



U.S. Department
of Transportation

Transformation Action Plan

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Director of Research, Development and Technology Coordination
Office of the Assistant Secretary for Research and Technology

January 2024

Time for Action!

*Together, we can **transform** transportation*

CURRENT STATE

42,915 motor vehicle traffic fatalities in 2021

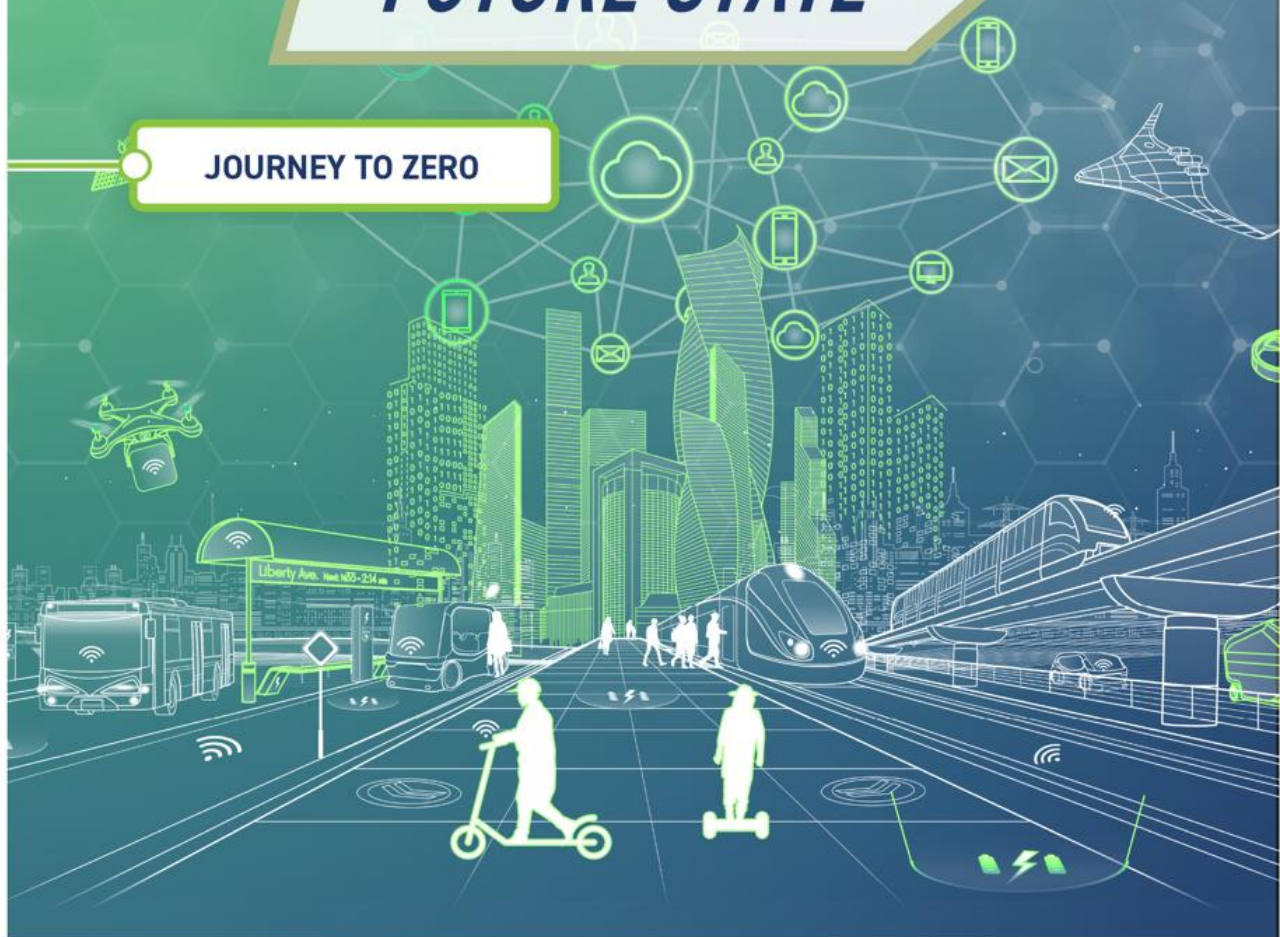
111,018 canceled flights in 2021

The Transportation Sector generates more greenhouse gas emissions than any other sector in the U.S.



FUTURE STATE

JOURNEY TO ZERO



National Transportation
Research Vision

*“We envision a people-centered transportation system that provides safe, accessible, reliable, equitable, and sustainable transportation **for all** through purpose-driven research and innovation for this and future generations”*



Stakeholder Engagement

- Need for coordination and collaboration across the transportation ecosystem
- Federal leadership and convenor role

NCHRP NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

VISION FRAMEWORK



U.S. Department of Transportation

SMART



Digital Infrastructure Strategy Report

Shaping the future of transportation in the United States

Roadway Digital Infrastructure (RDI) Strategy

Join us to collaborate and optimize the digital transportation ecosystem.

TRB 2024 Annual Meeting

Thursday, January 11, 2024
9:00 a.m. – Noon
Walter E. Washington Convention Center
Washington, DC
Workshop 5002 | Salon C

- Review emerging strategies for national-scale RDI
- Advance strategic initiatives for RDI across partner organizations
- Discuss upcoming activities in 2024

Sponsored by TRB Standing Committees: ACP15 | ACP10 | ACP20 | ACP30 | AED30

Source: USDOT/Getty

INITIAL DEPLOYMENTS

In November 2023, the NCHRP project panel selected 13 projects in 11 states to serve as initial deployments of the seven moonshot concepts.

<p>WASHINGTON STATE</p> <p>Develop and deploy innovative and measures to reduce vehicle delay and fuel costs.</p> <p>Paul Smith, Secretary Andy Wankel, Project Lead</p>	<p>SOUTH DAKOTA</p> <p>Advance highway and transportation infrastructure and improve safety and efficiency.</p> <p>Paul Smith, Secretary Andy Wankel, Project Lead</p>	<p>MINNESOTA</p> <p>Develop and deploy innovative and measures to reduce vehicle delay and fuel costs.</p> <p>Paul Smith, Secretary Andy Wankel, Project Lead</p>	<p>MICHIGAN</p> <p>Develop and deploy innovative and measures to reduce vehicle delay and fuel costs.</p> <p>Paul Smith, Secretary Andy Wankel, Project Lead</p>	<p>MICHIGAN</p> <p>Develop and deploy innovative and measures to reduce vehicle delay and fuel costs.</p> <p>Paul Smith, Secretary Andy Wankel, Project Lead</p>
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<p>UTAH</p> <p>Develop and deploy innovative and measures to reduce vehicle delay and fuel costs.</p> <p>Paul Smith, Secretary Andy Wankel, Project Lead</p>	<p>TEXAS</p> <p>Develop and deploy innovative and measures to reduce vehicle delay and fuel costs.</p> <p>Paul Smith, Secretary Andy Wankel, Project Lead</p>	<p>OKLAHOMA</p> <p>Develop and deploy innovative and measures to reduce vehicle delay and fuel costs.</p> <p>Paul Smith, Secretary Andy Wankel, Project Lead</p>	<p>MISSOURI</p> <p>Develop and deploy innovative and measures to reduce vehicle delay and fuel costs.</p> <p>Paul Smith, Secretary Andy Wankel, Project Lead</p>	<p>GEORGIA</p> <p>Develop and deploy innovative and measures to reduce vehicle delay and fuel costs.</p> <p>Paul Smith, Secretary Andy Wankel, Project Lead</p>

DRAFT Saving Lives with Connectivity: A Plan to Accelerate V2X Deployment

Cover photos courtesy of iStock

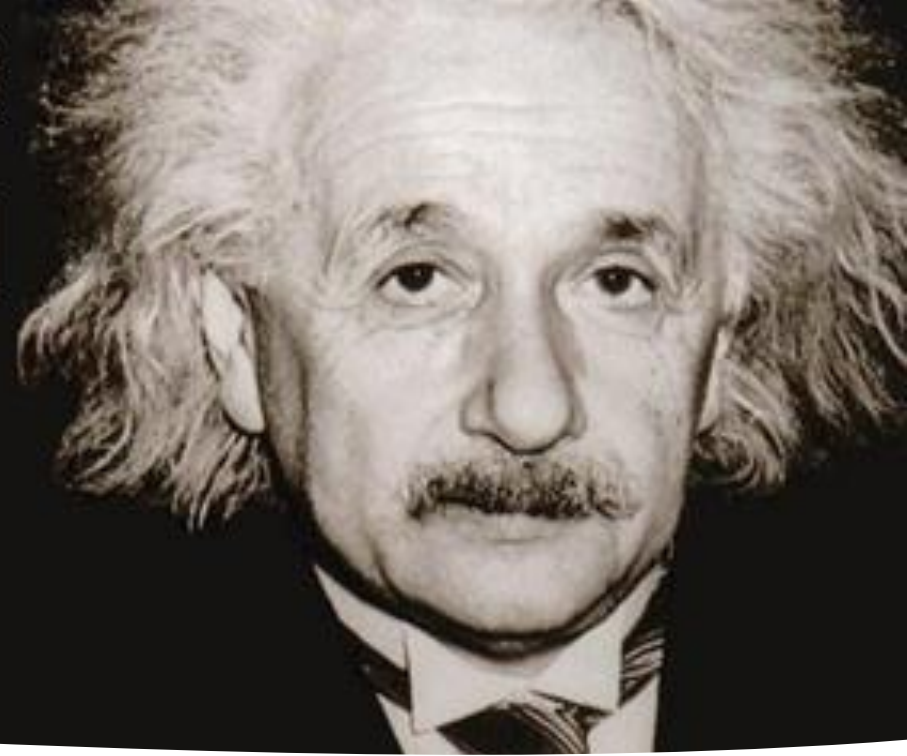
Transformation Action Plan – What’s Next?

- Advance U.S. DOT’s “transformation” research priorities and objectives
- **Project Scan:** Identify active and planned projects that support transformation
- Identify collaboration needs and opportunities with stakeholders across the transportation community and convene events at key milestones
- Scenario and Use Case Development:
 - “Around the Corner” – circa 2030
 - “Over the Horizon” – circa 2050
- Develop an Action Plan that provides a starting point for longer-term Federal leadership and consensus building

U.S. DOT RD&T Strategic Plan TRANSFORMATION GOAL	
RESEARCH PRIORITIES	RESEARCH OBJECTIVES
Integrated System-of-Systems	<ul style="list-style-type: none">• System Architecture• Digital Infrastructure• Connectivity
Data-Driven Insight	<ul style="list-style-type: none">• Data Science• Strategic Foresight
New and Novel Technologies	<ul style="list-style-type: none">• Automation• Advanced Aviation Systems

**“We cannot solve our problems
with the same thinking we used
when we created them.”**

~ Albert Einstein



Actions for 2024....

- Share information with us on projects/initiatives that support transformation research priorities and objectives
- Prepare to showcase your transformative projects at the *“U.S. DOT Future of Transportation Summit”* in August 2024
- Look out for new partnership/collaboration opportunities with Federal, State and industry stakeholders in your area



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