

## Support Letter

Dear Mr. Michael Sussman,

I am writing to strongly support the “National Transportation Life-Cycle Costs and Benefits Project” proposed by OnTrackNorthAmerica.

Costs and benefits analyses are required for any public projects. Although numerous academic research has been conducted for evaluating performance of transportation projects and transportation systems, there is no unanimously accepted performance measurement system to provide a systematic evaluations on transportation projects. A comprehensive Lifecycle Benefit Cost Analysis, including environmental and societal impacts, is essential to illuminate the real value of freight rail projects, especially through a comparison against trucking options. Planners considering rail as a transportation alternative need a comprehensive toolbox that permits them to estimate costs and benefits in a reasonable and defensible fashion. Generally, the planning community lacks familiarity with rail transportation. This is particularly true for freight rail, which operates largely in the private sector and has little tradition interaction with public sector programs. Nevertheless, this should not preclude rail solutions from consideration in the planning process. Unfortunately, the lack of rail focused project evaluation tools and the data to support them biases planners towards highway-oriented solutions, for which there is a large base of benefit-cost methodology. As an author of several papers about transportation performance measurement development and a principal investigator who has conducted more than a dozen projects for US DOT and several state DOTs for more than one decade, I still observe that measures used in practice are very different across transportation modes and government agencies. Many measures do not capture life-cycle costs and benefits but only focus on the early stage of life cycles, such as design and construction. Existing measures are often not scalable and may not represent interest of all stakeholders. As the director of the Institute for a Secure and Sustainable Environment at the University of Tennessee (UT), I especially observe the lack of measures to capture environmental impacts. There is a need to conduct a comprehensive study to provide a unified life-cycle costs and benefits analysis framework for evaluating transportation systems and facilitating performance-based decision makings.

A team at the University of Tennessee (UT), formed by Dr. David Clarke, me and a graduate student, will start to work together with OnTrackNorthAmerica and other partners from July 2021 to 1) Identify and well-define all factors that should be included into the lifecycle benefit cost analysis for land freight, 2) build a framework with calculation procedures for selected factors, and 3) locate data to facilitate the calculation. Our overarching goal is an online tool to calculate land freight lifecycle impacts of railroads and trucking for meeting given freight transportation needs. Dr. Clarke is the former director of the Center for Transportation Research at UT and an internationally renowned expert in railroads.

As an expert in the area of transportation performance measurement and life-cycle analysis, I fully endorse this national effort and will continue providing my expertise to assist the success of this project.

Best regards,



**Mingzhou Jin, Ph.D.**  
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