ADVANCED
MOBILITY
PARTNERSHIP

AGENDA

EXECUTIVE COMMITTEE
Wednesday, December 7, 2022
2:00 p.m.

In Person Meeting

DRCOG is hosting this meeting in person at the DRCOG office located at 1001 17th Street, Suite 700, Denver, CO.

1. **Welcome and Introductions**

2. **USDOT Discretionary Grants Coordination**
   Discussion
   Kalie Fallon, TDM and Emerging Mobility Planner, DRCOG

3. **AMP Working Group Briefing**
   Information
   Heather Pickering-Hilgers, Technical Project Manager, CDOT

4. **AMP Activities: MCB Tactical Action Updates**
   Information
   Kalie Fallon, TDM and Emerging Mobility Planner, DRCOG

5. **AMP Focus Area: System Operations**
   DRCOG's Regional Transportation Operations and Technology Strategic Plan
   Action
   Greg MacKinnon, Transportation Operations Program Manager, DRCOG

6. **Roundtable Partner Agency Updates**

7. **AMP Executive Committee Calendar 2023**
   Discussion
   Kalie Fallon, TDM and Emerging Mobility Planner, DRCOG

8. **Next Meeting: March 1, 2023**

Attendees can request additional aids or services, such as interpretation or assistive listening devices, by calling 303-480-6701 or emailing kfallon@drcog.org. Please notify us at least 48 hours in advance so we can coordinate your request.

Adrcog
We make life better!
DENVER REGIONAL COUNCIL OF GOVERNMENTS

DENVER METRO CHAMBER OF COMMERCE

RTD

COLORADO
Department of Transportation
CDOT

DATE: September 7, 2022
TO: AMP Executive Committee
FROM: Emily Lindsey, Active and Emerging Mobility Program Manager, DRCOG
SUBJECT: AMP Updates

SUMMARY
In lieu of the scheduled September meeting of the AMP Executive Committee, staff has prepared a memo with relevant AMP-related updates since the June Executive Committee meeting.

AMP Working Group
The AMP Working Group continues to meet monthly. Since the last AMP Executive Committee meeting, the AMP Working Group has received informational briefings on: the Montbello Connector Microtransit Pilot, Reimagine RTD, City and County of Denver's eBike Rebate Program, DRCOG's Regional Transportation Operations and Technology Strategic Plan, funding opportunity coordination for USDOT SMART Grants Program, the Colorado National Electric Vehicle Infrastructure Plan and Pegasus Service Updates.

AMP Focus Areas
The AMP Working Group formed Focus Area Steering Committees to collaboratively implement priority tactical actions in the following focus areas: Data and Data Sharing, Shared Mobility and System Operations. Brief updates for each of these focus areas are as follows:

- **Shared Mobility**: no updates
- **Data and Data Sharing**: Since the data platform concept white paper was approved by the Executive Committee at their June meeting, staff from partner agencies have been collaborating on several mobility data-related initiatives including DRCOG's regional Shared Micromobility Data Collaborative and CDOT's exploration and purchase of Streetlight data.
- **System Operations**: DRCOG's draft Regional Transportation Operations Strategic Plan is currently under development.

The next AMP Executive Committee meeting is scheduled for December 7, 2022 at 2:00pm.

ADDITIONAL INFORMATION
For additional information, please contact Emily Lindsey, Active and Emerging Mobility Program Manager, DRCOG, at 303-480-5628 or elindsey@drcog.org.

DATE: December 7, 2022
TO: AMP Executive Committee
FROM: Kalie Fallon, Emerging Mobility and TDM Planner, DRCOG
SUBJECT: USDOT Discretionary Grants Coordination
ACTION: Information

SUMMARY

The U.S. Department of Transportation (USDOT) has recently published Notices of Funding Opportunity (NOFOs) to apply for Fiscal Year 2022 discretionary grant funding: the Strengthening Mobility and Revolutionizing Transportation (SMART), Advanced Transportation Technologies and Innovation (ATTAIN) and Reconnecting Communities Pilot (RCP) programs.

An informational form was distributed to all local governments and partner agencies on September 27, 2022. In an effort to collaborate with partners throughout the region and maximize transparency in who DRCOG is providing Letters of Support for, grant proposals in the Denver region were submitted for Transportation Advisory Committee (TAC) review at the November 14, 2022 meeting for information and discussion – not approval.

For detailed information about each grant submittal form, please see Attachment 1.

ATTACHMENT(S)
1. 2022 USDOT Discretionary Grant Programs Letter of Support Request

ADDITIONAL INFORMATION

For additional information, please contact Kalie Fallon, Emerging Mobility and TDM Planner, DRCOG at kfallon@drcog.org.

2022 USDOT Discretionary Grant Programs
Letter of Support Request

In an effort to collaborate with partners throughout the region and maximize transparency in who DRCOG is providing Letters of Support for, DRCOG requests that USDOT discretionary grant proposals in the Denver region be submitted for Transportation Advisory Committee (TAC) review at the November 14, 2022 meeting for information and discussion – ***not approval***. This form is for the following discretionary grant funding opportunities:

- **Strengthening Mobility and Revolutionizing Transportation** (**SMART**): $100 million program available for Stage 1 (Planning and Prototyping) projects associated with purpose-driven innovation focused on advanced smart city or community technologies and systems to improve transportation efficiency and safety. *Applications are due Friday, November 18, 2022 by 5pm EST.*

- **Advanced Transportation Technologies and Innovation** (**ATTAIN**): $60 million program, previously named Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD), available to projects that promote advanced technologies to improve safety and reduce travel times for drivers and transit riders. *Applications are due Friday, November 18, 2022 at 11:59pm EST.*

- **Reconnecting Communities Pilot (RCP) Program**: $195 million program available for projects that reconnect communities by removing, retrofitting or mitigating transportation facilities such as highways and rail lines that create barriers to community connectivity including mobility, access or economic development. *Applications are due by Thursday, October 13, 2022 at 11:59pm EST.*

Transportation Planning and Operations
drcog
DENVER REGIONAL COUNCIL OF GOVERNMENTS

All projects will be presented to the TAC at their November meeting. In order for DRCOG to consider providing a letter of support for a project, this form must be submitted by the deadline as described below by funding opportunity.

For Reconnecting Communities Pilot Program projects, please submit this form to ckennedy@drcog.org by 5:00pm MST on October 3, 2022 in order for DRCOG to review and prepare a Letter of Support for your project.

For SMART or ATTAIN projects, please submit this form to ckennedy@drcog.org by 5:00pm MST on November 1, 2022 in order for DRCOG to review and prepare a Letter of Support for your project.

Agency: City and County of Denver

Contact: Jennifer Bartlett

Project Name: Reconnecting Communities Pilot:

Project Limit: Underserved communities in/around I-70, I-25 and 6th Ave

Project Description:

The proposed project will address Denver neighborhoods near three major freeway corridors Interstate 70 (I-70), Interstate 25 (I-25), and United States Route 6 (US-6); that are in underserved communities; and have missing bus stops and connectivity needs: sidewalks, ADA compliant facilities, and bicycle facilities.

This critical planning grant will support the planning and coordination of bus stop improvements and the delivery of new sidewalks improvements (including 30% design plans) for connected mobility improvements in Historically Disadvantage Communities in the City and County of Denver.

Total Project Cost: $1,000,000

Grant Funding Request: $800,000

All projects will be presented to the TAC at their November meeting. In order for DRCOG to consider providing a letter of support for a project, this form must be submitted by the deadline as described below by funding opportunity.

For Reconnecting Communities Pilot Program projects, please submit this form to ckennedy@drcog.org by 5:00pm MST on October 3, 2022 in order for DRCOG to review and prepare a Letter of Support for your project.

For SMART or ATTAIN projects, please submit this form to ckennedy@drcog.org by 5:00pm MST on November 1, 2022 in order for DRCOG to review and prepare a Letter of Support for your project.

Agency: City of Thornton

Contact: Darrell Alston

Project Name: Thornton ATSPM

Project Limit: Washington St-83rd Dr to Thornton Parkway/84th Ave-Huron St to Washington St

Project Description:

Thornton proposes to submit a SMART grant application for funding under Stage 1 of the grant to conduct the planning, systems engineering, and environmental review, and develop design documents for the deployment of Automated Traffic Signal Performance Measures (ATSPM) on the corridor of Washington Street - 83rd Drive to Thornton Parkway and the intersecting corridor of 84th Avenue - Huron Street to Washington Street. With planning and design completed under a successful Stage 1 SMART grant, Thornton will be positioned to apply for future grants to deploy the necessary equipment and system for ATSPM on the mentioned corridors. The complete implementation of ATSPM will aid Thornton in improving traffic signal operation through proactive monitoring of performance of signal timing and proactive maintenance in response to system discovered operational issues.

Total Project Cost: $250,000

Grant Funding Request: $250,000

All projects will be presented to the TAC at their November meeting. In order for DRCOG to consider providing a letter of support for a project, this form must be submitted by the deadline as described below by funding opportunity.

For Reconnecting Communities Pilot Program projects, please submit this form to ckennedy@drcog.org by 5:00pm MST on October 3, 2022 in order for DRCOG to review and prepare a Letter of Support for your project.

For SMART or ATTAIN projects, please submit this form to ckennedy@drcog.org by 5:00pm MST on November 1, 2022 in order for DRCOG to review and prepare a Letter of Support for your project.

Agency: Denver Regional Council of Governments

Contact: Matthew Helfant

Project Name: Ride Alliance Human Service Transportation Trip Exchange Upgrades

Project Limit: N/A- entire DRCOG area

Project Description:

DRCOG, with significant support from Transit Plus Inc., will leverage key assets, resources, and community partnerships to more seamlessly connect transportation providers to improve regional coordination and facilitate more effortless mobility for veterans, older adults, individuals with disabilities, and other populations that may not have full entrée to their community. This project will upgrade a human service transportation trip exchange prototype that enables transportation providers to share trips. This benefits riders by increasing capacity and decreasing trip denials due to circumstances like trips outside service boundaries, requests for trips outside of a particular agency's service hours and taking advantage of another agency's vehicle picking up or dropping off passengers near a rider's location when the original agency does not have plans to provide service in that area.

Total Project Cost: ~$550k This does not include previous investments in the project.

Grant Funding Request: ~$550k

All projects will be presented to the TAC at their November meeting. In order for DRCOG to consider providing a letter of support for a project, this form must be submitted by the deadline as described below by funding opportunity.

For Reconnecting Communities Pilot Program projects, please submit this form to ckennedy@drcog.org by 5:00pm MST on October 3, 2022 in order for DRCOG to review and prepare a Letter of Support for your project.

For SMART or ATTAIN projects, please submit this form to ckennedy@drcog.org by 5:00pm MST on November 1, 2022 in order for DRCOG to review and prepare a Letter of Support for your project.

Agency: City of Aurora

Contact: Carlie Campuzano

Project Name: Smart Cities Signal Technology Projects on Chambers Road & Colfax Ave Corrid

Project Limit: Colfax Avenue (Havana St to Chambers Rd); Chambers Road (I-70 to Alameda

Project Description:

This project installs fiber-optic network infrastructure, interconnecting over 30 traffic signals on Colfax Avenue and Chambers Road with Aurora's traffic signal control system. The fiber-optic network will improve the communications reliability, improving Aurora's ability to more effectively manage and control these traffic signals.

Total Project Cost: $1,806,000.00

Grant Funding Request: $1,806,000.00

All projects will be presented to the TAC at their November meeting. In order for DRCOG to consider providing a letter of support for a project, this form must be submitted by the deadline as described below by funding opportunity.

For Reconnecting Communities Pilot Program projects, please submit this form to **ckennedy@drcog.org** by 5:00pm MST on October 3, 2022 in order for DRCOG to review and prepare a Letter of Support for your project.

For SMART or ATTAIN projects, please submit this form to **ckennedy@drcog.org** by 5:00pm MST on November 1, 2022 in order for DRCOG to review and prepare a Letter of Support for your project.

Agency:

Contact:

Project Name:

Project Limit:

Project Description:

Total Project Cost:

Grant Funding Request:

DATE: December 7, 2022
TO: AMP Executive Committee
FROM: Kalie Fallon, Emerging Mobility and TDM Planner, DRCOG
SUBJECT: AMP Working Group Briefing
ACTION: Information

SUMMARY
At the December meeting of the AMP Executive Committee, staff will provide an overview of the Advanced Mobility Partnership Working Group collaboration since the last meeting. The AMP Working Group meets monthly to collaborate and coordinate on transportation technology-related efforts in the Denver region. Since February 2022, the Working Group has covered topics at their meetings such as:

- AMP Focus Area Updates
- City and County of Denver Montbello Connector Microtransit Pilot
- CDOT Office of Innovative Mobility Grants
- CDOT Pegasus Service
- CDOT WZDx Project
- CEO EV Equity Study and Tools
- City and County of Denver E-Bike Incentive Program
- Colorado National Electric Vehicle Infrastructure (NEVI) Plan
- CSU CARE E-Bike Program
- DRCOG Mobility Analytics
- DRCOG Regional Transportation Operations and Technology (RTOT) Strategic Plan
- Mines Rover Pilot
- Regional Shared Micromobility Data Collaborative
- Reimage RTD
- Seattle Department of Transportation Curbside Management Strategies
- USDOT Funding Opportunities and Coordination

ATTACHMENT(S)
N/A

ADDITIONAL INFORMATION
For additional information, please contact Kalie Fallon, Emerging Mobility and TDM Planner, DRCOG at kfallon@drcog.org.

DATE: December 7, 2022
TO: AMP Executive Committee
FROM: Kalie Fallon, Emerging Mobility and TDM Planner, DRCOG
SUBJECT: AMP Activities: MCB Tactical Action Updates
ACTION: Information

SUMMARY

For detailed information about each tactical action, please see Attachment. At the December AMP Executive Committee meeting, staff leads for AMP and related activities will share information about recent efforts.

ATTACHMENT(S)

1. AMP Tactical Action Matrix – Status Updates November 2022

ADDITIONAL INFORMATION

For additional information, please contact Kalie Fallon, Emerging Mobility and TDM Planner, DRCOG at kfallon@drcog.org.

Action ID	Tactical Action	Description	Initiator	Status
1.1	Establish a Mobility Technology Advisory Committee	Establish a committee that may include several functions, including: -Establish standards for public and private mobility data sharing to ensure interoperability among regional stakeholders -Coordinate Pilot Projects conducted throughout the region to avoid duplication of efforts and share findings -Provide guidance on best uses of available pooled funding across the agencies for coordinated technology Pilot Projects -Coordinate agency staff resource sharing for technology related projects -Create a process to prioritize corridors for technology projects -Develop partnerships with private sector providers to incentivize private ridesharing -Identify costs and potential funding associated with retrofitting infrastructure to support and maintain emerging technologies such as Connected Vehicles, Autonomous Vehicles, and Sensor Data Collection -Benefit from a broad membership beyond public agency representatives	All	Developed the Advanced Mobility Partnership (AMP): -Kickoff in late 2019 with MOU signing and first Executive Committee Meeting -Monthly AMP Working Group meetings beginning Jan 2020
1.2	Establish a new public-private partnership mobility entity or entities to pursue mobility technology implementation	Establish public-private partnership(s) to engage mobility technology innovators, coordinate and secure funding, identify projects and public partners, identify and implement pilot projects and simplify coordination with governments across the region. Desired characteristics of such an entity could include: -Nationally recognized center of excellence for new mobility project deployment and commercialization -Public and private sector participation/collaboration/ownership -Not-for-profit status -Physical presence of staff and office space -Connection to Colorado Smart Cities Alliance and Colorado local governments -Collaboration with Colorado universities and the National Renewal Energy Laboratory -Governance of the organization is balanced between the public and private sectors	All	No updates reported.
1.3	Engage university resources to develop technology mobility research and development	Build capability around emerging mobility by partnering with a regional academic institution to establish a university research center to benefit from the USDOT University Transportation Centers program that establishes and funds transportation research centers at host universities around the country.	DRCOG	Continued conversations with the University Transportation Alliance for Colorado (UTAC). Participation in Fall 2019 workshop around urban freight. Partnered with Harvard's Kennedy School to conduct workshops for regional mobility data platform in Fall 2021. RTD pursuing dynamic transit scheduling project with Colorado University Innovation Council. Regular university speakers invited to AMP working group meetings to present on research and build cross-sector relationships.

Action ID	Tactical Action	Description	Initiator	Status
1.4	Make Mobility as a Service available to all	Offer Mobility as a Service (MaaS) to all travelers in an equitable manner by developing subsidies or policies through a public-private partnership. MaaS offers a single point of access through a subscription account to public and private mobility services through which users travel across a variety of modes. Residents could choose from a selection of travel pass packages with different price structures for peak and off-peak travel. This may evolve from the universal mobility app described in Tactical Action 3.1.	RTD	RTD has implemented the Metro Taxi pilot program to enhance and improve FlexRide service in the Denver Tech Center.

RTD has implemented a partnership with Uber technology to bring enhanced demand response paratransit services.

RTD has implemented a partnership with DemandTrans to provide integrated trip planning and payment for FlexRide and fixed route services. |
| 1.5 | Develop regional guidelines for drone delivery and drone passenger travel | Convene a working group to develop a set of recommendations to prepare for managing short-range and low-altitude unmanned aerial vehicles (drones) for freight and (eventually) traveler transportation. This could include conducting an assessment to determine locations and conditions where services like automated parcel delivery would not pose a safety hazard. | CDOT | No updates reported. |
| 1.6 | Establish a regional smart mobility navigator | Establish a single point of contact for the region who will provide information to new mobility providers about common standards and guidelines for the operation of shared services in the region. The navigator will also provide individual municipalities resources to begin negotiations and contracting with service providers. | DRCOG | DRCOG has assisted municipalities with shared micromobility program deployment on data-sharing requirements and associated language for agreements; as-needed moving forward.

Assistance includes developing the Shared Micromobility in the Denver Region guide, continued work with Ride Report, and ongoing membership in the Open Mobility Foundation, among others. |
| 2.1 | Evaluate technology upgrades and interoperability in projects in DRCOG's Transportation Improvement Program | Create a new criterion in the DRCOG Transportation Improvement Program project selection process to incentivize local jurisdictions to include adaptable infrastructure and interoperable technology systems. | DRCOG | Considered as part of the Regional Transportation Operations and Technology (RTO&T) TIP Set-Aside program. |
| 2.2 | Prepare for technology upgrades and interoperability in transportation construction projects | Develop and recommend standards and best practices for new infrastructure installations of digital or electronic equipment along the roadside to be interoperable and capable of supporting future technologies. | CDOT, DRCOG | See 2.1 |
| 2.3 | Accelerate testing of bicycle/pedestrian detection on arterials | As new technology applications become available, test and learn from multiple pilot projects of pedestrian and bicyclist detection. | Local Jurisdictions | Denver, Aurora and CDOT R1 have deployed bicycle detection that activates a signal phase with a minimum duration specific to the bicycle movement.

Denver, through ATCMTD and DRCOG's RTO&T Set-Aside, is implementing passive pedestrian detection for select intersections/crossings. |
| 2.4 | Implement transit priority on all major bus corridors | Develop policies and incentives to implement transit priority along all high-use bus corridors through application of such tools as transit signal priority, queue jumps, bypass lanes, bus bulb-outs, and peak hour exclusive bus lanes. | RTD | DRCOG identified priority corridors and funding for BRT implementation in the 2050 MVRTP.

TSP projects are in place or planned for Federal Boulevard, Havana Street, E. Colfax, and the City of Westminster

RTD completed a report on *Conditional TSP Synthesis, Operation Review, and Design Criteria*

RTD was awarded two DRCOG RTO&T Set-Aside funding grants to enhance an integrated TSP/Transit real-time data sharing system and implement conditional TSP operations. |

Action ID	Tactical Action	Description	Initiator	Status
2.5	Implement traffic signal control technology on all major regional arterial corridors	Implement technology that continually monitors and adjusts to traffic demands to optimize signal timing for prevailing conditions. To monitor effectiveness, evaluate according to FHWA automated traffic signal performance measures (ATSPM).	DRCOG	Projects funded throughout the region through RTO&T Set-Aside.
2.6	Pilot integrated corridor management on ten arterial corridors	Fund and implement ten pilot projects on key Denver region corridors using smart signal technology, as well as enhanced institutional coordination and operational adaptability using real-time information for all modes.	DRCOG	See 2.1
2.7	Implement "smart corridor" operations on all regional freeways	Implement adaptive ramp metering, variable speed limits, and enhanced enforcement that use real-time traffic data to maximize capacity on the regional freeway system.	CDOT	No updates reported.
2.8	Coordinate traffic management centers systems and operations	Integrate management, operations, and center-to-center communications of the region's traffic management centers where real-time operational data is managed and processed to initiate control strategies and responses to incidents and to provide information to the traveling public and media.	CDOT	Denver, Lakewood and CDOT implemented traffic signal system integration, allowing visibility of status of select intersections and select interjurisdictional performance analytics.

Centennial is leading a multijurisdictional team to also integrate multiple traffic signal systems. |
2.9	Pilot mobility technologies on mountain corridors	Identify mobility technology pilot projects particularly well-suited to address and respond to the unique conditions of the Front Range's mountain corridors (I-70, US-285, US-6) and communities. The Front Range generates high demand on weekends and holidays to access the Rocky Mountains using a highway system that is often constrained by challenging topography and winter weather conditions.	CDOT	No updates reported.
2.1O	Pilot modular lanes	Conduct a pilot project to investigate the feasibility and required technologies to implement modular lanes. Modular lanes use technology to adjust lane width and uses at different times of the day or week.	CDOT	No updates reported.
3.1	Develop a universal mobility app for trip planning and payment	Implement an account-based, multipurpose user-friendly mobility app accessible to all. The app would provide one-stop-shop access to trip planning, fare payment, and vehicle arrival times across all mobility providers, both public agencies (RTD and the E-470 Public Highway Authority) and private providers (Lyft, Uber, B-Cycle, and others). Development of the app would require a vendor partner to integrate and market the branded regional app.	RTD	RTD and CDOT have concurrent efforts exploring the development of universal trip planning and payment apps. Work is underway to unify trip planning and payment between RTD and Bustang. CDOT is working on a Connected Colorado project.
3.2	Adopt a regional compact defining common standards for micromobility services	Adopt common standards and guidelines for micromobility services that address such issues as ensuring equitable access, data sharing requirements, protection of personal information, and use of the public right-of-way (including shared mobility lanes and mobility hubs).	DRCOG	Convened regional Micromobility Work Group in early 2019 to discuss regional best practices and where applicable, standards by policy area. Finalized state of the practice guidance document "Shared Micromobility in the Denver Region" which outlines regional and local components for implementation.

DRCOG hosts regional data sharing platform for MDS/GBFS data for entities throughout the region. Current participants include CDOT, RTD, DRCOG, Denver, Boulder, Thornton, Arvada and Brighton (Littleton and Aurora were partners while they had operators).

DRCOG launched a public, open data portal with regional and local pages highlighting regional, aggregated metrics for shared micromobility partners in the Denver region. |

Action ID	Tactical Action	Description	Initiator	Status
3.3	Develop incentives to improve ride hailing and ridesharing operations	Develop a suite of incentives encouraging ride hailing services to integrate with the regional transit network, increase shared ride pooling, provide services in mobility-challenged communities, minimize travel without a passenger, decrease idling time, and improve safety of passenger loading.	RTD, Local Jurisdictions	RTD has implemented a partnership with Uber to provide enhanced demand response paratransit services.
3.4	Implement curbside management standards	Implement standards for curbside passenger loading and freight delivery by developing policies and employing technologies to monitor, enforce, and monetize curbside operations.	DRCOG, RTD	DRCOG awarded CMPI Set-Aside project to evaluate and plan for curbside management in Boulder, potential transferability for other communities in the region. DRCOG participating in Open Mobility Foundation discussions around development of a Curb Data Specification (CDS) to digitize and manage the curb.
3.5	Pilot neighborhood-scale mobility hubs	Conduct pilot projects of neighborhood mobility hubs at different scales in diverse locations, including mobility-challenged communities. Mobility hubs are nodes on the transportation network that connect many modes of transportation, such as transit, bike sharing, car sharing, and other on-demand services.	DRCOG, RTD	DRCOG funded mobility hub projects and participated in Valverde Movement Project discussions around neighborhood scale mobility hub deployment.
3.6	Partner with the private sector to provide transportation in mobility-challenged communities	Create partnerships with ridehailing, microtransit, and other providers to establish mobility service in areas that do not meet fixed-route bus service standards. Consider connections to and from elderly housing, low-income areas, and human services facilities.	DRCOG, RTD	City and County of Denver and Boulder County have deployed projects to achieve these outcomes.
3.7	Pilot smart parking at Park-n-Rides	Fund and implement a smart parking system that could provide digital signage, dynamic pricing, and real-time occupancy information. Conduct the pilot projects at congested park-n-rides on the RTD rail and Bus Rapid Transit system.	RTD	No updates reported.
4.1	Establish a regional mobility data platform	Create a regional mobility data platform that houses transportation-related data from all transportation sources with access provided to all agencies. The platform consolidates archived and real-time data from multiple agencies and private providers into a single data repository. Implementation of the data platform will involve: -Establishing policy standards for data sharing between regional stakeholders for interoperability -Establishing security standards for maintaining privacy and data anonymity -Creating policies that will ensure the interoperability of infrastructure and software -Developing open, machine-readable data publication from instrumented infrastructure -Promoting the development of open, well-documented Application Program Interfaces (API)	All	Joined Open Mobility Foundation and SAE Mobility Data Collaborative to participate in national discussions with public and private sector partners on issues from data standards, specifications, privacy, security, performance metrics, etc. In 2022, AMP Working Group and Executive Committee approved Regional Mobility Data Sharing Concept White Paper.
4.2	Establish data sharing requirements for private sector roadway users	Establish standard data sharing agreements that address travel use, privacy, and data security with private sector mobility providers to be offered to municipalities and other public agencies in the region for negotiating and contracting.	DRCOG	Micromobility pilot as regional case study. Free-floating carsharing to be second addition to case study.
5.1	Incentivize ridehailing and ridesharing providers to use electric vehicles	Develop a goal, create a policy, and incentivize the deployment and use of electric and other zero-emission vehicles by ridehailing providers.	DRCOG	SB 260 addressed TNC fees and established the Clean Fleet Enterprise, which will have $289 million to invest in fleet conversion (including TNCs and taxis) over the next 10 years. This enterprise will be managed by CDPHE, but similar enterprises for charging infrastructure and transit fleets will be established at CEO and CDOT, respectively.

Action ID	Tactical Action	Description	Initiator	Status
5.2	Create an electrified mobility development program	Identify regulatory hurdles and develop recommendations to encourage the adoption of electric vehicles by public and private fleets.	Chamber	No active efforts.
5.3	Transition government fleets to electric and other zero-emission vehicles	Work with public agencies to create an aggressive and agreed-upon goal for converting a portion of their fleets to zero-emission vehicles. The goals may be tailored to fleet types, as well as available vehicle technology.	CDOT, DRCOG, RTD	Provided TIP funding to RAQC for fleet conversion.

Reimagine RTD includes an exhaustive examination of a potential transition to zero emission revenue vehicles.

See note on SB 260 above - the Clean Fleet Enterprise will help with this process. At the state level, SB 230 allocated $5 million for charging infrastructure across state agencies to support rapid EV adoption over the next 5 years. Xcel Energy also has $100+ million over the next 3 years to support transportation electrification as well as fleet coaching services to help public and private fleet owners plan for their transition. |
6.1	Pilot driverless microtransit to increase public exposure to automated vehicle technology	To ease the transition to this new mobility paradigm, conduct additional demonstrations of automated microtransit to increase First and Last Mile connections to FasTracks stations and create more opportunities for the general public to experience driverless vehicle technology firsthand.	RTD	The Mines Rover (EasyMile) automated shuttle demonstration project is the largest deployment of its kind in the United States and launched in August 2021.
6.2	Minimize zero occupancy and encourage high shared use of driverless automated vehicles	Investigate and develop recommendations for policies to discourage zero-occupant trips. In addition, develop a goal, create a policy, and provide incentives to build a framework that encourages sharing rides in driverless, automated vehicles as they enter the regional market.	CDOT, DRCOG	Participation in CDOT's SB 239 study.
6.3	Support legislative efforts to ensure that automated vehicles operate safely	Develop recommendations for the state legislature on potential approaches to testing, licensing, and regulating private and shared automated vehicles to ensure the safe operation of such vehicles in Colorado.	CDOT	No updates reported.
7.1	Expand DRCOG funding earmark for a mobility technology innovation fund	Expand upon the current funding set aside for mobility technology projects within the DRCOG Transportation Improvement Program.	DRCOG	In addition to the DRCOG TIP RTO&T set-aside program, upcoming TIP policy includes an innovative mobility set-aside to pursue pilot technology programs/projects. Further work on this innovative mobility set-aside will occur in 2023.
7.2	Explore the concept of a road usage charge for Colorado	Build on past CDOT studies to pilot systems, develop policies, and formulate recommendations to the state legislature on the potential creation of a Road Usage Charge system that to provide an alternative funding source for transportation.	CDOT	SB 260 requires CDOT to conduct a study of Road Usage Charge systems, barriers, and examples from other states and present results to the Legislature in 2023.
7.3	Support legislative efforts to ensure that driverless automated vehicles generate appropriate funding	Develop recommendations for the state legislature on potential new user fees, registration fees, or other appropriate revenue streams to prepare the region for the anticipated future deployment of private and shared driverless automated vehicles.	Chamber	Similar to the previous note, SB 260 requires CDOT to conduct a study of autonomous vehicle technology, including safety benefits/risks, legal issues, and necessary transportation infrastructure upgrades.

DATE: December 7, 2022
TO: AMP Executive Committee
FROM: Greg MacKinnon, Transportation Operations Program Manager, DRCOG
SUBJECT: AMP Focus Area: System Operations
DRCOG Regional Transportation Operations and Technology Strategic Plan
ACTION: Recommend strategic plan to the appropriate approval process

SUMMARY
DRCOG, working with stakeholders from across the region, has developed a draft Regional Transportation Operations & Technology Strategic Plan[1]. The purpose of the plan is to guide the DRCOG region's near-term efforts to deploy technology tools and coordinated system procedures for the multimodal transportation system. These efforts will assist transportation operations staff in serving daily travel demands across the region.

Over 15 million trips per day are made in the Denver region. Most people are unaware of the thousands of employees who work every day to provide and operate safe and reliable multimodal transportation facilities and services.

The plan envisions transportation systems serving all travel modes across the DRCOG region that are interconnected and collaboratively operated, managed, and maintained to optimize safe, reliable, and efficient travel for all system users, contributing to the region's economic prosperity and high quality of life. Ten objectives lay out the desired improvements to be monitored and measured to ensure progress towards meeting the vision.

This is an aspirational plan that provides guidance for the implementation of operational infrastructure and services to further strengthen the connections between transportation systems and improve the reliability of travel across the region. There are three main sections in the plan:

1. Current State of Regional Transportation Operations – A summary description of general responsibilities of the transportation system agencies across the region and the infrastructure they operate and maintain. Because of the complexity of multiple systems, services, and stakeholders, the description is arranged into natural focus areas relevant to daily real-time transportation management.

---

[1] https://drcog.org/sites/default/files/E2 - RTOT Strategic Plan.pdf

2. Regional Transportation Operations Needs – An analysis comparing the current state of regional transportation operations against the plan's vision, goals and objectives. Generally, it is evident that operations are not well-connected between jurisdictions, agencies and travel modes. New strategies, processes and tools are needed to facilitate coordination between stakeholders to achieve the outcomes envisioned in the DRCOG Metro Vision Plan and the Mobility Choice Blueprint.

3. Action Plan – A list of initiatives organized into three groups: primary, secondary, and tertiary. The primary initiatives are critical to establishing the desired regional framework for operations data sharing upon which the secondary and tertiary initiatives can build.

This plan will provide guidance for the development of the upcoming call-for-projects and project selection process for the RTO&T Set-Aside, which is scheduled for early 2023.

ACTION
Recommend the Regional Transportation Operations & Technology Strategic Plan be directed through the appropriate approval process at DRCOG.

ATTACHMENT(S)
1. [RTO&T Strategic Plan](link) (link)[1]

ADDITIONAL INFORMATION
For additional information, please contact Greg MacKinnon, Regional Transportation Operations Program Manager, DRCOG at gmackinnon@drcog.org.

DATE: December 7, 2022
TO: AMP Executive Committee
FROM: Kalie Fallon, Emerging Mobility and TDM Planner, DRCOG
SUBJECT: Partner Agency Updates
ACTION: Discussion

SUMMARY
There will be time at the AMP Executive Committee meeting in December to discuss other agency work related to AMP activities and projects.

ATTACHMENT(S)
N/A

ADDITIONAL INFORMATION
For additional information, please contact Kalie Fallon, Emerging Mobility and TDM Planner, DRCOG at kfallon@drcog.org.

ADVANCED MOBILITY PARTNERSHIP

DATE: December 7, 2022
TO: AMP Executive Committee
FROM: Kalie Fallon, Emerging Mobility and TDM Planner, DRCOG
SUBJECT: AMP Executive Committee 2023 Meeting Calendar
ACTION: Information

SUMMARY

The AMP Executive Committee meets quarterly on the first Wednesday of the month from 2:00-3:00pm. The AMP Executive Committee meeting schedule for calendar year 2023 is as follows:

2023 Calendar
March 1
June 7
September 6
December 6

ATTACHMENT(S)

N/A

ADDITIONAL INFORMATION

For additional information, please contact Kalie Fallon, Emerging Mobility and TDM Planner, at kfallon@drcog.org.