2025 Biennial Asset Management Conference and Training on Implementation Strategies

Final Report
July 2026

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16. Abstract

The National Conference on Transportation Asset Management (TAM) is a biennial event that brings together transportation professionals from across the country and around the world to share research, practice, and innovation in TAM. The 15th National Conference on Transportation Asset Management was held from August 25 to 28, 2025. The event was organized by a variety of federal and state transportation agencies and supported by Transportation Pooled Fund Study TPF-5(492).

Over four days, national and international participants attended technical program sessions, workshops, and panels related to TAM. The main conference program included six concurrent session blocks combining peer-reviewed presentations, invited panel discussions, and mini-workshops. In addition, a peer exchange aimed at graduate students took place, and a meeting was held for pooled fund TPF-5(492) partner representatives.

A post-conference survey indicated that 83% of respondents expressed satisfaction with the event, with 49% very satisfied and 34% somewhat satisfied, and 86% of respondents indicated that they were likely to attend the next national TAM conference.

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- Michigan Department of Transportation
- North Dakota Department of Transportation
- Nebraska Department of Transportation
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- Ohio Department of Transportation
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- Texas Department of Transportation
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- Wisconsin Department of Transportation

1. CONFERENCE OVERVIEW

1.1 Background and Purpose

The National Conference on Transportation Asset Management (TAM) is a biennial event that brings together transportation professionals from across the country and around the world to share research, practice, and innovation in transportation asset management.

The 15th National Conference on Transportation Asset Management was held from August 25 to 28, 2025, in Chicago, Illinois. It was organized by the Institute for Transportation (InTrans) at Iowa State University (ISU) through its Center for Transportation Research and Education (CTRE). The conference was sponsored by the American Association of State Highway and Transportation Officials (AASHTO), the Association of Metropolitan Planning Organizations (AMPO), and International Road Federation (IRF) Global and was supported through Transportation Pooled Fund Study TPF-5(492). The conference program spanned nine thematic tracks covering a broad range of topics, including asset management practices, data practices, resilience, risk management, innovative concepts, and communicating asset management processes and results to stakeholders.

1.2 Participants

The conference attracted 258 participants from across the TAM community (Figure 1.1). Attendees represented state and local agencies, regional organizations, academia, consulting firms, and federal and international partners. A breakdown of participants is provided in Table 1.1.

Figure 1.1. TAM conference attendees

Table 1.1. Breakdown of TAM conference participants

Participant Category	Count
State DOT staff	88
State DOTs represented	40
Local and regional agencies (including transit)	24
Consultants	98
International participants	14
AASHTO, IRF, FHWA, and USDOT representatives	10
Academia	24
Total	258

1.3 Geographic Reach

Participants from 44 US states were in attendance, demonstrating the broad geographic reach of the conference and the widespread interest in transportation asset management across the country. As shown in Figure 1.2, attendees represented nearly every region of the United States, including the Northeast, Southeast, Midwest, Great Plains, Mountain West, and Pacific Coast.

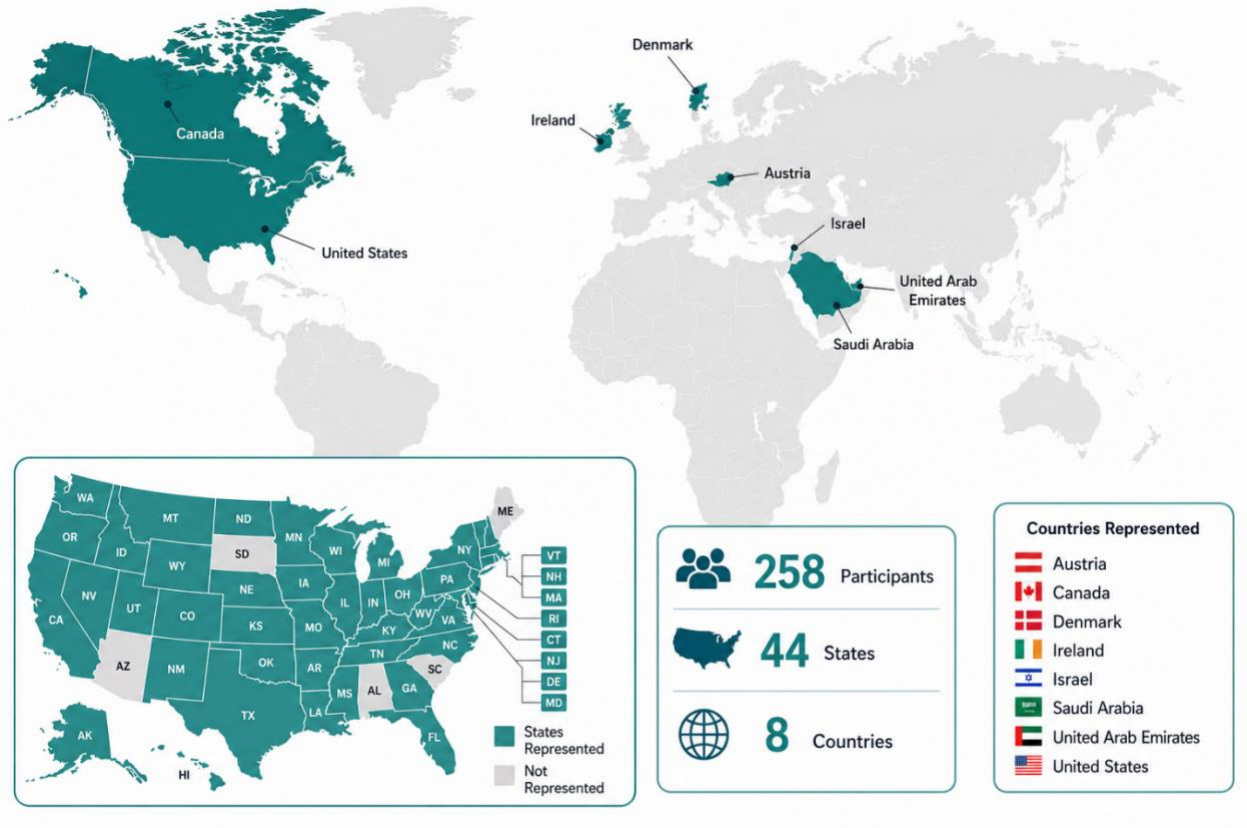

Figure 1.2. Map of conference participant home states and countries

State transportation agencies were strongly represented, with 88 staff members from 40 state departments of transportation (DOTs) in attendance. The geographic distribution of participants extended well beyond the TPF-5(492) partner states, reflecting the conference's role as a national forum for asset management practitioners, researchers, and decision makers.

International participation added a global dimension to the conference, with 14 participants from Austria, Canada, Denmark, Ireland, Israel, Saudi Arabia, and the United Arab Emirates. International perspectives were also reflected in the technical program through presentations and discussions on topics including artificial intelligence, active transportation infrastructure, resilience, and infrastructure performance assessment. These contributions enriched the exchange of ideas and provided attendees with insights into asset management practices from different regions of the world.

Beyond state DOTs, the conference brought together representatives from local and regional agencies, transit organizations, consulting firms, academia, and national organizations such as AASHTO, the Federal Highway Administration (FHWA), the U.S. Department of Transportation (USDOT), and IRF. This diverse mix of participants encouraged collaboration and knowledge sharing across organizational and geographic boundaries, contributing to the conference's multidisciplinary character.

1.4 Pooled Fund

The conference was supported through Transportation Pooled Fund Study TPF-5(492), 2023 through 2025 Biennial Asset Management Conference and Training on Implementation Strategies. Pooled fund studies allow federal, state, and local agencies to combine resources to support transportation research and training that would be difficult for a single agency to undertake independently. For the TAM conference, the pooled fund mechanism supports a nationally coordinated biennial event with shared planning responsibilities and broad state DOT involvement in program development.

Twenty state DOTs contributed a total of $480,000 to the pooled fund during the 2021 to 2025 commitment period. The pooled fund supported both the 14th conference, held in 2023, and the 15th conference, held in 2025.

The pooled fund began on February 15, 2023, with an estimated completion date of October 31, 2026, and a contract end date of January 31, 2026. It continued the work of a previous pooled fund study, TPF-5(335). The Iowa Department of Transportation (Iowa DOT) served as the lead organization for TPF-5(492). Key study contacts are listed in Table 1.2.

Table 1.2. Key contacts for TPF-5(492)

Role	Name	Organization
Lead Study Contact	Khyle Clute	Iowa DOT
Study Champion	Peggi Knight	Iowa DOT
FHWA Technical Liaison	Tashia Clemons	FHWA

2. PROGRAM SUMMARY

2.1 Conference Agenda

The conference was held over four days at the Hilton Chicago in Chicago, Illinois. Table 2.1 summarizes the main program components by day. The first day (Monday) was dedicated to pre-conference events and a welcome reception. The core technical program ran on Tuesday and Wednesday. An optional workshop day was offered on Thursday. The full conference program, along with the presentations from the sessions, is available on the conference website at https://ctre.iastate.edu/events/tam-conference-15/.

Table 2.1. TAM conference main program components

Day	Date	Key Activities
Monday	Aug. 25	Registration AASHTO TAM Peer Exchange (by invitation only) Annual Inter-University Symposium on Infrastructure Management (AISIM) Opening Reception with Exhibit Hall
Tuesday	Aug. 26	Opening Plenary and Keynote Address Exhibit Hall Concurrent Sessions 1 to 3 (4 parallel tracks each)
Wednesday	Aug. 27	Concurrent Sessions 4 to 6 (4 parallel tracks each) “Ask the Asset Management Doctors” Panel Closing Plenary with Oxford-Style Debate
Thursday	Aug. 28	Three Optional Half-Day Workshops Pooled Fund Meeting

2.2 Conference Themes

The technical program was organized around the nine thematic tracks shown in Table 2.2, each covering a distinct dimension of transportation asset management practice. Sessions were coded by theme to help attendees navigate the program.

Table 2.2. Technical program thematic tracks

#	Theme
1	Asset Management Practices (including case studies)
2	Asset Management 101
3	Ask the Asset Management Doctors
4	Communicating Asset Management Process and Results
5	Data Practices in Asset Management
6	Innovative Concepts in Asset Management
7	Resilience and Asset Management
8	Risk and Asset Management
9	Tactical Practices in Asset Management

2.3 Conference Sessions

The main conference program on Tuesday and Wednesday included six concurrent session blocks. Each block ran up to four simultaneous tracks, combining peer-reviewed presentations, invited panel discussions, and mini-workshops. Table 2.3 summarizes all session blocks.

Table 2.3. TAM conference session blocks

Session	Day/Time	Tracks and Key Topics
Session 1	Tue 10:30 a.m. to 12:00 p.m.	Sessions examined life-cycle planning approaches for tunnel and pavement infrastructure, frameworks for building a business case for maintenance funding, digital platforms for program trade-offs and budget distribution, and data interoperability innovations at the Minnesota Department of Transportation (MnDOT). Resilience and flood risk management practices were also addressed. An invited panel discussed the state of pavement management systems for local municipal agencies, drawing on a Chicago Metropolitan Agency for Planning (CMAP) project covering more than 90 agencies in the Chicagoland region.
Session 2	Tue 1:30 p.m. to 3:30 p.m.	Sessions addressed how agencies advance their asset management programs through benchmarking, stakeholder engagement, and change management, alongside workforce development tools such as the Transportation Asset Management Plan (TAMP) Knowledge Book. Additional presentations covered AI and machine learning applications, digital delivery, and frameworks for managing electrified roadways. A data practices track explored remote sensing, mobile lidar, connected vehicle data, and decision support dashboards. An introductory Asset Management 101 track and a mini-workshop on geotechnical asset management were also offered.

Session	Day/Time	Tracks and Key Topics
Session 3	Tue 4:00 p.m. to 5:30 p.m.	Sessions included a mini-workshop on National Cooperative Highway Research Program (NCHRP) Project 23-32, which is developing a standard method for quantitative transportation asset risk and resilience assessment, and an invited panel on asset valuation approaches under National Highway System (NHS) TAMP requirements. A data practices track covered the AASHTO TAM Data Guide, trackbed defect detection, and an Iowa DOT case study on AI-powered pavement preservation. Additional presentations addressed integrated asset information management, public-private partnerships, and active travel infrastructure management in Ireland. A mini-workshop explored the use of emerging technologies for asset data collection and management.
Session 4	Wed 8:00 a.m. to 10:00 a.m.	Sessions opened with an invited panel on data-driven transit asset maintenance featuring representatives from the New York Metropolitan Transportation Authority (MTA) and other transit agencies. A mini-workshop based on NCHRP Project 08-170 provided a hands-on introduction to post-implementation evaluation frameworks for asset management. Risk and asset management presentations addressed risk frameworks at the Delaware Department of Transportation (DelDOT), geotechnical resilience in bridge design, and MnDOT's corridor risk tool. A mini-workshop on pavement friction-informed asset management shared international and US success stories. The “Ask the Asset Management Doctors” panel discussion also took place during this block.
Session 5	Wed 10:30 a.m. to 12:00 p.m.	Sessions featured AI and GIS applications for roadway safety, roadside vegetation management tools, and risk register frameworks for integrating performance and process management. An invited panel convened the Asset Management Expert Task Group, representing FHWA, state DOTs, and local agencies, to discuss the group's work and future direction. A second invited panel presented international perspectives on AI applications in asset management, moderated by IRF. A mini-workshop examined the incorporation of structural response data into pavement asset management decision-making, drawing on experiences from multiple state DOTs.
Session 6	Wed 1:30 p.m. to 3:30 p.m.	Sessions covered tactical assessment tools, including strategic scanning technologies for pavement and bridge distress, the Michigan Department of Transportation’s (MDOT's) ancillary structures condition forecasting system, a unified multi-asset monitoring approach, and unmanned aerial vehicle (UAV)-mounted lidar for surface roughness measurement. A communicating asset management track addressed strategic asset management planning at MDOT, the cost of deferred road maintenance, change management practices, and agency-wide TAM communication strategies. Additional presentations examined asset management organization development at DelDOT, the integration of highway and transit asset management at the Connecticut Department of Transportation (CTDOT), and pavement marking retroreflectivity compliance methods.

3. WORKSHOP AND SESSION HIGHLIGHTS

3.1 Opening Session and Keynote

The conference opened with an official welcome and plenary session moderated by Dr. Omar Smadi, CTRE Director and conference organizer. Two welcome addresses were delivered by distinguished Illinois officials:

- Gia Biagi, Illinois Secretary of Transportation, spoke to the importance of asset management in an era of growing infrastructure pressures, limited funding, and performance accountability via a recorded video message. Biagi was appointed to her role by Governor J. B. Pritzker in December 2024 and previously served as Commissioner of the Chicago Department of Transportation.
- Erin Aleman, Executive Director of the Chicago Metropolitan Agency for Planning, highlighted CMAP's regional leadership in transportation planning for 8.6 million residents across seven counties and the critical role of data-driven asset management in shaping equitable and sustainable infrastructure decisions.

The keynote address was delivered by Katie Zimmerman, Executive Vice President of Applied Pavement Technology, Inc. (APTech), as shown in Figure 3.1. With more than 40 years in the transportation industry and a role in establishing many of the foundational asset management guides published by AASHTO, Zimmerman offered a reflective look at how the field has evolved and where it is headed. Her talk drew on decades of experience in life-cycle planning, pavement management systems, and ancillary asset management.

Figure 3.1. APTech Executive Vice President Katie Zimmerman delivering the keynote address

In her address, Zimmerman applied the concept of resilience to the practice of asset management itself. She assessed the current strength and urgency of seven factors shaping the field: technological adaptability, economic stability, environmental resilience, workforce and

knowledge continuity, agency policy and governance alignment, stakeholder buy-in and public value, and system flexibility. From this assessment, she identified four high-priority areas for the coming decade: technological adaptability, system flexibility, policy and governance alignment, and workforce and knowledge continuity. She called on agencies to invest in diverse talent and a dynamic culture, adapt more quickly to change, turn data into useful information, build practitioner confidence in data and tools, take calculated risks, and better communicate the value of asset management. Zimmerman closed by encouraging both newcomers and experienced practitioners to act as catalysts for the continued growth of the profession.

3.2 AASHTO TAM Peer Exchange

The AASHTO TAM Peer Exchange, held the day before the main conference, focused on the theme of "Communicating Asset Management Information and Outcomes," as shown in Figure 3.2. The full-day, invitation-only event explored how effective communication and visualization of asset data can strengthen TAM programs under growing pressures from safety mandates, performance requirements, and constrained funding.

Figure 3.2. AASHTO TAM Peer Exchange

Topics covered included data storytelling for internal and external audiences, the use of graphics and dashboards, communication of trade-offs and investment priorities, and integration of non-TAM objectives into asset performance frameworks. The event concluded with a collaborative discussion on future needs for research, tools, and organizational strategies to support the broader TAM community.

3.3 Annual Inter-University Symposium on Infrastructure Management

The Annual Inter-University Symposium on Infrastructure Management (AISIM), organized this year by Syracuse University, ran concurrently with the AASHTO TAM Peer Exchange on Monday. AISIM is a student-led, full-day event designed primarily for graduate students but also

attracts researchers, industry professionals, and representatives from infrastructure agencies and consulting firms. Participants presented research, exchanged ideas, and engaged with established experts, with a focus on fostering the next generation of infrastructure management professionals.

3.4 Ask the Asset Management Doctors

This recurring conference session was held in a town hall format, with audience members posing asset management questions to a panel of experienced practitioners who served as the "doctors," as shown in Figure 3.3. The moderator drew on themes raised throughout the earlier sessions. Panelists represented the California Department of Transportation (Caltrans), MnDOT, the Pennsylvania Department of Transportation (PennDOT), the Colorado Department of Transportation (CDOT), and the Southeast Michigan Council of Governments (SEMCOG). The session generated open, candid dialogue on current practice gaps and solutions.

Figure 3.3. Panelists during the "Ask the Asset Management Doctors" session

3.5 Closing Plenary

The closing plenary session was held Wednesday afternoon from 4:00 p.m. to 5:30 p.m. and included two components. The main event was an Oxford-style debate, in which two teams addressed whether digital twins should be adopted as a standard tool for infrastructure asset management, with one team arguing in favor and the other opposed. Both sides presented their arguments to the full audience, who voted on the resolution at the close. Michael Johnson of Caltrans served as master of ceremonies, and Matt Haubrich of HDR, Inc. served as debate moderator. Following the debate, Dr. Omar Smadi of InTrans at ISU delivered the official closing remarks for the 15th conference.

3.6 Optional Workshops

Three half-day workshops were offered on the final morning of the conference, each running from 8:00 a.m. to 12:00 p.m. Workshops were open to all registered participants and covered the topics shown in Table 3.1.

Table 3.1. TAM conference workshops

Workshop Title	Location	Presenters
Resilience in Asset Management Plans (AMPs): A Life-Cycle Approach to Weathering the Unpredictable	Lake Erie room	Prashant Ram, APTech; Amir Golalipour, FHWA
Asset Management and Digital Delivery	Lake Ontario room	Michael Cremin and Trisha Stefanski, MnDOT; Simon Lewis and Reed Brockman, AECOM
Building a Road Map for Adding the Value of GPR [Ground-Penetrating Radar] into Asset Management	Lake Michigan room	Mike Heitzman, KONTUR, Inc.

The resilience workshop, led by Prashant Ram of APTech and Amir Golalipour of FHWA, began with expert presentations on the impacts of extreme weather events on transportation infrastructure and strategies for incorporating resilience into asset management plans, followed by a hands-on exercise in which participants assessed real-world asset vulnerabilities under disruption scenarios, such as landslides blocking highway corridors or urban flooding causing major closures.

The digital delivery workshop, presented by Michael Cremin and Trisha Stefanski of MnDOT and Simon Lewis and Reed Brockman of AECOM, covered essential terminology, funding mechanisms for digital adoption, case studies from agencies implementing digital delivery across the asset life cycle, and a collaborative discussion on research gaps and barriers to implementation.

The GPR workshop, led by Mike Heitzman of KONTUR, Inc., brought together GPR users and asset managers to develop a roadmap for incorporating GPR-derived data into asset condition databases. The workshop addressed key needs, such as automating GPR response analysis across thousands of lane-miles.

3.7 Pooled Fund Meeting

A pooled fund meeting for TPF-5(492) partner representatives was held Thursday morning from 10:00 a.m. to 12:00 p.m. in the Lake Huron room. Participation was by invitation only and provided an opportunity for state DOT partners and FHWA representatives to discuss study progress, review conference outcomes, and identify priorities for the next biennial cycle.

4. POST-CONFERENCE PARTICIPANT SURVEY

A post-conference survey was conducted to evaluate participant satisfaction and gather suggestions for future events. State DOT staff represented over half of the respondents, and learning and professional development was the most cited reason for attending. The results indicated a high level of satisfaction. Overall, 83% of respondents expressed satisfaction with the event, with 49% very satisfied and 34% somewhat satisfied, and 86% of respondents indicated that they were likely to attend the next national TAM conference. Respondents appreciated the event's organization, the breadth of topics, the quality of speakers, and the opportunities for collaboration. Key survey results are summarized in Figure 4.1.

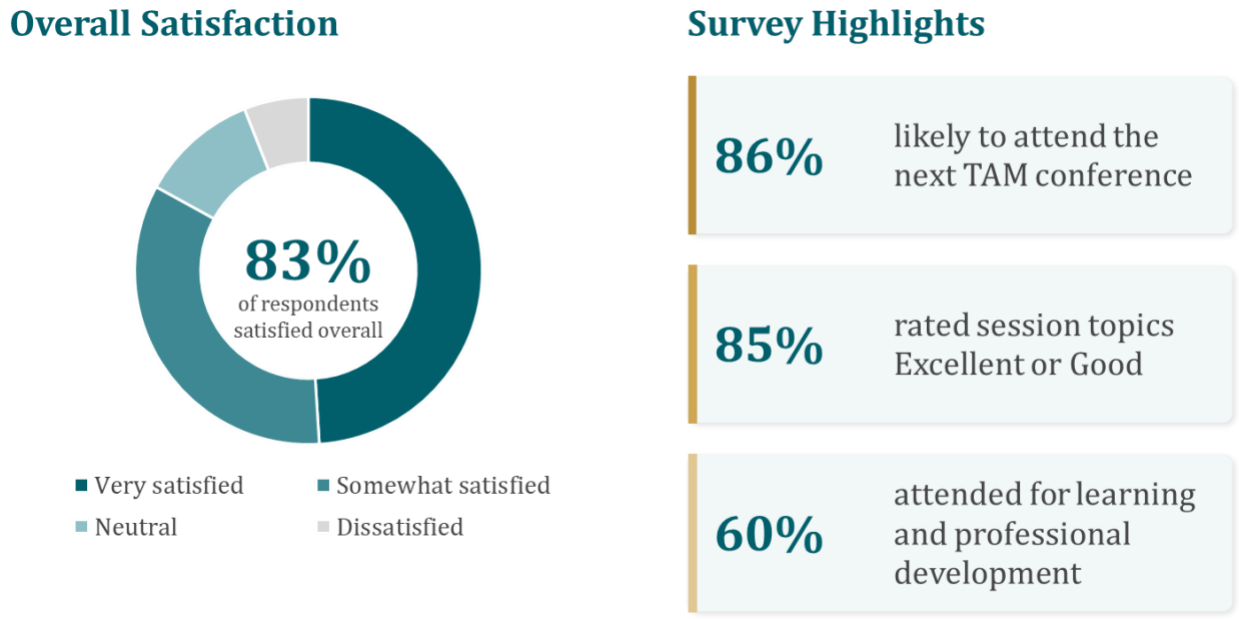

Figure 4.1. TAM conference survey results

Session topics were rated as relevant and well aligned with respondents' professional needs, with nearly 85% of respondents describing the topics as excellent or good. The conference earned similarly high marks for organization, venue, registration, and communication. Most respondents indicated that no improvements were needed. Among the suggestions offered, the most common were to provide more practical, implementation-focused content; a welcome session for first-time attendees; stronger engagement between attendees and exhibitors; fewer concurrent sessions; and a schedule that allows Monday to serve as a travel day.

Looking ahead, respondents expressed strong interest in artificial intelligence and data analytics, bridge management systems, risk and resilience frameworks, and digital twins, and they encouraged more hands-on formats such as the mini-workshops and the "Ask the Asset Management Doctors" session. The survey results confirm the conference's position as the leading national forum for transportation asset management professionals.

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