefits to both transit users and nonusers should make the dedicated transit tax more acceptable to the public.

State Aid for Mass Transportation

A number of the states provide aid for mass transportation, either in the form of financial contributions or by creating the enabling legislation for local action. In some cases, state aid is substantial in dollar amounts and may offer significant leverage when combined with local funds and used in conjunction with federal grant programs. Furthermore, as the perceived role of the federal government in transit funding changes, state aid will increase in importance.

Financial aid. Historically most state transit programs have been tied to federal aid programs. State funds are typically used to match a proportion of the required local share of a federal grant. A state may, for example, agree to pay up to one-half of the local share for federal capital improvement grants or other types of federal aid. The administration of a state aid program may be quite simple, with aid being given for projects that meet federal approval. The same application prepared by a transit agency for federal funds may be submitted to the state, greatly reducing local paperwork requirements.

On the other hand, the state may set its own standards, rules, and regulations for financial aid and require separate paperwork. Whatever practice is used will depend upon the goals and objectives established by the state for its program to help mass transportation. Again, as the role of the federal government in transit and programs changes, so too will these arrangements.

Some states may have a portion of their aid program independent of federal aid programs. Among these independent state programs are purchase-of-service agreements by which the state may use its funds to provide operating or capital subsidies for transit. States may also provide a program of aid for human services programs involving either standard mass transit or special service.

Enabling legislation. Many states may not give direct financial aid for mass transportation, but will provide significant help through the passage of enabling legislation. Such legislation may provide for public ownership of transit systems, the establishment of transit authorities, and the creation of transit districts with taxing powers. Enabling legislation can also be used to provide a variety of local option taxes to support transit.

Based on the experience of states that provide aid for transit through enabling legislation, the best advice appears to be to provide a wide spectrum of local option taxes that may be used to support transit and related activities. In some states, transit districts may be given authority and power to tax property only. The property tax is not popular, as discussed earlier in this chapter, and it probably is much easier to gain taxpayer support for transit if the particular source of support may be chosen from a wide variety of levies. Some form of local income tax may be the least regressive form of taxation, although a local sales tax may be somewhat easier to put through a referendum procedure.

The sources of revenue used by states for state aid programs in transit have been quite varied. A piggyback on the license fees for automobiles or on the gasoline tax would take advantage of collection methods already in use. Some states are in the process of revising the state gasoline tax, typically collected on a gallonage basis, because the revenues have not kept pace with rises in the cost of highway construction and maintenance. The gallonage tax is unsatisfactory in that it does not reflect inflation or the higher price of crude oil (as would a sales tax on gasoline). A gallonage-based fuel tax is also affected by decreases in gasoline consumption due to the impact of federally mandated improvements in the average gasoline mileage of new automobiles and the changes in driving habits as part of fuel conservation efforts. Many states face relatively static gas tax revenues. When states are considering either raising the gallonage tax or replacing it with a more realistic sales tax on gas, the time is ripe for including support for transit in the gas tax.

Other special levies may be attractive for financing transit activities or special portions of transit programs. For example, in Pennsylvania the state lottery is used to reimburse local transit agencies for the cost of moving senior citizens free of charge. A liquor tax is another possible source of funds. Numerous other sources for a special tax to aid transit are found in several publications which discuss the subject in greater detail. See, for example, <u>An Inventory of Innovative Financing Techniques for Transportation</u> by Gary T. Johnson and Lester A. Hoel.

It behooves local transit agencies to work as closely as possible with members of the state legislature and the state government to assure transit its rightful place in the state's transportation program. A unified front on the part of the transit agencies throughout the state is an absolute necessity in such a process. To achieve unity, a strong, well-organized state transit association is essential.

Federal Funds for Mass Transportation

Direct federal financial assistance to urban mass transportation began in 1961. A review of the ensuing legislation and programs is beyond the scope of this handbook. The various federal programs have changed substantially over the years, both in terms of scope and size. What is of concern here are the most recent revisions to the federal laws pertaining to urban transportation. Given that such laws and programs are subject to change, anyone seeking to use the federal government for financial assistance for transit service should make sure that they are dealing with the most current statutory provisions. One should also be aware of any proposed legislation that would alter any of these provisions. The office of your elected federal representatives (senators, congressional representatives) or the regional office of UMTA (see Appendix 3A) may be of assistance in providing information about such matters.

The most recent major changes to federal programs pertaining to mass transportation are contained in the Federal Mass Transportation Act of 1987 (Public Law 100-17). The major federal programs by type of aid provided are described in the following section.

The revenue source for a portion of the federal program which provides financial assistance to urban transit is the Mass Transit Account of the Highway Trust Fund. Of the nine cent per gallon federal motor fuel tax, one cent is allocated to the Mass Transit Account. The size of this fund depends upon gasoline sales to motorists and will therefore vary with gasoline consumption levels. The Mass Transit Account is authorized to provide up to $1.4 billion per year for transit purposes by 1991.

<u>Section 3 (discretionary capital program)</u>. The federal government will pay up to 75% of the net project cost for capital improvements. Only legally authorized public bodies (states, municipalities, political subdivisions, public commissions, and so forth) in urbanized areas (places with populations of more than 50,000) are eligible to receive capital grants or loans. Private transportation companies may participate in federally aided capital projects, but they must do so through a public agency. Capital needs for transit agencies in nonurbanized areas (with populations of less than 50,000) are met through Section 18 of the federal program (see below).

The kinds of projects eligible for capital grants and loans include: acquisition, construction, and reconstruction or improvement of facilities and equipment for use in mass transportation services. This includes purchase of buses or other transit vehicles, construction of garages and other maintenance and storage facilities, offices, shelters for passengers, parking lots, terminal structures, and equipment for the facilities mentioned previously. Capital grant funds may also be used for the acquisition of the assets of a private operator. The proceeds of the capital grant may be used for the purchase of land or to rent or lease facilities or personal property needed for an efficient and coordinated transportation system. Remanufacturing and major refurbishment of rolling stock may qualify for capital aid if the life of the transit equipment is materially extended; such projects are usually handled under Section 9. Recipients must certify that they have the capability to maintain the facilities and equipment that are to be acquired through the proceeds of federal financial assistance. Long term financial planning is now a requirement for all capital projects.

Low interest rate loans can be obtained under the capital program, but they are used relatively infrequently because a loan is obviously less attractive than an outright grant. Besides, since the requirements are the same for a loan as for a grant, there is no real incentive to apply for a loan.

Section 3 has undergone several changes in the past few years. Before 1983 the federal government provided 80% of the net project cost for capital improvements in urbanized areas. In addition, UMTA has relied on Section 9 (see below) to finance capital projects and has used Section 3 funds to supplement Section 9 money for extraordinary capital improvement projects. Indeed, Section 3 is to be used primarily for large scale capital projects, such as rail rapid transit systems.

Section 6 (research, development, and demonstration). Section 6 projects are intended to develop techniques and methods that can be of aid to transit professionals in managing the nation's public transit systems. Such projects and studies are normally carried out by UMTA-engaged contractors who specialize in various types of research activities. Thus, the primary benefit of the Section 6 program to a local transit operator is not as a source of financial assistance. Rather, the technical assistance program is a means of obtaining useful information on various management aspects of transit service provision. It is possible, however, for transit properties to participate in some demonstration projects if the effort is of significant interest and the project fits into a general scheme of research at a particular time.

Section 8 (planning and technical studies). Under this program, the federal government will pick up 80% of the cost of transit planning; local and state agencies must pay the remaining 20%. While this is a discretionary program, a sizeable proportion of the funds are allocated to urbanized areas and to states by a nonstatutory formula. States are allocated funds to do the planning for cities in nonurbanized areas (with populations of less than 50,000).

Section 9 (urban formula grant program). A complex formula is used to distribute the federal funds under this section. The urbanized area's population and transit service characteristics are among the factors considered in determining the amount of the formula grant. For capital projects the federal government will provide 80% of the net project cost. Under various restrictions a recipient may choose to use Section 9 money for operating assistance (referred to as "operating projects"). If the money is to be used to cover operating costs, the federal share is 50% of net project cost. Certain maintenance efforts and rolling stock refurbishment and rehabilitation projects qualify for federal capital support. Within a state it is also possible to move Section 9 money around between transit properties under certain circumstances. This section of the act has been amended a number of times and is likely to be amended again as Congress attempts to juggle scarce resources to meet the basic needs of the transit industry; as a result there are caps and limitations imposed on certain uses of the funds and other variables that may be complex and confusing. Transit managers should work very closely with the UMTA regional office to determine the precise amount of federal money for which their property is eligible and the uses to which it may be put. Managers should also work closely with whatever transit agency exists on the state level to maximize the usefulness of the Section 9 program. The UMTA external operating manual was a valuable source of information on the grants procedure in the past but was badly in need of updating; the manual may be updated by the time this is read. The best advice is to work closely with the UMTA regional office and the UMTA staff person responsible for grants to the property in question; this will assure compliance with all the many rules and regulations and the frequent changes that occur because of modifications in the law or the policies interpreting the law.

Section 10 (managerial training). This program has also undergone significant changes in recent years. Currently, UMTA Section 10 Training Fellowships are no longer available to cover up to 50% of the cost (which included tuition and transportation expenses) of attending an UMTA-approved training course. The purpose of this program was to help current management personnel further develop their skills to become more valuable to the transit enterprise for which they work. The majority of these grants were used for short courses, institutes, workshops, and other specialized types of programs. There is still money available for Section 10, but how that money will be spent is still in doubt. UMTA may decide to fund "single agency grants" (SAGs), in which case grants would be available to assist a single transit property in conducting on-site training sessions for its own employees.

Section 11 (university research and training). These are grants to institutions of higher learning primarily for research purposes, but also for aid in training young people for careers in mass transportation planning, management, or some other related field. Under the 1987 transit act University Research Centers are to be established in each of the 10 federal regions; these centers may be able to do useful work in conjunction with local transit properties.

Section 16(b)2 (nonprofit organizations). Capital assistance is available for equipment used in human services transportation. The federal government provides the assistance to nonprofit, private corporations, which receive 80% of the cost of acquiring equipment for services to the elderly, handicapped, or those who otherwise need some sort of human service transportation. Such agencies as the Red Cross, the Heart Fund, Easter Seals, and local community groups that provide various kinds of aid are eligible to receive such funds.

Section 18 (small urban and rural formula grant program). This program uses a formula based on the proportion of the nonurbanized residents in a given state to nonurbanized residents in the United States as a whole. The sum of money derived by this formula is made available as a block grant to the state and may be used only in nonurbanized areas. An agency in each state is responsible for administering the program and distributing the federal transit assistance funds within that state. If used for capital improvement purposes the federal share is 80% and the local share is 20%; operating aid is available on a 50 percent federal, 50% local basis. Section 18 monies may also be used for technical assistance, planning and research activities in nonurbanized areas.

Highway trust fund. Highway trust fund money from the Federal Aid for Urban Systems (FAUS) category may be used for transit capital improvement purposes. It also is possible to use money set aside for the interstate system for mass transportation capital purposes; the money may also be used for non-interstate highway projects. Such a use of interstate system money has been commonly undertaken only where it is difficult or impossible to build a road because of opposition to highway construction. Rather than forego the funds, a public transportation improvement is made. This use of interstate switchover funds has been made most notably in larger cities, such as Boston and Philadelphia.

Concluding comment on federal funding sources. The federal mass transit program, despite some ups and downs, is solidly established and has strong congressional support. The program is still under development and the material presented here may become obsolete in specific details. Transit properties interested in using such funding sources should contact UMTA for current information. In addition, funding assistance may be available from your state government. Thus, the state department of transportation (or comparable agency) should also be contacted as part of any effort to obtain financial assistance for a transit system.

Bonds

Bonds issued by public bodies for transit purposes are of two general types: general obligation and revenue; there are also several special categories.

General obligation bonds. General obligation bonds are backed with the full faith and credit of the taxing power of the issuer. There is no dependence upon transit revenues to pay off fare-backed bonds, so that pressure is less likely to be placed upon the farebox.

The problem with general obligation bonds is that, in many instances, they must receive voter approval through a referendum. If the sum involved is large, gaining approval may be difficult. Approval is also difficult if a community is experiencing one of the periodic taxpayer revolts in which any referendum item that is bound to increase taxes is also bound to fail at the polls. If the referendum route is to be used, it must be carefully timed, and a strong campaign must be developed to sell the bond issue to the voters. Some of the techniques reviewed in Chapter 2 should be used.

Revenue bonds. Revenue bonds are used when the transit operation is revenue-producing and may be expected to pay off its debt through the farebox. The advantages of revenue bonds are:

1. The users help pay for the facilities rather than imposing a burden upon the entire community and the general taxpayer.

2. Public agencies that overlap political boundaries can use these bonds more easily than forms of debt obligation that rely upon the property tax.

3. Usually, bonds can be issued without voter approval.

The issuance of revenue bonds requires that money be placed in a sinking fund for repayment of the bonds. Revenues, therefore, must be sufficient to cover operating costs as well as the sinking fund allotments. In a time of greatly increasing cost, it may be difficult to hold fares within reasonable levels. Since the payment of revenue bonds is based on the revenues earned by the undertaking, they are slightly more risky than general obligation bonds. Therefore, the rate of interest required for revenue bonds is usually higher than that required for general obligation bonds. Because few transit operations have sufficient revenue to cover even operating costs out of the farebox, fare-backed revenue bonds are generally impractical.

An alternate arrangement has arisen whereby the proceeds of a specific tax such as a local sales tax are dedicated to repay the bond obligation. Revenue bonds do not carry the full faith and credit of the issuer. Repayment sources are limited to the proceeds from operating revenues of the project or from the dedicated tax.

Special assessment bonds. Sometimes special assessment bonds may be issued. In this situation, the debt is paid off by a special assessment on property owners who stand to benefit in a more than ordinary manner by the service provided through the funds raised from the bonds. In the case of the small-scale transit operation, assessment of special bonds might be used to finance the construction of a downtown terminal building, if downtown merchants and business owners were expected to gain special benefits from the presence of such a terminal. Downtown properties would then be assessed at a higher rate than other property.

Municipal assistance bonds. A governmental body might float a bond issue for transit because the city may be able to procure a lower interest rate than a public transit operation that is only empowered to issue revenue bonds. The public transit enterprise would then reimburse the city, which, in turn, pays off the bonds. Even if a transit agency can issue general obligation bonds, the municipal bonding route should be followed if a municipality is able to issue bonds at a lower rate of interest.

Vendor Financing

This form of long-term financing is usually available from equipment manufacturers for use in acquiring transit vehicles. The loan is secured by the equipment being purchased and is normally repaid from operating or public assistance revenues.

Private Leasing

This is a commonly used means of providing long-term financing for capital assets (equipment, facilities, etc.). Under such a lease-purchase arrangement the private (for-profit) firm owns the equipment which is purchased using tax-exempt revenue bonds. The bonds cover most of the purchase price of the equipment. The transit property leases the vehicles, with the lease payments going to meet the interest and principal payments on the bonds. At the end of the lease the transit property becomes the owner of the vehicles. The use of favorable tax laws allows the private investor to develop a beneficial lease/ purchase arrangement with the transit property.

Debt Financing

These sources of revenue depend upon borrowing funds to finance current operations or current expenditures for capital projects. The debt is then paid over a period of time using proceeds generated by the project or from future revenues from tax sources. Such debt financing can take a variety of forms. A more in-depth discussion of this topic can be found in the Institute for Urban Transportation's Financial Management for Transit Handbook [2].

Grant anticipation notes. One form of short-term debt financing is through the use of grant anticipation notes. These notes are issued to provide working capital before the receipt of government grants or other types of financial assistance expected from the government.

Tax anticipation warrants. Another form of short-term financing is tax anticipation warrants, which are available to transit authorities permitted to use a dedicated tax. Such a tax is usually assessed and collected one or two times a year. There may be a delay in the transit authority's receipt of cash proceeds of the tax from the agency which collects the tax. A tax anticipation warrant may be issued by the transit authority and repaid with the proceeds of the tax when those monies are turned over to the transit authority.

Other Sources

Non-fare transportation revenues. Operating a charter service or school bus service on a contract basis by the transit system can be a source of revenue. Federal regulations which pertain to recipients of financial assistance from the federal government may restrict the transit property's offering of these types of services.

The leasing of advertising space on transit system vehicles and in transit shelters or stations is another potential non-fare transportation revenue source.

Non-transportation Revenues. This category involves revenues that are generated from activities performed by the transit system which are not associated with the provision of transit service by the transit system. Performing maintenance work on vehicles not owned or used by the transit system is one possible source of such additional revenue.

Preliminary Steps

Before applying for federal aid to mass transportation, management would be wise to become acquainted with UMTA and its procedures.

The first step is to establish contact with an UMTA regional office. (The addresses and telephone numbers of the regional offices are listed in Appendix 3A). At each UMTA regional office, there are UMTA staff specialists for the various UMTA program activities. The initial contact with the regional office by telephone or letter should be followed up as soon as possible by a personal visit. A copy of the UMTA external operating manual, which contains complete instructions on procedures involved in making applications for UMTA funds, should be obtained. This large and complex volume may prove daunting to the newcomer, however.

Early in the process, the transit goals and objectives of a city or a transit agency should be brought to the attention of UMTA in writing. As a product of the personal visit, telephone follow-ups, and correspondence, the outline of the particular program for which aid is being sought should be clearly sketched out. The applicant should be in a position to obtain advice and counsel from UMTA officials on the proposed project. UMTA's rules and regulations are complicated and the procedures are often time-consuming. The applicant can ensure the least trouble and quickest processing of paperwork by seeing that everything that is required is done properly and completely. A good working relationship and frequent contact with UMTA officials will be of great aid in getting applications done correctly the first time. The material that follows is designed to help in the application process. It is necessarily short and should in no way be considered a substitute for contact with UMTA or the use of the latest external operating manual.

Federal Aid to Urbanized Areas

For cities with populations over 50,000, aid is provided by UMTA through a relatively complicated procedure, and the advice and counsel of UMTA staff is of critical importance. Planning is a vital element in all UMTA programs and, in the case of mass transportation in urbanized areas, the transit planning process must be carried out in conjunction with highway planning. The first and most important step is the development and writing of a Transportation Improvement Program (TIP), which includes highway and transit elements. Each urbanized area has a metropolitan planning organization (MPO), designated by the governor of the state. It is responsible for seeing that the planning process is carried out.

In each TIP developed by an MPO, there will be an annual element for transit improvement projects that will include operating aid as well as capital improvement projects. It is vital that local transit officials build and maintain a good working arrangement with the MPO.

The planning process carried out by the MPO must be a "3-C" planning process (comprehensive, coordinated, continuing). If planning is not carried out in the proper fashion and certified by UMTA, the urbanized area will not be eligible for federal aid for mass transportation or highways.

As a part of the annual element of the TIP there must be a Transportation System Management (TSM) element. The TSM element calls for low capital cost improvements aimed at making better use of existing facilities and encouraging high-occupancy vehicles. TSM may include such things as reserved lanes for buses during rush hours; "no parking" programs on arterial streets at busy times; installation of "no parking, bus stop" signs; traffic signal coordination; one-way street programs; traffic-free zones; a program of no freight deliveries during the day; or any act that would permit more intensive use of existing facilities at a low capital cost. After the initial planning of these proposed improvements, they must be programmed into the various improvement projects for highways and transit that will be carried out in the years ahead.

Federal Aid to Nonurbanized Areas

The process of grant application planning is simpler for cities of fewer than 50,000 persons. The planning for many, if not most, of these cities is conducted under statewide transit planning grants. By means of a formula, UMTA provides money to each of the states so that it has only to deal with the state government, rather than with many small cities. The state then provides the planning aid by various means to the smaller cities. The state may choose to do the work itself or it may hire consultants. Persons involved in transit in nonurbanized areas should contact either the state department of transportation or the office of the governor to discover which agency handles transit planning for smaller cities.

For a city of fewer than 50,000 inhabitants, only a transit development plan (TDP) is necessary. This concerns transit improvements only and does not involve the highway planning element necessary for an urbanized area. In both urbanized and nonurbanized areas, the plan must be updated regularly and must be certified by UMTA for funding for capital and other purposes.

Critical Points

Cooperation. For urbanized areas, cooperation with the MPO is critical. The MPO is supposed to represent both elected and appointed public officials, planning professionals, and the transit agency. Transit and MPO people have much they can do to help one another, and they should work with each other as much as possible. Transit management should supply the MPO with all necessary information as soon as it becomes available. The MPO should give transit management the information it requires for effective management and marketing of the transit service.

Consultant selection. Great care should be taken in selecting who will do the planning, if it is to be entrusted to a consulting firm. There are many fine consulting firms that will do a good job of planning. Those making the selection must be careful and should not be impressed merely by a firm's reputation; contact should be made with other cities of the same size to learn what experience they have had with various consulting firms. Very large consulting contracts for large cities are often handled well; small contracts for small cities may not receive the same sort of attention and may even fail to gain UMTA's approval.

In selecting who will do the planning, management must carefully stipulate what is to be done, particulary when dealing with firms or planning agencies with little experience in transit planning. The result must be a usable 5-year transit plan that addresses all of the elements required by UMTA. That plan must be updated annually to maintain certification for funding by UMTA.

Grant application. The Section 9 capital grant process is long and involved. After planning is completed, there is a need to establish a program of improvements based on the plans. Once this program has been developed and priorities established, the application for funds must be written to include a host of required assurances, labor protection clauses, and assurance of the provision of the local matching funds necessary under the rules and regulations established by UMTA. After the capital proposal has been accepted by UMTA, the local agency must seek bids from equipment suppliers and contractors on the capital improvements. Then the bids must be approved by UMTA before they can be accepted. Finally, there is the delivery of equipment, completion of construction, or installation of the capital improvement. Section 18 capital grant procedures will probably be equally complex. It is not unrealistic to allow at least 2 years for the process to move from planning to completion of the capital improvement.

It is extremely important to prepare the justification for any capital improvement very carefully. This is especially true if the capital improvement is something other than a mere replacement of existing equipment on a one-for-one basis. Furthermore, great care must be taken to see that all requirements of the application are met before submission of the application.

Public hearing. One of the most frequently troublesome federal requirements is that there be a public hearing and that it be advertised in newspapers of general circulation 30 days before the hearing, with an advertisement once again prior to the hearing. Many places fail to advertise early enough or forget the second advertisement. The hearing transcript must be an exact transcription of the proceedings; UMTA will not accept a paraphrased version. It is best to hire a court reporter for this task.

Labor clause sign-off. Another time-consuming and troublesome factor is the sign-off of the Section 13(c) labor protection clause. This is handled by the U.S. Department of Labor (DOL). After a grant application is submitted to UMTA, that agency will send the proposal to DOL, which will then send it back to the local union for its sign-off. Local transit officials should have agreements reached with the union local while the grant is being put together prior to submission to UMTA. Otherwise, there will be a delay while the union reviews the grant application and an agreement is reached with the transit agency.

Sources for Chapter 3

[1] Cheng, Philip C., Accounting and Finance in Mass Transit, Totowa, NJ: Altanheld, Osmon & Co. Publishers, Inc., pp. 82-84, 1982.

[2] Institute for Urban Transportation, Financial Management for Transit Handbook, (Report No. DOT-IN-11-0011-2). Washington, DC: Urban Mass Transportation Administration, 1985.

[3] Perry, James L., Organizational Form and Transit Performance: A Research Review and Empirical Analysis, (Report No. UMTA-CA-11-0027-2), Washington, DC: Urban Mass Transportation Administration, 1984.

APPENDIX 3A

UMTA REGIONAL OFFICES

Region I

Maine, Massachusetts New Hampshire, Rhode Island, Vermont	Regional Administrator Transportation Systems Center Kendall Square, Suite 921 55 Broadway Cambridge, MA 02142 617/494-2055

Region II

Connecticut, New Jersey, New York	Regional Administrator 26 Federal Plaza, Suite 14-110 New York, NY 10278 212/264-8162

Region III

Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia	Regional Administrator 434 Walnut St., Suite 1010 Philadelphia, PA 19106 215/597-8098

Region IV

Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, Puerto Rico, Tennessee, Virgin Islands	Regional Administrator 1720 Peachtree Road, NW Suite 400 Atlanta, GA 30309 404/881-3948

Region V

Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin	Regional Administrator 300 S. Wacker Drive, Suite 1703 Chicago, IL 60606 312/353-2789

Region VI

Arkansas, Louisiana, New Mexico, Oklahoma, Texas	Regional Administrator 819 Taylor St., Suite 9A32 Fort Worth, TX 76102 817/334-3787

Region VII

Iowa, Kansas, Missouri, Nebraska	Regional Administrator 6301 Rockhill Road, Suite 100 Kansas City, MO 64131 816/926-5053

Region VIII

Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming	Regional Administrator 1050 17th St. Prudential Plaza, Suite 1822 Denver, CO 80265 303/844-3242

Region IX

Arizona, California, Hawaii, Nevada, Guam	Regional Administrator 211 Main Street, Rm. 1160 San Francisco, CA 94105 415/974-7313

Region X

Alaska, Idaho, Oregon, Washington	Regional Administrator 915 Second Ave., Federal Bldg. Suite 3142 Seattle, WA 98174 206/442-4210

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