

CHALLENGES TO INCLUSIVE BUS RAPID TRANSIT IN DEVELOPING REGIONS: THE ROLE OF PUBLIC PARTICIPATION

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1. SUMMARY

The rapid spread of Bus Rapid Transit (BRT) systems presents an historic opportunity to create models of accessible transport for passengers with disabilities and for older passengers, often in cities with little previous experience in this field. This paper considers methods to help assure that public participation plays a creative role in this process. BRT planners are advised to proactively seek to implement this process in order to maximize its benefits and create allies needed in the political process of developing BRT systems. The paper suggests several practical steps to carry out a public participation process with those potential passengers who will especially benefit from the design and operation of inclusive BRT systems.



Disability advocates inspect access features at a BRT station in Mexico City (Photo by AEI)

Key Words: BRT, accessibility, inclusion, public participation

2. PURPOSE OF THIS PAPER

The purpose of this paper is to promote effective and productive public participation by passengers who benefit from inclusive design in the process of planning and implementing Bus Rapid Transit systems, with special reference to developing regions.

3. METHODOLOGY

The World Bank published *Bus Rapid Transit Accessibility Guidelines*, compiled by the author, in 2007. This publication was followed up in 2010 by the author's *Technical and operational challenges to inclusive Bus Rapid Transit: A guide for practitioners*, in order to further explore some of the more troubling obstacles to accessible BRT service. The author is also involved in ongoing efforts by major institutions to improve BRT accessibility as new and expanded BRT construction occurs around the world. This background, combined with more than forty years of experience with public participation processes in wealthy and low income regions, forms the basis for this paper.

4. DISCUSSION

After noting problems that may be partially addressed by public participation processes, the paper will discuss some of the structures public participation can take as a preliminary to presenting requirements for a valid consultation process. Although public participation as used in this paper is focused on persons with disabilities and seniors, these principles may also apply to other interested groups.

4.1 The problem

There is an emerging agreement on the basic features of accessible BRT design and operation. These features benefit all passengers, even though they especially benefit passengers with disabilities and seniors. They include -

- The need for accessible pedestrian infrastructure to connect with BRT systems
- Provision of curb ramps, pedestrian crossings, tactile guideways and ramped entrances to BRT stations
- A preference for grade level crossings for all passengers entering BRT stations
- Use of audible and text signage in stations and on board BRT vehicles
- The advantages of contactless debit cards for fare payment
- Safety features at BRT stations that especially protect more vulnerable passengers, including women, children, and those with disabilities
- Design of BRT stations with adequate width to prevent a level of overcrowding that would make it impossible for vulnerable passengers to access the system
- Maintaining small platform-to-bus gaps to assist all passengers to board rapidly, and to avoid potential problems with the narrow feet of children or the small front wheels of wheelchairs
- Providing driver training to provide comfortable and courteous service to passengers, without sudden starts and stops or speeding around curves.

Yet, even when planners start with the assumption that these features will be in place, the resulting accessibility of BRT systems to persons with disabilities and seniors varies from region to region, and from city to city within regions. While, in theory, BRT features lend themselves to inclusive design, actual experience presents a more sobering picture. Many BRT systems are highly accessible, others exhibit mixed and varied accessibility, and some are virtually inaccessible to passengers with a range of mobility, sensory, and cognitive disabilities as well as many seniors, tourists and newcomers unable to navigate the system.

Typically, complaints by users, or observations by BRT personnel, show that the problems are created by

- (1) Ignoring one or another access feature which is deemed too expensive. An example would be failure to provide ramped and/or elevator access to a pedestrian bridge or underpass, making it difficult or impossible to use by many seniors, persons with disabilities, mothers carrying children, and others.

- (2) An assumption that a feature that looks accessible *is* accessible, when it does not deliver on its promise. An example would be a bus which looks accessible when stationed 5 cm. from the station platform edge in initial tests, but in actual revenue service averages 30-40 cm. from the platform.
- (3) An unanticipated problem which emerges once the system is in operation. An example would be an accessible ramped pedestrian tunnel which must then be blocked to keep motorcyclists from using it and endangering pedestrians in the tunnel.
- (4) An assumption that because BRT planners are not charged with actual implementation of a feature, no steps need be taken to begin to address closely related issues. An example would be a failure to participate in a larger planning process for incremental improvements to the pedestrian infrastructure away from BRT trunk lines, even though the planners are only required to actually implement accessible sidewalks and crossings along the trunk line corridors.

Each of these problems represents a very different type of issue, and each could be partly addressed by a well-organized public participation process. They are categories of problems that will not go away: they will only increase with rapidly aging populations that will have higher incidences of disability. And, as noted in a key publication in our field, “Examples abound of well-meaning but misguided officials who attempt to make access improvements based on what they *think* disabled people need, only to create new obstacles which renders their attempts worthless.”¹

Due to fear, mutual incomprehension, and a lack of knowledge on all sides, needed public participation often does not occur. Too often, the opening day of a BRT system has been accompanied by media coverage of persons with disabilities stating that various access features are either inferior or lacking altogether. The largest single complaint heard from disability NGOs is that their input is not sought early on in the planning process.

4.2 Possible elements of a public participation process

4.2.1. Focus groups

One or more “focus groups” can be held with 6-12 seniors and persons with different types of disabilities, keeping in mind that persons living along the main BRT corridors may have different input than persons living alongside feeder routes. As noted in a design guide for BRT systems in the USA, “The ability to focus on BRT characteristics unique to communities or system users during the design phase of the project allows early solutions and reduces potential for expensive fixes during the construction phases of the project. . . . By taking into consideration user safety, comfort, and accessibility right from the start, transit agencies can move forward more quickly and avoid the pitfalls and expensive cost

¹ TRL, page 32.

of retrofitting.”² Participants in focus groups are given an opportunity to freely discuss access features in a structured setting, with a priority on gathering their experiences and expectations. There is an extensive literature on focus groups which can be consulted. A focus group would typically meet only once, or a very few times. While focus groups cannot replace longer-term public participation, they can provide valuable supplemental information, create confidence in user groups that their opinions are valued, and lend further credibility to the consultation process.

4.2.2 Advisory committees

The most common approach to public participation in much of North America and Europe is an advisory committee composed of persons with disabilities and seniors. Members are carefully selected, or elected, to represent different persons with different needs. An advisory committee would typically include seniors, wheelchair users, persons who use crutches or other mobility aids, and persons who are blind or low-vision, or deaf or hard of hearing. Each would have their own perspective. Note that persons with one type of disability (e.g., wheelchair users) would not necessarily be able to speak competently about the needs of someone with a different type of disability (e.g., blind persons). Nor would either necessarily understand the concerns of an elderly person with a hidden disability such as heart disease or arthritis who might especially need other features (e.g., improved driver training) to avoid fatigue or pain caused by sudden starts and stops during travel. In addition, representatives could be sought from neighborhoods that have immediate access and more remote access to BRT trunk and feeder lines, to benefit from their different perspectives.

An advisory committee can be structured to represent a single group of actors (e.g., persons with disabilities) or multiple groups of actors (e.g., including representatives of different city departments and agencies). Advisory committees usually meet periodically – often monthly or quarterly – to review progress and make recommendations. A word of caution: some important groups may be left out of advisory bodies simply because they are not local. These groups include tourists, visitors, other first-time users, and people from rural area. These groups can become temporarily cognitively disabled by the language, signage, and other obstacles required to navigate any large transport system in a strange environment. A representative of the tourist industry on the advisory committee might partially address this need.

Advisory group members should comment on plans for stations and buses. Advisors can also join in inspecting construction of access features at stations or on prototype buses to make sure that design specifications have in fact been followed. For example, members of Mexico City’s Libre Acceso, a major disability agency, are invited by city authorities to inspect the access features of stations during construction of Mexico City’s large and expanding Metrobús system, to help assure that access features are built as planned.

² Project Action (2009) *Accessibility Design Guide for Bus Rapid Transit Systems, Executive Summary*, page 11, at www.projectaction.org.

The participation of advisors with disabilities may be especially helpful in learning how to reduce the bus-to-platform gap in order to create level boarding at BRT trunk line stations comparable to that found in rail systems. Excessive bus-to-platform gaps at BRT stations can make boarding and alighting more difficult for all passengers and especially for children, elderly or frail persons, blind persons, and passengers using wheelchairs. Complaints have been received from users in many countries. A wheelchair user in Africa, for example, states that “My most serious concern is the horizontal variance between a bus and the platform, which . . . renders the system inaccessible to wheelchair users.” A passenger with a disability in a Latin American city states that “when the bus is at the station, there is a 30 to 50 cm. gap that is dangerous for any person boarding or alighting from the bus.” Excessive gaps require passengers to carefully watch the gap when they board or alight, causing delays and creating the risk of injuries as well as line delays. The use of advisors to test the gaps, including using mockups prior to completing station design, may assist in assuring that gaps will not exceed the needs of many passengers. For example, such testing would provide early warning of excessive gaps to BRT systems using low-floor buses, where there may be a false perception that less attention need be paid to station design and bus driver training to assure that platform-to-bus gaps do not exceed stated standards.

Advisors can also comment on unusual configurations that too often are exceptions which require special attention. Sidewalk access is one such category. Advisory review of plans can avoid blockages to otherwise accessible sidewalks, and identify poorly located curb ramps or tactile guideways that lead blind persons into obstacles.

The interior configurations of buses with doors on both sides (an emerging trend in BRT systems) also raises a need for advisory committee review. At a minimum, a cutout of a plan view of a reference wheelchair, to scale with a plan of the bus interior and adjacent stop, should be used to assure an accessible travel path into the bus and then into the securement area. Note that securement areas must be longer than the reference wheelchair to allow for turning motions as the wheelchair is positioned in the securement area. Better still, users of reference size wheelchairs should test a full-size mockup of a bus door, aisle, and securement area taped to the floor. Even better, a three dimensional mockup should be used, with the bus floor, sides, seats, stanchions, fare box, and other elements mocked up using plywood or other inexpensive materials.

4.2.3 Special relationships with highly respected NGOs of persons with disabilities

In some cities there may be one or two unusually large NGOs that would be seen as natural advisors to a BRT system. For example, Rio de Janeiro’s Center for Independent Living has long had a leading role in planning access to pedestrian infrastructure. Libre Acceso in Mexico City has filled a similar role.

4.2.4 Comprehensive advisory bodies to coordinate the incremental growth of citywide pedestrian access to BRT and other public transit lines

Both Mexico City and Rio de Janeiro have created a public participation process that includes, but also goes beyond, the scope of a single transit system. Representatives from disability agencies and public bodies (e.g., planning, public works, traffic police, health agencies, tourism promoters) can meet periodically to recommend incremental steps to create an integrated plan of accessible footways and pedestrian crossings connecting with bus, rail, bicycle and other transport modes.

This is one way to address the issues which sharply decrease use of BRT systems in many cities: Issues such as roads with no sidewalks at all, broken sidewalks that are not contiguous, sidewalks jammed with vendors, motorcycles operating or parked on sidewalks, and the absence of a culture of safety. A comprehensive multi-agency advisory committee can take advantage of the fact that some BRT systems serve as “an island of accessibility” even if they are adrift in “a sea of inaccessibility” when first constructed. BRT systems can serve as an iconic example of what accessibility should look like – *the moreso if structures of public participation are put into place to further this goal*. Side effects of such coordination are easily seen in Mexico City, where a major disability NGO, Libre Acceso, is in close contact with the Monterrey Technological Institute in Mexico City, whose students have carried out access audits to prioritize access to Mexico City’s Metrobús BRT system.

4.2.5 Public participation to enhance political support of BRT

In theory, everyone should be in favor of the larger goals of BRT systems. In the real world, this does not occur. Drivers of informal vehicles have their concerns, neighborhoods, sidewalk vendors, and other interest groups all want to have their say. BRT practitioners need to take a close look at the advantages to be gained by having disability leaders and disability NGOs on their side, and to consider the disadvantages that accrue when the opposite occurs. Valuable political support can be provided by disabled advisors who feel the system deserves their support and rightly feel “ownership” as stakeholders in the public participation process.

4.3 Requirements for a valid public participation process

It is helpful to have enough familiarity with key people in disability agencies that their incorporation in the project is a natural process based on existing relationships where trust and trustworthiness can be taken for granted. Public participation then becomes a natural result of a more organic situation where previous cooperation has already occurred.

4.3.1 The process should be proactive

The most important single steps transit practitioners can take is to seek out and enlist the participation of disability leaders and NGOs early on, instead of trying to put off such participation for as long as possible. User groups are not fooled when transit planners ignore their efforts to contact them. And they will consider the process a sham if they are approached at the last minute in hopes of getting them to bless plans which are already a *fait accompli*. Conversely, it is only normal for people and organizations to feel acknowledged when they are contacted early on

to seek their input. Once a project is at the point where concrete decisions need to be made concerning service models, station locations, bus design, and similar matters, then public participation is especially needed.

4.3.2 The process should be transparent, and should be viewed as such by others

Ideally, the formation of an advisory committee and other public participation should follow written criteria which anyone can understand. Agendas for such bodies should be available on a web site or otherwise disseminated.

4.3.3 The process should be fair to participants and to those with different viewpoints and personalities

- 1) Participants should have equal opportunities to receive information and to attend meetings. Information about the advisory process should be distributed in formats accessible to those who are blind, deaf, or otherwise require special electronic and or print or audio formats. Transportation to meetings should be made available to those who are unable to pay for it. They need to be “on a level playing field” along with everyone else.
- 2) The viewpoint of persons with different perspectives, and of persons with less forceful personalities, are taken into consideration equally with the viewpoints of those with stronger personalities. This requires agency staff, or a mutually agreed upon facilitator or other external leader, to guide the advisory process and to make sure that the process is not “taken over” by a single individual or agency. Staff should not be timid about this. *Everyone’s* opinion deserves to be valued. Standards should be enforced that require mutual respect among advisory group members in much the same way that similar standards apply to other types of meetings. Advisory groups are not venues for “grandstanding” by individuals and the process should be kept open to all participants. One simple rule is that “no one speaks a second time until everyone has had an opportunity to speak the first time.”

4.3.4 Advisors must take their responsibilities seriously.

It is entirely appropriate to have written understandings about the expectations for disabled advisors to a transit system. This should include a commitment to be present at stated meetings, to treat others with respect, to permit all viewpoints to be heard, and to take part, where indicated, in training to increase the quality of their participation (see below). In some cities, advisors are paid for their duties in return for the work required. However, this may not be advisable in situations where this would give the appearance of paying for the adherence of advisors to the preferences of planners, which in turn might lead to the advisors losing credibility within their own communities.

4.3.5 Advisors must be trained to competency

On the one hand, persons with disabilities bring unique and valued contributions to an advisory committee because they – and they alone – understand the challenges of navigating their environment. The motto of many disability NGOs –

“Nothing about us, without us” -- reflects this reality. Much of this understanding will, of course, carry over to issues of the accessibility of a new public transport system.

On the other hand, as with *all the other* stakeholders who play a role in implementing bus rapid transit systems, so too advisers to the system will provide better advice if they have a basic understanding of BRT planning, financing and operations, as well as the timelines and challenges facing different actors as they carry out their roles. In many cases advisors with disabilities – and other beneficiaries of the inclusive design and operation of BRT systems – will require basic orientation to a transit mode which they (and many other actors) have never had an opportunity to use. *An accessible BRT corridor may be the first opportunity in a disabled person’s life to actually board a public transit vehicle.*

For example, the South African Department of Transport brought together a group of disability NGO leaders and accessible transit experts from around the country



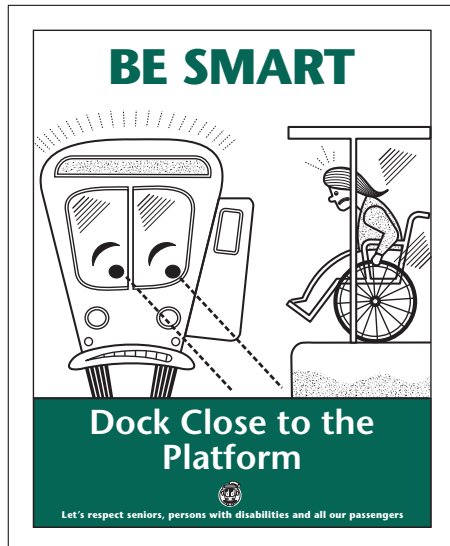
for a one-day workshop to enhance the ability of stakeholders to input into plans for inclusive BRT and other transit modes (photo at left, by AEI). This is one of a spectrum of approaches to better incorporate those who benefit from BRT as informed advisors and advocates for safe, accessible, and reliable public transportation. Helpful orientation also can be provided for advisers in a city which is only in the planning process, by assuring that

they personally experience a BRT system in operation in a nearby city.

There are other implications to “training to competency.” For example, wheelchair riders need an opportunity to develop their skills in boarding and alighting from a BRT vehicle. Most people using a BRT system – including those using wheelchairs – will use it repetitively and will improve their boarding and alighting skills in the process. “Practice makes perfect,” and practice may improve user perception of system accessibility, always assuming both vertical and horizontal station-to-bus gaps are kept within guidelines for level boarding, or some other level change device is used. It is foolish to expect that on opening day of a BRT system someone who has never been on a bus before can enter this new environment, navigate to the correct door amidst other passengers who also are hard-pressed to know how to use the system, identify the wheelchair securement position, smoothly cross the platform-to-bus gap, and figure out when and how to exit amidst the relative chaos that reigns on the opening day of any bus line. Training for “public participation” should occur beforehand. As with most other life activities, repeated use of a bus system leads to improved ability to quickly board and alight if gap distances are minimized. Blind persons also benefit from the opportunity to familiarize themselves with buses and transit stations before using them for the first time in revenue service.

4.3.6 Long-term implications

Once the system is opened, persons with disabilities can serve at customer service or fare vending points in the city, or can help orient new customers to the features of the BRT system. This has been done with success in both Pereira and Bucaramanga, Colombia.



The use of disabled advisors also helps keep transit operators aware of the need for driver training and retraining to benefit all passengers, including seniors and passengers with disabilities. Advisors can report back to staff concerning developing problems, providing valuable feedback loops to maintain the integrity of the service. Bus drivers need to avoid sudden starts and stops, to reduce speed before going around curves, and to drive carefully for the sake of all passengers. Station personnel also need periodic training and retraining, including the cross-training of station assistants, security staff, and fare personnel to provide courteous service to seniors, persons with

disabilities, and other beneficiaries of universal design. Advisors provide an “early warning system” when these efforts begin to falter. (Image courtesy of AEI)

5. REFERENCES

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