TSM: Alternative Institutional Roles

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The purpose of this paper is to develop a basis for a discussion of the roles and responsibilities of the various institutional participants in the transportation system management (TSM) process. I will begin by presenting a brief summary of the current institutional structure to serve as a frame of reference and will then describe in more detail an alternative perspective of the TSM process. The institutional roles in this perspective are viewed as a reasonable proposal for how the TSM process could and should work. I will conclude by discussing the steps necessary to actually achieve this alternative posture.

TSM TODAY

To many, TSM is simply a set of federal requirements or a type of project whose consideration these requirements mandate. The federal transportation agencies, the Urban Mass Transportation Administration (UMTA) and the Federal Highway Administration (FHWA), are now attempting to induce planning and implementing agencies to at least consider, and preferably to implement, low-cost alternatives in place of capital-intensive projects. Few would argue with the economic reasoning that underlies these attempts, but I take issue with the manner in which it is being administered. Going one step further, if the process were properly organized, this heavy federal hand would be unnecessary because local agencies would conduct their affairs according to this same economic reasoning. That is the basis of the argument I will develop in this paper.

Today, state and local agencies are trying to obtain as much federal highway and transit money as possible. Their considerable needs could justify such efforts, but there is also the feeling that they should get their fair share before it is too late. If they do not get theirs now, someone else will. An additional aspect of this behavior is to obtain the funds while there are still some available and before inflation further erodes their purchasing power. As a result, one can see agencies throughout the country working feverishly to show that TSM solutions are not as satisfactory as major capital-intensive projects.

In contrast to the behavior described above, FHWA and UMTA continue to force state and local agencies to shift their emphasis to TSM solutions. Most of these efforts are product oriented, i.e., implement TSM projects, prepare TSM plans, or consider TSM project alternatives. It may be more appropriate to examine the process, i.e., to consider how changes in the transportation planning process could effect a reorientation of priorities. A major part of this change could be effected by redefining the responsibilities of participating agencies. Let us examine a hypothetical reorientation and reorganization of the TSM process. This will help to define and understand appropriate roles and responsibilities of participating institutions.

THE MANAGING PROCESS

To begin, let us consider TSM as the process of managing the transportation system. The purpose of this process is to provide transportation services to travelers and haulers. The managers' objective is thus to provide service in the most effective and efficient manner possible. In simplified terms, this would seem to be the process actually followed by most transportation agencies. It is in fact the modus operandi of most transit operators, primarily because they both own the facilities and operate the services. It is, however, not the approach or attitude of most street and highway agencies because, although they control the facilities, they have little control over individual driver behavior.

The goal of every participant in the transportation management process should be to provide the most and best service, given available resources. The transportation manager will assess the needs and problems and allocate the resources in the manner that will most efficiently and effectively satisfy those needs and solve those problems. This will require making trade-offs about the best way to allocate resources, and such trade-offs imply making the most of operational improvements in order to allocate or preserve resources for needed capital improvements. For this discussion, it is important to emphasize that these trade-offs should be made by the transportation manager. These decisions require knowing the needs and resources of the system or service. Therefore, the individual making such trade-offs should be familiar with the operating system in order to properly appreciate all aspects of these trade-offs.

ALTERNATIVE ORGANIZATION FOR MANAGING TRANSPORTATION

This organization for managing transportation would be quite similar to a typical business management hierarchy. There would be operating managers responsible for providing various types of service to the public, e.g., transit operators, airport operators, street departments, and highway departments. There would be several successive levels of supervising management, provided in turn by city, county, regional, and state transportation agencies and the U.S. Department of Transportation. Obviously, not every agency of a particular type would have the same responsibilities, but the basic hierarchy would be the same.

The operators (i.e., operating agencies) would collect
revenue for services provided. Some of this revenue would be from fares or tolls; some would be from taxes. It is very important, however, that the relationship between services and revenue be carefully defined and preserved. One important reason why current financing structures produce less service than they might is that there are too many people, too many rules, and too many decisions between the users (who pay) and the producers (the operators). Therefore, the producer is more responsive to the fund-allocating agencies (and their criteria) than to the users.

The operating managers would be responsible for the allocation of resources among transportation services in the limited local area for which they were responsible. The revenue collected would pay for operations (bus drivers and train operators, traffic police, and toll takers); some would pay for maintenance, some would purchase new facilities and equipment, and some would pay for management. The operating managers would oversee and administer operations and would plan the design and financing of needed improvements. The operating agencies and their managers would be directly responsible to the users and the taxpayers (who pay taxes directly to the operators) for providing service and for trade-offs among operating expenses and capital improvements.

A portion of the revenue allocated for management would be passed up to supervising managers (this will be recognized as overhead). Supervising managers would usually be directly responsible for providing transportation services but rather would oversee the activities of several operating managers, each having service responsibilities for one operating system or one local area. A city or county transportation agency could supervise operators of several modes in one jurisdiction; a regional agency could supervise operators of the same mode in several jurisdictions in the region. The role of the supervising managers would be to ensure adequacy of performance of lower-level managers, primarily operating managers. The supervising managers would also be responsible for ensuring coordination among the systems operated or supervised by the agencies for which they were responsible. State transportation agencies would be supervising managers for several regional supervising agencies and for operating and supervising managers in counties and cities. (State agencies would also be operating managers for rural highways.) Federal transportation agencies would be supervising managers overseeing state managers.

One problem with this organizational arrangement is that of the responsibility for policymaking. The analogy to corporate management is somewhat difficult. Operating managers would have principal responsibility for policies on the services for their systems (they are directly responsible to the users and the electorate), and supervising managers would set policy for coordination among the services for which they were responsible. The question is, How much responsibility should supervising managers have for policies within individual systems? It seems reasonable to assume that policy input from supervising management to all operating systems under their supervision would be necessary. Some consistency among systems must be maintained because travelers and haulers often use transportation services outside their local areas. This same rationale also argues for interarea fund allocation, which would provide the needed influence to ensure compliance to the policies of supervising management.

INSTITUTIONAL ROLES

The hypothetical organization described above permits an analysis and comparison of the roles and responsibilities of the various institutions or agencies in the transportation management process. The principal responsibility for TSM decisions should reside in the operating agency whose service is affected; that agency is, after all, closest to the service, the needs, and the users. In the hypothetical organization, the operating agency is also closest to the financing source and thus should be responsible for resource allocation and its associated trade-offs. This agency understands, better than any other, the needs of its system and the demands of its user constituency. The manner in which each operating agency makes its decisions on services in its system would be reviewed by the supervising agencies, but the supervisors' involvement would be limited to advising operators on appropriate considerations and approaches in such decisions.

The supervising agencies would be lead agencies for decisions requiring coordination among the individual systems that they supervise. Such decisions should include active participation by each operating agency whose system will be directly affected by the decision. Except in extreme cases, however, the agreement of all participants in such coordination decisions should be obtained before implementation. Higher-level supervising agencies should be responsible for the review of lower-level supervising agency performance, except in the case where they are either coordinators or operators. This means that the federal and state agencies should not be deeply involved in the management process.

It is unlikely that this hypothetical organizational structure will ever be implemented, but even within existing regulations and especially with a few administrative changes, the general principles that it implies could be incorporated into the existing TSM process. This would require two major changes in the existing TSM process:

1. All participants in the process must agree on a redimensioning of responsibilities. Each agency must carefully define what it will and will not do. Supervising agencies must be identified and their responsibilities defined. Above all, system users must know who is responsible for deciding how their money is spent.

2. Transportation professionals should be trained in management skills. In a few cases, little adjustment beyond role definition will be necessary. In the majority of cases, however, major retraining efforts would be necessary. The major focus of such training would be on managing resources and making trade-offs. Some short- and long-term financial planning and techniques for evaluating performance should also be taught.

How can we initiate this metamorphosis? This conference can take the first step. Recommendations for change and precise definitions of roles from a group of this stature could be the catalyst. Once the need to change and the likely benefits of change have been recognized by the funding agencies, the process can begin. It would seem appropriate for this group to prepare concrete recommendations for change as the first step in such a process.

ROOTS OF THE PROBLEM

Notwithstanding the potential benefits that such changes can offer, the roots of the problem are much deeper than described above. Given the existing incentives in federal funding programs, local agencies cannot make the kinds of reasonable management trade-offs that the federal agencies are encouraging. In the simplest terms, federal and state funding is awarded on the basis of ap-
parent need; the more need you show, the more money you get. This approach puts a premium on high-capital-project solutions rather than on encouraging cost-effective trade-offs among operating and capital improvements. Under the guise that there is so much capital need, the funding agencies have earmarked funds for capital projects.

As a result, local agencies (and states) have tremendous incentives to develop the largest-capital projects possible, so that they will receive a larger allocation. Because of this capital-project orientation, implementing agencies have no incentive to make cost-effective trade-offs. The local and state staffs concentrate on developing plans for large projects, which leaves little time for operations improvements and other managing efforts.

It seems incongruous for federal and state agencies to attempt to force local agencies to implement TSM improvements. The funding incentives are currently against such an orientation; if they were not, the TSM requirement would not be needed. Operating managers would be able to make reasonable management decisions if they were responsible for expenditures. In the face of this, the federal agencies are seemingly unwilling to revise the existing funding mechanisms.

This situation will not change easily or soon, but recognizing the problem is the first step toward solving it. Knowing that counterincentives exist and that responsibilities are misplaced, we should be able to work out a strategy to circumvent the problem and accomplish what we all know needs to be done. That job is to bring management and funding decisions closer to the market so that services can respond to the user. This conference can be the first step. If we can prepare a reasonable agenda and timetable for improving the funding process, a giant step will have been taken. If we can assign some responsibilities and identify follow-up activities, that step may be the first on the journey out of the TSM organizational morass.

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