several general conclusions concerning coastal transit services. These include the following:

1. Transit service at coastal recreation sites is a fairly common phenomenon. Of the 50 coastal urbanized areas in the United States, at least 28 have some kind of transit service at one or more coastal sites; in addition, the survey uncovered 7 nonurban sites. Among the larger coastal urban areas (with populations of 500 000 or more), approximately 75 percent reported coastal transit service.
2. The bulk of transit access to coastal recreation sites is provided by regular transit routes in urban and suburban areas. With the exception of a few characteristic operational problems, these routes appear to be similar in design and operating results to routes in noncoastal portions of the same metropolitan areas.
3. Specially designed coastal transit services display a wide range of design and operating characteristics. This was to be expected, since many of them are experimental in nature. With the possible exception of park-and-ride shuttles in areas in which parking is available in the immediate vicinity of the shore, all types of service reported in the survey can be successful under the right conditions.

The coastal transit survey was intended to identify factors that contribute to the success of coastal transit services and thus serve as a basis for planning guidelines. In these terms, it must be considered a limited success. Although it is not possible to make generalizations about quantitative matters such as the relation between beach use and transit ridership under any particular set of circumstances, it is possible to make qualitative judgments about the factors that contribute to the success of coastal transit services and to identify some of the more important planning and operational issues. This information should contribute to more effective planning of transit services in the coastal environment.

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Emerging Public-Private Partnership in Urban Transportation

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The private sector has been an important actor in local transportation decision-making for many years. However, in recent years, the business community and large employers have begun to take a more aggressive role in identifying transportation problems and implementing programs to solve them. Joint efforts of the public and private sectors in several urban areas are examined. These cases show that successful public-private action can be directly related to the ability of a small group of people, in both public agencies and private firms, to work together; an understanding of the motivation of private firms; the commitment of top management in both public and private agencies; and careful identification of the expectations of program operation. It is concluded that increased private-sector involvement in urban transportation will significantly influence the politics of transportation decisionmaking, the program implementation process, the focus of transportation planning, and skills required for transportation professionals. In addition, a number of questions are raised regarding equity.

World and national events of the past seven years in relation to the supply and cost of petroleum have resulted in a need to evaluate carefully traditional forms of transportation and, perhaps more importantly, to examine closely the institutional relations that have guided transportation planning for many decades. One of the most important characteristics of the emerging urban transportation planning system is the increasing role that the private sector is

playing in identifying and implementing transportation programs--often substituting private-sector action where public-sector agencies had traditionally exercised responsibility. The purpose of this paper is to examine this emerging role of the private sector and to discuss the possible effects of such a role on the substance and form of urban transportation planning. Case studies of private-sector involvement in transportation issues are used to illustrate the characteristics of such involvement.

URBAN TRANSPORTATION AND THE PRIVATE SECTOR: MULTIPLE ROLES AND IMPACTS

In a recent set of essays on business and public policy, several authors explored the origins of the seeming adversary relation between business and government in the United States and concluded that leaders of business and government must adapt to a changing political and economic environment by learning to live and work with each other (1). The underlying cause of this conflict, it was argued, was the "massive new penetration [by government] into all manner of heretofore private economic activity" (2). In the transportation sector, this government "penetration" has also been prevalent and has created, for example, significant debates over regulatory policy in the motor carrier, air, and rail industries. However, in urban transportation, an interesting phenomenon has occurred over the past 10 years that, in many ways, reverses the arguments raised above. This phenomenon is the increasing role that the private sector seems to be taking in the provision of urban transportation services, in the decisionmaking process for transportation investment, and in establishing goals and objectives for an urban area's transportation program.

Although the importance of such involvement has often been overlooked by transportation planners, the fact remains that such involvement has been inherent in transportation ever since a transportation system was first needed to stimulate commerce and development. However, the importance of private-sector participation in transportation planning is beginning to be recognized by many transportation planners. For example, a major theme that emerged from a recent conference on transportation planning was that the private sector had a great deal to contribute to the substance and effectiveness of such planning activities. Specifically, it was noted that the private sector could participate in the planning process in the following ways (3):

1. Identify the problem areas and potential solutions;
2. Provide data on current and future industrial expansion and travel demand;
3. Assist the public sector in making trade-offs among strategies and in packaging groups of projects;
4. Play a direct role in both inducements and actual implementation;
5. Promote or support public-sector projects (or both);
6. In selected situations, provide all or part of the funding for preliminary engineering, right-of-way acquisition, or construction or combinations of these factors; and
7. Perform the function, along with the public sector, of monitoring progress and suggesting changes needed in projects, processes, institutional structures, or legislation.

This list presents a wide-ranging set of opportunities for private-sector involvement in transportation. There are several examples where the local business community has contributed to the transportation program by undertaking one or more of these activities. In Dallas, for example, the Chamber of Commerce along with other representatives of the business community has worked closely with government agencies on transportation issues. Examples of such participation include a business-funded study of traffic conditions in Dallas that identified some low-cost alternatives that businesses could adopt on a short-term basis, active participation in a campaign to create a regional transportation authority, the creation of a coalition of three business organizations to study alternatives to the proposed double-decking of a heavily traveled freeway, a business-directed feasibility study of a rail rapid transit program, and the formation of a metropolitan highway committee, consisting of 20 area Chambers of Commerce and members of the business community, that monitors local, county, state, and federal highway construction projects and works with public agencies in establishing project priorities.

In Atlanta, the Chamber of Commerce has actively requested and supported studies of transportation improvements, such as a recent study of traffic congestion at the airport. The Chamber and key businesses have also funded a group that studies important highway issues in the Atlanta region and lobbies for the implementation of beneficial projects. In Oakland, the Chamber of Commerce is involved with a citywide transit study that is examining such issues as bus rerouting, shuttle services, and freeway signing. In Houston, the Chamber of Commerce helps companies interested in ridesharing programs by providing contacts with companies that already have established programs, which then assist the interested companies.

The large potential of employer ridesharing programs for reducing gasoline consumption and for making optimum use of existing transportation facilities was recognized during the Carter Administration when a National Task Force on Ridesharing was established by executive order. The purposes of the task force (4) were to

1. Promote ridesharing among business and government leaders,
2. Assist in the removal of institutional barriers to ridesharing,
3. Provide a continuing dialogue between the public and private sectors, and
4. Make specific recommendations to increase the use and effectiveness of ridesharing.

Throughout its deliberations, one of the underlying themes that continually surfaced was that an effective partnership between the public and private sectors was essential to the development of a successful ridesharing effort. As pointed out in the final report, the roles of both public- and private-sector actors often differ with circumstances: "In some cases, each plays a separate role which complements the other; in other cases, there is joint responsibility." Public agencies and officials can remove administrative, regulatory, and institutional barriers to ridesharing programs while providing incentives through preferential use of highway facilities and even financing of innovative ridesharing programs. For their part, private employers can establish employee incentives, provide services, and create the management support needed for successful program operation.

Although there are several interesting questions and research topics on the dynamics of this partnership, most of the research conducted to date on employer-based transportation strategies has focused on techniques and methods of program implementation

(5-8). Unfortunately, very little attention has been given to the implications of the role of the private sector in urban transportation, especially the consequences of this role in relating transportation actions to other goals such as air quality, urban development and revitalization, and energy conservation. For example, the California Department of Transportation (Caltrans) has initiated a program whereby major new industrial developments must be accompanied by plans designed to alleviate the transportation problems of potential employees. These plans, which are part of the development permit process, are to address such issues as information and marketing, ridesharing, parking management, flextime or staggered shifts, and low-cost transit improvements.

The two serious disruptions in fuel supplies during the past decade, along with a series of transit strikes and shutdowns in several major U.S. cities, also illustrate another role played by the private sector in transportation planning and policy. In times of crisis, whether caused by an energy shortage or a labor strike, private employers will be critical actors in helping government agencies cope with the serious difficulties of keeping cities functioning. In recent crises in New York and Boston, private employers adapted to the crisis by instituting flexible work hours to reduce the peak-hour traffic burden, initiating shuttle-bus services for their employees, and providing extra conveniences (such as bicycle storage) for those employees who found alternative means of getting to work (9). A close relationship between the private sector and public agencies is necessary in such crisis situations to provide for a coordinated response; the government cannot respond effectively by itself, and neither can the private sector.

In summary, the private sector has become increasingly involved in urban transportation issues in recent years. Private employers play a key role in establishing the parameters of transportation demand and are well-positioned to "make incentive strategies effective; they possess a close-knit communication system to motivate desired ridesharing" (10). Because of these resources, the private sector can play a significant part in helping metropolitan areas attain their goals in the areas of energy conservation, economic development, and transportation system efficiency and productivity. The key component in achieving this outcome, however, is the development of an effective working relationship between the public and private sectors--i.e., a public-private partnership.

Although previous research has examined some of the problems involved in implementing employer-specific transportation programs, little work has been done on examining the more fundamental issues of the motivation, process, and impact of public-private partnership. It is hoped that examples discussed in this paper will begin to address some of these issues.

FRAMEWORK OF PUBLIC-PRIVATE OPPORTUNITIES

Because there are so many examples of private-sector investment in urban transportation, a framework is necessary to examine these efforts systematically. Although not all-inclusive, the following framework outlines the services and/or programs that the private sector can help fund, provide, or coordinate (11):

1. The private sector can aid and/or provide services such as the following: (a) self-generated, single-employer rideshare programs, completely organized, administered, and operated by in-house staff, that may be organized to perform carpool matching only or to become involved in vehicle (van) acquisition as well, through lease or purchase arrangements; (b) formation of nonprofit corporations that (among other functions) develop regional carpool-vanpool programs for companies that are either too small or ill-equipped to start their own rideshare programs; (c) cooperation, coordination, and assistance to publicly formed third-party rideshare matching organizations; (d) employer promotion and/or subsidization of public mass transit service among the workforce; (e) provision of commuter and/or conventional transit bus service by private bus companies as a replacement for or complement to existing public transit services; and (f) shared-ride taxi services, which provide on-call, door-to-door public transportation on a shared-ride basis, pooling unrelated trips into the same taxi, when possible, by deviating from a semifixed route.

2. Advocacy or advisory groups can be formed whose purpose is to influence the urban transportation policymaking process. Existing business associations (e.g., Chambers of Commerce) are becoming increasingly involved in urban transportation policymaking and investment decisions. Businesses are also forming regional associations for that same purpose, to improve employee transportation, or for any other specific purpose (e.g., a specific capital-intensive project).

3. Private sponsorship and/or funding can be provided for specific urban transportation-related studies that may be of great importance to an area's business community. Study topics can vary from optimal forms of land use in downtown areas to the location and design of transportation facilities. Private interests can provide funding, personnel, facilities, or any combination of these resources to perform these studies.

4. The private sector can provide management assistance to public-sector transportation organizations. Such assistance is not given with the idea that private managerial experience and assistance can cause a direct improvement in the provision of transportation service. It can, however, improve organizational functions that exist in both the private and public sectors, since the private sector often has greater managerial experience.

The characteristics of these private-sector efforts are briefly illustrated in the examples discussed below.

Aetna Life and Casualty

Aetna Life and Casualty, Inc., of Hartford, Connecticut, is one of the largest corporate employers in Connecticut, with 26 000 employees in the Hartford area. Its involvement with employee transportation can be attributed to the 1973 oil embargo and the ensuing disruption in employee access to the workplace. In the initial program stages, Aetna management contracted with the local transit operator to establish five new bus routes between company buildings and outlying areas that at that time received no transit service. Aetna also paid for the provision of parking facilities in these areas, which were about 15-20 miles from the downtown area. About 65 percent of this buspool program was subsidized by management.

In 1974, the company assessed the potential for expanding the rideshare concept into a broader program, collecting data on employee travel needs by using an extensive survey questionnaire. This information was later used to establish a rideshare program known as Operation Carlift, which was administered by a staff of six persons in the Department

of Employee Services. Matches were made by an in-house computer that subsequently advertised carpool vacancies. As an incentive, carpoolers were offered shuttle-bus service between all Aetna buildings in Hartford. At the same time, Aetna initiated staggered work hours.

In 1977, the Aetna rideshare program was expanded to include the use of vans. The trial program involved three 12-passenger vans; the number of vans has since increased to 150, and van leasing, maintenance, and insurance packages are arranged through the Chrysler Leasing Corporation. (Part of this increase is attributable to the phasing out of the buspool program and the transfer of its users to vanpools.) The program is aimed at employees with very long commutes, and vanpoolers receive the same parking and work-hour benefits as carpoolers. The Department of Employee Services screens and trains drivers for the program, but it is the drivers who actually perform most of the administrative and organizational details involved in running the vanpool. In exchange, drivers are offered personal use of the van (at a nominal fee) and have the option of buying the vehicle after five years.

The vanpool program is heavily promoted by Aetna. Posters, brochures, and advertisements are used regularly in the company's weekly newsletter, and the program receives continuous support from upper management. Employee interests and needs and program effectiveness are periodically monitored through surveys.

Today, nearly 60 percent of all Hartford-area Aetna employees take part in some form of ridesharing despite the fact that employee parking remains free. Without this program, it is estimated that 1000 extra parking spaces would have been necessary, at a cost of $600 000. Finally, it is expected that, when Aetna relocates 6000 employees to the new Middletown facility in 1983, its vanpool fleet will double to 300 vehicles to help accommodate new commuting patterns. Based partly on a 50 percent modal-share estimate for ridesharing, only 3000 parking spaces will be constructed for these 6000 employees at the new facility (12).

Stamford Metropool

The private sector has played a major role in transportation in Stamford, Connecticut. During the early 1970s, the Stamford area became a prime location for corporations relocating from New York City. One of the major problems that soon developed as a result of this large influx of businesses was an insufficient supply of housing for corporate employees. When Stamford, already a bedroom community of New York City, was unable to provide the additional housing necessary to satisfy this increased demand, many corporate employees were forced to live more than 25 miles away from the office location. The resultant commuting severely taxed the highway system, which had never been designed to handle such large numbers of vehicles, and high congestion levels soon occurred on several key highway segments. As employees located farther away from their jobs, it also became more difficult for firms to recruit personnel. By 1979, some major corporations were experiencing 60 percent rejection rates in their recruiting efforts (13). This translated into lost productivity as well as skyrocketing personnel and relocation costs.

By 1978, these transportation problems had become so severe that many Stamford corporations began considering alternative ways of providing transportation services to their employees. The Stamford regional planning agency (RPA) and the Southwestern Area Commerce and Industry Association (SACIA), an organization formed by the business community to promote the business climate in the Stamford area, worked together in identifying alternatives. SACIA surveyed 78 major corporations, which represented 40 percent of the Stamford area workforce, to determine the commuting patterns of their employees. The results of this survey indicated that some form of vanpool program could be most effective in solving some of the problems facing corporate employees. However, the business community also realized that little progress could be made without government participation in developing a comprehensive program of transportation improvements and that government action almost always depends on the existence of a plan. Thus, the business community, jointly with officials of the Connecticut Department of Transportation (ConnDOT), lobbied the state legislature for a $125 000 commutation study, which was provided. The resulting plan identified several transportation improvements in the Stamford area but, most importantly, recommended that a regional ridesharing corporation be established under the auspices of ConnDOT.

The business community, which did not want a government agency running such a program and was unwilling to wait the many months necessary for ConnDOT to initiate such a process, took several steps on its own:

1. A transportation-business section was established within SACIA that included on its governing committee several members from public agencies.
2. Liaison was established between SACIA and the RPA by having several businessmen serve on RPA committees.
3. A public-private task force was established by SACIA to examine the transportation needs of the area on a continuing basis. Several corporations loaned the city personnel to undertake some of the requested studies.
4. Most importantly, SACIA sponsored a nonprofit ridesharing corporation called Metropool to provide ridesharing services to corporate members.

Metropool was incorporated as a nonprofit corporation under Internal Revenue Service (IRS) Section 503(3)(c), which allowed all contributions to it to be tax deductible. In November 1980, Metropool decided to go with a "package" approach in providing actual vanpool services. Requests for proposals were sent out, and Van Pool Services, Inc., a wholly owned subsidiary of Chrysler Corporation, was selected. This approach was chosen to allow Metropool the fastest means of initiating service without having the extensive up-front capital for equipment purchase or a large staff to administer the program.

Metropool started in March 1979 with a pilot project of 12 corporations, but, with the fuel shortage during that summer, interest in the program expanded rapidly. There are currently 20 corporations in the vanpooling program and 55 vans in use. Over the next few years, many of the company-sponsored internal vanpool programs will be phased into the Metropool fleet, the first being the Anaconda-Ericsson fleet.

Metropool is also developing other innovative programs to enhance mobility in the region. One program aimed specifically at educators is designed to accommodate their unique temporal and origin-destination (usually residential neighborhoods) demand characteristics. The Metropool educator program prorates the vanpool costs over the school year only, is designed to arrange the compatibility of hours and destinations, and allows the driver to retain the van for the summer. Metropool is also studying the special needs of hospital employees,

particularly nursing staffs, as well as those of high school students in after-school employment training programs.

Because continued corporate growth and resulting traffic congestion remain a top regional concern, Metropool is now promoting a program that would help municipalities to control congestion by means of development-zoning alternatives. Developers and site occupants would be allowed to substitute rideshare programs for a reduction in the normally required number of parking spaces at each site. If allowed, this program would permit developers to reduce their parking construction costs while reducing the number of automobiles in the area of the building site. One of the remaining roadblocks to implementation has been the concern of local officials that future occupants of such building sites may ignore the rideshare program requirement and thereby exacerbate the traffic problem.

Metropool was initially based on corporate contributions ($10/year/employee, the maximum contribution $25 000), which were tax deductible. During the first year of operation, $100 000 was raised from eight corporations, and during the second year private donations of $30 000 were used for the local share of a $240 000 grant from the Federal Highway Administration to support Metropool services.

Adopt-a-Station

A truly new area of private-sector activity with respect to urban transportation is that of direct aid toward the rehabilitation of existing fixed facilities. This development has surfaced primarily in some of the large northeastern cities that have extensive, yet old and deteriorating, rapid transit networks on which urban-based businesses will continue to depend for a high percentage of workforce access. New York City, where the transit modal share approaches 80 percent for work trips, has been in the forefront of innovation.

The Adopt-a-Station (AAS) program was designed to use the time, effort, and money of private-sector and community-based organizations to make physical improvements in New York City subway stations. What started as a small-scale local community project grew into a much larger-scale effort, forged by an alliance among private businesses and foundations, community groups, civic organizations, and a variety of federal, state, and city agencies. This alliance proved extremely successful as subway stations throughout the city became catalysts for neighborhood development and rehabilitation.

The concept had a fairly modest beginning. In 1975, a group of high school students made some small-scale improvements (e.g., cleaning and painting) in their neighborhood station and in a few others. That same year, Exxon Corporation became interested in the idea of private rehabilitation of stations and set aside $25 000 for a pilot program for visual enhancement. This became a program called Platforms for Design, which was jointly administered by the Municipal Arts Society, the Public Arts Council, and the Metropolitan Transportation Authority (MTA). Four architectural firms were selected to choose a station, prepare a design for its renovation, and implement the solution with available resources.

Platforms for Design generated a lot of public interest for three reasons:

1. It was acclaimed as a unique and important new outlet for public art.
2. It was a vivid example of the value and potential impact of the investment of private capital in public improvements.
3. It had demonstrated what could be accomplished through an alliance of previously unallied groups--artists and designers, businesses, government agencies, engineers, neighborhood coalitions, and cultural institutions.

As a result of the interest generated and the success of this pilot program, the Urban Mass Transportation Administration (UMTA) became interested in expanding the concept to that of full-scale rehabilitation. Thus, in 1976, UMTA announced that it would match, on a 50-50 basis, up to $500 000 of any forthcoming private-sector donations for station improvements. The Public Arts Council, the Municipal Arts Society, and the MTA maintained administrative control over the program, coined the phrase "Adopt-a-Station", and proceeded to build an organized effort to generate additional interest and capital among business groups and community organizations.

AAS effectively picked up where Platforms for Design left off. The earlier program primarily emphasized the importance of aesthetically appealing designs and good public art in subway stations. However, the questions of durability and responsibility for maintenance were left unanswered. AAS was designed to get very large amounts of private capital committed toward permanent and comprehensive renovations of stations and their surroundings on an enormous scale.

One of the most important aspects of the program is that each of the six individual projects was to have a high degree of cooperation and coordination among all participants and that each project would have its roots in the community. Another key aspect is that a local sponsor must be willing to make the commitment to improving the transit facility. This was done by raising substantial funds from other institutions in the area to match public (UMTA) funds and by working with the MTA to develop a plan and a budget for the project. Local needs were analyzed from the very beginning. To the extent possible, each project was linked to surface development and/or rehabilitation. (A specified amount of private capital was another requirement for receiving consideration for public support.)

At the 14th Street/Union Square Station, station improvements were closely coordinated with ongoing neighborhood revitalization. A group of local businesses, institutions, and foundations raised more than $1 million for this project in an effort to strengthen the traditional retail character of the area. At the Hoyt Street Station in downtown Brooklyn, subway renovation was undertaken as part of a package of improvements to complement construction of a new downtown mall. Funds were raised by the A&S Department Store and a local developer. At the Wall Street Station, an $830 000 renovation was made possible by the Chase Manhattan Bank and the New York City Office of Economic Development. The Cooper Union and New York University cosponsored the renovation of the station at Astor Place. As in many other AAS projects, existing design elements were used to the greatest extent possible in the Astor Place Station, where as many of the existing mosaics and terra cotta ornaments as possible were kept and restored. The Vincent Astor Fund gave $100 000 to this project, and another $85 000 was raised within the neighborhood.

Santa Clara County Manufacturers Group

Santa Clara County, California, has experienced explosive growth in both population and jobs over the past five years due primarily to that area's fast-developing high-technology industry. This rapid growth, combined with a shortage of affordable

housing, has created a severe transportation problem. The spectre of continuous unchecked growth has reached the point where it threatens the health and viability of the industry and the region.

In an effort to alleviate the symptoms of rapid economic growth, the Santa Clara County Manufacturers Group (SCCMG) was formed in 1978. An association that represents 75 companies employing more than 180 000 people, SCCMG is a multipurpose organization involved not only in transportation but also in housing, energy, and management training (14). In the area of transportation, SCCMG, Santa Clara County Transit, and a carpool matching service called RIDES joined forces in a comprehensive program that included transit, ridesharing, and transportation management improvements.

SCCMG involvement in transportation began with its activity in promoting the implementation of a high-occupancy-vehicle (HOV) project on one of the region's expressways. To pursue that and other common transportation goals, SCCMG and Santa Clara County Transit created a transportation task force, which was led by the chief executive officer from SCCMG and included the San Jose city manager and Caltrans. The task force provides a structure that encourages companies to develop coordinated transportation programs with supporting services from Santa Clara County Transit.

Some of the accomplishments of the task force include (a) training commuter coordinators at 50 companies with workshops, videotapes, and manuals; (b) provision of employee survey and planning information; and (c) cooperative bus-stop and shelter improvements. Current projects include (a) a pilot project to create a ridesharing data base integrated with the company's personnel files; (b) development of promotional materials including videotapes, posters, slide shows, etc.; and (c) formulation of short-term transportation system management (TSM) solutions for CA-237, a congested major corridor. These include HOV lanes, ridesharing, and park-and-ride strategies.

New York City MTA

The Economic Development Council of New York City, Inc. (EDC), is an organization composed of businessmen and other private-sector representatives in the New York City area. EDC was formed in 1965 by the chief executive officers and other leaders of major New York corporations for the purpose of improving the business climate and to make the city a more attractive place to live. It attempts to do this by promoting itself as a "nonpartisan blue-ribbon management consultant" to a variety of state and city agencies.

Its private-sector members provide financial support and lend middle-management executives on a project-by-project basis to augment full-time EDC staff. It is classified by the IRS as a Section 501(c)3 "educational" organization, which means that all corporate contributions are tax deductible. Since it was established, EDC has sent its executives into many city agencies, most notably the criminal justice system, where many of its recommendations have been adopted. EDC has also sent task forces into other city agencies such as the Board of Education, the Health and Hospitals Corporation, and New York City welfare and child foster care programs.

EDC first became involved with the New York MTA [parent agency to the New York City Transit Authority (NYCTA)] in January 1981 amid deterioration of subway and bus service to what had been called the worst levels in the system's history. The MTA chairman sought assistance from EDC in seeking a $14 billion financial package from the New York State Legislature. EDC replied that it would help on the condition that (a) MTA funding proposals were truly warranted and (b) the MTA would allow them to investigate the management of the system.

After MTA officials agreed to this, EDC spent nearly two months surveying the NYCTA staff and reviewing organizational procedures with a staff of on-loan executives from its business members (of which there are 300). The product of this initial study effort was a report that described "a sluggish and overstaffed transit headquarters with inadequate resources supporting the basic mechanical operations in the garages and on the lines."

Specifically, the report listed 55 areas that the EDC team claimed were suffering from poor management. The president of NYCTA gave permission to EDC to create and implement a program of management assistance designed to tackle all but seven of these problems. He decided that the Authority had already begun solving the seven problems and thus EDC help was not needed (the seven problems included financial audits, research and development, broken subway car doors, maintenance yard productivity, advice to the public on crime prevention, relations with transit police unions, and reorganization of headquarters staff). Some of these problem categories--broken car doors, worker productivity, and an overstaffed headquarters--were included in EDC's identification of the seven most important problems. The other four were uncoordinated and inefficient use of computer systems, "borrowing" and theft by token clerks, shortage of nonunion supervisors, and poor working conditions at many facilities.

It should be noted that, whereas the Authority could obviously benefit from procedural changes in several managerial and organizational functions and did not hesitate very long in agreeing to EDC's request to conduct this study, they were under enormous pressure to do so. At this point, the public image of NYCTA had plummeted to what was thought to be its lowest point ever, a reflection of the deteriorated service levels. A large amount of media attention was thus given to the EDC program. A local paper went so far as to describe the program as "a gift from the gods", and the mayor sent a letter to the MTA chairman criticizing what he called "the transit system's operational quagmire and applauding the time and talent offered by the private sector."

It becomes clear in retrospect, then, that despite the inherent organizational tendency to resist external criticism and interface, NYCTA really had no alternative but to accept the EDC proposal.

As soon as EDC sent its task force into the system, the program of management assistance began to take shape. A total of 18 executives were recruited from EDC corporate members to complement 5 EDC staff members who would be working on the 12- to 18-month-long project. A total of 14 corporations have contributed personnel to this program. Salaries will continue to be paid by their respective companies for the duration of the program.

Prior to commencement of problem solving and reorganization of any of the specified problem areas, the EDC task force devised a process for reviewing specific procedures in each department to be studied. As of November 1981, there were 17 projects in process and an additional 6 in the fact-finding stage. These represented 26 out of the 48 problem areas that MTA had allowed EDC to study (3 problem areas were combined with others).

Although it is far too early to pass judgment on the effectiveness of the program, there are some interesting points to be made concerning the ability of public- and private-sector individuals to work

together. For their part, the EDC people who were interviewed felt that their presence was widely accepted and even welcomed by NYCTA personnel. They claimed that this was due to what they perceived to be a general feeling of exasperation among NYCTA employees concerning the inability to get things done and the general state of affairs prevailing throughout the system. They also claimed to have encountered some resistance from a few people who resented "intrusion by outsiders", but this resistance did not last very long.

On the other hand, a very high official of MTA expressed a more cautious perspective toward the program, a view that seemed to reflect the feelings of several professionals within the organization. It was felt that there was no inherent conflict between the two types of individuals required to work together on this project. On one hand, private-sector executives tend to have expertise in one specific area but generally have limited knowledge of others (including the constraints that exist within a public-sector organization). Conversely, public-sector personnel tend not to be experts in any specific area but do know a limited amount about a variety of topics. This caused a significant period of adjustment. Still, the MTA official expressed hope that the program would produce positive results. Much would depend on the competency of the executives coming to NYCTA on loan.

CONCLUSIONS

The policy environment for urban transportation is changing rapidly with the new programs and philosophies of the Reagan Administration. Potential cutbacks in federal operating subsidies to mass transit and in funding programs for urban transportation projects pose some serious problems for future urban transportation services. What is needed in this situation is a fundamental rethinking of the purpose and components of the urban transportation program. Although there are many possible answers to the questions that should be asked in this assessment, one of the most important characteristics of the emerging urban transportation program will be the joint action of the public and private sectors in meeting the transportation needs of a community.

As shown in the above examples, public-private partnership in identifying and implementing programs has proved most successful. The skills and resources of both groups have been used most skillfully to develop a well-structured approach to meeting transportation needs. The characteristics of this approach that would seem to be most essential for similar action in other locations include the following:

1. Creating a mechanism, or working group, that is able to present the proposed concept to public and private officials and to orchestrate the process of implementation;
2. Highlighting what private businesses will receive for their participation;
3. Obtaining the commitment of top public and private officials;
4. Identifying the role each actor must play in program adoption and implementation;
5. Developing a consensus on how program success will be measured; and
6. Maintaining the mechanism or working group in order to facilitate communication between public and private officials and to focus the activities of the private sector.

The public-private partnership concept will likely play an important role in future transportation planning and policy. The implications of this partnership are potentially quite significant. The impact on the politics of decisionmaking and on equity considerations, as well as the impact on the focus of transportation planning, could be noticeable. Even more importantly, the success of public-private partnership depends greatly on the existence of a new type of transportation professional, one who understands the motivation of the private sector and is able to orchestrate the process of bringing both public and private officials together.

Perhaps the most important question that arises from the reemergence of the private sector as an important actor in urban transportation is, What exactly is the proper role for the private sector? Unfortunately, this is one of the most difficult questions to answer. There is, of course, no all-encompassing explanation that is applicable to all metropolitan areas. Each has it own needs and its peculiar set of circumstances. However, if one can assume that a balanced urban transportation network that offers minimally acceptable levels of mobility for all population segments is a universal goal for all our cities, then it is possible to offer a set of guidelines on this issue.

First, it is important to remember that the phenomenon of increased private-sector activity is primarily attributable to the emergence of unique sources of travel demand, which has resulted in an insufficient supply of publicly provided transit. Thus, private-sector initiatives in urban transportation should be used to complement existing public services, not to supplant them. To do otherwise or even to think that it is possible undermines the raison d'etre of public transportation for the past two decades. During this time, the attitude of government toward public mass transit has increasingly been that it is a necessary public service and that it can be a useful tool in helping to create what are felt to be physically desirable urban environments. Thus, government has, until recently, committed increasingly large amounts of resources to transit development. Given the social and political environment of today's urban areas, it is not very likely that the shift in the public perception of urban mass transit from that of a market commodity to one of a public service will change.

Second, private-sector actors and associations should be given access to the decisionmaking processes for urban transportation planning, policy formulation, and program implementation. At the same time, it is extremely important not to allow this trend to lead to a breakdown of the overall institutional framework responsible for setting and achieving public policy goals, which has taken several years to develop.

Finally, in many cases of private-sector efforts to solve transportation problems, success often results from the direct efforts of a relatively small group of individuals, in both public agencies and private firms. If a program is successful, it is often because such individuals have effectively guided the project through the various stages of implementation.

In the case of public-sector personnel, their efforts are often directed toward (a) helping to identify programs that may best be administered by private rather than public resources and (b) devising various methods to induce private involvement when such responsibility is considered both beneficial to solving the problem and preferable to a publicly administered program (i.e., when transit service being provided at a loss by a public authority could be operated profitably or could at least break even if administered by a private group).

For these situations, there are four ways in

which public-sector officials may encourage private-sector involvement in urban transportation:

1. Direct subsidy--Transportation officials can encourage private participation in transportation by awarding subsidies in the form of grants or loans for capital or operating and administrative costs. This is applicable to cases in which private groups become involved in the provision of services (e.g., commuter bus service, rideshare services, or a brokerage organization).

2. Indirect subsidy--Indirect forms of subsidy are similar to direct forms except that private groups providing transportation service benefit from indirect sources of public-sector financial assistance. Examples of this include tax and insurance breaks on van purchases for companies that wish to start a vanpool program or subsidized tickets for elderly taxi patrons.

3. Legislative and/or statutory assistance--Again, this applies mostly to private organizations that wish to become involved in the provision of services. State legislatures may pass (or revise) laws that could make van purchasing or leasing by companies and/or rideshare corporations easier and less expensive. State and municipal governments can also revise statutory rules regarding the operation of private transit services (where feasible) and taxi service (for the purpose of allowing shared rides or a "checkpoint" style of operation).

4. Nonmonetary forms of encouragement--One of the keys to getting members of the private sector interested in participating in the planning and provision of urban transportation is to convince them that participation within the existing framework is in their own best interest. At times--e.g., during crises such as transit shutdowns or energy shortfalls--they will not need much encouragement. However, at other times it may be necessary for public-sector officials to take steps to induce a form of business community participation that they feel would be in the public interest. Such steps may include (a) persuading key decisionmakers in government and business that private participation in certain programs is useful and necessary and (b) the rallying of a strong constituency in business and government and orchestration of necessary meetings and decisions. As a result, the business community may become more deeply involved in the decision-making processes involved in policymaking for urban transit and traffic-flow operations and transportation infrastructure investment as well as in decisions and studies regarding transportation-related urban development (public and private).

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