TRB Snap Search: Innovation

TRB’s involvement in research on Innovation from 2020-2021

The Transportation Research Board (TRB) provides innovative, research-based solutions to improve how we move. TRB is part of the National Academies of Sciences, Engineering, and Medicine, an independent, non-profit institution that provides objective advice on scientific, engineering, and medical issues.

A resource to the nation and to the transportation community worldwide, TRB provides an extensive portfolio of services:

- Opportunities for information exchange on current transportation research and practice
- Management of cooperative research and other research programs
- Analyses of national transportation policy issues and guidance on federal and other research programs
- Publications and access to research information from around the world

All available Snap Searches can be accessed online here: [http://www.trb.org/InformationServices/Snap.aspx](http://www.trb.org/InformationServices/Snap.aspx)

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 Innovation in the past year.

Specialty Websites

- [Transformational Technologies](#)

Specialty Report

- [Critical Issues in Transportation 2019](#)

Recent Reports & Publications

- [Airport Cooperative Research Program (ACRP)](#)
- [Report 223 - Performance Measures for State Aviation Agencies](#)
- [Report 222 - Collecting and Sharing of Operations and Safety Data](#)
- [Report 218 - Building and Maintaining Air Service Through Incentive Programs](#)
- [Report 217 - Guidance for Diversity in Airport Business Contracting and Workforce Programs](#)
- [Synthesis 106 - Airport Risk Identification and Prioritization Practices](#)
- [Web-Only Document 49 - Research Roadmap on Airport Administration & Human Resource Issues](#)
- [Conference Proceedings on the Web](#)
- [National Cooperative Highway Research Program (NCHRP)](#)
- [NCHRP 25-25/Task 120 - Use of the State Department of Transportation Portal to the International Stormwater BMP Database](#)
- [IDEA Report 212 - Non-Gating Guardrail Terminal](#)
- [IDEA Report 207 - MILDGLASS: GFRP Strand for Resilient Mild Pre-Stressed Concrete](#)
- [Report 952 - Guidebook for Managing Data from Emerging Technologies for Transportation](#)
- [Report 932 - A Research Roadmap for Transportation and Public Health](#)
- [Report 924 - Foreseeing the Impact of Transformational Technologies on Land Use and Transportation](#)
- [Synthesis 557 - Utility Pole Safety and Hazard Evaluation Approaches](#)
- [Synthesis 545 - Electronic Ticketing of Materials for Construction Management](#)
- [Web-Only Document 287 - Planning and Implementing Multimodal, Integrated Corridor Management: Guidebook](#)
- [Web-Only Document 282 - Framework for Managing Data from Emerging Transportation Technologies to Support Decision-Making](#)

Updated 12/04/2020
Transit Cooperative Research Program (TCRP)

Innovation in Action: Accomplishments of the Transit IDEA (Innovations Deserving Exploratory Analysis) Program

IDEA Report 94 - Evaluation of Transit Vehicle Brake Inspection through Ultrasonic Emissions Analysis
IDEA Report 89 - Dynamic Vehicle to Infrastructure TCIP Communications Laboratory Proof of Concept
IDEA Report 84 - Development of a Mass-Based Automated Passenger Counter
Report 218 - Characteristics and Elements of Non-Punitive Employee Safety Reporting Systems for Public Transportation
Report 212 - Stray Current Control of Direct Current-Powered Rail Transit Systems: A Guidebook
Synthesis 145 - Current Practices in the Use of Onboard Technologies to Avoid Transit Bus Incidents and Accidents

Transportation Research Circulars
E-Circular 264 - Conference on Health and Active Transportation

Current & Upcoming Projects

Current Projects
ACRP 01-40 - Evaluating the Traveler’s Perspective to Improve the Airport Customer Experience
ACRP 01-43 - Conducting Consumer Research of Air Passengers
ACRP 01-47 - A Guide to Developing a Culture of Innovation at Airports
ACRP 03-49 - Effective Collaboration to Plan and Respond to Communicable Disease Threats
ACRP 03-51 - Electric Aircraft of the Horizon -- An Airport Planning Perspective
ACRP 03-57 - A Guidebook to Prepare Airports for Transformations in Wireless Connectivity
ACRP 07-17 - Update to ACRP Report 40: Airport Roadway Analysis and Curbside Congestion Management Strategies
ACRP 08-03 - Construction Safety and Phasing Plans
ACRP 09-18 - Rapid Airfield Concrete Pavement Slab Replacement and Patching
ACRP 09-19 - Airfield Pavement Markings - Effective Techniques for Removal and Temporary Applications
BTSCR BTS-01 - Guidance for Employer-Based Behavioral Traffic Safety Programs for Drivers in the Workplace
BTSCR BTS-02 - Guide for Behavioral Traffic Safety Messaging on Variable Message Signs
BTSCR BTS-06 - MPO and SHSO Coordination on Behavioral Traffic Safety
BTSCR BTS-07 - Assessing the Impacts of Connected, Automated, and Autonomous Vehicles on the Future of Transportation Safety
BTSCR BTS-09 - The Influence of Infrastructure Design on Distracted Driving
BTSCR BTS-12 - State Practices Promoting Older Driver Safety
BTSCR BTS-15 - Highway Safety Strategies for Rural Communities
NCHRP 03-128 - Business Intelligence Techniques for Transportation Agency Decision Making
NCHRP 03-135 - Wrong-Way Driving Solutions, Policy, and Guidance
NCHRP 03-140 - Guidelines for Applications of RFID and Wireless Technologies in Highway Construction and Asset Management
NCHRP 05-22A - Gaps and Emerging Technologies in the Application of Solid-State Roadway Lighting
NCHRP 06-18 - Guide for Snow and Ice Control Operations
NCHRP 08-111 - Effective Decision-Making Methods for Freight-Efficient Land Use
NCHRP 08-118 - Risk Assessment Techniques for Transportation Asset Management
NCHRP 08-121 - Accessibility Measures in Practice: Guidance for Transportation Agencies
NCHRP 12-117 - Guidelines for Corrosion Protection of Steel Bridges Using Duplex Coating Systems
NCHRP 15-67 - Wind Drag Coefficients for Highway Signs and Support Structures
NCHRP 15-69 - Utility Conflict Impacts During Highway Construction
NCHRP 15-77 - Aligning Geometric Design with Roadway Context
NCHRP 17-91 - Assessing the Impacts of Automated Driving Systems (ADS) on the Future of Transportation Safety
NCHRP 20-65/Task 79 - Program Management Insights for the 5310 Program (Including Sub-Grantee Consolidation and Urban 5310)
NCHRP 20-65/Task 81 - Best Practices in Rural Service Assessment
NCHRP 20-102(10) - Cybersecurity Implications of CV/AV Technologies on State and Local Transportation Agencies
NCHRP 20-102(15) - Impacts of Connected and Automated Vehicle Technologies on the Highway Infrastructure
NCHRP 22-44 - A Transportation Agency Data Collection Practice for Use with In-Service Performance Evaluations (ISPEs)
NCHRP 22-45 - Understanding and Analyzing Crash Contributing Factors
- NCHRP 23-03 - Targeted Guidance and Information Support to State DOT CEOs on Cybersecurity Issues and Protection Strategies
- NCHRP 20-123(11) - High-Value Research Marketing and Communications for 2020
- NCHRP 25-57 - Innovative Mitigation Strategies for Highway Noise
- NCHRP 25-59 - Pollinator Habitat Conservation Along Roadways
- NCHRP 25-61 - Effective On-Bridge Treatment of Stormwater
- NCHRP Synthesis 20-05/Topic 50-10 - Availability of Pedestrian Infrastructure Data For Routing and Network Analysis
- NCHRP Synthesis 20-05/Topic 52-01 - Highway Infrastructure Inspection Practices for the Digital Age
- NCHRP Synthesis 20-05/Topic 52-11 - Use of Smart Work Zone Technologies for Improving Work Zone Safety
- NCHRP IDEA 20-30/IDEA 203 - Safer Cushions
- NCHRP IDEA 20-30/IDEA 214 - An Enhanced Network-Level Curve Safety Assessment and Monitoring Using Mobile Devices
- NCHRP IDEA 20-30/IDEA 224 - Development of an Automated and Rapid Conditioning and Testing Device for Cracking and Rutting
- NCHRP IDEA 20-30/IDEA 225 - An Automated System for Large-Scale Intersection Marking Data Collection and Condition Assessment
- NCHRP IDEA 20-30/IDEA 226 - A Smart IoT Proximity Alert System for Highway Work Zone Safety
- NCHRP IDEA 20-30/IDEA 227 - Adjustable Cross-frames for the Erection of Steel Girder Bridges
- NCHRP IDEA 20-30/IDEA 228 - A Retrorreflective Road Lane Marking Tape 1,000X Brighter Than Existing Technology
- NCHRP IDEA 20-30/IDEA 229 - Lab Dielectric Measurement System for Asphalt Mixture Bulk Specific Gravity Determination
- TCRP B-47 - Impact of Transformational Technologies on Underserved Populations
- TCRP B-48 - The Provision of Alternative Services by Transit Agencies: The Intersection of Regulation and Program Objectives
- TCRP C-23 - Assessing and Mitigating Electrical Fires on Transit Vehicles
- TCRP H-58 - Prioritization of Public Transportation Investments
- TCRP J-05/Topic 19-02 - Legal Issues and Emerging Technologies
- TCRP J-05/Topic 19-03 - Navigating the Complexities of Sensitive Security Information (SSI) and Protected Critical Infrastructure Information (PCI)
- Transit IDEA J-04/IDEA 91 - Comprehensive Wayfinding for All (CWall)

- Upcoming Projects
- ACRP 01-41 - Blockchain Technology and Airports - A Primer
- ACRP 03-63 - Modernizing Air Cargo Operations in U.S. Airports
- ACRP 04-25 - Airports and Pandemics---Reducing the Spread of Communicable Diseases
- ACRP 06-08 - Human Factors in Airport Operations
- ACRP 10-32 - Airside Automated Ground Vehicle Technology (AGVT) Demonstration to Support Airport Operations
- ACRP 11-02/Task 37 - Periodic Report on Transformative Technology at Airports
- ACRP 11-02/Task 41 - Toward a Touchless Airport Journey
- BTRSCRP BTS-14 - Understanding and Analyzing Crash Contributing Factors (Joint project with NCHRP 22-45)
- NCHRP 08-128 - Snapshots of Planning Practices
- NCHRP 08-127 - Emerging Issues: Impact of New Disruptive Technologies on the Performance of DOTs
- NCHRP 08-130 - Best Practices in Coordination of Public Transit and Ride Sharing
- NCHRP 08-136 - Guidance on Using Performance-Based Management Approaches for Maintenance
- NCHRP 08-139 - Guide for Preventing and Mitigating the Risk of Bridge and Tunnel Strikes by Motor Vehicles
- NCHRP 08-142 - Best Practices for Using Online Tools in Public Involvement Processes
- NCHRP 08-144 - Best Practices in Determining Rural Transit Fleet Size – How to Provide Service for Changing Demographics of Rural Ridership (Right-sizing of Rural Transit Fleets)
- NCHRP 10-109 - Modern Solutions to Safe and Efficient Work Zone Travel
- NCHRP 14-45 - Model Procedures for Post-Event Bridge Damage Assessment and Engineering Evaluation
- NCHRP 15-72 - Methodology to Define New AASHTO Green Book 7.0 Context Classification Settings Implementation as Related to Active Transportation Infrastructure
- NCHRP 20-07/Task 358 - Reducing Risks to Worker Safety in Work Zones Due to Distracted Drivers
- NCHRP 20-24(132) - Understanding Knowledge Management in Context with Other Organizational Practices
- NCHRP 20-44(34) - Successful Practices for State Transportation Research Office's Complying with 2 CFR 200 (NCHRP 20-111J)
- NCHRP 20-123(09) - Feasibility Study for a Platform to Capture Innovations from State Departments of Transportation
- NCHRP 20-127 - Development of Business Case and Communication Strategies for a State DOT Resilience Program
- NCHRP 20-128 - Organizational and Operational Models Used by State DOTs for Emergency Response
- NCHRP 20-102(20) - Workforce Capability Strategies for State and Local Agencies
- NCHRP 20-102(28) - Preparing Transportation Agencies for Connected and Automated Vehicles in Work Zones
- NCHRP 20-102(33) - Safety of Vulnerable Road Users in a C/AV Future
- NCHRP 23-15 - Prioritization of Risks Related to Connected and Automated Vehicles and Emerging Technologies
- TCRP A-46 - Quantitative Procedures for Designing and Operating Ferry Transit Services
- TCRP C-25 - Bus Driver Security Barrier Design—The Challenges and Solutions
- TCRP D-19 - Phase II TCRP Project D-17 - Detecting and mitigating low level DC fault currents in transit systems thus eliminating electrical fires in tunnels and rights-of-way
- TCRP D-21 - Planning for Innovation & Emerging Mobility Futures at Intermodal Passenger Facilities
- TCRP I-05/Topic 20-02 - Liability Insurance Issues for Transit Lawyers: A Primer
- TCRP I-05/Topic 20-01 - Legal Issues in Transit Mega Projects--Case Studies
- TRB/AAMVA 19-01 - RFQ: Demographic and Technological Trends Impacting the DMV of the Future

Reports from the National Academies Press on Innovation
- Information Technology Innovation - Resurgence, Confluence, and Continuing Impact
- Enhancing Federal Clean Energy Innovation
- Exploring the Frontiers of Innovation to Tackle Microbial Threats
- The Role of NIH in Drug Development Innovation and Its Impact on Patient Access
- Leveraging Commercial and Other Innovation for Future U.S. Navy Data Warfare Needs
- Safeguarding the Bioeconomy

Committees & Panels
Sign-up to be a committee "Friend"

TRB Standing Committees – Search by transportation mode and committee topic
- ABE25 - Congestion Pricing
- ABG20 - Transportation Education and Training
- ABI30 - Urban Transportation Data and Information Systems
- ABJ65T - Freight Data Workshop
- ABI95 - Visualization in Transportation
- ABR35T - 11th University Transportation Center Spotlight Conference: Rebuilding and Retrofitting the Transportation Infrastructure
- ADB45 - Travel Forecasting Resources
- ADC10 - Environmental Analysis in Transportation
- AFF30 - Concrete Bridges
- AFS60 - Subsurface Drainage
- AFS70 - Geosynthetics
- AHD60 - Maintenance Equipment
- ALO40 - Emerging Technology Law
- AP020 - Emerging and Innovative Public Transport and Technologies
- AP025 - Public Transportation Planning and Development
- AP045 - Passenger Intermodal Facilities
- AP065 - Rail Transit Systems
- AR030 - Railroad Operating Technologies
- AT020 - International Trade and Transportation
- B0024 - Research and Technology Coordinating Committee (FHWA)
- B0156 - Review of Federal Highway Administration Infrastructure R&D
- B0160 - Study on Performance of Bridges
- B0164 - Update of National Naval Responsibility for Naval Engineering
- DA11081602 - Critical Issues in the Airport Industry: Workshop #2--Economic and Social Sustainability
- E1008 - Rail Safety IDEA Program
Panels
- D08106 - Getting Innovations in Metropolitan Freight Implemented
- D20108 - Effective Practices for Creating and Maintaining an Innovation-Delivery Culture
- D2030 - IDEA (Innovations Deserving Exploratory Analysis)
- D2557 - Innovative Mitigation Strategies for Highway Noise
- TJ04 - Transit-innovations Deserving Exploratory Analysis (IDEA)

Councils
- A001C – Young Members Coordinating Council

Recent and Upcoming Events

Upcoming Conferences - Left hand menu "upcoming conferences by topic"
Conferences cosponsored by TRB are denoted with an asterisk.

Advancing the Marine Transportation System through Automation and Autonomous Technologies: Trends, Applications, and Challenges
March 15-17, 2021
Online

2nd International Conference on 3D Printing and Transportation
April 21-23, 2021
Washington, DC

Research Day at ITF Annual Summit - Transport Innovation for Sustainable Development
May 25, 2021
Leipzig, Germany

2020 International Conference on Resource Sustainability: Sustainable Pavement Technologies*
May 28-30, 2021
Tirupati, India

TRB Conference on Planning Applications
June 21-25, 2021
Online

2021 Conference on Sustainability and Emerging Transportation Technology
June 29 - July 1, 2021
Irvine, CA

GeoChina 2021 International Conference*
July 19-21, 2021
NanChang, Jiangxi, China

2021 Innovations in Freight Data
September 21-23, 2021
Irvine, CA

Webinars – View upcoming webinars, suggest a webinar or add registration information

Past Webinars
- Advancing Innovative Automated Vehicles and Shared Mobility Research – November 9, 2020
- Enter the Portal–The Transportation Performance Management (TPM) Portal – August 12, 2020
- Attracting the Future Construction Workforce – Case Studies – May 12, 2020
- Greener in Two Ways – Innovative Sustainability Solutions for Airports – March 2, 2020

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