



Semi-Annual Progress Report
Mineta Consortium for Transportation
Mobility October 1, 2023 - March 31, 2024



To move is to live.



Semi-Annual Progress Report for University Transportation Centers Mineta Consortium for Transportation Mobility (MCTM) Led by San José State University

- **Federal Agency and Organization Element to Which Report is Submitted:**
U.S. Department of Transportation Office of the Assistant Secretary for Research and Technology
- **Federal Grant or Other Identifying Number Assigned by Agency:** 9A3551747127
- **Project Title:** Tier 1 University Transportation Center
- **Center Director:**
Karen E. Philbrick, PhD
MCTM Executive Director
karen.philbrick@sjsu.edu and 408.924.7562
- **Submission Date:** April 30, 2024
- **DUNS and EIN Numbers:** 0568207150000 and 94-6017638
- **Recipient Organization:**
San Jose State University Research Foundation
210 N. Fourth Street, 4th Floor, San Jose, CA 95112
- **Recipient Identifying Number or Account Number:** Not Applicable
- **Project/Grant Period:** November 30, 2016 – September 30, 2023
- **Reporting Period End Date:** March 31, 2024
- **Report Term or Frequency:** Semi-annual
- **Signature of Submitting Official:** *Karen Philbrick*

Introduction

The Mineta Consortium for Transportation Mobility (MCTM), led by the Mineta Transportation Institute (MTI) at San José State University, conducts research, education, workforce development, and technology transfer activities to improve mobility of people and goods. MCTM unifies and focuses the efforts of four outstanding institutions that represent and support the geographical, cultural, racial, and socioeconomic diversity that makes our nation strong: Howard University; Navajo Technical University (NTU); San José State University (SJSU); and the University of North Carolina Charlotte (UNCC).

1. Accomplishments

Emerging Leaders Seed Grant Program

The Emerging Leader Seed Grant Program engages and develops leadership capacity among junior faculty at SJSU. This program supports faculty in the first five years of an academic position who are interested in exploring transportation research problems aligned with MTI's research goals and objectives and encourages multidisciplinary participation. To date, MTI has awarded eighteen seed grants to faculty from six of the seven academic Colleges at SJSU.

During this period of performance, no new seed grants were funded.

During this period of performance, two seed grant reports were published:

1. [A Bike System for All Silicon Valley: Equity Assessment of Bike Infrastructure in San José, CA](#) (this project also produced an [interactive web-tool](#) for assessing bike equity)
2. [Misconduct on Public Transit: An Exploratory Analysis Using the Comments Formerly Known as Tweets](#)

Ongoing Research

Since January 6, 2017, MCTM has funded 125 studies –71 peer-reviewed projects, 18 emerging leader seed grants, and 36 commissioned research or white papers. Details on all MCTM projects can be found in the [UTC project information sheets](#).

| Project Type | # Published | # in Progress |
|---|-------------|---------------|
| MTI lead (competitively-selected/peer reviewed, including Caltrans projects) | 45 | 5 |
| MCTM partner lead (peer reviewed) | 21 | 0 |
| Commissioned research/white papers | 34 | 2 |
| Emerging leader seed grants (peer-reviewed, SJSU lead) | 18 | 0 |

Leveraging Federal Funds

USDOT has made, and continues to make, a significant investment in developing and sustaining the UTC program and MCTM researchers and staff work tirelessly every day to leverage that federal investment to dramatically increase its return.

Since 2017, **MTI has executed contracts on an additional \$27 million** in funding from federal, state, regional, and local sources. This funding serves to support faculty and students and expands on the expertise and capacity within the institution.

Dissemination of Results

MCTM utilizes a diverse array of dissemination methods and media to ensure research results, conference proceedings, and expert interviews reach those responsible for managing change. These methods include publication, seminars, workshops, websites, social media, webinars, and other technology transfer mechanisms.

Consortium Website

In compliance with the Grant Deliverables and Reporting Requirements for 2016 University Transportation Centers, MCTM has a website that features all consortium activities: <https://transweb.sjsu.edu/mctm>. This website is updated regularly with event information, media coverage, and research activities.

Media Coverage

During this reporting period, there were **904 MTI stories featured in print, radio, and television media**, bringing the total number of MCTM stories to 5,098 since inception. Links to many of these articles are featured on the [Consortium website](#) and below is a snapshot of activity:

| Article | Media Outlet |
|--|----------------------|
| Air taxi service is coming. But cities aren't ready for it, experts say. | The Business Journal |
| New law makes top California transit agencies survey riders about harassment | The Mercury News |
| Safe and Efficient Transportation: Pioneering The Future of Silicon Valley | Non-Profit Stories |
| Renewed push for all-lane freeway tolls in the Bay Area | KTVU TV |
| How Gender Diversity in Transportation Tech Can Make Our Lives Safer and More Efficient | Built In |
| BART, Muni must address fare evasion to receive state bailout | KTVU TV |
| Increasing Gender Diversity in Transportation Tech Can Deliver Lasting Change | Metro Magazine |
| Air taxi charging infrastructure coming to 3 states in Archer, Joby deals | Smart Cities Dive |
| SJSU professor emeritus and deputy director of the National Transportation Security Center | KTVU TV |

| Article | Media Outlet |
|---|----------------------|
| at SJSU's Mineta Transportation Institute discusses Supply Chain Impacts from the Baltimore bridge collapse | |
| DIA head selected for transportation fellowship program | The Business Journal |

Continuing Education: Opportunities for Growth and Engagement

MCTM is providing thought leadership and contributing to solutions for some of our nation’s most pressing transportation problems. Through regional forums, national summits, mid-career leadership training, and K-12 workforce development initiatives we help create a connected world. To that end, and during this period of performance, MCTM sponsored/co-sponsored 2 technology transfer and workforce development activities that reached 241 attendees; a selection follows:

Introducing Youth to American Infrastructure’s Sustainable Mobility Career Awareness and Youth Innovation Challenge November 1, 2023 (various dates in 2023, then programming concluded in November) • Online: The “Sustainable Mobility Career Awareness & Innovation Challenge” for youth (18-25 years of age) builds on iyai+’s core infrastructure career awareness and “My Beloved Community” youth voice and active community engagement elements. The Program includes three distinct components: 1) Career Awareness & Personal Development; 2) Grand Innovation Challenge; 3) Critical Conversations.

The Future of Automated Shared Mobility November 30 - December 1, 2023 • San José, CA: The main goal of the Future of Automated Shared Mobility conference is to encourage considerable improvement of mass mobility in all possible ways – conserve earth and human resources, improve equity and have an open dialog of planning for the future. This conference is an initiative by 4Dialog AB, Sweden, in collaboration with the International Institute of Sustainable Transportation (INIST), USA. MTI is a co-sponsor of this event.



Plans During the Next Reporting Period to Accomplish the Goals?
No change to the agency-approved application.

2. Participants & Collaborating Organizations

What Organizations Have Been Involved as Partners?

During this period of performance, MCTM partnered with the 2 organizations listed below.

1. Organization Name and Location: **4Dialog AB**
 - Partner’s Contribution to the Project: In-kind sharing of information
 - Project: The Future of Automated Shared Mobility

2. Organization Name and Location: **Introducing Youth to American Infrastructure (“iyai+”)**

- Partner’s Contribution to the Project: In-kind sharing of information
- Project: Sustainable Mobility Career Awareness and Youth Innovation Challenge

Have Other Collaborators or Contacts Been Involved?

MTI collaborates with a wide range of departments/programs on campus at SJSU. Additionally, several organizations have participated as experts in MCTM summits, conferences and events.

3. Output

| Performance Measures for Research Outputs | 2024 ^a | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 |
|---|---------------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|---------------------------|
| Number of completed research reports, including two-page research briefs <i>Target goal: 12 reports, including research briefs, <u>annually</u></i> | 2 | 21 | 18 | 15 | 19 | 16 | 8 |
| Number of research presentations at professional meetings and conferences <i>Target goal: 35 presentations <u>annually</u></i> | 18 | 66 | 88 | 79 | 117 | 107 | 53 |
| Number of downloads of research reports as tracked through Google Analytics (GA) and ScholarWorks (SW) annually (see Figure 1 below for geographic distribution) <i>Target goal: 3,000 downloads <u>annually</u></i> | 11,113 (GA) 6,260 (SW) | 24,680 (GA) 21,084 (SW) | 17,841 (GA) 15,583 (SW) | 17,939 (GA) 18,307 (SW) | 14,248 (GA) 12,955 (SW) | 15,380 (GA) 8,782 (SW) | 13,597 (GA) 6,198 (SW) |
| ^a Number reported through March 31, 2024 | | | | | | | |

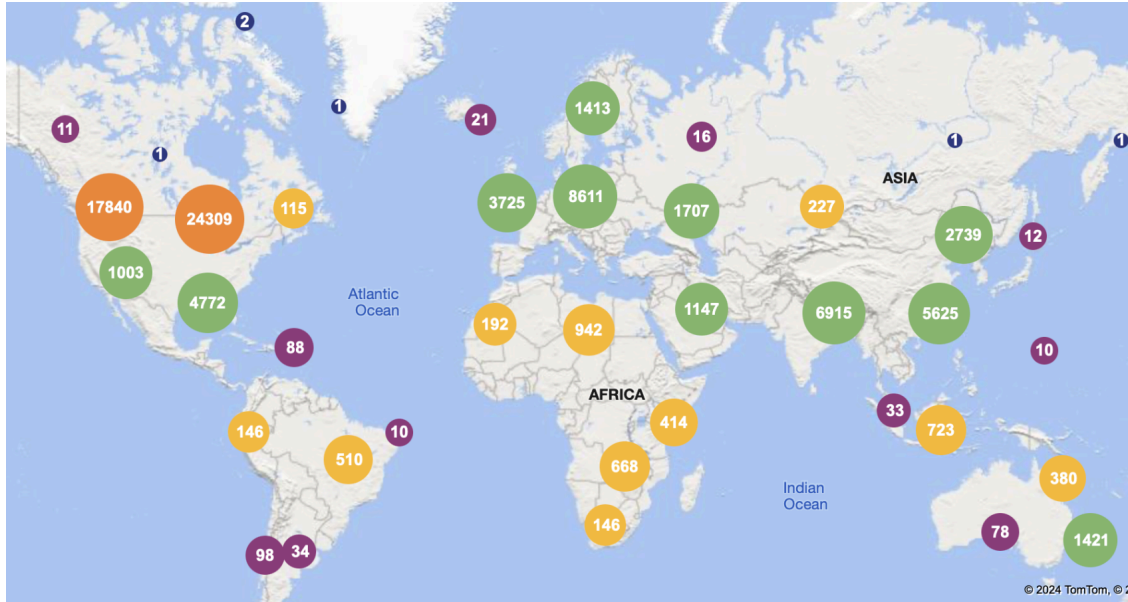


Figure 1 Distribution of MTI Report Readers via ScholarWorks, January 1, 2018-March 31, 2024 [89,169 downloads from 4,569 Institutions in 176 countries]

Published Research Reports

During this period of performance, ten research reports featuring the results of MTI-funded research, were published on the MCTM website. *All reports are peer-reviewed prior to publication.*

1. Agrawal, A.W., Nixon, H., & Azevedo, A. (2023, November). [What Do Americans Think About Federal Tax Options to Support Transportation? Results from Year Fourteen of a National Survey.](#)
2. Arhin, S., Manandhar, B., & Gatiba, A. (2023, December). [Influence of Pavement Conditions on Commercial Motor Vehicle Crashes.](#)
3. Kachadoorian, C. (2023, December). [Cycling Past 50: A Closer Look into the World of Older Cyclists, Year 4 Survey.](#)
4. Kalambay, P., & Pulugurtha, S. (2023, December). [Exploring Traffic Speed Patterns for the Implementation of Variable Speed Limit \(VSL\) Signs.](#)
5. Alexander, S. (2023, December). [Evaluating Benefits from Transportation Investments Aligned with the Climate Action Plan for Transportation Infrastructure \(CAPTI\).](#)
6. Mtech, C.A., Gore, N. & Pulugurtha, S. (2023, December). [Understanding the Effect of Pervasive Events on Vehicle Travel Time Patterns.](#)
7. Ogungbire, A., Kalamby, P., Gajera, H. & Pulugurtha, S. (2023, December). [Deep Learning, Machine Learning, or Statistical Models for Weather-related Crash Severity Prediction.](#)
8. Dibaa, D.S., Gore, N. & Pulugurtha, S. (2023, December). [Autonomous Shuttle Implementation and Best Practices.](#)
9. Ullmann, L. & Douglas, G.C.(2024, February). [Beneath I-280: Excavating a Neighborhood Lost to San José Freeways.](#)

10. Dong, M., Lee, Y., Cha, J.S., & Huang, G. (2024, February). [Investigating the Effects of Alcohol Consumption on Manual and Automated Driving: A Systematic Review.](#)

Publications, Conference Papers, and Presentations

During this period of performance, 34 academic and professional presentations/briefing featuring MCTM-federal or match-funded research and researchers. Nine additional presentations occurred in a prior reporting period but had not been included in that report. A selection follows:

| Academic Presentations | | | | |
|------------------------|---|--|------------------|------------|
| | Presentation Title | Audience/Conference | Location | Date |
| 1 | Vulnerability Assessment of Accessibility to Emergency and Lifesaving Facilities | IACP 2021 Conference | Online | 9/12/21** |
| 2 | Vulnerability Assessment of Accessibility to Emergency and Lifesaving Facilities | ACSP 61st Annual Conference | Toronto, Canada* | 11/01/22* |
| 3 | Exploring the Interaction between Topography and Weather-Related Crashes in Mountainous Areas | NCSITE 2023 Mid-Year Meeting | Asheville, NC | 06/08/23* |
| 4 | Identifying Factors Affecting Fatal Crashes Involving At-Fault and Not-At-Fault Level 1 and Level 2 Automated Vehicles | ASCE International Conference on Transportation & Development (ICTD 2023) | Austin, TX | 06/14/23* |
| 5 | Identifying the Effect of User's Perception Toward Employment Insecurity due to Automation on Their Willingness to Ride Autonomous Vehicles | ASCE International Conference on Transportation & Development (ICTD 2023) | Austin, TX | 06/14/23* |
| 6 | Disasters and Human Trafficking: Learnings from the Syrian Refugee Crisis | International Human Trafficking & Social Justice Conference | Toledo, OH | 09/18/23** |
| 7 | Understanding the Role of Transportation in Combatting Human Trafficking | International Human Trafficking & Social Justice Conference | Toledo, OH | 09/18/23** |
| 8 | About the City and County Pavement Improvement Center | National Pavement Preservation Conference | Indianapolis, IN | 09/19/23** |
| 9 | Pavement Preservation Academy, Advancing the Practice – Training | 2023 National Pavement Preservation Conference | Indianapolis, IN | 09/19/23** |
| 10 | GIS for Sustainable Development, Community, and Transportation | GIS-Pro 2023: URISA's 61st Annual Conference | Columbus, Ohio | 10/18/23 |
| 11 | Where Do I Start? Cybersecurity Assessments and Beyond | U.S. Department of Transportation's Cybersecurity Symposium | Online | 10/18/23 |
| 12 | Charging Drivers by the Gallon vs Mile | ClimatePlan | Online | 11/07/23 |
| 13 | Pay-As-You-Go-Driving: Examining Possible Road User Charge Rate | California Transportation Commission Road User Charge Technical Advisory Committee | San Francisco | 11/09/23 |

| | | | | |
|----|---|---|--------------------|----------|
| | Structures for California and Public Opinion Survey | | | |
| 14 | HOTTER Lanes for reduced traffic and emissions | International Road Federation Global R2T Conference 2023 | Phoenix, Arizona | 11/15/23 |
| 15 | Congestion-Clearing Payments to Passengers | International Road Federation Global R2T Conference 2023 | Phoenix, Arizona | 11/15/23 |
| 16 | Large Eddy Simulations of Wind-Shear from Passing Vehicles under a Freeway Overpass | APS DFD 76th Annual Meeting | Washington DC | 11/19/23 |
| 17 | Executive Leadership Responsibilities Related to Cybersecurity and Where to Start | National Rural Transit Assistance Program's 5th Annual Conference | Myrtle Beach, SC | 12/04/23 |
| 18 | The FTA Cyber Assessment Tool for Transit (CAAT) Tool and Beyond. Where Do I Start? | The American Public Transportation Association's Safety & Risk Management Seminar | Austin, Texas | 12/11/23 |
| 19 | Prominence of CEs in Planning, Designing, and Managing Transportation Systems | 3rd International Conference on Sustainable Construction Technologies & Advancements in Civil Engineering | Online | 12/15/23 |
| 20 | ICS for Field Level Transportation Personnel | Annual Meeting, International Association of Emergency Managers | Long Beach, CA | 11/07/23 |
| 21 | Briefing on the Methods and Findings of the CAPTI Evaluation | California State Senate Transportation Committee | Online | 11/14/23 |
| 22 | Best Practices in Public Communications | Monthly Seminar, State Farm Insurance national, Innovation Group and Communications Group | Online | 11/14/23 |
| 23 | Diversity, Equity, and Inclusion in Higher Education | MEF University | Istanbul, Turkiye* | 12/15/23 |
| 24 | Combating Human Trafficking | International Labor Organization Office for Turkiye (Briefing) | Ankara, Turkiye* | 12/15/23 |
| 25 | Decent Work: Serious Human Rights Violations in Supply Chains | Ministry of Labor and Social Security (Briefing) | Ankara, Turkiye* | 12/15/23 |
| 26 | Early Academic Successful Careers: Resources and Advice | Transportation Research Board Annual meeting | Washington DC | 01/07/24 |
| 27 | Keynote: Self-organizing inclusive networks: a step toward global food sufficiency. | 14th IEEE Computing and Communication Workshop and Conference, | Las Vegas, NV | 01/09/24 |
| 28 | A Fracture in the Glass Ceiling | WTS San Francisco Bay Area Chapter Meeting | Oakland, CA | 01/18/24 |
| 29 | Earthquake Early Warning System Challenges for Emergency Managers | 2024 Northern California Earthquake Hazards Workshop: Too Many Earthquake Anniversaries | Online | 01/30/24 |
| 30 | National Disaster Preparedness Training Center - Research Activities | Hawaii 2024 Research Day with the Hawaii State Legislature | Honolulu, HI | 02/06/24 |

| | | | | |
|----|--|---|---------------------|----------|
| 31 | Insights for a successful measure & variables that will drive success | BART Meeting | Oakland, CA | 02/08/24 |
| 32 | AI-based Road Inspection Framework using Drones with GPS-less Navigation | International Conference on Computing, Networking, and Communication (ICNC). | Big Island, Hawaii | 02/19/24 |
| 33 | The Role of Emotional Intelligence in Safety Leadership Expertise | Expertise Management Workshop for Safety Leadership Positions in the US Railroad Industry | Online | 02/27/24 |
| 34 | Combating Human Trafficking through Analytics | RSCA in Five, San José State University | San Jose, CA | 03/01/24 |
| 35 | Research and Data Update | Advisory Committee on Human Trafficking Public Hearing | Online | 03/01/24 |
| 36 | Creating a Sense of Safety and Belonging: Building Your Membership | San José Rotary Leadership Meeting | San Jose, CA | 03/01/24 |
| 37 | Diversity, Equity, and Inclusion: Leveling the Playing Field | Women's History Month: Harris and Associates | Online | 03/18/24 |
| 38 | Geospatial Analysis of the San José Bike Equity iMap (SJ-BE iMap) | CalGIS 2024 | Visalia, California | 03/18/24 |
| 39 | Community Integration of Advanced Air Mobility: Noise and Public Perception | UNWG Community Engagement for AAM Panel | Langley VA | 03/21/24 |
| 40 | Critical Sustainability Determinants for Infrastructure Construction Projects | 2024 8th International Conference on Civil Engineering | Singapore* | 03/22/24 |
| 41 | Women in Nontraditional Careers | Women's Leadership and Policy Summit | San Jose, CA | 03/23/24 |
| 42 | Welcome Remarks: Women Leading Change | Women's Leadership and Policy Summit | San Jose, CA | 03/23/24 |
| 43 | The Impact of California's EV Policy on State-Generated Transportation Revenues: Projecting Scenarios through 2040 | CA Infrastructure Symposium 2024 ~ ASCE Sacramento Section | Sacramento, CA | 03/28/24 |

* No federal funding was used to support international travel.

** Not previously reported

Published Conference Proceedings

During this period of performance, 2 conference proceedings were published. In addition, 1 conference proceeding was published in a prior period but not reported.

1. Balali, V., Guo, X., Fathi, S., and Heydarian, A. (2022). "Perceptions of Augmented and Virtual Reality Technologies Adoption within the AEC Industry." Construction Research Congress (CRC), 1067-1076, Washington, DC, USA. [Not previously reported]
2. Morsy, A.M., Helm, P.R., El-Hamalawi, A., Smith, A., and Stirling, R.A. (2024), "Simulation of Weather-Driven Deterioration of Clay Embankments," In Proceedings of Geo-Congress

2024, American Society of Civil Engineers (ASCE), February 25-28, 2024 | Vancouver, BC, Canada, pp. 85-94. DOI: 10.1061/9780784485354.009.

3. Balakrishnan, A., Pathak, S., Herrera, P., and Liu, T. (2024). Addressing Urban Traffic Congestion: A Hybrid DQN-Autoencoder Model with HyperOPT Tuning. International Conference on Transportation and Development (ICTD 2024), Atlanta, GA.

Journal Publications

During this period of performance, 5 journal articles were published or are in press.

1. Auguste, M., Yagci Sokat, K., Wigle, C., Baglin, C. "Reporting on Human Trafficking Crimes: A National Transportation Survey." *Journal of Transportation Security*, 17, 7 (2024). <https://doi.org/10.1007/s12198-024-00277-5>.
2. Gutfraind, A., Yagci Sokat, K., Muscioni G, Alahmadi S., Hudlow J, Hershov R, Norgeot B. "Victims of human trafficking and exploitation in the healthcare system: a retrospective study using a large multi-state dataset and ICD-10 codes." *Frontiers in Public Health*, 2023 Sep 28;11:1243413. doi: 10.3389/fpubh.2023.1243413.
3. Ke, J.-y., Prager, F., & Martinez, J.N. (2023). "Revisiting the Competitive Analysis Framework." *Journal of Supply Chain and Operations Management*, 21(1).
4. Yagci Sokat, K., Auguste, M., Wigle, C., Baglin, C. (2024) "Forced Labor and Transportation: Multi- disciplinary Perspectives." *Transportation Research Interdisciplinary Perspectives*, 23C, 100999.
5. Yagci Sokat, K., Chi, M., Hudlow, J. "Transit Monitoring Capacity Expansion: Analytics for Combating Human Trafficking." *Transportation Research Interdisciplinary Perspectives*, 24, 101032.

Books or other non-periodical, one-time publications

MCTM documents 5 publications in this category during this period of performance.

1. Ferrell, C. (2023, October). [Metropolitan Transportation Commission Discretionary Transit Funding Methods Evaluation](#).
2. Jenkins, B., Butterworth, B., & Yagyu, S. (2023, October). [The Use of Explosive Devices in Attacks on Public Surface Transportation: Trends in Frequency, Lethality, and Prevention](#). MTI Security Report.
3. Mineta Transportation Institute (2023, October). [The Economic and Environmental Potential of High-Speed Rail](#). MTI White Paper.
4. Weinardy, Alverina (2023, November). [2023 Mineta Summer Transportation Institute at San José State University](#). MTI Workforce Development Summary Report.
5. Yazdani, F. (2024, January). [Assessment of Copper Theft in Caltrans District 7 Electrical Systems](#). MTI Perspective.

Website(s) or other Internet site(s)

- An MCTM website is maintained at <http://transweb.sjsu.edu/mctm/index.html>
- An MCTM presence has been established, and continues to grow, in conjunction with the existing MTI Facebook page - <https://www.facebook.com/MinetaTransportation/> and Twitter feed - [@MinetaTrans](http://www.twitter.com)

Technologies or Techniques: Nothing to report

Inventions, Patent Applications, and/or Licenses: Nothing to report

Other Products:

- Researchers at MTI developed an [interactive ArGIS StoryMap](#) documenting the history of the development of Interstate 280 in the San Francisco Bay Area. This StoryMap accompanies the [full report and dataset](#) for the project.

4. Outcomes

- Performance Measures for Research Outcomes

| Performance Measures for Research Outcomes | 2024 ^a | 2023 | 2022 | 2021 | 2020 |
|---|-------------------|-------|-------|-------|-------|
| Number of technology transfer events (workshops, seminars, webinars, etc.) <i>Target goal: 12 annually</i> | 0 | 15 | 31 | 29 | 29 |
| Number of technology transfer event participants <i>Target goal: 500 participants annually</i> | 0 | 1,614 | 6,860 | 2,668 | 2,382 |

^a Data reported through March 31, 2024.

| Performance Measures for Research Outcomes | Current Period | Previous Period |
|---|----------------|-----------------|
| Number of organizations participating in consortium activities <i>Target goal: 10 during each semi-annual performance reporting period</i> | 2 | 16 |

5. Impacts

- Performance Measures for Research Impacts

| Performance Measures for Research Impacts | 2024 ^a | 2023 | 2022 | 2021 | 2020 |
|---|-------------------|-------|-------|------|-------|
| Number of instances of research influencing policy or practice <i>Target goal: 3 annually</i> | 0 | 12 | 7 | 8 | 6 |
| Evidence of impact and exposure based on number of media articles covering MCTM activities <i>Target goal: 50 annually</i> | 659 | 1,383 | 1,304 | 399 | 334 |
| Evidence of impact on transportation workforce development based on number trained and/or educated individuals (K-12 level) | 0 | 128 | 133 | 1162 | 1,063 |

| | | | | | |
|---|---|-------|-------|-------|-------|
| <i>Target goal: 50 K-12 students annually</i> | | | | | |
| Evidence of impact on transportation workforce development based on number trained and/or educated individuals (college level/working professionals) <i>Target goal: 75 college students and/or working professionals annually</i> | 0 | 1,485 | 6,727 | 1,542 | 1,417 |
| Percent of surveyed participants attending MCTM technology transfer events and training programs reporting that MCTM research and training is useful, effective, and impactful <i>Target goal: 60% with an average survey score of more than 4 out of 5 indicating that the event was useful, effective, and impactful</i> | - | 78% | 76% | 76% | 90% |
| ^a Data reported through March 31, 2024. | | | | | |

MCTM documents the following instances of research influencing policy or practice during the current period of performance (October 1, 2023 – March 31, 2024):

1. State Farm Insurance reached out to MTI’s Dr. Frannie Edwards regarding the importance of her research focused on Best Practices for Disaster Communication. The company is interested in possibly developing a mobile app based on the research. [November 2023]
2. At the request of Administrator Amit Bose, Federal Railroad Administration, MTI prepared a report on the economic benefits of high-speed rail which was widely distributed throughout the agency and industry. [October 2023]

What is the Impact on the Effectiveness of the Transportation System? Nothing to report

What is the Impact on the Adoption of New Practices, or Instances Where Research Outcomes Have Led to the Initiation of a Start-up Company? Nothing to report

What is the Impact on the Body of Scientific Knowledge? Collectively MCTM partners are impacting the body of scientific knowledge through the publication of reports, journal articles, conference presentations, technical advising, and other activities. As visually depicted in Figure 1, from January 1, 2018 to March 31, 2024 reports were downloaded 89,169 times from 4,569 Institutions in 176 countries from the SJSU ScholarWorks archive and there were 114,798 downloads from the MTI website.

What is the Impact on Transportation Workforce Development?

- MTI, in partnership with ARTBA, developed a new learning tool, “How We Move Goods” for children, ages 6-11. Each "How We Move Goods" Card represents a mode of transportation and tells a story of how people move goods. The image and facts on the card provide more information about that specific mode, including how much it can

carry, how far it can move in a day, and if/how it pollutes the environment. [October 2023]

- Swetha Ashok, a high school student who participated in MTI's Summer Transportation Institute in 2022, served as a Youth Mentor for a Garrett Morgan Sustainable Transportation Competition team from William Hopkins Middle School. The team won the 2nd place prize. Swetha was also accepted into UC Berkeley for Environmental Engineering Science and stated that the Institute and competition contributed to her choosing her college pathway.
- Meera Bhaskar, a high school student who participated in MTI's Summer Transportation Institute in 2022, served as a Youth Mentor for a Garrett Morgan Sustainable Transportation Competition team from Silicon Valley Monterey Bay Council Boy Scout troop. She writes a [Transportation Of The Future blog](#) and published an [EVs and Sustainable Mobility eBook](#). Meera has been accepted to the 2024 NASA Ames internship with their aviation systems division.
- MTI provided technical assistance to California's Office of Planning and Research on the development of their Zero Emissions Jobs roadmap. [October 2023]

Additional Successes of Note

MCTM is regularly contacted by academics, practitioners, elected officials, government entities, transit agencies and others to provide information, insight, and briefings on high priority transportation initiatives. The following are of note but do not fit neatly into any of the prior categories, as such this new section has been implemented.

- MTI's Dr. Asha W. Agrawal provided expert advice to the Eno Center for Transportation on transportation finance, specifically related to public support for mileage fees. [October 2023]
- MTI's Dr. Serena Alexander briefed the California Senate Transportation Committee lead staff on the results from MCTM-funded research evaluating the benefits from transportation investments on state greenhouse gas emissions.
- MTI's Dr. Kezban Yagci Sokat was asked to present to Turkey's Ministry of Labor and Social Security and International Labor Organization on how to combat human trafficking.

Leadership

MCTM Directors and researchers are regularly tapped to serve in leadership roles across the transportation sector. The following lists several examples:

- MTI's Dr. Kezban Yagci Sokat has been appointed as a liaison from TRB's Standing Committee on Women and Gender in Transportation to serve on TRB's Standing Committee on Disaster Response, Emergency Evacuations, and Business Continuity. Dr. Sokat also received the 2024 AACSB Influential Leader Award as well as a Master Teacher Award from San José State University. Since 2023, Dr. Sokat has served as a [Public Voices Fellow](#) through the OpEd Project.



Changes/Problems

- Changes in Approach and Reasons for Change: Nothing to report
- Actual/Anticipated Problems or Delays Encountered: Nothing to report
- Changes that Have a Significant Impact on Expenditures: Nothing to report
- Significant Changes in Use or Care of Human Subjects, Vertebrate Animals, and/or Biohazards: Nothing to report
- Change of Primary Performance Site Location from that Originally Proposed: Nothing to report