Universal Mobility Implementation Resources

Al Benedict

Director Mobility Learning Center &

Accessibility Programs

Enjoli Dixon

Regional Liaison
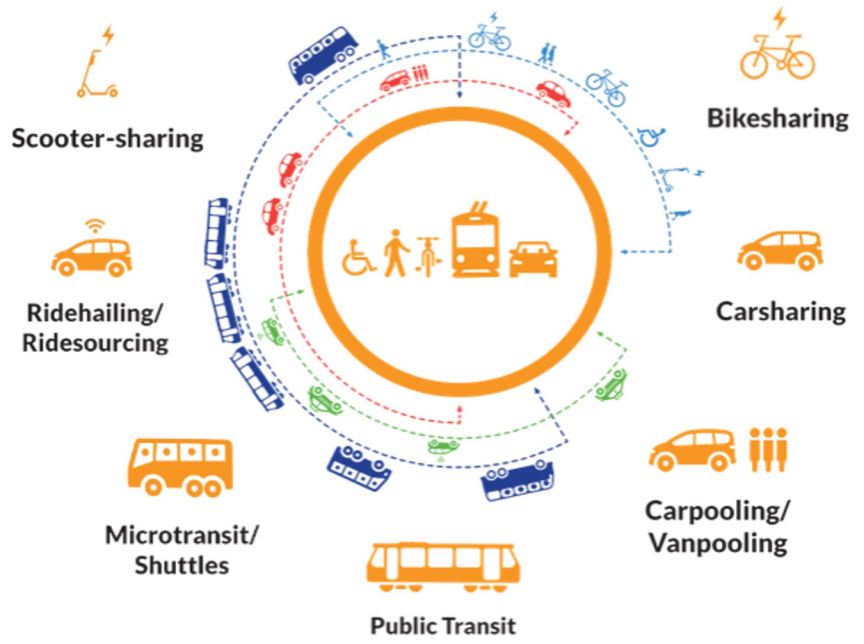
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NCMM National Center for Mobility Management

Introduction

The Shared-Use Mobility Center (SUMC) is a non-profit organization working in the public interest

SUMC is working to replace car-centric transportation with people-focused shared mobility to fight climate change, promote equity, and strengthen community.

Scooter-sharing

Bikesharing

Ridehailing/Ridesourcing

Carsharing

Microtransit/Shuttles

Public Transit

Carpooling/Vanpooling

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Universal Mobility Resource

Mobility Learning Center

Partnered with NCMM to convene a diverse working group to better understand accessibility needs and solutions.

https://learn.sharedusemobilitycenter.org/learning_module/universal-mobility/

What is Universal Mobility?

Universal Mobility

Universal Design

Inclusive Mobility

Understanding Passengers

Service Planning and Coordination

Mobility Data and Technology
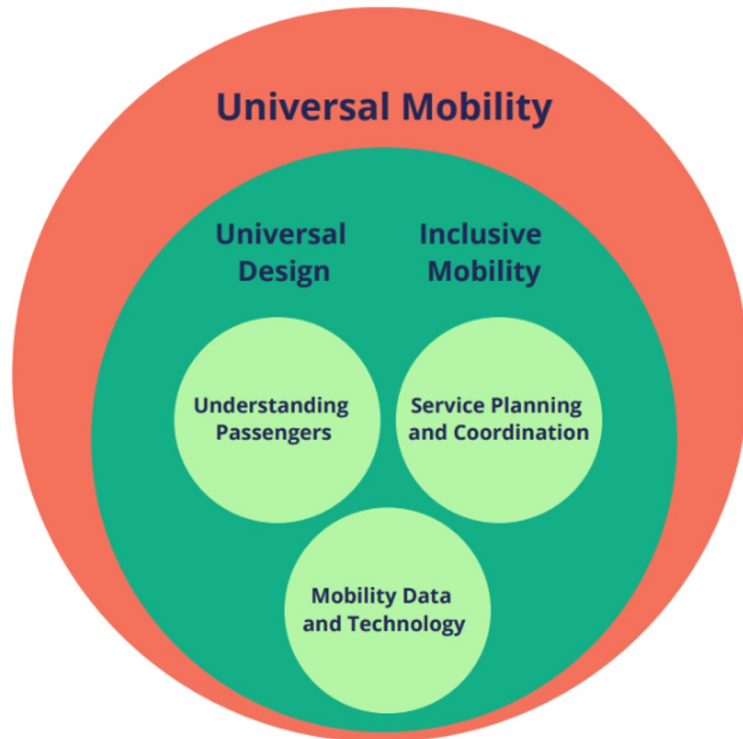
Universal mobility is a design practice that ensures that **all transportation products and services are inclusively designed** and available for all user groups and are centered on the complete trip.

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Universal Mobility Planning & Implementation Resource

Introduction to Universal Mobility
This section provides an overview of what universal mobility is, describes why it is relevant to the transportation and planning industries, and offers insight on the development of this resource.

🕐 5 minutes

Understanding Passengers
This section provides an overview of why understanding passengers is an important consideration when pursuing universal mobility.

🕐 5 minutes

Universal Design
This section provides an overview of why universal design is an important consideration when pursuing universal mobility.

🕐 5 minutes

Planning and Service Coordination
This section provides an overview of why service and planning coordination is an important consideration when pursuing universal mobility.

🕐 5 minutes

Mobility Data and Technology
This section provides an overview of why mobility data and technology are an important consideration when pursuing universal mobility.

🕐 5 minutes

Checklist
This checklist provides an opportunity for practitioners to assess whether or not they have processes and infrastructure in place conducive to universal mobility.

🕐 5 minutes

Implementing This Toolkit
This section provides considerations when implementing the ideas and recommendations outlined in this toolkit.

🕐 5 minutes

Checklist provides steps that an agency can take - but understand this takes time and often starts with

Changing the culture around creating an accessible system -

Requires coordination!

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What is Complete Trip?

All these components are critical to assure accessible service

USDOT ITS4US OVERVIEW

Source: USDOT

TRIP PLANNING

INTERSECTION CROSSING

VEHICLES & MODE TRANSFERS/PAYMENT STOPS & STATIONS

INDOOR NAVIGATION

OUTDOOR NAVIGATION

BOARDING/USING VEHICLES

INDOOR/OUTDOOR TRANSITION

CONNECTING & COMPLETING TRIP SEGMENTS

Universal Design
Facilities, Operations, Information Systems

Universal Design

Facilities

The first component of universal design is facility design – how facilities look and how their **physical features support accessibility.** All the physical design features of a transit facility, bus stop, or mobility hub enable riders to use services before they even get on a transportation service.

Neighborhood Infrastructure is another integral piece of facility design that refers to roadway and pedestrian infrastructure, the streetscape, and paths of travel.

Universal Design

Operations

Transportation service is a continuum of operations including:

1. How individuals learn about services, schedules, and costs;
2. Procedures for purchasing tickets and paying fares;
3. How individuals board and deboard from a transportation mode;
4. Riding the service.

If one of these points in the continuum is not accessible, the entire trip can become inaccessible.

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Universal Design

Information systems

Having **information systems, including signage and communication systems that are also universally designed**, is critical to respond to the needs of individuals with sensory disabilities, such as those who are blind or those with hearing disabilities. **Cognitive disabilities** must also be considered.

Technology can help but not always required

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Universal Design

Information systems

The agency needs to have **a forum and a consistent opportunity to gather perspective**, feedback, and insight from the disability community.

It is equally important that agencies have a **reliable and transparent means of sharing information** about the accessibility of all components of its system.

Mobility Data and Technology

Mobility Data and Technology

Mobility Data

An inclusive and well-functioning mobility system requires **understanding how mobility services operate in real-time and** assurance that mobility service and accessibility **information is available to the public.**

GTFS offers a starting point into mobility data

https://learn.sharedusemobilitycenter.org/casestudy/maas-in-minnesota-developing-a-regional-trip-planning-platform/

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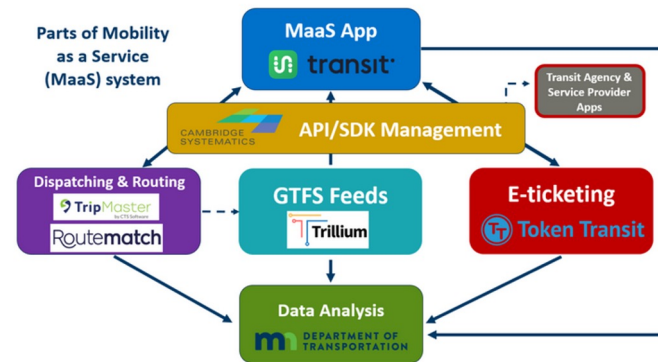
Mobility Data and Technology

Mobility Data

New technologies and **mobility data-driven solutions are continually emerging**. These technology solutions are not always applied to projects with the **end user in mind** and thus are not sensitive to their personal or cultural means.

- Avoid silos
- Engage communities and users
  - Creates support
  - Helps avoid costly retrofits

https://learn.sharedusemobilitycenter.org/overview/on-demand-pilot-with-via-launched-for-seniors-and-people-with-disabilities-grand-rapids-mi-2019/

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Mobility Data and Technology

Technology

Having **data management systems** in place and understanding mobility assets and challenges enables agencies to take on more complex technology-driven solutions.

- Does your agency have the
  - Staff capacity
  - Knowledge and funding to adopt, maintain, and operate the technology solution
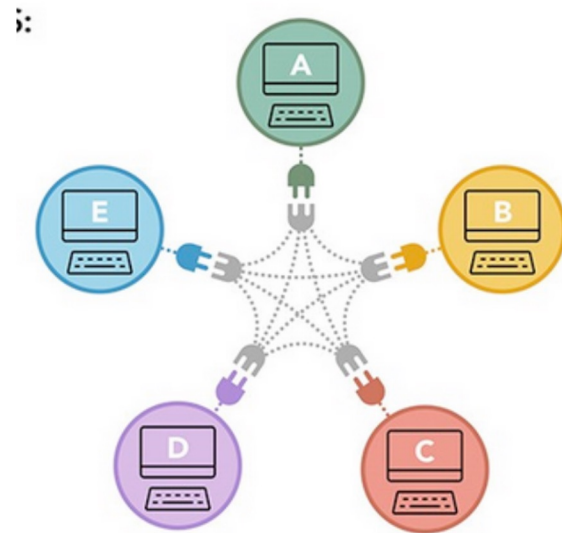 - Identifying the trade-offs
  - Collaboration opportunities (DOTs/MPOs)

Photo Credit AARP
https://learn.sharedusemobilitycenter.org/casestudy/mobility-interoperability-logic-model-summary/

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Federal Policies Promoting Accessibility

All Stations Accessibility

All Stations Accessibility Program

https://www.transit.dot.gov/ASAP

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U.S. Access Board Issues Final Rule on Public Right-of-Way Accessibility Guidelines

August 08, 2023

Pedestrians with disabilities throughout the United States continue to face major challenges in travel because many sidewalks, crosswalks, and other pedestrian facilities are inaccessible. Today, the U.S. Access Board addressed this inequity by issuing a final rule on accessibility guidelines for pedestrian facilities in the public right-of-way. These guidelines inform federal, state, and local government agencies on how to make their pedestrian facilities, such as sidewalks, crosswalks, shared use paths, and on-street parking, accessible to people with disabilities.

https://www.access-board.gov/prowag/

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Thank you!

Al Benedict

Director of Mobility Learning Center &

Accessibility Programs

Shared-Use Mobility Center

albert@sharedusemobilitycenter.org

sharedusemobilitycenter.org

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Universal Mobility Implementation Resource

Understanding Passengers

Enjoli Dixon

Project Associate

Understanding Passengers

Involves the following:
- diverse social service and community-based organizations working together to provide accessible and sustainable transportation services and facilities

Understanding Passengers

Engaging the Community

- understanding of how people get around
- what influences their transportation choices

Results: mobility practitioners are better equipped to customize services and expand mobility among their targeted audiences

Understanding Passengers

Engaging the Community - Challenges

- Unaware of the types of mobility options/models that may best align with their community (both in relation to passenger needs and geographic context).

- Difficult to provide mobility options that are convenient, usable, and address mobility challenges.

Understanding Passengers

Engaging the Community - Challenges

- Lack of understanding and evaluation framework to understand rider travel patterns, destinations hotspots and mode choice preference.

- This is an important part of the mobility needs assessment and should be coupled with an evaluation of current mobility services to identify opportunities and needs.

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Understanding Passengers

Engaging the Community - Challenges

- Riders are indicating that the new mobility solution is not helping meet their mobility needs.

- This can occur when new mobility solutions are implemented without first understanding the mobility need, meeting with riders, and conducting community engagement.

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Understanding Passengers

Engaging the Community - Challenges

- Ridership is low and the mobility service is not reaching its intended users.

- This can occur when the target audience does not have awareness, ownership, or trust in the mobility solution

Understanding Passengers

Engaging the Community - Recommendations

- Establish guiding principles for the community engagement your team is conducting.
- One unified vision is not realistic and weakens the engagement process.

Understanding Passengers

Engaging the Community - Recommendations

- Even if the planning and design process may be long, find ways to generate tangible outcomes in the short term to demonstrate progress and action towards the larger objective.
- Invest in low-cost ongoing community engagement exercises.

Understanding Passengers

Engaging the Community - Recommendations

- Establish partnerships with local community-based organizations (CBOs) and meet with them on a regular basis.
- Develop community transportation needs assessments to better understand

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Understanding Passenger

Engaging the Community - Recommendations

- Develop rider personas to understand and empathize with different goals and frustrations a rider may have
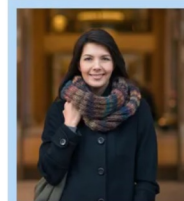
Name: Lisa
Age: 26
Location: Somerville, MA
Occupation: Teacher
Archetype: City Dweller

Name: Bob
Age: 61
Location: Walpole, MA
Occupation: Social Worker
Archetype: Commuter

Name: Rachel
Age: 38
Location: Singapore
Occupation: Engineer
Archetype: The Tourist

How do they experience the MBTA?

It was important to think critically about each of these personas' experiences with the MBTA, so I used this set of questions as a guide:

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Understanding Passengers

<u>Engaging the Community - Recommendations</u>

- Define a marketing and outreach
- strategy to ensure a mobility pilot reaches the intended users.

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Customer Service

- Establishing good customer service processes and wayfinding signage is integral to individuals reusing a mobility option and deeming it accessible

Customer Service

Information: For passengers to access information, those who interact with customers should have the most current information on services provided in the system.

Operators: Operators are the frontline workers in public transportation systems and therefore leave the first impression on the passenger.

Complaint Process: When addressing concerns or complaints is siloed or done on a one-by-one basis, it is challenging to identify concerns that stem from the same problem.

ADA Compliance: The Americans with Disabilities (ADA) Act requires that all public transportation, vehicles, and facilities, are accessible for all.

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Customer Service
Challenges

- Customers rely on vehicle operators or station guides as sources of accurate information.
- Misinformation can result in confusion about how to use a service
- Lack of operator response to customers can result in loss of ridership or concern escalating to a larger issue or complaint
- Agencies are required to provide and maintain accessibility services for all passengers

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Customer Service

Recommendations

- Ensure communication between drivers, and operations and planning staff
- Have a customer-first attitude
- Utilize the FTA's technical assistance centers to aid in customizing the operator customer service training
- Evaluate ADA guidelines and design on customer environments, facilities, and vehicle components
- Develop and integrate wayfinding signage, maps, educational materials

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Planning and Service Coordination

- Ongoing coordination of transportation services improves system connectivity and reliability and encourages the use of shared mobility options.

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Planning and Service Coordination

System Fragmentation

System fragmentation occurs when there are various transportation services in an area that operate privately or publicly and at different governance levels: municipal, township, county, or regional

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Planning and Service Coordination

Challenges

Payment: In fragmented transportation networks, one may need to use multiple modes to complete a trip

Eligibility: Service area and rider eligibility requirements can differ between providers, making it difficult to identify and coordinate services.

Micromobility Management: An influx of micromobility devices coming to cities with the promise of offering a sustainable mode of travel that helps bridge gaps in current transportation systems.

Inter-jurisdictional Travel: For those living on the fringes of city limits or near county lines, the ability to travel across jurisdictions is necessary

Awareness of Available Mobility Options: the influx of new mobility options will continue to increase the complexity of travel rather than improve performance and customer experience

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Planning and Service Coordination
Challenges

ADA Accessibility: ADA transition planning intends to guide municipalities in their transition to a more accessible state.

Existence and Maintenance of Basic Infrastructure: When working toward universal mobility, the upkeep of existing infrastructure needs just as much consideration as its presence. Uneven and damaged sidewalks create hazardous conditions for many users, particularly those with mobility limitations, as it presents another obstacle to navigating travel

Paratransit Implications: As on-demand mobility opportunities become more prominent, it is important to consider the implications that those services might have on existing fixed-route service and corresponding paratransit service eligibility guidelines.

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Planning and Service Coordination

Recommendations

- Establish a regional mobility management coordinator to survey available mobility options and oversee the different mobility options and payment eligibility criteria to inform and assist riders.

- Develop a strategic regional mobility plan in collaboration with the municipalities, public and private transportation providers, and community service providers that offer a coordinated approach to transportation policy.

- Establish a regional or metropolitan body to coordinate transportation and land use planning and convene at the local level to consider the varied mobility needs.

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Planning and Service Coordination

Recommendations

- Find ways to **facilitate interaction** between transportation providers. Working groups can serve this purpose to bring awareness to what others are doing, talk through issues, and build support for coordination.

- Develop **coordinated fare policies**. Standardizing the fare payment process across providers can reduce customer confusion and support a more seamless, cost-efficient trip.

- Explore **interlocal agreements** between transit agencies and municipal governments. Interlocal agreements allow municipalities to outsource transit services in geographies that don't provide their own transit services.

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Planning and Service Coordination

Recommendations

- Open mobility data can help coordinate trips across jurisdictions

- Increase awareness of mobility options to benefit agencies and users.
  - Inventory the available mobility services in a city or region. This inventory should be used to identify service gaps based on transit user mobility needs and challenges.
  - Engage in intentional marketing of mobility services to specific populations and ensure the information is in various formats, including in languages other than English.

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Planning and Service Coordination

Recommendations

- Local governments must create policies and regulations for micromobility services that work for all parties

- Employee responsible for coordinating ADA compliance

- Implement the tenets of the [Coordinating Council on Access and Mobility (CCAM)](#) at the state, regional, and local levels.

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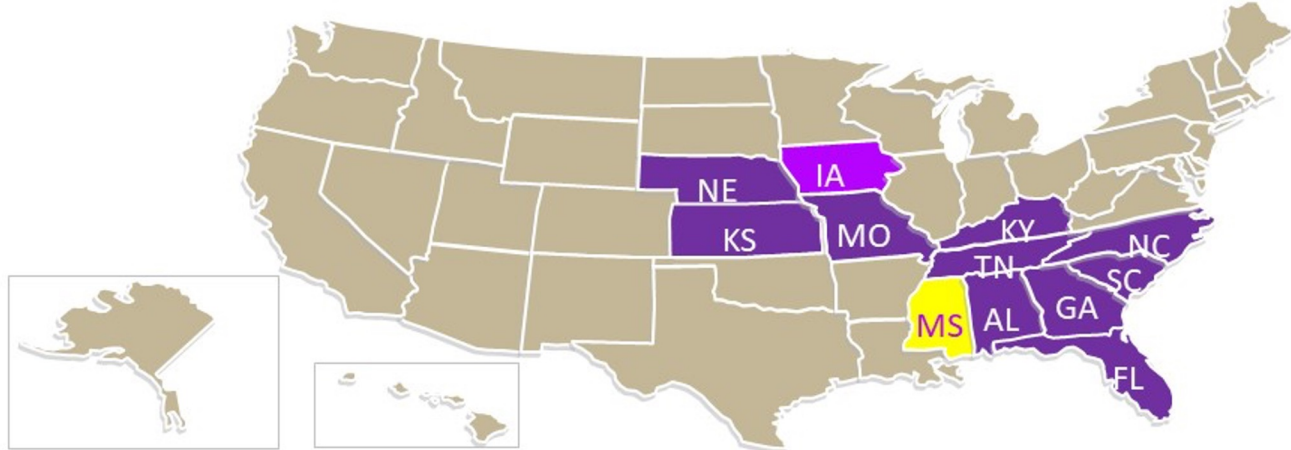
NCMM Regional Liaison – Corresponding to FTA Regional Offices 4 & 7

Region 4: Kentucky, Tennessee, Mississippi, Alabama, Georgia, Florida, North Carolina, South Carolina

Region 7: Missouri, Iowa, Nebraska, Kansas

Enjoli Dixon,
National Center for Mobility
Management at Easterseals

Group Activity

- Randomly assigned to a breakout room
- Two scenarios (each group will discuss one of them)
- How can the service or program can be more universally designed
- Breakout activity is planned for ~10 minutes
- After we will meet as a large group to discuss
- All are welcome to participate in the group discussion, but please have one person ready to provide a summary

Scenarios

Scenario 1

The transit agency in has to do rail work that will impact upon a highly traveled subway line. As the provider plans for alternate routes/services for passengers, what might be some important considerations to ensure that everyone can use the alternate service?

Scenario 2

The bus operator is approached by a patron standing in the bus lane attempting to board the bus. The bus operator would not open the door for the patron to enter. What should the bus operator have done to assist the patron? How should he have assisted the patron further?