Public Transportation Development and Coordination: San Diego Case Study

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The San Diego Metropolitan Transit Development Board (MTDB) was created by the California state legislation in 1975 and empowered to plan, construct, and operate mass transit guideways and to perform near-term planning. The agency has evolved into an umbrella organization that has broad transit development, planning, programming, and financing powers. Operations of transit services are performed by a variety of operational units controlled by MTDB in a unified system. This system has been officially called the Metropolitan Transit System (MTS). Made up of six fixed-route bus carriers, one light rail transit (LRT) operator, and four general-purpose dial-a-rides, the MTS is characterized by unified fares, transfers, passes, and route numbers.

The San Diego metropolitan area contains 10 cities, of which the largest is the city of San Diego. The current population for the metropolitan area (Figure 1) is just under 1.6 million people, with nearly two-thirds of these residents living within the city of San Diego. The area has faced considerable growth since World War II, and population forecasts show an approximate 30 percent increase over today's levels by the year 2000, resulting in an expected population of about 2.1 million residents (1).

The public transportation system for the area includes a variety of services. The basic system is a fixed-route bus network that has local/feeder, urban arterial, and express/commuter runs and is supplemented by light rail transit (LRT) service in two corridors and a number of general- and special-purpose demand-responsive systems. Approximately 130,000 total passengers are carried by these systems daily. As presented in Table 1, specific operators include six that provide fixed-route bus service, the LRT operator (San Diego Trolley, Inc.), and four general-purpose dial-a-rides. Over 350 transit vehicles—buses, taxis, vans, and light rail vehicles—are deployed during the peak periods to operate this system (Table 2).

This overall public transit network is officially called the Metropolitan Transit System (MTS). However, MTS itself is not an agency, but is the unifying name, logo, or acronym used to represent all of the publicly subsidized transit operators in the San Diego metropolitan area. The purpose of this paper is to explain how the San Diego MTS is organized and governed.

FUNCTIONS OF THE METROPOLITAN TRANSIT DEVELOPMENT BOARD

The San Diego Metropolitan Transit Development Board (MTDB) was created in 1975 by California state legislation (Senate Bill 101) (2). The board is empowered to plan, construct, and operate mass transit guideways and to perform near-term programming in its area of jurisdiction. MTDB is an independent agency governed by a 15-member board of directors: four council members from the city of San Diego, one council member each from nine suburban cities, one supervisor from the county of San Diego, and one representative appointed by the governor of California.

The organizational basis for MTDB took hold with a concept presented to the MTDB board of directors in January 1979 (3). This concept described an agency that

"... would determine overall transit service levels, fares, schedules, and be responsible for public information about transit in the MTDB area of jurisdiction... The LRT operator is but one of several contract operators for transit and freight service operating to specifications established by the regional transit agency. All of these contract operations would thus fit together into a unified system from the point of view of the public.

In a somewhat gradual and incremental way, the concept came together in 1984 after several studies of the matter were completed (4, 5). These studies paved the way for legislative changes completing organization of MTDB in its current form (6). As such, the concept mirrors what has been referred to (7) as a "public marketing agency approach" and has parallels to the transit federations of some systems in the Federal Republic of Germany (8-10).

Over MTDB's first 10 years, the agency was best known as a guideway development organization. MTDB planned, designed, and constructed the 16-mi LRT line between Centre City San Diego and the International Border (i.e., Tijuana) in San Ysidro, followed by the first 4.5-mi leg of the eastern extension, which runs from Centre City to Euclid Avenue. This LRT system initiated revenue service on the South Line in 1981 and on the East Line in March 1986.

In addition to these development functions, MTDB is also responsible for short-range planning and financing for bus and rail transit systems in its area. As depicted in Figure 2, MTDB effectively functions as an umbrella agency. MTDB owns the assets of San Diego Transit Corporation (SDTC) and San Diego Trolley, Inc. (SDTI), the area's two largest transit operators. These two transit units were formed under California law as nonprofit public corporations. In addition, MTDB owns the San Diego and Arizona Eastern Railway Company (SD&AE), a Nevada railroad corporation that covers 108 mi of line and over 2,000 acres of property. The operations and maintenance
of these two transit services and for the freight railroad are all handled under separate operating organizations. Essentially, the day-to-day functions, labor matters, and maintenance of facilities are managed by these individual operating corporations.

Outside of MTDB's ownership responsibilities, but essential to the cost-efficient operation of public transit services in the area, are MTDB's coordination powers. These functions are specified through California state legislation (11) that provides state transit fund administration, planning and programming roles for MTDB over any public transit operator in the area that receives state operating monies. These powers are translated into various formal MTDB controls over public transit services through these means:

- Policies, for example, on fare setting and transfers.
- Plans and programs, for example, the annual Short-Range Transit Plan and the annual Transportation Improvement Program.
TABLE 1 SUMMARY OF MTDB AREA PUBLIC TRANSIT OPERATORS

<table>
<thead>
<tr>
<th>Operator Service Area</th>
<th>Number of Routes</th>
<th>FY 86 Total Passengers</th>
<th>FY 86 Revenue Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIXED ROUTE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chula Vista Transit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>County Transit Express</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>County Transit Suburban (Includes East County and Poway service)</td>
<td>8</td>
<td>696</td>
<td>903</td>
</tr>
<tr>
<td>National City Transit(1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Diego Transit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Diego Trolley</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strand Express</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GENERAL PUBLIC DEMAND RESPONSIVE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>El Cajon Express</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>La Mesa Dial-a-Ride</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lemon Grove Dial-a-Ride</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poway Dial-a-Ride</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SENIOR AND DISABLED DEMAND RESPONSIVE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chula Vista Handytrans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>County Transit WHEELS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National City Dial-a-Ride</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poway Call-a-Ride</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Diego Dial-a-Ride(2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MTDB Area Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Passenger and mile amounts in thousands

- Approval of annual budgets for San Diego Transit Corporation and San Diego Trolley, Inc.
- Approval of claims for state operating assistance.
- Grantee for federal funds.

Thus, although MTDB does not have direct control of the suburban fixed-route bus operations nor the public dial-a-rides, it has direct influence over the route/service definition and fare structure for each of the operators through these powers.

As noted, MTDB’s enabling legislation has been amended in recent years to clarify and strengthen the various coordination roles. One amendment provided for a separate fund of state operating monies to be established and available to MTDB for so-called “regional” services (12). These regional transit services are those that are defined to be intercity and generally have a longer passenger trip length than local services. Currently, MTDB uses these regional monies to provide service under contract with three operators. Further, in accordance with state law, a board policy that would require competitive award of new regional services was prepared and adopted (13). Another piece of legislation granted MTDB authority to administer and resolve disputes with regard to regional service and funding matters (14).

Finally, an important legislative change was one that required maintenance of an areawide farebox recovery rate (FRR) (15). Before this legislation, each operator receiving state transit operating subsidies was bound to maintain a certain individual FRR or possibly face the loss of funds. This legislation aggregated all subsidized transit operations together statistically under MTDB to come up with a unified FRR for the metropolitan area. In this way, an individual operator would not be faced with possible fare structure changes, to the detriment of a unified metropolitan system. Of interest, and of importance locally, is that the areawide FRR has increased from a historical low of 30.85 percent in Fiscal Year 1976–77 to 44.74 percent.
### Table 2: MTDB Area Transit Vehicle Fleet Description

<table>
<thead>
<tr>
<th>Operator</th>
<th>Number of Vehicles/Peak Vehicles</th>
<th>Type of Vehicle</th>
<th>Owned by Operator or Contractor</th>
<th>Air Conditioned</th>
<th>Wheelchair Lifts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed-Route</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chula Vista Transit (SCOOT)</td>
<td>13/9</td>
<td>Bus</td>
<td>Operator</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>County Transit System Express Bus</td>
<td>10/7</td>
<td>Bus</td>
<td>Contractor</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>County Transit System Suburban Bus</td>
<td>9/6</td>
<td>Bus</td>
<td>Operator</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>- East County</td>
<td>6/5</td>
<td>Van</td>
<td>Contractor</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>- Poway</td>
<td>5/4</td>
<td>Bus</td>
<td>Contractor</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>National City Transit</td>
<td>11/7</td>
<td>Bus</td>
<td>Operator</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>San Diego Transit DART</td>
<td>298/223</td>
<td>Bus</td>
<td>MTDB</td>
<td>297</td>
<td>110</td>
</tr>
<tr>
<td>San Diego Trolley</td>
<td>30/24</td>
<td>LRV</td>
<td>MTDB</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Strand Express</td>
<td>12/12</td>
<td>Bus</td>
<td>Contractor</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>General Public Dial-a-Ride</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>El Cajon Express</td>
<td>25/25</td>
<td>Taxi</td>
<td>Contractor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>La Mesa Dial-a-Ride</td>
<td>15/15</td>
<td>Taxi</td>
<td>Contractor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lemon Grove Dial-a-Ride</td>
<td>3/3</td>
<td>Taxi</td>
<td>Contractor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Poway Dial-a-Ride</td>
<td>2/1</td>
<td>Station Wagon</td>
<td>Contractor</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>358/268</td>
<td>Buses</td>
<td>338</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30/24</td>
<td>Light Rail Vehicles</td>
<td>6</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15/15</td>
<td>Taxis</td>
<td>15</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6/5</td>
<td>Vans</td>
<td>6</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

**FIGURE 2** MTDB functional organization chart.

*MTDB in Fiscal Year 1985-86 (16). This increase paralleled MTDB fare policies initially adopted in 1977 and strengthened by the legislation previously mentioned.*

### DESCRIPTION OF ORGANIZATION

MTDB is divided into three basic departments: engineering and construction, planning and operations, and finance and administration. These departments are augmented by in-house legal counsel and a public information office. All design and construction management activities are handled by the engineering and construction department. Included within the planning and operations department are short-range transit planning activities, special fare and operational studies, LRT project planning, area transit marketing, environmental studies, and monitoring of MTS performance. Basic support services for the organization are contained in finance and administration, in addition to grants management and regional transit pass sales administration.

### ANNUAL PLANNING PROCESS

The annual planning process, as shown in Figure 3, weaves the following within the Short-Range Transit Plan (SRTP) (16)
annual update: the Transportation Improvement Program (TIP),
individual operator budgets, claims for state and federal operat­
ing assistance, and receipt of state and federal grants. Adoption
of transit development goals and objectives takes place in fall
each year and leads to the update of the SRTP by the following
August. This plan is drafted in the spring to guide final pro­
cedures of the TIP, operator budgets, and claims. The SRTP,
adopted in the summer, leads to the submission of grant
applications.

In close cooperation with the short-range planning is the
long-range planning, as carried out by the metropolitan plan­
ing organization, the San Diego Association of Governments
(SANDAG). SANDAG is responsible for development and
adoption of a Regional Transportation Plan (RTP), which con­
tains the long-range multimodal plan for transportation im­
provements in the region. The metropolitan SRTP must be
found consistent with this long-range RTP. To promote this
coordination, two key agreements define the separation and
coordination of mutual responsibilities in planning and pro­
gramming between MTDB and SANDAG (17, 18). As a result,
specific planning and programming responsibilities define a
partnership to cooperatively establish common goals and
objectives.

UNIFIED MTS SERVICES

A number of devices are used to coordinate services and
projects among the affected agencies and MTS operators. A
primary method for communication is through the General
Managers' Group. This group, composed of the general man­
gers of all fixed-route operators, normally meets twice
monthly. The intent of this body is to foster high-quality MTS
services through communication and cooperation, as well as to
attempt to resolve any differences at the management level
rather than at the board level. Supporting the general managers'
group are other committees:

- Fare pricing and operation task force
- Regional transit marketing group
- Regional transit service advisory committee

The following are examples of key aspects of the MTS that
serve to coordinate and unify services:

- Fare structure: an agreement that establishes a uniform
  fare structure for the metropolitan area providing basic fares
  and transfers between operators.
- Monthly passes: an agreement (19) that establishes
  monthly passes valid on all fixed-route transit services in the
  metropolitan area and a formula for distribution of pass fare
  revenue.
- Telephone information: a service that provides a central
  transit telephone information system for all fixed-route
  operators.
- Route numbering: a system of uniform route numbers
  established to avoid duplication and confusion between
  operators.

CONCLUSIONS

Because each urban area is unique, it requires a unique ap­
proach to the institutional aspects of providing public transpor­
tation service. Although the specifics of what works in San
Diego may not be transferable to other regions, the ingredients
that are needed for providing cost-efficient public transpor­
tation services and for programming future developments appear
to be transferable. The San Diego MTDB organizational form,
through having different organizational units, also possesses
the following characteristics:
1. A central, single legislative body that makes all metropolitan transit policy decisions. The objective of such a body is to set consistent service, development, and investment policy across all transit providers to effect system uniformity and ease of use by all community residents.

2. A clear and efficient decision-making network. There must be a conscious effort to coordinate and communicate with all affected agencies. Final decision-making authority must be clearly identified and the decision processes outlined. Ownership of the two major operators and legislated coordination powers solidify the MTDB and force it to have such a network.

3. The power of financing projects and services. Primary planning and regulatory authority comes by virtue of holding the funding powers. The management and allocation of financial resources are necessary to carry out required explicit and implicit authorities.

4. Board members who are locally elected officials and appointed by their city councils. This board form encourages MTDB management to work closely with counterparts at the local level and promote joint, cooperative MTDB-city actions.

5. Separation of development functions from operations. Significant management attention and energies are needed for effectively carrying out both functions—this organizational form allows it.

From the San Diego metropolitan area experience, the following are advantages and disadvantages of this organizational form:

Advantages

1. Significant attention is devoted to medium- and long-range planning and tying in future transit project services and programs with land use decisions.

2. Apparently because it functions as a development agency and not an operator, unbiased attention can be given to the financial management of operating resources.

3. The separation of planning and development from operations allows operating management to remain closer to the day-to-day operations and maintenance of transit services.

4. Lobbying for operations and capital funds at the local, state, and federal level is on an areawide basis and effectively includes all local jurisdictional units.

5. Inclusion of multiple operating agencies, through constructive competition, sharpens operating decisions as well as policy decisions, leading, it is hoped, to improved cost efficiencies in the provision of service. In addition, the existence of multiple operators forces more attention on the coordination of transfers between routes.

6. The engineering and short-range planning activities for area transit services and projects are centralized and directly related to each other.

7. Independent operator identities create spirit and pride in the individual organizations, promoting innovation and cost-effectiveness.

Disadvantages

1. Independent operator identities create spirit and pride in their individual organizations, promoting rivalry and jealousy.

2. Despite what may be clear lines of authority, the existence of multiple operator governing boards has the potential for delaying decisions and promoting jealousy.

3. There is the potential for duplication of work when the paths of authority and decision-making powers are not clearly outlined.

4. To work smoothly requires the cooperation of top management from all agencies, with a corresponding commitment to a unified operation.

5. Financial decisions that might be in the best interest of the region will have different impacts on each of the operating agencies, causing those that receive negative impacts to react adversely to such decisions.

REFERENCES


18. MTDB and SANDAG. 7th Supplemental Agreement. 1984.