and to analyze closely alternative solutions in which the public is involved. In that way, the constituencies needed to sustain solutions are assured, assuming a positive feedback on the objectives desired. This action should be initiated locally, but certainly there are many actors and some form of regional forum is essential. TSM may be viewed as a set of projects, but more important it is a planning process emphasizing short-term, low-capital solutions that may also complement long-term capital-intensive solutions, which are the traditional focus for this process.

### ACTIONS TO IMPROVE TRANSIT MANAGEMENT EFFICIENCY

Ray A. Mundy  
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Workshop moderator

Workshop participants included directors of transit bureaus for state transportation departments, directors of metropolitan planning organizations, transit operators, and federal agency representatives.

They began by listing the following areas in which improvements can be made in the management efficiency of transit operations: service standards, commuter market approaches, organization of planning and operations, integration of paratransit, use of standard cost information, role of state departments of transportation, integration of control, small capital improvements, marketing, parking strategies, and payment of transit fares. Because of limitations of time and active participation from a large number of the workshop attendees, only the first four topics were fully discussed.

#### SERVICE STANDARDS

There is lack of adequate service standards in the transit industry, and what good transit service is needs to be more clearly defined. Service standards will be increasingly needed as more public money is used in transit operations so that providing transit in some areas and not providing it in other areas can be justified. Several participants, however, felt that standards could represent a potential danger to urban transportation because they could be used to justify only one type or level of service to a community—that of traditional fixed-route, fixed-schedule transit operations. Participants feared that traditional service standards would prevent urban communities from developing innovative approaches to public transportation. Such innovative experimentation might include route-deviation schemes, substitution of taxi service on lightly traveled routes, contracting peak-time commuter services to private operators, and variations of dial-a-ride schemes. The workshop agreed that service standards were needed but that provision should be made so that new forms of public transportation would not be hindered by strict adherence to such service standards.

#### COMMUTER MARKET APPROACHES

Some participants felt that management efficiency could be improved if ridership were to be improved and that the most likely time for this ridership increase would be during peak commuting times. Other members of the workshop pointed out that the marginal cost of providing additional peak service far outweighed the marginal revenue received under present operating conditions and thus management efficiencies would be severely hindered by servicing additional commuters. Considerable discussion ensued as to whether it was beneficial for transit systems to increase service for commuter markets. The majority of the participants agreed that the cost of providing service to these markets with additional fixed-route, fixed-schedule transit systems or even express systems appeared to outweigh the benefits derived. Alternative ways are needed by which commuter markets can be approached. Discussed were approaches such as express services using existing capacity of the transit system, subscription bus service using premium fare plan with existing transit, subscription bus service using private transportation firms, and a variety of ridesharing approaches including van-pool and car-pool operations. Institutional and organizational problems have prevented these approaches from being used.

#### INTEGRATION OF PARATRANSIT MODES

Paratransit activities offer some hope for revitalizing public transportation in the United States. Veterans of public transportation planning cited, however, that paratransit is often suggested to be something that will always be just around the corner but never quite reaching fruition. How are paratransit options implemented? Some organizational form, other than that of traditional transit, needs to be used. The "brokerage" concept being tried in Knoxville was discussed for its implications to paratransit. With this concept, the city acts as an interested but unbiased third party to bring together and if necessary subsidize transportation suppliers, private or public, to provide transportation services. This approach may maximize the urban transportation subsidy dollar and achieve broader urban transportation goals of less congestion, clearer air, and overall improvement in quality of urban life. The discussion concluded with the general feeling that no one approach can be viewed as a panacea but that experimentation is needed with a variety of approaches to see what can be achieved in various urban areas.

#### PLANNING AND OPERATIONS ORGANIZATION

Where should planning be done for urban public transportation? Two schools of thought were brought forth by the participants. One suggested that those on staffs of metropolitan planning organizations were the most technically qualified individuals for urban planning and therefore should do transportation planning. Opponents of this viewpoint suggested that, when planning and op-
erations are separated, a great deal is lost in the final implementation of the service. The workshop participants discussed the alternative approaches but reached no conclusion other than the realization that closer coordination is necessary between planning and operation. They generally agreed that an organizational form that encompassed both these functions with appropriate control mechanisms could operate more efficiently than one that had separate control units.