

CREATING A SHARED UNDERSTANDING OF TRANSPORTATION DEMAND MANAGEMENT

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PREAMBLE

The Association for Commuter Transportation is the premier organization and leading advocate for commuter transportation and Transportation Demand Management (TDM) professionals. ACT strives to create an efficient multimodal transportation system by empowering the people, places, and organizations working to advance TDM to improve commuters' quality of life, enhance the livability of communities, and stimulate economic activity. To facilitate knowledge sharing and further develop TDM skills among ACT professionals, ACT staff, with the support of the ACT board of directors, facilitate a 10-month learning session known as the ImpACT! Leadership program. As part of the program, students are divided into groups and allowed to select a group project.

Our project team consists of five ImpACT! Leadership course attendees (pictured below). We selected our course project, *Creating a Shared Understanding of Transportation Demand Management*, because it is an exciting area where our team felt we could provide unique perspectives. Throughout this document, the project team has detailed the prompt of our project, how our project and deliverables evolved, our research and key findings, and more.

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A message from the team

Positive strategies can have far-reaching benefits over and above traffic management or congestion. There is potential when made accessible to the large majority of people, TDM can, at minimum, influence outcomes such as:

- **health and well-being**, potentially supporting reduced healthcare visits, obesity, and the mental health epidemic,
- **economic outcomes**, supporting people in accessing jobs and reducing wear and tear on crucial infrastructure assets
- **education**, providing support for accessing education to those who didn't have the option before
- **environment**, reducing emissions, waste, and effective land use

- **bridging social gaps**, helping create opportunities for people to be together, talk, and learn about each other's lives.

While these may seem like lofty objectives, it doesn't take much of a stretch of the imagination to understand how our small world of TDM can have needle-moving benefits for some of the significant issues in the world today.

With so much at stake, we hope our work supporting a shared understanding of TDM will help our industry unite and find ways to achieve its potential. This whitepaper is a culmination of our research and findings, and we hope it will, at minimum, spark a conversation.

INTRODUCTION

The Project

Our team was provided with the following brief to prompt our project development:

"A key challenge we face as an industry is the lack of a shared understanding of Transportation Demand Management (TDM). Depending on the individual, organization, or agency, TDM can mean anything from the niche focus on ridesharing to a vast menu of strategies encompassing everything from public transit to behavior change. Creating a shared understanding of TDM can improve efforts to advance policy objectives, secure dedicated funding, and bring more people into the TDM tent."

We reviewed the existing information on TDM and surveyed people within our personal and professional networks to gather a wide range of perspectives on its meaning. It was clear that a significant amount of information was available about TDM, its strategies, how it has been implemented, and its corresponding policy decisions in different regions. It was also clear that the understanding of TDM varies by individual and type of person, such as consultant, vendor, TDM user, or TDM practitioner. We surveyed forty individuals from across the country who emphasized different areas of mobility, but largely had an aligned view of TDM. Figure 1 depicts a word cloud of responses to the question, “In a few words, summarize what TDM means to you.” More prominent words indicate words submitted in more significant quantities than smaller words. Appendix A contains all survey results.

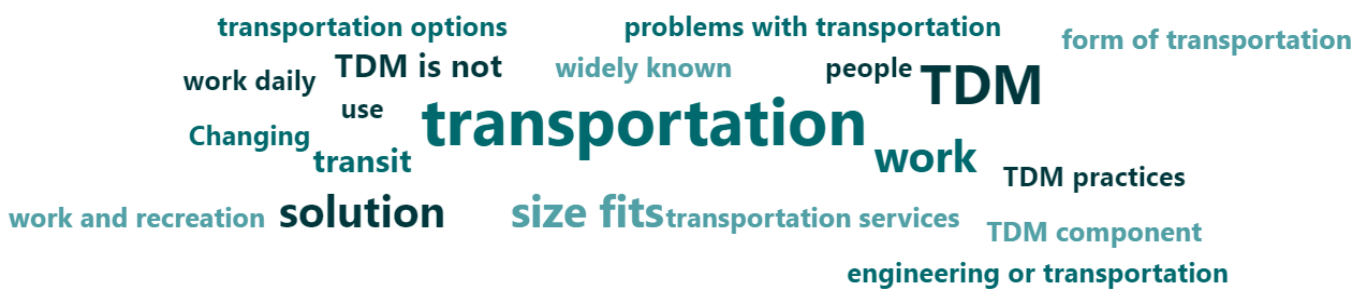


Figure 1. Word cloud results from the “What does Transportation Demand Management (TDM) mean to you?” survey question number 6: “In a few words, summarize what TDM means to you.”

In addition to the survey, our desktop research led us to find an overwhelming amount of information available about TDM. So, we asked ourselves, “Is there a common misunderstanding?” If so, “Why is there still a common misunderstanding?” Rather than thinking about how to provide information more succinctly or clearly, we began thinking about the recipient of the messaging. As a team, we deliberated on different personas in the TDM space and how they may react to all the information available about TDM.

We found that different receivers of TDM information aren’t required to know the same information. For example, suppose someone receives an offer for a job but has limited access to transportation. In that case, they must become aware of the different mobility options. This differs from a transportation management association (TMA) director or a bus operator who may be interested in the most effective ways to implement TDM strategies.

Therefore, we pivoted and took our project in a different direction from simply developing a new definition of TDM. Instead, we focused on how TDM is communicated. Throughout the document, we view the shared

understandings of TDM through the eyes of varying users and create personas for how TDM practitioners can better target TDM messaging, incentives, and programs to align with the values of the persona with whom they are interacting and therefore, increasing the likelihood of adoption.

Our goal is to support practitioners to effectively communicate TDM by aligning the goals and values of TDM with those of the individual, ensuring that the benefits and relevance of TDM are clearly understood and appreciated by each unique audience. To do so, we have developed an initial set of TDM personas, provided guidance on discovering new or varying personas, and offered some examples of outcomes for individual personas.

RESEARCH AND KEY FINDINGS

Our initial exploration of TDM's definition revealed our group members' diverse understanding of the term. While our definitions varied, they aligned with TDM's core benefits and goals: providing commuters with flexible, accessible, and equitable transportation options. This led us to believe that a functional understanding of TDM may exist within the broader public domain despite our personal experiences otherwise.

We turned to traditional research and artificial intelligence platforms like ChatGPT to verify this assumption. We discovered a wealth of information on TDM, which we have sampled in Figures 2 through 5. In particular, we noted many one-pagers dedicated to TDM concepts, common strategies, and definitions.

We surveyed ACT members to gauge the shared understanding of TDM within the transportation community, the results of which are detailed in Appendix A. We also surveyed non-TDM professionals with similar questions to sample public understanding, detailed in Appendix B.

While the survey results indicated a consensus among TDM professionals, there was an apparent disconnect between this knowledge and the public. Our non-TDM professional survey revealed that 88% of participants either had not heard of TDM or had heard the term but didn't know its meaning. While 96% responded their primary mode of transportation was a car, 24% of participants indicated their desire for more accessible public transportation.

AT A GLANCE: Fundamentals of Transportation Demand Management

Transportation Demand Management (TDM) can be defined as: Programs, policies, and services that help the traveling public make use of alternatives to driving in single-occupancy vehicles (SOVs) and reducing traffic demand.

The Federal Highway Administration defines TDM as "a set of strategies aimed at reducing the demand for roadway travel, particularly in single-occupancy vehicles. These strategies address a wide range of externalities associated with driving, including congestion, poor air quality, less livable communities, reduced public health, dependence on oil, reduced environmental health, and climate change and greenhouse gas (GHG) emissions. Some TDM strategies are designed to reduce total travel demand, while others are designed to reduce peak period demand, which may disproportionately contribute to these externalities."¹

TDM typically includes the following elements:

- Data collection and benchmarking, including mode split and SOV trips for effective decision-making.
- Public transit, intermodal connections, shuttles, and other alternative methods of transportation.
- Incentives to use transit, carpooling, and other alternative commuting methods.
- Disincentives to driving alone.

1 actweb.org/what-is-tdm/

AT A GLANCE: FUNDAMENTALS OF TDM

Ten Commonly Applied Programs and Policies

- 1. Data Collection & Benchmarking.** Data from surveys, traffic counts, parking utilization, transit ridership, and other programs help determine mode split and program performance.
- 2. Ride-sharing/Carpool/Vanpool.** Carpools have at least a driver and a rider who share a ride. Carpools may be formed by family members, neighbors, co-workers, through app-based programs, or even ad-hoc "slugg" lines. Vanpools make use of a five- to 15-passenger vehicle leased through a third party or provided by an employer that uses a volunteer driver(s); riders may pay a monthly fee, while sharing the costs for gas, tolls and/or parking.
- 3. Car-share.** Micro car rental by the hour usually provided through third parties such as Zipcar, Car2Go, and Maven that use an app or smartcard to access the car. Rentals usually include gas and insurance and do not require interfacing with a rental office. This program supports those who use non-drive-alone modes.
- 4. Parking Cash Out/Payment in-lieu of Parking.** Allows employers to provide a salary increase for the cost of parking instead of providing parking for free. Employees can then use that salary increase for parking, transit, or vanpools tax-free or keep it as a taxable increase if they commute by biking, walking, or carpooling, or otherwise do not drive to work, i.e. work remotely.
- 5. Ride-share.** Web- or app-based software that helps form carpools. Examples include Scoop, RideAmigos, and Zimride.
- 6. Pass/Subsidies.** Provides reduced-price or free transit passes to employees. Passes can be provided tax-free and/or employees can use pre-tax salary to cover any remaining costs.
- 7. Provisions for Active Transportation.** Walking, bike parking, valet, card access, storage, and provisions of changing rooms/showers and lockers.
- 8. Guaranteed Ride Home.** Providing non-drive-alone commuters with a taxi or TNC (Uber/Lyft) ride home or a car rental at no cost to the commuter. This is typically used for unexpected situations such as illness, child care, home damage, etc., and not for overtime or offsite work trips.
- 9. Ecopass/Occasional Parking.** Providing roughly 20 days of parking per year for bad weather days, visitors, special events, etc. This applies to commuters using a mode other than driving alone (transit, carpool, bike, or walk).
- 10. Remote Parking.** Providing shuttle or transit from outside core parking area.

Parking, Mobility, and TDM

Parking has a fundamental effect on what happens in cities and towns and how the greater transportation and mobility system functions. Designing and implementing an effective, professionally-managed parking strategy can mean the difference between frustrating and costly traffic congestion and efficient, time-saving traffic flow that is characteristic of smart cities. TDM policies affect parking resources directly and indirectly, appropriately priced on- and off-street parking can work in tandem with other TDM strategies to create desired incentives and outcomes, including but not limited to:

- Managing parking demand and meeting parking limitation regulations.
- Providing additional programs and services to users and customers.
- Documenting Parksmart certification and Accredited Parking Organization (APO) accreditation requirements.
- Contributing to a building's LEED certification.
- Reinforcing and expanding an organization's sustainability efforts.
- Growing the customer base to include those who do not drive or those who ride-share.

Featured Resources for Additional Research

- *A Guide to Parking*, International Parking Institute, 2018; reference chapter on TDM
- *IP Online Course: Transportation Demand Management: Parking Strategies*
- *Sustainable Parking Design & Management: A Practitioner's Handbook*; reference chapter on TDM
- Victoria Transportation Policy Institute
- Online TDM Encyclopedia
- Mobility Lab
- Parksmart Certification Manual, Green Business Certification Institute
- *Integrating Demand Management into the Transportation Planning Process: A Desk Reference*, Department of Transportation, Federal Highway Association

For more information, search keyword "TDM" in IPMI's online Resource Center at parking-mobility.org

Figure 3. International Parking and Mobility Institute.

Our research also demonstrated that despite this challenge, there are ongoing efforts to bridge the TDM knowledge gap. Cities often promote alternative transportation modes through events like "bike-to-work days" and "transit weeks." Social media platforms like Reddit, TikTok, and Instagram also feature TDM-related content, with some accounts reaching a substantial audience. However, our attempts to engage these communities in discussions about TDM yielded surprisingly low levels of interaction.

At the national level, significant efforts are being made to define TDM, though these often lack a direct connection to everyday travel experiences. For instance, the U.S. Department of Energy, Transportation, Housing, and Environmental Protection Agency issued a Memorandum of Understanding (MOU) in September 2022 to decarbonize the transportation sector by 2050. The subsequent U.S. National Blueprint for Transportation Decarbonization outlines strategies for achieving this goal, prioritizing job creation and equitable mobility.

This raises the question: If TDM information is readily available, why is there such a limited public awareness of the concept? Furthermore, why do individuals participating in TDM-related behaviors often fail to connect them to the broader TDM framework? Notably, the government, city, and social media examples above are more catered to an audience who already understands the basics of TDM.

Ultimately, our research encouraged us to look for gaps in the TDM information already available. Our group determined that the key to effective TDM lies in understanding the motivations and behaviors of the target audience so we can facilitate knowledge sharing on terms that are relevant to them.



The SUMP Planning Cycle. Source: Rupprecht Consult, 2014

Figure 4. Sustainable Urban Transport Project (international).



Figure 5. X (Twitter) account for ATX Transportation and Public Works (@austinmobility, 6/15/2018).

Notable examples of TDM definitions:

"Transportation Demand Management (TDM) refers to strategies, programs, or policies designed to reduce drive-alone trips and enable transportation systems to function more effectively and efficiently through alternative transportation options." <https://www.waaretdm.com/> . Non-profit org GVF (ACT member).

"Transportation Demand Management uses strategies and policies to reduce travel demand, traffic, energy use, and GHG emissions. TDM initiatives are multimodal and include strategies like congestion pricing and parking pricing paired with affordable transit options, car-free zones with accessible and safe bike and pedestrian infrastructure, ride-sharing promotions, safe walking, biking, and rolling routes to school, transit fare discounts, off-peak goods delivery incentives, and more." (2, Blueprint pg41).

"Transportation Demand Management (TDM) is the use of strategies to inform and encourage travelers to maximize the efficiency of our transportation systems, leading to improved mobility, reduced congestion, and lower vehicle emissions." (ACT <https://www.actweb.org/what-is-tdm>).

"WHEREAS Transportation Demand Management (TDM) means the use of strategies to inform and encourage travelers to maximize the efficiency of a transportation system, leading to improved mobility, reduced congestion, equity, and lower vehicle emissions, including strategies that use planning, programs, policies, marketing, communications, incentives, pricing, data, and technology [...]" Veronica Jarvis draft of WA state proclamation.

"Managing demand is about providing travelers, regardless of whether they drive alone, with travel choices, such as work location, route, time of travel, and mode. In the broadest sense, demand management is defined as providing travelers with effective choices to improve travel reliability." – ACT 2004.

HOW TO DISCOVER PERSONAS

Discovering personas can help TDM practitioners connect and align with the values of various audiences, increasing the adoption of TDM strategies. Personas represent different segments of people who interact with or are affected by TDM strategies. These personas may help practitioners who aim to tailor their communication, methods, and policies to meet other audience's needs and concerns. This leads us to the following question: How do you discover personas? To answer this question, we have detailed several strategies below.

Surveys and Interviews

Conducting surveys and interviews will help TDM practitioners understand the diverse needs, preferences, experiences, and behaviors of the different segments of the population or audiences. By asking questions about one's role, commuting patterns, transportation barriers, and aspirations, among other tailored questions, we can understand how and why people currently travel in the ways that they do. This will also allow us to identify common pain points and obstacles and address specific issues hindering efficient travel. This can include anything from a lack of reliable public transit options to safety concerns for cyclists and pedestrians. These can inform how TDM is communicated to the persona, whether verbally through conversations or webinars, digitally through website pages or social media, or print through one-pagers or other infographics. Additional questions to identify TDM personas are included in Appendix C.

Data must be analyzed after the survey or interview to determine a baseline, identify gaps, and highlight trends and patterns. It is also important to validate findings by leveraging existing data from transportation studies, census reports, or even previous TDM results. This helps validate and enrich the data, revealing specific areas where TDM interventions may be most needed or effective. It allows for a comprehensive understanding of transportation needs and challenges.

- **Targeted Interventions:** Existing data can reveal specific areas where TDM interventions may be most needed or effective. For example, if data shows high congestion levels in certain regions, TDM strategies can be targeted to those hotspots.
- **Resource Allocation:** Data analysis can help allocate resources efficiently by identifying priority areas.
- **Benchmarking and Monitoring:** Establish benchmarks for current conditions and monitor the impact of TDM strategies over time.

Community Engagement Activities

Engaging in community activities is instrumental in gathering local insights and fostering trust and buy-in.

Participating in community events such as local sustainability gatherings, bike rides, and festivals, partnering with local organizations, and conducting focus groups with community representatives are all integral to this process.

Focus Groups

The value of focus groups in gathering in-depth qualitative insights cannot be overstated. Organizing and facilitating focus group sessions with diverse participants representing different personas is crucial. Focus groups allow for detailed discussions on specific transportation issues, understanding the nuances of people's commutes, testing concepts and messaging, and identifying practical and community-driven solutions.

Focus groups could also serve as a pilot to test a hypothesis. Implementing a test pilot can help to gather in-depth qualitative insights and validate personas. A rollout in a specific area or community for a small-scale TDM program tailored to the identified personas would allow for real-world testing of concepts and messaging, provide valuable feedback, and build connections with the community. For example, a carpooling initiative could be piloted in a suburban area. Participants could share their positive experiences, encouraging others to try carpooling and highlighting cost savings and community benefits.

One-On-One Discussions

One-on-one discussions with individuals are also a widely used method for determining personas. TDM practitioners can utilize questions like those detailed in Appendix C to identify personas. Personal conversations can allow a more focused understanding of an individual's commuting behaviors, barriers, perceptions, motivations, and values. One-on-one discussions can allow TDM practitioners to uncover specific information that may get lost or overlooked in broader community engagement activities or focus groups, allowing TDM practitioners to plan and/or implement more tailored and effective TDM strategies. These discussions can also allow for a deeper connection with TDM current or future participants, making TDM strategies practical and community-driven.

Surveys and interviews, community engagement activities, focus groups, and one-on-one discussions are examples of how TDM practitioners may discover personas. Although this is not an exhaustive list of ways to discover personas, these strategies have proven effective among industry professionals. For examples of TDM personas generated with a combination of personal experience and artificial intelligence, see Appendix D.

EXAMPLES OF PERSONAS AND COMMUNICATION STRATEGIES

Mobility applications in urban, suburban, and rural landscapes are continuously evolving. TDM plays a pivotal role in these landscapes by promoting sustainable travel behaviors that reduce vehicle congestion and emissions. A key contributor to TDM's success is the ability to create an understanding of its goals and concepts among diverse stakeholders or personas. Aligning the goals and values of TDM with those of the individual stakeholder or persona is critical to ensuring that the benefits and relevance of TDM are clearly understood in the associated application. Building on the previous section on identifying personas, this section delves into practical applications for practitioners by detailing typical personas in the TDM ecosystem. In describing these common personas, we provide details on their role in creating an understanding of TDM and critical strategies, tools, and resources contributing to a tailored approach to communication.

TDM Practitioners

Summary

TDM practitioners encompass a vast group whose primary role is to develop and implement strategies supporting TDM, such as carpool or ridematch programs, vanpool formation, bike share, and more. TDM practitioners are instrumental in designing, implementing, managing, and promoting TDM programs. They can include transportation management associations, non-profit organizations, and private organizations.

The key areas where private TDM practitioner efforts are most crucial are:

- **Education and Awareness:** TDM practitioners develop education materials and conduct outreach to inform the community about the goals and benefits of TDM in localized applications to spur behavioral change.
- **Stakeholder Engagement:** TDM practitioners engage diverse groups to ensure that their voices are heard, assist with identifying mobility barriers, and develop tailored solutions that meet the needs of these diverse groups and communities. They can also lobby for more considerable region wide changes on behalf of commuters.
- **Program Development and Implementation:** TDM practitioners design and implement tools, strategies, and programs that encourage using sustainable travel modes, such as carpooling, vanpooling, public transit, biking, and walking. They also contribute to developing policies and incentives to promote sustainable travel modes over single-occupancy vehicles.

- **Monitoring and Evaluation:** TDM practitioners continuously monitor and evaluate program impacts, ensuring the programs are refined to maximize benefits. This ongoing commitment to improvement should reassure the audience about the effectiveness of TDM programs.

Communication Strategies

TDM practitioners often engage with other stakeholders, provide education, and raise awareness of TDM programs and resources. Common communication strategies to create an understanding of TDM among TDM practitioners are:

- **Research and Case Studies:** TDM practitioners often rely on published research findings and lessons learned from other TDM practitioners, scholars, industry professionals, and stakeholders. These resources provide evidence-based recommendations that TDM practitioners use to gain insights and knowledge, instilling confidence in their strategies and tools.
- **Webinars and Training Sessions:** Webinars and training sessions offered by industry professionals or subject matter experts on specific TDM topics are another means of communication that TDM practitioners often utilize to gain knowledge and influence their understanding of TDM.
- **Networking and Peer Exchanges:** Networking among other TDM practitioners, subject matter experts, and other industry professionals and engaging in peer exchanges allow for knowledge and information sharing, which inform TDM effective strategies and tools that could be tailored to specific communities.

TDM Service Users

Summary

TDM service users include commuters, students, professionals, and general travelers who may have varying abilities and reasons for using TDM services. Some of the primary goals of TDM service users are mobility, money and time savings, emission reduction, and health and wellness promotion. TDM service users commonly seek reliable, accessible, cost-effective, and convenient transportation solutions but sometimes face barriers relating to safety, infrastructure availability, and general awareness of TDM services, like commuter benefits.

TDM users can advocate for accessible, equitable, sustainable, efficient, and cost-effective commuting options, driving the demand for sustainable mobility in their communities. Feedback and lessons learned from using TDM options can help practitioners, planners, policymakers, and other stakeholders enhance and evolve TDM to better meet the community's needs.

Communication Strategies

TDM users intake information on TDM, gain awareness of TDM strategies and tools through several outlets, and may adopt TDM elements that align with their values. It is important to note that this group is likely the largest and most diverse group within our outlined personas. There will likely be a benefit in going one level deeper to define different types of users within this group. This group is also most likely to be completely unaware of 'TDM' as a concept and predominately interested in small elements of the transit picture, such as the bus schedule or a vanpool option.

Some common communication strategies to create an understanding of TDM among TDM users are:

- **Digital Platforms:** TDM users may consume information on TDM strategies, tools, and programs through specific digital platforms such as social media, applications, and websites that align with their interests and demographics.
- **Emails and Newsletters:** Some TDM users may gain awareness of TDM program elements through email or newsletter subscriptions from their company, transit agencies, community groups, or other local organizations implementing TDM strategies.
- **Community Engagement:** TDM users may gain awareness of TDM strategies through community engagement and interactions through online forums, local events, workshops, public meetings, or word of mouth.
- **Traditional Media:** Newspapers, news, and radio stations are traditional media outlets where TDM users may gather information on local TDM strategies and tools.
- **Workplace Programs:** Many employers provide TDM strategies and tools or utilize local TDM programs, commonly known as commuter programs, to offer employees benefits and awareness of TDM strategies and tools.

Employers/Universities

Summary

Employers and Universities have the potential for significant influence in the TDM industry through their engagement and deployment of programs. These groups often have large amounts of people traveling to, from, and around their locations and can have outsized influence on employee/student choice. With the right level of engagement and encouragement these groups have the potential to make needle moving changes to the way people travel.

Communication Strategies

Employers and Universities cover such a large range, it would be sensible to segment this group further in future work. A large Fortune 5 company would have very different needs, interests, and resources to a local auto shop or florist. Nonetheless, we have included some examples of strategies below that could be used for engaging with employers:

- **Digital Platforms:** employers and universities may consume information on TDM strategies, tools, and programs through specific digital platforms such as social media, applications, and websites that align with their interests and demographics.
- **Research and Case Studies:** larger entities in this group may be interested in published research findings and lessons learned from other similar organizations. These resources provide evidence-based recommendations that they can use to gain insights and knowledge, instilling confidence in their strategies and tools or providing them with a competitive edge.
- **Webinars and Training Sessions:** Webinars and training sessions offered by industry professionals or subject matter experts on specific TDM topics are another means of communication that employers may be interested in to gain knowledge and improve their understanding of TDM options.
- **Networking and Peer Exchanges:** Networking among subject matter experts, and other industry professionals and engaging in peer exchanges allow for knowledge and information sharing, which inform TDM effective strategies and tools that could be tailored to specific communities.
- **Compliance Reporting:** larger entities within this group may face compliance issues, for example Scope 3 emissions reporting. Ensuring these groups are well informed about regulations and local programs that can help provide a significant incentive for these entities to engage.

Policymakers/Influencers

Summary

Policymakers and influencers are often educated and engaged individuals who hold positions such as government officials, urban planners, Executive Directors, and CEOs. These individuals promote sustainability by proposing improvements to public welfare and reducing environmental impacts through policy development and collaboration with stakeholders and the public. Policymakers and influencers face funding constraints and political pressures, navigate complex political procedures, laws, and regulations, and manage complex transportation systems.

This group helps raise public awareness of TDM through engaging communication strategies that align with stakeholder values. Overall, the efforts of policymakers and influencers in the TDM space focus on promoting sustainable mobility, improving public welfare, reducing environmental impacts, and improving equitable access to sustainable mobility options. However, this group usually has a more extensive scope of issues than TDM and may be battling competing priorities.

Communication Strategies

TDM policymakers and influencers gain information on TDM through various strategies ranging from scholarly articles to digital and traditional media, all of which help to influence TDM policies. Common communication strategies to create an understanding of TDM among TDM policymakers and influencers are:

- **Published Research:** A common source of information for TDM policymakers and influencers are government publications, policy briefings, and published reports or research such as scholarly articles. These sources often offer data-driven insights and best practices from pilot programs.
- **Political Pressure:** This group often obtains input from industry bodies, such as ACT, and is influenced by local businesses and, sometimes, local voters.
- **Stakeholder Input:** Community members, advocacy groups, and subject matter experts, among other stakeholders, often provide feedback to policymakers and influencers via public meetings, forums, workshops, and interviews.
- **Networking:** Professional networking, such as events, conferences, workshops, meetings, and professional organizations, facilitates information exchange among peers. Policymakers and influencers may use the knowledge gained through networking as knowledge-sharing opportunities that influence TDM policies.
- **Technology and Data Analytics:** Policymakers and influencers requiring data and evidence may use transportation modeling platforms, mapping tools, and data analytics tools to research and analyze transportation trends and evaluate the effectiveness of TDM strategies and tools.
- **Digital and Traditional Media:** Social media, newsletters, emails, outreach campaigns, news, and other media outlets can be sources of TDM information for policymakers and influencers.

Vendors

Summary

Vendors consist of organizations that provide services and products to other organizations or individuals to help them manage their programs. Vendors in the TDM space commonly offer services or products that support transportation alternatives to driving alone, such as carpooling platforms, bike-share programs, transit services, telecommuting tools, and parking management systems, to name a few. The goal of vendors is generally to provide alternatives to single occupancy vehicle travel, therefore reducing traffic congestion, lowering vehicle emissions, and improving sustainable mobility in a region or community. Vendors often get exposure to TDM programs across the country putting them in a valuable position to share insights with their clients.

Communication Strategies

Vendors commonly gain TDM knowledge and insights through user surveys and feedback, partnerships with other vendors or mobility providers, and data analytics, which they then use to inform TDM practitioners, users, and different personas. In more detail, common communication strategies to create an understanding of TDM among vendors are:

- **Surveys and Feedback:** Vendors may utilize surveys and feedback from travelers, employers, and other stakeholders to gather insights on mobility needs and preferences.
- **Data Analytics:** Vendors often analyze transportation data to identify trends, patterns, and areas of improvement and gain further insights into traveler demand and behaviors. Usually, vendors have a more comprehensive view of data than some practitioners focused on a geographically constrained market.
- **Stakeholder Engagement:** Regular meetings among government agencies, employers, TDM users, community groups, and other personas allow vendors to remain informed about specific mobility needs and barriers.
- **Partnerships:** Collaboration among transportation agencies, academic institutions, TDM practitioners, and other vendors can provide access to valuable research and lessons learned.
- **Policy Briefs, Regulations, and Guidelines:** Clean or sustainable policy briefings, regulations, laws, and other guidelines can inform vendors of regulatory requirements and best practices.
- **Workshops and Training:** Vendors may attend workshops or training sessions to understand TDM strategies better, learn pilot programs and best management practices, and integrate or adapt their products and/or services.

Consultants

Summary

Consultants in the TDM space are known for their expertise in designing, implementing, and evaluating TDM tools, strategies, and programs. Consultants provide knowledge and insights to organizations to help them meet their sustainable mobility goals and needs. By understanding the broader marketplace and tailoring solutions to clients' needs, consultants play a critical role in creating and implementing effective TDM programs.

Consultants are often leveraged to provide expert analysis, develop tailored solutions, and offer strategic guidance to organizations seeking to improve regional mobility, reduce vehicle congestion, and reduce vehicle emissions. Consultants leverage industry knowledge, data, and tools to provide clients with effective TDM strategies that align with the client's specific goals and needs. They often have access to a more extensive knowledge base across their organization than some clients can access.

Communication Strategies

Consultants also gather their TDM information from various sources depending on the type of consultant firm.

Commonly, consultants gather their TDM knowledge through sources like webinars and training, academic publishing, research, pilots, and peer learning opportunities. These communication strategies and more are detailed below:

- **Research and Literature Review:** Consultants often leverage research, publications, and case studies in the TDM space to inform their practices and recommendations and remain current on the latest information.
- **Professional Networks and Associations:** Consultants often participate in professional networks and associations, such as ACT, which help them share knowledge and remain informed of industry trends and best practices.
- **Client Feedback:** Soliciting client feedback can provide consultants with insights into changing mobility challenges and needs, helping them understand how to apply and adapt TDM strategies to accomplish different goals.
- **Best Practices:** Consultants may analyze best practices from pilots, implemented programs, and peers to understand what works and why in different scenarios.
- **Workshops and Training:** Attending workshops and training allows consultants to exchange ideas and learn more about others in the TDM industry.
- **Data Analytics:** By leveraging data analysis tools and modeling software, consultants can gain insights into travel trends and the effectiveness of TDM strategies.
- **Policy Briefs, Regulations, and Guidelines:** Informing and sharing policy, regulations, and other guidelines can help consultants to understand regulatory frameworks within the TDM space and to work within their bounds.

To increase program effectiveness, the goals and benefits of TDM must be communicated in a way tailored to specific personas. This allows for aligning TDM goals and benefits with the individual's values, making TDM more relevant and adoption more persuasive. Additionally, it is essential to consider what TDM is not when communicating to various personas, as this helps to clarify misconceptions, set realistic expectations, and limit resistance to TDM initiatives.

CONCLUSION

In conclusion, this research calls attention to the critical need to shift the focus of creating a shared understanding of TDM from an internal consensus to an external, audience-centric approach. While TDM practitioners seem to share a common understanding of the term, the general public remains largely unfamiliar with it. Rather than imposing a singular definition of TDM, this study advocates for a deeper understanding of how different stakeholders perceive and value TDM. By identifying and highlighting the specific aspects of TDM that resonate with target audiences, practitioners can develop more effective policies, programs, and messaging.

Understanding an individual's motivations and values provides a crucial entry point for explaining TDM in relatable terms. The use of visualizations, real-life examples, and locally relevant narratives can significantly enhance the communication of this complex concept to a broader audience.

To effectively promote TDM, professionals must bridge the gap between the industry, policy makers, and the public by tailoring strategies to specific end-user needs and preferences. This research serves as a foundation for future studies that delve into specific audience segments and develop tailored communication plans.

Future Research

Figure 6 below shows where we would suggest focusing future efforts. It highlights a particular emphasis on policy leaders and TDM users due to their influential role in shaping TDM environments and the ultimate success of TDM initiatives, respectively. We believe that finding ways to increase interest of policy makers and improving both interest and influence of TDM users would have an outsized impact on the results of our industry. Other work could include the further segmentation of the "Employer/University" group in order to better target the wide range of potential personas within this segment.

We invite further exploration and critique of our findings as we collectively strive to optimize TDM initiatives for maximum effectiveness.

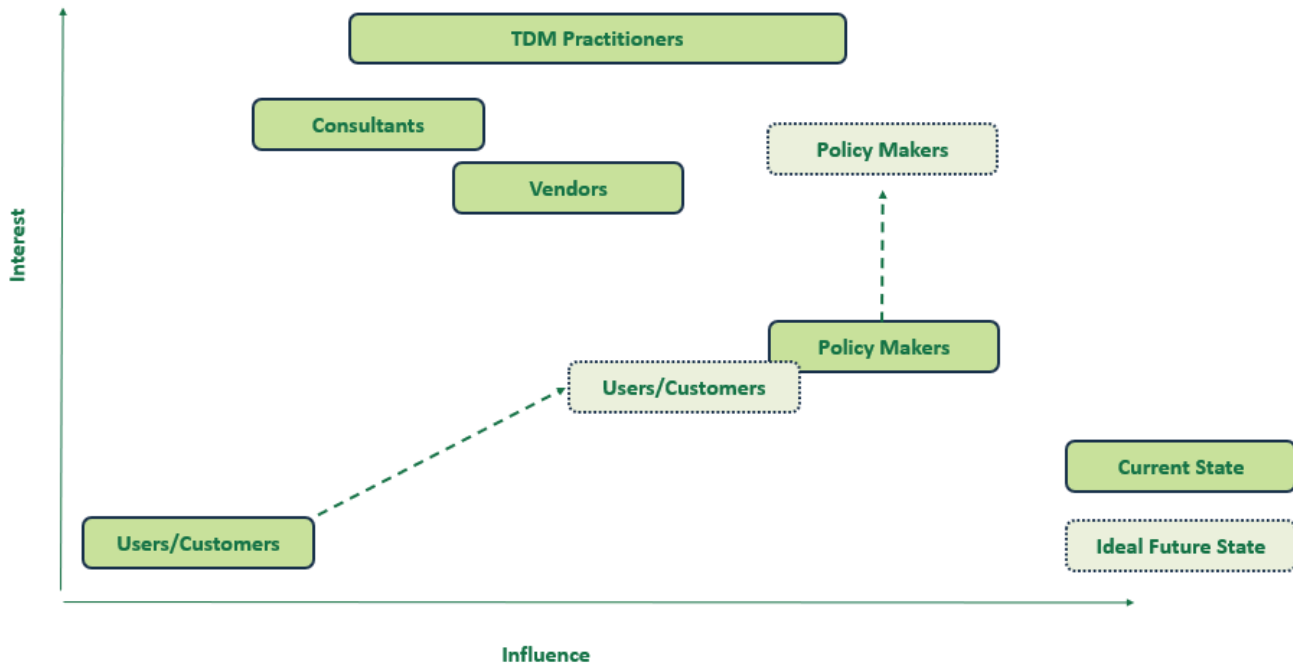


Figure 6. Interest and influence grid.

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Interviews

Jeff Olschwang, Director of Communication at Stanford University. ACT Northern California Chapter. Interview date: 3/14/2024

Veronica Jarvis, Sr. Planner CTR/TDM at Thurston Regional Planning Council. ACT Cascade Chapter. Interview date 4/24/2024.

Social Media

Instagram: @thetransitguy, @car_free_america, @transportationalternatives, @streetcraft, @transportationplanning, @transpochoices, @federaltransitadministration, @futurewise.wa

Reddit: r/sustainability, r/urbanplanning, r/transit

TikTok: The Happy Urbanist (@jonjon.mp4), Pedestrian Dignity (@pedestriandignity)

Agencies and Non-Profits

We Are TDM. <<https://www.wearetdm.com/>>

The 82 Alliance. <<https://www.82alliance.com/about>>

Sustainable Urban Transport Project.

<<https://sutp.org/publications/inua-1-sustainable-urban-mobility-plans/>>

Association for Commuter Transportation.

- ACT Connect. <<https://connect.actweb.org/home>>
- "What is TDM?" <<https://www.actweb.org/what-is-tdm>>

APPENDIX A:

Survey Results of “What does Transportation Demand Management (TDM) mean to you?” from TDM practitioners

What state do you live in? Ex. Maine	What type of organization are you affiliated with? Select the option that most closely aligns with your organization.	What is your role as it relates to TDM? Select the option that most closely aligns with your role.	How long have you been working in the TDM industry?	In a few words, summarize what TDM means to you.	Finish the following sentence: "In my opinion, TDM is not..."	Do you think the definition of TDM varies across geographies, roles, and/or applications?	Why do you think the definition of TDM varies across geographies, roles, and/or applications?	Please use this space to provide any recommendations or pose questions. For questions, please leave your name and email address.
New York	Consulting Firm	Consultant;	1-3 years	Processes that aim to transport people from point A to point B by giving them many options to choose from	One rigid solution	Yes		
Colorado	Technology Provider	Sales;	5-10 years	TDM means a set of strategies, technologies, and transportation options that give people the freedom to live a healthy, happy, and practical life.	...a restriction on how people move. It is the opposite!	Yes		
Minnesota	Transportation Management Association	Outreach Specialist;	1-3 years	Choices/options, congestion reduction, sustainability, multi-modal, air quality improvement, quality of life	taken seriously enough!	Yes		
Washington	Local Government	Planner;	5-10 years	TDM focuses on sustainable behavior change and programs to reduce SOV trips and VMT while encouraging multi-modal mobility options.	It is a widely known concept.	Yes		
Washington	Metropolitan Planning Organization / Council of Governments	Planner;	3-5 years	Making the most efficient use of the transportation system by maximizing usage of all modes.	Electric vehicles	Yes		

Washington	Public Corporation	Program Manager ;	5-10 years	Reducing single occupancy vehicles on the road by incentivizing sustainable public transportation to reach more people.	A one time event	No	I dont	
Florida	Technology Provider	Sales;	10+ years	Informing and encouraging efficient use of existing transportation resources	A single strategy.	Yes		Is this the right question to ask? What are you hoping to learn/find/uncover?
Ca	Employer	Managet;	10+ years	Creating exciting programs to encourage solo drivers to consider sustainable commute modes	Is not used enough	No	There is variety between urban, suburban, and rural	
California	College / University	Planner;	10+ years	Providing guidance with mobility solutions as an alternative to parking.	Just planning, it's an interdisciplinary approach to transit and mobility access for all	No	Because the typical person doesn't know what TDM is. It's a niche that the typical person doesn't know or understand	I think practitioners and senior management would benefit from renaming what we do so that the public is aware of what we do and what it means for them. It's a narrative to bridge the information gap.
California	Private Company	Transportation Budget/Financing;	5-10 years	TDM connects people to opportunity.	TDM is not free parking.	No	Connecting people to opportunities is universal.	TDM creates a better way to get people to places.
Vermont	Metropolitan Planning Organization / Council of Governments	Planner;	1-3 years	Suite of strategies that aim to reduce traffic congestion	Well incorporated to work done by state and federal governments and agencies	Yes		
California	Local Government	Operations manager;	1-3 years	Optimizing transit solutions to reduce congestion and encourage more sustainable transportation.	Building bigger highways or tolling.	Yes		
Minnesota	Transportation Management Association	TDM Enthusiast;	5-10 years	Change transportation behavior through policy and sharing resources, incentives and education.	Community organizing	Yes		Stop using the term TDM
California	College / University	Director, Parking & Transportation;Sales;	10+ years	Developing cost-effective, convenient and environmentally sounds forms of access for a	...only transit, or carpooling, or telecommuting, or a single modal solution--but, instead, a broad	Yes		

				diverse public community.	set of travel modes and tools that work together to provide better options than driving alone.			
Virginia	College / University	Planner;Manager;	5-10 years	Freedom of movement	driving alone and transitioning to EVs.	No	n/a	
Maryland	College / University	TDM Enthusiast;	10+ years	Providing and encouraging use of options to minimize traffic, especially single occupancy vehicles. Managing the demand on the overall transportation system, but especially on roads.	an easy solution or one-size fits all.	Yes		
Pennsylvania	Metropolitan Planning Organization / Council of Governments	TDM Enthusiast;	< 1 year	TDM means expanding mobility options beyond single-occupancy vehicles	a one-size-fits-all solution	Yes		
Colorado	Consulting Firm	Consultant;	10+ years	A collection of relatively low-cost strategies that improve mobility by working with the existing transportation system. I think a newer element of TDM is the deployment of TDM strategies to support the travel needs of low-income travelers, which may not reduce environmental impacts or reduce congestion. I also see TDM being used to address travel for all types of trips, not just commute trips.	Building significant infrastructure or funding expensive transportation services.	Yes		I think there is general agreement that TDM strategies help reduce congestion and improve air quality by moving people to different modes, routes, and times. I think there is more acceptance, but not complete acceptance, that TDM strategies can be used to improve mobility for low-income travelers or others who cannot drive while not reducing vehicle trips and improving the environment. Where I feel like there is a lack of consensus, is where TDM ends and other strategies begin. Is micro transit a TDM strategy? What about micro mobility? Where does parking policy

								and pricing come in, if at all? Are safe routes to school programs TDM? If these things are TDM strategies, are they always TDM strategies or only when certain conditions are met? There is a lack of agreement on these things among my clients, within my firm, and among my TDM colleagues. Good luck!
Colorado	Transportation Management Association	Outreach Specialist;	< 1 year	To me, TDM is an array of policies, programs and transportation options that encourage people to use active, shared and sustainable modes of travel. Ideally, TDM maximizes the efficiency of existing transportation infrastructure by incentivizing the use of public transit, walking, bicycling, and modes other than driving alone.	... engineering or transportation planning.	Yes		
Maryland	College / University	Planner;TDM Enthusiast;Assistant Director - Sustainable Transportation (manage a unit on a variety of tdm activities related to operations, planning, and outreach/education);Researcher;	5-10 years	Harnessing a variety of strategies, (ie. incentive programs, education, operations, budget allocations, and land-use planning development) to drive multi-modal system improvements in service of a more sustainable, efficient, and equitable transportation system. I believe there's no single bullet and that regions, cities,	One size fits all.	Yes		

				and organizations need to work closely with their communities, decision-makers and stakeholders to understand their needs, define targets, develop strategies and measure impact in their locality.				
CA	Transportation Management Association	Planner;	1-3 years	It means understanding travel behaviors to create support, incentives, and programming, to get people out of cars and to move people more efficiently and sustainably.	that complicated.	Yes		recommendations for what? not sure what you're asking here.
California	College / University	Outreach Specialist;	< 1 year	TDM means lowering the number of single occupancy vehicles on our roads and encouraging alternative commute modes, like public transit.	In my opinion, TDM is not improving ride alone rates	Yes		
Minnesota	Metroplitan Planning Organization / Council of Governments	Outreach Specialist;	1-3 years	TDM is helping people have education about and access to the many ways of getting from Point A to B.	merely about public transit service providers.	Yes		
PA	Transportation Management Association	Outreach Specialist;	10+ years	Giving people options when commuting	Should not only focus on businesses and workers but everyone	No	I don't	
California	Consulting Firm	Consultant;	10+ years	A holistic behavior change approach to reducing drive-alone trips.	about managing the highway system to be more efficient, nor providing new transportation services.	No	n/a	
Virginia	Metroplitan Planning Organization / Council of Governments	Outreach Specialist;	1-3 years	It means: 1. helping the residents in our community know that they have options other than drive alone 2. doing the research to know all the options available 3. making sure commuters know all the	difficult to understand...we are working to help our communities have transportation options so everyone can enjoy getting together for work and recreation.	Yes		It would be nice to see TDM become a mainstream acronym. I don't think a lot of people know what it means outside of our industry. As an outreach coordinator, I always explain what I do and

				benefits available to them. Because when these things are implemented and barriers to transit are broken down, we help our communities reduce traffic congestion, save money, and improve air quality which ultimately improves a whole community's quality of life!				how it helps commuters in our region, but I'm not sure if the people I interact with ever remember the words Transportation Demand Management after they leave. Perhaps, interacting more with kids, in schools or scouts, and educating in a fun way will help the next generation to know what TDM is and why it is such an important part of the functionality of a healthy community.
Ohio	Metropolitan Planning Organization / Council of Governments	Consultant;Outreach Specialist;Program Coordinator – Many different hats;	1-3 years	TDM means reducing the number of single occupancy vehicles on the road through education, outreach, and encouragement. Our two biggest goals are improving air quality/sustainability efforts, and reducing traffic congestion.	widely known/understood outside of our (those working specifically in TDM) circle.	No	I don't – I think at the core it's essentially the same. Though motivators for diving into TDM work certainly vary, I think the work itself is primarily universal.	
Connecticut	Technology Provider	Consultant;	5-10 years	Educating, empowering and enabling individuals to discover and utilize travel options that contribute to a more robust and resilient environment and local economy.	just marketing and incentives.	Yes		
Virginia	Transportation Management Association	TDM Program Director;	1-3 years	Getting people out of driving alone in their vehicles and commuting differently to embrace a healthier, greener lifestyle and reduce congestion.	a taxi service	No	It doesn't really	Question number 7 is backwards in her survey. It should trigger the answer when you click yes not no.
Washington	State Government	Planner;State program administrator ;	5-10 years	Mode shift, multimodal, mobility options, access, behavior	Surveying, performance measurement	Yes		The industry needs to begin focusing programming,

				change, education.				policy, education, funding and other recourses on TDM centered around equity and access for vulnerable populations in both urban and rural areas.
Minnesota	Transportation Management Association	Outreach Specialist;	1-3 years	Transportation options. Education, marketing, planning, and incentives around those options. Flexibility.	encouraging the use of SOVs for every trip, nor about electric cars.	Yes		
Utah	College / University	TDM Program planner & administrator;	3-5 years	Designing and implementing transportation programs to help people get where they need to go efficiently	a one size fits all field, each commuter group has their own needs and values that need to be considered.	Yes		
British Columbia - Canada	College / University	Director of Parking & Transportation;	10+ years	Helping people choose the best mode of transportation for their circumstances (reason for travel)	TDM is NOT about eliminating the automobile (it remains the most sustainable form of transportation in many circumstances)	Yes		TDM focuses too much on mode (how you travel) as opposed to destination (why you travel).
DC	Department of Transportation	Planner;	5-10 years	TDM means encouraging and enabling people to not drive alone. It is social marketing, education, behavior change campaigns, and communications	Actually I think almost everything is TDM, or should have a TDM component to make it the most successful. Updating a bus schedule? Use best TDM practices and channels to inform people, get their feedback, and teach them why it benefits them. Changing intersection geometry? Use best TDM practices and channels to make sure people are using it correctly and know why you changed it.	No	^ this branching is swapped, FYI. I don't think it varies, but TDM is effective at different levels due to scope of influence or built environment realities.	
Texas	Metropolitan Planning	Manager;	10+ years	a practice or collection of	building roads.	Yes		None. Thanks!

	Organization / Council of Governments			strategies aimed at improving how we use our multimodal transportation network, so that travel is more efficient and also more effective at helping communities reach broader strategic goals like improved air quality and congestion.				
Washington	Corporation	Employee Transportation Coordinator;	10+ years	TDM is a means to improving the quality of life within a community.	a key strategy for addressing climate change.	Yes		
Pennsylvania	Transportation Management Association	Planner;	1-3 years	Some common TDM strategies we implement and focus on include promoting ridesharing programs, flexible work schedules, providing education for using alternative modes of transportation, and help municipalities develop infrastructure for non-motorized transportation.	Going to solve the United States problems with transportation but we can work daily to educate the public on ways to go about their daily life without relying on SOV.	No	N/A	
Oregon	Consulting Firm	Consultant;	10+ years	TDM is about helping people find solutions to transportation challenges and helping empower them to drive less and experience the benefits of transportation options.	abstract/theoretical.	Yes		TDM varies so greatly, but I think it is most effective and powerful when it stays focused on people and practice, not just theory.
Minnesota	State Government	Planner;	5-10 years	TDM is a way to maximize the transportation infrastructure and travel options/services that are available. TDM looks different depending on what options are available, but TDM helps provide information and makes it easier	the infrastructure or services that make up travel options	Yes		

				for people to use modes besides driving.				
California	Local Government	Planner; Coordinator	10+ years	Increasing the efficiency of existing transportation resources.	a political issue and should not entangle itself with any political hot topics.	Yes		The definition may not vary, but the application does! We can get involved with Park and Ride lots, Safe Routes to School, new developments, etc. If your definition gets granular, it varies across geographies.

APPENDIX B:

Survey Results of “What does Transportation Demand Management (TDM) mean to you?” from the public.

Which state do you live in (if outside US, which country?)	Do you know what Transportation Demand Management (TDM) is?	If “yes”, what is your definition of TDM? Otherwise put N/A.	How do you complete the majority of your local/regular trips? E.g. to work, the grocery store or a local restaurant.	Do you know where to find information about how to plan a local trip or commute for work or leisure? If yes, please explain.	How would you describe your priorities involving commuting? From the following list, choose up to 3 sentiments that best describe your approach to transportation.	Do you have any comments, questions, or suggestions for transportation professionals?
Virginia	No	N/A	Car	Yes, Apple Maps.	<ul style="list-style-type: none"> I want to get from point A to point B as quickly as possible My journey needs to be comfortable Travelling with co-workers would be acceptable 	(skipped)
North Carolina	I have heard the term, but don't know the meaning	N/A	Car	Google maps	<ul style="list-style-type: none"> I want to get from point A to point B as quickly as possible I am happy to take various methods of transport, I just don't know where to go to find them Travelling with co-workers would be acceptable 	(skipped)
South Carolina	No	(skipped)	Car	No	<ul style="list-style-type: none"> I want to get from point A to point B as quickly as possible My journey needs to be comfortable I am happy to take various methods of transport, I just don't know where to go to find them 	(skipped)

Washington	Yes	TDM is a factor of city planning – looking at how big the city is, amount of cars, cars per household, bikability, what a persons average commute time is, and availability or public transit.	Car	i just use my phone apps like maps and camping apps and	<ul style="list-style-type: none"> I want to get from point A to point B as quickly as possible I 100% need my car, I can't possibly go without it I use active modes of transport predominately for health benefits 	(skipped)
Alaska	I have heard the term, but don't know the meaning	N/A	Car	(skipped)	<ul style="list-style-type: none"> I want to get from point A to point B as quickly as possible My journey needs to be comfortable Travelling with co-workers would be acceptable I 100% need my car, I can't possibly go without it 	(skipped)
South Carolina	No	N/A	Car	No	<ul style="list-style-type: none"> My transport should be environmentally sustainable I want to get from point A to point B as quickly as possible I use active modes of transport predominately for health benefits 	No
South Carolina	No	N/A	Car	No	<ul style="list-style-type: none"> I want to get from point A to point B as quickly as possible My journey needs to be comfortable I 100% need my car, I can't possibly go without it 	No
North Carolina	No	(skipped)	Car	Google or Google maps	<ul style="list-style-type: none"> My transport should be environmentally sustainable I want to get from point A to point B as quickly as possible My journey needs to be comfortable 	Nothing they don't already know but I wish we had free public transport and way more trains in this county
Maine	No	N/A	Car	directions aside, I'm not sure I understand the question but, for navigaiton, Google Maps	<ul style="list-style-type: none"> My transport should be environmentally sustainable I want to get from point A to point B as quickly as possible My journey needs to be comfortable 	(skipped)
South Carolina	No	N/A	Car	I drive. Public transportation isn't available	<ul style="list-style-type: none"> My journey needs to be comfortable Travelling with co-workers would be acceptable I 100% need my car, I can't possibly go without it 	No
South Carolina	No	N/A	Car	Y	<ul style="list-style-type: none"> My transport should be environmentally sustainable I am happy to take various methods of transport, I just don't know where to go to find them I 100% need my car, I can't possibly go without it 	Make cities more walkable and Bike friendly as well as more public transportation options.
South Carolina	No	N/A	Car	Yes	<ul style="list-style-type: none"> I want to get from point A to point B as quickly as possible My journey needs to be comfortable 	(skipped)

					<ul style="list-style-type: none"> • Travelling with co-workers would be acceptable • I 100% need my car, I can't possibly go without it 	
South Carolina	No	N/A	Car	No	<ul style="list-style-type: none"> • My transport should be environmentally sustainable • I want to get from point A to point B as quickly as possible • I am happy to take various methods of transport, I just don't know where to go to find them 	(skipped)
Illinois	No	N/A	Car	No	<ul style="list-style-type: none"> • I want to get from point A to point B as quickly as possible • My journey needs to be comfortable • I am happy to take various methods of transport, I just don't know where to go to find them 	No
South Carolina	No	N/A	Car	No	<ul style="list-style-type: none"> • My journey needs to be comfortable • Other (please specify): • I am happy to take public transportation with logical routes, when available. None is available near me. 	Nope
North Carolina	Yes	Planning and managing the transportation needs of a community- I believe gov funded infrastructure	Car, Other (Car now, but took the metro when I lived in DC)	I mainly use google maps and select the "public transport" option	<ul style="list-style-type: none"> • I want to get from point A to point B as quickly as possible • My journey needs to be comfortable • I am happy to take various methods of transport, I just don't know where to go to find them 	Moving from DC to NC and relying on my car has been the biggest shift. I love public transportation but don't feel it meets my needs in NC
Washington	No	N/A	Bike, Other (ebike)	Google maps	<ul style="list-style-type: none"> • My transport should be environmentally sustainable • I use active modes of transport predominately for health benefits • I use active modes of transport predominately to help the environment 	Please make more safe bike infrastructure! Ebikes are the future and we need safe routes
Texas	No	N/A	Car	No	<ul style="list-style-type: none"> • My transport should be environmentally sustainable • I want to get from point A to point B as quickly as possible • I am happy to take various methods of transport, I just don't know where to go to find them 	(skipped)
North Carolina	No	N/A	Car	No but would likely consult a map service and opt for a public transit option	<ul style="list-style-type: none"> • I want to get from point A to point B as quickly as possible • My journey needs to be comfortable • I want to be able to engage in other activities while I travel (e.g. read, play games, catch up on email etc.) 	I live in a rural area, we quite literally have no public transit! Even ride sharing is difficult here. I wish rural areas could get some love in the public transit sector.
South Carolina	No	(skipped)	Car	I would check the city website for transportation options.	<ul style="list-style-type: none"> • My transport should be environmentally sustainable • I want to get from point A to point B as quickly as possible • My journey needs to be comfortable 	(skipped)

South Carolina	Yes.	Transportation demand	Car	Google	<ul style="list-style-type: none"> • My transport should be environmentally sustainable • I want to get from point A to point B as quickly as possible • I 100% need my car, I can't possibly go without it 	(skipped)
Oregon	No	N/A	Car	Yes	<ul style="list-style-type: none"> • I want to get from point A to point B as quickly as possible • Travelling with co-workers would be acceptable • Travelling with strangers would be acceptable 	(skipped)
South Carolina	No	(skipped)	Car	Internet	<ul style="list-style-type: none"> • I want to get from point A to point B as quickly as possible • I want to be able to engage in other activities while I travel (e.g. read, play games, catch up on email etc.) • I 100% need my car, I can't possibly go without it 	No.
South Carolina	No	N/A	Car	Since I live in Greenville, I would check bus routes, but that's all I know how to do	<ul style="list-style-type: none"> • I want to get from point A to point B as quickly as possible • I want to be able to engage in other activities while I travel (e.g. read, play games, catch up on email etc.) • I am happy to take various methods of transport, I just don't know where to go to find them 	HIGH SPEED TRAINS LIKE EUROPE PLZZZZZ <3
Washington	I have heard the term, but don't know the meaning.	N/A	Car, Other (trail, light rail)	Yes. Local public transit website has a trip planner.	<ul style="list-style-type: none"> • I want to get from point A to point B as quickly as possible • My journey needs to be comfortable • Travelling with strangers would be acceptable 	None.

APPENDIX C:

Sample Questions to Help Determine Personas in the TDM Space

Surveys and Interviews

1. What are your primary modes of transportation for commuting, and why do you prefer them?
2. How often do you encounter delays or issues with your current transportation options?
3. What factors influence your decision when choosing a transportation mode (e.g., cost, convenience, environmental impact)?
4. How would you describe your ideal commuting experience?
5. Are you aware of alternative transportation options available in your area, such as carpooling, biking, or public transit? If so, have you tried them?
6. What barriers prevent you from using alternative transportation modes more frequently?
7. How important is environmental sustainability in your transportation choices?
8. What would motivate you to shift from your current transportation mode to a more sustainable option?
9. Have you participated in any transportation programs or initiatives in the past? If so, what was your experience?
10. How could your community improve transportation options to meet your needs better?

Community Engagement Activities

1. What transportation challenges do you and your neighbors face regularly?
2. What transportation solutions would you like to see implemented in your community?
3. How do transportation issues impact your daily life and community involvement?
4. In what ways do you think transportation improvements could enhance your neighborhood's quality of life?

5. How do you prefer to receive information about transportation programs and initiatives?
6. What role do you see yourself playing in shaping your community's transportation future?
7. How would you rate the accessibility of transportation options in your neighborhood?
8. What transportation-related community activities or events would you like to participate in?
9. How can local organizations and governments better engage with you and your community on transportation issues?
10. How do you think transportation solutions can be more inclusive and equitable in your community?

Focus Groups

1. What are your biggest transportation challenges, and how do they affect your daily routine?
2. How do you perceive current transportation options regarding reliability, affordability, and convenience?
3. What transportation initiatives have you found successful or unsuccessful in your area, and why?
4. How do you think transportation improvements could better serve people with diverse needs (e.g., seniors, people with disabilities, low-income households)?
5. What messaging around transportation options resonates most with you, and why?
6. How could transportation changes impact your community's economy and environment?
7. What types of incentives would encourage you to try alternative transportation modes?
8. How do you think technology could play a role in improving transportation options in your community?
9. What are your thoughts on shared transportation solutions like carpooling, bike-sharing, or ride-hailing services?
10. How do you believe transportation initiatives can build stronger connections within your community?

One-On-One Discussions

1. Can you walk me through a typical day of your commute and how you feel about it?
2. What are your top priorities when choosing a mode of transportation, and why?

3. How does your current transportation routine fit your lifestyle and values?
4. What changes would make your commute more enjoyable or less stressful?
5. Have you considered alternative modes of transportation, and what has influenced your decision to try them?
6. How does your personal or family situation (e.g., children, work schedule, health) impact your transportation choices?
7. What information or support would you need to consider switching to a different mode of transportation?
8. How do you see transportation fitting into your long-term goals (e.g., health, financial stability, community involvement)?
9. What challenges or barriers do you face when accessing transportation options that align with your values?
10. What would it look like if you could design an ideal transportation system for your community?

APPENDIX D:

Examples of Transportation Demand Management Personas

Persona 1: Suburban Commuter

Name: Sarah Thompson

Age: 34

Occupation: Marketing Manager

Location: Suburban neighborhood in a metropolitan area

Household: Single

Transportation Modes: Owns a sedan, uses commuter train

Commuting Pattern: Drives to the train station and takes the train to work downtown

Sarah is a 34-year-old marketing manager living in a suburban neighborhood. She commutes to a downtown office five days a week. Sarah uses her car to drive to the train station and then takes a commuter train into the city for work. Her commute involves a 10-minute drive to the train station and a 30-minute train ride to downtown. Sarah prefers the train for convenience and to avoid the stress and expense of driving and parking in the city.

Needs and Motivations:

- **Convenience:** She values the ease and predictability of her commute.
- **Cost Savings:** Using the train helps her save on gas, parking fees, and vehicle wear and tear.
- **Environmental Concerns:** Sarah is environmentally conscious and prefers public transit as a more sustainable option.

Potential Barriers:

- **First/Last Mile Connectivity:** Limited options for getting to and from the train station.
- **Service Reliability:** Occasional delays and overcrowding on the train.
- **Parking Availability:** Limited parking at the train station can be challenging during peak hours.

TDM Strategies:

- Enhanced Shuttle Services: Provide shuttle services or bike-share options for the first/last mile connectivity.
- Parking Solutions: Implement reserved parking for regular commuters if they carpool to the station.
- Real-Time Updates: Improve real-time updates and communication about train schedules and delays.

Persona 2: Urban Professional

Name: Lisa Rodriguez

Age: 29

Occupation: Software Developer

Location: Urban city center

Household: Lives with a roommate

Transportation Modes: Uses public transit, rides a bicycle, occasionally uses ride-hailing services

Commuting Pattern: Takes the subway or buses for daily commuting, bikes for short trips

Lisa is a 29-year-old software developer living in the city center. She uses a mix of public transit and cycling to get around. She relies on the subway to commute to work and buses or her bike for shorter trips within the city. Her daily travel includes a 15-minute subway ride to work, occasional bus rides for errands, and biking for nearby activities.

Lisa chooses public transit and biking for convenience, cost-effectiveness, and environmental benefits.

Needs and Motivations:

- Accessibility: She needs reliable and frequent public transit options.
- Health and Wellness: Lisa enjoys biking for its health benefits and flexibility.
- Sustainability: She is motivated by a desire to reduce her carbon footprint.

Potential Barriers:

- Transit Overcrowding: Buses and subways can be overcrowded during peak times.
- Bike Safety: Concerns about bike safety and secure parking.
- Service Disruptions: Occasional service disruptions on public transit.

TDM Strategies:

- Improved Bike Infrastructure: Develop more bike lanes and secure bike parking.

- Enhanced Public Transit: Increase the frequency and reliability of public transit services.
- Flexible Work Hours: Encourage employers to offer flexible work hours to reduce peak-time congestion.