

Accessible Passenger Transportation 10 Years On: A Fresh Approach to Policy

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The International Year of the Disabled Person heightened the awareness of the need for people with reduced mobility to have access to the public transportation system, yet significant inroads have not been made into this underdeveloped sector of the market. There is clearly an enormous potential for creating a fully integrated public transportation network, but what little has been done has taken a simplistic approach to vehicle design rather than address systems design. A radical change in the philosophy behind public transportation is necessary if the quality of life for people with reduced mobility is to be maintained.

One of the key issues raised during the International Year of the Disabled Person (1981) was that of transportation. The possibility arose to study immobility and to translate the findings into action. A public transportation committee in Reading, Berkshire, England, became the first public transportation agency to sponsor an application to the Department of the Environment to fund an experimental service, called Readibus. The task was to discover how to provide cost-effectively for the need revealed by the research, as well as to validate or refute the research. The terms "disabled" and "elderly" proved inappropriate. Mobility problems extended well beyond people described as, or associated with, being disabled. More than 10 percent of the population was found to have what we called a mobility handicap. Under the terms of the experiment, the mobility handicap had to be directly or indirectly due to any physical, mental, or sensory impairment, permanent or temporary. Thus, although substantially wider than most approaches, it did not apply to everyone who considers himself or herself to be suffering from a lack of mobility. This restriction was necessary because of the conditions of the grant, the legislation under which the service operated, and resources that were limited in relation to projected need.

Much was learned during the first year of this experiment. The large and varied nature of the market was revealed, as were the nature of appropriate services, the complexity of the factors causing barriers to movement, the need for thoroughness and attention to detail if every aspect of service design was to be optimized, and the management style and environment that involved all employees in research and development. A large team designed and developed the experiment: people from the University of Reading, consultancies, the U.K. Transport and Road Research Laboratory, the Transport Policy Review Unit of the U.K. Department of Transport, and the staff of Readibus. Keen interest was shown by

Peter Baldwin, the permanent secretary at the Department of Transport, and by Lynda Chalker, then the minister responsible for public transportation.

The result was an enormous amount of information that could be used anywhere and relate to any mode. The information from research and operation clearly showed that the need was for short trips of a dispersed nature for individuals, low cost (lower than the cost of provision), and the image of a public transportation service. Approximately 90 percent of users would be over retirement age (50 percent were older than 75), and the main purposes of travel would be for leisure, recreation, visits to friends, and shopping (approximately 20 percent per category). This profile could be changed easily by insensitive and inappropriate design.

In 1982 the U.K. Department of Transport set up a National Advisory Unit to disseminate the information on accessible services and other types of community-based transportation. What has happened since then?

TWO APPROACHES

Since 1981 two approaches have developed, each having the same objective: transportation for all who need it. The approaches are, however, radically different.

Approach 1: Transportation for Disabled and Elderly

We believe that the first approach, transportation for the disabled and elderly, sets no realistic objectives and shows a poor appreciation of the market that it is to serve. For various reasons, it results in a concentration of issues of physical access for people in wheelchairs. The approach appears to be ad hoc, addressing any issue related to the movement of the disabled and elderly. It focuses on the symptoms rather than the causes of immobility, and it has no effective measures of progress. Approach 1 has sent the wrong message to the transportation industry.

Approach 2: Development of Accessible Public Transportation System

Approach 2—developing an accessible public transportation system—depends on understanding the individual. Which personal, environmental, and trip-related factors are barriers to movement and cause a mobility handicap? Why are the prevailing passenger transportation planning techniques fail-

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ing to eliminate these barriers? Why is there no intersectoral appraisal of the role of public transportation?

The second approach identifies people's patterns of movement (once the people are mobilized) and sets out a service design and development approach that will eventually reach all people with a mobility handicap and develop a public transportation system that is appropriate to the changing needs of a changing society.

Approach 2 has been developed empirically, notably in the West Midlands; it shows how development should occur in a gradual and progressive way. However, Approach 1 is comparatively simple and is therefore more attractive to those who underrate this area of work. There is increasing dissatisfaction with Approach 1 and frustration with its lack of progress. Approach 1, although it aims at the whole market, tends to concentrate on a small part of latent demand, and to do so ineffectively. The hopes of this approach center on the introduction of accessible buses (perhaps with low floors) on existing mainline routes. We believe that most latent demand will be catered for in this way. However, there is no hard evidence to support this hope or to show that it is true. Approach 2 is aimed at the whole market via a staged business planning approach—that is, a 20-year strategy against an overall objective within which is based a 3-year rolling tactical objective; the tactical objective is geared to the current availability of resources and current knowledge, and it seeks to gain and use knowledge to compete for additional resources.

The prevalence of Approach 1 represents the triumph of hope over experience.

INFORMATION

Information on the market is still comparatively new. Knowledge, skills, and experience are still rare. Hence, there are many pitfalls to be avoided when acquiring and interpreting data.

After 10 years, there is a great deal of operational information from many initiatives. A common trap is that of simply summarizing operational data and using the results normatively. So, if a service shows that x percent of people are women and y percent are men, it might be considered representative. If s percent of journeys are for shopping and y percent for social visits, it is interpreted as the norm.

There is little awareness that service design acts as a filter on the population. Operators and planners with limited knowledge of the market produce services that may appeal to a small proportion of people with reduced mobility (PRM)—and, even for them, the services meet only a few journey purposes. Very few services have had the skill, knowledge, and opportunities to optimize every aspect of service design and produce operating data that truly reflect the nature of latent demand. Even these services have been degraded over time, through staff changes or changes in local authority personnel (so that knowledge is not passed to the new players) or through limited resources and pressure to concentrate only on the type of demand that maximizes the number of trips made. Hence, using operational data is a mine field for the unwary.

We are not saying that the data produced by Approach 2 are perfect; we will always have more to learn. But the second

approach developed unique skills and knowledge. The impetus was on turning research into practice.

When people have not been schooled in Approach 2 but operate from Approach 1, misinterpretation of information is common—and misinterpretation leads to bad policy. When things go wrong, it is often because false assumptions have been made somewhere along the line. Approach 1 does not put its work into context and allow one to see what is not being done. It is assumed that the data produced are representative and that the average view reveals the norm; the norm equates with what should be done.

In any new area, development does not advance uniformly. Usually some people demonstrate greater ability than others to grasp the fundamental nature of the issue and turn it into good practice. Policy makers should identify these “top 2 percent,” the people with the knowledge and ability for development. If the average is taken rather than the best, the tendency is to level down. Policy should not be based on bad practice.

If the average always represents something less than the best that can be achieved, then in reviewing the performance of the average we should not come to conclusions about the potential for different types of service. The average performance of paratransit systems in the United Kingdom leads many people to believe such services are inefficient, expensive, or intended for the severely disabled. What should be done is to look closely at what the top 2 percent can do with paratransit and see the potential role of paratransit rather than its existing (average) role or even its worst cases.

Hence, by lacking vision or the potential knowledge required to turn paratransit into a cost-effective multimodal operating system, many have pigeonholed it as a special service. We then begin with categorizations, which themselves impede progress. That is, we have “mainstream” public transportation (routed systems creaming off volume flows in big buses, and continuing to decline) and special services. We have described elsewhere this approach as part of a precategorization approach (i.e., one reaches the conclusions before one even begins). It is an output of Approach 1. We believe that policy should be more neutral and encourage developments that reveal the relevant role of services and the nature of the market; then categorizations may be made more accurately (postcategorization).

CONSULTATION

To be effective, consultation must be proactive. People must know what they are looking for; they must test volunteered information to see whether it is sensible, representative, and practicable. There must be ways of penetrating this “silent majority.” In the United Kingdom the people with the most comprehensive knowledge are

- Too busy with operational responsibilities or welfare support to come forward.
- Unsure about whom to brief with what they know. Some who have tried are disillusioned by what has been understood or made of their efforts.
- Devalued, because quite often in this area those with the knowledge do not come from a conventional career but have

progressed through unconventional means. They may have no formal academic or professional qualifications.

- Not necessarily good at writing reports or communicating what they know to policy makers. They need help through regular debriefing by those who can formalize what they know. They may be substantively excellent, but their work is dismissed simply because they lack writing and presentation skills, which are not prime requirements in their day-to-day activities.

Proactive consultation means getting out in the field and contacting friends, relatives, and carers of PRM; social workers; and other welfare officers who treat the symptoms of immobility. It also means being accepted by people on their terms so that they are relaxed and get to know you. There is an overreliance on conventional surveys, which at best summarize what experienced operators already know.

Consultation should represent a thirst for information, an ability to draw information out of people, a talent for listening. It is a never-ending task: the policy maker's ear should never be turned away.

LEADERSHIP

People have different abilities. One key ability in an area of work as large and as challenging as this is leadership. The ability to assemble the requisite knowledge and skill is important for a leader, but especially so is the vision that inspires leaders to chase the ultimate objective. Leaders have a vital role in motivating others, pulling people forward, asking the next awkward question, questioning what has been done and achieved, and destroying complacency. Such a role, although thankless and exhausting, is indispensable to progress.

Leaders themselves, however, need support to prevent burnout, disillusionment, and demotivation. Policy makers should identify such people and spend time with them, making it clear that they must say what they need to say and that saying merely what people want to hear is not their function. It is difficult to give this reassurance. Often the policy maker at the regional or national level is paying, either directly or indirectly, the wages of people with leadership abilities. The policy maker should be aware that the natural assumption, particularly where the developers are finding flaws in the current policies, is that censorship is implicit in patronage—that it is too easy to not speak the truth for fear that the patronage will cease. When this happens, the policy makers are starved of what may be their most vital input: constructive criticism.

OVERVIEW

To get policy right, it is essential that the people at the top take a holistic view of the area. In transportation this is especially difficult because the product is an intermediary good and its impact extends across the spectrum of modern economic and social life. Certainly it would be good to have many people, at all levels of involvement, who can take the holistic view and see where what they do fits with what others do. However, because of an education system that segregates information and creates single-discipline hierarchies, it is dif-

ficult to find enough people with eclectic skills to occupy even the top positions.

COMPLICATED INFORMATION

Is the approach to this area getting too complicated? There are large differences in the demands for information. At the policy level, general statements may be adequate if they are based on a sound synthesis and can be trusted. At the academic level, sufficient information is needed to allow certain types of statistical or mathematical analysis and to allow correlation to be tested and the researchers to say something interesting. The output does not have to be true, and the interpretation may still not be sensible.

At the level of service operation, very detailed information is needed about all aspects of PRM, and all the factors that may be barriers to movement must be understood. It is the operator's job to mobilize all people in need, so they build up awareness—of how to eliminate barriers by design, of who finds their service easy to use, of who still has difficulties, and so on.

This detailed knowledge is necessary to build up detailed specifications for premises, work practices, information design, computer systems, vehicles, and so forth. If the senior staff involved in operations (managers and planners) do not have this detailed understanding, they will lose credibility in the eyes of the rest of the staff and the customers.

Policy makers should realize that operators have this detailed knowledge and work with them to assess progress and the direction that development should take. In reality (in the United Kingdom), this would require senior civil servants to work closely with people from voluntary organizations. Attention to detail and a thorough knowledge of the market are parallel requirements for anyone launching a commercially viable product. Bank managers will not fund commercial enterprises based solely on meritable principles, rights, and hope. They require the display of detailed and well-researched facts and a precise knowledge of the market.

SUPPLY SIDE

Over the past 15 to 20 years almost every part of developed economies has seen product diversification. Separate market niches have been identified and provided for in products ranging from stereos to clothes, foodstuffs to vacations. The motive has been to sell and make a profit. However, as mentioned, the same market analysis methods, product diversification techniques, and marketing and management systems apply to services requiring subsidies. The methods ensure that all segments of the market are identified, that the product of passenger transportation is diversified to cater for different types of need, and that potential consumers get to know about the product, which is delivered efficiently. The knowledge of the market also identifies the role of the product and accumulates information about users to show how mobility can change their lifestyles and give them autonomy. Such information is needed to justify subsidies and prove that value is being obtained.

The commercial sector attracts capable people by offering job interest, financial reward, and occasionally some security.

In the noncommercial field the work environment must be right to attract, encourage, and retain visionaries capable of transformational management. What is the "right environment" for sustained development? Is any policy maker examining this factor?

The supply side must be proactive. Its job must be to identify what is not being done and then argue that it should be done. There is a tendency to accept the resources that one has and to reconfigure supply to provide a little more for some of the people that are already mobilized. Any improvement in service delivery within existing resources is a marginal addition to supply compared with the vast market of people with unmet needs that remains. Such rationalization can destroy the development impetus, demotivate operating staff, and result in a position that loses some users, ceases market penetration, puts the operator on the defensive, and begins the downward spiral of decay. Nothing stands still. Advances are made only through great effort, and ground already won can be easily lost. As Napoleon said, "He who stays within his own defenses will lose the campaign."

COMMUNICATION

If the transformationalists can be given their head, then what they find in practice must be communicated to policy makers. They must thirst for the constant challenge of breaking new ground, making progress, and identifying the next questions to answer, but they must also play a role in passing on and demonstrating their findings. The skills and working practice they have developed must be passed on to others, the majority of whom will be transactionalists—that is, those whose skill it is to continue what has already been developed, who can put an operation into effect in another area and make sure that all is managed well on a day-to-day basis. Transactionalists must be able to implement specifications developed, tried, and tested by the transformationalists, but there must be dialogue between the two. Transactionalists can identify problems; they recognize where there is ignorance and where new questions should be asked.

No value judgments should be made about the two roles—one is neither superior nor inferior to the other; managers have different aptitudes, abilities, and interests. Relatively few transformationalists are needed, and their work needs coordination. Very many transactionalists are needed, however, to make sure that the buses get out there and the job is done, that the development effort is put into effect and not wasted.

TEAMWORK

There is a pressing need to bring together a "critical mass" of people who have the knowledge needed to tackle this work. It is critical in that the individuals are isolated (nothing brings them together) and are worn down by trying to make progress in an unreceptive and unsupportive environment. They are becoming disillusioned and in some cases taking their skills away from this area of work. A critical mass is large enough to support its members and contains expertise from all the disparate areas of knowledge: economics, sociology, psychology, systems design, mechanical engineering, manage-

ment, policy development, education and training, and so on. It is large enough to have influence and to create momentum.

If transportation is seen as interdisciplinary, then boundaries between local departments of authority and between subject areas in education need to be broken down. Perhaps central government should take the first step by creating the first interdisciplinary team to attack the problem and show that cooperation can be effective.

We must not grind down those with vision; we must recognize what they can offer and support and encourage them.

A BUSINESS PLAN

Strategic Objective

Clear long-run practical objectives should be evaluated. Is the long-run objective simply to make existing systems physically accessible? Should people in certain income groups be the focus of attention? Should delivery cater primarily to a limited range of journey purposes? Or should we be aiming for mobility for all who need it? If so, what level of mobility? If the emphasis is on ensuring people access to facilities and activities, should nontransportation solutions be priority ranked so that the problems of congestion and pollution are not compounded? Many complex issues are to be addressed before clear guidelines for long-term goals can be set. When the strategic objective is sorted out, it is a constant point of reference for tactical objectives.

Tactical Objectives

Tactical objectives concentrate on what we do *this* year. However, they must be set in relation to the strategic objective so that they are consistent with it and allow development toward it. Of course, it should be recognized that the strategic objective will never be reached; it is a moving target. Social, environmental, and economic conditions are changing all the time, so the strategic objective that may take 20 years to attain should not be rigid; it should be reevaluated as time goes by.

One form of tactical objectives may be to allow as many people as possible to live independently within existing resources; that is, to accent service development. There may be a requirement that services should be provided on an equity basis or to categories of people who are given preference.

Monitoring

Monitoring should be regarded as devising a simple system of gathering information about the operation as it develops. Ideally it should be an automatic process (i.e., it should involve no work practices beyond those needed to operate the service safely and efficiently).

Evaluation

The effectiveness of the operations should be questioned. The first step of evaluation is to make sure that the right questions are being asked. It is not uncommon in research to ask either shotgun questions (every question one can think of) or random questions (questions that are interesting but that have

no specific objective). The questions must be probing and must refer to the strategic objective.

Evaluation should be analytic, not descriptive; it is of limited interest to know the number of people who are wheelchair users, who go shopping, who are under retirement age, who travel certain distances, and so on. What must be asked is, Why are we getting these results? Are they as expected for the area of operation, or are they somehow strange? If so, why? Has the design gone wrong, or has the implementation gone wrong?

A vital part of evaluation is to identify who still needs to be mobilized: this includes other types of service provision and their specifications and costs.

Monitoring and evaluation are extremely good in some places and extremely crude in others. The average situation is an ignorance of the basic questions to be asked. Above all, evaluation should be honest and relevant, that is, in human terms, not simply an inventory of accessible vehicles.

SYSTEMS APPROACH

Wherever discussion begins in transportation, it tends to lead toward a concentration on technical issues and mechanical or civil engineering. Developing a transportation system is not purely or primarily an engineering task; it is a systems problem. No element of design should be looked at alone. For example, one reason that accessible services are underused is a lack of publicity. Better publicity can usually increase the use of a service. However, there is usually great consistency between the different aspects of design. People who have a great understanding of the market can design a service that is appropriate and for which there is great demand. Because of the thoroughness of their knowledge, they also know how to market the product.

Conversely, where understanding is poor, design, delivery, and marketing of the service are poor, although better marketing does little to improve the service design and delivery or make the service more appropriate. Policy makers who take a holistic view soon become aware of this consistency attribute.

EFFECTING A CULTURE CHANGE

The changes needed to enable PRM to live independently are major. Over the past 10 years the issue has been marginalized through inappropriate terminology and a concentration on physical modifications rather than on the nature of barriers to travel, the reasons for travel, and the destinations of travel. There is an urgent need to bring the issue of reduced mobility from the margins of passenger transportation planning and make it the focus of the discipline. The passenger transportation industry should be about understanding current and potential passengers, not about technology. Several key changes are needed for policy to progress constructively.

After 10 years, we need to return to basics and find a conceptually sound starting point that is based on people and their needs. Two basic elements should be recognized: barriers to movement and the patterns of movement once the barriers are removed. Subsequently, cost-effective delivery of service needs organizing on the basis of logistics.

A major (and ongoing) debate should take place concerning the role of public transportation. Once the role is identified, the nature can be defined.

Transportation should always be thought of as an intermediary good. This principle is often taught in transportation courses but usually only in the introduction. It is not emphasized and is often forgotten. Gaining access to an activity is the objective, and transportation is the bridge between people and activities. It should be remembered that (in the United Kingdom at least) this bridge is that of walking for 40 percent of journeys made by mobile people.

Evaluation of progress should be not an inventory of engineering feats, but an assessment of the impact of new initiatives on people. It should be honest, not a public relations exercise, and should seek to identify the people using services and the people who are still immobile.

Unambiguous terminology should be developed and used. It should be determined not by policy makers and politicians but by those with functional responsibility who have shown a capability to address the whole problem of reduced mobility. If one takes definitions from those addressing only part of the problem, the terminology will not fit the entire market. Hence, when politicians and policy makers use limited terminology, they are spreading the results of bad practice and limited experience; they are discredited in the eyes of, and demoralize, the top 2 percent.

Solving the problem of reduced mobility will take great financial support. The issue needs to find allied causes so that a stronger case can be made to prove the worth of the expenditure. The most promising allied causes now are those evaluating the effects of traffic congestion and vehicle exhaust emissions. Each of these issues points toward the need for a common solution: a diversified and flexible public transportation system.

Services should be encouraged that help to reveal the nature of demand. Demand should not be determined by a supply provided through unsubstantiated opinion instead of an analysis of the needs of people, or the outcome will be that a few people gain mobility and the needs of most will go unmet.

Developments—whether of policy, finance, legislation, technological, systems design, or other—should be put in context. A holistic view is needed, and progress must be balanced and take place on all fronts. Policy makers must seek out those with knowledge based on experience and spend time listening and digesting what is said.

To achieve changes in service delivery there must be changes in

- Management style and environment,
- Organizational structure, and
- Legislative structure and environment.

Because of the scale of demand and the scale of the task of providing for all of this demand, a strategic perspective is necessary.

There have been many welcome developments in the built environment and in bus design, but as Ann Frye, of the U.K. Department of Transport, summarized at the 6th World Conference for the Mobility and Transportation of Elderly and Disabled Persons, held in Lyon, France, "Whether we have also succeeded in giving people the confidence and the means to travel, by whatever mode is most appropriate, remains to be seen."