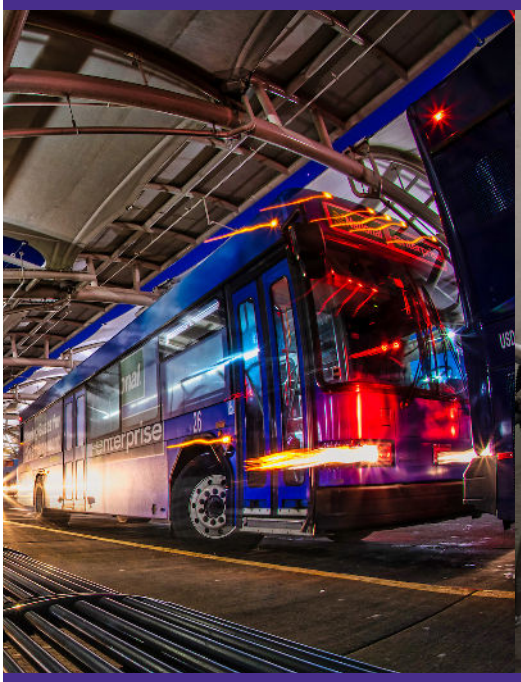
DEN TRANSPORTATION DEMAND MANAGEMENT PLAN

Mobility Recommendations



DENVER INTERNATIONAL AIRPORT

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CCD	City and County of Denver
DEN	Denver International Airport
DOTI	Denver's Department of Transportation & Infrastructure
DRCOG	Denver Regional Council of Governments
FAA	Federal Aviation Administration
GRH	Guaranteed Ride Home
RTD	Regional Transportation District
SEO	Search Engine Optimization
SIDA	Security Identification Display Area
TDM	Transportation Demand Management
TMA	Transportation Management Association
TNC	Transportation Network Company (e.g., Uber, Lyft)
TSA	Transportation Security Administration

EXECUTIVE SUMMARY

The Denver International Airport (DEN) Mobility Study was conducted to identify strategies to reduce demand on Peña Boulevard and other roadways, reduce the environmental impacts associated with vehicle trips, and improve access to the airport for employees and passengers. The resulting recommended transportation demand management (TDM) strategies are detailed in this report along with guidance for their implementation.

INTRODUCTION TO TRANSPORTATION DEMAND MANAGEMENT (TDM)

The TDM Plan focused on the identification of TDM strategies. TDM strategies focus on offering appealing alternatives to driving alone. The strategies can include educational programs, incentives and pricing, policies, and investment in low-cost infrastructure and transportation services. TDM strategies inform and encourage travelers to make choices that efficiently meet their travel needs and encourage the use of less congested travel modes, times, and routes.

PURPOSE OF THE TDM PLAN

The need to address mobility and access to DEN is a result of the airport's and the surrounding communities' fast growth. In 2022, the airport had 69.3 million passengers; that number is expected to reach 100 million by 2032. Jobs at and surrounding the airport are expected to increase from 238,000 in 2020 to 397,000 by 2050. Meanwhile, the number of residents living around the airport is expected to increase from 127,000 to 250,000 over the same period[1]. This growth creates more demand for the transportation infrastructure and services that travelers and employees use to get to and from the airport. This results in more delays and challenges for passengers and workers accessing the airport.

THE STUDY PROCESS

The study was led by a group of experts that included consultants and DEN staff from numerous divisions. It involved benchmarking to identify what other airports are doing to improve mobility; a review of transportation services and infrastructure to understand what challenges and opportunities exist when it comes to moving people to and from the airport; surveys of passengers, tenants, and employees to understand current behaviors, needs, and what tools and resources would be most effective to improve mobility; and tenant interviews to explore transportation challenges in depth.

Results from the data-collection efforts were used to identify an initial list of TDM strategies. The list was subsequently refined based on feedback from multiple divisions within DEN, a workshop that included internal and external stakeholders, and an analysis of the strategies' ability to meet community and DEN needs.

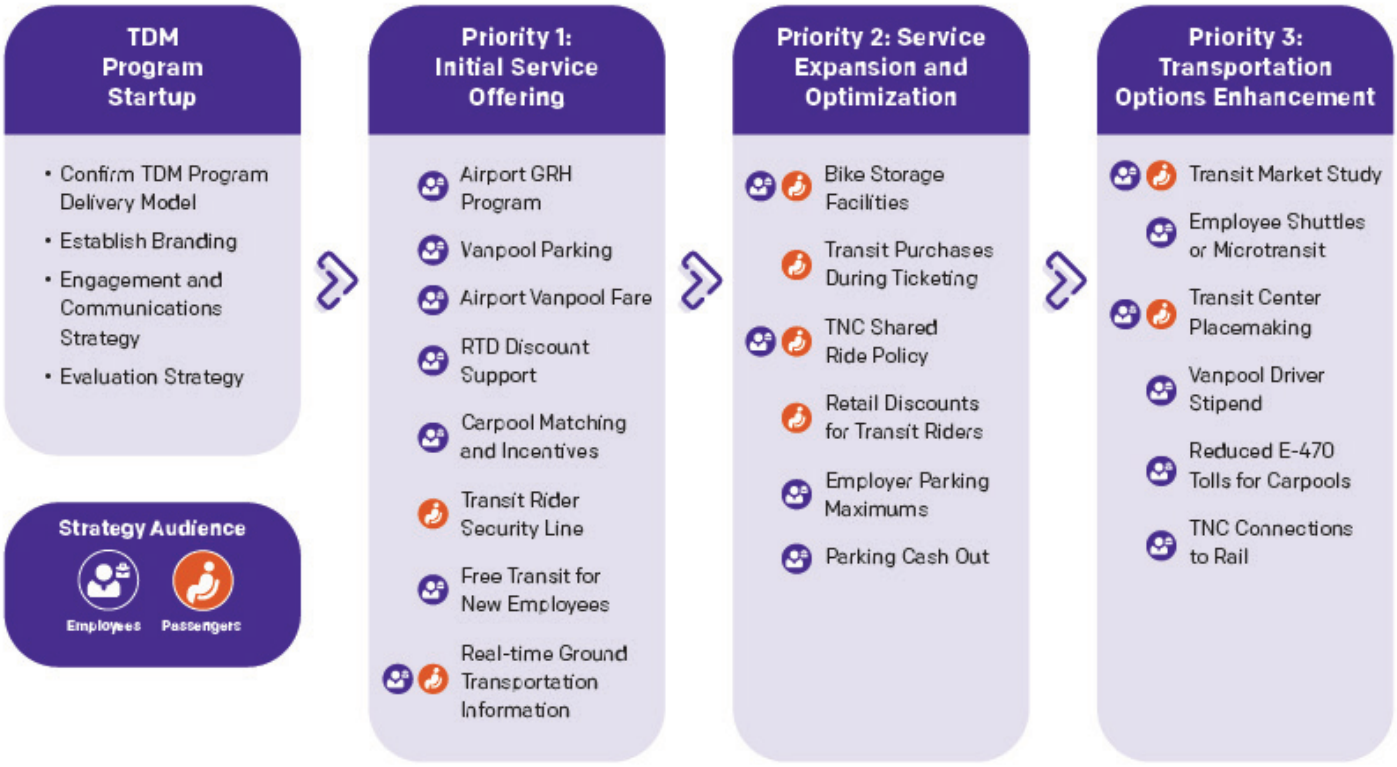
[1] Denver Regional Council of Governments, 2050 travel model

RECOMMENDATIONS

The TDM recommendations are summarized in Figure 1 and organized based on priority. Implementing the strategies will require creating a structure for their delivery. Options for doing so have been provided to DEN leadership and include operating the program internally similarly to how parking is managed, creating a non-profit to deliver the services, or joining an existing non-profit.

In Figure 1, TDM Program Startup items are activities that should be implemented to ensure a successful program launch and long-term success. TDM strategies are subsequently organized into three tiers based on priority. Each strategy has an icon next to it that shows whether the strategy serves passengers, employees, or both. The fill report includes a workplan to guide the implementation of the recommended strategies.

Figure 1: Recommended TDM Activities and Strategies



LONG-TERM GOALS

As part of the plan, DEN established long-term goals for how employees and passengers access the airport. By 2035 DEN seeks to decrease the rate at which employees drive alone to the airport by 10 percentage points. By the same time, DEN seeks to increase the rate at which passengers take rail, bus, and shuttles to the airport by 10 percentage points.

INTRODUCTION

The Denver International Airport (DEN) initiated the Peña Boulevard Master Plan in spring 2022. The plan includes a Transportation Study and a TDM Study that will help DEN implement multimodal solutions to improve mobility along Peña Boulevard, within surrounding communities, and to the airport generally.

The need to address mobility and access to DEN is a result of the airport's and the surrounding communities' fast growth. In 2022, the airport had 69.3 million passengers; that number is expected to reach 100 million by 2032. Jobs at and surrounding the airport are expected to increase from 238,000 in 2020 to 397,000 by 2050. Meanwhile, the number of residents living around the airport is expected to increase from 127,000 to 250,000 over the same period[2]. This growth creates more demand for the transportation infrastructure and services that travelers and employees use to get to and from the airport. This results in more delays and challenges for passengers and workers accessing the airport.

This document summarizes the work and recommendations of the TDM Study, which was conducted to identify mobility solutions to improve access to the airport using transportation demand management (TDM) strategies. TDM strategies include educational programs, incentives and pricing, policies, and investment in low-cost infrastructure and transportation services to inform and encourage travelers to make choices that efficiently meet their travel needs.

The recommendations from this study are intended to reduce demand on Peña Boulevard and other roadways, reduce the environmental impacts associated with vehicle trips, and improve access to the airport for employees and passengers. They do this by increasing awareness of travel options; reducing the cost and time needed to ride in carpools, vanpools, or on transit; and implementing policies that encourage airport tenants to provide subsidies that do not incentivize driving alone over the use of more sustainable travel options. TDM strategies that will likely impact passenger vehicle trips and access are expected to have minimal to no impact on employee trips and vice versa. For this reason, unique recommendations were identified for each traveler group.

By improving access to the airport, the recommendations seek to improve access to jobs for low-income employees and others who cannot afford to drive or are unable to drive. Improved job access can benefit workers economically and enhance airport operations by increasing the number of people who can work at the airport and enhancing job retention.

[2] Denver Regional Council of Governments, 2050 travel model

STUDY PROCESS

The study was conducted by a team of consultants with experience in airport and TDM planning in close coordination with DEN staff from numerous divisions. DEN staff established specific expectations that the study recommendations be based on significant input from airport tenants, employees, and passengers, along with local and regional stakeholders representing government agencies, area residents, and transportation service providers. They also wanted the recommendations to be informed by successes and lessons learned at other airports. The consultant team and DEN staff developed a study process to meet these expectations. The key data-collection elements of the study process are summarized below.

1. **Benchmarking:** Data was collected from other airports regarding their efforts to improve access, how employees and passengers access the airports, and ground-access lessons learned.
2. **Transportation Services and Infrastructure:** The study team also collected information on transportation services and infrastructure that impact airport access. This included parking data; transit usage, service areas, and frequency; and private ground transportation services and fees.
3. **Tenant Survey:** Airport tenants were surveyed to gather insights about how employee access impacts operations and success and what challenges employees experience getting to work. Information was also collected on existing and potential programs to improve employee access to DEN.
4. **Tenant Interviews:** A selection of tenants was interviewed to gain a deeper understanding of the transportation-related challenges tenants face and how actions could be taken to positively impact their operations and employees' access to DEN.
5. **Employee Survey:** Airport employees were surveyed to collect information on their travel behavior, challenges they face getting to work, and their preferences for transportation programs. Information was also collected to assist with evaluating recommendations considered in the study process.
6. **Passenger Survey:** Passengers were surveyed to understand how they get to the airport, how unique traveler characteristics impact mode choice, and what programs might assist travelers with getting to and from DEN. Information was also collected to assist with evaluating recommendations considered in the study process.

The TDM Study was coordinated with the Transportation Study, which focused on identifying infrastructure improvements to Peña Boulevard. Both studies were guided by an advisory group consisting of DEN staff and members of the consultant team. The advisory group met weekly to review and comment on findings, support outreach activities, and guide the study process.

In addition to the surveys and tenant interviews, stakeholder input was collected through two in-person events in the neighborhoods surrounding the airport and a virtual public meeting. Attendees could learn about and provide feedback on the transportation and mobility studies at these events. Information on the events and feedback is documented in the Transportation Study.

Goals to guide the selection of preferred alternatives for both the TDM Study and Transportation Study were developed as part of the Transportation Study. The goals applicable to the TDM Study are listed in Figure 2.

Figure 2: TDM Study Goals

Results from the various study elements were documented and shared with a group that included members of the consultant team and DEN staff. These individuals were led through a facilitated exercise to brainstorm potential TDM strategies that could be implemented to improve airport access. This resulted in the identification of approximately 70 TDM strategies. A workshop was conducted with a broader collection of DEN staff, the consultant team, and community members. Workshop participants were assigned strategies to review and prioritize while also documenting potential implementation challenges and opportunities.

After analyzing the feedback received, the list of TDM strategies was refined, with some strategies removed and others added. A feasibility meeting was subsequently held with DEN staff representing Legal Services, Global Communications & Marketing, Parking & Commercial Transportation, Equity, Engagement & Inclusion, and Planning & Design. The meeting provided an opportunity to identify further challenges that could impact the successful implementation of strategies. This meeting resulted in a list of 25 TDM strategies. The remaining strategies were scored based on their potential to achieve project goals, implementation costs, and the level of effort to implement. The consultant team also reviewed the remaining strategies to identify potential synergies. The result was a final list of 20 strategies detailed later in this report.

BENCHMARKING AND THE TRANSPORTATION SYSTEM

Airports were benchmarked to understand the range of ground access programs in use, identify goals that airports have set for ground access, and develop a list of programs, policies, and approaches that could inform the TDM Study recommendations. A review of the existing transportation system also supported this foundational research. Together, these two initiatives assisted the project team in comprehending possibilities for enhancing ground access and generating ideas for improvement.

BENCHMARKING

Airports were prioritized for benchmarking based on having similar passenger volumes to DEN, connections to a central business district via rail or bus-rapid transit, being predominantly origin-destination airports, and having a track record of pursuing innovative ground access programs and strategies.

The airports that were benchmarked are listed below and shown in Figure 3.

- Portland International Airport (PDX)
- Ronald Reagan Washington National Airport (DCA)
- Boston Logan International Airport (BOS)
- Seattle-Tacoma International Airport (SEA)
- San Francisco International Airport (SFO)
- Los Angeles International Airport (LAX)
- Gatwick Airport (LGW)
- Amsterdam Airport Schiphol (AMS)
- Heathrow Airport (LHR)

Figure 3: Benchmarked Airports

Airports with mode-share goals for passenger trips are listed in Table 1. The goals generally focus on high-occupancy vehicle (HOV) trips, defined as any travel mode other than driving.

Table 1: Airport HOV Goals

Airport	Non-Drive Alone Current Mode Share	Non-Drive Alone Mode Share Goals
Portland International Airport (PDX)	--	70% HOV
Boston Logan International Airport (BOS)	24%	40% HOV by 2027
Seattle-Tacoma International Airport (SEA)	18%	10% Rail; 16% other non-drive alone by 2030
Gatwick Airport (LGW)	40% (Rail)	45% rail by 2030
Heathrow Airport (LHE)	40%	50% by 2030

Refer to *Attachment A. Airport Benchmark Ground Access Programs* for a complete summary of the benchmarking effort.

THE TRANSPORTATION SYSTEM

The transportation system was evaluated to understand the travel options for passengers and employees accessing the airport. Key findings are summarized below.

Parking

- Passenger parking at the airport can sometimes be limited, particularly during holidays. Demand can exceed capacity for the East and West Garages and close-in East and West Economy lots. However, parking is generally available at the Pikes Peak shuttle lot.
- Parking costs are $30 per day for the garages, $18 per day for the economy lots, and $8 per day at the Pikes Peak shuttle lot as of January 2024.
- Seven off-airport commercial parking facilities offer shuttles to the airport. A DEN-operated parking lot is located at 61st and Peña, with access to the airport via the Regional Transportation District (RTD) A Line.
- Employee parking costs $36 per month and is available in two lots. Access to the lots is controlled based on the type of security badge an employee has. The lot for landside employees was recently relocated to the former Mt. Elbert shuttle lot.

Transit

- DEN is served by five RTD bus lines and the A Line commuter rail. Fares for the A Line and airport buses will be $10 per day starting January 1, 2024. Passengers can take unlimited trips on the RTD system for the remainder of the day after paying the $10 fare. A monthly pass can be purchased for $88.

- RTD is updating the LiVE discount program in 2024 to increase the discount to 50% from 40% and further decrease the cost of a monthly transit pass.
- Based on a study conducted by RTD in April 2019, half of A Line riders are local residents, while the other half are visitors.
- The airport recently established an EcoPass master contract that gives all employees working in concessions an unlimited transit pass at no cost to the employee. EcoPasses are valid for all RTD services and available at a significant discount, but employers must purchase passes for all employees at the airport.

Vanpools

- Vanpools are shared vehicles with 6 to 15 passengers, typically co-workers or employees sharing similar commutes. Most vanpool contracts are between the vanpool provider and the individual riders. Riders share the vanpool costs charged by the provider, including fuel, maintenance, and a base fare per seat. Some vanpool riders receive partial or full fare support from their employers.
- Vanpool programs cover the entire Front Range. In the Denver region, vanpools are operated by Enterprise under contract to the Denver Regional Council of Governments (DRCOG) and RTD, which subsidize and help market the program. The North Front Range Metropolitan Planning Organization operates vanpools originating from northern Weld County to Fort Collins. The Pikes Peak Area Council of Governments operates vanpools originating from Colorado Springs and nearby cities. Two vanpools with airline employees served the airport at the time of this study.

Private Transportation Services

- The airport hosts 28 shared-ride services and 13 taxi services, with taxis offering both flat rates to popular areas and metered rates.
- DEN has operating agreements with Turo, a peer-to-peer carsharing service that allows private individuals to rent their personal vehicles.

KEY FINDINGS

Multiple themes were identified during the benchmarking process. Sustainability and climate change goals are driving many ground access initiatives (e.g., SEA, SFO, and LAX). Airports are increasingly looking at pricing and yield management as a tool to influence mode choice, align ground access services with market segments, and contribute to non-aeronautical revenue generation (e.g., parking).

The benchmarking effort also showed that airports with the highest daily parking rates tended to have the highest use of non-drive-alone and public transit travel options. Several US airports have considered access fees to manage curb congestion (e.g., BOS, LAX, and SEA). Still, none have implemented programs like those at Gatwick, Heathrow, and other airports in the United Kingdom.

Airport transit fares are higher than the rest of the RTD system. All travel to or from the airport requires the purchase of a $10 Airport Day Pass, good for unlimited travel on the RTD system. Since most passengers do not travel to and from the airport on the same day, they must purchase two-day passes. Their total cost to get to and from the airport is $20. Most employees will travel to and from the airport on the same day. This limits their total cost to get to and from the airport to $10. Significant cost savings are available to employees who purchase monthly transit passes at $88 per month. Lower-income employees may also be eligible for RTD's LiVE discount. Before 2024, a monthly airport pass was $200. These changes to the fare structure represent significant opportunities to affect employee travel choices.

Employee parking fees at only $36 per month make the cost of driving and parking less than taking transit when not accounting for fuel and maintenance costs.

Vanpool service offers an opportunity to serve employees who do not have good access to transit. The lack of vanpools serving the airport indicates an issue with its value proposition and/or awareness of the program.

SURVEYS AND INTERVIEWS

Surveys and interviews were conducted to understand how employees and passengers access the airport. Knowing how people access the airport sets a baseline that can be used to develop TDM strategies and measure their success. The surveys and interviews were also used to identify transportation challenges, document transportation benefits offered by employers, and evaluate the potential impact of some TDM strategies.

TENANT INTERVIEWS

Ten tenant interviews were conducted with various airport tenants. These interviews aimed to gather information from tenant representatives about the impacts of transportation accessibility and commute benefits on their employees.

Representatives from three airlines, DEN maintenance, a cargo operator, two concessionaires, two labor unions, and a rental car agency were interviewed. The following are commonalities expressed by the tenants about transportation accessibility and commute benefits:

- All the tenants offer their employees some form of transportation benefit or subsidy, but they differ in type and the amount provided.
- Commuting to the airport for work is a major concern for employees of all interviewed tenants.
- The lack of reliable and frequent transit options affects the ability of the tenants to recruit and retain staff.
- Some tenants provide shuttles or operate their fleet vans to provide transportation for employees in specific scenarios, such as overtime or weather-impacted commutes.
- Carpooling is encouraged or practiced by some employees to reduce commuting costs.
- Many tenants experience issues with tardiness or missing work altogether due to transportation issues.
- EcoPasses are offered by some tenants, but there are varying degrees of utilization and effectiveness.
- Many tenants offer overtime opportunities to staff, which typically requires flexibility in employee schedules that transit riders cannot take advantage of due to RTD operating hours.

"SOMETIMES PEOPLE CAN WAIT ABOUT 40 MINUTES FOR A BUS AND THEN MUST GO THROUGH SECURITY. THAT COULD BE AN HOUR AND A HALF IN THE MORNING OF UNPAID TIME."

-CONCESSIONAIRE TENANT

TENANT SURVEY

An online survey was distributed to airport tenants. The survey was marketed through direct emails and phone calls to tenants at tenant meetings and airport communications channels. Fifty-four tenants responded to the survey, representing over 11,000 employees. Common themes identified in the survey included a desire for improved transportation access to the airport for employees, mainly calling for:

- More frequent and reliable service on the A Line.
- Extended bus service hours to connect with Park-n-Rides.

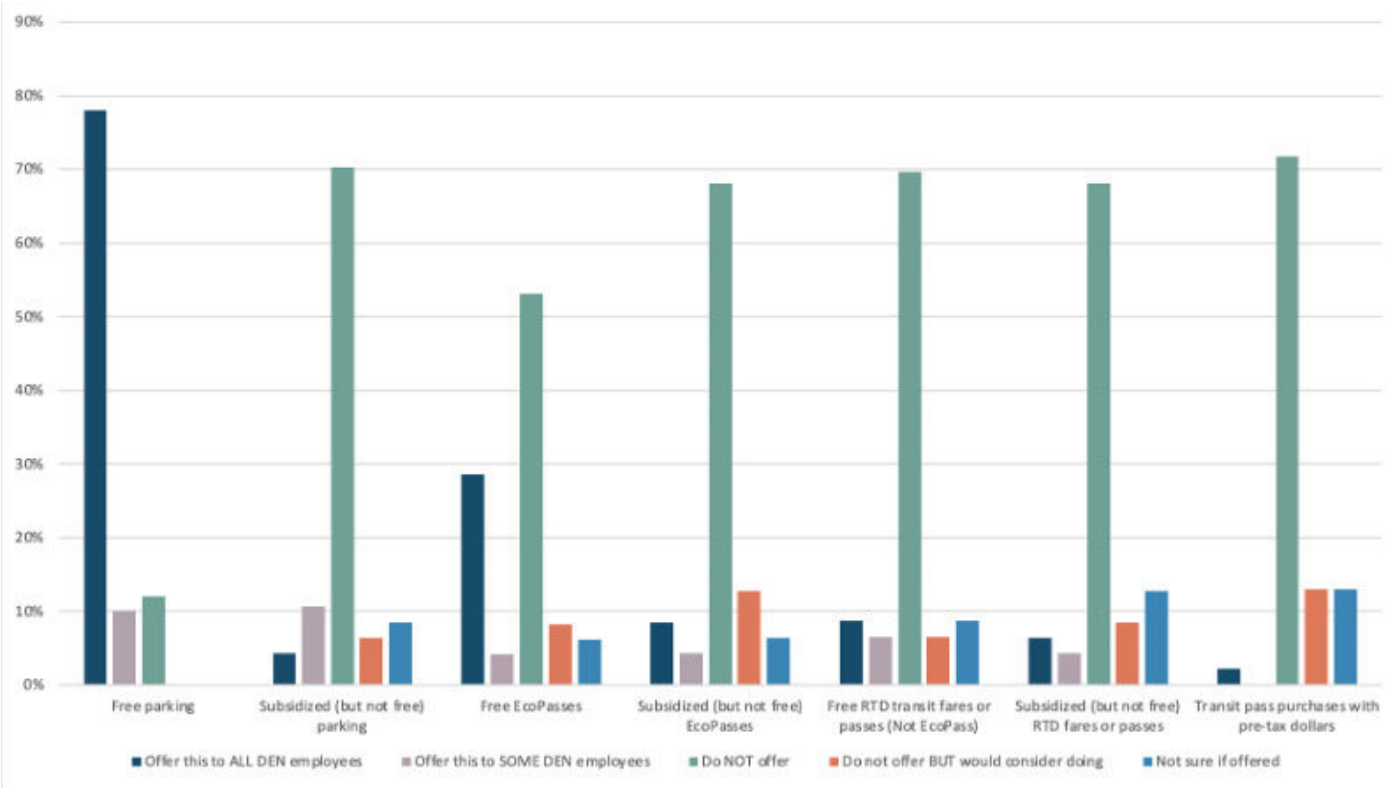
- Increased bus service in areas where employees reside.
- Implementation of an airport-specific shuttle.
- Reduction in the cost of EcoPasses and overall transit fares.

Figure 4 summarizes the commute benefits offered by employers to employees. Many tenants do not provide free or subsidized transit but offer free parking. This creates an economic incentive for employees to drive versus take transit or use other modes like carpooling and vanpooling. When asked why they do not provide EcoPasses to employees, tenants' top responses were that they were unaware of the program (29% of respondents), they do not have enough employees who take transit (19%), and the cost is too high (14%). Just over half of tenants who provide EcoPasses say that their transportation benefits give them a competitive advantage when hiring and retaining employees.

"THE A LINE REALLY HELPED. I REALLY COULD TELL A DIFFERENCE. WE STARTED GETTING EMPLOYEES FROM DIFFERENT NEIGHBORHOODS THAT WE'D NEVER GOTTEN BEFORE."

-RENTAL CAR TENANT

Figure 4: Commute Benefits Offered by Employers



As might be expected, given the large amount of shift work at DEN, relatively few employees can flex their shift start and end times. This can make it challenging for employees to align their shift start and end times with transit service. It also decreases the pool of potential matches for carpooling and vanpooling.

Transportation also impacts tenants' ability to recruit and retain employees. Approximately 30% of employers cited the following as being primary issues that affect their ability to recruit and retain employees: the time it takes employees to travel to the airport, RTD service not operating when employees need to get to or leave work, the time it takes employees to pass through security, and the time it takes employees to get from where they park to their job.

"THE HARDEST PART ABOUT WORKING AT THE AIRPORT IS GETTING TO THE AIRPORT."

-CONCESSIONAIRE TENANT

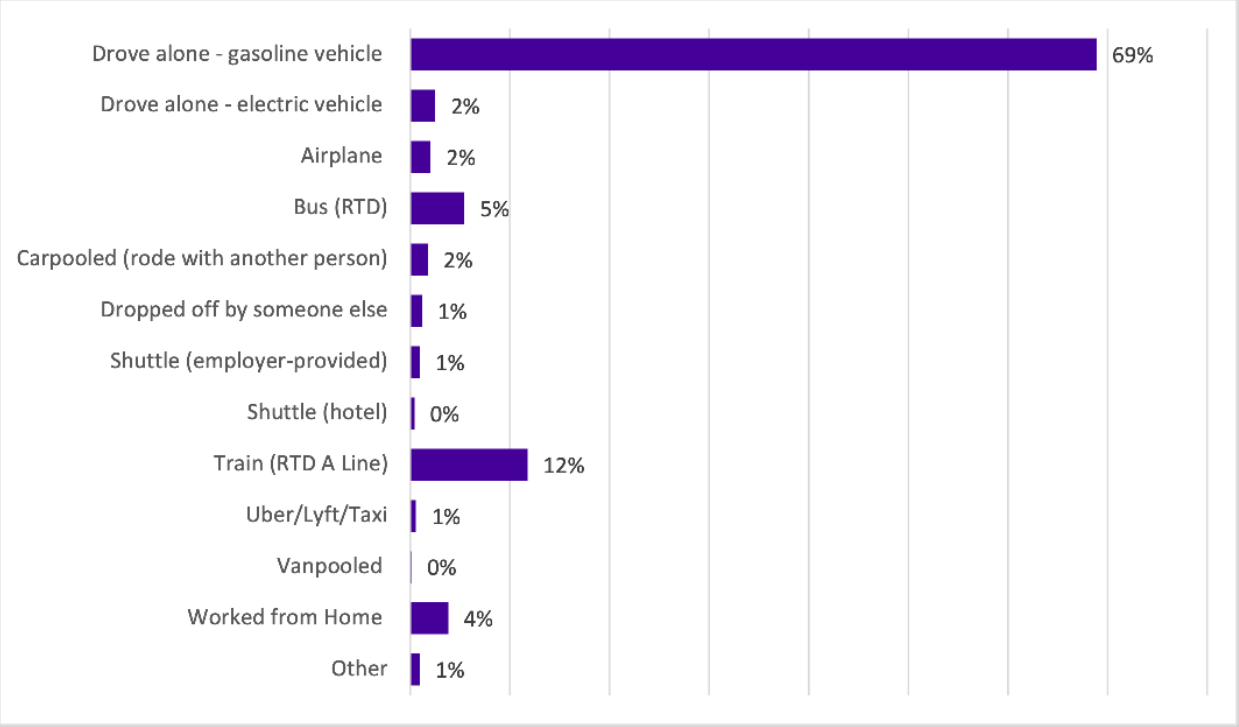
Refer to *Attachment B. DEN Tenant Transportation Survey Results* for additional information.

EMPLOYEE SURVEY

A survey of employees was conducted in the fall of 2022 and distributed through employers, DEN communications channels, and employee events. The survey was available in paper and online formats. The online version was available in English, Spanish, and Amharic. The employee survey received 2,702 responses, representing approximately 8% of all DEN employees at the time of the survey.

Figure 5 shows the employee mode split. A little over 70% of employees reported driving alone to work. Transit was the second most used travel mode, accounting for 17% of commute trips.

Figure 5: Employee Mode Split



Commute mode varies significantly by employee type. Concessionaire employees tend to work more days at the airport than other employees, meaning they are commuting more days per week.

The evaluation of employee mode split included household income to ensure a comprehensive understanding of factors impacting

CONCESSIONAIRE EMPLOYEES ARE ALMOST 3.5 TIMES MORE LIKELY TO COMMUTE VIA TRANSIT THAN AIRLINE EMPLOYEES

transportation decisions. Employees with annual household incomes below $50,000 were more than twice as likely as other employees to take the train and about twice as likely to ride the bus.

"DEPENDING ON TRAFFIC, [RTD] CAN BE THE FASTEST AND MOST RELIABLE WAY TO GET TO WORK."

-EMPLOYEE

Employees were asked to review a list of options that often impact commute mode choices and to select the options that apply to them. They could choose as many options as applied to them. Figure 6 shows the results by commute mode. Employees who take the bus to work do so because they consider it the least expensive and least stressful option. People who drive alone do so because they consider it to be fast, reliable, and because they can make stops before and after work more easily.

Figure 6: Drivers of Employee Commute Choices

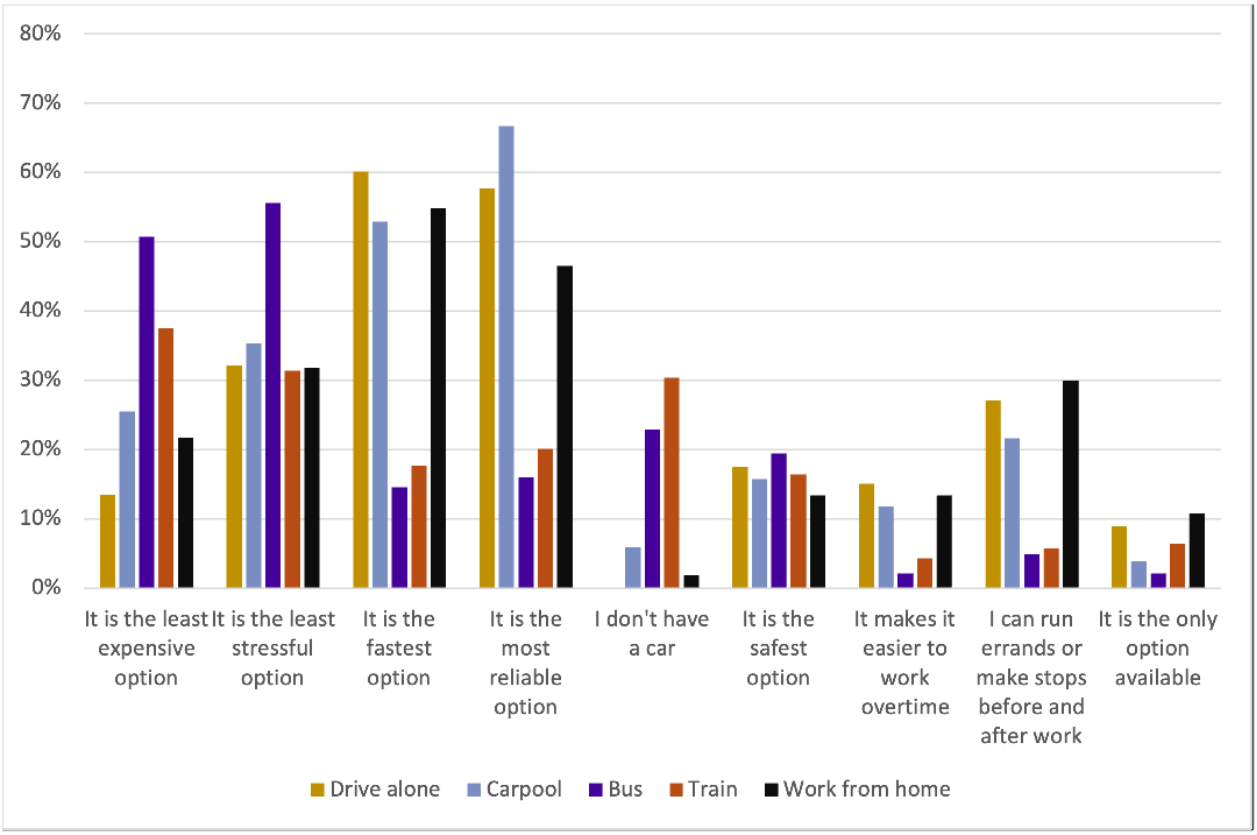
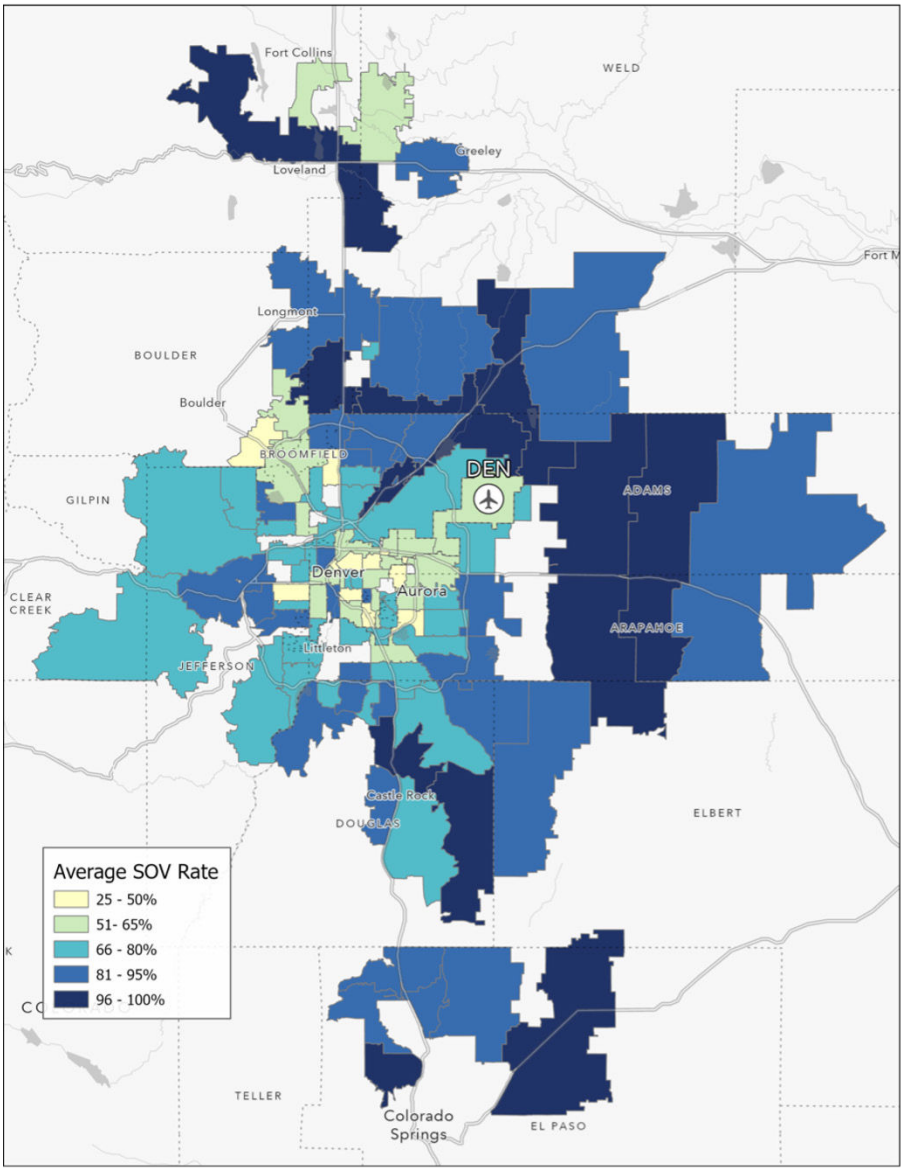


Figure 7 shows the average rate employees drive alone to the airport by residential ZIP code. The areas with lower drive-alone rates are generally located near the airport, in denser urban areas, and adjacent to high-quality RTD service, such as the A Line, R Line, and AB1 SkyRide bus routes.

Employees were asked to report how long it takes them to get from their residences to where they park or alight from transit at the airport. The results were analyzed to compare travel times by transit and driving alone. Transit riders are almost four times more likely than drivers to report short commute times of less than 15 minutes. In general, transit travel times appear competitive to driving times.

Figure 7: Employee Drive Alone Rates

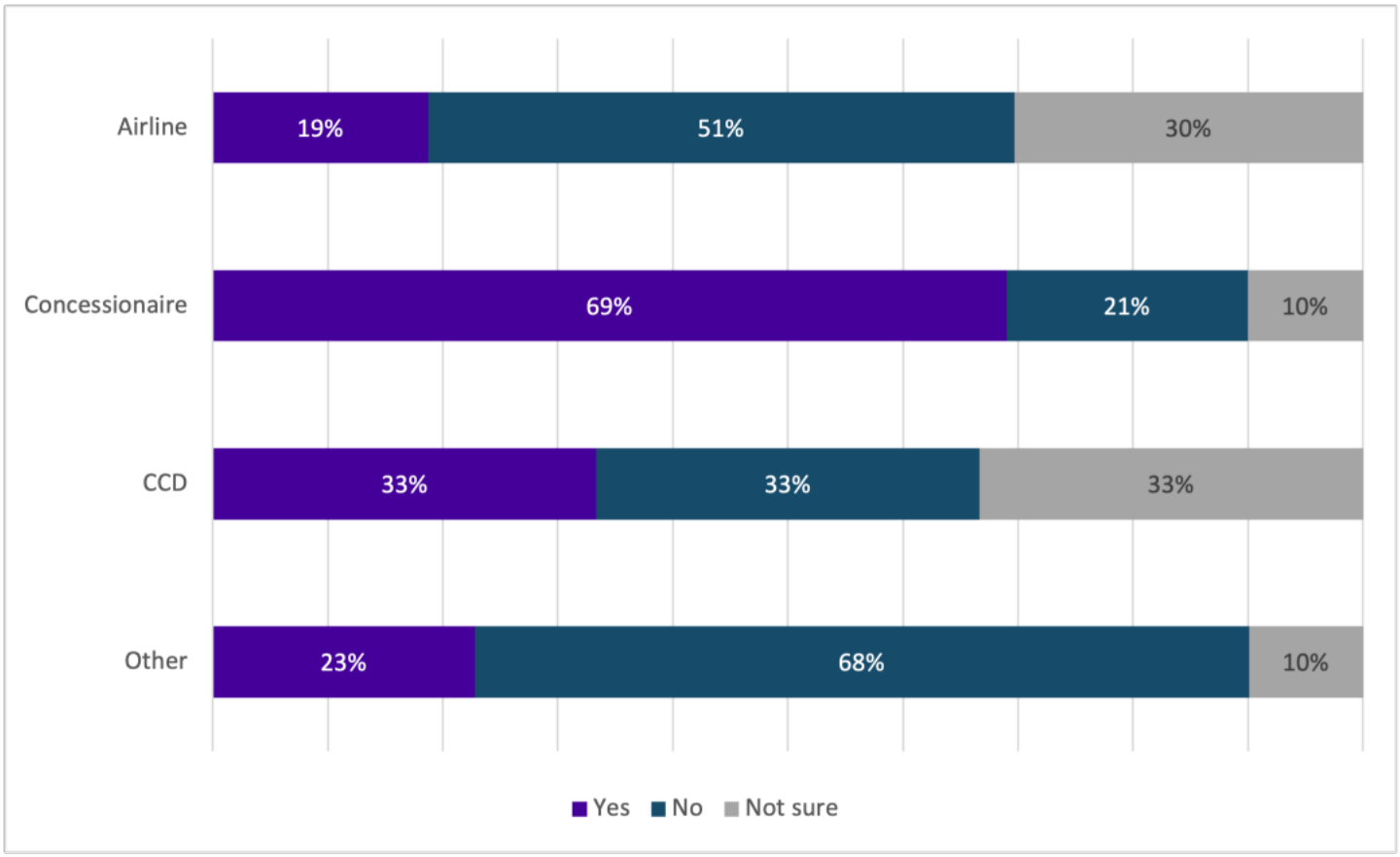


Employees were also asked to report how long it takes them to get from their parking space or where they alight from transit to their job. For concourses A, B, and C, the average travel time for transit riders and employees who drive alone was 19 minutes. Employees who work in the Jeppesen Terminal and Airport Office Building who drive spend 12 minutes getting to their job site versus 15 minutes for employees who take transit.

COMPARED TO EMPLOYEES WHO NEVER TAKE TRANSIT TO WORK, EMPLOYEES WHO RIDE TRANSIT FIVE OR MORE DAYS PER WEEK ARE THREE TIMES AS LIKELY TO RECEIVE FREE OR DISCOUNTED TRANSIT FARES

Figure 8 shows whether employees reported receiving free or discounted transit fares based on employer type. Employees who work for concessionaires were significantly more likely to receive free or discounted transit fares[3].

Figure 8: Does Your Employer Provide Free or Discounted Transit Fares?



Refer to *Attachment C. DEN Employee Transportation Survey Results* for additional information.

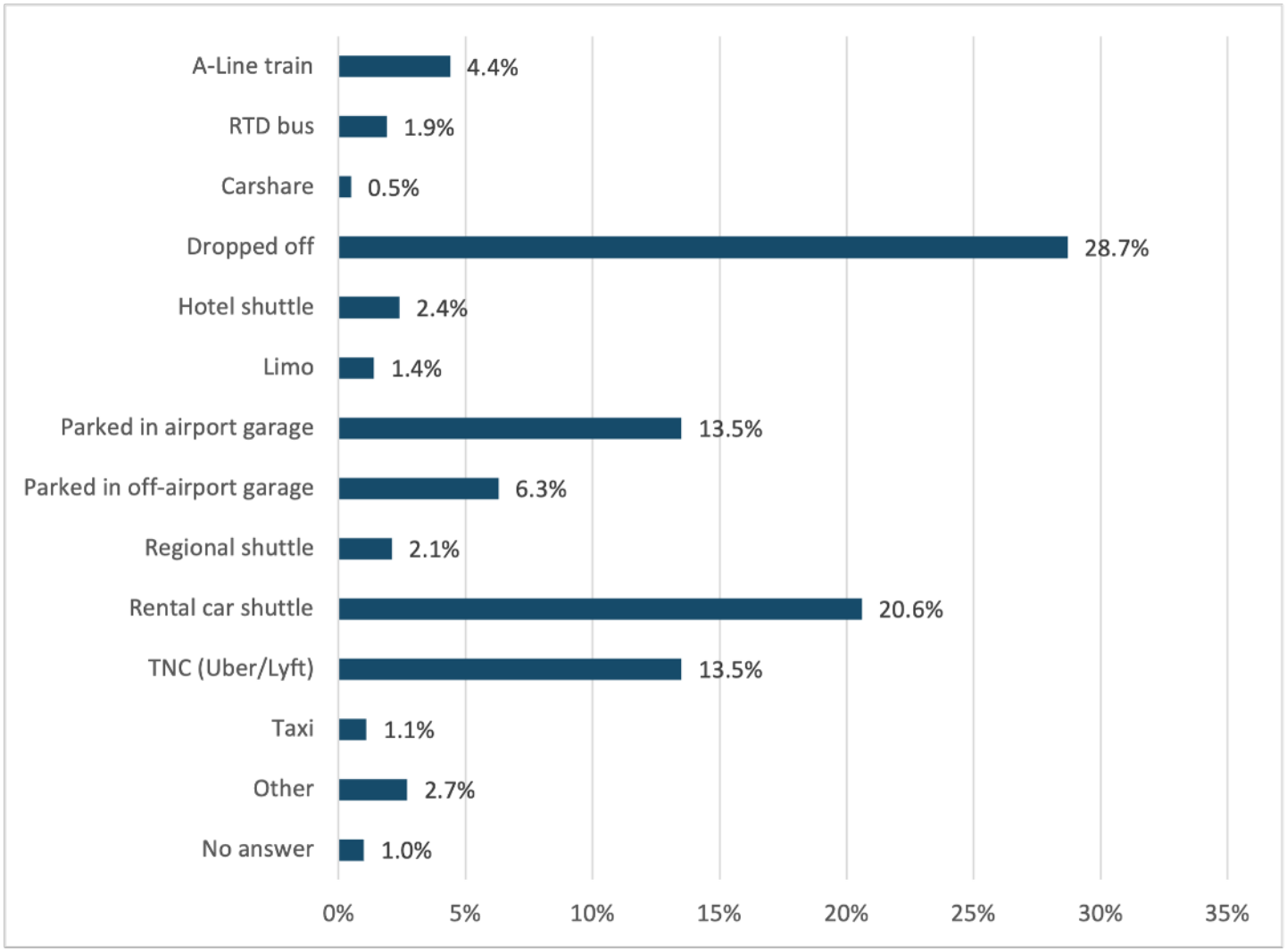
PASSENGER SURVEY

Passengers were surveyed to understand how they access the airport and what factors affect their mode choice. The survey was conducted in July and August 2022 and received 4,800 responses. Passengers in gate holding areas were asked to complete the survey and targeted using a sampling methodology designed to obtain a representative sample of all travelers. Passengers completed the survey using tablets; the questions were available in English and Spanish.

[3] DEN entered into a Master EcoPass agreement with RTD after the employee survey was conducted. That agreement resulted in all concessionaire employees gaining access to EcoPasses.

Figure 9 shows how passengers arrive at the airport and that automobiles are the dominant mode of transportation.

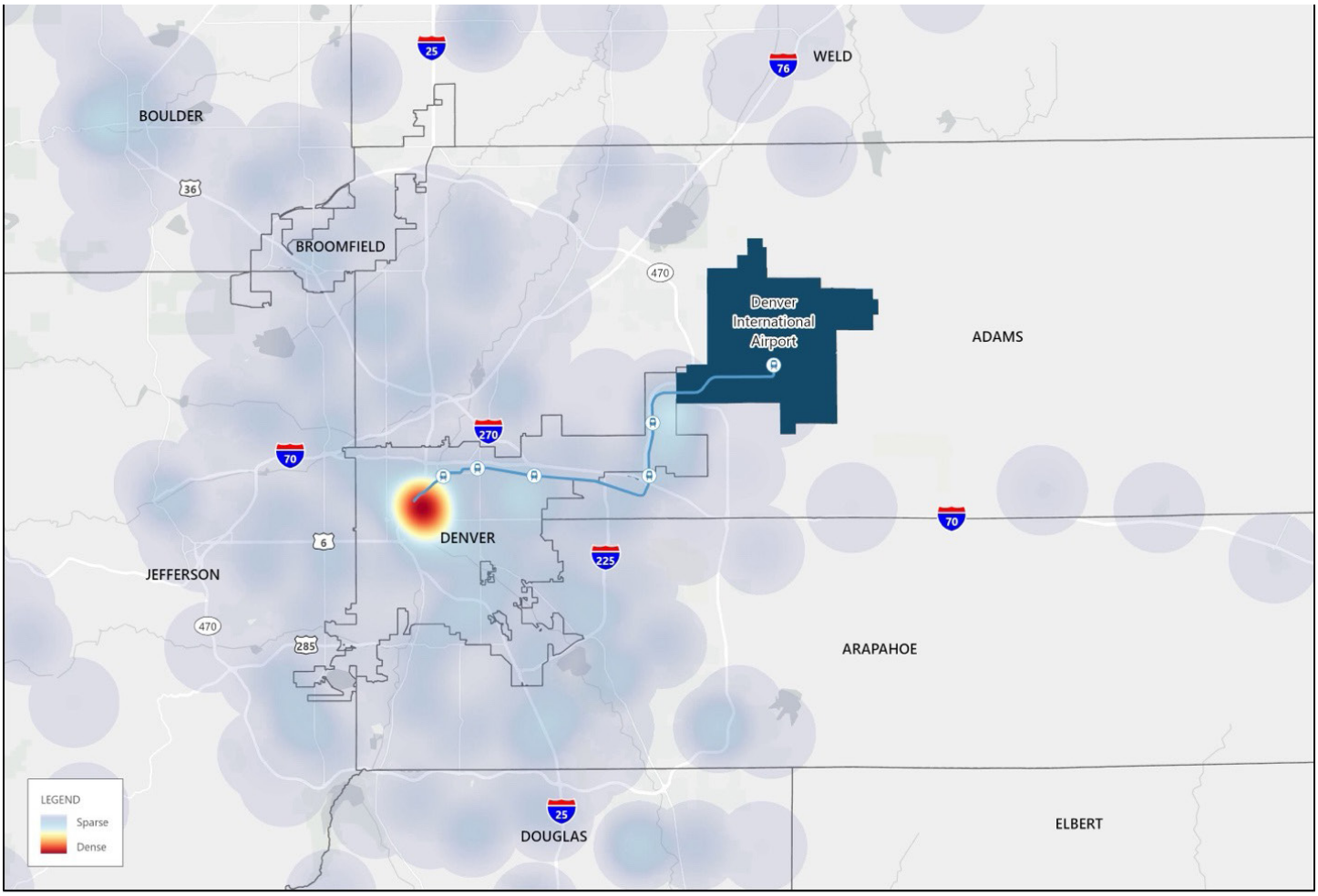
Figure 9: Passenger Mode Split



The two most common reasons passengers cited for not taking transit were a lack of transit service near their origin and not knowing enough about their options.

Figure 10 shows where passengers began their trips to the airport. While there is a high density of trips that begin downtown, passengers are otherwise relatively evenly distributed throughout the Denver region.

Figure 10: Origins of Passenger Trips



Refer to *Attachment D. DEN Passenger Transportation Survey Results* for additional information.

KEY FINDINGS

Airport tenants were consistent in their concerns regarding employee commute challenges. This indicates that they would be open to TDM solutions and programs offered by the airport. The consultant team has found that when employers have shared concerns, they are more likely to be actively involved in TDM programs.

A key concern for both employers and employees was the time it takes to commute to the airport and the time it takes to get from parking spaces or the transit center to job sites. Any programs that can reduce this travel time will likely be well received.

Transit can be an efficient travel option for employees and travelers; it is sometimes faster than driving alone and can be much less expensive than passenger parking. However, many employees and passengers said they do not have access to a transit service that can get them from their residence to the airport. They also reported that transit does not operate when they need it.

While transit can be an efficient travel option for some employees, their employers may only cover the cost of parking. This creates a financial incentive for employees to drive instead of taking transit or using other more sustainable travel modes.

There are significant variations in how employees and passengers travel to the airport based on their job type, travel purpose, and place of residence. A TDM program needs to implement multiple strategies to address these various needs. A successful program must also remain focused, so it may not be possible to address the needs of all travelers. It will be essential for the TDM program to focus on efforts likely to generate a high return on investment.

STRATEGY RECOMMENDATIONS

TDM strategies that addressed the transportation needs identified from the surveys, tenant and public engagement, and review of the transportation system were identified for consideration. They were also identified based on their ability to maximize benefits from the existing transportation system and achieve the goals identified in the planning process. Needs included reducing travel times for employees, making transit and other non-drive-alone modes more competitive compared to driving alone, increasing employee and passenger knowledge of travel options, and addressing the limited reach and service hours of transit.

As noted in the Study Process chapter, a facilitated brainstorming meeting was conducted with the consultant team and DEN staff members to identify an initial list of TDM strategies. The session began with an initial identification of strategies. Attendees were then shown four personas that represented different passengers and employees. Attendees identified which strategies from the initial brainstorm would benefit the various personas. This was done to ensure that the initial list of strategies addressed the needs of different traveler groups. The strategies were refined through discussion, and attendees ranked the strategies based on ease of implementation. This resulted in an initial list of almost 70 potential TDM strategies. An image from the brainstorming session is shown in Figure 11.

Figure 11: Persona Workshop Image from Strategy Brainstorming Session

The consulting team and DEN staff further refined the strategies before sharing them in a workshop with representatives from DEN, the community, transportation service providers, and additional consultants. The workshop resulted in an updated list of strategies that was subsequently reviewed with DEN staff representing Legal Services, Global Communications & Marketing, Parking & Commercial Transportation, Equity, Engagement & Inclusion, and Planning & Design. The meetings provided an opportunity to identify challenges that could impact the successful implementation of strategies. This resulted in a list of 25 strategies further refined by the consultant team, resulting in a summarized final list of 20 strategies.

EMPLOYEE-FOCUSED STRATEGIES

- **Airport Vanpool Fare:** Establish a special fare for vanpools that serve the airport. The fare could be equivalent to the cost of a transit pass.
- **Carpool Matching and Incentives:** Implement a program to encourage DEN employees to participate in scheduled carpooling. The program could help people find rides to work and may serve as an alternative to transit when service is limited, offering the additional benefit of providing participation incentives.
- **Employee Shuttles and Microtransit:** Operate shuttles or microtransit services from densely populated residential areas to the airport. Target neighborhoods without direct transit connections to DEN. Alternatively, provide service in areas with transit connections but during times when RTD service is limited or not operating.
- **Free Transit for New Employees:** Provide new employees with either an RTD monthly transit pass or ten RTD day passes during their Security Identification Display Area (SIDA) badging process.
- **Guaranteed Ride Home (GRH) Program:** Implement an airport-specific GRH program that allows employees who do not drive alone to work to get a free taxi, Uber, or Lyft ride home if an emergency arises or they need to work unexpected overtime. The Denver Regional Council of Governments operates a GRH program, but there are challenges associated with its implementation at the airport. A new program could use DRCOG's service or operate independently.
- **Parking Maximums for Employers:** Charge DEN tenants higher parking fees when the number of employee parking spaces they purchase exceeds a defined cap. The cap would be based on the number of employees. Higher parking fees should be similar to the cost of riding transit to encourage tenants who pay for parking to provide equivalent benefits for riding transit or using other travel modes.
- **Parking Cash-Out:** Develop resources and other tools to encourage airport tenants to implement parking cash-out programs. With these programs, employees who receive free parking spaces are paid the cash value of the space, or something equivalent like extra vacation, when they choose not to use the parking space.
- **Reduced Tolls on E-470 for Registered Airport Carpools:** Provide free tolls to employees who carpool on E-470 to encourage more employees to form carpools.
- **RTD Discount Support:** Help eligible employees secure access to RTD's discounted transit passes. Seniors, disabled riders, and individuals with household incomes at or below 185% of the federal poverty level can receive half-price rides, day passes, and $27 monthly passes. Eligible employees should also be informed about other transportation discounts they may be eligible to receive, such as Lime and Lyft scooter- and bike-share discounts for lower-income Denver residents.
- **Reduced Fare Transportation Network Company (TNC) Connections to Rail for Employees:** Offer discounted TNC rides to employees to access stations along the A Line and R Line as a solution to first- and last-mile transportation challenges.
- **Preferred Parking for Vanpool Vehicles:** Allocate priority parking for registered vanpool vehicles at DEN. These spaces would ideally be provided in the East and West Garages. Access could be restricted when passenger demand for parking in the garages exceeds capacity.
- **Vanpool Driver Stipend:** Encourage employees to serve as vanpool drivers by subsidizing or fully covering their fare.

PASSENGER-FOCUSED STRATEGIES

- **Collaboration with Airlines for Transit Ticket Purchasing:** Work with airlines to integrate the ability to purchase RTD fares when purchasing airline tickets.
- **Onsite Discounts for Transit Riders:** Work with concessionaires to provide discounts to passengers who ride transit to the airport.
- **Transit Rider Security Line:** Create a dedicated Transportation Security Administration (TSA) security line for RTD riders to quickly pass through security.

ALL USER STRATEGIES

- **Bike Storage Facilities:** Install secure bike parking facilities at DEN and, in coordination with RTD, at stations along the A Line. The bike parking would make it easier for employees and passengers to access the A Line and other transit service.
- **Real-Time Ground Transportation Information:** Display ground transportation information, including upcoming transit arrivals, travel time, and TNC cost information to inform travel decision making. Accessible screens with compiled real-time transportation information can be installed at locations throughout the airport, including baggage claim and secure area exit points. The transportation information can also be displayed through DEN's employee portal, on breakroom screens, and on a DEN-specific app.
- **TNC Shared Ride Policy:** Require transportation network companies, such as Uber and Lyft, to offer a shared ride (carpool) option to riders departing the airport as part of their access agreement with DEN. TNCs stopped offering this feature at the start of the COVID-19 pandemic. Uber recently began offering the feature again, but its availability is not guaranteed, nor is the option available through Lyft at the time of writing this report.
- **Transit Center Placemaking:** Improve the DEN Transit Center bus area to make it more comfortable and interesting. Options include painting murals, adding kinetic art, installing more benches and real-time transit displays, and adding heaters. In addition, the area could support secure bicycle parking.
- **Transit Market Study:** Conduct a feasibility study for new airport-sponsored and subsidized bus services. The service could target employees, passengers, or both.

STRATEGY PRIORITIZATION

The final list of strategies was prioritized using a scoring process that (1) evaluated each strategy's ability to achieve the goals established in the planning process (noted in the Study Process section of this report), (2) estimated the cost of implementation, and (3) estimated the level of effort needed to implement each strategy.

Table 2 summarizes the raw scores for each strategy (in alphabetical order). The goal scores could range between 1 and 3, with 3 being the highest possible score.

It is important to note that every strategy ranked was vetted through numerous efforts and reviewed by DEN staff in multiple departments. Each ranked strategy is worthy of implementation. The ranking process was done to prioritize strategies, not remove strategies from consideration.

Table 2: Summary of Strategy Scores

Description	Goal's Score (1-3)	Cost Score ($-$$$)	Level of Effort (Low-High)
Bike storage facilities	1.50	$	Medium
Carpool matching and incentives	2.08	$$	Medium
Employee shuttles and microtransit	1.92	$$$	High
Free transit for new employees	2.33	$$	Low
Guaranteed Ride Home program	1.58	$$	Medium
Parking cash out	2.50	$$	Medium
Parking maximums	2.17	$	Medium
Real-time ground transportation information	1.83	$	Low
Reduced E-470 tolls for carpools	1.50	$$$	High
RTD discount support	2.25	$	Low
TNC connections to rail	1.67	$$$	High
TNC shared ride policy	2.25	$$$	Medium
Transit Center placemaking	1.33	$	High
Transit market study	2.50	$$$	Low
Transit purchases during ticketing	2.60	$	High
Transit rider onsite discounts	1.20	$	High
Transit rider security line	2.40	$$	High
Airport vanpool fare	2.00	$$$	High
Vanpool driver stipend	1.33	$$	Low
Vanpool parking	1.67	$	Medium

Table 3 provides more details regarding costs and staffing. Costs are estimates of the annual cost to implement a strategy, including a low and high range. Cost estimates include direct and indirect costs as of 2024. The bike storage and Transit Center placemaking strategies include significant infrastructure costs, which were depreciated over 10 years to create the annual cost estimate. Staffing estimates are based on a full-time equivalent of 2080 hours per year and were rounded up to the nearest 0.05. The TNC shared ride policy and Transit Center placemaking strategies will not require on-going staffing and therefore have no staffing estimates. The transit market study will also be time limited. While no staffing requirements are listed, DEN staff will need to manage the request-for-proposal process and project management.

Table 3 Summary of Cost Estimates

Description	Low Annual Cost Estimate	High Annual Cost Estimate	Staffing Estimate (FTE)
Bike storage facilities	$15,000	$18,000	0.05
Carpool matching and incentives	$52,000	$62,000	0.20
Employee shuttles and microtransit	$1,150,000	$1,380,000	1.50
Free transit for new employees	$106,000	$127,000	0.15
Guaranteed Ride Home program	$100,000	$120,000	0.35
Parking cash out	$57,000	$68,000	0.25
Parking maximums	$0	$0	N/A
Real-time ground transportation information	$31,000	$37,000	N/A
Reduced E-470 tolls for carpools	$525,000	$630,000	0.15
RTD discount support	$23,000	$28,000	0.15
TNC connections to rail	$3,675,000	$4,410,000	0.25
TNC shared ride policy	$264,000	$317,000	N/A
Transit Center placemaking	$20,000	$24,000	N/A
Transit market study	$188,000	$226,000	N/A
Transit purchases during ticketing	$44,000	$53,000	0.25
Transit rider onsite discounts	$11,000	$13,000	0.10
Transit rider security line	$47,000	$56,000	0.25*
Airport vanpool fare	$1,055,000	$1,270,000	0.25
Vanpool driver stipend	$98,000	$118,000	0.15
Vanpool parking	$4,000	$5,000	0.05

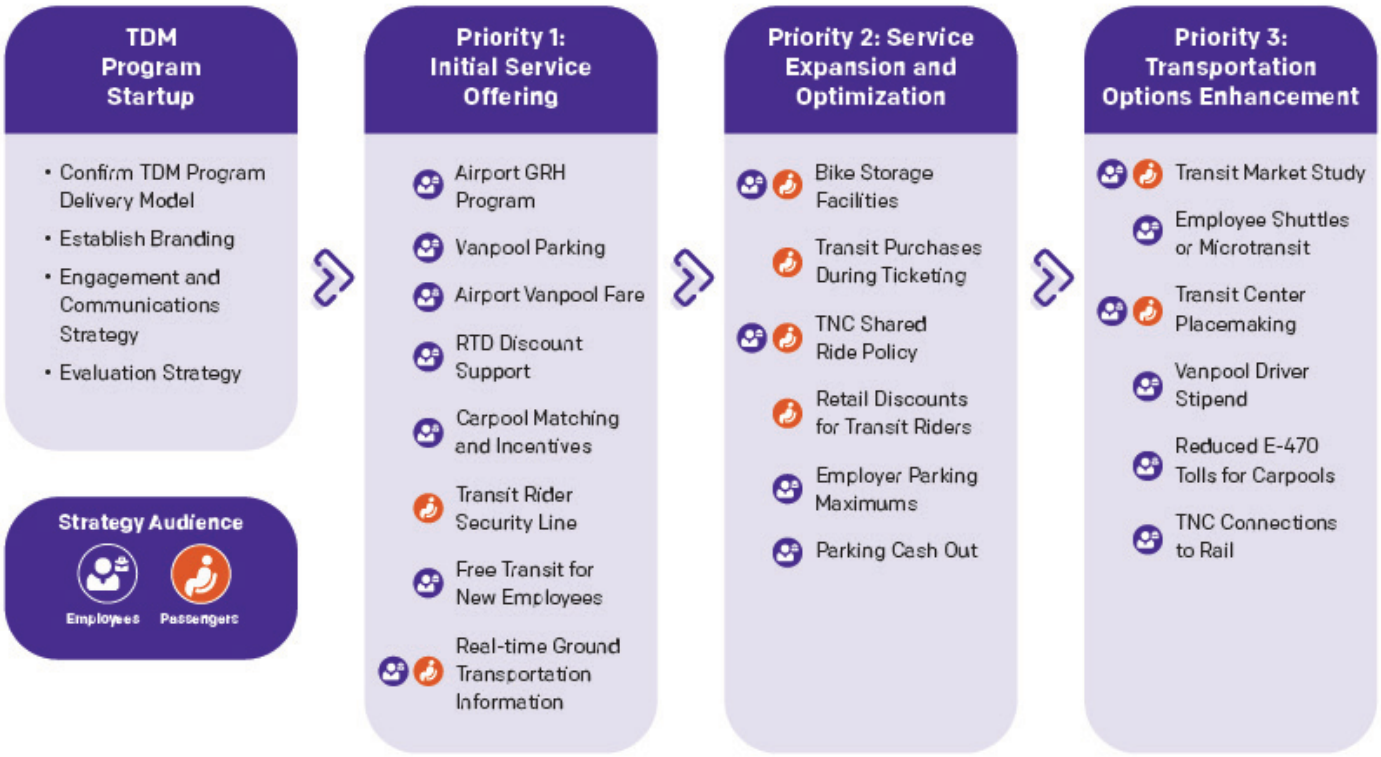
*Assumes verification of passenger eligibility can be managed with a turnstile or other automation. FTE requirements will be significantly higher if the line needs to be monitored by a staff person.

IMPLEMENTATION PLAN

This section details a workplan that outlines the steps needed to implement a successful TDM program at DEN. The workplan is organized into four sections as summarized in Figure 12. TDM Program Startup items are activities that should be implemented to ensure a successful program launch and long-term success. TDM strategies are subsequently organized into three tiers of priority. Icons next to the strategy names indicate whether they support the travel of employees, passengers, or both.

The implementation plan includes steps to implement the Priority 1 and 2 strategies and general guidance for implementing longer-term strategies.

Figure 12: Summary of Strategies



TDM PROGRAM STARTUP

The recommended TDM strategies will be most successful when managed and delivered through dedicated staff and aligned branding efforts. The consultant team identified potential options for delivering the TDM program based on best practices, available resources, and funding opportunities within the region, as well as their knowledge of DEN's needs. The delivery models considered are listed below. DEN staff and executives are working to determine the most suitable delivery model.

- DEN could manage the program, allowing it to set objectives and budgets, and determine staffing. Day-to-day operations could be conducted with airport staff or outsourced.

- DEN could request to join an existing transportation management association (TMA) that works to address travel challenges. There is no TMA currently serving DEN; therefore, joining a TMA would require a shift in service boundaries. In this scenario, the TMA would set objectives and budgets, and determine staffing based on needs identified by the airport and other stakeholders.
- DEN could facilitate the creation of an airport-focused TMA. In this scenario, the airport would be a member of the TMA along with other tenants and possibly adjacent businesses. The TMA would set objectives and budgets, and determine staffing based on needs identified by the airport and other stakeholders.

The type of delivery model impacts the organizational structure and available funding sources; however, it does not influence this implementation plan as there are commonalities between all three models.

Staffing: Launching a TDM program requires a committed allocation of resources to ensure success. Dedicated staff should oversee the implementation of the TDM strategies, coordinate with internal DEN and external stakeholders and vendors, and track progress toward DEN's strategic plans, Vision 100, and Operation 2045. The dedicated team responsible for delivering the TDM program to DEN employers, employees, and passengers must actively participate in relevant stakeholder committees. They should stay informed about internal and external projects impacting the airport and contribute to advancing the TDM strategies and policies presented below.

Branding: Crafting the TDM program's brand is crucial for optimizing its reach and influence among target audiences. The framework for establishing a brand should include the following:

- Developing a brand identity, including program name, mission, and "elevator pitch." The TDM program delivery method will impact the overall branding.
- Creating guidelines on brand voice and suggested audience messaging. Ways to improve accessibility for non-English speakers should be identified.
- Developing key brand elements, including logo, imagery, color palettes, icons, patterns, and fonts.

Engagement and Communications: TDM program staff should develop a marketing and communications plan that includes tactics to achieve meaningful engagement with key audiences. Communications and messaging should consider key differences between employees and passengers, including trip decision factors and frequencies. These tactics should cover a broad range of communications activities aligned with the recommended TDM strategies, regional events, and seasonal DEN promotions and events. Tactics identified can include, but are not limited to:

- Creating an initial suite of communications materials for use with priority audiences and marketing TDM recommendations. This includes a TDM program website (or DEN webpage) outlining all available travel modes and supporting services, employer-facing toolkits, and materials specific to the initiatives.
- Building awareness through activities such as website updates, corresponding search engine optimization (SEO) strategies, content marketing, social media, and public relations.
- Paid marketing, advertising, and other general promotion of TDM strategies for diverse employee and passenger audiences.
- Connecting with TDM program audiences through newsletters, developing case studies and testimonials, and establishing partnerships with tenants and regional agencies.
- Virtual one-on-one education and travel training for employees, employers, and passengers.

- In-person outreach to travelers at key intervention points such as security badging, career fairs, DEN tenant workshops, and employee-specific events. Outreach opportunities and core messaging should align with specific calls to action based on the TDM strategies and initiatives. Outreach content could include education on available travel options and travel training.
- In-person outreach to tenants to encourage them to participate in TDM programs, share TDM information with their employees, and implement policies that support employee travel.

Evaluation Strategy: The TDM program must demonstrate its success to funders and participants. It must also track the impacts of efforts to determine what strategies and marketing methods are most effective; this information informs adjustments to program delivery to ensure the program maximizes benefits. Achieving these outcomes requires developing an evaluation strategy. The evaluation strategy should identify ways to measure the following three performance measures:

- Inputs: These are interventions and program touchpoints, such as the number of outreach events to promote transit incentives and newsletters sent.
- Outputs: These quantify the results of inputs, such as the number of employees who accepted a free transit pass.
- Outcomes: These quantify the results of inputs and outputs, such as increased employee transit commute trips due to the distribution of free transit passes.

The evaluation strategy will likely need to use a diverse source of tools and information. Examples include contact relationship management software to track events and program participants; surveys to track behavior change; data from RTD on transit ridership; and carpool parking space utilization data.

The TDM program should develop annual reports summarizing the work completed and associated outcomes.

PRIORITY 1: INITIAL SERVICE OFFERINGS

The following section outlines a set of carefully selected strategies designed to be the initial service offering of the TDM program. These strategies have been chosen for their immediate impact and efficiency in addressing key priorities identified in DEN's strategic vision. The emphasis on an initial service offering will allow DEN to capitalize on immediate opportunities while maintaining a strategic focus on all the strategies in this document.

AIRPORT-SPECIFIC GUARANTEED RIDE HOME PROGRAM

Create a program to provide employees who don't drive alone to work with a free ride home in case of an emergency, sickness, or unanticipated overtime.

Audience: Employees

Overview: Establish an agreement with DRCOG to fund an airport-specific Guaranteed Ride Home (GRH) pilot program. DRCOG's current GRH program provides a free ride home from the workplace for employees with an emergency (e.g., illness, family emergency, unexpected overtime, etc.). The program is intended for employees commuting by any mode other than driving alone. Regionally, employees are eligible if their employer has purchased into the program on behalf of their employees. All DRCOG

regional vanpool riders qualify for the program regardless of their employer's GRH membership status. Rides are provided by Uber or taxi, depending on the location.

Estimated Annual Costs: $100,000 - $120,000

Cost Considerations: Direct costs to sponsor pilot participants; staffing costs to promote the program

Key Partnerships: DRCOG

Step 1: Establish Pilot Program

Work with DRCOG to develop pilot program specifics, including roles and responsibilities, currently participating employers, and program guidelines. Consider creating an employer agreement to reduce any overuse of the program due to overtime. Establish a pilot timeline. Discuss an end-of-pilot evaluation strategy.

Step 2: Recruit Pilot Participants

Work with DRCOG to establish and promote the airport-specific GRH program. Develop employer-facing marketing materials in collaboration with DRCOG's GRH team that address the roles and responsibilities of the participants, including a requirement to participate in a user survey at the end of the pilot timeline.

Step 3: Launch Pilot

Develop employee-facing marketing materials to promote the GRH program at pilot employer locations. Launch the program through outreach and communications efforts at each location.

Step 3: Maintain Program During Pilot

Assist DRCOG in maintaining the program with employers and employees. DRCOG will manage the program participants and rides requested throughout the pilot.

Step 4: Conduct Pilot Program Evaluation

Conduct a pilot program evaluation to determine next steps for the program. Consider reviewing program enrollment and usage reports, and conducting surveys with all employers and participants. Ensure that the evaluation timeline allows for enough time to determine the future of the GRH program with the goal of continuous employee support from a pilot to a full-time program, if applicable.

Step 5: Identify Long-term Program Options

Consider ownership of a long-term GRH program. The options could include the following options for DEN: 1) expand the airport-funded GRH program to include additional employees, 2) manage a GRH program outside of the regional DRCOG program, or 3) all participants transition to the regional model in which employers fund their employees' participation. It's estimated that TDM program staff would dedicate 10 – 15 hours of staff time per week to GRH. If the airport were to manage this program, annual costs would include program marketing and recruitment, GRH management, and technology administration.

Incorporate information on new program into existing TDM program communications materials. Communicate new program offering through TDM program communications channels.

VANPOOL PARKING

Set aside preferential parking spaces for vanpools.

Audience: Employees

Overview: Grant registered employee vanpools access to priority parking locations onsite at DEN. Vanpools are groups of 5-15 passengers traveling from the same neighborhood to the airport with similar work schedules. Vanpools can be comprised of employees from one employer; however, they can also represent a mix of employers. With onsite employee parking at a premium, this additional amenity incentivizes employees to participate in vanpools.

Estimated Annual Costs: $4,000 - $5,000

Cost Considerations: TDM program staff time to establish the program. Ongoing maintenance of the program would be minimal.

Key Partnerships: DEN Parking and Commercial Transportation | Vanpool Providers

Step 1: Identify Preferred Parking Spot Locations

Working with the DEN Parking and Commercial Transportation division, consider locations for parking spaces that will shorten the on-campus travel time for airside and landside employees. These will most likely be in the terminal garage for landside employees and the airside lot for airside employees. Conduct a site visit for each location, tracking the time to access the spots and travel to employee security or job site locations. If necessary, identify situations or times when the spots may not be available to vanpools, such as during peak parking demand associated with holidays.

Step 2: Create a Vanpool Parking Management System

Depending on where the vanpool parking spaces are located, develop a parking spot management system to manage demand and utilization of the spaces. Identify options to reserve and differentiate the parking spaces from general parking (e.g., paint the space, signage, and access-only locations). Most vanpool operators provide branded vehicles, enabling easy enforcement of the vehicle spaces; however, some vehicles may not be branded. Consider providing a vehicle hang-tag or decal to vanpools to designate vanpool vehicles that are not branded.

Step 3: Communicate with Security

Ensure parking operator and airside lot security know about the program and proposed vanpool parking management system. Consider needs such as employer-only access points that will dictate the types of vanpools that can participate. Establish protocols for vanpool drivers to follow if parking in airside lots. For example, airside vanpools cannot have non-badged employees or those who would otherwise not have access to the parking lot. These protocols will need to be provided to drivers upon forming a vanpool.

Step 4: Launch the Program

Designate the parking spaces in desired locations. Begin recruiting current vanpools to participate in the program (if applicable). The spots should only be used by vanpools pre-registered with the TDM program. Ensure that spaces are not empty for long, as this will indicate low interest in vanpooling.

Step 5: Spread the Word

Promote the vanpool spaces as a new benefit for all DEN employees. The preferred parking spaces can serve as an incentive to join a current vanpool or start a new vanpool among employees. Leverage current vanpool riders to help with providing testimonials about their vanpool commute experience.

Step 6: Expand as Needed

A successful vanpool parking program will result in a waitlist for parking access and, ideally, the need to increase the number of parking spaces dedicated to vanpools. If there is demand for additional parking spaces, work with DEN Parking and Commercial Transportation to identify and secure those spaces.

AIRPORT VANPOOL FARE

Create a flat rate vanpool fare that is equivalent to the cost of riding transit.

Audience: Employees

Overview: Establish an airport vanpool fare equivalent to the cost of a monthly RTD transit pass ($88) per rider. Vanpools are groups of 5-15 passengers traveling from the same neighborhood to the airport with similar work schedules. Vanpool pricing varies month-to-month based on the vanpool vendor, distance and route, number of employees in the vanpool, and gas prices. The inability to predict this monthly cost is a significant barrier to entry for many employees interested in vanpooling. DEN could add a layer of cost transparency by subsidizing all DEN airport vanpools so that employees only pay $88 per month.

Estimated Annual Costs: $1,055,000 - $1,270,000 (based on a maximum of 100 vans)

Cost Considerations: Estimated subsidies per vanpool per year, up to 100 vans; TDM program staff time to promote program to employees/employers and manage subsidies.

Key Partnerships: Vanpool Providers | DRCOG

Step 1: Identify Funding Sources

TDM program staff will need to identify opportunities for funding the subsidies. Federal Aviation Administration (FAA) funding could be applicable because this program would only impact airport employees. TDM program staff could also approach employers to provide a portion of the funding for their employees. It is likely that some employers currently offer this as a transportation benefit to employees.

Step 2: Implement Program

Upon receipt of funding, TDM program staff should work with vanpool providers to promote vanpool formations at the airport. Efforts should be targeted to establish vanpools with certain employers and groups of employees who live near each other and have similar work schedules. DRCOG's Way To Go ridematching tool can connect interested vanpool riders to facilitate initial conversations.

RTD DISCOUNT SUPPORT

Help DEN employees determine what RTD discounts they are eligible for and help them apply for applicable discounts.

Audience: Employees

Overview: RTD offers multiple discount programs that reduce daily fares by 50% and allow riders to purchase monthly transit passes for $27 versus $88. The programs are available to older adults aged 65+, individuals with disabilities, and individuals whose household incomes do not exceed 185% of the federal poverty level. DEN TDM program staff will support eligible employees by increasing program awareness and providing application assistance. Based on the DEN Employee Survey, it's estimated that approximately 19% of employees could qualify for the LiVE Program, which is available to riders whose incomes do not exceed 185% of the federal poverty level. This service will be incorporated into the TDM program staff's regular service offering to employees.

TDM program staff should also educate employees on other transportation discounts. For instance, the city of Denver has negotiated discounts for lower-income households to use shared bikes and scooters operated by Lime and Lyft. Additionally, the Colorado Transportation Investment Office provides free transit passes to eligible residents as part of the Globeville and Elryia-Swansea Tolling Equity program.

Estimated Annual Costs: $23,000 - $28,000

Cost Considerations: TDM program staff time to develop marketing materials and assist an estimated 1,000 employee applicants

Key Partnerships: RTD LiVE and/or State of Colorado PEAK Staff | DEN Equity, Engagement, & Inclusion staff

Step 1: Identify Key Stakeholders

Meet with RTD and DEN Equity, Engagement, & Inclusion staff to discuss the implementation of the discount strategy at the airport. Identify any additional key stakeholders to engage, such as Colorado PEAK, workforce development organizations, city of Denver, or other agencies that can facilitate engagement with core audiences or offer equivalent discounts.

Step 2: Attend Training

TDM program staff should attend training with RTD or Colorado PEAK staff to learn about the LiVE Program and other discount application processes and commonly asked questions.

Step 3: Develop Marketing Plan and Materials

Informed by the application process and commonly asked questions, develop airport-specific marketing materials to build awareness of the LiVE Discount Program and other discounts among airport employees. The Marketing Plan should include employer and employee audiences. Employers can serve as connectors between the RTD discounts, TDM program staff, and their employees. Develop content for existing TDM program communications channels such as the website, physical marketing assets, social media, and the complimentary new employee transit program. Materials should be developed in Spanish and other prioritized languages. Note: The LiVE Application is offered in English and Spanish.

Step 4: Launch and Evaluate Support Service Program

When launched, the discount support service will be incorporated into the TDM program's suite of services. Ongoing service evaluation can be conducted through follow-up surveys with applicants assisted by TDM program staff.

CARPOOL MATCHING AND INCENTIVES

Provide assistance and incentives to encourage and help employees form carpools.

Audience: Employees

Overview: Facilitate ridematching or the ability for employees to connect with carpool partners at DEN. Currently, DRCOG provides regional access to Way To Go, a ridematching platform. Offer complementary incentives to recruit drivers willing to participate in the program by sharing rides with other DEN employees. Carpooling could be a strong travel mode at the airport due to the nature of employees' predictable shift schedules.

Estimated Annual Costs: $52,000 - $62,000

Cost Considerations: Initial incentive provided to drivers to participate in the program; Staff time to develop, market, and administer the service.

Key Partnerships: DRCOG

Step 1: Develop DEN Carpool Program

Across the nation, carpooling as a travel mode has declined since before the COVID-19 pandemic. Most challenges stem from not having enough drivers willing to share the ride and increase their travel time. TDM program staff should develop an incentive program to increase the number of carpool drivers willing to share the ride with other employees in the airport. For example, DEN could provide drivers with $10 for the initial 1,000 trips. Identify incentives that could be provided to drivers, including financial incentives, preferred parking, car washes, or others that would entice DEN employees to enroll in the Way To Go carpool database. The database will then "match" employees with similar commutes and work hours, prompting them to start conversing with each other within the platform.

Step 2: Market Carpooling as a Commute Option

Develop marketing and communications to promote the carpool program. Identify a target audience for the carpool program. Consider commute patterns, the need for drivers, and communications channels. Consider leveraging existing Way To Go marketing assets to build off the regional brand. TDM program staff could launch a carpool campaign to promote the initial behavior of connecting with a carpool partner.

Step 3: Gather Testimonials

Employee testimonials can be a compelling way to showcase that carpooling is a viable option—leverage testimonials in marketing materials and other communications methods to reinforce the social norm and expectations around carpooling.

Step 4: Identify Opportunities for Dynamic Ridematching

Dynamic ridematching enables employees to find carpool partners for individual trips rather than recurring needs. One-time carpool trips may be needed in the case of unscheduled overtime. One-time carpools can also lead to long-term carpooling. TDM Staff should work with DRCOG to consider expanding the technology to incorporate dynamic ridematching to support employees who may need the occasional overtime support.

TRANSIT RIDER SECURITY LINE

Provide a queue for transit riders to reduce the time they spend passing through security.

Audience: Passengers

Overview: Promote transit ridership by allowing transit riders to access premium security queues and reach the TSA checkpoint more quickly. The benefit would result in fewer car trips to and from the airport while increasing transit ridership.

Estimated Annual Costs: $47,000 - $56,000

Cost Considerations: DEN and TDM program staff time to develop and market the program. It is assumed that RTD could provide technology, and additional TSA staff would not be needed.

Key Partnerships: RTD | DEN Terminal Operations |TSA | DEN Government Affairs and Global Public Policy | DEN Leadership

Step 1: Identify Queue Feasibility Implementation Options

Work with DEN Terminal Operations to identify opportunities for transit riders to enter a separate or existing premium queue. Conduct a ridership analysis to determine when transit-riding passengers arrive at the airport to anticipate security queue capacity needs. Depending on the recommended lane option (e.g., DEN Reserve access, restricted lane, and North versus South security), DEN leadership must be consulted if additional staffing is needed.

Step 2: Understand Technology Requirements

TSA staff must clearly and quickly identify that passengers are eligible to be in the transit-rider queue. Riders can display their RTD pass from that day or from the RTD MyRide app. RTD is implementing a paid-fare area at Union Station, requiring passengers to pass through turnstiles. Efforts are underway

to determine how the system will work with various fare types. Ideally, the airport could use the resulting technology and an associated turnstile to manage the transit-rider queue. Given the likely increase in transit ridership, RTD should be asked to provide and maintain the technology. Work with RTD to determine mechanisms in which riders can display eligibility to TSA for access to this queue. Develop recommendations for DEN to provide to TSA.

Step 3: Coordinate with TSA

DEN Terminal Operations staff will need to confirm the eligibility criteria established with RTD with TSA officials.

Step 4: Test the Transit Rider Queue

Testing the transit-rider queue is required to ensure reduced wait times are realized. Utilize testing data and transit-rider data modeling to inform final queue implementation.

Step 5: Launch the Transit Rider Queue

Pending successful testing and optimal queue performance, the TDM program staff should work with DEN Government Affairs and Global Public Policy to develop a press release announcing this new transit-supportive amenity at the airport, further positioning DEN as a mobility-forward airport.

FREE TRANSIT FOR NEW EMPLOYEES

Provide free transit passes to new employees.

Audience: Employees

Overview: Offer new airport employees the option to claim 10 RTD Airport passes during the SIDA badging process. New employees have not yet established their commutes to the airport; however, they will be considering their travel choices at this time.

Offering a transit discount, even if short-term, will remove the cost barrier to riding transit and match the immediate free parking benefit that most employers offer employees. A short-term transit solution can also provide a gap in transit coverage for new employees who have missed the initial order window for an EcoPass or employer-subsidized monthly pass.

Estimated Annual Costs: $106,000 to $127,000

Cost Considerations: 10-trip RTD fare for up to 10% of new employees; staff time to administer the program

Key Partnerships: DEN Badging Office Staff | DEN staff "champion" or advocate

Step 1: Research Pass Administration Options

RTD offers Bulk Mobile Ticketing purchase options. This option would allow DEN to distribute single-ride tickets to airport employees. DEN would only be charged for the tickets used, and RTD would invoice DEN monthly for the used tickets. The program includes a 10% discount.

The TDM program staff should meet with RTD to learn more about the bulk mobile ticketing process and confirm the ability to track pass utilization for program evaluation. Based on the meeting and input from the badging office, identify an ideal process or workflow to distribute passes. Consider the timing of the RTD order process, pass distribution options, and monthly invoicing.

Step 2: Recruit Implementation Partners

Meet with the DEN Badging office staff to introduce this concept to new employees and provide an overview of the workflow. Collaborate with Badging staff to identify opportunities to introduce this concept to new employees and manage the registration. Consider easy-to-incorporate employee enrollment options such as an additional field on any existing DEN registration forms. Identify marketing and outreach opportunities within the DEN Badging office, including informing staff of this offer and physical assets such as brochures or posters. This step may require a site visit to the badging office. Because this will be a new concept for the Badging office staff, introduction with TDM staff and a current DEN staff "champion" or liaison may be productive.

Step 3: Confirm the New Employee Recruitment and Intake Process

Based on the findings from the initial meetings with stakeholders, identify a final transit pass distribution workflow. Consider what actions the employees will need to take to move through this process and identify supporting assets and activities the TDM program staff will need to provide to facilitate this workflow. Develop a follow-up process with employees after they "graduate" from the program to promote longer-term transit ridership.

Step 4: Develop Marketing and Communications

Create marketing materials to promote the new employee transit pass program. Marketing should focus on brand awareness of this option for new employees. Additional communications materials will be developed to guide employees through the enrollment process (e.g., "Get Your New Pass" email and rider guide). Incorporate approvals needed from SIDA Badging staff.

Step 5: Launch Program and Provide Ongoing Support

Launch program based on workflow. Work with employers who do not offer transit benefits to educate them on the TDM program and this transit offering for their employees. Follow up with employees after they graduate from the initial transit pass offering.

Step 6: Evaluate Program and Iterate

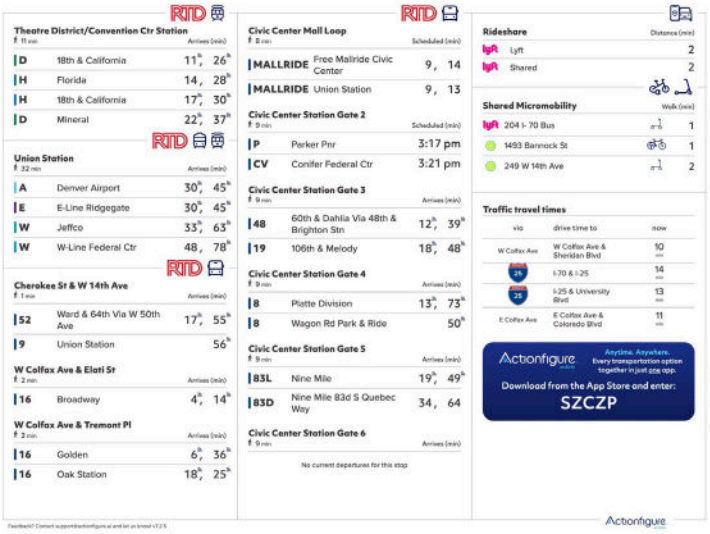
Conduct a 6-month program evaluation effort, including quantifying passes distributed and rides taken to assess ROI. Analyze top employers represented by new employee riders to identify initial employer targets for transit benefit policy consultation. Additional steps could include conducting a survey of all participants or introducing a post-pass survey effort. Collaborate with DEN Badging staff on employee awareness activities, frequently asked questions, and any additional staff training needs. The evaluation effort should inform further process innovations.

Real-time Ground Transportation Information

Display real-time ground transportation information in key areas.

Audience: Employees and Passengers

Overview: Display real-time ground transportation information screens at decision points within the airport to allow users to better plan their travel from DEN. These screens will include next arrival information, travel time, and costs for ground transportation options available at DEN such as RTD, TNCs, and driving to anticipated popular destinations such as Union Station. Information can be accessed by passengers within the terminal and by employees through the DEN intranet and screens located throughout employee passageways. Exposing passengers to all travel options will enable informed decision-making and increased awareness of all ground transportation options.



Estimated Annual Costs: $31,000 - $37,000

Cost Considerations: Real-time technology subscription service; Hardware and installation

Key Partnerships: DEN Customer Service | Technology Provider

Step 1: Needs Assessment

Determine the specific requirements and goals for providing real-time ground transportation information to passengers and employees. Conduct an audit of passenger routes through the airport after a deplaning to identify locations where travel decisions would be made. Identify all existing employee-specific communications channels and displays that could host this information. Identify the suite of transportation services to display (e.g., RTD, mountain carriers, TNCs, DEN parking lot shuttles, traffic travel times, etc.).

Step 2: Select a Provider

Research and select a provider to offer real-time transportation information solutions. Consider requirements such as the accuracy and reliability of feeds, the ability to customize to the suite of DEN-specific services identified in the needs assessment, and user experience. Identify a plan for ongoing maintenance requirements and assignments.

Step 3: Install Infrastructure

Ensure that the necessary infrastructure is in place to support the information screens. This can include power outlets, internet connectivity, and mounting brackets. Purchase and install screens and associated

hardware. There may be several key locations where larger screens are necessary. DEN can install one pilot screen to test before installation of additional screen locations. Conduct training sessions for airport information booth employees, instructing them on how to interpret and utilize the information displayed on the screens to effectively address passenger inquiries.

Step 4: Launch and Promote Real-time Information Screens

Promote the availability of real-time ground transportation information through additional signage in passenger and employee-facing communications materials. Consider adding "Ground Transportation Information" wayfinding signage directing to key primary screens.

Step 5: Ongoing Maintenance and Expansion

Update screens with seasonal information such as RTD's Zero Fare for Better Air and other transportation-related events. Consider additional screen installation options such as a transportation kiosk in Jeppesen Terminal.

PRIORITY 2: SERVICE EXPANSION AND OPTIMIZATION

Building on the selected strategies in Priority 1, this section outlines the subsequent scope of services to be implemented by the TDM program. This expansion will incorporate additional services to further meet the needs of airport users. Concurrently executing these Priority 2 services, TDM program staff should continue to offer and further optimize the delivery of the services outlined in the Priority 1 phase.

BIKE STORAGE FACILITIES

Work with RTD to install secure bicycle parking for DEN employees and passengers at stations along the A Line.

Audience: Employees and Passengers

Overview: Locate secure bike parking facilities near the A Line to support home-end bike utilization. It's recommended that bike parking is very secure, such as bike lockers or a bike room. Additionally, DEN could provide a bike fix-it station or other amenities. This infrastructure would most likely support multimodal bike trips being used to access the A Line near passengers' and employees' residences. At the time of writing this plan, direct access to DEN by bike is very limited.

Estimated Annual Costs: $15,000 - $18,000

Cost Considerations: Direct costs for bike lockers and installation, depreciated over ten years; Staffing costs to manage onsite lockers

Key Partnerships: RTD | DEN Security

Step 1: Identify potential bike storage locations

Conduct site assessments to identify opportunities for well-located bike storage. Consider locations on the airport property and additional RTD stations, such as 40th and Airport and 61st and Peña. Bike storage locations should consider supporting bike trips to DEN facilitated by the A Line. Determine locations to install secure bike racks, bike lockers, a bike room, and additional infrastructure such as fix-it stations. Consider placing in visible and well-lit areas for user convenience, to increase security and safety, and to promote a positive bicycle culture.

Step 2: Identify funding or sponsors

Identify internal funding mechanisms to support the purchase and installation of the bike storage facilities. Explore partnerships with airport retailers for sponsorship and storage branding opportunities. By determining the amount of funding available, TDM program staff can identify the types of bike storage and supporting infrastructure that will be feasible to install and maintain.

Step 3: Develop partnerships with DEN security and RTD

Partner with DEN security and RTD to discuss storage installation and maintenance. Identify roles and responsibilities, including funding, maintenance of infrastructure, and ongoing security and support for these storage facilities. Consider additional partnerships with local bike shops to provide additional services for cyclists.

TRANSIT PURCHASES DURING TICKETING

Encourage airlines to provide passengers with the option to purchase RTD tickets when purchasing airfares.

Audience: Passengers

Overview: Establish a partnership with airlines to offer the sale of round-trip transit tickets when purchasing airfares. Utilizing ticket confirmation emails and airline apps, passengers can be directed to buy RTD fares either through the RTD website or app integration. Many airlines provide ground transportation and destination information to ticket purchasers. Event venues have provided ticket purchases with integrated fare pass options in other markets.

Estimated Annual Costs: $44,000 - $53,000

Cost Considerations: Initial high TDM program staffing requirements to recruit airlines.

Key Partnerships: RTD | DEN Government Affairs and Global Public Policy | Airlines

Step 1: Determine Feasibility with RTD

Meet with RTD to determine the feasibility of app integrations with airlines and interest in cross-promotion of RTD round-trip passes. TDM program staff should have conducted best practice research to showcase precedence for similar relationships and technology considerations.

Step 2: Approach Airlines with Proposal

TDM program staff should create a proposal with a business case with which to approach airlines. Coordinate with DEN Government Affairs and Global Public Policy, RTD staff, and additional DEN staff as necessary. The business case should identify the benefits of a relationship with RTD, examples from other industries, and recommendations for implementation within their communications or app technology—target two airlines for the program's initial launch.

Step 3: Launch the Ticketing Option

Work with airlines to launch integrated transit ticket purchases for their DEN passengers. TDM program staff can collaborate with RTD and airline communications staff to develop communications that airlines can adapt and share through their distribution channels.

Step 4: Expand the Program

Continue to iterate the program as needed. Leveraging a successful launch of transit ticketing purchases, expand the program to additional DEN airlines. TDM program staff should approach additional DEN operators with a similar proposal.

Step 5: Ongoing Communications

Ensure that RTD collaborates with DEN airlines on transit promotions, such as Zero Fare for Better Air.

TNC SHARED RIDE POLICY

Require TNCs to offer shared-rides to passengers coming to and leaving the airport.

Audience: Employees and Passengers

Overview: Implement a policy requiring TNCs to offer the shared-ride product option (e.g., UberX Share and Lyft Line), enabling two separate riders to share a vehicle if the routes align. This would reduce the number of TNCs going to and from the airport. As of November 2023, Uber reintroduced UberX Share to Denver; however, Lyft does not offer this option. Approximately 14% of passenger trips are made via TNCs.

In addition to establishing a ground access policy for TNCs to provide this product to travelers, DEN can incentivize riders to choose this option by reducing or eliminating the airport fee charged to TNCs and passed on to riders. Additional revenue costs would be incurred.

Estimated Annual Costs: $264,000 - $317,000

Cost Considerations: Costs reflect potential revenue loss from reduced TNC drop-off/pickup charges. Assumes approximately 12% of TNC riders will shift to a shared ride.

Key Partnerships: DEN Parking and Commercial Transportation staff | DEN Leadership

Step 1: Coordinate with DEN Departments

As this is initially an internal policy decision, TDM program staff should identify the appropriate stakeholders to navigate this discussion as a working group. Considerations include TNC contract renegotiation timelines (anticipated 2025) and ground access fee policies.

Step 2: Develop Policy Change Workplan and Timeline

Informed by the working group, TDM program staff will develop a stakeholder engagement plan and timeline to develop and implement a TNC shared ride policy and potential incentives.

Step 3: Execute the Workplan

Ensure contracts with TNC operators are updated based on guidance from the working group. If applicable, develop marketing materials to raise passenger awareness of the discounts associated with shared rides.

RETAIL DISCOUNTS FOR TRANSIT RIDERS

Work with DEN concessionaires to provide discounts to passengers who take transit to the airport.

Audience: Passengers

Overview: Recruit DEN retailers and concessionaires to provide discounts to passengers who travel to the airport by transit. The recommended discount would be 10% to match the employee discount provided at DEN retailers and concessionaires. Passengers could show eligibility in the same way that they are able to access the transit-rider security queue.

Annual Costs: $11,800 - $13,000

Cost Considerations: No direct costs; Staffing costs to recruit retailers and promote the program.

Key Partnerships: DEN Concessionaires | RTD

Step 1: Confirm RTD technology systems implemented in the transit-rider security queue

Leveraging the existing RTD MyRide app technology implemented in the Priority 1 Transit-rider Security Line, identify a similar rider verification system for passengers to confirm their RTD ride status to concessionaires and retailers. This should not require any additional technology requests from RTD. Identify opportunities to expand the program further to additional transit operators.

Step 2: Establish partnerships with DEN Concessionaires and Retailers

Recruit retail participants to offer a 10% discount to passengers who traveled to the airport by transit that day. TDM program staff should develop a business case for DEN concessionaires and retailers to participate in this program. It is recommended to approach retailers participating in the DENPerks program, an existing shopping and dining rewards program for passengers. Develop FAQs and other retail employee-focused training materials to support employers implementing the program within their establishments.

Step 3: Launch program

It is recommended to start with a soft launch of the program by promoting the discounts to current transit rider security line users. By testing the discount program with a smaller population, TDM program staff can support retailers with any troubleshooting or further clarifications of the program. Refine any training materials or marketing materials as necessary.

Step 4: Generate press for the new discount program

Develop a marketing plan aimed at passengers to promote the new transit rider discount. Consider current passenger-facing communications channels such as DEN social media, paid advertising, neighborhood-based marketing, etc.

EMPLOYER PARKING MAXIMUM

Create a two-tiered parking fee for tenants that charges a higher rate when the number of spaces purchased by tenants exceeds a defined percentage of their employees.

Audience: Employees

Overview: DEN Parking and Commercial Transportation can establish a pricing policy that would provide each employer with a certain number of employee parking spaces at the current price per space. Additional spaces over that parking maximum would be charged a higher cost. For example, if an employer has 100 employees, the first 60 spaces could be purchased at standard rates and additional spaces would cost more. Most employers (90%) pay for their employees' parking. Employers would be motivated to implement commuter benefits that impact mode choice and decrease their demand for spaces.

Estimated Annual Costs: $0

Cost Considerations: It's anticipated that this will generate additional funds for the airport.

Key Partnerships: DEN Parking and Commercial Transportation

Step 1: Develop Pricing Strategy and Policy

Work with DEN Parking and Commercial Transportation staff to develop a parking utilization formula and employer pricing strategy. Consider the ability of DEN's parking management system to accommodate the pricing model. Determine if a system for monitoring and enforcing compliance is required.

Step 2: Implement Policy in Phases

As employer parking contracts renew throughout the year, the new employer parking pricing structures should be phased in. Prepare the employers well in advance of their contract renewals through personalized communications with the potential cost impacts of the new pricing policy tailored to their usage. Message the policy with the TDM program services to mitigate the effects of increased costs, as employers can consider alternate benefits and policies to offer employees.

Step 3: Evaluate and Adjust

Collect data and feedback on parking utilization to assess the effectiveness of the pricing policy. Adjust the policy as needed based on evaluation results.

PARKING CASH OUT

Help tenants implement parking cash-out programs that pay employees to give up their parking spaces.

Audience: Employees

Overview: DEN tenants would offer a bonus to all employees who opt out of parking onsite. The bonus could be a cash stipend or perk (e.g., flight rewards). Parking cash out encourages the use of commute modes other than driving alone and reduces parking demand.

Approximately 90% of employers offer free or reduced-cost parking, but only slightly more than 40% offer free or reduced-cost transit. Employees who do not have cars do not benefit from free parking. Parking cash-out equalizes benefits regardless of car ownership or commute mode. The strategy has a high potential to improve job access for low-income employees.

Estimated Annual Costs: $57,000 - $68,000

Cost Considerations: TDM program staff time to educate and recruit employer participants, and assist with parking cash out implementation within their systems.

Key Partnerships: DEN Employers | DEN Tenant-facing Staff | DEN Parking and Commercial Transportation staff | DEN Leadership

Step 1: Research Parking Cash Out Best Practices and Applications

Research parking cash out models and best practices to develop initial DEN employer-specific recommendations. Parking cash out can be implemented on a daily, monthly, or quarterly basis. Identify and research applicable parking cash out strategies that have been leveraged in multi-tenant locations.

Step 2: Understand Local Regulations

Become familiar with employer parking contracts, pricing structures, and policies. Work with the DEN Parking Department to determine which type of cash-out frequency would accommodate their parking management system. Ensure compliance with any legal requirements related to incentives and benefits from employers.

Step 3: Interview Key Employers

Employer buy-in will be critical for the adoption of this program. Identify a few employers who will be amenable to this new employee benefit or offer a similar benefit. Gather input to understand implementation considerations, concerns, timelines, budget planning processes, etc.

Step 4: Develop an Implementation Guide

Parking cash out does not need to be one-size-fits-all for airport employers. Create an employer-facing

implementation guide outlining the benefits, costs, potential impacts, and an overview of parking cash out at the airport. Leverage insights from employer interviews.

Step 5: Launch a Pilot Program

Market the program and implementation guide to DEN tenants, securing participation from 1-3 organizations to participate in a pilot consultation and cash out program development. The organizations should represent a range of employer types. Assist employers with implementing a tailored parking cash out program within their organizations. Implementation will likely include developing marketing materials to announce the new benefits and recruit employees.

Step 6: Evaluate and Refine

Monitor the parking cash out programs to determine the effectiveness of the new benefit at each employer. Adjust as needed.

Step 7: Expand the Service Offering

Offer the parking cash out development as a service of the TDM program to all employers. Identify opportunities to market parking cash out to all DEN tenants. Leverage testimonials and pilot program successes to recruit additional employers to participate.

PRIORITY 3: TRANSPORTATION OPTIONS ENHANCEMENT

Envisioning the future of DEN's TDM program, the Priority 3 section outlines a roadmap for sustained growth in service offerings. They are designed to layer onto the foundation built by the Priority 1 - 2 strategies.

The strategies outlined below require additional funding sources. As the TDM program staff concentrates on introducing initial services and building awareness among stakeholders and tenants, there could be a potential avenue for broadening funding sources by incorporating a membership dues structure to support some of the longer-term strategies.

However, in acknowledgment of the dynamic nature of the transportation landscape, this long-term strategy must remain flexible. The TDM program and DEN staff will need to remain responsive to changes, including technological advancement, shifts in the market, or unforeseen challenges.

TRANSIT MARKET STUDY

Conduct a study to identify additional transit service to help employees and passengers access the airport.

Audience: Employees and Passengers

Overview: DEN can commission a market study to determine the feasibility of an airport-sponsored bus service to help employees, travelers, or both access the airport. The market study would analyze opportunities, benefits, and costs to operate a new airport-specific route(s) or pay RTD to expand existing airport services or add new service. The study can include an element to identify potential park and ride locations (private or public) where passengers and employees could park their cars and then board an express service to the airport.

Estimated Costs: $188,000 - $226,000

Cost Considerations: Estimated consultant cost for transit market study with DEN-specific needs.

Key Partnerships: DEN Leadership | RTD Transit Planning | City and County of Denver | Community Stakeholders | CDOT Division of Transit and Rail | Airlines

Initial Steps:

1. Define the Objectives and Scope
2. Secure Funding and Resources
3. Execute the Transit Market Study

EMPLOYEE SHUTTLES OR MICROTRANSIT

Operate shuttles to move employees from their neighborhoods to the airport.

Audience: Employees

Overview: Provide shuttles or on-demand microtransit for employees in high-density residential areas. A third-party vendor would operate the routes and provide direct access for employees to DEN. Any new routes would not compete with current RTD routes.

Estimated Annual Costs: $1,150,000 - $1,380,000

Cost Considerations: Leveraged Inglewood Iride microtransit service at LAX for cost considerations; Staffing costs to promote and maintain service.

Key Partnerships: DEN Leadership | RTD | DOTI | Microtransit Vendor

Initial Steps:

1. Identify potential routes and needs.
2. Identify funding.
3. Define objectives and scope.
4. Release procurement solicitation for microtransit vendors.
5. Launch pilot program in one to two neighborhoods.
6. Ongoing monitoring of pilot program performance and ridership.
7. Expand program.

TRANSIT CENTER PLACEMAKING

Install art and infrastructure improvements to make the Transit Center more welcoming and enjoyable.

Audience: Employees and Passengers

Overview: Enhance the Denver Airport Transit Center bus and bike storage areas to create an inviting and comfortable space that will positively contribute to the transit and bike riding experience at DEN. Consider incorporating elements such as painted murals, kinetic art installations, additional seating, real-time transit displays, and the installation of wind guards and heaters. The location of secure bike storage facilities (e.g., bike lockers) could be located in Airport Transit Center.

Estimated Costs: $20,000 – $24,000

Cost Considerations: Direct costs for mural installation

Key Partnerships: Transit Operators | DEN Security | City and County of Denver (CCD) Public Art Program

Initial Steps:

1. Conduct experience audit of Denver Airport Transit Center to identify potential placemaking needs. This could be conducted in the shorter term.
2. Identify funding or sponsors. The City of Denver's Public Art Policy dictates that one percent of the budget for any capital improvement project equal to or more than $1M be set aside for public art. Available funding sources could dictate the initial types of improvements.
3. Develop partnerships with appropriate departments and organizations to develop implementation plans and pursue funding opportunities.

VANPOOL DRIVER STIPEND

Provide a stipend that allows vanpools drivers to ride for free.

Audience: Employees

Overview: DEN will recruit vanpool drivers by providing a monthly incentive for their role as drivers. Incentives could be through a paystub, airport-specific incentives, or as a further subsidy for the driver in addition to the airport vanpool fare subsidy strategy. This program would intend to recruit and retain vanpool drivers, supporting the additional suite of vanpool strategies recommended for short-term implementation.

Estimated Annual Costs: $98,000 - $118,000

Cost Considerations: Annual vanpool fare for one vanpool driver, up to 25 drivers/vans; Staff time to administer the program.

Key Partnerships: Vanpool Providers

Initial Steps:

1. Identify funding.
2. Work with vanpool providers to establish incentive structure and process.
3. Develop marketing and promote incentive to DEN employees.

REDUCED E-470 TOLLS FOR CARPOOLS

Provide toll subsidies to employee carpoolers who use E-470.

Audience: Employees

Overview: Establish partnerships with E-470 Public Highway Authority to subsidize reduced tolls for DEN-registered carpools. Carpool registration can be managed through ExpressToll tags, which are incorporated into DEN's parking management system.

Estimated Annual Costs: $525,000 - $630,000

Cost Considerations: Direct costs through analysis of badged employee home locations and assumptions of toll price implications on carpool formation; Staffing costs to promote program.

Key Partnerships: E-470 Public Highway Authority | DEN Parking and Commercial Transportation

Initial Steps:

1. Determine feasibility with DEN Parking and Commercial Transportation and E-470 Public Highway Authority.
2. Identify technology requirements.
3. Identify funding.
4. Develop a carpool registration system.
5. Market program to DEN employees.
6. Ongoing monitoring and maintenance of the program.

TNC CONNECTIONS TO RAIL

Provide TNC subsidies for employee travel between their homes and rail stations.

Audience: Employees

Overview: DEN could subsidize eligible employee TNC fares to/from transit stations to support their commutes to DEN. The purpose would be to increase transit ridership to DEN by removing the first- and last-mile barrier to transit. Subsidies could be managed through customizable vouchers, enabling DEN to geofence when and where these rides could be used.

Estimated Annual Costs: $3,675,000 - $4,410,000

Cost Considerations: Direct costs for TNC subsidies for employees who live within zip codes located along the A Line and R Line, identified through employee survey data; Staffing costs to manage program

Key Partnerships: TNCs | RTD | DEN Tenants

Initial Steps:

1. Identify funding.
2. Develop program guidelines and eligibility.
3. Partner with TNCs to implement.
4. Launch pilot program with specific DEN tenant(s).
5. Ongoing maintenance and monitoring of pilot program.
6. Expand program to additional employees. Consider further expansion to passengers.

TDM PROGRAM FUNDING

DEN secured a grant from the Denver Regional Council of Governments (DRCOG) that includes $1.2 million for TDM program implementation over three years. Restrictions generally prevent the funds from being used to pay for incentives like those recommended in this plan. DEN will need to secure additional funding to pay for the incentives and on-going program implementation.

If the airport's TDM program is officially recognized by DRCOG, it may be eligible for $100,000 in Partnership Grant funding per year. DEN could also apply for funds from DRCOG's TDM Set-Aside. Funds are distributed approximately every two years through a competitive process. The amount that can be requested is generally between $100,000 and $400,000 with a typical amount being below $200,000.

The Colorado Department of Transportation (CDOT) also provides funds for TDM programs. It offers TMA support grants, which are similar to DRCOG's Partnership Grant. The funds are distributed every two years and have a current value of $125,000 each two-year cycle ($62,500 per year). They are available only to recognized TDM programs. CDOT also offers Innovation Grants, which are distributed every two years to fund TDM efforts and have a current value of $50,000 each two-year cycle ($25,000 per year).

LAX is implementing a fee to fund its TDM program. Employers at the airport will be required to pay an annual fee of $10 per employee with a maximum charge of $10,000 per employer. DEN could develop a similar fee or use other internal funding sources.

GOAL SETTING

An early implementation action for the TDM program is the development of an evaluation plan to understand the impacts and effectiveness of the TDM strategies. The evaluation plan will identify what data needs to be collected along with how and when the data should be collected.

Data collection and evaluation are important because they allow DEN to understand the effectiveness of individual TDM strategies. The information can be used to support decisions to refine, expand, or scale back the delivery of certain TDM strategies. The information can also help DEN understand the effectiveness of the overall TDM program and the degree to which it is helping DEN achieve its ground access goals.

An important element of evaluation is knowing what you are working towards. Mode share goals were established as part of this planning process. Unique goals were created for employee trips and passenger trips.

EMPLOYEE MODE SHARE GOAL

The employee survey conducted as part of this study process found that 71% of employee commute trips are made in single-occupancy vehicles (SOVs). The consultant team, in partnership with DEN staff, established a goal to reduce the SOV rate by 10-percentage points by 2035.

The consultant team estimated that the SOV mode share can be reduced 8-percentage points if all the TDM strategies listed in this document are implemented. Additional reductions in the SOV rate are likely to be accrue from other actions that occurred after the employee survey was conducted. Since the survey, DEN established a master EcoPass contract for all concessionaires. This resulted in every employee of a concessionaire receiving an EcoPass that allows them to ride any RTD service at no cost to the employee. RTD also lowered the cost of a monthly transit pass for riding to the airport from over $200 per month to $88 per month.

Based on the anticipated reductions associated with the TDM strategies, master EcoPass contract, and RTD fare reductions, a goal was established to reduce the SOV mode share 10-percentage points by 2035.

It is important to note that the employee survey yielded an estimate of the employee SOV rate. All surveys are subject to sampling error, which is reflected in a survey's "margin of error." The employee survey was also subject to coverage error, meaning that not all airport employees had the same opportunity to respond to the survey. This occurred due to the lack of a master list for contacting employees. Future data collection efforts may find that the starting SOV rate was higher or lower than 71%. The goal will remain to reduce the SOV rate by 10-percentage points. But, the target SOV rate may be higher or lower than 61%.

PASSENGER MODE SHARE GOAL

The passenger survey conducted as part of this study process found that 9% of passenger group trips to the airport are made via transit and shuttles. The consultant team, in partnership with DEN staff, established a goal to increase the percentage of passenger groups using transit and shuttles by 10-percentage points by 2035.

This goal was based on results from a model analysis conducted by the consultant team. The model evaluated the various ways in which passengers arrive at the airport, which are depicted in Figure 13. The

most impactful travel modes are at the bottom of the pyramid and the least impactful are at the top. Pickups and drop-offs by friends and family generate two vehicle trips per air passenger party trip to or from the airport. Taxicabs and TNC will often generate 1.5 vehicle trips per passenger pickup or drop off. At the top of the pyramid are walking, biking, and transit, which generate zero or close to zero vehicle trips per passenger group trip.

The 10-percentage point reduction goal was based on the anticipated impacts of the strategies recommended in this document and the potential to move passengers from high-impact travel modes at the bottom of the pyramid to less impactful travel modes higher up the pyramid.

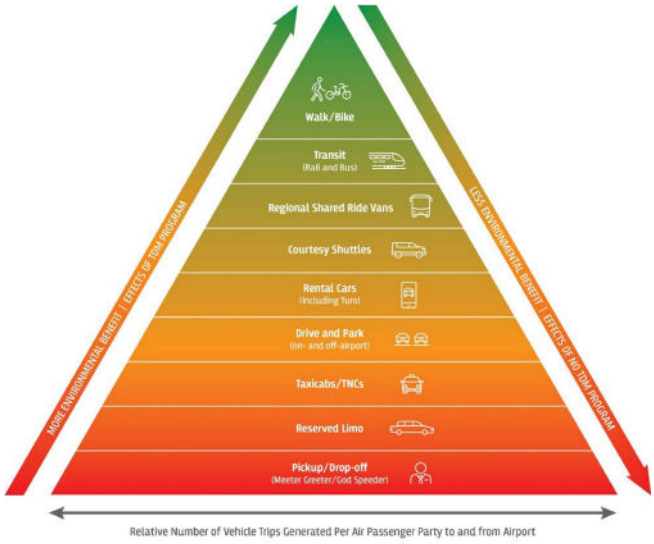


Figure 13: Passenger Vehicle Trip Generation Pyramid

Unlike the employee survey, the passenger survey was not subject to coverage error. However, it was subject to sampling error. The survey estimate that 9% of passenger trips are made using transit or shuttles has a margin of error of +/- 1% at the 95% confidence level. This means we can be 95% sure that the actual passenger use of transit and shuttles to access the airport is within +/- 1-percentage point of 9%. This means a 19% transit and shuttle mode share goal for 2035 is likely well supported by the survey data and unlikely to need adjustment.