

INSTITUTE FOR CIVIL INFRASTRUCTURE SYSTEMS (ICIS)

MINI-FORUM ON PERFORMANCE MEASURES: HIGHLIGHTS

December 11, 1998

Summary and Highlights

INTRODUCTION: The Mini-forum on performance measures is part of the plan for the Performance Measurement Assessment program in ICIS to develop user and community-based measures for infrastructure. Prior to the forum, measures were compiled from numerous sources, and divided into a preliminary and hypothetical list of those that users and communities relate to. At the mini-forum, various interests were brought together to brainstorm about the measures, how they react to these measures, and whether or not they thought any dimensions were lacking. After the mini-forum, a series of interviews are planned and a workshop to develop these measures further. Interviews of users and community interests will be used as a check on the formulation and coverage of the measures. Interviews of agencies will ascertain whether in fact these measures are in use now, and if not, what barriers exist to their incorporation.

MINI-FORUM OBJECTIVE: To obtain input from operators, managers, and some oversight organizations on how to integrate user and community concerns into infrastructure planning, design and management. In particular, ICIS wants to create measures that are based on the following questions, that need input from these organizations –

- If I am a User of infrastructure, what do I want to know and what do I experience?
- If I am a Community that hosts an infrastructure facility, what do I care about and what do I experience?
- To be a part of important infrastructure decisions in my community, what do I need to know to be a part of the decision-making process?

OBSERVATIONS/RECOMMENDATIONS FOR SPECIFIC INFRASTRUCTURE AREAS (Reported out by the individual breakout sessions):

I. ICIS must advocate a longer range view of the sustainability of infrastructure systems, and proper administrative and financial mechanisms to accomplish this through long-range planning and implementation programs. One aspect of this is the need for a long-range maintenance plan, that is a critical foundation for performance indicators. Once developed, it should be marketed and communicated, and people need to be educated about it. Institutionally, this is difficult to bring about, since the emphasis has been upon capital planning. There is uncertainty as to which agency should undertake this. Information has to relate time savings with dollars spent on maintenance and where in order to get public buy-in.

II. Performance measures have to be sensitive to the fact that there are different groups that have different needs, levels of perception and understanding with respect to infrastructure. Performance measures have to reflect these different needs. At least 4 groups need to be recognized:

-Technicians/operators: They tend to have the indicators they need, and ICIS will review them, but not necessarily propose major modifications. (They will, however, have to be responsible for considering the indicators requested by the other groups.)

-Individuals, users, patrons: That is an area ICIS has to address. It is not clear how are they implemented. These indicators should be limited to just a few.

-Politicians: They react to different sets of indicators.

-Financial cohort: Indicators involve money to finance long range improvements.

III. Flexibility is key to performance because its absence reduces the number of people affected by a problem. Density in urban areas enhances flexibility: e.g., there are many modes to travel by. Water and electricity can be switched to different parts of the network. People in suburbs are more affected by, but more accepting of, service disruptions. This may be because in the suburbs utility lines are visible, whereas in denser urban areas they are not. How do we measure flexibility?

IV. Performance measures must reflect user preferences

V. Reliability and quality of service are multidimensional, so performance measures must necessarily be multi-dimensional: One cannot only talk about average reliability. The user's inconvenience is related to length of outage, when it happens, and how many contiguous people are affected, not necessarily to the average reliability.

VI. Quality of life indices are a key foundation for performance measures, but are hard to identify.

Institute for Civil Infrastructure Systems
Performance Measurement Assessment Group

Mini-Forum Agenda

Glucksman Ireland House
One Washington Mews
New York, NY 10003
Tel (212) 998-3950

December 11, 1998

- 8:30am – 9:00am Breakfast and coffee
- 9:00am – 9:15am Introduction to ICIS
Prof. Rae Zimmerman, ICIS Director
Professor of Planning and Public Administration,
Robert F. Wagner Graduate School of Public Service, New York University
- 9:15am – 9:30am Introduction to the Performance Measurement Assessment Program
Prof. John Falcocchio (Member, ICIS Executive Committee)
Professor of Transportation
Department of Civil & Environmental Engineering
Polytechnic University of New York
- 9:30am – 10:00am Review of current performance measures addressing ICIS goals
- 10:00am – 10:45am Open Discussion
- 10:45am – 11:00am Break
- 11:00am – 12:30pm Breakout groups to brainstorm on possible new measures, challenges
and obstacles
- Transportation (transit, highway, bridge) group to be led by
Sigurd Grava, (Member, ICIS Executive Committee)
Professor of Planning
Columbia University
- Utility (water, wastewater, energy, telecom) group to be led by
Prof. Rae Zimmerman
- 12:30pm – 1:00pm Reconvene and report on highlights of breakout discussions
- 1:00pm Lunch (*Informal discussion will continue through lunch.*)

ATTENDEES

Andrew Bata (Senior Director of Service Planning, MTA, NYC Transit), Robert Bell (Consolidated Edison), Jeanette K. Boyle (Office of Utility Efficiency and Productivity, NYS Public Service Commission), Leland Caldwell (Vice President and Chief Engineer, MTA, Bridges and Tunnels), Beverly Dolinsky (Executive Director, Permanent Citizens Advisory Committee to the MTA), Bernard Haber (Hardesty and Hanover LLP), Alan Kiepper (Senior Vice President, Parsons Brinckerhoff, formerly with MTA Transit), Anne G. Morris (Center for Logistics and Transportation, CUNY-Baruch College), David Nickols (Vice President, Hazen & Sawyer, P.C., water supply), Anthony Tafuri (U.S. EPA, water supply and wastewater infrastructure), Michael Rennard (Chief Engineer, NYC Comptroller's Office), Bojidar Yanev (Director, Bridge Inspection/Research and Development, NYC DOT).

ICIS Participants: Falocchio (Polytechnic University of NY), Grava (Columbia University), James (NYU), Killackey (NYU), Meyburg (Cornell), O'Reilly (NYU), Restrepo (NYU), Sparrow (NYU), Zimmerman (NYU)