



DEPARTMENT OF TRANSPORTATION

[Docket No. DOT–OST–2026–0430]

Office of the Assistant Secretary for Research and Technology; Request for Information - Research to Support Establishing a National Strategy for Transportation Digital Infrastructure

AGENCY: Department of Transportation (DOT).

ACTION: Request for information (RFI).

SUMMARY: The U.S. Department of Transportation (U.S. DOT), Office of the Assistant Secretary for Research and Technology (OST-R), is seeking information from the public, industry, technology developers, State, local, and tribal transportation agencies, researchers, and other stakeholders. The focus of this request is to seek public and stakeholder input on the research and development activities needed to modernize the nation’s transportation system through the application of digital infrastructure at scale. Responses will inform a coordinated national strategy for the development and deployment of Transportation Digital Infrastructure (TDI). This strategy will serve as the framework for the next generation of the transportation system across all modes (highway, rail, air, maritime, transit, pipeline) supporting multimodal operations, safety, asset management, and the accelerated deployment of new and emerging technologies.

DATES: Written submissions must be received by **[INSERT DATE 30 DAYS AFTER PUBLICATION IN THE *FEDERAL REGISTER*]**.

Submission Instructions: Responses should be submitted electronically as a Microsoft Word document, preferably no greater than 10 MB in file size. Recommended format for responses includes Times New Roman 12-point font and 1 inch page margins. Responses should be emailed to TDI-Strategy-RFI@dot.gov (with the Subject Line of “TDI Strategy RFI Response

<Institution Name>”. No Confidential Business Information or Sensitive Security Information should be submitted in response to this RFI. Respondents are not required to answer every question. Submissions may be as brief or detailed as appropriate and should focus on areas where the respondent has relevant experience.

FOR FURTHER INFORMATION CONTACT: For questions about this RFI, please email TDI-Strategy-RFI@dot.gov. You may also contact Alasdair Cain, Director of Research, Development and Technology Coordination, Office of the Assistant Secretary for Research and Technology (202-366-0934) or by email at alasdair.cain@dot.gov.

SUPPLEMENTARY INFORMATION:

This RFI seeks information that will assist OST-R in carrying out its transportation research and development responsibilities under 49 U.S.C. Chapter 65, “Research Planning”. This RFI is neither a request for proposals nor a notice of funding opportunity.

Respondents are requested to supply the following information at a minimum in their written responses:

- A. Name of the responding entity (“respondent”).
- B. Respondent’s Contact information, including that individual’s title, name, address, telephone number and email address.
- C. The respondent’s input to U.S. DOT transportation digital infrastructure research and planning needs relating to any or all of the questions below.

Specific Information Required

This RFI seeks feedback from the public, industry, technology developers, State, local and tribal transportation agencies, researchers, and other stakeholders on the research, development and deployment activities necessary to develop a comprehensive, national Transportation Digital Infrastructure (TDI) strategy. This includes identifying opportunities for improved data exchange and interoperability, cyber-resilience, asset management, and technology integration across varied U.S. geographies and operational environments. The insights gained through this RFI will

inform a research agenda that supports the development, deployment, and scaling of digital infrastructure nationwide. The following presents key questions in four critical topic areas.

A. Research, Development and Deployment

1. How should Transportation Digital Infrastructure be defined?
2. What TDI research needs should be prioritized?
3. What travel corridors or regions should be prioritized for TDI development and deployment?
4. Are there existing testbeds, pilots or demonstrations that could be leveraged?
5. What TDI use cases or applications should be prioritized?
6. How should U.S. DOT leverage or expand existing programs to advance TDI development and deployment?

B. System Architecture, Interoperability and Standards

1. What are the key elements of a TDI system architecture that can accommodate the operation of all transportation modes including surface, maritime, and aviation?
2. How can TDI be integrated into infrastructure planning, construction and asset management processes?
3. What methods should be used for federating data sharing across States and regions?
4. What existing architecture frameworks or standards could be used to underpin TDI development and deployment (e.g. U.S. DOT's Architecture Reference for Cooperative and Intelligent Transportation (ARC-IT))?
5. What are the necessary latency and throughput requirements for safety-critical applications (e.g., Vehicle-to-Everything (V2X) communications, Automated Driving Systems (ADS), and Cooperative Driving Automation (CDA))?
6. What are the highest-priority research gaps and challenges to advancing interoperability across modes and sectors?

C. Artificial Intelligence and Automation

1. How should AI applications be leveraged to support TDI development and deployment?
2. How should TDI be best used to accelerate the development and deployment of autonomous vehicles, drones and other transformative technologies?
3. What are the highest-value, near-time AI and automation applications enabled by comprehensive sensing and data sharing?
4. How can AI applications be safely deployed to accommodate data exchange and data use across jurisdictional boundaries?

D. Data Governance, Privacy, and Cybersecurity

1. What data governance principles, access controls, and cybersecurity measures are needed to ensure trust, accountability, and privacy?
2. What models or frameworks should be used to ensure secure data exchange (e.g., data trusts, federated data sharing, and public Application Programming Interfaces (APIs))?
3. What are the most significant threat vectors introduced by extensive transportation system sensing and data integration, beyond traditional Information Technology (IT) and Operational Technology (OT) threats?
4. How should U.S. DOT apply the National Institute of Standards and Technology (NIST) Cybersecurity Framework (CSF) to TDI development and deployment?
5. How should TDI be aligned with federal data strategies and privacy frameworks?
6. How can legacy and proprietary data sources be effectively incorporated into a new national data exchange environment?

Confidential Business Information

Do not submit information disclosure of which is restricted by statute, such as trade secrets and commercial or financial information (hereinafter referred to as Confidential Business Information "CBI") in response to this RFI. Responses submitted to OST-R cannot be claimed as CBI. Responses received by OST-R will waive any CBI claims for the information submitted.

Issued in Washington, DC, on January 30, 2026.

Michael A. Halem,

Acting Assistant Secretary for Research and Technology.

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