



Performance Measurement: What We Can Learn from Our International Neighbors

By Ken Philmus

Over the past several years, we American transportation operators have begun to change the way we evaluate the job we've been doing for those who use our facilities. Throughout the history of surface transportation, we have, for the most part, limited our self-measurement in that regard to how many lane miles of new capacity we provided, how many "ribbon cuttings" we held, and how much money we received through either governmental programs or tolls. We are now realizing that this simplistic form of performance measurement is not useful for quality management, and that it must be transformed into a system that is more directly related to the actual value given the public based on a predetermined set of goals.

Many transportation service providers have already begun this change by focusing on operations and mobility, and this has been a good first step. They have done so not only because it is proving to be a valuable management





tool, but because transportation funding is increasingly based on quality outcomes rather than on quantity results alone. That shift will encourage transportation providers to focus and better measure how well they are doing, not just how much.

Further, as a nation we are only just beginning to fully understand that the performance of our highway system is one part of a much bigger picture. We have much to learn from our fellow practitioners around the world about setting goals and developing measurement systems that ensure that scarce resources are spent appropriately to maximize transportation's benefit to society. Maximizing mobility is very desirable in and of itself, but its true value lies ultimately in how well it contributes to larger societal needs and goals. Our recent national foray into valuing operational transportation outcomes is certainly a good thing and represents a big change from where we were. But the process of determining exactly what we want to accomplish and why, how to measure it, and what to do with the measurements we obtain is difficult, despite the value the effort produces.

Measuring Performance Abroad

Last April I had the exceptional opportunity to participate in an international "Performance Measurement Scanning Tour" of Canada, Japan, Australia, and New Zealand. The tour was sponsored jointly by the Federal Highway Administration (FHWA) and the American Association of State and Highway Transportation Officials (AASHTO). The American toll industry, through IBTTA, was asked by AASHTO to participate in this event for two primary reasons. First, there is a growing realization that the use of tolls and road-user fees will be a major element in the further development and day-to-

day operation of our national highway system. Second, the toll industry already has a history of measuring success somewhat differently from the various direct governmental highway providers.

As director of tunnels, bridges, and bus terminals for the Port Authority of New York and New Jersey, a position I held at the time of the tour, I was responsible for some of the busiest and most congested toll operations in the world, including facilities such as the George Washington Bridge, the Lincoln Tunnel, and the Holland Tunnel. Through IBTTA, I became the toll-industry representative on the scanning tour. In addition to me, the group included representatives from the FHWA, several state departments of transportation (DOTs), academia, and the National Council of Engineering Consultants.

All of us on the tour believed that a data-based performance management system should be at the core of a transportation agency in both the short and long terms. The state DOTs represented on the tour—those from Washington, Minnesota, Virginia, and Maryland—are among the most forward-thinking representatives in the United States in the use of advanced performance measurement techniques. Those from the FHWA, particularly in the area of safety management, were already moving down this road as well. We quickly learned, however, that in America we are just beginning to touch the surface of finding better ways to evaluate and maximize our resources and provide the public with the best use of their transportation investments.

What we took away from the tour is that we still have very much to learn regarding the potential utility of performance measurement data for decision-making. The countries we visited were selected because they provide the best examples in the world of how performance measurement is being used most effectively to evaluate and integrate transportation into a larger picture of governmental and societal planning. Perhaps most telling was how we saw other countries working within their broader national requirements to

achieve this task. For example, measures for improving traffic flow were seen as part of the larger goals of attaining livable communities and maximizing industrial growth.

My participation in this program is a career highlight of mine, one that changed the way I view my own public management approach. I also now see our industry differently and think more about why—and not only how—we operate highway, bridge, and tunnel facilities.

Measurable Outcomes

The users of our national surface transportation system, whether on local roads, arterials, or interstates, are rightfully more demanding today than they have ever been. They are tired of spiraling congestion and upset about the rising number of highway fatalities nationwide. They simply want it to be easier and more reliable to get from here to there. They couldn't care less about which governmental entity is meeting their need. They just want it done. As a result, toll authorities and transportation officials at all levels of government are starting to realize that what the customer most cares about are mobility, safety and environmental responsibility and that funding decisions should be based on achieving these outcomes at the regional level.

While sometimes difficult to overcome, traditional government boundaries are meaningful only to the government entities themselves. We need to do a better job of jointly understanding what the public wants from its transportation systems, set goals and strategies accordingly, measure our performance in those areas, and make appropriate improvements and investments.

That isn't enough, though. We then must have a feedback system in place to measure whether we achieved what we set out to do. The



days of simply building more and more highways as the sole response to what was surmised to be the transportation need are clearly over. Our job always was to determine, listen to, and measure what the public wants and ensure that we give it to them. Now, with the advent of intelligent transportation systems (ITS), electronic tolling, and other progressive technologies, we have many more tools available to us to accomplish this task. These tools enable us to gather and analyze data at levels that previously were impossible. Perhaps only now can we truly measure what is taking place on our roads.

These modern systems also give us the tools to make more than just incremental improvements. Using the right information, combined with directly measuring results and customer satisfaction, lets us know if we are headed in the right direction. Today's better transportation technology lets us do that.

Transportation as Part of the Whole

The four countries we visited exhibited various levels of transportation performance measurement, but one point was equally clear among all of the countries: They don't view transportation as a stand-alone activity. Rather, they consistently see the provision of transportation as part of the broader purpose of maximizing their citizens' quality of life and economic vitality. They then develop their goals, work plans, and measurements against that backdrop. Effective transportation, while vital in and of itself, is consistently seen as part of larger societal concerns and goals and, as a result, is viewed as having limited utility in isolation.

Each country and the governmental subunits we visited view their role as integrating transportation fully as one of many strategies for attaining certain broader goals defined at higher levels of government. In most cases, transportation is integrated with other government services to work in concert to provide livable, environmentally sound, economically viable communities. The countries then

formulate their transportation strategies to meet these goals and measure themselves in ways that tell them whether they are on the right track for both mobility and the greater good.

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Viewing effective transportation goals and strategies in the context of meeting broader goals has sometimes led the countries to devise and make different strategies and decisions than they might have otherwise. (An obvious example is that just building more roads to improve mobility doesn't always serve the broader goal of improved land use or better air quality.) Budgetary funding then flows to those activities or projects that do the best job of meeting those integrated and predefined goals so that actions taken have the most impact. In all the four countries, it is also deemed important that the general public fully understands this approach and that the public's viewpoint is an integral part of the decision-making process.

The Customer as Performance Measure

The involvement of the public in the transportation performance measures process was a constant in all the countries we visited. There was routine agreement that the public is ultimately the customer and that the customer is "why we do what we do." It was very interesting to see how the various agencies devised ways to involve as many viewpoints, individuals, and groups as possible in developing performance measures and reporting results. Satisfaction and attitude surveys, focus groups, and customer advisory panels were common and showed consistently that measures of safety, traffic flow, and road quality were most important to system users.

The agencies' thought processes were really quite simple: Why should they develop a performance measurement system that

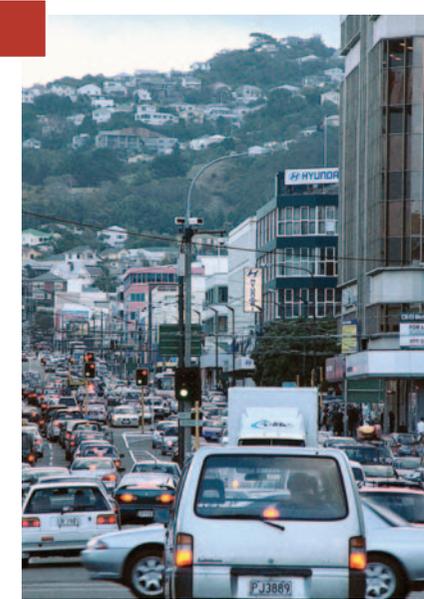
doesn't focus on the desires and needs of those that use the system? How could one possibly expect to be successful in setting up or operating a transportation system without being as inclusive as possible? This reconfirmed my own point of view that we American managers and planners all too often believe we know and understand what the public wants without asking them. Even worse, we sometimes believe we know better than the public does! Then, remarkably, once we actually solicit the public's opinions, we're surprised to find we didn't really know what our customers wanted. Worse yet, we undertake a major program or project that turns out to be off the mark.

In contrast, the four countries find multiple ways to make an impact and track whether what they hoped would occur is actually happening. Our intuition as managers may be good, but it is only through data, measurement, and quality communication that we can determine whether our intuitions are based in reality.

Fatality Reduction through Behavioral Change

Another area in which we saw common practices was in the desire by all countries visited to reduce the number of fatalities on their highways. American road operators typically focus on making engineering changes to the geometry of their roads to reduce the potential for serious accidents, and much federal and state money goes into research and projects to make roads safer for all of us. Other countries do that as well, but as they've taken a hard look at their safety performance in a societal context, they've found that technological improvements are bearing only incremental safety value.

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ty was to focus on changing basic driver behavior, even if doing so would be very unpopular with the public at the outset. They began to take radical steps to change poor driving habits, thoroughly measured the impact of what they were implementing, and were then able to prove that poor driving behavior was much more to blame for fatalities than was road geometry, design, or conditions.

It may have been intuitively obvious that curbing the behaviors the Australians wanted to change would greatly reduce accidents and fatalities, but producing statistics and measurements to corroborate that contention was key to convincing elected officials and the public to take radical steps. To seriously cut their highway fatality rate,

which is much lower than that in the United States, the Australian operators brought in programs such as extensive random drunk-driver stops with very low alcohol tolerance levels. They put cameras on all types of roads on which speeding tickets could be issued, and they implemented seat-belt laws that penalize drivers who transport passengers who are not wearing safety belts. At the same time, the Australians continued to

improve roadway design and geometry but through performance measurement found definitively that this was not where they obtained their “bang for the buck.”

Through performance measurement, the Australians very clearly demonstrated that strong behavioral measures were what really worked. Despite the fact that there was some concern with these programs regarding individual rights, much as we feel so strongly about in the United States, the performance measurements convinced Australia’s general public just how effective these changes were and that they were worth the trouble.



Congestion and Travel-Time Reliability

Another constant among the agencies we visited was that they all include congestion and travel-time reliability as key elements in their performance measurement processes. Congestion is no different in Tokyo and Sydney than it is in New York or Los Angeles. Transportation managers around the world realize that congestion and trip travel time is the single aspect of surface transportation that the general public cares about most on a day-to-day basis. It is the piece of our business that causes them the most frustration and is where improvements are most noticeable. Further, it is the part of transportation that has the most impact on any given region’s economic vitality.

Drivers will put up with a certain amount of congestion on a daily basis. In Japan and Australia in particular, it was determined through customer surveys that the most frustrating part of a trip is when there is a constant worry that the length of the trip can’t be reliably predicted. When that is so, drivers must plan on a longer trip every day, “just in case,” to ensure that they arrive at their destinations on time. We found the measuring of percentage of travel-time reliability to be an element of virtually all performance measurement programs.

As we are learning in the United States, we also saw during our tour that tolling is increasingly utilized around the world as a means of reducing congestion through value pricing. In Japan, expressways previously were underutilized and deemed too expensive—particularly for electronic tolling. In response, Japanese authorities lowered the tolls to encourage greater utilization and decrease congestion on other roads. More typically, tolls are varied by time of day to maximize flow and encourage travelers to use other forms of transportation, such as mass transit.

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The Leader in Security

There is one area where the United States is, unfortunately, the performance measurement leader: security. My former agency, the Port Authority of New York and New Jersey, was terribly disrupted by the events of 9/11. We constructed, owned, and operated the World Trade Center. Our offices were in the World Trade Center, and when those buildings collapsed our agency also nearly collapsed. It has been furiously rebuilding ever since. I had hoped that somewhere among these “best case” countries, I would find a way to better measure and evaluate the headlong rush our nation and, in particular, my region and agency have been making to implement operational and capital security programs.

The rest of the world is struggling as we are in grappling with the question of how to spend limited resources on so important an area. How do you know you’re spending the right amount of funds in the right places to accomplish the right kinds of things? It is nearly impossible to know, when the only measure you have is that something did not get destroyed or some other type of terrorist attack did not happen.

I did learn that the use of risk and vulnerability studies as a performance measure at the Port Authority of New York and New Jersey is cutting-edge, as are some of the security changes the authority has been implementing. The search for better measures in this area must continue.

Moving to the Head of the Line

The efficient and effective movement of people and goods will always be valuable and important, but to be most effective that movement must be part of a larger overall context and not a goal solely in and of itself. Transportation must be part of a bigger picture, as it is in the four countries we visited. Improving the job we do of defining mobility-related goals within a larger societal context

and then measuring how well we’ve done will put transportation at the head of the line when the money is given out.

Through the international scanning tour, I learned that some countries are doing a significantly better job than the United States in figuring out how to determine their mobility-related goals in connection with society at large, prove the accuracy of that process, and then make it very visible for the public to see. The public feels much better about paying for outcomes it can see, understand, and believe are making a difference, through either tolls or other means of transportation funding. This is particularly true in the areas of safety and traffic-fatality reduction, congestion, and travel-time reliability. I also learned that no one outside the United States has developed an effective means of measuring expenditures on security, which is taking up large amounts of our energy and resources.



Most important, I now realize how much we all have to learn from others around the world and how important it is for us to listen to each other. The problems we share are so similar. The development of a mutual understanding of how we all can best approach common problems and work toward their resolution can only serve to better us all.

Ken Philmus was recently appointed Vice President and National Director of Toll Facilities for DMJM+Harris, Inc., headquartered in New York City. Ken is located in the firm's regional office in Iselin, N.J. He is the former director of tunnels, bridges, and bus terminals for the Port Authority of New York and New Jersey.