

# Marketing and Budgeting of Transit Technology

## Implementation and Strategic Planning Training Program

**A Companion to the MDOT Transit Agency Guidebook  
Supporting Marketing, Budgeting, and  
Implementation of Transit Technology  
Across Michigan**

### **PHASE 1: ASSESS YOUR AGENCY NEEDS**



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## Phase 1: Understanding your Riders

The MDOT Transit Technology Training Program is a multi-phase learning journey designed to help Michigan's transit agencies plan, fund, implement, and market new transit technologies. Through hands-on exercises, practical tools, and peer collaboration, this companion to the MDOT Transit Agency Guidebook equips agencies to make informed, strategic decisions.

### PURPOSE

**Understanding your riders—now and in the future—is the foundation of smart transit planning. Rider personas and demographic insights help agencies make informed investments that improve accessibility, efficiency, and service delivery.**

### WHY IT MATTERS

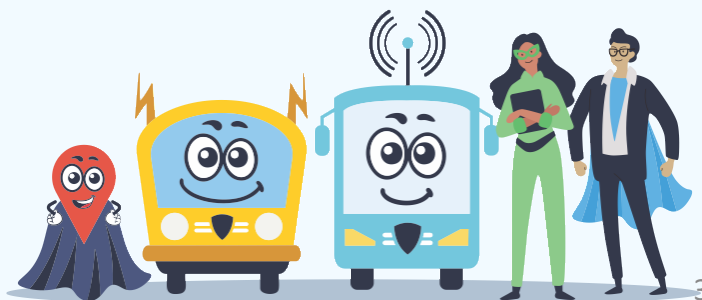
**During the first phase of the program, you will engage in foundational modules focused on assessing your agency's needs and understanding your riders. This phase emphasizes gathering demographic and trip data, developing rider personas, and identifying barriers and opportunities to inform strategic transit technology decisions. When you understand your riders, you can design services, technologies, and strategies that truly meet the needs of your community.**

### LEARNING OBJECTIVES

**By the end of this session, you will understand who your riders are and how they use transit. You will identify key rider groups, assess demographic and trip data, develop preliminary rider personas, and recognize barriers and opportunities affecting transit use. These insights will help your agencies to begin aligning services and technology with community needs.**

### PEER LEARNING CIRCLES

**Throughout the program, you will participate in peer learning circles. These sessions provide space to share experiences, reflect on challenges, learn from others, and support one another's development in real time.**



# "AGENT AXIS"

## **SUPER POWER**

Ability to zero in on what your agency really needs, cutting through the noise to uncover gaps, spot opportunities, and chart a course toward smarter, rider-focused solutions.

## **APPEARING IN PHASE 1**

**Assess Your Agency Needs**



## PHASE 1

# ASSESS YOUR AGENCY NEEDS

**Before you dive into the latest tech, make sure you actually need it.**



**Get clear on your challenges, listen to what your riders want, and make sure any new tools fit with how you operate day to day. After all, smart moves are more important than shiny gadgets!**

Investing in new technology isn't just about keeping up, it's about solving the right problems. Every transit system is different, and a one-size-fits-all solution rarely hits the mark. Innovation works best when it's purposeful, aligned with how the agency operates and what riders need. By starting with this kind of clarity, agencies can make smarter decisions, build internal support, and set the stage for real, lasting impact.



**This foundational step will help ensure that new tools and ideas actually move the needle.**



# Understanding Your Riders:

## Section 1: Session Overview



**What are the primary trip purposes in your community??**

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**What rider challenges are you already aware of?**



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# Understanding Your Riders:

## Section 1: Session Overview

**What improvements would most benefit your riders?**



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## Section 2: Rider Demographics and Trip Data



**OBJECTIVE**  
Identify existing data and knowledge gaps.

**INSTRUCTIONS**  
Use available data or your best estimates. You will validate this information after the workshop.

RIDER DEMOGRAPHICS	
Category	Details
Age Groups Served	
Income Levels	
Individuals with Disabilities	
Seniors	
Students	
Limited English Proficiency	
Households Without Vehicles	

## Section 2: Rider Demographics and Trip Data



**OBJECTIVE**  
Identify existing data and knowledge gaps.

**INSTRUCTIONS**  
Use available data or your best estimates. You will validate this information after the workshop.

TRIP INFORMATION	
Datapoint	Details
Top Origins	
Top Destinations	
Common Trip Purposes	
Peak Travel Times	
Service Types Usage (e.g.,: Fixed Route / Demand Response / Paratransit)	

## Section 2: Rider Demographics and Trip Data



**OBJECTIVE**  
Identify existing data and knowledge gaps.

**INSTRUCTIONS**  
Use available data or your best estimates. You will validate this information after the workshop.

DATA SOURCES		
Datapoint	Available (Yes/No)	Notes
Ridership Data		
Census Data		
MDOT Reports		
Rider Surveys		
Driver Feedback		
Community Organizations		



**POW!**

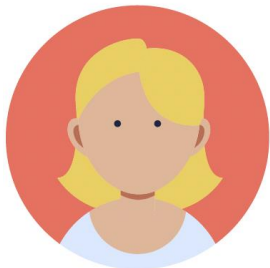
## Section 3: Rider Persona Development

OBJECTIVE

**Develop representative rider profiles.**

INSTRUCTIONS

**Create a rider persona based on your agency's community.**



**THE SAVVY  
STUDENT**



**THE INDEPENDENT  
SENIOR**



**THE HYBRID  
COMMUTER**



**THE URBAN  
MULTITASKER**



**THE DETERMINED  
TRAVELER**



**THE YOUNG  
NAVIGATOR**

## SECTION 3

### RIDER PERSONA DEVELOPMENT

# Persona 1: The Savvy Student



**A technology-savvy student balancing a part-time job and evening college classes relies on public transit as their primary mode of transportation.**

Without a driver's license, they depend on frequent and well-timed service to get to work and school on schedule. Challenges like missed connections and irregular schedules make real-time tracking, app-based ride requests, and reliable public transit essential for their success.

### Background

- Suburban resident
- No driver's license
- Tech-savvy
- Part-time college student
- Works at the local Walmart

### Challenges

- Infrequent service
- Missed connections
- Irregular work hours

### Travel Habits

- Going to/from work daily
- Evening college classes

### Definition of Success

- On-demand service
- Arrives/departs on schedule

### Technology Considerations

- On-demand ride requests
- Realtime bus tracking
- Phone app payments

## SECTION 3

### RIDER PERSONA DEVELOPMENT

## Persona 2: The Independent Senior



**A retired resident in a rural area relies on public transit for essential trips, including medical appointments and errands.**

Living on a fixed income and without access to fixed-route services, they require affordable, door-to-door public transit options that accommodate their mobility needs. With limited access to technology, they prefer printed schedules and phone-based reservation systems to navigate their public transit options independently and confidently.

### Background

- Rural area resident
- Fixed income
- Does not own a smartphone
- Retired

### Challenges

- Needs mobility assistance
- No access to fixed-route services

### Travel Habits

- Weekly medical appointments

### Definition of Success

- Fare-free system
- Accessible vehicles that provide door-to-door service

### Technology Considerations

- Prefers printed schedules and maps
- Calls to reserve rides

## SECTION 3

### RIDER PERSONA DEVELOPMENT

# Persona 3: The Hybrid Commuter



**A professional with a hybrid work schedule chooses public transit over driving to avoid congestion and reduce commuting stress.**

While they own a vehicle, they prefer using public transit for part of the week, making seamless connections and real-time service updates crucial for a smooth commute. Access to onboard Wi-Fi, flexible ticketing options, and multimodal connections enhances their ability to stay productive while traveling and ensures a reliable alternative to driving.

#### Background

- Lives in urban area outside city
- Owns vehicle
- Choice transit user due to commuter traffic
- Salaried job Hybrid work schedule
- Owns a smartphone

#### Travel Habits

- Uses transit for kids' school and work commute
- Goes to office only half of the week

#### Challenges

- Missed connections
- Multiple routes needed for one trip
- City route must align with connecting bus

#### Definition of Success

- Alerts on delays or cancellations
- Frequent buses and smooth connections

#### Technology Considerations

- All-in-one transit app
- Links to other transport modes
- Free onboard Wi-Fi for work

## SECTION 3

### RIDER PERSONA DEVELOPMENT

## Persona 4: The Urban Multitasker



**A busy city-based parent depends on public transit for daily errands, social outings, and transporting children. Without a personal vehicle, they navigate a mix of buses, micromobility options, and walking to get where they need to go.**

Their biggest concerns include the reliability of public transit, accessibility for strollers and bikes, and clear communication of delays or cancellations. Features like onboard safety measures, multilingual signage, and well-maintained infrastructure make public transit more convenient and efficient for their family's needs.

### Background

- Lives in the city
- Does not own a vehicle
- Stay-at-home mother
- Hearing impaired

### Travel Habits

- Uses public transit daily
- Transit for errands, social, and kids
- Enjoys using bicycles

### Challenges

- Stroller/bike storage on buses
- Delays or cancelled transit service

### Definition of Success

- Stops close to destinations
- Good bus stop/station setup
- Clean and safe transit
- Multiple communication methods

### Technology Considerations

- Safe onboarding/offboarding apps
- Visual cues at stops and onboard
- Apps to support hearing impaired
- Easy micromobility (e.g., e-bikes)

## SECTION 3

### RIDER PERSONA DEVELOPMENT

# Persona 5: The Determined Traveler



**A senior, first-generation immigrant with LEP relies on public transit for errands, medical visits, and daily mobility.**

Without a driver's license, they face challenges in understanding signage, online public transit information, and verbal announcements. Navigating the system is further complicated by mobility constraints. Their experience is improved through multilingual signage, clear visual cues at stops and stations, and public transit apps with built-in translation features, allowing them to travel with confidence and independence.

#### BACKGROUND

- 60 years old
- Does not own a vehicle or have a driver's license
- Speaks/understands very little English
- First-generation immigrant
- Uses a mobility device

#### Travel Habits

- Uses transit often for errands, outings, and kids
- Relies on paratransit for medical visits

#### Technology Considerations

- Apps/drivers with text-to-speak tools
- Visual cues at stops and onboard

#### Travel habits

- Uses transit often for errands, outings, and kids
- Relies on paratransit for medical visits

#### Challenges

- Difficulty getting to stops and boarding
- Trouble with signs, content, and announcements

#### Definition of Success

- Transit info in multiple languages
- Easy access to stops and vehicles
- Simple paratransit application process

## SECTION 3

### RIDER PERSONA DEVELOPMENT

# Persona 6: The Young Navigator



**A young school-aged rider takes public transit to and from school, often traveling alone or with siblings.**

With no school-provided transportation, they depend on buses to get to class on time and may need to travel later due to after-school activities. Delays, missed transfers, and safety concerns are significant challenges. Features like real-time tracking for students and parents, secure station amenities, and easy, cashless payment options help make their public transit experience safer and more accessible.

#### BACKGROUND

- 13 years old
- Uses public transit to travel to elementary/secondary school
- Often travels alone or with siblings

#### Travel habits

- Uses public transit to travel to and from school
- Often travels later due to after-school activities

#### Travel Habits

- Uses transit often for errands, outings, and kids
- Relies on paratransit for medical visits

#### Challenges

- Delayed or cancelled buses and late arrivals
- Difficulty understanding transfers and new routes

#### Definition of Success

- Real-time tracking for both student rider and student's parents
- Ease of payment/adding funds

#### Technology Considerations

- Cashless, onboard payment
- Onboard Wi-Fi for devices without data/calling abilities
- Station amenities—security cameras, lighting, real-time information
- Online videos for users to understand how to ride the system

## Rider Persona Development

### OBJECTIVE

**Understand your rider personas for your specific agency.**

### INSTRUCTIONS

Given a total of 100 points, assign a value to each of your primary rider profiles. If selecting "Other," please specify and allocate a value. The combined total must not exceed 100 points.

### DATA SOURCES

Persona Type	Value (Total does not exceed 100 points)	Notes
Persona 1: The Savvy Student		
Persona 2: The Independent Senior		
Persona 3: The Hybrid Commuter		
Persona 4: The Urban Multitasker		
Persona 5: The Determined Traveler		
Persona 6: The Young Navigator		
Other Persona(s)		

## Section 3: New Rider Persona Outlining



### INSTRUCTIONS

**If you have identified a rider persona not listed on the last page, use this worksheet to outline and define their characteristics and needs.**

Background	Notes
Persona Name	
Age	
Employment Status	
Household Income	
Location	
Access to a Vehicle (Y/N)	
Technology Comfort Level	

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## Section 3: New Rider Persona Outlining



### INSTRUCTIONS

**If you have identified a rider persona not listed here, use this worksheet to outline and define their characteristics and needs.**

Trip Habits	Why Do They Ride?
Trip Purpose	
Frequency of Transit Use	
Common Destinations	
Preferred Service Type	

### Challenges:

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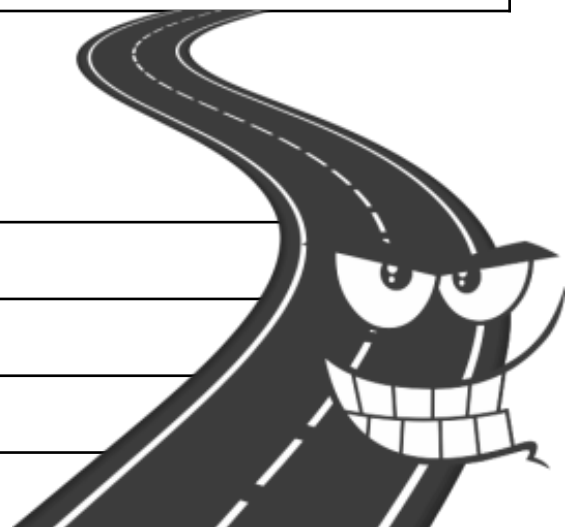
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## Section 3: New Rider Persona Outlining

### INSTRUCTIONS

**If you have identified a rider persona not listed here, use this worksheet to outline and define their characteristics and needs.**

### Definitions of Success:

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### Technology Considerations:

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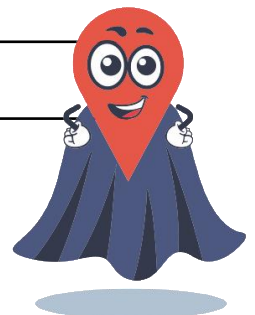
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## Section 4: Rider Persona Summary



**OBJECTIVE**  
**Identify your agency's top three rider groups.**

Persona Name	Primary Needs	Challenges	Technology Opportunities
Rider Persona 1:			
Rider Persona 2:			
Rider Persona 3:			

## Section 5: Barriers and Opportunities

**OBJECTIVE**  
**Identify key constraints and potential improvements.**



Category	Identified Barriers
Accessibility	
Awareness and Communication	
Technology	
Funding	
Staffing	
Service Availability	

# Section 5: Barriers and Opportunities



**OBJECTIVE**  
**Identify key constraints and potential improvements.**

Category	Opportunities
Service Improvements	
Technology Enhancements	
Community Partnerships	
Rider Experience	
Equity Accessibility	
Other	

## Section 6: Rider Feedback & Engagement Planning



**OBJECTIVE**  
**Identify methods to validate findings.**

Stakeholder	Engagement Method	Timeline
Riders	Surveys	
Bus Operators	Interviews	
Community Organizations	Meetings	
Local Governments	Workshops	
Employers and Schools	Partnership	

### Key Questions to Ask Riders:

1. What challenges do you face when using transit?
2. What improvements would enhance your experience?
3. How do you prefer to receive transit information?
4. What technology would make transit easier to use?



## Section 7: Gridlock Risk Assessment

**OBJECTIVE**

**Identify potential obstacles to rider-centered planning.**



Risk	Impact	Mitigation Strategy
Limited Funding		
Lack of Data		
Staffing Constraints		
Low Rider Awareness		
Technology Barriers		
Other		

## Section 8: Agency Plans



**OBJECTIVE**

**Define immediate next steps.**



**Top Three Rider Group Identified**

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**Top Three Rider Needs**

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# Section 8: Agency Plans



**OBJECTIVE**  
Define immediate next steps.



## Priority Actions

Action	Owner	Timeline

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## Section 9: Workshop Reflections and Next Steps

### OBJECTIVE

Prepare agencies for the next session for Phase 1, Part 2

### Data to Validate after Workshop

- Ridership data
- Demographics
- Surveys
- Community/agency feedback

### Topics in Upcoming Workshop

- Understanding your organization's needs
- Defining goals and problem statements
- Stakeholder engagement
- Technology readiness and gap analysis

**TAKE ACTION!**





