Jeremy Mattson Small Urban and Rural Transit Center Upper Great Plains Transportation Institute North Dakota State University

Midwest Big Data Hub Transportation Symposium
Ann Arbor, MI
June 22, 2017



Small Urban and Rural Transit Center (SURTC)



Research



Education



Training

Research

Research Projects

- Transit and Rural Livability
- Bike Share Research
- Demand for Rural Demand-Response Transit
- Rural Intercity Bus Demand
- Assessing National Demand-Response Transit Level of Service
- Aging in Place
- Cost-Benefit Analysis of Rural Transit

Data Sources

- American Community Survey
- American Housing Survey
- National Household Travel Survey
- National Transit
 Database
- Surveys

Tools

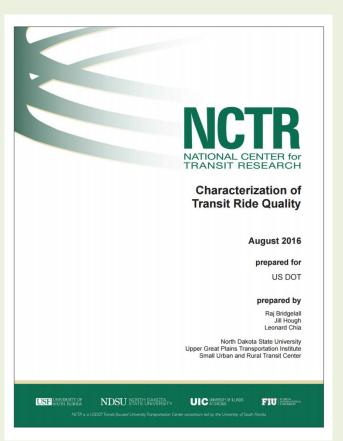
- Regression modeling
- GIS
- Simulation
- Cost-benefit analyses

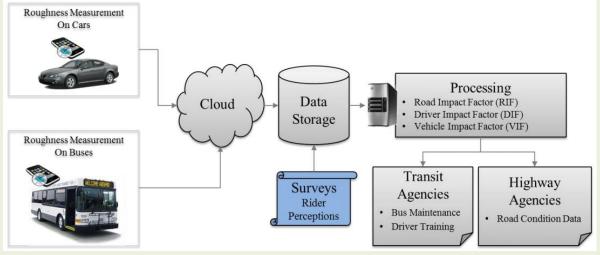
Data Challenges

- Rural NTD limited
- Demand-Response/flexible fixedroute level of service
- NHTS sporadic
- Rural transit use
 - Trip purpose
 - Alternatives
- Appropriate performance measures

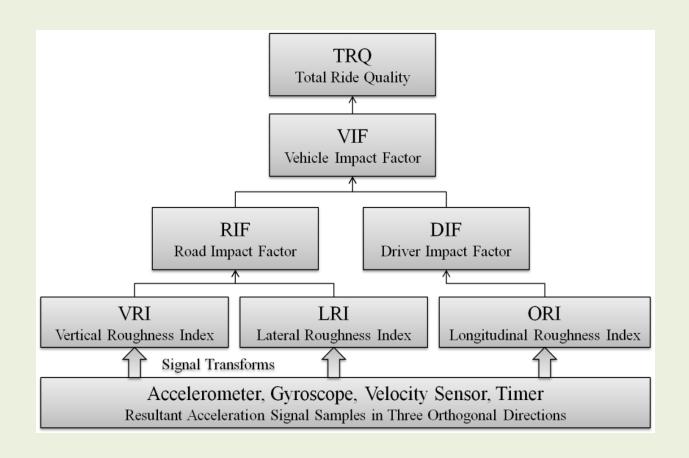


Evaluating Ride Quality with Smartphone Data





Evaluating Ride Quality with Smartphone Data



Other Recent UGPTI Research

- Local Road Surface Selection Tool
- Building a Sustainable GIS Framework for Supporting a Tribal Transportation Problem
- Data-Driven Freeway Performance Evaluation Framework for Project Prioritization and Decision Making
- Remote Sensing of Multimodal Transportation Systems
- A Sensor Fusion Approach to Assess Pavement Condition and Maintenance Effectiveness



Questions & Answers Session 1

Moderator: Carol Flannagan, PhD
Research Associate Professor, UMTRI Biosciences Group
Director, CMISST
Transportation Research Institute
Core Faculty, Michigan Institute for Data Science
University of Michigan



