



TRANSPORTATION RESEARCH BOARD

TRB Snap Search

How We Move Matters: Exploring the Connections Between New Transportation and Mobility Options and Environmental Health – A Workshop

An Event of the [Environmental Health Matters Initiative](#)

Technology-enabled transportation services – like ridehailing, delivery apps, automated vehicles, and e-scooters – have revolutionized the way we move. But changing how we get around also impacts our environment.

- How does ridehailing affect air pollution in our communities?
- What are the environmental impacts of having packages delivered to our front door?

This workshop will bring together experts in transportation, consumer behavior, and environmental health to share perspectives on the environmental health impact of evolving mobility options. Participants will explore existing and needed research on the environmental health challenges related to emerging transportation services expected in the next decade.

TRB Research

TRID – The world's largest and most comprehensive bibliographic source on all modes and disciplines of transportation

- Click here to view [search results](#) on TRB published research on this topic within the past ten years. Below is a snapshot of some reports attendees of the workshop may find of interest

Specialty Report

- [Critical Issues in Transportation 2019](#)
- [COVID-19 Addendum to Critical Issues in Transportation](#)

Recent Reports & Publications

- [National Cooperative Highway Research Program \(NCHRP\)](#)
 - [Report 845](#) - Advancing Automated and Connected Vehicles: Policy and Planning Strategies for State and Local Transportation Agencies
 - [Report 750, Volume 6](#) - Strategic Issues Facing Transportation, *Volume 6*: The Effects of Socio-Demographics on Future Travel Demand
 - [Report 750, Volume 4](#) - Strategic Issues Facing Transportation, *Volume 4*: Sustainability as an Organizing Principle for Transportation Agencies
 - [Web-Only Document 239](#) - Impacts of Laws and Regulations on CV and AV Technology Introduction in Transit Operations
- [Special Reports / Consensus Studies](#)
 - [Report 337](#) - The Role of Transit, Shared Modes, and Public Policy in the New Mobility Landscape
 - [Special Report 304](#) – How We Travel: A Sustainable National Program for Travel Data
- [Transit Cooperative Research Program \(TCRP\)](#)
 - [Report 197](#) - Tools for a Sustainable Transit Agency
 - [Report 176](#) - Quantifying Transit's Impact on GHG Emissions and Energy Use—The Land Use Component
 - [Report 95](#) - Traveler Response to Transportation System Changes Handbook, Third Edition: Chapter 1, Introduction
 - [Research Results Digest 105](#) - Summary of Research Findings: Assessing and Comparing Environmental Performance of Major Transit Investments
- [Transportation Research E-Circulars](#)
 - [E-C252](#) - TRB Forum on Preparing for Automated Vehicles and Shared Mobility: Mini-Workshop on the Transition Toward Shared Automated Vehicles
 - [E-C244](#) - Mobility on Demand: A Smart, Sustainable, and Equitable Future
 - [E-C203](#) - Transportation for Sustainability: An International Conference

Current & Upcoming Projects

- [Current Projects](#)
 - [NCHRP Synthesis 20-05/Topic 52-13](#) - Micromobility Policies, Permits, and Practices



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- [Upcoming Projects](#)
 - [NCHRP 20-102\(23\)](#) - Potential Impacts of Highly Automated Vehicles and Shared Mobility on Traveler Behavior
 - [NCHRP 20-123\(12\)](#) - System Mobility and Emerging Technologies (SMET): Strategic Planning Session and Research Roadmap Development
 - [NCHRP 23-15](#) - Guidance on Risks Related to Emerging and Disruptive Transportation Technologies

Relevant Articles

- [Transportation Research Record \(TRR\)](#)
 - [OnlineFirst](#) - Quantifying Environmental Benefits of Ridesplitting based on Observed Data from Ridesourcing Services
 - [Vol 2674, Issue 8](#) - Collaborative Parcels Logistics via the Carrier's Carrier Operating Model
 - [Vol 2634, Issue 1](#) - Air Pollution and Seasonality Effects on Mode Choice in China
 - [Vol 2427, Issue 1](#) - Traffic Emissions and Air Quality near Roads in Dense Urban Neighborhood: Using Microscopic Simulation for Evaluating Effects of Vehicle Fleet, Travel Demand, and Road Network Changes
 - [Vol 2224, Issue 1](#) - Evaluation of Emissions Reduction in Urban Pickup Systems: Heterogeneous Fleet Case Study

Material from Outside Sources in TRID

- **Reports**
 - [Good to go? Assessing the environmental performance of new mobility](#)
 - [Autonomous Vehicle Adoption: Assessing Operational and Environmental Impacts](#)
 - [Autonomous Vehicle Implementation Predictions: Implications for Transport Planning](#)
 - [What Does Ridesharing Replace?](#)
 - [A Study of the Integrated Parking and Ridesharing Pricing/Incentives and their Social and Environmental Impacts in Metropolitan Areas](#)
 - [Automated Vehicles: Economic Incentives for Environmental Benefits and Safety](#)
 - [Smart Transport for Cities & Nations: The Rise of Self-Driving & Connected Vehicles](#)
 - [Exploring the Relationships Among Travel Multimodality, Driving Behavior, Use of Ridehailing and Energy Consumption](#)
 - [Autonomous vehicle ride-sharing services: will they make cities greener, more efficient and more accessible?](#)
 - [Three Revolutions: Steering Automated, Shared, and Electric Vehicles to a Better Future](#)
 - [What's the Buzz? The City-Scale Impacts of Drone Delivery](#)
 - [The Geography of Urban Transportation](#)
 - [The Future of Fully Automated Vehicles: Opportunities for Vehicle- and Ride-Sharing, with Cost and Emissions Savings](#)
 - [The Emission Impacts of Car Clubs in London](#)

National Academies Divisions, Boards and Committees

- [TRB](#) - Transportation Research Board
 - [How to Get involved in our Standing Committees](#) – open to the public!
 - [AEP30](#) - Traveler Behavior and Values
 - [AEP50](#) - Transportation Demand Forecasting
 - [AEP60](#) - Transportation Demand Management
 - [AEP80](#) - Transportation-Related Noise and Vibration
 - [AME10](#) - Equity in Transportation
 - [AME70](#) - Transportation and Public Health
 - [AMS10](#) - Air Quality and Greenhouse Gas Mitigation
 - [AMS20](#) - Resource Conservation and Recovery
 - [AMS30](#) - Transportation Energy
 - [AMS40](#) - Alternative Transportation Fuels and Technologies
 - [AMS50](#) - Economic Development and Land Use
 - [AP020](#) - Innovative Public Transport and Technologies
 - [AP025](#) - Public Transportation Planning and Development
 - [AT015](#) - Freight Transportation Planning and Logistics
 - [AT025](#) - Urban Freight Transportation
 - [AT045](#) - Intermodal Freight Transport



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- [AV030](#) - Environmental Issues in Aviation
- [AW030](#) - Marine Environment
- [Marine Board](#)
- [DBASSE](#) - Division of Behavioral and Social Sciences and Education
 - [BECS](#) - Board on Environmental Change and Society
- [DEPS](#) - Division on Engineering and Physical Sciences
 - [BEES](#) - Board on Energy and Environmental Systems
 - [BICE](#) - Board on Infrastructure and the Constructed Environment
- [PGA](#) - Policy and Global Affairs
 - [STEP](#) - Board on Science, Technology and Economic Policy
- [HMD](#) - Health and Medicine Division
 - [BPH](#) - Board on Population Health and Public Health Practice

Recent and Upcoming Transportation Research Board Events

[Upcoming Conferences](#) - Left hand menu “upcoming conferences by topic” (*Conferences cosponsored by TRB are denoted with an asterisk.*)

[Webinars](#) – View upcoming webinars, suggest a webinar or add registration information

[Past Webinars](#)

- [Advancing Innovative Automated Vehicles and Shared Mobility Research](#) – November 9, 2020
- [The intersection between health and transportation](#) – April 27, 2020
- [Mobility as a Service Study: Public Participation Event - Part 1](#) – December 17, 2018
- [Mobility as a Service Study: Public Participation Event - Part 2](#) – December 17, 2018
- [Public-Private Partnerships and the Mobility on Demand Sandbox Program](#) – April 16, 2018
- [Shared Mobility and the Transformation of Public Transit](#) – September 29, 2016
- [Automated Transit Future Impacts on the Built Environment](#) – May 2016
- [Sustainability as an Organizing Principle for Transportation Agencies](#) – October 27, 2015
- [Multimodality in Major Cities: Urban Success Stories](#) – September 16, 2015

TRB’s Transportation Research Information Services (TRIS)

TRIS includes the [TRB Library](#) and the [TRIS Databases](#) (listed below) which are available free on TRB’s website.

The TRB Library provides information services to TRB staff, sponsors, TRB Committee members and panels and researchers. Access to the TRB Library is a benefit to TRB sponsors and TRB committee members.

In cooperation with your State DOT Library or Information Service, the TRB Library provides:

- Reference and research assistance
- Literature searches
- Articles for TRB Committee work

The TRB Library provides training on effective and efficient use of the following TRIS resources:

- **Transportation Research International Documentation (TRID)** – [trid.trb.org](#) - The world's largest and most comprehensive bibliographic source on all modes and disciplines of transportation
- **Transportation Research Thesaurus (TRT)** – [trt.trb.org](#) - A tool to improve the indexing and retrieval of transportation information.
- **Research in Progress (RiP) Database** – [rip.trb.org](#) - Current or recently completed transportation research projects
- **Research Needs Statements (RNS)** – [rns.trb.org](#) - Research needs as identified by TRB Technical Activities standing committees
- **Publications Index (PubsIndex) Database** – [pubsindex.trb.org](#) - The papers, articles and reports published by the Transportation Research Board, Strategic Highway Research Programs or the Marine Board

Contact or Questions: TRBLibrary@nas.edu



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Additional Suggested Reading

(Updated July 12, 2021)

This section contains links to materials that members of the workshop planning committee and session panelists suggest as references to the topics discussed in the event.

1. [How has the coronavirus pandemic \(COVID-19\) affected mobility patterns?](#)
2. [Traffic-Related Air Pollution: A Critical Review of the Literature on Emissions, Exposure, and Health Effects](#)
3. [The Future of Vehicle Fuels and Technologies: Anticipating Health Benefits and Challenges](#)
4. [Nudging the Commute: Using Behaviorally-Informed Interventions to Promote Sustainable Transportation](#)
5. [Integrating Human Health into Urban and Transport Planning](#)
6. [Fourteen Pathways Between Urban Transportation and Health: A conceptual model and literature review](#)
7. [TOMNET Transformative Transportation Technologies \(T4\) Survey](#)
8. [Texas A&M Transportation Institute \(TTI\) 2021 Urban Mobility Report](#)
9. [How Cities Can Apply Behavioral Science to Promote Public Transportation Use](#)
10. [Urban and transport planning pathways to carbon neutral, livable and healthy cities; A review of the current evidence](#)
11. [COVID19 and the City](#)
12. [Mobility on Demand Operational Concept](#)
13. [Mobility on Demand Planning and Implementation: Current Practices, Innovations, and Emerging Mobility Futures](#)
14. [Multimodal and Accessible Travel Standards Assessment – Survey of Standards and Emerging Standards](#)
15. [Applications for the Environment: Real-Time Information Synthesis \(AERIS\) Program Capstone Report](#)
16. [Curbside Management Fact Sheet](#)
17. [FHWA Micromobility Fact Sheet](#)
18. [PBIC Micromobility Fact Sheet](#)
19. [COVID-19 Resources and Community Tracking for Walking and Bicycling](#)
20. [Identification of Effective Programs to Improve Access to and Use of Trails among Youth from Under-Resourced Communities: A Review](#)
21. [Case Studies in Delivering Safe, Comfortable and Connected Pedestrian and Bicycle Networks](#)
22. [Case Studies in Realizing Co-Benefits of Multimodal Roadway Design and Gray and Green Infrastructure](#)
23. [Rails-with-Trails - Best Practices and Lessons Learned](#)
24. [Good to Go? Assessing the Environmental Performance of New Mobility](#)
25. [Autonomous vehicle adoption: use phase environmental implications](#)
26. [The Potential of Green Infrastructure in Mitigating Flood Impacts on the Mobility of Low Income and Minority Neighborhoods](#)



Additional Suggested Reading *[Continued]*

(Updated July 12, 2021)

27. [Shared Use Mobility Equity](#)
28. [Typecasting Neighborhoods and Travelers: Analyzing the Geography of Travel Behavior Among Teens and Young Adults in the U.S.](#)
29. [Integrative Health and Transportation in Canada](#)
30. [Health Impact Assessment \(HIA\) Knowledge and Needs Scan: Findings, Gaps and Recommendations](#)
31. [Carpooling Precautions During COVID-19 \(blog\)](#)
32. [Climate Assessment and Performance Report \(Uber, 2020\)](#)
33. [Private Mobility, Public Benefit \(Transit Center, 2016\)](#)
34. [Future of Transportation \(SPUR, 2020\)](#)
35. [Transit Horizon Paper \(Uber, 2021\)](#)