Our Accelerated R&D Agenda

Partnering and Pivoting in Response to COVID-19

We've been talking with clients and teaming partners over the last couple months about how COVID-19 is impacting travel and engagement in their communities. Explore how we have shifted and accelerated our R&D in response to the most pressing needs.

Known Industry Issues Caused by COVID-19

INCREMENTAL ACTIONS
Enhancing Existing Tools, Data, or Research

Restarting Transit Service*
Develop scenario-planning tools to restart transit service so that impacts to revenue, equity, accessibility goals, etc. are considered and balanced.

Safe and Healthy Streets*
Identify thresholds for temporary or permanent closures of streets to facilitate social distancing or additional spaces for restaurants and those walking and biking.

Post-COVID-19 Safety
Identify post-COVID-19 active mode safety issues to dive deeper into those affecting homeless and other vulnerable populations.

Post COVID-19 Travel Trends
Develop travel trend dashboards to actively display relevant travel pattern shifts, particularly for smaller communities that don't typically have access to this data.

Autonomous Freight
Collect new autonomous freight data to prepare additional research, particularly focused on infrastructure needs and timing.

Freight VMT
Collect freight vehicle miles traveled data to pair with research to mitigate for greenhouse gas and air pollution emissions, particularly as freight volumes increase as traditional retail scales back in importance.

Community Engagement
Identify community engagement strategies and metrics to conduct outreach and measure success with special emphasis on equity and accessibility for all populations, and guidance on tools/resources that are most effective during social distancing restrictions.

Post-COVID-19 Transit Strategies
Provide targeted strategies for transit agencies and others to emerge from the era of social distancing with a focus on equity and mobility needs.

TRANSFORMATIVE ACTIONS
Generating Entirely New Tools, Data or Research

Grant Application Analysis Tool
Develop a grant analysis tool to systematically identify projects that could rate well in grant applications.

Urban Freight Data
Collect new urban freight data to understand freight delivery trip generation post-COVID-19.

Curb Space
Update our CurbSpace+ tool with post-COVID-19 data and enhance it to better forecast how demand for the curb (from buses, pick-up/drop-off, deliveries, retail transactions, TNCs/taxis, and parking) translates into linear feet, and the effect on roadway traffic of different curb-supply scenarios.

Online Retail and Delivery*
Evaluate expanded online retail and delivery to identify how it is impacting consumer travel patterns, curb space usage, loading dock use, and last-mile freight delivery.

Freight O-D Flows
Evaluate freight vehicle origin-destination flows to refine suggested practices for using Big Data. Do so by testing new big data sources and partnering with East and West Coast ports and Big Data vendors to evaluate flows, comparing those to traditionally collected data.

Autonomous Rapid Transit
We're leveraging our R&D funding to partner with a client to evaluate the merits, challenges, and potential implementation pathway of autonomous rapid transit on a key transit corridor. Contact us if you're interested in learning more.

INCREMENTAL ACTIONS
Enhancing Existing Tools, Data, or Research

Transportation Revenue Sources*
Research transportation revenue sources for transportation improvements and operations for transit and other modes.

Travel Patterns*
Track travel pattern shifts and collect data on telecommuting, reduced business travel, less transit travel, increased online shopping, and increased walking/biking (in some areas) as areas continue to reopen.

Transit Funding Trends*
Expand research on current and future transit funding options to remain knowledgeable of both traditional (public revenue) and non-traditional (partnerships and private sector funding) sources.

Big Data Travel Analysis
Evaluate new/existing big data sources to see how travel patterns have shifted by time of day for private vehicle travel, active modes, freight, and transit in markets big and small, so that we can more accurately describe the project setting and address community perceptions about travel.

Defining "Existing Conditions" Post COVID-19
Define 'baseline' and 'existing' conditions to develop talking points and key considerations for clients for environmental review and other transportation studies; Partner with Big Data vendors to identify innovative ways to gather data on "typical conditions" for vehicle and multimodal flows.

Crowdsourcing
Update this internal Crowdsource+ online engagement tool to make it faster and easier to set up. Enhance with additional customizations requested by clients (e.g. capabilities for inserting project logos, allowing/disallowing photo attachments, allowing/disallowing additional comments).

Visualizations
Enhance and develop new web, 3D, and static visualizations to facilitate online engagement and remote presentations to the public, boards, and officials to help communities understand the scope and scale of projects seeking feedback.

Post-COVID-19 Safety*
Evaluate post-COVID-19 traffic crashes for auto and active modes to determine whether less congestion and higher speeds are contributing to higher injury rates. Compare to potentially lower crash rates for active modes despite anecdotal evidence of more active mode travel.

TRANSFORMATIVE ACTIONS
Generating Entirely New Tools, Data or Research

Quick-Build
Pre-design 'quick-build' concepts to streamline the design process for shovel-ready projects that can take advantage of post-COVID-19 stimulus funding.

Transportation Demand Management
Update our TDM+ tool to include latest research on TDM and leverage lessons learned from COVID-19-related travel pattern changes to reduce single-occupant vehicle travel.

Scenario Planning & Modeling
Release a 2020 version of our quick-response TrendLab+ scenario-planning and modeling tool to evaluate impacts to transit ridership (along with vehicle trip generation and safety implications) of potential new travel trends that emerge from the COVID-19 stay-at-home orders.

VMT Analysis and Mitigation
Update vehicle miles traveled analysis tools and mitigation strategies to respond to more stringent travel demand management measures.

Contributed by Client/Teaming Partner
https://fehrandpeers.com/our-accelerated-research-agenda/