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2050 Long-Range Transportation Plan

Emerging Mobility Playbook





Contents



What is Emerging Mobility?

Technology and new mobility services are elements of the transportation system that can be leveraged in service of a city's values, advancing policy objectives like sustainability, resiliency, accessibility, and equity. As new mobility services and technologies come online, Missoula is focused on steering the conversation around the public interests articulated in its Long-Range Transportation Plan goals. When cities focus investment on core mobility networks--like safe and connected active transportation, fast and reliable transit networks, and well managed parking--emerging mobility services complement public mobility services as elements in a broader system.

Emerging Mobility...



To enable clearer understanding and action, it can be helpful to parse emerging mobility into its component parts. Emerging mobility refers to new transportation modes and services delivered primarily by the private sector, but occasionally in partnership with or as permitted by the public sector; elements that support their effectiveness and operations; and importantly, the management tools that government can use to align emerging mobility with a community's broader goals.



Emergent Modes and Services

- Micromobility (shared bikes, scooters, mopeds, and other small vehicles)
- Car share
- Ride-hailing
- Microtransit
- Urban freight
- Autonomous mobility



Supportive Elements

- Plan/book/pay/nudge platforms
- Electric mobility
- Data standards and real-time data feeds
- Digitized and shareable right-of-way information

Policies

Management Tools

- Regulation: local, state, and federal level legal definitions and requirements
- Accountability mechanisms: equity frameworks, licensing and permit programs, partnerships
- Pricing: incentives, subsidies, surcharges, user fees, taxes
- Digital policy: digitized regulation and policy

Practices

- Organizational coordination
- Maintenance of digitized data

Programs and Pilots

- Right-of-way and curb management
- Pilots: testing and evaluating new ideas to solve real problems
- Funding



Why Should We Care?

Across the country and globe, a lot of attention has been given to new modes, many of which offer a promise of attracting new customers and reducing reliance on low occupancy vehicles. **More mobility options must be part of the mode shift and sustainability equation, but more options alone hasn't meaningfully moved the dial.** Even with broad adoption of smartphones and increased awareness of ride-hailing, car sharing, micromobility, and other new modes, we still see reliance on single-person car trips for the vast majority of commute trips.

To achieve the broad mobility shift many communities seek in service to sustainability, affordability, equity, and other goals, communities must marry transit, parking, transportation demand management, and active transportation strategy with a goal-oriented approach to emerging mobility.

2010 General Commute Mode Split in Missoula¹







1 ACS, Table S0801 2 Pew Research Cente

Long Range Transportation Plan

Missoula's Long Range Transportation Plan (LRTP) establishes regional transportation goals and provides a list of investment strategies to a growing and changing Missoula. The Emerging Mobility Playbook is one chapter of the LRTP. It highlights key trends in emerging mobility, provides an evaluation and recommendations of policies and pilots that support Missoula's future transportation system, and provides best practices for implementation and management.

The Missoula Metropolitan Planning Organization is leading the LRTP planning process. The MPO provides funding and technical assistance and works closely with the City of Missoula to implement planned projects.

Missoula's Transportation Goals:





Technology and new mobility services are elements of the transportation system that can be leveraged in service of a city's values, advancing policy objectives like sustainability, resiliency, accessibility, and equity. As new mobility services and technologies come online, Missoula is focused on steering the conversation around the public interests articulated in its Long-Range Transportation Plan goals. When cities focus investment on core mobility networks--like safe and connected active transportation, fast and reliable transit networks, and well managed parking--emerging mobility services complement public mobility services as elements in a broader system.

A History of Emerging Mobility Services in Missoula

In recent years, Missoula has made significant strides to integrate emerging mobility into its transportation ecosystem 2012 and to begin laying the foundation for a City of Missoula, more comprehensive framework. Rather University of Montana, and than accepting the oftentimes disruptive 2011 Associated Students of the nature of emerging mobility business Citywide Signal Optimization ITS University of models, Missoula has taken great care Montana announced project a joint quality of life to guide emerging mobility toward initiative, which accomplishing broader mobility and called for setting up a car share program sustainability goals. and reviewing park-and-ride facilities 2011

More than a decade ago, Missoula initiated its first citywide signal optimization project designed to improve the operations of 51 signals throughout the city so that they are compatible with Intelligent Transportation Systems (ITS), the application of smart technologies to improve the flow and efficiency of the existing transportation network. Transportation network companies (TNCs), such as Uber and Lyft, officially launched their service in 2016 and since then, car share providers and several shared mobility companies have shown interest in operating in Missoula. In 2018, City officials engaged in informal discussions with bicycleand electric-scooter sharing provider Lime to determine the feasibility of rolling out a bike share system in Missoula. City officials ultimately determined that existing docked- and docklessbased systems were cost-prohibitive and instead shifted their focus towards creating a policy environment that would make way for other systems that better fit Missoula's mobility needs. A year later, Missoula passed several local ordinances that defined electric bicycles and scooters. Although City Council tabled the discussion on shared micromobility due to overriding safety and equity concerns, recognizing electric bicycles and electric scooters in the municipal code is a critical first step in establishing a path forward for these modes should Council decide to permit these services in the future.





March 2019

Missoula Community Transportation Safety Plan (CTSP)

June 2019

Missoula passes ordinances defining electric bikes and scooters

July 2019

City Council tables e-bicycle and e-scooter ordinances

August 2019

State lawmakers passed House Bill 456 aimed at expanding EV charging infrastructure by authorizing utilities to sell electricity to third-party charging station operators

November 2019

City Council approved the Missoula Downtown Master Plan, which calls the City of Missoula to consider designating curb space for ride-hailing pick-up and drop-off zones, clustering MaaS options and connecting them with transit, and adopting a policy and program framework to manage micromobility services

Missoula's Emerging Mobility Planning & Policy Precedents



Activate Missoula 2045 LRTP

Adopted in 2017, the Activate Missoula 2045 LRTP establishes regional transportation goals and provides a project list and investment strategies to support a growing and changing Missoula. The LRTP coordinates transportation projects and programs carried out by various partners across the region to ensure the system is comprehensive and coordinated as priorities shift over time. The plan makes no specific attempt to incorporate assumptions related to new technology, however, it acknowledges the need to address and find solutions for the changing mobility landscape in the next plan update, which this Playbook addresses.



2019 Missoula Community Transportation Safety Plan

The 2019 Missoula Community Transportation Safety Plan (CTSP) examines transportation safety issues within the Missoula Metropolitan Planning Area (MPA) and addresses safety concerns, crash trends, mitigation strategies, innovative technologies, and updates to federal requirements. The plan weighs the potential safety benefits and implications of connected and autonomous vehicles as well as electric scooters and other emerging technologies. Though the plan does not prescribe specific recommendations, it suggests an emphasis on building partnerships with private mobility providers, reflecting emerging technologies in local and statelevel regulations, and improving infrastructure.

Mountain Line's 2018 Strategic Plan

Mountain Line's 2018 Strategic Plan is a guiding policy document that reflects the views and desires of the community on how to grow the transit network and the role transit plays in the region's growth. The plan includes an action item that encourages the adoption of a threshold standard when considering new demand-responsive transit service (also known as microtransit) that relates to the subsidy provided on low-ridership fixed routes. Should Mountain Line choose to pursue demand-responsive service in the future, the plan recommends establishing a floating ridership-focused standard for demandresponsive service where the operating subsidy per ride can not exceed the average subsidy per ride for the three least-productive fixed-routes.

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transport persons on a public highway	y in this state without obtaining, pursuant to this chapter, a certificate of
compliance.	
(2) A Class E-motor carrier sha	all apply for a certificate of compliance in writing. The application must be
verified by the applicant and specify the	re following:
(a) the name and address of t	the applicant and its officers, if any;
(b) the locality and character of	of operations to be conducted,
(c) a detailed statement show	ing the assets and liabilities of the applicant;
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Senate Bill 396

In 2015, Montana passed Senate Bill 396 enabling the Montana Public Service Commission to regulate transportation network companies like Uber and Lyft. The bill revised the state's motor carrier laws and removed the requirement that certain carriers obtain a certificate from the Public Service Commission. The law, which went into effect on July 1, also prohibits local governments from regulating transportation network services.

Missoula Municipal Code Sections 10.02.094 and 10.02.095

A provision in state law determined that non-standard vehicles, which are defined based on wheel and wheel-base size, are not permitted in the state except where local jurisdictions explicitly allow them. In June 2019, City Council reviewed several proposed ordinances that sought to define electric-assisted bicycles and scooters in the municipal code. The bike ordinance organizes e-bikes into three classes based on whether they require pedal assist and top speed. The ordinance also defines electrically-powered scooters as a two-wheeled device with handlebars, a floorboard designed to be stood upon, and a speed cap at 15 mph. These definitions enable Council to set policy on where different classes are or are not allowed to be used–a useful policy precedent if the City brings e-scooter share to Missoula.

Missoula's Mobility Targets

Establishing mode shift goals had been discussed for several years by members of the bicycle and pedestrian advocacy community. While Missoula has had many successes in creating opportunities for people to travel using a variety of modes, setting a goal meant solidifying it as a policy direction and directing investment toward transit and active transportation modes. The Activate Missoula 2045 LRTP planning process involved assessing several mode share goal scenarios. The plan ultimately adopted the most ambitious option, which targets a tripling of people's use of transit, walking, and biking and increasing carpooling by about 30% by 2045. If achieved, less than

FUTURE

half of trips in Missoula would be made by drive-alone trips. When paired with a comprehensively managed mobility environment, emerging mobility can support mode shift goals by providing new travel options. The convenience of these options can change the way people make transportation choices, and with strategic oversight and incentives, can extend to reach travelers across the age spectrum and with limited incomes or abilities.

Emerging mobility has potential to **expand transportation choices** and **promote a shift toward sustainable options**



TODAY

Emerging Mobility Services in Missoula Today

What options are available to Missoulians?

As emerging mobility continues to evolve and expand in cities across the U.S., the idea of mobility being limited to a finite set of transportation options (e.g. walking, driving, bicycling, transit) is quickly changing. This shift in the transportation landscape is currently underway in Missoula, where various emerging mobility options have become available in recent years. Ride-hailing services, like Uber and Lyft, have operated in Missoula since 2016. They can also be accessed as part of Missoula in Motion's Guaranteed Ride Home Program. Though primarily oriented to through-travelers at highway interchanges, rather than to locals in town, electric vehicle charging infrastructure is offered throughout the region. Additionally, shared micromobility, while not yet available, has generated a lot of interest in the past few years as is evident in the uptick of personally-owned micromobility devices such as electric bikes and scooters, and City Council approval of the use of electric-assist micromobility on commuter trails.







Sources: Missoula Current (Top), Plugshare (Middle)

In Focus: Scooter Share in Missoula

What lessons can be learned from the debate about e-scooters?

In July 2019, due to overriding safety and equity concerns, Missoula's City Council voted to table a proposed ordinance that would have allowed dockless e-scooters and e-bike companies to operate in the public right-of-way. Council could consider e-scooters again, however, the primary focus now is to track regulatory changes, monitor market trends, and identify gaps in the existing network that may undermine the safe use of these devices. This measured approach. though different from some cities, gives Missoula the opportunity to understand how micromobility fits into the broader transportation ecosystem and how to guide the delivery of these services to accomplish broader mobility goals. This measured approach could be applied to managing or incentivizing all types of emerging mobility services and enables Missoula to leverage mobility innovation in service to its community goals.



Source: Tommy Martino, Missoulian

How is Covid-19 Impacting Emerging Mobility?



The COVID-19 global pandemic has profoundly impacted many aspects of daily life, including transportation. As cities across the country implemented shelter-in-place orders, people largely avoided non-essential travel, which has led to significant shifts in travel behaviors.

In general, travel activity during traditional morning and evening commute hours have decreased, consistent with the expansion of work-from-home policies. Many public transit agencies have cut back service due to declining ridership and financial constraints, while others have shifted traditional service to meet other community needs that have come to light during the pandemic. This may include offering free, shuttle-like services for essential workers, utilizing transit drivers and vehicles to deliver goods to senior citizens, altering service hours to align with medical shifts, and capping vehicles at a certain capacity for shared rides. Ride-hailing companies have also seen a precipitous decline in ridership and have halted shared rides.³ The use of on-demand delivery services, such as Amazon Flex, Instacart, DoorDash, and UberEats, are on the rise,⁴ reflecting the change in how people travel, shop, and receive deliveries. Personal trips to the market or to local restaurants have declined, though this has led to an increase in vehicle miles traveled and congestion.⁵ In addition to reducing short-distance trips, increased demand for food delivery services highlights the need to better manage curb space, especially in more urbanized areas.

Due to its open-air nature, personal and shared micromobility is proving to be a relatively attractive transportation option during the pandemic. More people are trying electric bikes and scooters for the first time, including critical workers who still need a viable commute option to travel to and from work.⁶ This notable uptick in micromobility utilization likely stems from the need to socially distance, a hesitancy to be in confined spaces, and reduced transit service. People using micromobility are traveling more in afternoon and evening hours,⁷ which suggests that trip purposes may be expanding beyond commuting to include errands or leisure trips. People are using shared micromobility for longer trips as well.⁸ This trend suggests increased micromobility use due to reduced transit service, a hesitancy to use transit, or increased use for recreational trips on new open streets or protected facilities. It may also reflect increased adoption by critical workers with non-conventional work schedules, who have been provided free or reduced costs memberships in many locations.

³ Lyft revenue plummets 61% as pandemic stams ride-hailing. LA Times, August 12, 2020. Accessed via: https://www.latimes.com/business/technology/

⁴ He month the entire world signed up for delivery. Quartz. April 19, 2020. Accessed via: https://az.com/1838349/how-coronavirus-will-change-the-online-delivery-

 ⁵ COVID-19 Nearly Killed the Economy; It Didn't Kill Traffic, GovTech, July 23, 2020. Accessed via: <u>https://www.govtech.com/fs/data/COVID-19-Nearly-Killed-the-Economy-It-Didnt-Kill-Traffic.html</u>
 6 Changes in Bike and Scooter Travel Behavior During COVID-19, Debs Schrimmer, July 1, 2020. Accessed via: <u>https://medium.com/sharing-the-ride-with-lyft/</u>

<u>changes-in-bike-and-scooter-travel-behavior-during-covid-19-3b1444ab99cd</u>

⁷ The 3 Most Compelling E-Scooter Trends Post-COVID, Bird Cities Blog, June 12, 2020. Accessed via: https://www.bird.co/blog/3-most-compelling-e-scootertrends-post-covid/

⁸ What does COVID-19 mean for shared mobility? Lime, June 18, 2020. Accessed via: https://www.lime/second-street/what-does-covid-19-mean-for-shared-mobility

Challenges and Opportunities

An effective emerging mobility playbook relies on a foundation of regional goals. With these goals as a lens, Missoula's core strengths and weaknesses in its ability to leverage or manage emerging mobility, its unique opportunities, and the threats presented by change in transportation emerge.

This "SWOT" analysis considers the existing condition of Missoula's transportation landscape—which includes not only the physical but also the planning and policy foundations. This exercise reveals key areas of action for Missoula in advancing emerging mobility in service to regional problem solving.

SWOT Analysis

Strengths and Weaknesses

What inherent strengths and weaknesses does Missoula have in terms of its ability to leverage or manage emerging mobility in service to the community's goals and local problem solving? These factors could include its policy and planning groundwork, infrastructure, funding sources, community culture, topography, climate, or other factors.

Opportunities and Threats

What extrinsic opportunities might be available in the near- or long-term future? And, what threats appear when considering emerging mobility's impact on the region? These factors might include marketplace dynamics, future population trends, evolving technologies, or other factors.



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How might Missoula protect and build on its innovative and practical culture to achieve its goals?

The following section examines Missoula's inherent strengths and weaknesses and external opportunities and threats to achieving each of the LRTP's transportation goals through emerging mobility.



Improve safety and promote health to enhance quality of life

STRENGTHS

Robust network of protected bikeways that support the use of shared micromobility for all ages and abilities (however, e-bikes and e-scooters are disallowed in these areas)

Several safety-focused adopted plans (e.g. 2019 Community Transportation Safety Plan) call for upgrading infrastructure, exploring partnerships with private providers, and identifying opportunities to integrate new modes with the existing transportation system in support of emerging mobility

Culture of outdoor recreation and health could translate to support and use of shared micromobility services

WEAKNESSES

As a city with snowy and icy winter months, the use of shared micromobility could be unsafe for portions of the year

Several State-owned roads pass through Missoula; the City and MPO have limited ability to influence street designs supportive of increased pickup/ dropoff activity, bike/ scooter use, or other emerging mobility use cases

OPPORTUNITIES

Develop a prioritization scheme for investment in bike/scooter parking along transit (informed by new ITS data on buses)

Continue investing in protected infrastructure for the safe and comfortable use of bikes, scooters, and other small devices by people of all ages, especially through the neighborhood greenway network and investments in end-oftrip facilities

Create a unified set of principles for emerging mobility in Missoula that form the foundation of new policy or regulations guiding the region's response to or deployment of emerging mobility services

Explore opportunities to increase biking, skating, scooting, and walking to school in partnership with Missoula's Safe Routes to School program and potential non-profit or private partners

THREATS

Missoula has limited control over safety standards for emerging mobility services and devices (federal, state, and industry standards may preempt)



Advance sustainability and climate resilience to protect natural resources and address climate change

STRENGTHS

City and County of Missoula have a long history of energy conservation and climate action (e.g. City of Missoula Conservation & Climate Action Plan; 2017 Montana Climate Assessment; Mountain Line's investment in its electric bus fleet) - local culture of sustainability could support addition of emerging mobility options

Partially in recognition of slow electric vehicle adoption in Montana, State lawmakers passed House Bill 456 aimed at expanding EV charging availability for personal vehicles to promote clean, electrified transportation options

Missoulans' lifestyle and outdoor focus gives potential for folks to increase reliance on active modes like micromobility

WEAKNESSES

Local sustainability activists will recognize the potential negative sustainability implications of emerging mobility services and devices, such as TNCs and shared bikes or scooters with short life spans

OPPORTUNITIES

Promoting shared mobility that is managed to support sustainability could help advance mode shift and climate goals

Support Mountain Line's Strategic Plan focus on its core routes by identifying first/last mile and other coverage areas with potential for emerging mobility pilots or partnerships

Connect with Buffalo e-bike libraries program to understand potential applicability to Missoula

Collaborate with the Missoula Parking Commission to leverage the passage of House Bill 456 and identify specific project opportunities for expansion of electric transportation options at new developments or other strategic locations within the community

Foster and maintain a culture of innovation grounded in practicality, both within government and the community

THREATS

Regional population growth alongside lack of investment in choices leads to unpredictable or unreliable travel times, especially on key corridors

New mobility services and technology are viewed by some signals of gentrification, which could exacerbate local concerns over regional growth and affordability

There is concern over sidewalk and right-ofway blockages caused by improperly parked dockless mobility devices



Expand mobility choices to improve efficiency and accessibility for people and goods

STRENGTHS

People in Missoula have adopted personal micromobility, demonstrating a marketplace supportive of pedal- and e-assist devices

Culture of openness to trying new things supports pilots and new mobility options

University population is target market of emerging mobility services

Various emerging mobility service providers have shown interest in operating in Missoula (e.g. Lime, Bird, Zipcar)

Missoula Downtown Master Plan sets direction for reduced reliance on auto trips and highlights ways to leverage emerging mobility (e.g. more designated pick-up/ drop-off zones, enhancing digital connections with transit, and a micromobility policy framework)

WEAKNESSES

The region's approach to parking management and policy does not match the larger transportation goals of enhancing nonmotorized mobility and reducing the need to drive (e.g. Missoula Downtown Master Plan)

With its smaller population, private emerging mobility market potential is limited (without subsidy)

University allows all students to bring a vehicle to campus

Wintry climate reduces feasibility of shared micromobility for significant portion of the year

OPPORTUNITIES

Build off Mountain Line's 2018 Strategic Plan, which recommends subsidy standards for flexible transit services, to assess the need or demand for demandresponsive transit service coverage in certain geographies or within certain customer segments

Coordinate bike/scooter infrastructure and parking investments with Mountain Line's Primary Transit Network identified in its 2018 Strategic Plan

Connect with and understand lessons learned from Buffalo, NY's recently established e-bike library program and the potential to scale it to other interested communities

Partner with the University and Missoula in Motion to pilot a voluntary "leave your car at home" challenge program supported by access to shared mobility (e.g. car share, bike share, scooter share), as these modes help students live car free and enjoy the recreational benefits of Montana

THREATS

Regional population growth alongside lack of investment in choices leads to unpredictable or unreliable travel times, especially on key corridors

New mobility services and technology are viewed by some signals of gentrification, which could exacerbate local concerns over regional growth and affordability

There is concern over sidewalk and right-ofway blockages caused by improperly parked dockless mobility devices



Connect and strengthen communities to create a more equitable region

STRENGTHS

Missoula is a relatively compact and topographically constrained city with strong neighborhood identity; neighborhoodbased and culturally relevant pilots could work well

Fare free transit provides affordable access to those who need it most, and connects people to core services and affordable housing

Invest Health has a local focus on equitable access to opportunity as a path to health

WEAKNESSES

The availability of transit complements emerging mobility options and vice versa. Currently, transit service has limited frequency in many geographies and on nights and weekends.

Bolt transit routes provide high-frequency service, but this service has very limited coverage today

OPPORTUNITIES

Empower community leaders by establishing ongoing forums for collaboration

With community partners, identify specific aspirations for and barriers to emerging mobility choice and access (geography, income, access to transit, proximity to bicycle infrastructure, race, age, digital divide)

Establish an emerging mobility pilot playbook with specific equityrelated goals and evaluation metrics

Advance emerging mobility pilots that specifically target the needs of lowincome, people of color and indigenous populations, people with disabilities, youth, communities with low English proficiency, and other disadvantaged populations

Point to LRTP transitoriented growth scenarios to affirm transit's central role in non-auto travel in Missoula, and link emerging mobility policy to this transit-first vision

THREATS

Missoulans' lifestyles and culture are attracting new employers and residents, whose higher incomes may enable higher reliance on personally owned autos or AVs in the future



Maintain assets and invest strategically to boost economic vitality

STRENGTHS

Zoning requirements for new development and for commercial and civic uses are supportive of increasing the supply of bicycle parking (and reducing reliance on personal vehicles) by establishing minimum requirements for longterm and short-term parking spaces

Mountain Line's 2018 Strategic Plan positions the agency to focus on lower cost/higher impact investments while recognizing the lifecycle costs of emerging mobility services (like microtransit)

WEAKNESSES

Wintry climate requires more upkeep and maintenance of infrastructure for micromobility

Missoula's manufacturing and industrial employment sites are outside the typical service area of shared micromobility services, limiting access for significant groups of workers

OPPORTUNITIES

Work with Mountain Line to develop and support a digital asset management program (e.g. bus stop asset inventory database management; transit ITS system; digitized curb information)

Undertake a landscape analysis of data sharing standards (learn what's out there and draw back to what Missoula is trying to achieve); consider connecting with the City of Kelowna, British Columbia (similarly sized northern city) on their use of the Mobility Data Specification (MDS)

Study the Mobility Hubs concept – connect with Mountain Line's Bus Stop Investment Plan (next update); potential to focus on the Downtown Transfer Center to start

Identify opportunities in existing zoning requirements that help facilitate the expansion of emerging mobility (e.g. car share, bike/ scooter share parking, EV charging stations)

Recover street space to expand the public realm and invite mode shift

THREATS

A significant portion of Montana's labor force is employed by the transportation and material moving industry. A shift to autonomous vehicles will not eliminate these jobs in the near-term, but the skills needed will change and some jobs will cease to exist.

What Priorities Does this Lead to?

While Missoula may struggle to attract and support profit-motivated mobility services, it is in a strong position to achieve its goals in part by managing and partnering with emerging mobility services complemented by ongoing investments in demand management programs, infrastructure projects, and transit service.

This SWOT analysis revealed opportunities for Missoula in the near- and medium-term to advance its goals by approaching emerging mobility strategically. Specifically, Missoula can take immediate steps to **Set the Foundation** by connecting with community and rooting principles for engagement in local values. It can **Take Action** in defining and prioritizing mobility needs that might be solved through pilots and connecting with peers who have experimented with unique partnerships and business models. And it can **Apply Lessons** by establishing a framework to evaluate pilots according to its goals and iterate with community and industry partners.

The following section provides specific examples of other cities who have acted on these opportunity areas. While the cities vary in comparability to Missoula, the fundamentals of the actions they take are transferable.

A concluding chapter-Getting it Donedescribes next steps for Missoula in greater detail and offers a prioritization of next steps.

STRATEGIES

Set the Foundation Goal Setting & Policy Alignment

Take Action Operations, Pilots, & Partnerships

> **Apply Lessons** Evaluation & Iteration



Case Study Highlights

SET THE FOUNDATON

Goal Setting & Policy Alignment

An effective approach to emerging mobility requires a strong foundation, rooted in community goals and oriented around addressing specific needs.

New Mobility Playbook – Seattle, WA

In recognizing the rapid expansion of emerging mobility and its impact to the existing transportation network, the Seattle Department of Transportation (SDOT) sought to establish policies to prepare for anticipated new mobility innovations as well as innovations that have not yet been imagined. This led to the creation of its New Mobility Playbook. The New Mobility Playbook is a set of plays, policies, and strategies that position Seattle to foster new mobility options while prioritizing safety, equity, affordability, and sustainability in the transportation system. The playbook is comprehensive and addresses everything from shared transportation to data management to impacts on the local labor market. Principles from the Playbook helped shape Seattle's First Moves Program, through which the city invites innovators to help bring solutions to achieve specific mobility programs and goals.



Emerging Mobility Guiding Principles and Evaluation Framework – San Francisco, CA

Given its proximity to Silicon Valley and its openness to innovation, the City of San Francisco has a lengthy and storied history of guiding emerging mobility policymaking at the local, regional, and state level. Like many coastal cities, San Francisco has often served as the site of rogue launches whereby emerging mobility service providers release their devices and services within the public right-of-way without informing or engaging with local policymakers. Though less common today with the city in a stronger position to manage emerging mobility, over the last five to ten years, these rogue launches caused disruption to the transportation network and forced local policymakers to respond in real time.

To facilitate the shift from a reactive to proactive response to emerging mobility and to ensure the seamless integration of new mobility services with the existing transportation network, San Francisco's transportation agencies established the <u>Guiding Principles for Emerging</u> <u>Mobility Services and Technologies</u> to provide a consistent framework to evaluate new mobility services and help guide decisions, policies, and actions regarding emerging mobility services. The framework created a shared language across all transportation agencies and emerging mobility modes. By defining specific, measurable performance indicators associated with each guiding principle, the framework was first used to comprehensively evaluate private sectordriven emerging mobility outcomes in San Francisco (see the <u>Emerging Mobility</u>. <u>Evaluation Report</u>).

The evaluation framework and results were instrumental in shaping the City's emerging mobility rules and regulations, how it selects potential partners, and how it evaluates program performance. The framework was specifically applied to the <u>Powered Scooter Share Permit Program</u> <u>Evaluation</u> and the development of rules and regulations for the city's <u>dockless bike</u> <u>share</u> and <u>microtransit</u> pilot programs.



Pittsburgh Principles for Autonomous Vehicles – Pittsburgh, PA

The City of Pittsburgh created the "Pittsburgh Principles," a set of objectives that promote the safe testing of autonomous vehicles (AVs). The executive order establishing these objectives also designated the Department of Mobility and Infrastructure (DOMI) as the principal point of contact and the liaison between public agency partners, private sector industry, and general public stakeholders. Objectives include instituting transparent lines of communication between the city and partners testing AVs, promoting automated driving systems that encourage high vehicle occupancy and lower emissions, establishing guidelines for the safe testing of selfdriving technology on public streets, and engaging with industry leaders and community stakeholders to collaboratively facilitate the development of self-driving technology. Its primary purpose is to use city actions to benefit people, plant, place, and performance. Industry stakeholders report information on testing, trends developments, and safety issues every six months to DOMI, who shares this information in a publicly available report that includes data analysis and policy recommendations.

One notable aspect of Pittsburgh's approach is its collaboration with industry; in a recent podcast, DOMI Director Karina Ricks noted how their ongoing dialog with industry players helped them understand potential unintended side effects of policies meant to increase safety. In her own words:

We hear a lot about disengagements and, you know, "Do you have enough data about when these vehicles, you know, when the these vehicles?" And we said, "Well, no. Actually that wasn't one of the datasets that we asked the testers to provide for us." And the reason that we didn't ask that was because we had these discussion with them, and they said, "If you make us report that data, that will have the unintended resistant to disengage the vehicle, even though the safest thing may be more often than not. Allow the model to run in the background to see how the vehicle would have responded have been in that situation but really have the human driver—you know not put up any obstacles to the human driver taking over the vehicle. So that was new information to us, and we wouldn't have known that: we wouldn't have really had that kind of insight had we not had these really open discussions with our testers, a give and take, and working those things out together.

- DOMI Director Karina Ricks

Austin Smart Mobility Roadmap – Austin, TX

In 2018, the City of Austin and Capital Metropolitan Transportation Authority (CapMetro) worked together to establish a shared approach to addressing the shared, electric, and autonomous mobility future. The result of this collaboration is the Austin Smart Mobility Roadmap, which serves as a vision and communications document stating outcomes emerging technologies should be managed to provide to their constituents, such as safety, mobility, access, affordability, and equity.

The roadmap, which is incorporated into the Austin Strategic Mobility Plan, calls for investing in and leveraging technology through open data and public-private data partnerships to optimize mobility options. The plan also highlights a set of pilots, policies, and programs for shareduse mobility, autonomous vehicles, electric vehicles and infrastructure, and data and technology to help anchor the city's commitment and future investments towards promoting emerging mobility.



New Mobility in the Development Review Process – Baltimore, MD

The City of Baltimore is examining how changing mobility options, particularly the introduction of new mobility services, are impacting and are expected to impact the region's roads, pathways and curb space, and how local government development planning and review processes can and should consider and evaluate these services. Through these efforts, the City of Baltimore is assessing potential shifts towards the flexible allocation of right-of-way uses that balance the parking needs of automobiles, bicycles, and personal electric vehicles through various types of pick-up and drop-off zones that accommodate passengers, freight, and other street uses. This effort is ongoing as of mid-2020, but demonstrates how foundational policy—in development review and street design guidelines—can be used to manage new mobility services' outcomes.

TAKE ACTION Operations, Pilots, Partnerships

The emerging mobility industry is in constant motion. Government can work smarter, not harder, by taking strategic actions that get ahead of the pace of change.

Electric Bike and Scooter Regulations - Boise, ID

In 2018, Boise City Council approved changes to the city's bicycle ordinance to define and establish regulations for the operation of electric bicycles and scooters within city limits. Though there was initial disagreement in the community, the ordinance outlines the lawful use of electric bikes and scooters within the public right-of-way, which includes sidewalks, bike lanes, and on the 25 miles of Greenbelt trail network managed by the city. The ordinance also establishes no-ride and nopark zones throughout the city, which are demarcated in mobility service provider permit applications. The city also partnered with Boise Parks and Recreation to accommodate individuals with mobility disabilities by permitting the use of electric bicycles on certain cityowned property, including the Ridge to Rivers trails.



ource: Ridge to Rivers

- City of Boise Bicycles, E-Bikes, and E-Scooters Ordinance
- 2017, Dec 19. Ridge to Rivers.
 "Boise City Council Approves Electronic Bicycle (E-Bike) Changes to City Ordinance."
- 2017, Apr 7. Idaho Business Review. "Boise Residents Want Electric Bikes on Public Trails."
- Ridge to Rivers. "Accessible Trails."
- Boise Parks and Recreation.
 "E-Bike ADA Accommodation Trails."

E-Bike Libraries: Western New York + Shared Mobility Inc Partnership – Buffalo and Niagra Falls, NY

In a first-of-its-kind partnership, Shared Mobility Inc. (SMI), a national transportation non-profit, obtained 3,000 donated e-bikes from Uber when it exited the bike share operations market in 2020. SMI is working with smaller cities and underserved communities across the nation-places that private market-driven e-bike share models would not naturally serve-to establish e-bike libraries in locations identified and planned by community-based organizations.

SMI is using many of these bikes to build out transportation libraries: free, community-led hubs that loan bikes, e-bikes, and scooters, to facilitate first/ last-mile connections and to expand mobility options in areas with infrequent bus service. The program seeks to expand mobility options for households in Eastern and Western Buffalo where infrequent bus routes have made it more difficult for residents in those areas to access the region's employment centers. It is working in partnership with the Niagra Frontier Transportation Authority (which operates NFTA Metro transit service) and the Cities of Buffalo and Niagra Falls to deploy about 600 of the e-bikes. The locations and administration of transportation libraries will be determined in partnership with local block clubs, social service agencies, and other community organizations.



ource: Shared Mobility, Inc

- 2020, Aug 5. Creighton Randall.
 "E-Bikes, Mobility Justice, and Rebooting Bikeshare."
- 2020, Jul 21. Newell Nusbaumer (Buffalo Rising). "The Future of E-Bikes in Buffalo?"
- 2020, Jul 22. Matthew Beedham (The Next Web). "Thousands of Uber's JUMP E-Bikes Saved from Scrap Heap to be Loaned out for Free."

Accessible Bike Share: City of Oakland + Lyft + BORP Partnership – Oakland, CA

The City of Oakland Department of Transportation (OakDOT), the Mayor's Commission of Persons with Disabilities, Lyft (operator of BayWheels, the Bay Area's bike share system), and Bay Area Outreach and Recreation Program (BORP) conducted a 6-month adaptive bike share pilot program for people with disabilities. BORP, a local organization serving the disability community, matches riders with adaptive bikes and staffed local pop-ups to assist riders with bike fittings. Although the future of this program remains uncertain in light of the current global health crisis, the organizations engaged in this partnership entered the pilot seeking to understand how to scale adaptive bike sharing and how future iterations of the program might incorporate aspects of a oneway sharing model (in its first iteration, adaptive bikes were borrowed from and returned to the same staffed location at specific times of week).



Source: City of Oakland

- 2019, May 22. City of Oakland.
 "Adaptive Bike Share."
- BORP. "BayWheels / BORP Adaptive Bike Share Pilot."
- 2019, May 16. BORP. "BORP Cycling Expands to Oakland's Lake Merritt."

Transit and Micromobility: RTA + Spin Partnership – Dayton, OH

Generally, city government has the responsibility to regulate micromobility, while transit agencies-though affected by and sometimes benefactors of shared micromobility services-must work directly with their city partners or with operators themselves to achieve their goals. In Dayton, the Greater Dayton Regional Transit Authority worked with the City to craft language in its micromobility regulations requiring an permitted provider integrate with a locally-chosen mobility-as-a-service app. This set the framework for RTA, which also operates the region's bike share system Link, to partner with e-scooter sharing operator Spin to provide service in the city.

Unique to this partnership is that the RTA is responsible for the daily pickups, charging, and drop-offs of scooters. This enables the agency to be fully responsive to any issues regarding scooters blocking public right-of-way or access to transit stops. Spin is providing the scooters, the digital platform, and has worked with the city of Dayton to develop geofenced "no-ride zones." RTA has a vision to provide a suite of mobility servicestransit, bikes, scooters, and potentially other services-through a single app. So far RTA is pleased with the outcomes of this partnership, and suggests other transit agencies seeking to take a similar role in the management and provision of micromobility services "spend time up front defining success."



ource: Greater Dayton RTA

- 2019, Aug 21. Greater Dayton RTA. "Greater Dayton RTA Partners with E-Scooter Company Spin."
- 2020, Jan 31. APTA. "Transit as a Micromobility Manager: The Dayton RTA Experience."



APPLY LESSONS

Emerging Mobility Evaluation & Iteration

The point of these "Lessons" case studies is to demonstrate thoughtful evaluation frameworks that empower cities to understand how well emerging mobility services contribute to their goals and whether the evaluation framework enables iteration and improvement.

Free-Floating Bike Share Evaluation Framework - Seattle, WA

SDOT performs quarterly and annual evaluations of its Free Floating Bike Share pilot program using a framework anchored in citywide mobility goals that revolve around ridership, safety, geographic coverage, and financial costs. The evaluation framework employs quantitative and qualitative methods to assess the contributions of and alignment between bike share services and its broader mobility goals. It is also seen as an opportunity to gather lessons learned to inform future decisions around mobility management. SDOT's Free Floating Bike Share program is unique in how iterative it has been. Each year, outcomes of the evaluation directly inform changes to the pilot program for the following year. Lessons learned were also used to inform its recently launched e-scooter pilot goals and permit program. This iterative approach was enabled by tying data sharing requirements to metrics that indicate progress toward goals.⁹



Source: SDOT

9 Seattle Evaluation Report. Accessed via: https://www.seattle.gov/transportation/projects-and-programs/programs/bike-program/bike-share#annualevaluationreport

On-Demand Transit Pilot - Centennial, CO

The City of Centennial in partnership with the Lyft, Via, and other city partners launched a six-month, on-demand transit pilot to facilitate first- and last-mile connections to the Dry Creek light rail station. The program was the first in the country where a government or transit agency fully subsidized rides provided by a transportation network company. The pilot was evaluated using metrics built around desired outcomes, such as increasing light rail ridership and reducing trips to the nearby park-n-ride. Although ridership at the transit station included in the pilot increased over the pilot period, ridership was one-fifth of the Regional Transit District's existing flexible demandresponsive transit service and each pilot ride cost twice as much. Lessons learned from the pilot include the need for better integration with the fixed-route transit system, improved marketing of eligibility criteria, marked pick-up and drop-off locations, extended pilot duration, and extended service area and hours of operation.¹⁰





Source: City of Centennia

10 Go Centennial Report. Accessed via: https://www.centennialco.gov/files/sharedassets/public/documents/communications/go-centennial-final-report.pc

Mobility Hubs Pilot Framework - Minneapolis, MN

In Minneapolis, Metro Transit is collaborating with the City of Minneapolis, Hennepin County, mobility service providers, and neighborhood organizations to pilot a mobility hub program. These mobility hubs are intended to not only enhance first- and last-mile connections, but to also serve as centers of placemaking for residents to gather and learn about new ways to travel in the city.

The pilot identified several goals that with the city's Transportation Action Plan as well as metrics for evaluating progress. Some of these goals include ensuring design consistency and providing seamless connections and reliable transportation options for all. The city tested possible mobility hub interventions and conducted interactive engagement around these concepts to inform future iterations of improvements.

The City took a strategic evaluation approach, defining specific goals and methods for gathering data and a diverse set of voices to inform pilot changes. Through this evaluation, the City learned five key lessons about seating, safety, space, maintenance, and barriers to using hubs.¹¹



ans/mobilityhubs

Source: City of Minneapoli

To Mobility Hubs. Accessed vid. <u>http://wwwe.minnedpolismi.gov/publicworks/</u>



Getting it Done Set The FOUNDATION

A Framework for Success

Missoula's mobility goals are the north star of this playbook. Three key strategic action areas--Set the Foundation, Take Action, and Apply Lessons--guide Missoula's tactics for achieving those goals.

GOALS

- Improve safety and promote health to enhance quality of life
 Advance sustainability and climate resilience to
- Advance sustainability and climate resilience to protect natural resources and address climate change
- Expand mobility choices to improve efficiency and accessibility for people and goods
- Connect and strengthen communities to create a more equitable region
- Maintain assets and invest strategically to boost economic vitality

Set the Foundation

An effective approach to emerging mobility requires a strong **foundation**, rooted in community goals.

Engage with Community

Define the role of the community's voice in the decision-making process. Consult, inform, empower and collaborate with community partners to identify specific aspirations for and barriers to emerging mobility and choice. Establish emerging mobility framework accordingly. Empower community leaders by establishing ongoing forums for collaboration.

Set Principles 😵 🖉 🙆 👪 🤤

Create a unified set of locally-defined, values-based principles for emerging mobility in Missoula that form the foundation of new policy or regulations guiding the region's response to or deployment of emerging mobility services.

Foster Local Culture

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Leverage and foster Missoulans' practical and innovative spirit and culture of openness to trying new things to develop more community-driven mobility innovations that reflect and protect local culture.



Understand Baseline

Establish baseline of key assets that may facilitate or hinder emerging mobility initiatives. This may involve building an inventory of assets like bike parking, curb and parking regulations, zoning requirements that support the expansion of emerging mobility (e.g. car share, bike and scooter share and EV parking), and identifying the mobility needs of the community. Update this baseline at least every two years.

Establish Roles

Many players have a role in affirming and holding Missoula accountable to principles including the City, MPO, County, Montana DOT, Mountain Line, UDASH, the University of Mountain, Missoula in Motion, and MontanaWorks' job training program. Identify key state policymakers to engage in discussions around emerging mobility services, such as TNCs, autonomous vehicles, drones, or other airborne transportation options, is also critical for advancing supportive legislation.

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TAKE ACTION

GOALS

- Improve safety and promote health to enhance quality of life
- Advance sustainability and climate resilience to protect natural resources and address climate change
- Expand mobility choices to improve efficiency and accessibility for people and goods
- Connect and strengthen communities to create a more equitable region
- Maintain assets and invest strategically to boost economic vitality

STRATEGIES

Set the Foundation Goal Setting & Policy Alignment

Take Action Operations, Pilots, & Partnerships

> Apply Lessons Evaluation & Iteration

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Take Action

The emerging mobility industry is in constant motion. Government can work smarter, not harder, by taking strategic **actions** that get ahead of the pace of change.

Target Problems

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Prioritize community engagement to define geographies, customer markets, localized pressure points, and specific mobility needs. Advance emerging mobility pilots that specifically target the needs of vulnerable and disadvantaged populations.

Continue Current Efforts

Build on the good work being done in the region. Continue investing in protected infrastructure for the safe and comfortable use of bikes, scooters, and other small devices. Identify shared goals and opportunities for collaboration that are identified in other planning processes such as the Mountain line Strategic Plan, Missoula in Motion, Safe Routes to School, and the Missoula Downtown Master Plan.



Coordinate with Partners

Foster collaboration with key partners such as Mountain Line for coordinated mobility and mobility hubs strategies. Work closely with state-level organizations to identify and plan for job training opportunities that align with anticipated shifts in the transportation industry.

Pilot & Test

(See "What makes a successful pilot?"). Build pilots from defined problems. Consider partnering with the University and Missoula in Motion to pilot initiatives that support access to shared mobility options.

Connect with Peers

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Connect with case study peers and other similarly sized northern cities working through similar topics to promote knowledge sharing. Identify liaison at the State level on emerging mobility topics, particularly autonomous vehicles, TNCs, and electric vehicle infrastructure.

Set Policy

Review zoning code with an emerging mobility lens to determine if existing policies support or hinder sustainable emerging mobility growth. Assess whether existing or planned local and state-level policies or regulation future proof for autonomous vehicles.

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APPLY LESSONS

GOALS

- Improve safety and promote health to enhance quality of life
 - Advance sustainability and climate resilience to protect natural resources and address climate change
- Expand mobility choices to improve efficiency and accessibility for people and goods
- Connect and strengthen communities to create a more equitable region
- Maintain assets and invest strategically to boost economic vitality

STRATEGIES

Set the Foundation Goal Setting & Policy Alignment

Take Action Operations, Pilots, & Partnerships

> **Apply Lessons** Evaluation & Iteration

Apply Lessons

The cities and agencies that most successfully manage and leverage emerging mobility are able to evolve quickly. This starts with strategic monitoring of outcomes, an understanding of root causes, and trusted community relationships enabling quick action. **Applying Lessons** can occur at the pilot, policy or program level.

Define Performance Metrics

Measurable indicators of success should reflect problem statement(s). Consider identifying objectives and key results associated with each emerging mobility principle established in the Foundation step. Measurable indicators of success should reflect problem statements and vary on a pilot-by-pilot basis.



Collect Information

Undertake a landscape analysis of data sharing standards and specifications to inform how pilot and partnership evaluations can be measured. Performance metrics should be feasible to collect. Set data sharing agreements with relevant parties and hear from the community. Collect qualitative and quantitative evaluation data.

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Evaluate Pilots

Pilots could include service pilots, programmatic pilots, or project pilots. Outcomes could inform policy change. Establish a pilot evaluation framework rooted in predefined goals, objectives, and metrics. Commit to an evaluation schedule. Assess and report results to the community.

Adjust & Repeat

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Extend, adjust, or terminate pilots with justification. Continually hone in on solutions to the original problem. Honor emerging mobility principles.

What Makes A Successful Pilot?

The right ingredients and a good recipe.

When implementing a new solution, technology, or policy, it is important to make sure it will be beneficial to the targeted audience before substantial resources and investments are committed. A pilot program enables experimentation on a small scale to prove the viability of a new technology, service, program, or project and creates opportunities to find, assess, and solve for potential issues and unexpected outcomes.

A successful pilot is comprised of several critical steps. The first step involves establishing an understanding of the regulatory and market conditions in which the pilot will operate. The second step involves establishing a plan that delineates a path forward—this may involve establishing initial criteria for selecting private partners, preliminary regulations, and identifying staffing and resource needs to manage the pilot. The next three steps, launch, operate, and evaluate, are iterated as new findings, data sources, and lessons learned get incorporated into program management. When designing a pilot, allow for enough flexibility to adapt as information increases and be clear from the beginning whether and when pilot-to-permanance decisions will be made..



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The Ingredients

A successful pilot program is anchored by a clearly defined problem to be solved. These problems may vary from insufficient access to social services to poor first- and last-mile connections to key transit stops. Closely related, a pilot should also address an existing need in the market, such as the need for affordable transportation alternatives in neighborhoods lacking direct and frequent transit service. Identifying the appropriate mode and the distinct role it plays within the transportation ecosystem is also a critical ingredient.



The Recipe

Marketing is a major component to operating a successful pilot as it draws participants and increases opportunities to gather feedback and to engage in knowledge sharing. To determine the success of a pilot, it is important evaluate program performance based on a set of key performance metrics and to identify roadblocks, lessons learned, and opportunities for improvement. Insights gathered from the evaluation process will help to determine the feasibility of extending, renewing, or ending the pilot.



Bringing it All Together

Missoula's framework for goal-oriented strategic action in emerging mobility.

		SET T	HE FOUNDA	TION			
			NEXT 2 YEARS				
	Engage with Community	Set Principles	Establish Roles	Foster Local Culture	Understand Baseline	Target Problems	Continue Current Efforts
GOALS	SAMPLE ACTIO	NS					
Improve safety and promote health to enhance quality of life		Create a unified set of principles for emerging mobility in Missoula that form the foundation of new policy or regulations guiding the region's response to or deployment of emerging mobility services				Develop a prioritization scheme for investment in bike/scooter parking along transit (informed by new ITS data on buses)	Continue investing in protected infrastructure for the safe and comfortable use of bikes, scooters, and other small devices by people of all ages, especially through the neighborhood greenway network and investments in end-of-trip facilities
Advance sustainability and climate resilience to protect natural resources and address climate change				Foster and maintain a culture of innovation grounded in practicality, both within government and the community Leverage Missoulans' practical and innovative spirit to develop more community- driven mobility innovations that reflect and protect local culture	Support Mountain Line's Strategic Plan focus on its core routes by identifying first/last mile and other coverage areas with potential for emerging mobility pilots or partnerships		Promoting shared mobility that is managed to support sustainability could help advance mode shift and climate goals

TAKE A	ACTION			APPLY LESSONS				
2-4 Y	EARS			3-5 YEARS				
Coordinate with Parters	Connect with Peers	Pilot & Test	Set Policy	Define Performance Metrics	Collect Information	Evaluate Pilots	Adjust & Repeat	
Explore opportunities to increase biking, skating, scooting, and walking to school in partnership with Missoula's Safe Routes to School program and potential non-profit	Connect with Buffalo e-bike libraries program to understand potential applicability to Missoula		Collaborate with the Missoula Parking Commission to leverage the passage of House Bill 456 and identify specific project opportunities for expansion of electric transportation					
or private partners			options at new developments or other strategic locations within the community					

		SET T	HE FOUNDA	TION			
			NEXT 2 YEARS				
	Engage with Community	Set Principles	Establish Roles	Foster Local Culture	Understand Baseline	Target Problems	Continue Current Efforts
GOALS	SAMPLE ACTIO	NS					
Expand mobility choices to improve effciency and accessibility for people and goods					Inventory existing downtown parking garages and assess physical and financial feasibility for re-use as downtown attracts fewer drivers; couple with an assessment of parking revenue trends and opportunities for new revenue sources as the region considers benefits and impacts of autonomous vehicles		Coordinate bike/scooter infrastructure and parking investments with Mountain Line's Primary Transit Network identified in its 2018 Strategic Plan

TAKEA	ACTION				APPLY L	ESSONS		
2-4 Y	'EARS			3-5 YEARS				
Coordinate with Parters	Connect with Peers	Pilot & Test	Set Policy	Define Performance Metrics	Collect Information	Evaluate Pilots	Adjust & Repeat	
	Connect with and understand lessons learned from Buffalo, NY's recently established e-bike library program and the potential to scale it to other interested communities	Build off Mountain Line's 2018 Strategic Plan, which recommends subsidy standards for flexible transit services, to assess the need or demand for demand- responsive transit service coverage in certain geographies or within certain customer segments Partner with the University and Missoula in Motion to pilot a voluntary "leave your car at home" challenge program supported by access to shared mobility (e.g. car share, bike share, scooter share), as these modes help students live car free and enjoy the recreational benefits of Montana						

		SET 1	HE FOUNDA	TION			
			NEXT 2 YEARS				
	Engage with Community	Set Principles	Establish Roles	Foster Local Culture	Understand Baseline	Target Problems	Continue Current Efforts
GOALS	SAMPLE ACTIO	NS					
Connect and strengthen communities to create a more equitable region	Empower community leaders by establishing ongoing forums for collaboration With community partners, identify specific aspirations for and barriers to emerging mobility choice and access (geography, income, access to transit, proximity to bicycle infrastructure, race, age, digital divide)	Point to LRTP transit- oriented growth scenarios to affirm transit's central role in non-auto travel in Missoula, and link emerging mobility policy to this transit- first vision					
Kaintain assets and invest strategically to boost economic vitality					Work with Mountain Line to develop and support a digital asset management program (e.g. bus stop asset inventory database management; transit ITS system; digitized curb information)	Study the Mobility Hubs concept – connect with Mountain Line's Bus Stop Investment Plan (next update); potential to focus on the Downtown Transfer Center to start In anticipation of a shift to autonomous vehicles, particularly for long-haul trucking, collaborate with MontanaWorks' job training programs	

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TAKE A	ACTION				APPLY L	ESSONS		
2-4 Y	EARS			3-5 YEARS				
Coordinate with Parters	Connect with Peers	Pilot & Test	Set Policy	Define Performance Metrics	Collect Information	Evaluate Pilots	Adjust & Repeat	
Consider bike, scooter, or other micromobility sharing partnership programs directly with the region's larger employers, particularly those with hourly wage workers		Advance emerging mobility pilots that specifically target the needs of low- income, people of color and indigenous populations, people with disabilities, youth, communities with low English proficiency, and other disadvantaged populations Consider community- supported car share or bike share programs in collaboration with Invest Health		Establish an emerging mobility pilot playbook with specific equity- related goals and evaluation metrics				
Become and stay involved in state- level policy discussions (e.g. liability/ insurance, preemption) around emerging mobility services, such as TNCs, autonomous vehicles, drones or other airborne transportation		Recover street space to expand the public realm and invite mode shift	Identify opportunities in existing zoning requirements that help facilitate the expansion of emerging mobility (e.g. car share, bike/scooter share parking, EV charging stations)		Undertake a landscape analysis of data sharing standards (learn what's out there and draw back to what Missoula is trying to achieve); consider connecting with the City of Kelowna, British Columbia (similarly sized northern city) on their use of the Mobility Data Specification (MDS)			



2050 Long-Range Transportation Plan

