

**Summary comments of James R. McCarville, Executive Director, Port of Pittsburgh Commission at the Committee on Marine Transportation and Transportation Research Board's Conference "Diagnosing the Marine Transportation System: Measuring Performance and Targeting Improvement", National Academy of Sciences, Washington, DC, June 26-28, 2012.**

**Question: What performance indicators do I personally find useful, what should be used for the marine transportation industry and what gaps exist.**

1. We measure service performance to improve service delivery, but also to demonstrate to the public that the marine transportation system is worth investing in. Metrics are critical. They need to be timely, complex, balanced, flexible and meaningful, but they also have limitations. They don't stand alone. There is no single bullet or even mathematical average score. They are easily misused and always require feedback and explanations of circumstances. Nonetheless, we always need to improve ourselves and demonstrate our "Value to the Nation". I will focus on the second part of that statement. Unfortunately, the data we are looking at, namely tons and ton-miles, are insufficient to prove our value.

2. The current process used by USACE to justify navigation projects goes back to the Rivers and Harbors Act of 1936 and subsequent (and now flawed) policy modifications. In the Act it says the **USACE should invest in projects where the Benefits exceed the Costs, for WHOMSOEVER the benefits accrue**, a sound economic principle. Later USACE policy Principles and Guidelines, however, excluded for Navigation projects (but not Flood Control projects) the "loss of property values" and "regional benefits", significantly distorting all other performance indicators.

- The exclusion of property values, for instance, ignores the calculation that the failure to modernize or even minimally maintain reliable navigation on the Monongahela River would result in the loss of billions of dollars of private property values and investments and would turn large tracts of productive industrial property into Brownfield sites.
- The exclusion of regional benefits (jobs, income and taxes) may have been understandable in the non-globalized 80s, but not any more. At that time, a loss of jobs in Pittsburgh may have meant a gain for Alabama. Today it would more likely be a gain for Slovakia, China or some other country. Our continued failure to consider the loss of these jobs, income and taxes paid is to ignore the only metric meaningful to elected officials and the public at large. Unless we change this, it will be very difficult to convince Congress, or the public, that we have a system worth investing in.
- 3. The Port of Pittsburgh Commission (PPC) uses two important metrics to reflect our value to our region and the nation, and we recommend their broader use. They are: economic impact studies and benefit monetization studies.

- The PPC engaged Martin Associates to develop an “Economic Impact Study of the Port of Pittsburgh”. The key to their methodology was to interview not just the towing companies, but shippers and consignees - the owners of the cargo - to determine how many employees in our region were truly dependent upon waterway transportation, AND THEN TO GEO-LOCATE THE EMPLOYEES ADDRESSES BY ZIP CODE AND CONGRESSIONAL DISTRICTS. They found over 45,000 direct jobs and over 217,000 total jobs that were maintained by waterway transportation. At the time of the study, in 2004, (and they had then completed 77 similar studies), Pittsburgh ranked as the second largest port job-generator in the nation, due to our large value-added manufacturing of waterway dependent cargo. This was the single most useful tool the PPC has employed to help legislators understand why investment in waterway transportation is important. This is not advocacy. It is simply demonstrating our “Value”, and doing so effectively.
- In order to advance our DOT TIGER Grant Application, the PPC retained HDR to do a “Monetization Study” for our “Wireless Waterway” project, an advanced communications project. Ports, especially inland waterway ports, do not traditionally have monetization studies in their toolboxes. Among the questions DOT asked to monetize were related to “livability, sustainability, and state of good repair”, etc. Intuitively, I understood these things, but couldn’t quantify them. Thanks to the TIGER application, and it was a great exercise, we can now monetize the reduction in vessels waiting at locks, trucks waiting at terminals, less highway congestion and pollution and increased safety and security and, we can now better demonstrate that value of the waterway commerce to the nation. But this is not enough.

4. There are remaining gaps to be covered in recreation, industrial cooling and public health and safety.

- Consider that 80% of the population of Allegheny County gets drinking water from stable pools maintained by our locks and dams. I would like to see a study monetizing the value differential between getting drinking water from the rivers versus buying it in bottles. But, just imagine the value proposition if even a small portion of the 80% could not flush their toilets because of a dam failure drained the pool making it impossible to draw water. The point is there are many beneficiaries who have not been counted in beneficiary studies.

5. Let me also address the waterway of the near future and how technology will enable the collection of data that appears too complicated to collect now. Earlier I mentioned a PPC project to bring wireless broadband communications to the waterways. The PPC has initiated construction of an “Inter-Operability Test Bed” and a pilot “Network System Infrastructure”. I would like to invite you all to at least one of the three demonstrations that we will be doing at the end of August. There will be three workshops that week including *PIANC-USA’s Annual Meeting*, the *National Harbor Safety Council’s Annual Meeting* and *USACE’s River Information Workshop*. The changes that this

technology will bring will be akin to the changes brought by the introduction of the radio on the waterways, and, before that, the introduction of sticking secret messages along the river for union pilots. Each of these resulted in increased safety and efficiency. We are only beginning to project the improvements this technology will bring. A very important improvement, however, will be in the ability to transmit large amounts of data in real time. We expect this to significantly raise the bar in transparency and efficiency. We also expect it to make it easier to analyze the data that we all determine most critical to evaluate.

6. Taking a historical perspective, a hundred years ago freight transportation did not have to justify itself. There was almost a religious belief that it would lead to both world understanding and world peace on the one hand, and prosperity on the other. We all know how well the first one worked out, but it is undeniable that transportation has led to unprecedented prosperity in this country and throughout great parts of the world. Building our waterways, due to the foresight of our parents, grandparents and great-grandparents, has granted much of the prosperity to the interior of our nation, which is usually reserved for ocean port cities. We lost that conviction, however, in the last 40 years. Transportation services were de-regulated and asked to “justify” themselves. Great efficiencies resulted from that process. Today it is transportation infrastructure that is being asked to “justify” itself. But, it should not be treated as the same question since the infrastructure beneficiaries are external to the operations and widespread throughout the economy. The benefits are social, environmental, economic and financial. The most significant contribution this conference could make is to recommend going back to counting the jobs and property value impacts of our marine transportation system.

7. If we do not focus on our very significant social, economic, environmental and financial contribution to the nation, we will continue on the path we are on and will continue to lose public support.

8. There is an old Chinese proverb that says “Build a road and prosperity will travel on it”. **The value of our marvelous inland river road is well known to our metalworkers, chemical workers, mine workers and transportation workers, but, not as well known to the government or even the public at large.** For generations, private industry has invested and continues to invest billions of dollars each year alongside our waterways in environmental, operational and plant improvements, predicated upon the partnership that they will be able to continue to source raw materials via the waterways. We hope they will continue. But, if we fail to maintain our system, then wealth, and the opportunity for a many people to create wealth, will contract.

9. This is a cost/benefit test we cannot afford to fail. We need better metrics to tell this story.