A Statewide Dial-a-Ride Program

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In 1972 the Michigan legislature voted to make state funds available for public transportation programs. This paper describes the kinds of programs undertaken with this support and explores the factors that have made these programs highly successful.

We are quite proud of Michigan's statewide dial-a-ride program, which has succeeded in providing a cost-effective transportation service for the general public in 28 communities. State-sponsored dial-a-ride service has in turn given us the experience to implement additional paratransit programs for special groups. Among these programs are 20 curb-to-curb transportation services for the elderly and handicapped persons in rural areas and metropolitan cities, 18 programs under section 1662 in support of private nonprofit agency transportation, and the nation's first regional transportation system under section 147.

One of the lessons we have learned is that a state can accomplish much on its own to expand mobility for its residents. Our investment in a statewide dial-a-ride program that covers 28 communities and carries 1.5 million riders a year has required less than 5 percent of all state moneys allocated for public transportation. I am certain it is within your financial and technical capabilities to launch a dial-a-ride program similar to Michigan's—similar, but not exactly like Michigan's program, because there is no single correct way to design a dial-a-ride system. There is no magic formula that, if followed faithfully, guarantees success or, if altered, dooms your efforts. Each of our small-town dial-a-ride systems is unique. Each one is managed under a slightly different structure. Each one's operations are tailored to local needs. It is not because we have found the correct procedure or scored a technological breakthrough that our program is so well accepted by such a broad range of communities. It is because our program is tailored to local needs.

I believe Michigan's dial-a-ride programs are also successful for two more reasons—the state, on its own, willingly shouldered the risk of innovation and we adopted a minimum-planning, maximum-implementation approach to dial-a-ride.

POLICY AND DECISION-MAKING BACKGROUND

In mid-1972 Michigan, like many other states, saw its transit services staggering into the last stages of financial collapse. Only nine of our largest cities had even the remnants of a bus system—60-min headways and rolling stock 12 or 15 years old. Cities as large as Flint (population 350 000) periodically lost bus service as local support was withdrawn. Middle-sized and smaller cities had no alternative to the private automobile. In this respect, Michigan was much worse off than many other states in which bus service survived in many mid-sized communities.

It was clear to Governor Milliken and, fortunately, to a majority of state legislators by 1972 that public transportation is a necessary public service and one that must be publicly supported like police and fire service. After much debate, Michigan took an important step in late 1972. The legislature approved diverting 0.5 cent of the state's 2.4 cents/liter (9 cents/gal) tax on motor fuel into an exclusive fund for transit purposes. This sum—about $22 million annually—was shared at the outset by the nine surviving metropolitan bus systems. Funds were used for operating aid up to $\frac{1}{3}$ of costs and as a 20 percent local match for federal capital grants. Responsibility for public transportation programs was incorporated in a new bureau of the Department of State Highways and Transportation. The State Highway Commission, advised by a Public Transportation Council, sets policy for public transportation programs.

Thus, we began in 1973 to rebuild a decent public transportation system for our state. Our efforts began in the nine cities with bus service still in place. Yet we recognized that the need for a transportation alternative transcends urban boundaries. Gasoline in mid-1973 cost the same 16 cents/liter (60 cents/gal) in northern Michigan and was in just as short supply there as in Detroit. More important, small towns and rural areas contained the same (or greater) proportion of elderly, poor, and handicapped persons—the mobility-deprived—as our larger cities.

As we looked for a solution to the transportation prob-

lems of small and rural communities in 1973, we had to look no further than Ann Arbor. An experimental dial-a-ride program funded through the state had been in operation there for two years. It had just won the overwhelming support of voters in a campaign to levy an additional property tax. Ann Arbor's dial-a-ride service was successfully providing door-to-door on-demand transportation to one Ann Arbor neighborhood that contained roughly the population of a small outstate city. If Ann Arbor could provide door-to-door bus service to part of a large community, why couldn't a smaller city provide the same service to all of its residents?

Why not indeed? The State Highway Commission and Public Transportation Council decided to try. These bodies approved a demonstration of dial-a-ride service in nine outstate communities. We already had funding to carry out such demonstrations at 100 percent state expense under a section of an act that established the General Transportation Fund. That act earmarked 10 percent of the fund's annual receipts to be used for demonstration purposes—in the words of the act, "to encourage... application of new ideas and concepts in public transportation facilities and services."

According to the Urban Mass Transportation Administration (UMTA), a demonstration is a controlled, highly planned application of a theory in a limited field test. An UMTA demonstration tends to be structured like a laboratory experiment in which the success of the program being tested is secondary to the opportunity to collect data. If an UMTA demonstration succeeds, it does so for precisely identifiable reasons. In contrast, Michigan's definition of a transit demonstration is considerably looser. We are willing to try an idea we think will work and to demonstrate over and over again that it will work in as many communities as are willing to make a minimum commitment to our program.

THE FIRST DEMONSTRATION PROGRAMS

On July 11, 1973, the State Highway Commission formally approved a first-year dial-a-ride demonstration program budgeted at $1.2 million. This money would start service in nine communities selected from a list of 22 cities with populations between 9000 and 35 000, excluding those communities within the jurisdiction of a metropolitan transit authority. Our plan was simple. We would offer the first nine communities to show interest in the program a one-year trial of dial-a-ride service at state expense. We would buy vehicles and make up operating deficits. We would establish an operations headquarters, train drivers and dispatchers, apply for radio licenses, and see to other details before service was implemented. Average start-up and first-year operating costs for a typical dial-a-ride transportation (DART) system using four small vehicles turned out to be $105 000. The local commitment required was minimal: a token $1000 contribution and a good-faith pledge to retain service with partial local funding in the second year. The state agreed to sign over title to vehicles and radios in the second year for $1.00, so that all capital equipment purchased by the state became local property. Furthermore, the state continued in the second year to underwrite up to $\frac{1}{3}$ of operating costs through our regular transit assistance formula.

The State Highway Commission's action approving this kind of high-risk demonstration is perhaps unparalleled. UMTA certainly would not undertake such a risky program, one unsupported by exhaustive preplanning. For the state of Michigan to go into the field with a million dollars and a relatively unproven paratransit technique and then to spread that program around nine communities on a first-come, first-served basis in less than one year set heads shaking in amazement at UMTA. In fact, the feedback we get suggests that Washington still does not believe we have succeeded.

But we have succeeded. We have succeeded beyond our hopes. Our first three DART systems began operating in February and March 1974, just 6 months after the commission resolved to fund dial-a-ride programs. By the end of 1974, 13 systems were in operation, scattered around the state. In November of that year, our infant program faced its first critical test. Special votes on levying additional property taxes were scheduled to determine whether voters in the first three communities to adopt dial-a-ride would tax themselves to retain service. Confident as we were that dial-a-ride was needed and appreciated in small communities, we waited nervously for those election results. We need not have worried. By approvals as high as 73 percent, all three communities said yes to dial-a-ride.

And that has been the story ever since. Of 18 communities to face the question of second-year funding, 11 approved special property taxes for dial-a-ride, and 7 agreed to fund it with existing local revenues. Not a single state-sponsored DART system has been discontinued. Clearly, Michigan dial-a-ride has scored its greatest success at the grassroots level. Having seen dial-a-ride in operation and having had a chance to use it, local residents are overwhelmingly willing to pay for it.

And from our state DART experience, we have expanded into paratransit programs for the elderly and handicapped in 34 rural counties and 11 metropolitan areas, which include commuter or supplemental bus service in conjunction with metropolitan line-haul service; a section 16b2 program in 28 rural areas; and a 3-county section 147 program in our eastern Upper Peninsula. A second 4-county section 147 project may be approved this month.

One side effect of statewide dial-a-ride has been to turn many skeptical legislators into strong supporters of transit programs. Outstate legislators who bitterly opposed our first diversion of gasoline tax funds are now convinced by the success of dial-a-ride in their districts that public transit is indeed a worthwhile cause. That change of heart has translated into expanded state funding for our public transportation program.

Operationally, our systems are among the most efficient in the nation. The average subsidy per ride across 15 systems with one year of operating experience is $1.32, the average waiting time is less than 20 minutes, productivity per vehicle-hour averages 6.0, and the monthly per-capita ridership is 0.33.

Our ridership and trip-purpose profile suggests the kind of social impact dial-a-ride is having on small and rural communities. Ridership is split about equally among older persons, youngsters, and the general adult public. A great percentage of the trips are made to a downtown shopping area or to medical-professional services.

About half of our passengers in one survey said they would not have made the trip, or would have postponed it until someone else could drive them, if dial-a-ride were not available. The other half can be characterized as riders by choice. In addition to providing first-class citywide transit service for all residents, dial-a-ride is giving the elderly and handicapped residents of Michigan's small towns the kind of mobility most of us take for granted.

I would also like to briefly touch on Michigan's carpooling experience. At the height of the 1973 gasoline shortage, the state of Michigan launched a program to encourage car pools among state employees. We used a computer-aided matching system to bring riders to-

gether and reserved the choicest spots in state parking facilities for car poolers. At the most, we estimate this effort removed about 250 cars from state lots. Some of our metropolitan areas also undertook car-pooling efforts in 1973. The most aggressive (Grand Rapids) attempted to enlist the cooperation of private employers. This effort, too, was only moderately successful. Interest in car pools has nearly disappeared today.

Our highway park-and-ride lots have been more successful. The Michigan Department of State Highways and Transportation has established 51 such lots statewide by erecting signs and making modest improvements to the shoulders of state rights-of-way near freeway entrance ramps leading to metropolitan areas. This program actually legalized what motorists have done informally for years and has generated about twice as much interest in ride sharing.

CONCLUSIONS

There are three factors that I believe contributed most to Michigan's successful paratransit experience. First, I believe our program succeeded from a policy basis because we started with the basic assumption that every small community needs some kind of public transportation service. We did not spend months on prescreening candidate communities. As a corollary, we assumed that dial-a-ride or demand-responsive transit was the correct strategy for meeting this need. We did not spend time on an analysis of alternatives. Our procedure was simply to introduce dial-a-ride in communities that made a minimum commitment at maximum state risk. Our assumption that local communities will gladly pay to retain service after the first year has been proved correct.

Second, I believe we have succeeded because our state implementers allowed each dial-a-ride or paratransit system to develop with a minimum of interference. They resisted the temptation to inflict their prejudices about how a dial-a-ride service should be organized. As a result, we have systems operated by cab companies, systems operated by community action agencies, and systems operated directly by local governments. Some of our DART dispatchers use a zone system. Some use a card file. But all of the systems are working. I cannot stress enough the need for a state or regional agency to allow—in fact, to require—local initiative in establishing a paratransit system. The community must perceive it as its own, not another remote government boondoggle.

Finally, I believe dial-a-ride has succeeded in our small communities and in Ann Arbor because our programs started small and grew from there. We rejected sophisticated technology. We avoided the problems some large unsuccessful systems stumbled over by choosing conventional hardware off the shelf. We started with manual rather than computer-aided dispatching. Ann Arbor's system began on a manageable scale in one neighborhood. Over the years, it has slowly expanded. Today, Ann Arbor is working into computer dispatching and other sophisticated software, but it is doing so with a solid background of operating experience.

We believe that statewide dial-a-ride has had a profound impact on Michigan. Obviously, the 1.5 million rides it provides in outstate communities represent a significant number of shopping trips downtown or trips by elderly or poor persons to receive basic services. Furthermore, dial-a-ride has caused a major shift in public attitudes toward public transportation. When Michigan began its efforts to restore transit, the outstate rural legislators were bitterly opposed to spending state money on something for the big cities. Today, outstate legislators give public transportation their strong support, thanks to the enthusiasm with which their constituents have greeted dial-a-ride. The $22 million annual funding level for public transportation programs approved in 1972 has been boosted to $52 million this year and more than $70 million in fiscal year 1976-77. Transit dollars spent in southeast Michigan and Detroit rather than on outstate dial-a-ride systems would have had a negligible impact on service levels there. If a total of $3 950 000 were spent in southeast Michigan on line-haul service, it might have purchased and operated 30 buses—less than a 2 percent increase in the region's bus fleet. Instead, $3 950 000 spent on dial-a-ride is annually providing 6 440 000 km (4 000 000 miles) of highly visible service in 28 cities.

There is a new mood of public support for state transit programs in Michigan, thanks to dial-a-ride. That new attitude was expressed well, I believe, in an editorial on July 5, 1975, by outstate rural legislator Sen. Richard J. Allen.

> Times change. So do people . . . even some politicians. The Senate easily passed the mass-transit bill allowing for bonds to be paid off by gas tax revenues.
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> Only a few years ago such a proposal would have met with strong resistance from a number of sources. Most of us outstate legislators would have opposed it automatically on the basis that statewide tax dollars would be going primarily to big cities and especially to southeast Michigan.
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> Motorists all over the state would have put up a howl that they should not pay for systems they did not use. Auto manufacturers would have strongly protested that their product was being forced to finance its competition.
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> The ball game has changed. . . . Even motorists who hope never to ride a bus or a subway now support their development. They recognize gasoline supplies will be continually restricted and they hope more of it will be left for them! Auto companies have begun to have an inkling that an efficient mass transit system may be necessary to preserve the auto as a viable part of our transportation system. Mass transit is no longer viewed as the poor man's choice; we all are beginning to realize we may want to use it . . . if not right now, certainly by the time gasoline hits two dollars a gallon!
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> Times change; even some of us politicians do. I voted for mass transit.