Keynote Address

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IN JUNE 1975 THE first national conference on light rail transit was held in Philadelphia under the auspices of the Transportation Research Board of the National Research Council. Twelve years later it is interesting to look back on that meeting, to reflect on some of the statements that were made, and to consider what has transpired since then in the field.

Let me refer first to the printed record of the speeches made at those proceedings (*1*). The foreword was written by Robert E. Patricelli, who was then the administrator of the Urban Mass Transit Administration. He wrote:

> There is increasing doubt that a single transport system of any technology can effectively serve the broad range of travel patterns and services that prevail in a large city. There is also no compelling reason why a single type of transportation system must dominate an entire metropolitan area. This trend to move away from a unimodal solution to a system that blends a number of discrete transit elements, each of which is tailored to demands and local conditions, should make light rail transit a particularly strong contender for attention by cities that desire some form of a fixed guideway system. Light rail should certainly not be treated as a panacea for urban mobility problems, but it should be considered as one of the various transit options available to cities.

I find that statement so valid that I'd like to see it printed, framed, and hung on the wall of every transit agency in the United States. We who are involved in the development and the operation of light rail systems should give special emphasis in our own thinking to Bob Patricelli's point that travel patterns are so diverse in large cities that a diversity of technologies may best serve the many demands put on transit systems.

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The fact that a city has a heavy rail system to serve the busiest transit corridors is generally taken to mean that there are no parts of that city that can be better served by some other guideway technology. Yet some of the best systems in the world—Toronto, San Francisco, Boston, and Moscow, for example—owe a part of their excellence to a recognition on the part of their managers that a diversity of modes can be the best response to a variety of demands for service.

Commonly transit officials have striven to junk light rail and streetcar systems when they succeed in the great accomplishment of putting a heavy rail line in place. In fact, that has become a general rule on this side of the Iron Curtain. A great many very good light rail lines have been discontinued unnecessarily—to the disadvantage of the public.

Bob Patricelli's point that light rail should not be considered a panacea for urban mobility problems should be underlined in the frames on our walls. Light rail is, without doubt, the right technology for some corridors. But heavy rail is the right technology for others, and buses are right for many more. And paratransit is the right way to provide mobility in many areas. Every decision about which transit technology should be used on any route must be based on the peculiarities of that route and must never be based on somebody's fondness for one type of hardware or another. Existing and future demands for service are the factors that are most likely to define the best transit mode in any corridor.

Bob Patricelli was offering us a warning that light rail can be the wrong system to build if it is put in the wrong place. That must be balanced against his assurance that it is the right system when put in the right place.

I want to talk about how well light rail works when in the right place, and I hope that none of you will mind if I use the light rail system in San Diego as an example. However, before I begin telling you that success story, I would like to refer back to some of the remarks made by Vukan Vuchic at the meeting in Philadelphia 12 years ago. Vuchic said (*1*, p. 74):

> Some lay observers have posed this question: Why are we returning to LRT after abandoning streetcars as inefficient? The fact is that, if the LRT concept is understood properly, it is clear that introduction of this mode is not a step backward but a major step forward in upgrading existing surface transit systems. The potential for introduction of LRT into our cities lies in the fact that LRT is better adapted to separation and preferential treatment than are streetcars and buses, that it offers a higher service quality and that it has a better image. Most important, LRT can, because of these features, attract passengers that other surface transit cannot.

That statement is one that has gathered meaning in the last 12 years, particularly in San Diego. When our line from downtown to the Mexican

border was opened in 1981, the daily patronage was well above the expectations of management, which were for 9,800 riders a day. Right at the start we had 11,000. That figure was proof that Vukan Vuchic was right, and that LRT can attract passengers that other surface transit cannot.

Since that time, ridership has grown steadily. The number of people taking our trains has been higher for each of the last 61 months than it was during the same month of the previous year. The daily figure for the South Line is now well over 22,000 a day—more than twice as many as seven years ago. The growth has not only been steady, it has been steadily increasing both in absolute numbers and as percentages.

The average annual patronage increase for the entire light rail system since January 1983 is 12.2 percent. In March 1988 our patronage was 20.8 percent higher than it was in March 1987. The only difference in our service was an increased frequency of trains, which apparently contributed a great deal to our increase in the number of riders served. That, I hope, is a point everyone here will note.

All categories of ridership are increasing, but the one that is growing fastest is commuter traffic. These are people who, we were warned, would never get out of their cars to ride transit. Californians, we heard, are in love with their cars and driving to work is a precious right as far as most of them are concerned.

It turns out that is not so. If San Diegans are given a pleasant alternative to their cars, a large number of them will take advantage of it to get to work. Our surveys show that one-third of the people who ride our system each day come to it in their cars and park at the lots at our stations. Our surveys further show that most of those people, when asked how they would get to work if the light rail line did not exist, say they would drive the rest of the way.

We have, you see, proved Vukan Vuchic right. Our system has also demonstrated a number of other truths about light rail transit. It can be cheap to build, compared with other fixed-guideway systems. Our South Line, complete with cars, shops, and every other appurtenance, cost us $117 million for 16 mi of a double-track railway. At less than $7.5 million/mi, including rolling stock, it is by far the cheapest urban passenger railway built during the lifetimes of most of us in this room.

It was cheap to build because management decided that it should be. Everything about the system is simple and practical. As a result it is also very cheap to operate. The last report on the operating costs of the urban rail systems of America showed that our line costs less to run per passenger mile than any other. That fact carries with it an important lesson. Complexity not only costs more to build into a system, it also costs more to maintain and operate.

Our high level of patronage and our low level of operating costs have produced a farebox revenue ratio of 85 percent on a year-round basis. During

summer months, it has often risen to over 100 percent. Another lesson we have learned is that we have not reduced that figure by increasing our levels of service. When we have extended our schedules later into the evening, and when we have increased frequencies in midday, we have found that the increases in farebox revenues have been more than enough to pay for the costs of the new service.

As we look to the future, we anticipate keeping ourselves in good shape financially by adding further improvements in the quality of our service. Naturally we will be very careful about what we do in that regard. Making mistakes would be expensive. However, we are convinced that Vukan Vuchic was right in 1975 when he said that light rail transit can best attract new riders by offering higher service quality.

I should like to conclude by repeating a few of the remarks I made in my speech to the Philadelphia conference in 1975 (*1*, p. 5).

> The rediscovery of light rail was not motivated by sentimentality and nostalgia for a bygone era. It was the result of judgment founded on a realistic assessment of growing transit needs and diminishing financial resources. The reason for the rebirth of light rail transit is the inherent advantages of the technology. Light rail transit offers public officials the opportunity to initiate rail transit developments at a modest cost. . . . The flexibility of the technology allows transit service, system capacity, and available resources to be traded off in a variety of ways so that the best transit system for a community can evolve over time.

To repeat the words of Bob Patricelli, light rail should not be considered a panacea for the growing woes created by our increasing urban congestion. But, in the right corridors, it can be the right answer to the needs of a lot of Americans. It can make their lives more pleasant. It can make the cities where they live more vital and interesting places. And it can contribute to the quality of the air they breathe. Finally, it can help to assure them of a more prosperous America by diminishing, along with all other improvements in our public transportation systems, our dependence on foreign oil and the adverse balance of trade that dependence has helped to impose on us.

Like all of the speakers in 1975, I want to urge the careful consideration of light rail as the right technology in the right places. We owe it to the people we serve, we owe it to communities, and we owe it to the nation we so often pledge our allegiance to. Even though the contributions we might make to the solutions of very great problems may be modest ones, we should make them. The greatest of problems are only solved if a lot of people undertake to do whatever is within their power to do. Our responsibilities, though modest, are clear enough: to make correct decisions as to the modes of public transit we operate and as to how we operate them.

Let us reflect on the fact that the passing of time has borne out the truths of what was said at the first conference of this group, and let us go forward with the assurance that we are on the right track.

REFERENCE

1. *Special Report 161: Light Rail Transit.* TRB, National Research Council, Washington, D.C., 1975.