

APPENDIX B

TRANSIT PROFILES FROM THE 1994 SECTION 15 REPORT YEAR

TRANSIT PROFILES FROM THE 1994 SECTION 15 REPORT YEAR *

Property Name	Metropolitan Area (UZA)	State	Service Area Square Miles	Service Area Population	Veh. Oper. in Max. Service
Alameda-Contra Costa Transit District	San Francisco	CA	241	1,086,254	588
Ann Arbor Transportation Authority	Ann Arbor	MI	71	189,205	93
Bay Area Rapid Transit District	San Francisco	CA	234	1,267,766	444
Beaver County Transit Authority	Pittsburgh	PA	440	204,441	32
Bi-State Development Agency	St. Louis	MO	3,580	2,307,900	633
Broward County Mass Transit Division	Fort Lauderdale	FL	410	1,337,000	618
Cape Cod Regional Transit Authority	Cape Cod	MA	395	186,605	55
Capital Metropolitan Transportation Authority	Austin	TX	572	604,621	395
Central Contra Costa Transit Authority	San Francisco	CA	200	450,000	114
Chicago Transit Authority	Chicago	IL	356	3,708,773	3,444
Conn DOT Contract Services (Connecticut DOT)	Stamford	CT	88	168,760	27
Corpus Christi Regional Transportation Authority	Corpus Christi	TX	838	325,000	80
Culver City Municipal Bus Lines	Los Angeles	CA	26	191,053	24
Dallas Area Rapid Transit Authority	Dallas	TX	695	1,812,650	838
Foothill Transit Zone	Los Angeles	CA	293	1,344,166	174
Golden Gate Bridge Highway & Transportation Dist.	San Francisco	CA	256	618,900	242
Greater Peoria Mass Transit District	Peoria	IL	35	147,126	45
Hillsborough Area Regional Transit Authority	Tampa	FL	1,058	834,054	258
Intercity Transit	Olympia	WA	89	106,960	106
Jacksonville Transportation Authority	Jacksonville	FL	242	710,592	234
Kitsap Transit	Bremerton	WA	132	169,000	219
Las Vegas Transit System	Las Vegas	NV	50	854,300	32
Lehigh & Northampton Transportation Authority	Allentown	PA	106	389,000	109
Los Angeles County Metropolitan Transportation Auth.	Los Angeles	CA	4,070	9,087,715	2,199
LYNX (Orange-Seminole-Osceola Transportation Auth.)	Orlando	FL	2,700	1,187,833	304
Madison Metro Transit	Madison	WI	54	219,185	298
MARC (Maryland Railroad Administration)	Baltimore	MD	1,043	2,056,700	96
Maryland State Department of Transportation	Baltimore	MD	1,795	2,077,667	859
Massachusetts Bay Transportation Authority	Boston	MA	1,038	2,602,487	1,956
Metropolitan Atlanta Rapid Transit Authority	Atlanta	GA	804	1,241,000	814
Metropolitan Transit Authority of Harris County	Houston	TX	1,279	3,398,800	1,202
Metro-Dade Transit Agency	Miami	FL	285	1,735,000	644
Metro-North Commuter Railroad	New York	NY	527	4,484,000	700
Milwaukee County Transit System	Milwaukee	WI	243	990,700	431
King County Department of Transportation	Seattle	WA	2,128	1,482,800	1,724
New Jersey Transit	Newark	NJ	6,559	7,495,000	2,468
New York City Transit Authority	New York	NY	618	14,648,000	8,253
Northern Indiana Commuter Transportation District	Chicago	IL	1,970	958,644	45
Orange County Transportation Authority	Los Angeles	CA	797	2,566,275	519
Pace (Chicago RTA Suburban Bus Division)	Chicago	IL	1,914	7,463,937	925
Palm Beach County Transportation Auth. (CoTran)	West Palm Beach	FL	623	869,633	73
Peninsula Corridor JPA/JPB	San Francisco	CA	425	3,690,367	90
Phoenix Transit System	Phoenix	AZ	416	996,166	387
Pierce Transit	Tacoma	WA	275	575,000	362
Regional Transit Service	Rochester	NY	673	702,238	195
Regional Transportation Commission of Washoe County	Reno	NV	69	213,747	81
Ride-On Montgomery County Government	Washington	DC	495	757,027	289
Rogue Valley Transit District	Medford	OR	159	109,449	25
Sacramento Regional Transit District	Sacramento	CA	295	931,146	258
Salem Area Mass Transit District	Salem	OR	70	160,000	44
San Diego County Transit System	San Diego	CA	902	1,853,315	56
San Diego Transit Corporation	San Diego	CA	170	1,010,764	290
San Mateo County Transit District	San Francisco	CA	97	540,194	296
Santa Clara Valley Transportation Authority	San Jose	CA	300	1,136,614	550
Southeastern Pennsylvania Transportation Authority	Philadelphia	PA	1,164	4,222,211	2,079
Stockton Metropolitan Transit District	Stockton	CA	84	236,000	72
Tidewater Transportation District Commission	Norfolk	VA	253	910,000	219
Tri-County Metropolitan Transportation Dist. of Oregon	Portland	OR	592	988,284	620
University of Iowa/CAMBUS	Iowa City	IA	31	70,085	18
Washington Metropolitan Area Transportation Authority	Washington	DC	1,486	3,005,757	1,894
Winston-Salem Transit Authority	Winston-Salem	NC	99	162,177	93

* Information taken from "Transit Profiles: Agencies in Urbanized Areas Exceeding 200,000 Population, 1994 Section 15 Report Year" and "Transit Profiles: Agencies in Urbanized Areas with a Population of Less Than 200,000, 1994 Section 15 Report Year," published by the Audit Review and Analysis Division of the Federal Transit Administration Office of Capital and Formula Assistance. No profiles have been included for agencies listed in the Compendium that did not appear in these two documents.

APPENDIX C

PERFORMANCE MEASUREMENT FOR NON-TRADITIONAL TRANSIT SERVICES

Technical assistance to the King County Department of Transportation focused on performance measurement for non-traditional transit service. This appendix provides a brief summary of conclusions, followed by documentation of the technical assistance.

SUMMARY OF KEY CONCLUSIONS

1. Non-traditional and traditional services need to be evaluated for efficiency and effectiveness using a common set of *measures* (e.g., subsidy per passenger or passengers per hour), although various circumstances may justify lower *standards* for certain services. Examples of such circumstances include the following:
 - Situations where communities have a right to a certain amount of service, based on policy considerations or allocations based on funding. This kind of allocation process should be avoided but, where it occurs, it may require that standards for some areas be lower than for other areas.
 - Some services are cheaper to provide than others. For example, use of small buses or contracted service may justify a lower passenger-per-hour standard than for large-bus, in-house service. Implicit in this case is that efficiency is being maintained.
 - The community is willing to contribute extra funding.
 - Ridership is expected to grow because of near-term development trends or meaningful land use measures (rare in the United States and usually associated with rail lines or major facilities).
2. To the extent that policy considerations dictate that low-density areas should receive service or that demand-responsive service should be provided, lower standards have to be accepted. For example, in California, demand responsive systems are required to achieve a 10 percent farebox recovery while fixed-route systems are required to achieve a 20 percent farebox recovery.
3. The process for determining the right value to use for performance standards and for applying the standards should be open, visible, understandable, and consistent. Performance standards need to be based on local experience and community goals. Where lower standards are set for a class of service, they are often based on averages for that class of service.
4. The process of implementing and evaluating a new service typically takes between 1 and 2 years. A consistently applied process should be defined which is known and communicated to the community at the outset. The process should involve multiple review steps, beginning early in the process. Working with the community to achieve acceptable performance, by means of marketing or service modifications, is important.
5. Coverage or connectivity is generally a service design consideration rather than a performance evaluation measure. The only example discovered of a performance measure which reflects coverage or connectivity is Toronto's measure of the change in weighted passenger travel time associated with a service change. The way Toronto uses this measure, an added travel time of 5 min for 100 passengers can be overcome by reducing travel time by 20 min for 25 people. Therefore, ridership is still part of the equation.
6. There are systemwide measures for which non-traditional services may make a contribution disproportionate to their ridership. One such measure is "market share"—the percent of service area residents who have used transit in some time period.
7. If, in considering a possible service, it appears unlikely that it would meet the established standard, then it may be that the transit agency should facilitate the service being provided by another entity, rather than lower its established standards. Another way to say this is that the transit agency should try to define its "market niche" and help others to serve the other niches.
8. Customer satisfaction, the subject of the focus groups, is an important tool for constantly improving services, but ultimately does not substitute for more objective measures of effectiveness. It could be that some number of extremely satisfied customers might be as important as a larger number of somewhat satisfied customers. This kind of tradeoff might be one that a community would be interested in making in the case of neighborhood service, assuming that the service allocation requires some amount of neighborhood service of some form.
9. Determining the appropriate share for private sector partners typically follows one of two models, based on the experience of symposium participants and other systems included in the research. One is a share based on negotiation. The other is a requirement that the partner cover the total subsidy cost.
10. Supporting land use planning objectives is an appropriate consideration in designing service or setting performance standards only for major capital facilities or where meaningful measures to promote transit ridership are in place.

BACKGROUND INFORMATION

Description of the Agency

The Transit Division of the King County Transportation Department operates public transportation in Seattle, Washington, and surrounding communities. The service, known as Metro, was commonly referred to as Seattle Metro until incorporated into the County government in 1995.

Metro is widely regarded as a leader in providing a wide array of mobility management services. In its application for technical assistance, Metro noted the following mobility management functions:

- A large vanpool program;
- Bicycle racks on all buses;
- An instrumental role in establishing the Bellevue TMA;
- Efforts to influence transit-friendly development, including producing the DOT report *Encouraging Public Transportation through Effective Land Use Actions* and organizing a four-session workshop for local jurisdictions in 1995 on “Translating Comprehensive Plan Policies in Transit-Supportive Code”;
- Efforts to influence parking policies through organizing a national symposium, lobbying for tax code changes, and developing employer education workshops and handbooks;
- Programs in partnership with the private sector, including the corporate FlexPass program, the UPass program, and the First Hill Express; and
- Technology innovations in transportation information dissemination and analysis, including developing RiderLink and the TDM model.

Metro introduced successful Commute Trip Reduction (CTR) legislation for the state of Washington in 1991 and has a staff with responsibility for helping employers in King County meet CTR goals. Metro was one of the first transit agencies to take an active role in providing services for seniors and people with disabilities, including demand-responsive services and fully accessible fixed-route services.

Goals of the Technical Assistance

Metro is planning to put more emphasis on non-traditional “products.” Some of these are programs, such as FlexPass (corporate passes) and parking debits. Others Metro staff refer to as “products on wheels,” (i.e., transportation services).

Non-traditional transportation services, especially those that provide intra-community service and connections to the regional network, may have disappointing performance according to usual measures such as passengers per hour or cost per passenger. Examples of non-traditional services include small-bus fixed routes, dial-a-ride (especially func-

tioning as a feeder to fixed route), route deviation service, and designated stop or point deviation services.

Metro desired ideas on how to measure the performance of these services which recognize the contribution they make, but still provide adequate accountability so it is possible to discontinue a service which is unsuccessful by some standard. Metro wanted some idea of what are reasonable expectations for non-traditional services using common measures such as passengers per hour or cost per passenger. This investigation would involve contacting other operators which have implemented similar services to see how they have performed, how long the services took to reach levels that were considered successful, and what local standards of success may have been applied.

Metro desired ideas on how to measure whether each area is receiving its fair share of service for the tax dollars it spends. This topic was expanded slightly to look at ideas for measuring how coverage is best measured at all, and especially how non-traditional services contribute to coverage. This investigation included looking at alternative concepts to coverage such as “accessibility,” which would be some measure of what degree of access the network gives to the array of activities in the community or metropolitan area. The investigation would search for some way of comparing service alternatives so the research team could say one creates better accessibility than another. It was assumed that there was some theoretical research on this topic, but Metro needed tools that can be implemented for practical use in the short term.

Metro also needed assistance in learning about the dimensions of satisfaction that private sector partners apply to their evaluation of program-type products and how they decide whether to participate in a program. This element of the technical assistance focused on Metro’s FlexPass program. FlexPass is a corporate pass program that provides a bus pass to all employees of participating employers. The FlexPass can also cover vanpool fares, ridematching services, guaranteed rides home, and cash payments to employees who carpool, bike, or walk to work.

Methods Used to Achieve the Goals

1. Research and document what other systems have done in the areas of performance measurement for non-traditional services of interest to Metro (or what practical ideas researchers have come up with) through networking and library research.
2. Arrange for people representing a handful of the most interesting ideas on performance measurement to come to Seattle for a 1-day symposium to work with Metro staff on developing useful ideas to apply there.
3. Conduct focus groups of employers to determine the dimensions of satisfaction with a programmatic service (specifically FlexPass) and to investigate how decisions on participation are made.

4. Conduct focus groups of community users to determine the dimensions of satisfaction with an innovative transportation product.

Description of Technical Assistance Activities

Review of Approaches to Performance Measurement

A literature search was conducted using Crain & Associates' library, the library of the Institute of Transportation Studies at the University of California at Berkeley, and a search of the TRIS on-line data base. The search focused on issues of coverage, equity, and performance measures for service in suburban and low-density areas. Thirteen relevant reports and articles were found and summarized.

Practitioners were interviewed based on references found in the literature search, suggestions from Metro staff, and the consultants' experience gained in preparing the Compendium of mobility management functions. Information about 16 transit systems was summarized, including how those agencies measure customer satisfaction, coverage or equity, and performance of non-traditional services.

A brief summary of the review is attached in matrix format (see Table C-1). Lengthier summaries were also provided to Metro and are available from Crain & Associates on request.

Symposium on Performance Measurement

Crain & Associates arranged for representatives of the transit systems in Toronto, Vancouver, Portland (Oregon), and Montgomery County (Maryland) to travel to Seattle and participate in an all-day symposium on measuring performance of non-traditional transit services. The symposium was held in May 1996 at Seattle Metro's offices. During the morning, a representative from Seattle explained Metro's needs and plans for service changes, and what issues Metro was looking for guidance on. Following that, each participant provided an overview of his or her agency's services and approach to performance measurement. The afternoon was devoted to a facilitated discussion of six topics which had been posed in each participant's invitation. These were:

- What are appropriate performance measures for non-traditional services? Is it appropriate to use different measures than those used to evaluate traditional services?
- What are reasonable expectations or standards for performance of non-traditional services? What basis is there for setting standards lower than for traditional service?
- How much time should be allowed for non-traditional service to achieve standards? What type of mid-term review or corrective action is appropriate for services which are in trouble?

- What are effective methods that give new services a chance to succeed but allow for discontinuing unsuccessful services?
- How should considerations such as supporting land use objectives, providing accessibility, serving special markets, or meeting coverage or equity goals be included in the process of evaluating service? Can useful performance measures be constructed that incorporate these considerations?
- Should financial participation by community or private sector partners or calculations of subsidy revenue from each community enter in the evaluation of performance?

Following the symposium, Crain & Associates prepared a synthesis of the discussion and the review of current practice for use by Metro. The synthesis is attached to this summary.

Employer and Community Focus Groups

Two focus groups were conducted in March 1996 with representatives of employers participating in Metro's FlexPass program and with representatives of employers who expressed interest in FlexPass but had so far declined to participate ("potential users"). Focus groups were also held with users and non-users of two small-bus services operated in partnership with local communities. These services were the Issaquah Shuttle and the Federal Way DART. The participants were recruited by Metro staff. The focus groups, conducted by subcontractor Pacific Consulting Group, were designed to

- develop a framework, in the form of a scorecard, for assessing employer satisfaction with the FlexPass program and for assessing rider and community satisfaction with innovative transit services.
- identify ways the programs and services could be improved to meet key concerns.

SUMMARY OF THE SYMPOSIUM ON PERFORMANCE MEASUREMENT

1. What are appropriate measures for non-traditional services? Is it appropriate to use different measures than those used to evaluate traditional services?

Symposium Participants

Preceding the discussion on appropriate measures for non-traditional services, the question of what constitutes "non-traditional" service was addressed. Juri Pill of the Toronto Transit Commission (TTC) stated that what is considered to be "non-traditional" service varies for different people and different situations. He raised the concern that classifying service as non-traditional may simply provide a justification

TABLE C-1 Summary of Practitioner Interviews

System	Customer Satisfaction	Coverage Equity	Performance Measures for Non-Traditional Service
Montgomery Co. MD	On-board plus telephone survey. Results used in monitoring contractors.	Route miles and hours based on funding from each community. Also look at low income areas.	A lot of non-traditional service. Collector service to rail on a scale acceptable to community. Clear standards. Review routes over 2-year trial period.
PACE	Detailed process with Cust. Satis. Index (CSI), Problem Solving Loop. Seems to be system level.	Not an issue.	Very detailed service design and performance guidelines. Low density areas compared only to each other.
Tidewater	Nothing.	Each area gets service they pay for.	Performance of maxi-ride areas compared to each other using subsidy per pass, cost/pass, etc.
NJ Transit	Not done on regular basis.	Nothing relevant.	41 employer-oriented CMAQ services with 25% farebox recovery targeted by second year.
Connecticut Transit			Want to emulate Seattle.
Portland Tri-Met	Detailed process as part of Transit IDEA project. CSI. General public opinion surveys. Application to service planning unclear.	No measures.	Doing some non-traditional service but no clear standards. May be kept during service cuts despite "poor" performance to retain coverage.
SEPTA	A lot of surveying, process on paper, big report, not much implementation due to lack of funds.	Measure boardings per population density.	Nothing relevant.
LIRR	Annual systemwide survey. Little funding for changes.	Nothing.	Nothing.
Long Island Bus	Annual systemwide survey.	Nothing formal.	Nothing relevant.
BC Transit	Weekly survey of 100 customers. Compiled for 6 bus operation centers, rail, ferry.	Moving away from coverage focus toward using transit to concentrate growth.	Strategic plan. Service design guidelines. 3, 6, 12-month reviews for new service. Suburban service linked to land use policies.
Grand Rapids	General market survey annually.	Formula based on local funding, demand, population.	Nothing formal. When CMAQ for circulators runs out, will negotiate with cities.
MARTA	New G.M. strong on customer focus. Will incorporate into service planning after Olympics.		One year for new service to reach standard.
Metro-Dade	Done as needed for specific services. Related to service design features (e.g., stop spacing).	Spacing standards depending on density.	Very detailed service design guidelines, but little non-traditional service.
Toronto Transit Commission	TTC tracks overall customer satisfaction and the ratio of passengers to complaints.	Reducing customer walk time is part of point score in evaluating service proposals.	TTC has a very refined process for comparing benefits of services to costs. Economic assessment is based on ranking of subsidy per passenger. Community bus service, targeted at seniors, is evaluated by separate standards (in the mail).
Orange County Transportation Authority	No information.	No standards or measures..	"Community routes" using small buses are expected to achieve 10 pass./hour within one to 1 1/2 years (half of large bus standard). Overall service evaluation process is not structured. DAR was general public, now just ADA.

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TABLE C-1 (continued)

System	Customer Satisfaction	Coverage Equity	Performance Measures for Non-Traditional Service
Minneapolis (Metropolitan Council Transit Operations)	Part of Transit IDEA project. Regular customer satisfaction surveys--were monthly, will be annual. Led to increased focus on evaluating on-time performance.	New service standards will include route spacing for areas based on density, ranging from urban core to rural.	Service standards specify higher subsidy per passenger for non-downtown services. Not being followed due to funding shortage. Mini-bus service has been phased out to avoid pressure to contract out.

RESULTS OF LITERATURE SEARCH

- **Ircha and Gallagher, "Urban Transit: Equity Aspects," (1985).**
Illustrates calculation of density of transit service and access to the city center in each census tract and comparing to socio-economic variables to establish whether transit is equitably distributed.
- **Burke, Womack, and Sauders, "Some Considerations of Equity in Financing and Providing Transit Service in Texas," (1986).**
Review of the literature concludes that transit subsidies generally have favored higher income people. Recommendations for fare policy construction priorities and subsidized passes are made. Cites studies by John Pucher and Steven Rock.
- **Lede, "Suburban Employment Growth and Public Transit Accessibility: A Comparative Approach," (1993).**
Survey research and literature review are used to show that socio-economic trends will require more suburban-oriented transit service.
- **Allen, Liu, and Singer, "Accessibility Measures of U.S. Metropolitan Areas," (1993).**
Average travel time between random pairs of points is used to construct an index of accessibility. The index is calculated for 10 U.S. metropolitan areas.
- **Spasovich, Boile, and Bladikas, "Bus Transit Service Coverage for Maximum Profit and Social Welfare," (1994).**
An idealized model is used to show that a constant ratio of route spacing and headway achieves optimal public welfare. Calculates optimal balance between fares and public welfare.
- **Ewing, "Transportation Service Standards - As If People Matter," (1993).**
Reviews ways of measuring the adequacy of the overall transportation system (for growth management purposes) using measures of level of service and congestion. Mentions the possibility and advantages of measuring accessibility and personal mobility instead of vehicular speed or congestion. Claims King Co., Washington, is developing a multimodal measure of transportation adequacy but gives no references.
- **Urbitrans Associates, Multisystems, SG Associates, Robert Cervero, "Improving Transit Connections for Enhanced Suburban Mobility," TCRP Project B-6. (Report in process).**
Provides a planning framework for choosing the type of service best suited for various suburban situations. Includes a section on evaluation criteria. (Only a set of presentation slides has been reviewed so far).
- **Benn, "Bus Route Evaluation Standards," TCRP Synthesis No. 10 (1995).**
Reports results of a survey of 111 transit agencies asking which performance measures and design standards are used at each agency. No distinction between traditional and non-traditional services.
- **Crain & Associates, "Pierce Transit Productivity and Privatization Project," (1987).**
Identified areas where fixed-route transit does not work well and examined possible non-traditional services to implement in those areas. Cites service area and population density guidelines for determining what areas are suitable for dial-a-ride and shared-ride taxi. Cites Boston standard for farebox recovery of 20% for "community-based service" vs. 30% for "regular route" service, and a reduced standard of 10% for routes on which over 60% of riders are transit dependent or over 25% of riders are elderly (see *NCHRP Report No. 69, "Bus Route and Schedule Planning Guidelines,"* 1980).
- **Crain & Associates, "Neighborhood Shuttle/DART Service Evaluation," (for San Diego MTDB - 1993).**
Demand-responsive feeder services in San Diego (DART) were compared to dial-a-ride and fixed-route shuttle peer services. Due to low operating cost, DART has good farebox recovery (21% to 28%) and subsidy per passenger even though productivity is lower than fixed-route services. Peer systems lacked definite performance standards.
- **Hooper, "Innovative Suburb-to-Suburb Transit Practices," TCRP Synthesis No. 14 (1995).**
A survey of 23 transit agencies and four in-depth case studies identified a need for better knowledge and planning regarding suburban transit. Identifies BC Transit, Minneapolis, and Seattle as systems that evaluate suburb-to-suburb services by different standards than other services.
- **Cervero, "Making Transit Work in Suburbs," (1994).**
Identifies poor performance of suburban transit services compared to urban ones. Advocates innovative approaches (paratransit, flexible services, land use initiatives) to improve performance rather than lowering standards. However, in the case of reverse commute service, suggests that helping people find jobs should be a measure of success even if ridership stays low because people buy cars once they have a job.
- **Crain & Associates, "Suburban Transit Study," (for Portland Tri-Met - 1989).**
Contracted small buses are identified as a means to produce acceptable cost and subsidy levels for areas where fixed-route productivity is low or dial-a-ride is to be provided. Assumes productivity of 10 - 20 passengers per hour for small bus shuttle service and 4 - 7 passengers per hour for DAR.

to allocate funds to relatively inefficient service. It was generally agreed by the participants and audience that at the outset, innovative service may be “outside the box” of existing traditional service and, initially, “service inside the box” subsidizes these new services. However, eventually all transit services must be judged by a common set of standards; otherwise, effective, efficient services will suffer by supporting services where transit is inappropriate and inefficient.

The symposium participants agreed that performance measures, i.e., the bases for comparison, should be consistent across services. Performance is viewed as outcome-based, primarily relying on measures of service effectiveness such as passengers per revenue hour or passengers per platform hour. Non-traditional and traditional services should ultimately be viewed in terms of efficiency using measures such as cost per trip, subsidy per trip, and cost per hour as compared with other services. At TTC, recommended changes are expected to produce better economic performance and greater benefits for customers than the current service configuration.

Regarding the specific performance measures used, Montgomery County, Maryland, evaluates passengers per platform hour, cost per platform hour, and cost per passenger, recognizing that employing platform hours penalizes those choosing to live in less dense areas. BC Transit re-allocates resources on the basis of rides per hour, cost per ride, and riders at the maximum load point. It does allow for lower performance if a service supports regional objectives such as the “Regional Town Center” concept. Tri-Met measures performance by boarding rides per revenue hour of service and cost per boarding ride. TTC’s emphasis is on maximizing economic performance, as measured by subsidy per boarding and revenue-to-cost ratios, and maximizing mobility, as measured by weighted travel time. TTC conducts comparative evaluations to determine the relative value of service changes using four measures of community benefit: ridership, change in accessibility (e.g., walking time to transit stops and transit dependency), degree of access to other modes, and change in travel time.

Community desires and wants and customer satisfaction come into play but are hard to measure. For various reasons, local communities desire non-traditional, community-based services. For example, BC Transit operates a community-oriented mini-bus service called Community Link; one community initially served by Community Link preferred a local operating company with drivers who resided locally. From the community perspective, it is relevant that these services typically use mini-buses or smaller buses which are seen by the public as more neighborhood-friendly (because of their reduced noise, weight, and odors) and more efficient (less unused capacity) and as tending to provide a more comfortable ride. In Portland, Oregon, and British Columbia, the small vehicles are necessary in order to navigate certain areas because of topography or road size. The symposium participants noted that these services are actually much less efficient than perceived by the community.

Measures of customer satisfaction include the percentage of the population who have used the system in the past year (Montgomery County, Maryland) and complaints (TTC). BC Transit conducts weekly telephone interviews with 100 customers while Montgomery County uses on-board and telephone surveys. Tri-Met was part of the TCRP Transit IDEA Project No. 1 to develop a Customer Satisfaction Index (CSI) methodology to determine customer satisfaction with mass transit. The overall conclusion by the panel was that community satisfaction is important but does not substitute for effectiveness.

Other Evidence

Staff members from 13 other transit systems were interviewed, by phone, about their “non-traditional service” and performance measurement. All transit agencies used one or more of the measures cited above to monitor new or “non-traditional service.” A few additional measures were cited: passengers per mile (MARTA), maximum load factors (Metro-Dade), and cost per mile (San Diego Transit Development Board). Only the Southeastern Pennsylvania Transit Authority (SEPTA) varies performance measures by service and “typically picks four to six factors appropriate to the service and monitors whether it’s moving the needle.” MARTA’s approach to “stick with traditional, simple, measures of performance so that policy board members can understand and support recommended service changes” is exemplified by many systems. Two systems which have developed comprehensive guidelines for service planning and standards are Metro-Dade (*Service Planning Guidelines* and *Current System Analysis*) and PACE Suburban Bus Division of the RTA (*Service Criteria and Performance Guidelines*).

Observations

The experience of other transit agencies supports designating consistent measures of performance which can be applied to different modes, different services, and the system as a whole. The preponderance of traditional performance measures points to the necessity of choosing measures which will be easily understood by elected officials and the public. It is also important to fully understand the policy implications of choosing, for example, a variable of platform hours versus revenue hours.

2. What are reasonable expectations or standards for performance of non-traditional services? What basis is there for setting standards lower than for traditional services?

Symposium Participants

Performance measures are constant across services but performance objectives or standards may be set lower for

non-traditional services. However, there was little support for setting lower standards solely on the basis of the service being non-traditional.

Various justifications for setting lower standards for non-traditional service were mentioned. A lower performance standard can be adopted on a temporary basis in order to build the market for transit. While there are few cases in the United States, this temporary acceptance of lower performance may be contingent upon developing supporting land uses, such as a town center. Sub-area allocations of resources or service to coincide with transit revenue contributions provide another basis to justify lower standards in lower density areas. The fact that non-traditional services are often operated with smaller buses at a resulting cheaper cost per hour can also justify lower passenger per hour standards since the subsidy or cost per passenger will be correspondingly lower. A final situation justifying the adoption of lower standards occurs when a community agrees to pay to subsidize lower performance. However, meeting “congestion relief” objectives was not seen as a reason to accept lower performance.

Establishing a planning process and “picking an objective you can live with” were seen as critical. Being careful about setting precedents was noted as was the importance of avoiding an unwieldy or inflexible evaluation process.

Tri-Met’s non-traditional services are expected to meet a pre-determined minimum threshold set for the particular service or type of service. Montgomery County sets performance standards by category of service but these are unrelated to whether the service is non-traditional. BC Transit’s *Service Design Guidelines* give minimum performance targets by routes in terms of boarding passengers per service hour, passengers per vehicle at the maximum load point, and walking distance. TTC has certain “as of right” services, for example, paratransit and night service, but other service is expected to eventually reach minimum performance standards or face reconfiguration or elimination. The Toronto approach is that eventually “the box” of service must expand to include new or non-traditional service or the system will suffer. This approach is mirrored in Montgomery County, where non-traditional services are viewed as “incubator services” which eventually must mature into more conventional service in order to survive.

The Tri-Met standard for traditional service is 15 boarding rides per revenue hour and 9 boarding rides per vehicle hour, while the standard for alternative service has been set at 5.2 boarding rides per revenue hour and 4.6 boarding rides per revenue hour.

BC Transit’s “Phase II” of its “Community Link” service has set 35 boardings per hour in the peak and 25 boardings per hour in the off-peak as the guideline. This reflects the current minimum for conventional services, but is far below the current regional average of 55 boardings per hour for regular service.

Montgomery County peak service standards are 15 passengers per platform hour for regular buses and 12 for small

buses, and the off-peak standard is 10 passengers per platform hour. When new services are introduced, a set of performance objectives is defined.

TTC’s system performance must meet a 78 percent revenue-to-cost ratio—this drives the annual review of service by route. This annual process consists of first ranking over one-half of all routes in terms of economic efficiency, as measured by the revenue-to-cost ratio and subsidy per boarding. All routes with performance worse than the system average are then examined in detail to identify means of improving their performance. A third component of the economic review examines those routes which exceed the maximum permissible subsidy of five times the system average; major changes are proposed and if this is not possible, elimination is recommended. Finally, a comparative evaluation is conducted to determine the relative value of transit service changes that have been proposed. Measures of ridership, change in accessibility (average reduction or increase in walking time to transit stops), transit dependency (the degree to which people who live or work in the area have access to no other modes of travel), and change in travel time are combined into one overall total of benefit-points for each route change. Each benefit-point total is then divided by the cost of the service change, and the changes are ranked on the basis of this number.

The participants agreed that while it is difficult to project ridership for experimental service, projections should be made and if the proposed service does not meet expected performance levels, it should not be implemented. It is important to be able to project whether or not new ridership is “choice,” i.e., will get people out of their cars, and how much ridership will be peak versus off-peak travel. Tri-Met projects ridership for new service requests using mode split, density, employment, and population density. TTC and BC Transit also employ models to project ridership.

Gordon Aoyogi of Montgomery County advised that Metro should identify its “core service” and determine which “market niches” for new service it can serve and whether certain market niches should have some other provider. He felt it was important not to succumb to community pressure to provide service that does not make sense. Rather, in the role of a mobility manager, Metro should facilitate the provision of certain services by others.

Other Evidence

The approaches to setting and using performance standards for transit service fall into three general categories: (1) evaluating individual service or route performance against the average performance of the system, (2) setting performance standards by type of service, or (3) setting performance standards for particular services which reflect circumstances such as characteristics of the service area or level of financial support.

Like many transit agencies, Metro-Dade (Miami) and Tidewater Transportation District Commission (Norfolk, Virginia) evaluate performance based on the system average. For Metro-Dade service, a route's unlinked passenger trips per revenue hour must be equal to or greater than one-half the weighted system average for all routes of that time period (by weekday, Saturday, or Sunday). Routes failing to meet this guideline are considered sub-standard and designated for further investigation and corrective action. Tidewater distinguishes its core fixed-route service from paratransit feeder service called Maxi-Ride. It ranks its service areas by cost per passenger and other variables, looks at the lowest ranking Maxi-Ride areas, and then subdivides these low-ranking areas as to time or area in order to improve performance.

PACE Suburban Bus Division (Chicago), New Jersey Transit, and Orange County Transit Authority (California) are examples of systems which set performance standards by type or classification of service. PACE reviews performance quarterly based on route performance standards for each type of service: inner suburban, outer suburban, satellite city, rush-hour service, subscription bus, and special services. Route productivity must achieve 50 percent of the classification average quarterly as measured by passengers per revenue hour. The PACE farebox ratio standard is 50 percent for fixed route, 60 percent for suburban bus, and 100 percent for vanpools.

New Jersey Transit implemented a "Wheels Program" using CMAQ funding. Twenty-five services were extensions of existing services which were required to attain a 20 percent farebox recovery in the first year and 25 percent farebox recovery in the second year. Another 15 services for congested employment sites in the suburbs were required to attain a 15 percent farebox recovery in the first year and 25 percent farebox recovery in the second year. An evaluation of the 40 services after 1 year recommended retention of 21 services, revision and reevaluation of 14 services, and elimination of 5 services.

Orange County Transportation Authority has two types of non-traditional services: (1) market development services which are experimental routes, usually with small buses, intended to develop the market for fixed-route service, and (2) community routes implemented at the time of the Orange County bankruptcy, some of which were new service and others which replaced traditional services which had to be cut. The market development services were expected to reach the large-bus standard of 20 passengers per vehicle hour within 1 to 1½ years. The community service routes are expected to achieve 10 passengers per vehicle service hour. Because of community support, certain routes for both type services have been retained, although the standard has not been achieved.

Similar to Montgomery County, San Diego's community-based demand-responsive DART service and MARTA (Atlanta) provide examples of operators which set service standards particular to the service. DART service standards

are incorporated as part of each provider contract based on historical productivity and minimum standards. MARTA initially establishes average weekly passengers per revenue hour and average weekly cost per passenger expectations for new service. These are monitored quarterly using a 1-year running average to account for seasonal fluctuations.

Observations

Setting performance standards for non-traditional or experimental services must be reconciled with Metro's view of itself as a community service and must reflect system goals and objectives clearly. All the systems reviewed with any type of non-traditional service have set lower performance standards than for regular service. Justifications for the lower performance standards included: (1) allowing sufficient time to build the transit market (including accompanying land use), (2) sub-area allocations to reflect fair shares of service to lower density areas, (3) lower operating costs per hour because of the use of smaller vehicles, and (4) contributions by local communities to subsidize service. Importantly, the lower performance standards were seen as temporary to allow the service sufficient time to incubate and reach a higher performance level. Thus, the importance of picking "an objective you can live with" and recognizing that, although there is some flexibility to take local specifics into account, ultimately the service should perform "inside the box" of core service.

3. How much time should be allowed for non-traditional service to achieve standards? What type of mid-term review or corrective action is appropriate for services which are in trouble? What are effective methods that give new services a chance to succeed but allow for discontinuing unsuccessful services?

Symposium Participants

The amount of time allowed for non-traditional services to achieve standards varies but it was agreed that if service does not measure up then it is necessary to pursue other options—reconfiguration, community support, employer support, or elimination. Important elements relative to standards and expectations for non-traditional services include the process to set performance objectives, the length of time allowed for the service to come up to standard, the implementation of service adjustments during the trial period, and the definition of roles and responsibilities.

Montgomery County, Maryland, relies on a 1-year comprehensive process to provide sufficient opportunity for new service to succeed. At the end of the first 4 months, adjustments are made as necessary. If the standard is not achieved after an additional 4 months, the service is placed on the "endangered species" list and the community is notified that

they have 4 months to make the service come up to expectations. This process is important in harnessing community support and resources to make a new service successful. If the service is close to the standard by the end of the year, they continue to work with the community, especially if the service is in a growing area. Other routes have been saved by politically astute community members. The advantage of this process is in letting the community understand that service provision is more than just putting a bus on the street. The process has enabled Montgomery County to cut two of three routes which do not meet standards.

TTC has the opportunity to reconfigure service in conjunction with each of ten annual “Board periods.” One service was reconfigured 10 times in order to meet service standards. In another case, the question of which two of three arterials to serve in a community was resolved by using the service planning process to estimate ridership and working with the community to choose an option which met the service criteria. If service does not meet the established criterion of requiring no more than 5 times the average subsidy per boarding, the only option for continuing the service is 100 percent private support. The rationale is that any lesser amount would bring down the system average performance.

In Vancouver, there is strong support to continue to expand non-traditional services to support the “Complete Community” concept. In Portland, the future of non-traditional services is tied to systemwide financial constraints. Institutional and organizational considerations for Tri-Met dictate an 18-month to 2-year timeframe to evaluate the success or failure of new service. BC Transit reviews new service at 3 months and 6 months but allows about 1 year before significant changes are made. If the service meets other objectives, such as supporting the regional town centers, BC Transit looks at this as a growth market and may even expand service although the initial performance objectives have yet to be achieved.

Other Evidence

The interviews with other transit agencies revealed that most operators carefully monitor new service and make adjustments early on to allow a new service to succeed. The time allowed for new services to reach expected performance ranged from 6 months (Miami’s Metro Dade) to 2 years. MARTA allows 1 year for new service, Orange County Transportation Authority allows 1 to 1½ years for market development routes, and New Jersey Transit sets 1-year and 2-year required farebox recovery ratios. PACE’s new routes are evaluated quarterly and are generally implemented on a 1-year trial basis. Possible actions for a PACE route that is not performing to standard include restructure, increased marketing or advertising, developing community input and action, or additional research. If after 1 year, the route fails to improve, it is placed on a Target List for review and action by the Board. Routes which demonstrate an acceptable

growth rate are continued for a second year when most reach maturity.

Observations

The most successful systems have established a clearly defined process as to the roles for relevant players (the community, elected officials, the transit agency staff, and Board), setting and monitoring performance objectives, timing for modifications and adjustments, and the consequences for services unable to attain performance objectives. The willingness of the transit agency to work with the community to modify or reconfigure service to successfully achieve an acceptable performance level was also critical.

4. How should considerations such as supporting land use objectives, providing accessibility, serving special markets, or meeting coverage or equity goals be included in the process of evaluating service? Can useful performance measures be constructed that incorporate these considerations?

Symposium Participants

The divergence between the Canadian and American approaches to the relationship between land use and transportation planning and considerations of equity of service set the tone for the discussion among the symposium participants.

In Vancouver and Toronto, transit and infrastructure investments support land use objectives. Vancouver has less developable land than any major city in North America and has pursued a policy of developing regional town centers for the past 25 years. While the transit system supports this concept, ridership remains “core-focused” with a 40 percent transit share travelling into the core. Vancouver has experienced huge growth in suburb-to-suburb travel and strategic investments have been made to encourage development of high-density suburban sub-centers. One example of such investment was the alignment for the SkyTrain rapid transit system. Regional planning goals include the development of “complete communities” with a balance of jobs, housing, and services. Considerations of equity and coverage arise because of contributions of local gas taxes. Lower density areas feel they are subsidizing the urban areas because they generate proportionately more tax revenue per population—outlying service is, therefore, retained. Serving areas based on income is not an issue but seniors present some equity issues. Because the fleet is now 38 percent accessible, BC Transit will try to target more community-oriented routes, for example, to capture ridership within communities.

Twenty years ago, Toronto decided not to continue highway construction into the urban area but to invest heavily in transit. Under strong political leadership, TTC has tied the transit budget to an annual cycle in which all service (other

than “as of right service”) is “put into the same hopper and evaluated the same way at the same time.” Standards which are public and fully accountable have been established to allocate resources. The public must be made to understand the process and standards so that politicians can say no to unreasonable requests. TTC is funded 70 percent by farebox revenues, 15 percent by metro tax payers, and 15 percent by the province. Communities receive their share of available service based on the optimum functioning of the system as a whole. This process is influenced by political considerations.

By contrast, considerations of equity and sub-area allocations of resources are more predominant in the United States. Non-traditional services have been implemented in Portland, Oregon, and Montgomery County, Maryland, in order to find the most cost-effective means of serving low-density or particular service populations. Tri-Met’s non-traditional services are “typically for lower density suburban residential and employment centers” which necessarily have to be initially served with minibuses. That Tri-Met is partially financed by an employer payroll tax increases the pressure to provide service equitably. Businesses in the suburbs expect provision of transit service because they contribute to transit financing; this is particularly an issue for businesses that have relocated to suburban areas and no longer enjoy the same level of transit service but continue to pay the same level of payroll tax.

Montgomery County looks at census tract data to determine concentrations of low-income people. These areas then receive “Level 3” service (peak + mid-day + evening and weekend) versus “Level 1” (peak) or “Level 2” (peak + mid-day) service. As another example, when Metrorail opens a new station in its greater Washington, D.C., service area, considerations of equitable provision of service come into play. Four bus routes are typically added to service each new station. This new service is financed by reallocating existing funding and optimizing service efficiency.

The participants agreed that the only land use factors that can truly influence transit use are major infrastructure investments and policies. Gordon Aoyagi of Montgomery County felt strongly that transit should not be part of the local master planning process unless the master plan identifies facilities, densities, and automobile controls (i.e., things that influence demand). Glen Leicester of BC Transit gave the example of SkyTrain extensions to areas where development was desired and successfully achieved. Similarly, in Toronto, the Scarborough Rapid Transit was specifically aimed at development with service being provided as a loss leader.

Gordon Aoyagi concluded that, “We want transit-oriented communities but land use planning, zoning, and funding do not reflect this.”

Other Evidence

Although the literature on equity is fairly extensive, it is highly theoretical. This is reflected in the fact that few of the

transit agencies interviewed incorporate measures or even considerations of equity in their service planning.

Only SEPTA calculates service coverage for the five counties within its jurisdiction. Passengers are tracked by the county of boarding and service coverage is then computed based on population and square miles of service. Steve Silkunis of SEPTA suggested a measure of service penetration as measured by unlinked passengers per population density (population per square mi.).

Ottawa-Carleton Transit Authority (OC Transpo) provides different levels of subsidy for different services. There is a \$4 maximum subsidy per passenger for suburb-to-suburb service versus a \$3.25 to \$3.85 subsidy per passenger for local radial, all-day express, and peak express services. When the maximum subsidy is reached, the agency evaluates services for redesign or termination.

Typical of many U.S. systems, Metro-Dade has established a goal of bus service within ¼ mile of 95 percent of the population in central Miami with different bands and goals as distance increases from the urban core. MARTA looks at the criterion of service within ¼ mile of population but really plans are based on a route-by-route analysis.

Of note in the literature was a recapitulation of transit equity research in the United States in “Some Considerations of Equity in Financing and Providing Transit Service in Texas” (Technical Report 1078-1f, Technical Study No. 2-10-84-1078, *The Issue of Equity in Texas Transit Finance* by Dock Burke, Katie Womack, and Joanne Sauders for the Texas Transportation Institute, April, 1986). This research classifies equity in terms of three different systems: (1) fee for service, (2) equality in service distribution, and (3) distribution according to need. In the past, it was generally accepted that transit service should be distributed equally within a metropolitan area, with low-income sectors receiving their “fair-share.” More recently, the emphasis has switched to the third system, focusing particularly on the mobility deficits of people with disabilities, the elderly, and low-income people. Nonetheless, studies of the actual benefits and tax burdens of transit subsidy allocations show that, overall, transit subsidization redistributes income from high-income to low-income classes but is not very effective in targeting benefits to low-income people. Long-distance, peak-hour suburban trips have significantly higher income riders but receive the highest subsidies. Buses transport the largest percent of riders and lowest income riders but receive the least amount of capital subsidy. Also, local and state taxes to finance transit are regressive against income versus federal financing which is progressive.

Observations

Metro has traditionally focused primarily on measures of ridership and cost effectiveness when considering changes to the system. This is consistent with the experience of most other transit agencies. The Six Year Plan includes an

emphasis on non-downtown connectivity and market share which implicitly reflects an equity orientation and a desire to support local comprehensive plans. Customer satisfaction is also considered important. The experience of other transit systems shows that customer satisfaction and equity are rarely quantified or have associated performance standards. Coverage (similar to connectivity) is considered as a policy related to system design rather than performance evaluation.

There was no support among the participants for using a Customer Satisfaction Index (CSI) as a performance measure. Rather, a CSI is seen as a tool for improving service. For example, a CSI might be used to adjust a route to improve the route-level CSI or adjust the network to improve the system-level CSI but this would not be used as the basis to keep or eliminate service.

The success and desirability of pursuing comprehensive land use and transportation planning was evident from the Toronto and Vancouver experiences over the past decades. The Canadian regional planning process is predicated on less individualism than is possible in the United States. However, Canada's experience does point to the importance of designing communities so transit works and developing meaningful plans and programs which support the development of transit ridership.

5. Should financial participation by community and private sector partners, or calculations of subsidy revenue from each community, enter in the evaluation of performance?

Symposium Participants

Private-sector partners do not play a significant role in any of the participants' transit operations. Only Montgomery County has been proactive in brokering transit options with the private sector. Otherwise financial contributions by communities and the private sector are a last resort to maintain or initiate a service.

In Montgomery County, the trip reduction ordinance requires that, if the number of trips associated with a new development is projected to exceed capacity or rides, the developer must pay to provide service to achieve a 30 percent mode share. Some options available include contributions to park-and-ride lots, peak hour shuttles, fare subsidies, and guaranteed-ride-home programs which are financed by 10-year performance bonds. Communities have the option to contribute financially to a service when it is placed on the "endangered species" list, however, communities generally realize they would be compromising other programs. Montgomery County was also the only participant that actively brokers transportation service. For example, the National Institutes of Health, the Naval Medical Center, and a suburban hospital all wanted shuttle service. Montgomery County successfully adopted a broker role by providing technical expertise to the employers to jointly implement a private

shuttle. The advice of Gordon Aoyagi was "lend expertise to those who can use it."

TTC has developed the clearest guidelines for private-sector participation. Proposed routes which are projected to exceed the standard of 5 times the system average subsidy are not recommended for implementation. The only option for service then is 100 percent private subsidization of the operating loss.

BC Transit has limited opportunities for private-sector partnerships because the agency partially relies on a local gas tax. Because of the gas tax, most businesses and communities feel they pay their fair share to support transit service; this is particularly true in outlying areas where more gas tax revenue is generated per capita than in the urban core. The cost of Vancouver's transit service is relatively high because 40 percent of the operating budget consists of debt service on capital. One commercial area wanted service but, because ridership projections did not meet the BC Transit guidelines, the area now pays the difference of an institutional charter rate.

To date, Tri-Met has had limited success with private sector partnerships because the system is partially supported by a local payroll tax and businesses feel they already pay their share for service. However, a regional employee commute options ordinance is under development, and Tri-Met expects that employers will come to them in the future. Several types of public-private partnerships are under consideration by Tri-Met—neighborhood grants, financial partnerships with employers, taxi shuttles with local jurisdictions or employers, and Transportation Management Associations (TMAs). One hospital consortium agreed to pay 70 percent of the cost for service. Tri-Met is looking for a rationale to determine the approximate share of cost for future privately subsidized service.

Other Evidence

Research conducted during the B-7 project did not produce clear guidance for private-sector partnership funding. HARTLine in Tampa has pursued a negotiating strategy with several private partners. Milwaukee County Transit has set a requirement that partnership services have a zero impact on total local subsidy requirements. The Milwaukee approach mirrors that used in Toronto and Vancouver.

Observations

Successful results in Montgomery County, Maryland, reinforce the message that transit agencies should become mobility managers. Gordon Aoyagi pointed out that no request for assistance or service was initially denied because it was not considered part of the County's purview. However, providing assistance does not imply providing the service

and ignoring a transit agency's core service and market niches for new service. A transit agency cannot be "all things to all people."

There are few business partnerships with transit, but elements to support developing partnerships were evident. Juri Pill of TTC emphasized establishing a visible, open, objective

process. All participants had examples of services for which lower performance standards are accepted or a higher level of service is provided through private subsidy. Tri-Met is receptive to implementing service with private-sector participation. In Montgomery County, the Silver Spring downtown shuttle operates on 3-min headways because of private subsidy.

APPENDIX D

DOCUMENTATION OF TECHNICAL ASSISTANCE ON MOBILITY MANAGEMENT PROVIDED TO ORLANDO LYNX

DESCRIPTION OF THE AGENCY

History

The predecessor to Lynx, Tri-County Transit, was founded in 1972 in Central Florida as the Orange-Seminole-Osceola Transportation Authority. In 1991, the Chamber of Commerce president was elected as chair of the transit board. He led the Board of Directors in the transition from a managed contract bus company to an empowered locally staffed organization, terminating the contractor who operated the fleet, bringing in a new management team, and reinventing the agency under the name of Lynx. In the succeeding years, "What was a 'status quo' bus company has been successfully transformed into a full line mobility services organization." (*Fiscal Year 1995-96 Annual Budget*)

Lynx, based in Orlando, serves an area of approximately 2,500 square miles with a population of 1.4 million people. It has a fleet of 215 air-conditioned coaches; 127 are accessible to persons with disabilities. Peak frequency is 15 minutes on heavily used routes, with average frequency of 30 minutes in urban areas and 1 hour in outlying areas. It also operates carpool and vanpool programs, community shuttles, and a paratransit service called A+ Link. Ridership on A+ Link is 50,000 customers each weekday with a base fare of \$.85. In 1994, Lynx merged with the Central Florida Regional Transportation Authority, creating a regional role for Lynx and adding the function of rail development.

Lynx is governed by a nine-member Board of Directors. Each of the three County Commissions appoints a member, as do the cities of Orlando, Altamonte Springs, and Kissimmee. The State membership consists of the Florida Department of Transportation's (FDOT's) District Secretary and two members appointed by the Governor.

Mobility Management Role

From its outset, Lynx intended to be more than just a bus company, unlike its predecessor. Its vision is "Moving to be America's Best: to become recognized as a world class leader in providing and coordinating the full array of transportation services." Its mission statement also embraces the concept of mobility management as a full range of transportation options: "Lynx's mission is to create and provide a comprehensive transportation system for residents and visitors that offers quality customer services in a cost-effective manner." (*Lynx Master Plan 1992*)

In order to expand into the role of mobility manager, Lynx first had to establish a stronger identity in the communities it

serves. Market research conducted in 1991 showed that only 33 percent of those surveyed could name Tri-County Transit as the public bus company. Not only did it change its name, Lynx also painted the downtown terminal and some buses pink. The painted buses were meant to symbolize a bold change. Now all the buses have bright colors, and Lynx describes itself as Funky ... Fun ... Artistic ... Colorful ... Bold ... Graphic ... Wild ... Creative ... Exciting ... Cutting Edge." (*Customer Amenities Manual*). The result is that, during the 1995 market research, 85 percent of households surveyed volunteered Lynx as the name of the community bus service. Lynx supplements its income by allowing the buses to become moving billboards with commercial messages. The painted buses have become a trademark of sorts and public reaction is overwhelmingly positive at 87 percent.

Lynx has a Mobility Assistance department which performs ridematching and organizes vanpools, now numbering 39. New software is being purchased for the matching program to upgrade its capabilities. The department has launched a School Pool ridematching service for parent carpools and has instituted a Commuter Assistance Program for Lynx's own employees.

Recognizing the relationship between land use and transportation, Lynx has developed a *Central Florida Mobility Design Manual* that cities and counties can use in their development review process. The manual shows how traffic circulation, transit stops, and building location can be designed to promote public transportation. A companion *Customer Amenities Manual* describes designs for bus shelters, bike parking, park-and-ride lots, and ADA compliance.

In conjunction with the business community, Lynx operates a circulator shuttle in downtown Orlando and another shuttle along International Drive in the hospitality sector of town. It is working on the installation of new technology, which will eventually give callers to the Customer Services Center real-time information on buses and a menu of transportation options.

GOALS OF THE TECHNICAL ASSISTANCE

Lynx was selected by the TCRP B-7 project panel for a pilot program testing strategies for becoming a mobility manager. Because of its suburban operating environment, Lynx is representative of many transit agencies around the country and, therefore, its experiences have potential for transferability to others. As described above, Lynx has already embraced the mission of mobility management, which was a prerequisite for the technical assistance. How-

ever, it is still in the fledgling stages and ripe for advancement of mobility management practices.

The goal of the pilot program was to assist Lynx in developing new products and services responsive to employers through partnerships with the private sector. To meet this goal, Lynx proposed to work with businesses, developers, and major public and private employers from three activity areas:

- The Downtown Transportation Management Association (TMA) in downtown Orlando,
- The University Alafaya Corridor Transportation Association (UACTA), encompassing the University of Central Florida and an adjacent research park, and
- The International Drive Transit and Improvement District (I-Drive), which includes a major concentration of hotels and restaurants serving Orlando's tourist attractions, such as Walt Disney World.

The emphasis on public/private partnerships was also an important factor in Lynx's selection for the pilot program, given that advancement of mobility management often involves such collaborations.

METHODOLOGY

Crain & Associates, in conjunction with Pacific Consulting Group, conducted interviews with a broad representation of the organizations within Lynx's service area. City, county, and FDOT staff members were interviewed, along with a developer, a human resources director for a hotel chain, the police chief at the University, and persons involved with the three targeted areas mentioned above. From these interviews, along with interviews of Lynx management, a list of potential strategies was developed, ranging from basic strategies, such as discounted transit passes, to integrating information on private sector transportation services into Lynx's future customer services technology. In order to develop strategies that would be of the most interest to private-sector partners, it was decided to involve potential partners in their selection. Employers in the three activity areas were targeted, because there was an existing organization—the Downtown TMA, UACTA, and I-Drive—with which to coordinate.

The technical assistance comprised three activities: a peer roundtable, focus groups, and a survey of employers. The peer roundtable was planned as a 1-day symposium to describe successful partnerships in other cities between a transportation organization and the business community. Representatives from the business community and major public and private employers were then convened in focus groups to identify their transportation concerns and the products and services that might meet these needs. Finally, a survey was widely distributed to employers in the TMA, UACTA, and I-Drive to test responses to the ideas and the potential for partnerships. From the results of these activities,

Lynx will develop an action plan for implementing partnerships around strategies identified as most appealing to the private sector.

TECHNICAL ASSISTANCE ACTIVITIES AND RESULTS

Peer Roundtable

As the first step in developing an action plan for new products and services, Lynx held a 1-day peer roundtable featuring speakers from four agencies in other parts of the country. The audience was composed of staff from the largest public employers, the City of Orlando and Orange County; a representative of FDOT; members of the TMA, UACTA and I-Drive associations; and key Lynx staff.

Crain & Associates arranged and paid for participation of four speakers, who were chosen based on the interests expressed in the initial interviews with various sectors of the community. For example, Lynx wanted to stimulate increased involvement by the three associations and the local governmental organizations. Therefore, the Community Affairs Manager from the City of Redmond, Washington, was invited to describe that city's role in nurturing two successful TMAs. She also explained FlexPass and Riderlink. Riderlink is a joint technology project between the transit operator and one of the TMAs to provide information by means of electronic touchscreen kiosks set up at employer sites. FlexPass, a program of Seattle Metro, is an employer-paid, discounted, multiple-use pass for all employees at participating sites.

Because both Lynx and those interviewed had discussed employer-subsidized passes, two other speakers were chosen to present variations of the FlexPass. The TDM Program Manager of Tidewater Regional Transit (TRT) in Norfolk, Virginia, outlined the Commuter Check program, sold primarily to hotel managers and fast food retailers through TRT's mobile sales unit. Employers purchase Commuter Checks and give them or resell them to employees, who can use them toward the purchase of transit tickets. She also outlined TRT's Maxi-Ride service—vans used as neighborhood circulators and connectors to fixed routes in low-density areas.

The Marketing Director of Milwaukee County Transit System in Wisconsin described how the UPass was folded into the tuition payment of all students at two universities and how the concept is being expanded into a corporate pass for businesses. Through his Business Development Department, he has also developed new routes and route extensions partially funded by local businesses.

The final speaker, the Employer Services Administrator of the Fort Worth Transportation Authority (The T) in Texas, discussed the transit agency's assistance to a non-profit organization involved in transporting the unemployed to job interviews. Once employed, workers were further assisted by organizing carpools and vanpools to their jobs. The T subsidizes vanpools by an amount comparable to the subsidy of its

fixed routes and uses vanpools where bus routes are uneconomical. This speaker, as well as earlier speakers, emphasized the benefits of offering an accompanying guaranteed-ride-home program to gain acceptance for vanpooling and pass programs.

At the close of the session, the audience discussed which partnership programs might be transferable to Orlando. Based on this input, Lynx staff and the research team decided that reactions to an employer pass program and a subscription vanpool program, including an accompanying guaranteed-ride-home program, would be tested further in the focus groups.

The Proceedings of the Peer Roundtable are included as Attachment D-1.

Focus Groups

Three focus groups were held, one in each of the targeted areas of the Downtown TMA, UACTA, and I-Drive. Staff from these associations helped Lynx organize the focus groups and invite key employers to participate. The objectives of the focus groups were

- To learn more about specific transportation problems faced by employers and their employees;
- To gauge interest in the existing vanpool program, called VanPlan, and in a commuter pass; and
- To help develop a survey to go to a broader sample of employers.

Four to seven employers participated in each focus group. Participants were asked what issues or problems they faced getting themselves and their employees to and from work. They were then asked to design a transportation program to fit their needs. Both the commuter pass program and the VanPlan program were separately described, along with an accompanying guaranteed-ride-home program. For each program, participants were asked what was good and not so good about it, how it could be made better, and under what conditions they would participate in the program.

Both programs were well received. Participants suggested that the pass program should be linked with improved bus service and ease of purchase, such as a buy-by-mail option or payroll deduction. Suggestions for the vanpool program were to use smaller, easier-to-fill vans, to offer a free month trial, and to provide free use to drivers on non-commute days. Participants were concerned that organizing vanpools among several employers might be difficult.

Attachment D-2 is a summary of the focus groups' responses.

Surveys

Based on the responses in the focus groups, a 14-question survey was developed. The survey was sent to 716 employ-

ers in the three target areas, preceded by an advance letter from Lynx's Executive Director. In order to increase responses, a second wave of surveys was sent out. A total of 305 employers returned the surveys for a response rate of 43 percent.

The survey listed the transportation problems identified in the focus groups and asked respondents to rank the seriousness of the problems on a scale of 1-7. Respondents were then asked to indicate how serious each problem would be for them as an employer 5 years from now. Downtown and UACTA-area employers ranked overcoming resistance to anything but the single-occupant automobile as the most serious problem now, but ranked congestion leading to the area as the most serious problem 5 years from now. I-Drive employers ranked congestion on the roads within the area as the most serious problem both now and 5 years from now.

Relatively few employers had heard of the VanPlan program, and even fewer had participating employees. However, just over 25 percent of all employers surveyed indicated at least some likelihood of participating in part of the funding as a benefit to employees. They ranked congestion and parking availability as the problems that both the vanpooling and commuter pass programs would help with most.

Almost half of all employers surveyed indicated at least some likelihood of participating in part of the funding of the commuter pass program. The survey showed that large employers are more likely to participate, but more than half of even the smallest employers, with under 25 employees, are at least somewhat likely to participate.

When asked how employers would determine the value of the VanPlan and commuter pass program to their company, Lynx's understanding of business concerns headed the list. This measure was followed closely by program costs, benefits to employees, time required to administer the program, and communications with Lynx. The person Lynx should contact about the VanPlan or commuter pass programs varied widely, but Human Resources was the single most likely point of contact.

The full survey results are presented in Attachment D-3.

DIFFICULTIES ENCOUNTERED AND THEIR RESOLUTION

Initially, the technical assistance was planned as part of the development of a business plan to be funded with an additional grant. The business plan would have been a more comprehensive look at internal and external institutional issues, leading to both short- and long-term strategies to becoming a full-service mobility manager. When the additional grant did not materialize, the first difficulty encountered was to define a manageable scope of work for the technical assistance. Because Lynx has a strong commitment to mobility management and is open to many strategies for implementation, the challenge for them is to harness their energy and creativity to fit within their staffing and financial resources.

This difficulty was approached in several ways. Because it had been determined that the goal was to involve private-sector partners, the activities of the technical assistance centered on ways to assess the interests of potential partners. The interviews and the peer roundtable were methods at the outset to research these interests and, thus, narrow the range of possible products and services. The participation of Lynx staff in these activities also helped them focus their sights on specific strategies. In addition, a decision was made to work with the three activity areas that already had existing associations. This decision saved the enormous amount of time it can take to organize interest groups and provided a conduit for direct involvement of the private sector. From this process, a focus on the VanPlan and discounted transit passes emerged.

A second difficulty was the weak response of and involvement in the downtown area. This response resulted from a faltering Downtown TMA and the negative results of a prior survey of City of Orlando employees, which had indicated that employees were unreceptive to a proposed Commuter Assistance Program. In one respect, this was helpful, in that it gave direction to Lynx about where to focus its energies. The interest expressed in the I-Drive area has convinced Lynx to target that area first for implementation. But the survey results from the employers are encouraging enough that the downtown should still remain a market to develop. During the timeframe of the technical assistance, the Downtown TMA did fold. However, there are now plans for Lynx to take a primary role in its revival. In addition, since Lynx has started the Commuter Assistance Program with its own employees, the City of Orlando has indicated interest in developing a pilot program.

The final difficulty involved getting the survey to employers within the original timeframe established for the technical assistance. Because of the need to coordinate the schedules of several busy people, the mailing of the survey was delayed. Having top management's endorsement of the survey was considered important enough to justify the delay. To increase the response rate, a second wave was also mailed out. The result was a 2½-month slip in the research schedule.

PARTICIPANT EVALUATION

The Director of Planning and Development and the Manager of Mobility Assistance, who were the Lynx staff members most involved in the technical assistance, were asked to evaluate the benefits of the technical assistance. Overall, they ranked the role of the technical assistance as very helpful, particularly in regard to the responsiveness of the products to private-sector needs and the increased communication with the private sector. One ranked the technical assistance as moderately helpful in increasing the potential for new partnerships and the other ranked it as very helpful. Focus groups in the business community constituted the component of the technical assistance activities that both found most helpful.

Both believe that TCRP should give more emphasis to pilot programs, as opposed to basic research, because pilot programs are more likely to generate interest and result in action plans and program implementation. As the Director said, "You'd be surprised what you discover in the real world!"

IMPACT OF THE TECHNICAL ASSISTANCE

A presentation on the activities of the technical assistance program and the results of the survey was made to the Executive Director and key Lynx staff. Following the presentation, the planning and marketing department staffs met for a brainstorming session on the findings and their implications for the VanPlan and commuter pass programs. Out of this evolved two additional tasks:

- The marketing department developed a preliminary plan for an expanded VanPlan program.
- A consultant was hired to research the various types of discounted transit passes around the country, including FlexPass, Commuter Check, UPass, and others. The research will serve as the foundation for the design of Lynx's new pass.

The research team returned to Lynx to develop the framework for an action plan for the VanPlan program. Items discussed included

- Whether painting the vanpools for increased visibility will result in increased riders;
- What the goal for new vanpools on the road should be, given the limited staff available and competing program priorities;
- What types of marketing materials are needed for phone inquiries and presentations;
- Whether carpooling should be emphasized as much or more than VanPlan;
- How to tap into wireless communication companies and traffic radio for additional incentives to riders;
- How to evaluate the success of an expanded VanPlan program; and
- What the marketing budget will be for VanPlan.

Through this discussion, the barriers and opportunities for implementation were identified. The first barrier that has to be resolved is the fact that no marketing budget has been planned for this program. Other elements of the action plan will concern resolution of the budget issue, and the Plan will then be refined. Reports will be sent to the Crain & Associates and the project panel 6 months and 1 year after the end of the technical assistance to document progress.

Although the period of the technical assistance was too brief to demonstrate quantifiable results, such as the number of new vanpools or employers selling commuter passes, there are, nonetheless, identifiable outcomes:

- Lynx has a useful product from the technical assistance—a body of research about its employer market to use in developing new products and services.
- Through the focus groups and survey, Lynx learned that sometimes it is more important to return to the basics than to invest in another new product. Although they have a good product in VanPlan, almost no one knows of it. The survey indicated that there is significant potential for growth and interest in financial participation.
- A representative from the University of Central Florida at the peer roundtable was stimulated enough by the presentation about Milwaukee County Transit's UPass to call the speaker later for more details. Although Lynx had had preliminary discussions about such a pass, the technical assistance program solidified the university's interest in pursuing this partnership with Lynx.
- Because the survey identified major potential for an employer commuter pass program, with a majority also interested in financial participation, Lynx is moving ahead with plans to develop such a pass. It is likely that this program would have been implemented eventually, but the technical assistance has advanced its development and has clarified community interest in it.
- As a result of the technical assistance, Lynx developed a relationship with one major employer in the I-Drive area, who has instituted a payroll deduction plan for bus passes and scheduled two vanpool program presentations. This employer will be a model for others in the hospitality industry.
- The passivity first encountered in the downtown area has been countered with an interest in having Lynx reformulate the Downtown TMA and develop a Commuter Assistance Program among city employees.
- The selection of Lynx by the TCRP panel and the involvement of the research team as a third party gave Lynx's ongoing mobility management efforts credibility in the community. Similarly, the peer roundtable exposed private and public sector participants to new ideas and gave credibility to mobility management as a function of a transit agency.
- The technical assistance helped increase the attention of the Executive Director and Lynx's senior staff on the Mobility Assistance programs offered by Lynx.

LESSONS ABOUT MOBILITY MANAGEMENT

Crain & Associates has identified ten key factors which influence a transit agency's ability to act as a mobility manager. This section analyzes how these factors limit or encourage mobility management at Lynx. (In three sections, discussion about two factors has been combined.)

Leadership

The clearest lesson that emerged from the Lynx pilot program is the critical role that leadership plays in creating, pro-

moting, and advancing the mobility management agenda. Because of the vision of the Board president in 1991 and because of the commitment of the new management team to that vision, Lynx transformed itself from a bus company into a mobility management agency. The transformation demonstrates that leadership can bring about fundamental change.

This change can be attributed to a willingness to take risks. The Board agreed to paint the downtown terminal and some buses pink to draw attention to the re-invention of the transit system. When one downtown employer objected to the pink terminal, the Board president attempted to make peace and win her over by sending her a bouquet of pink roses. However, in a town used to being entertained by Walt Disney World, the pink paint paid off in community acceptance.

The pilot program further demonstrates the importance of leadership. Lynx's activities during the technical assistance stimulated renewed interest among downtown employers in mobility assistance programs. By its outreach to employers, Lynx has already begun new partnerships with the hospitality sector in the International Drive area and solidified commitment to a discounted pass program at the university. Lynx obtained these results by taking the lead instead of limiting itself to existing operations.

Organizational Culture and Management

Mobility management continues to be part of Lynx's vision because it has a champion in the Director of Planning. However, leadership alone cannot succeed without a supportive environment. Both the Board of Directors and the Executive Director give the Director of Planning latitude to experiment and take initiative. Senior staff members who were interviewed agreed unanimously that Lynx has a culture of innovation that is widely accepted in the organization. However, one cautioned that, as staff who were part of the birth of Lynx leave, the internal vision needs refocusing among new members to the organization. Another believes that, as Lynx grows, its processes are becoming more bureaucratic and less responsive. These comments point out that transportation agencies must continually take the temperature of the organizational culture and reinforce the mobility management mission when needed.

Labor Relations

Florida is a right-to-work state, so the union is not in as strong a position as in some other states. Nonetheless, the agency has worked on team-building and trust and, according to a senior staff member, employee surveys show a positive growth in union-management relations. Labor relations do not appear to constrain the agency's mobility management efforts. In fact, the union contract allows Lynx to privately contract for any new service with notification to the union. One department director suggested that having a two-

tiered or variable pay structure would be a measure, not only at Lynx, but industry-wide that could further mobility management.

Political and Institutional Environments

The fast-growing, suburban setting in which Lynx operates creates a climate that encourages flexibility and change. Lynx is operating in a dynamic environment, as evidenced by its 70 percent increase in ridership in 4 years. It is attempting to respond by putting a high value on meeting the community's needs—on “never saying no”—and the political and institutional environments are, in turn, generally quite supportive.

Both the State of Florida and the City of Orlando have adopted growth management policies that are favorable to transit. In the face of rapid growth, many consider the policies ineffectual in their implementation; nonetheless, the existence of the policies evidences that a mindset to encourage a mobility management approach is alive within these institutions.

FDOT has exhibited a commitment to balanced transportation by limiting urban interstate highways to six general purpose lanes within a maximum of ten lanes. Lynx staff interprets this policy as the state's recognition of a need for mobility management to address traffic growth. The policy's intentions are undermined by the lack of enforcement of the high-occupancy-vehicle (HOV) lanes on I-4. It is anticipated, however, that when new HOV lanes are added, all of the HOV lanes will then be enforced.

The one area where Lynx has experienced some conflict within the political environment is with the private sector carriers. There are 250 private bus operators serving the 13 million tourists visiting Orlando. The largest has sued over the shuttle Lynx operates on International Drive, which reportedly has the largest concentration of hotels in the world. Although the private operator lost the lawsuit, it continues to maintain that Lynx's intentions of being “entrepreneurial” represent unfair competition. This incident demonstrates a barrier that can occur when an agency strays from a traditional transit role.

Cost and Funding

Because it has no dedicated source of funding for its \$47 million budget, it must negotiate annually with the cities and

counties for their contributions. Although Lynx enjoys good relationships with the cities and counties, local funding is not predictable.

Lynx's plans outstrip its ability to fund them. Thus, despite its commitment to mobility management, it must go slower than it would like or than the rapid growth of its service area requires. For example, School Pool has been a successful pilot program that introduces Lynx as a mobility management agency into the homes, where residents are not necessarily bus riders. The potential to greatly expand this program has been demonstrated, but additional personnel would be required. Similarly, vanpools are recognized as an efficient method of providing mobility with limited resources. In addition, vanpools help boost Lynx's Section 15 data, bringing in revenue to the agency which exceeds the cost of the VanPlan program. However, one barrier that was discussed during the action plan session was the need to add staff if an aggressive implementation of the VanPlan expansion is to be undertaken.

Performance Measures

Lynx staff indicated that they think out new programs very thoroughly before introducing them. Thus, they set realistic timeframes for measuring success and feel confident from the outset that programs will meet expectations. However, the rapid growth of Lynx has inhibited their ability to develop structured measures linked with the budget. Staff also cited a lack of industry-wide models upon which to base measures for mobility management.

Regulations

As indicated earlier, growth management regulations of Florida and Orlando have actually been enhancing characteristics for Lynx's mobility management efforts. They have created an awareness of transportation issues among business and elected officials and the community, although actions have sometimes lagged behind policies. As with many other transportation agencies studied in this research, Lynx cited federal regulations regarding school busing, charter service, and Section 13(c) labor protections as inhibitors to realization as a full mobility management organization.

ATTACHMENT D-1

STRATEGIES TO ASSIST LOCAL TRANSPORTATION AGENCIES IN BECOMING MOBILITY MANAGERS (TCRP B-7)

LYNX PILOT PROGRAM PEER ROUNDTABLE PROCEEDINGS

**March 22, 1996
Orlando, Florida**

As the first step in developing an action plan for new products and services, Lynx held a 1-day Peer Roundtable on March 22. Representatives from four other agencies described how they had responded to the market by forming partnerships with the private sector. Speakers were Joseph Caruso, Milwaukee County Transit System, Wisconsin; Carol Russell, Tidewater Regional Transit, Norfolk, Virginia; Catherine Simpson, The T in Dallas, Texas; and Kim van Ekstrom, City of Redmond, Washington. The audience was composed of key Lynx staff; City of Orlando, Orange County, and Florida DOT staff; and members of the three activity areas upon which the pilot program is focused:

- The Downtown Transportation Management Association (TMA);
- The University Alafaya Corridor Transportation Association; and
- The International Drive Transit & Improvement District.

Kim van Ekstrom, Community Affairs Manager from the City of Redmond, Washington, described the planning process leading to the formation of the Overlake and Willows Corridor TMAs. She emphasized that successful partnerships depend on flexibility and positive thinking, goals—and measures to determine whether the goals have been met, acceptance of the role as an agent of change, reinforcement of the benefits of transportation programs to employers, and identifying someone to continually nurture the relationship.

Two specific products have resulted from partnerships: Riderlink and Flexpass. Riderlink is a joint project between King County Metro and the Overlake TMA. Electronic touchscreen kiosks have been set up at selected employer sites. The Employee Transportation Coordinator at each of

the eight member companies has a connection to Riderlink. Through the Internet, Riderlink provides transit schedules, on-line ridematch applications, bicycle information, and congestion and road construction updates. The Internet address is <http://transit.metrokc.gov/>

Flexpass provides participating employers with a multiple use pass for all their employees. The pass can be used to ride transit, participate in a guaranteed-ride-home program, and receive rideshare matching assistance, vanpool subsidies, reduced parking rates, and merchant discounts. How much the employer contributes is based on the number of employees making use of the discounted bus pass.

At various points during the morning, Danny Pleasant, Transportation Planner from the City of Orlando; Joe Wallace, Director of the Central Florida Research Park; and Luann Brooks, Director of the International Drive Transit & Improvement District, briefly outlined the demographics of their activity areas and described problems and opportunities.

Carol Russell, TDM Program Manager of the Tidewater Transportation District Commission in Norfolk, Virginia, discussed their Maxi-Ride service. Ten vans serve six service areas as neighborhood circulators and connectors to fixed routes. Originally, Tidewater Regional Transit (TRT) contracted with taxi companies to run this dial-a-ride service for the general public, but TRT later found that it was less expensive to use their own vans. Drivers have cellular phones and book their own trips. Patrons can call the drivers directly 2 hours in advance of the trip. The service is most appropriate for low-density areas.

The Commuter Check program also originally began as a subsidized taxi program. Residents in public housing were

given taxi vouchers for trips. When the taxi program became costly and unwieldy to manage, TRT converted to a Commuter Check program. Employers purchase Commuter Checks and give them or resell them at a discount to employees, who can then use the checks toward the purchase of transit tickets. Hotel managers and fast food retailers are primary customers for Commuter Checks, subsidizing their workers to ensure that they have a way to get to work. TRT uses a mobile sales unit to travel to employment sites. Benefits to employers include a federal tax credit, attraction of entry-level employees, reduced turnover, and possible reductions in parking costs or subsidies. TRT has found that this program requires a significant sales effort—six or seven sales calls to reach closure. Larger employers have been more resistant because of internal bureaucracy and the potential for a substantial cost in subsidies to employees.

Joe Caruso, Marketing Director of Milwaukee County Transit System in Wisconsin, outlined three partnership programs introduced by his Business Development department: new routes and route extensions partially funded by local businesses, a UPass for students at two universities, and a corporate pass that is under development. The UPass is a \$29 semester pass folded into the tuition payment of all students. At one university, transit ridership increased 35 to 40 percent and automobile use declined from 54 to 40 percent. The corporate pass will be modeled after the UPASS, where Milwaukee County Transit and participating businesses will subsidize \$30 of a \$45 monthly pass for employees.

Milwaukee County Transit uses the following key concepts to ensure successful partnerships:

- Customize routes to fit the partner's needs,
- Involve the corporate customer as a marketing and financial partner,
- Ensure that the corporate customer shares the risk and needs to participate in the political process,
- Keep the process simple and do as much for the corporate customer as possible,
- Hire a coordinator to help the customer, and
- Give it time to succeed.

The final peer speaker was Catherine Simpson, Employer Services Administrator of the Fort Worth Transportation Authority (The T) in Texas. She discussed the Weed and Seed program, which organized transportation for workers to

jobs at the airport. The T provided a van to a non-profit agency to transport potential workers to job interviews. A large carpool matching effort evolved, along with three subsidized vanpools. Before participating in the Weed and Seed transportation program, 70 percent of the workers were on unemployment. Employers are satisfied because the program provides them with good employees who come to work on time. Employers now enjoy an 86 percent retention rate for new hires.

The T's subsidized vanpool program consists of 130 vans. The speaker indicated a belief that passengers in vanpools should be subsidized in the same way that bus riders are subsidized. Vanpooling is part of the area's Ozone Alert strategy for clean air. In addition, she mentioned that The T saved \$150,000 a year by converting bus routes into vanpools when Lockheed downsized its workforce. This speaker, as well as previous speakers, emphasized the importance of a guaranteed-ride-home program to accompany ridesharing efforts. Guaranteed-ride-home, which assures participants of a ride home in case of an emergency, has a low cost but is very effective in marketing carpooling and vanpooling to potential riders. Her experience and that of TRT's has indicated that minimal use of the program is actually made.

At the close of the session, the audience discussed which partnership programs might be transferable to Orlando. Based on this input, the consultants, Peter Webb and Gail Murray, met with Lynx's Director of Planning, Rob Gregg, and Manager of Mobility Assistance, Ann Joslin, to determine which potential products or services discussed at the Roundtable were most promising for further testing. It was decided that focus groups would be scheduled in May to test reactions to a UPass and a corporate pass, expansion of the vanpool program, commuter check, and guaranteed-ride-home.

These concepts will be presented to three separate focus groups—one in each activity area—on May 15 and 16, 1996. Each focus group will be asked to develop and rank a list of transportation needs and concerns. The group will then evaluate what products and services could address these needs. Focus group participants will be asked how best to approach the private sector with partnerships, what resources might be available from them, and how willing they would be to get involved. A follow-on survey of employers in the three activity areas will then be conducted to quantify the results of the focus groups.

ATTACHMENT D-2

LYNX

- **INTERNATIONAL DRIVE TRANSIT IMPROVEMENT DISTRICT (I-DRIVE)**
- **DOWNTOWN ORLANDO**
- **CENTRAL FLORIDA RESEARCH PARK/UNIVERSITY OF CENTRAL FLORIDA (UACTA)**

Focus Groups

May 15-16, 1996

PACIFIC CONSULTING GROUP
399 Sherman Avenue, Suite 8
Palo Alto, California 94306
415-327-8108

PCG/Pacific Consulting Group

Project Background

- As part of the Transit Cooperative Research Program (TCRP) B-7, "Strategies to Assist Local Transportation Agencies in Becoming Mobility Managers", Crain and Associates with Pacific Consulting Group (PCG) are offering technical assistance to LYNX in the areas of developing partnerships with private and public sector business organizations to improve and promote mobility management in the Orlando area.
- As part of this program, three focus groups were conducted, two on May 15, 1996 and one on May 16, 1996. The International Drive Transit Improvement District (I-Drive) focus group had 7 participants, the Downtown Orlando focus group had 6 participants and the Central Florida Research Park/University of Central Florida (UACTA) focus group had 4 participants. The participants in each of the focus groups represented employers in their respective areas. The focus groups were conducted in Orlando and were attended by several LYNX staff members. The primary objectives of the groups were to determine current commuting and other transportation issues facing themselves and their employees; to get their reactions to two programs LYNX is currently developing; and to develop a survey based on their responses.

PCG/Pacific Consulting Group

Report Organization

The report begins with a listing of transportation issues identified by focus group participants at the beginning of the discussions. Next is a proposed transportation program designed by the focus group participants which would accommodate their needs as well as their employees. This is followed by the focus group participants reactions to two transportation programs LYNX is currently developing.

PCG/Pacific Consulting Group

Transportation Issues

At the outset of the focus groups participants were asked what issues or problems they faced with respect to getting themselves and their employees to and from work. Consensus responses included:

- Traffic congestion
- Availability of low cost parking
- Negative view of public transportation
- Convenience of driving own car
- Accessibility of bus stops
- Limitations of route boundaries
- Unplanned growth
- Convenience of transportation options
- Cost of commuting
- Limited access roads (I-Drive area)
- Need for 24 hour transportation alternatives (I-Drive area)

PCG/Pacific Consulting Group

Transportation Programs

Focus group participants were asked to design a transportation program to fit the needs of themselves and their employees or to modify an existing program. Responses included:

- Increase number of park & rides
- Promote public transportation
- Offer incentives to employees
- Increase frequency of buses
- Provide transit center offering transportation options
- Increase hours of transportation service
- Increase parking prices to discourage use of own car
- Provide orientation and activity fairs to increase awareness of public transportation
- Provide more convenient transportation locations
- Shuttles between specific locations (e.g., I-Drive and Downtown)
- Increase carpool matching assistance

PCG/Pacific Consulting Group

Pass Program

LYNX currently offers a transportation program called the Pass Program. An expanded program was described to the focus group participants focusing on a commuter pass. The tax deductible program, partly subsidized by employers, would include free bus passes for employees and a guaranteed ride home program for emergencies. Reactions to the proposed program included:

- Would be a useful program for many employers
- Link with improved service, e.g., park & ride with express bus service
- Emphasize convenience of service
- Provide well-lighted, clean and safe stops and transfer points
- Offer buy-by-mail option
- Increase awareness of subsidy
- Provide sale of tickets on the bus
- Provide payroll deduction to spread costs over month

PCG/Pacific Consulting Group

Subscription Vanpool Program

LYNX also offers a Subscription Vanpool Program which is operating successfully, but is still relatively unknown to many employers. Focus group participants were asked to give their reactions to the program. Responses included:

- Would be a useful program for many not now using
- Promote convenience of vanpools
- Provide guaranteed ride home in case of emergency
- Provide attractive vans
- Provide free use to drivers on non-commute days
- Create eye-catching advertising in business lobbies
- Promote at general office meetings
- Offer a free month trial
- Offer as benefit to employees
- More difficulty if shared among employers
- Consider smaller, easier to fill vehicles

PCG/Pacific Consulting Group

ATTACHMENT D-3

SUMMARY OF ORLANDO EMPLOYER SURVEY AND RECOMMENDATIONS TO LYNX

LYNX

TECHNICAL ASSISTANCE ON NEW PRODUCTS AND SERVICES FOR EMPLOYERS IN:

- **INTERNATIONAL DRIVE TRANSIT IMPROVEMENT DISTRICT (I-DRIVE)**
- **DOWNTOWN ORLANDO**
- **CENTRAL FLORIDA RESEARCH PARK/UNIVERSITY OF CENTRAL FLORIDA (UACTA)**

November 22, 1996

CRAIN & ASSOCIATES
120 Santa Margarita Avenue
Menlo Park, California 94025

PACIFIC CONSULTING GROUP
399 Sherman Avenue, Suite 8
Palo Alto, California 94306

Crain & Associates/Pacific Consulting Group

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Project Components

As part of the Transit Cooperative Research program (TCRP) B-7, "Strategies to Assist Local Transportation Agencies in Becoming Mobility Managers," Crain & Associates with Pacific Consulting Group (PCG) provided technical assistance to LYNX in the areas of developing partnerships with private and public sector business organizations to improve and promote mobility management in the Orlando area.

- Peer Roundtable of practitioners from other systems
- Focus Group of employers from three areas to develop issues for testing
- Mailback survey of employers:
 - Severity of transportation problems
 - Reactions to two programs: VanPlan and Commuter Pass

Crain & Associates/Pacific Consulting Group

Page 2

Outline of Presentation

- Summary of Peer Roundtable
- Survey Results
- Findings and Recommendations

PEER ROUNDTABLE

MARCH 22, 1996

City of Redmond, WA.

- Partnership in forming two TMAs
 - Accept role of change agent
 - Nurture relationships
 - Measure progress toward goals
- Riderlink - touch-screen info kiosks at employer sites
- FlexPass - multiple use pass

Tidewater Transportation District, VA.

- Maxi-Ride - neighborhood circulators
- Commuter Check
 - Use toward transit pass purchases
 - Hotel and fast food employers primary market

Milwaukee County Transit, WI.

- UPass - semester pass at universities
- Routes subsidized by businesses
 - Customer must share risks
 - Keep process simple

Fort Worth Transportation Authority, TX.

- Weed & Seed Program
 - Partner is non-profit
 - Van for job interviews
 - Carpool matching aimed at low income workers
- Subsidized Vanpools
 - Converted low productivity bus routes
 - Guaranteed Ride Home important to marketing

SURVEY RESULTS

SURVEY RESPONSES

After two mailings, a total of 43% of all employers contacted completed the survey.

<u>Region</u>	<u>Surveys Mailed</u>	<u>Surveys Completed</u>	<u>Response Rate</u>
UACTA	125	75	60%
Downtown	159	94	59%
I-Drive	432	136	32%

SURVEY RESPONSES

Over half of the employers responding to the survey have 50 or fewer employees.

- About 30% of all respondents have over 100 employees.
- Downtown Orlando is represented by a higher percent of smaller employers.
- I-Drive has a greater representation of large employers.
- UACTA has the most employers with over 1,000 employees.

Number of Employees (On Site)	UACTA		Downtown		I-Drive		Three Area Total	
Less than 25	29	42%	55	59%	31	23%	115	39%
25 to 50	10	15%	10	11%	27	20%	47	16%
51 to 100	6	9%	11	12%	30	23%	47	16%
101 to 500	15	22%	11	12%	28	21%	54	18%
501 to 1000	1	1%	4	4%	13	10%	18	6%
More than 1000	8	12%	3	3%	4	3%	15	5%
Total Valid Respondents	69	100%	94	100%	133	100%	296	100%

TRANSPORTATION PROBLEMS (DOWNTOWN)

Many problems are considered currently serious by downtown employers with even more problems anticipated in the future.

- Over 60% consider that **overcoming people's resistance to anything but the single occupant automobile** is currently a serious problem.
- Other problems currently considered serious by a majority of downtown employers include: **congestion on roads leading to the area, availability of parking in the area, and cost of parking in the area.**
- With respect to anticipated problems five years from now, **congestion on roads leading to the area** heads the list with 84% anticipating a serious problem. This is followed by **cost of parking (74%), availability of parking (73%), and congestion on roads in the area (72%).**
- Just 10% of the downtown employers consider **daytime bus service within the area** a serious problem now (rising to 21% anticipating a serious problem five years from now).

TRANSPORTATION PROBLEMS (DOWNTOWN)

Problem	Percent Rating Very Serious Right Now*	Percent Anticipating Very Serious in Five Years*
Overcoming people's resistance to anything but SOV	62%	66%
Congestion on roads leading to area	59%	84%
Availability of parking within area	55%	73%
Cost of parking within area	52%	74%
Congestion on roads within area	41%	72%
Lack of information about alternatives to SOV	39%	43%
Overall cost of commuting for employees	25%	58%
Inadequate bus service to/from area outside commute hours	23%	28%
Inadequate bus service to/from area during commute hours	20%	29%
Inadequate bus service within area nights/weekends	17%	25%
Inconvenient or unsafe bus stops	14%	30%
Inadequate bus service within area during the day	10%	21%

*Based on a rating of 6 or 7 on a 7-point scale where 1 is not at all serious and 7 is very serious.

TRANSPORTATION PROBLEMS (I-DRIVE)

I-Drive employers also perceive serious problems currently and in the future, although somewhat differently than downtown employers.

- Over 50% consider **congestion on roads within the area** a serious problem now, with 85% anticipating that this will be a serious problem in five years.
- Other problems considered currently serious by I-Drive employers include: **inadequate night/weekend bus service** (38%), **availability of parking within the area** (37%), **congestion on roads leading to the area** (34%), and **overcoming resistance to anything but the single occupant automobile** (33%).
- Anticipating five years from now, 77% perceive **congestion on roads leading to the area** will be a serious problem, followed by **availability of parking in the area** (68%).
- Just 9% of the I-Drive employers consider **cost of parking** a serious problem now, although this rises to 40% for five years from now.

TRANSPORTATION PROBLEMS (I-DRIVE)

Problem	Percent Rating Very Serious Right Now*	Percent Anticipating Very Serious in Five Years*
Congestion on roads within area	52%	85%
Inadequate bus service within area nights/weekends	38%	48%
Availability of parking within area	37%	68%
Congestion on roads leading to area	34%	77%
Overcoming people's resistance to anything but SOV	33%	39%
Inadequate bus service to/from area during commute hours	27%	42%
Inadequate bus service to/from area outside commute hours	26%	45%
Lack of information about alternatives to SOV	26%	39%
Inconvenient or unsafe bus stops	22%	37%
Overall cost of commuting for employees	15%	35%
Inadequate bus service within area during the day	13%	34%
Cost of parking within area	9%	40%

*Based on a rating of 6 or 7 on a 7-point scale where 1 is not at all serious and 7 is very serious.

TRANSPORTATION PROBLEMS (UACTA)

Overall, problems are perceived as somewhat less serious by UACTA employers than by Downtown or I-Drive employers.

- Over half consider **overcoming people's resistance to anything but the single occupant automobile** is currently a serious problems (dropping slightly to 46% anticipating this as a serious problem in five years).
- The other problem perceived as currently serious by almost half the UACTA employers is **congestion on roads leading to the area**. This concern tops the list five years from now with 67% anticipating it as a serious problem.
- Other future problems anticipated include: **congestion on roads within the area** (46%) and **availability of parking in the area** (45%).
- **Overall cost of commuting for employees, cost of parking within the area, daytime bus service within the area, and inconvenient or unsafe bus stops** are all perceived as current serious problems by less than 10% of the UACTA employers, although each rises to closer to 20% five years from now.

TRANSPORTATION PROBLEMS (UACTA)

Problem	Percent Rating Very Serious Right Now*	Percent Anticipating Very Serious in Five Years*
Overcoming people's resistance to anything but SOV	51%	46%
Congestion on roads leading to area	45%	67%
Lack of information about alternatives to SOV	29%	27%
Congestion on roads within area	22%	46%
Inadequate bus service to/from area during commute hours	18%	24%
Availability of parking within area	17%	45%
Inadequate bus service to/from area outside commute hours	13%	19%
Inadequate bus service within area nights/weekends	11%	22%
Inconvenient or unsafe bus stops	9%	16%
Inadequate bus service within area during the day	6%	23%
Cost of parking within area	5%	20%
Overall cost of commuting for employees	4%	19%

*Based on a rating of 6 or 7 on a 7-point scale where 1 is not at all serious and 7 is very serious.

VANPLAN PROGRAM

Relatively few employers have heard of the VanPlan program. Even fewer have participating employees.

	<u>UACTA</u>	<u>Downtown</u>	<u>I-Drive</u>
Heard of VanPlan Program	14%	20%	7%
Have employees participating in VanPlan	1%	0%	2%

VANPLAN PROGRAM

Over one third of the total employers responding to the survey think it likely that vanpools could be set up for their employees.

- I-Drive shows the most potential (44% very or somewhat likely) with Downtown the least (23%)
- Most reasons given for responses were negative: **not enough potential participants** (64 responses); **inflexible work hours** (40); **job requires use of automobile** (16); **program too costly** (10); and **not enough incentive to give up automobile** (10).

<u>Likelihood of Setting Up Vanpools for Employees</u>	<u>UACTA</u>	<u>Downtown</u>	<u>I-Drive</u>
Very likely	3%	1%	9%
Somewhat likely	26%	22%	35%
Not at all likely	71%	77%	57%

VANPLAN PROGRAM

Just over 25% of all employers surveyed indicate at least some likelihood of participating in part of the funding of the VanPlan program as a benefit to employees.

- I-Drive again shows the most potential (36%) with Downtown again the least (16%).
- Most positive responses in all three areas are in the "somewhat likely" category.

<u>Likelihood of Participating in Funding of VanPlan Program</u>	<u>UACTA</u>	<u>Downtown</u>	<u>I-Drive</u>
Very likely	1%	3%	6%
Somewhat likely	20%	13%	30%
Not at all likely	78%	84%	65%

VANPLAN PROGRAM

Employers have mixed opinions about the extent to which VanPlan addresses problems identified as serious.

- No one area shows more promise than the others.

<u>How Well VanPlan Addresses Problems Identified as Serious</u>	<u>UACTA</u>	<u>Downtown</u>	<u>I-Drive</u>
Not very well ¹	30%	22%	28%
Will help some ²	55%	64%	57%
Will help a lot ³	14%	14%	15%

¹Based on a rating of 1 or 2 on a 7 point scale where 1 is "won't help at all" and 7 is "will help a lot."

²Based on a rating of 3, 4, or 5

³Based on a rating of 6 or 7

VANPLAN PROGRAM

Congestion and parking availability are seen as the problems VanPlan helps with most.

- I-Drive employers also think VanPlan will help with: **deficient non-peak bus service within the area (25%), deficient bus service nights and weekends within the area (24%), overall employee commuting cost (21%), and deficient peak bus service to/from the area (21%).**

<u>Problems VanPlan Helps with Most</u>	<u>UACTA</u>	<u>Downtown</u>	<u>I-Drive</u>
Congestion leading to the area	61%	65%	28%
Congestion within the area	31%	61%	35%
Area parking availability	41%	50%	35%
Area parking cost	16%	32%	7%
Total Responding	49	54	71

COMMUTER PASS PROGRAM

Reactions to the proposed commuter pass program are quite positive.

- Over 80% of I-Drive employers surveyed indicated they would be at least somewhat likely to participate in the program, with 26% indicating very likely.
- UACTA, while showing the least potential of the three areas, still shows over 50% at least somewhat interested.
- The primary reason for participating is that **enough employees could use the passes**. Reasons for not participating: **Not enough incentive to give up auto; Not enough participants.**

<u>Likelihood of Participating in Commuter Pass Program</u>	<u>UACTA</u>	<u>Downtown</u>	<u>I-Drive</u>
Very likely	7%	12%	26%
Somewhat likely	44%	54%	55%
Not at all likely	49%	34%	20%

COMMUTER PASS PROGRAM

- Large employers are more likely to participate, but more than half of even the smallest employers are at least somewhat likely to participate:

<u>Employer Size</u>	<u>Very or Somewhat Likely to Participate in the Program</u>
Over 100	84%
25-100	78%
Under 25	52%

COMMUTER PASS PROGRAM

Almost half of all employers surveyed indicate at least some likelihood of participating in part of the funding of the Commuter Pass Program as a benefit to employees.

- As with the vanpool program, I-Drive shows the most potential (61%), followed by Downtown (44%) and UACTA (29%).
- Once again, most positive responses concerning funding participation are in the "somewhat likely" category for all three areas.

<u>Likelihood of Participating in Funding of Commuter Pass Program</u>	<u>UACTA</u>	<u>Downtown</u>	<u>I-Drive</u>
Very likely	0%	3%	5%
Somewhat likely	29%	41%	56%
Not at all likely	71%	56%	40%

COMMUTER PASS PROGRAM

- Larger employers indicate more of a willingness to participate in funding:

<u>Employer Size</u>	<u>Very or Somewhat Likely to Participate in Funding</u>
Over 100	63%
25-100	55%
Under 25	31%

COMMUTER PASS PROGRAM

As with VanPlan, employers have mixed opinions about the extent to which the Commute Pass Program addresses problems identified as serious.

- UACTA employers are somewhat less optimistic than the other areas that this program will be of at least some help in alleviating problems.

How Well the Commuter Pass
Program Addresses Problems
Identified as Serious

	<u>UACTA</u>	<u>Downtown</u>	<u>I-Drive</u>
Not very well ¹	28%	14%	13%
Will help some ²	57%	69%	67%
Will help a lot ³	15%	16%	20%

¹Based on a rating of 1 or 2 on a 7 point scale where 1 is "won't help at all" and 7 is "will help a lot."

²Based on a rating of 3, 4, or 5

³Based on a rating of 6 or 7

COMMUTER PASS PROGRAM

As with VanPlan, congestion and parking availability are seen as the problems the Commuter Pass Program helps with most.

- I-Drive employers also think Commuter Pass will help with Deficient non-peak bus service to/from the area (25%) and Deficient bus service nights and weekends within the area (25%).

<u>Problems the Commuter Pass Program Helps with Most</u>	<u>UACTA</u>	<u>Downtown</u>	<u>I-Drive</u>
Congestion leading to the area	63%	46%	28%
Congestion within the area	39%	38%	36%
Area parking availability	41%	38%	25%
Overall employee commute cost	17%	28%	26%
Area parking cost	15%	32%	3%

EVALUATION MEASURES

No single measure stands out in how employers determine the value of programs such as the VanPlan and Commuter Pass programs.

- **LYNX's understanding of business concerns** heads the list of most important measures but is followed closely by **program costs, benefits to employees, time required to administer the program, and communications with LYNX.**
- I-Drive employers rated all measures higher than employers in the other two areas.

EVALUATION MEASURES

Percent rating very important*

Measure	UACTA	Downtown	I-Drive	Three-Area Average
LYNX's understanding of business concerns	22%	32%	45%	33%
Program costs	25%	29%	41%	32%
Benefits to employees	22%	25%	44%	30%
Time required to administer program	24%	25%	32%	27%
Communications with LYNX	21%	22%	34%	26%
Benefits to customers/visitors	14%	11%	39%	21%
Equity for all/most employees	21%	14%	29%	21%
Benefits to employers	11%	10%	42%	21%
Value of giving benefits to employee	10%	17%	31%	19%
Number of employees using	11%	11%	26%	16%

*Based on a rating of 6 or 7 on a 7 point scale where 1 is "less important" and 7 is "very important."

COMPANY CONTACT

The person LYNX should contact about the VanPlan or Commuter Pass programs varies widely by company.

- Human Resources is the single most likely point of contact, followed by Head of Operations and CEO/President.

Contact Person	UACTA		Downtown		I-Drive		Three Area Total	
Head of Human Resources	26	42%	18	21%	41	34%	85	32%
Head of Operations	13	21%	11	13%	20	17%	44	16%
CEO/President	5	8%	20	23%	18	15%	43	16%
CFO or Equivalent	3	5%	4	5%	1	1%	8	3%
Other	15	24%	34	39%	40	33%	89	33%
Total Responding	62	100%	87	100%	120	100%	269	100%

APPENDIX E

MOBILITY MANAGEMENT SURVEY

**SURVEY ON BARRIERS TO MOBILITY MANAGEMENT
TCRP PROJECT B-7**

1. Phase I of the TCRP B-7 project identified ten key factors that influence a transit agency's ability to act as a mobility manager. In the following questions, the statements on the left describe conditions which *limit* mobility management, while the statements on the right describe conditions which *encourage* mobility management. For each factor, please indicate where your agency or its operating environment falls between these extremes. Circling 5 means conditions are most limiting; circling 1 means conditions are most encouraging.

<u>Factor</u>	<u>Conditions that Limit Mobility Management</u>						<u>Conditions that Encourage Mobility Management</u>
Leadership	Discourages or does not recognize value of mobility management, unwilling or unable to educate elected officials.	5	4	3	2	1	Champions mobility management, able to convince elected officials, willing to take risks, share power and recognition.
Organizational culture	Hierarchical, top-down, strictly segmented by mode.	5	4	3	2	1	Open to change, market-driven, cohesive internal vision and mission. Creativity and initiative encouraged and rewarded. No bias toward a single mode.
Management	Outmoded job descriptions, lack of new skills, unwilling to try new approaches.	5	4	3	2	1	Understanding of service alternatives, roles and motivations of other organizations, funding possibilities.
Labor Relations	Fear of job loss, inflexible agreements.	5	4	3	2	1	Cooperative relationship, flexible agreements.
Political environment	Elected officials create pressure to keep unproductive services, inhibit creative services, promote local or non-transit interests over regional mobility.	5	4	3	2	1	Wide base of enlightened public support among elected officials, civic and business leaders.
Institutional environment	Agencies competing for funding, riders, and prestige; managers competing for control, personal recognition.	5	4	3	2	1	Strong ties with MPO, state DOT, cities, and county. Cooperative relations among local agencies, across jurisdictional lines.
Cost	Mobility management seen as drain on already tight budget, detracting from core mission.	5	4	3	2	1	Mobility management used as a way to leverage funds, increase efficiency, expand constituency for transit.
Performance measures	Inappropriate measures of success applied to nontraditional services and programs.	5	4	3	2	1	Non-transit programs measured separately. Measures applied to non-traditional services with understanding of impact on mobility.
Funding	Proposals for new mobility management services overshadowed by unmet needs of traditional transit.	5	4	3	2	1	Adequate and predictable local funding sources; flexibility in use of funds; demonstration funds available for experimentation.
Regulations	Federal, state, and local regulations inhibit flexible, entrepreneurial approaches to mobility.	5	4	3	2	1	More flexible regulations.

2. Overall, how successful has your agency been in acting as a mobility manager?

Very Successful Not Successful

5 4 3 2 1

3. Please list up to three conditions that most *limit* your agency's ability to act as a mobility manager. (These may be conditions mentioned in Question 1, or others which were not mentioned.)

4. Please list up to three conditions that most *enhance* your agency's ability to act as a mobility manager. (These may be conditions mentioned in Question 1, or others which were not mentioned.)

ACTIONS TO PROMOTE MOBILITY MANAGEMENT

5. Actions by Your Agency

Some of the conditions that influence your agency's ability to act as a mobility manager are within your agency's control. Please list up to three things that your own organization can do that would most enhance its ability to act as a mobility manager. (Possible actions might include staff development, board development, using new planning tools, or finding new ways to work with other organizations.)

6. Actions by Local Governments

Local governments include cities, counties, regional governments, and special districts. Please list up to three things that local governments can do that would most enhance your agency's ability to act as a mobility manager. (Possible actions by these governments might include changes to zoning and development rules, changes to other policies and ordinances, cooperation on financing and joint use of facilities, better coordination, etc.)

7. Actions by State Government

States limit or promote mobility management through funding and grant programs, through administration of some federal programs, through legislative and regulatory requirements, through state tax codes, and in the way they operate state-owned facilities. Please list up to three things that state government can do that would most enhance your agency's ability to act as a mobility manager.

8. Actions by the Federal Government

The Federal government limits or promotes mobility management through its funding and grant programs, through legislative and regulatory requirements, through the tax code, and through research and technical assistance programs. Please list up to three things that the Federal government can do that would most enhance your agency's ability to act as a mobility manager.

9. Actions by National Organizations

How can national organizations, such as APTA, CTAA, the National League of Cities, or others, best promote mobility management?

CURRENT LEVEL OF SUPPORT

10. How well do the current policies and actions of each level of government support efforts to become a mobility manager in your area?

		Very <u>Supportive</u>				Not <u>Supportive</u>	Not <u>Applicable</u>
a.	City/cities	5	4	3	2	1	n.a.
b.	County/counties	5	4	3	2	1	n.a.
c.	MPO	5	4	3	2	1	n.a.
d.	Special Districts	5	4	3	2	1	n.a.
e.	State(s)	5	4	3	2	1	n.a.
f.	Federal	5	4	3	2	1	n.a.

SOURCES OF INFORMATION

11. TRB and APTA would like guidance on the best ways to spread information about mobility management. How useful would each of the following be as a way to learn about mobility management ideas?

		<u>Very Useful</u>			<u>Not Useful</u>	
a.	Presentations at national conferences	5	4	3	2	1
b.	Presentations at state-level conferences	5	4	3	2	1
c.	Presentations at local or regional meetings	5	4	3	2	1
d.	Articles in trade publications	5	4	3	2	1
e.	A special newsletter devoted to mobility management	5	4	3	2	1
f.	Opportunities to visit other transit systems which have implemented interesting programs	5	4	3	2	1
g.	Presentations at your agency by representatives from other transit systems	5	4	3	2	1
h.	A TRB or APTA report summarizing success stories	5	4	3	2	1
i.	Information on a web site	5	4	3	2	1
j.	A national clearinghouse that can provide information or referrals to other agencies and experts	5	4	3	2	1
k.	A video that could be shown to local officials	5	4	3	2	1
l.	Materials on specific actions of interest to you that Board members can give to local and state officials	5	4	3	2	1

How else should information about mobility management be disseminated?

RESPONDENT INFORMATION (Optional)

Name/Title: _____

Agency: _____

Address: _____

Phone: _____

METHOD FOR CALCULATING POTENTIAL IMPROVEMENT

The potential for improvement by removing each barrier was calculated based on the following difference:

- The percentage of successful agencies among those agencies where that factor is now viewed as enhancing, minus
- The percentage of successful agencies among all agencies.

("Successful" means rated four or five on the five-point scale.) For example, 50% of respondents at agencies where leadership is enhancing rated their agency as successful compared to 37% of respondents overall. The potential improvement by making leadership enhancing is then 50% - 37% or 13%. In other words, as a measure of maximum potential improvement from removing a barrier, it is assumed that all agencies assume the success profile of agencies where that factor is already enhancing.

THE TRANSPORTATION RESEARCH BOARD is a unit of the National Research Council, which serves the National Academy of Sciences and the National Academy of Engineering. It evolved in 1974 from the Highway Research Board, which was established in 1920. The TRB incorporates all former HRB activities and also performs additional functions under a broader scope involving all modes of transportation and the interactions of transportation with society. The Board's purpose is to stimulate research concerning the nature and performance of transportation systems, to disseminate the information that the research produces, and to encourage the application of appropriate research findings. The Board's program is carried out by more than 400 committees, task forces, and panels composed of more than 4,000 administrators, engineers, social scientists, attorneys, educators, and others concerned with transportation; they serve without compensation. The program is supported by state transportation and highway departments, the modal administrations of the U.S. Department of Transportation, and other organizations and individuals interested in the development of transportation.

The National Academy of Sciences is a private, nonprofit, self-perpetuating society of distinguished scholars engaged in scientific and engineering research, dedicated to the furtherance of science and technology and to their use for the general welfare. Upon the authority of the charter granted to it by the Congress in 1863, the Academy has a mandate that requires it to advise the federal government on scientific and technical matters. Dr. Bruce M. Alberts is president of the National Academy of Sciences.

The National Academy of Engineering was established in 1964, under the charter of the National Academy of Sciences, as a parallel organization of outstanding engineers. It is autonomous in its administration and in the selection of its members, sharing with the National Academy of Sciences the responsibility for advising the federal government. The National Academy of Engineering also sponsors engineering programs aimed at meeting national needs, encourages education and research, and recognizes the superior achievements of engineers. Dr. William A. Wulf is president of the National Academy of Engineering.

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The National Research Council was organized by the National Academy of Sciences in 1916 to associate the broad community of science and technology with the Academy's purpose of furthering knowledge and advising the federal government. Functioning in accordance with general policies determined by the Academy, the Council has become the principal operating agency of both the National Academy of Sciences and the National Academy of Engineering in providing services to the government, the public, and the scientific and engineering communities. The Council is administered jointly by both Academies and the Institute of Medicine. Dr. Bruce M. Alberts and Dr. William A. Wulf are chairman and vice chairman, respectively, of the National Research Council.

Abbreviations used without definitions in TRB publications:

AASHO	American Association of State Highway Officials
AASHTO	American Association of State Highway and Transportation Officials
APTA	American Public Transit Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
IEEE	Institute of Electrical and Electronics Engineers
ITE	Institute of Transportation Engineers
NCHRP	National Cooperative Highway Research Program
NCTRP	National Cooperative Transit Research and Development Program
NHTSA	National Highway Traffic Safety Administration
SAE	Society of Automotive Engineers
TCRP	Transit Cooperative Research Program
TRB	Transportation Research Board
U.S.DOT	United States Department of Transportation