

CASE STUDY

FIRST AND LAST MILE CONNECTIONS: THE SALT LAKE REGION, UTAH

Mile High Connects (MHC) is a partnership of private, philanthropic, and nonprofit organizations committed to developing inclusive, affordable, and livable communities within walking distance of public transit. In 2015 MHC identified and prioritized First and Last Mile Connections (FLMC) as a critical part of study to make sure that every transit rider could easily and safely get to and from their transit connection. As a member of MHC, Natural Resources Defense Council (NRDC) undertook research and developed three case studies that looked at FLMC best practices in the Denver region and nationally. FLMC refers to the facilities, infrastructure, and services that allow people to get from their front door to their final destination via transit without driving a personal vehicle. The comprehensive objective is to provide MHC with useful information, tools and a set of best practices to complement their regional and local work around social and equitable transit solutions. The first two case studies focus on the interface and relationships between the Metropolitan Planning Organizations (MPO), local jurisdictions, and transit agencies progressing FLMC enhancements in the Salt Lake City and Atlanta regions. The third case study focuses on emerging and existing shared mobility models and systems that are striving to provide sustainable transit service to low-income communities and communities of color. Additionally, this case study highlights some of the best practices, tools, and technologies and where they have best worked in more disadvantaged communities.

Interagency collaboration is improving as FLMC strategies, programs, and policies rapidly take shape nationally. However, competing interests and systemic inefficiencies within metropolitan planning organizations (MPO), transit agencies, and local jurisdictions can stifle urban planning, transportation projects, and collaborative relationships. Furthermore, FLMC has no clear responsible owner or concrete definition, and no one FLMC strategy can address all the current gaps, barriers, and challenges facing low-income and communities of color. Understanding the interface, roles, relationships, and collaborative or independent functionality between the city, MPO, and transit agency can often be challenging and complex. Successful FLMC strategies, programs, and policies are supported by the political landscape, communities, and interagency cooperation. Successful inter-organizational frameworks allow much-needed resources to be redirected to low-income and communities of color. We have identified highly collaborative FLMC advances in the Salt Lake City region, exhibiting some useful lessons and models for the Denver region.

CONTEXT

Mirroring Denver, the Salt Lake City region has seen accelerated population growth within the last four decades. This long-term unprecedented growth is putting significant pressure on planned expansions to existing regional transit systems. The Salt Lake City region's geography is also similar to Denver, and has a surrounding conservative suburban political climate. The Wasatch Front is comprised of a series of natural geographic urban growth boundaries in the form of surrounding mountains, water bodies, deserts, and federally owned land. Similar to Denver's brown cloud, the Salt Lake City region's

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high vehicular use, seasonal climate, and natural geographic barriers combine to produce notoriously poor air quality. The natural geography and Great Basin pressure systems create stagnant air and, when combined with vehicular smog and pollution, leads to the nation's worst visible insulated inversion, or trapped air and smog layer. Additionally, the Denver and Salt Lake City regions are in the midst of constructing extensive and expanding public transit systems. These systems necessitate innovative best practices to help mitigate documented environmental and public health impacts.

Politically, Salt Lake City is to Utah what Denver is to Colorado. Salt Lake City is the blue liberal and Democratic center of Utah. The majority of Utah, including the peripheral Salt Lake City districts and regions, are conservative and Republican. However, at a micro-level Salt Lake City has always remained pedestrian- and bicycle-friendly, hosting a number of grassroots organizations working to get bicycles to lower income residents of color. The Salt Lake City region has a different set of dynamics compared to Denver regarding the role of its center city.

The Wasatch Front is a uniquely distinct and exemplary national model of the benefits of high-functioning, strong, and longstanding inter-organizational partnerships between local jurisdictions, transit agencies, and MPOs. Salt Lake City, Salt Lake County, Ogden City, Wasatch Front Regional Council, Mountainland Association of Governments, and Utah Transit Agency have all formed a cohesive and effective working relationship to advance the development and implementation of FLMC strategies, policies, and tools. The partnership is vital to the success and streamlining of cross-boundary implementation requirements.

Envision Utah, Salt Lake City's first public and private partnership to coordinate regional planning efforts, works with various stakeholders and communities to address growth and transit connectivity. Prior to 1997, local jurisdictions in the Greater Wasatch Area were individually tasked with planning for growth. This independent and uncoordinated jurisdictional responsibility created a fragmented community "bunker mentality" that unsuccessfully managed growth from a micro level.¹ In 1997, as a neutral facilitator, Envision Utah connected residents, elected officials, developers, conservationists, business leaders, and other interested parties to make informed decisions about growth strategies.² Between 1997 and 1999, Envision Utah conducted public values research within Salt Lake City, holding more than 200 workshops, and involving more than 20,000 residents. Ultimately, this led to the development of the 1999 Quality Growth Strategy, which provides voluntary, local, market-based solutions for healthy regional growth. Envision Utah works with more than 100 communities and has drawn participation from more than 50,000 Utahans since the development of the Quality Growth Strategy.³ Envision Utah remains a national model for visioning and civic engagement around growth and transit.

REGIONAL AGENCIES

Utah Transit Agency (UTA)

The Utah Transit Agency (UTA) is the public transportation provider for the Wasatch Front metropolitan region. UTA's geographic service area covers 1,800 square miles and seven counties. UTA's operations include fixed route bus lines, express buses, ski buses, three light rail lines (TRAX), a streetcar line (the S-Line), a commuter rail train (the FrontRunner), and ridesharing options.⁴ UTA provides multi-modal technologies like real-time geo-locating phone apps (GeoUTA and AllSubway), and additional static routing data. UTA also has accessible and user-friendly language translation services built into station kiosks, apps, and their website.

Since it is not recognized as a state agency by law, UTA is a local district political subdivision of the State of Utah. UTA is overseen by a 16-member Board of Trustees, who are appointed by elected city and county officials, and by constituent members of the transit district. UTA's largest funding source, at 65 percent, comes from the local option sales tax revenue administered in the districts maintaining service. Federal funding for operations and preventative maintenance provides another 17 percent of funding revenue, while passenger fares make up an additional 16 percent.

Salt Lake City

Salt Lake City municipal is home to approximately 200,000 residents—one-third the size of the Denver. The City is small enough that regional MPOs do not always require a high level of municipal involvement and coordination. In other words, Salt Lake City is just not a big enough regional partner to impact a regional conversation. That said, the micro role of Salt Lake City is to utilize programs and pursue funding, which they have done successfully. Salt Lake City has become a regional leader in bike and pedestrian infrastructure planning and investment. The city has implemented a hugely successful bike share, creating healthy interest from surrounding suburbs. Salt Lake City leads by example as a champion of innovative and healthy transportation planning.

Through his tenure in office, Mayor Ralph Becker maintained a deeply engrained mobility prioritization. Due to be finished this fall, Salt Lake City will be the first in the United States to implement a protected intersection for bicycles. This pilot project is designed to enhance bicycle, pedestrian, and vehicular safety and intersection mode share clarity. Other collaborative accomplishments from Becker's office include UTA light rail network expansion, GREENbike sharing system expansion, and low-cost multi-modal transit passes.⁵ Salt Lake City's Complete Streets program has contributed to substantial public engagement for new design and system implementation.

Salt Lake City's Community and Economic Development Department governs the Transportation Division, which is responsible for the planning, design, and operation of all city transportation systems (including biking, walking, mass transit, and auto travel). The Transportation Advisory Board (TAB) provides recommendations to the Transportation Division, mayor, and City Council regarding all transportation issues and decisions. TAB consists of 15 members—one resident from each of the City's eight planning districts, one member at-large to represent the Northwest Quadrant Planning District, one representative of college-level transportation academia, one representative of a business-oriented organization actively involved in transportation issues affecting Salt Lake City, and one representative of the Salt Lake City School District.⁶ In addition to the Transportation Director and Police Department representative, there are also representatives of organizations with continued interest in city transportation.

Salt Lake City has actively and innovatively attempted to combat city and regional air quality issues. SLC has many air quality accomplishments, as it relates to transit, they include: converted City fleets to low/no emissions, adopted anti-idling ordinances, partnered with Utah Clean Cities to provide electric car charging stations, planning and zoning changes to increase walkable and bikable streets and neighborhood centers to complement transit centers, doubled the number of bike lanes, opened two new rail lines linking the airport via TRAX and Sugar House via the streetcar S Line to downtown and surrounding neighborhoods, opened the SLC BikeShare program, and co-located City services near TRAX to help reduce multiple trip need.⁷ The next step to combat SLC's air quality issues require partnering assistance from County and State partners. The most important request to the state is to help allocate more funding to public transit, which can be done by increasing the cap on sales tax.

Salt Lake County

Salt Lake County is a much larger government responsible for more than 1.08 million residents, 15 incorporated cities and towns, and 11 unincorporated communities. Salt Lake County provides smaller jurisdictions with funding resources and project guidance. As with most county-level entities, Salt Lake County is also tied to the budget and taxing authority as determined by State Legislature. As a regional partner, Wasatch Front Regional Council (WFRC) has more frequent conversations with the Salt Lake County. UTA, WFRC and Salt Lake County are all multi-jurisdictional organizations providing more commonality in that regard.

Salt Lake County has strong programmatic departments in Active Transportation, Public Works, and Regional Development. The Active Transportation Department has worked with unincorporated county communities to plan, coordinate, and implement the Bike Transportation Improvement Program (BTIP) and the Complete Streets policy. The Active Transportation Department also provides self-reliance technical resources including: Salt Lake County Bicycle Advisory Committee (SLCBAC), Salt Lake County Bicycle Ambassador Program, and Safe Routes To School.⁸ The Public Works Department is responsible for engineering, operations, inspections, and maintenance service for public transit infrastructure. The Regional Development Department is in charge of coordinating county-wide input on and implementation of the Wasatch Front Regional Transportation Plan, and the management of the Planning and Transportation Advisory Committee.⁹ As part of the county bike route network program, the \$800,000 Salt Lake County bike transportation development fund will support bike infrastructure improvements in seven communities.

Ogden City

As an up and coming city with huge economic growth, Ogden, Utah has raised the bar for the Salt Lake City region in advancing bicycle and pedestrian infrastructure. More than 20 percent of Ogden's population is people of color and many are transit-dependent.¹⁰ The city's mayor, Mike Caldwell, is dedicated to raising public awareness around the critical need for alternative forms of transportation. Mayor Caldwell made a commitment to a yearlong daily bike-to-work commute. As the mayor and chair of the Wasatch Front Regional Council's 2015 Active Transportation Committee, Caldwell brings credibility to alternative transportation needs to the forefront of state and regional long-range transportation planning discussions.¹¹

Early this year, Utah Department of Transportation approved Ogden’s Bicycle Master Plan, consisting of executable goals and strategies to increase bicycle use and facilities for the public. As part of the plan, Ogden is examining a bike share program that would mirror and interface with the Salt Lake City GREENbike program. Currently, there is limited space inside trains as bike storage is consistently reaching capacity. Recently, Ogden spent \$2 million per mile for their new bike promenade, which contains a separated cycle track with a glass texture. The city intends to expand the downtown Grant Avenue Promenade that will connect the Ogden River Parkway to the downtown core via a pedestrian and protected bike lane corridor. The goal is that the new infrastructure serves as the backbone of a low-stress pedestrian and bike system that stretches across 24 city blocks. The city is in the process of finalizing this plan and has facilitated multiple public engagement opportunities in addition to high-level coordination with involved organizations. The City Council is also working on a Complete Streets policy and a bike parking ordinance. The Bicycle Master Plan includes a number of key analyses and recommendations:

- Coordinate with UTA’s First/Last Mile Strategies Study and the Utah Collaborative Active Transportation Study (UCATS) to identify bicycle-related improvements at the Ogden Transit Center that could potentially increase transit ridership.¹²
- Analyze potential locations for bike share stations, with consideration for factors known to influence bike share usage such as employment and population density, intersection density, land use mix, and major employment and residential centers.¹³

Other transit successes in Ogden include:

- Ongoing transit-mode study to evaluate the possibility of and preferences for a transit solution to enhance service and connectivity from downtown Ogden to Weber State University and McKay Dee Hospital.
- New upgrades to sidewalks and Americans with Disabilities Act (ADA) designated crossings.
- Ogden recently connected an intermodal hub to their paved multiuse pathway system.
- Ogden just completed the first phase of a general City plan update. The second phase will explore funding through the WFRC’s Local Planning Resource Program. WFRC has been active on the steering committee of this process.

Mountainland Association of Governments

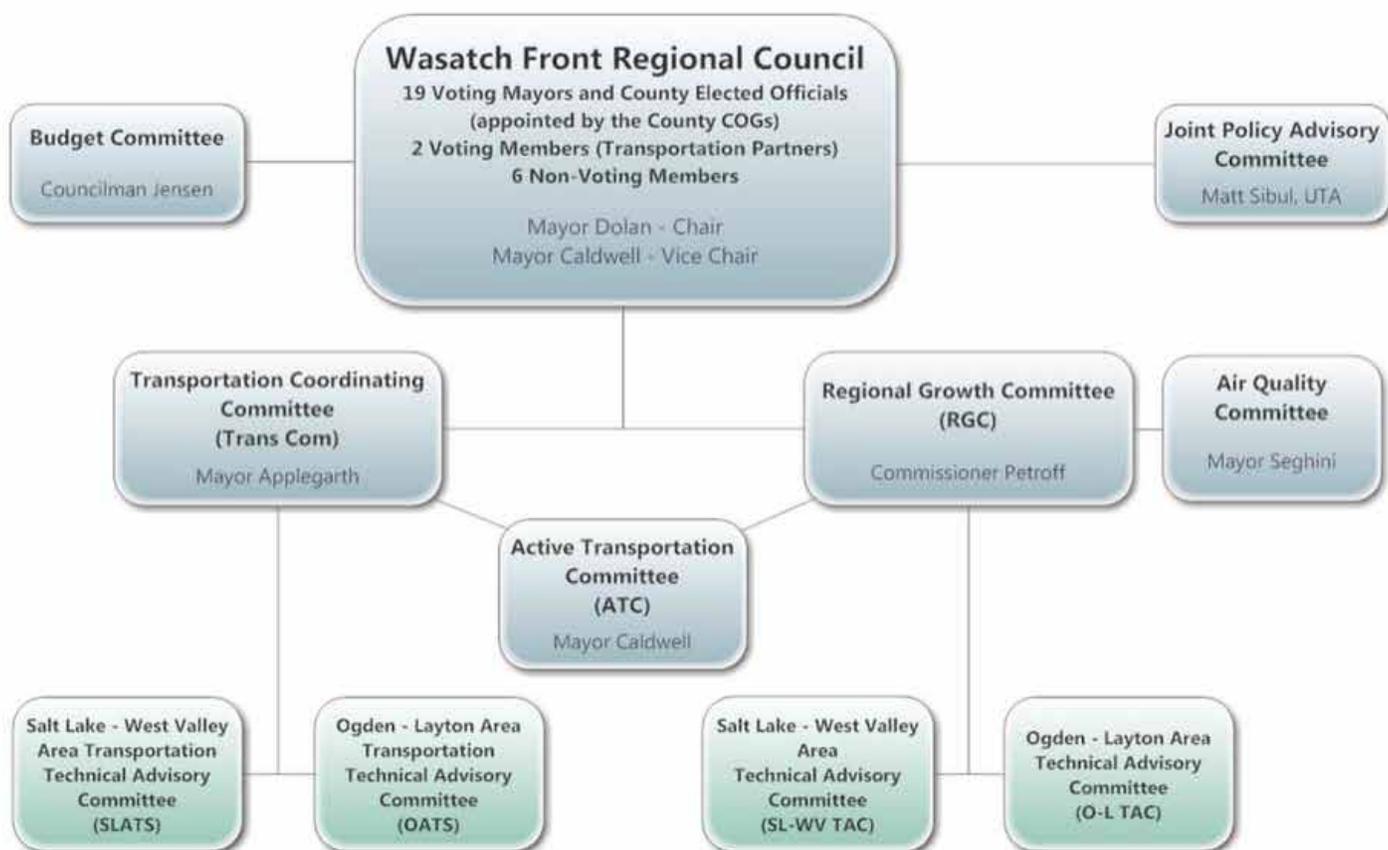
The Mountainland Association of Governments (MAG) provides regional services to Summit, Utah, and Wasatch Counties. MAG is the administrative MPO for Utah County, as well as the rural planning organization (RPO) in Wasatch County. MAG is also the Area Agency on Aging and the regional community and economic development agency for all three counties.¹⁴ MAG’s Regional Planning Committee was established to oversee all Utah County transportation planning and air quality policy. The coordinated transportation planning activities include road, pedestrian, bicycle, transit planning, and traffic modeling.¹⁵ As the MPO, the Regional Planning Committee is in charge of reviewing and approving major Metropolitan Transportation Plans (MTP) and the Transportation Improvement Program (TIP).

Wasatch Front Regional Council (WFRC)

The Wasatch Front Regional Council (WFRC) functions as the region’s federally mandated MPO for transportation planning along the Wasatch Front. WFRC is responsible for the development and approval of all transportation master plans detailing the distribution of federal funding. The WFRC is comprised of 27 members. Two of those members are appointed with voting rights from WFRC’s transportation partners (UTA and UDOT). WFRC also includes 6 non-voting members representing the Utah State Senate, the Utah House of Representatives, the Utah League of Cities and Towns, the Utah Association of Counties, the Utah Department of Transportation, the Utah Transit Authority, and Envision Utah.¹⁶

The WFRC has established a number of committees to assist action review and preparation. Its Transportation Coordinating Committee, Regional Growth Committee, Active Transportation Committee, and Air Quality Committee are further assisted by several Technical Advisory Committees. WFRC has created the interagency Joint Policy Advisory Committee (JPAC) to ensure that long- and short-range plans and programs are consistent across Salt Lake and Utah counties. JPAC provides a forum for critical interagency discussion about federal and state legislation, and the urban impacts connected to regional transportation planning and programming. Figure 1.1 shows the organization of WFRC’s committees.

FIGURE I.I: 2015 WFRC Committee Structure



Source: http://www.wfrc.org/new_wfrc/index.php/committees

WHAT DO AGENCIES DO TO SUPPORT FLMC?

Active Transportation Coordinator

“Active transportation means using human energy to get around, often through walking or bicycling. It can also mean skateboarding, using a wheelchair, taking public transit, or other efforts that harness the power of the human body.”¹⁷

WFRC is currently hiring their first active transportation coordinator to coordinate all the WFRC work regarding active transportation, including staffing the high-functioning Active Transportation Committee (WFRC, UTA, UDOT, and MAG) and leading regional planning efforts with active transportation.¹⁸ Also, the coordinator will be responsible for WFRC programming and funding activities. As part of the decision-making and funding process, the active transportation coordinator will reevaluate how WFRC allocates money to bike and pedestrian projects. Most importantly, the coordinator will build effective collaboration and working relations with UDOT and UTA to ensure that active transportation is considered in all projects. Given that the active transportation coordinator is under an MPO, their purpose will be to engage in long-range planning as a conduit between local government, UDOT, and UTA. The job of the WFRC is to represent local governments, so they will make sure local government bike and pedestrian plans are in place and communicated effectively to UDOT and UTA.

Local Planning Resource Program

The WFRC’s Local Planning Resource Program (LPRP) is a technical and consulting assistance pilot program that originated from a 2011 HUD Sustainable Communities Grant. Through the initial two-year grant, more than eight regional partners with a total of \$9.8 million in cash and in-kind collateral created six catalytic sites to develop and test key resources that would be used to consider the Wasatch Choice for 2040 Vision.¹⁹ After the HUD Sustainable Communities Grant ended in 2013, WFRC and Salt Lake County partnered to form the LPRP.

WFRC has access to federal funds, including the Surface Transportation Program (STP), Congestion Mitigation and Air Quality Improvement Program (CMAQ), and Transportation Alternatives Program (TAP). The WFRC uses STP funds and contributions from Salt Lake County to facilitate the LPRP—totaling \$620,000. Under the STP, under which the LPRP is a budget line item, WFRC receives \$160,000 for the Ogden/Layton urbanized area in the north, and \$260,000 in the Salt Lake/West Valley City area.²⁰ Salt Lake County remains a critical partner to WFRC and to the LPRP, contributing more than \$200,000 to projects within the county and supporting key management activities. Additionally, Salt Lake County’s mayor is supportive of the Wasatch Choice for 2040 regional vision helping to streamline funding, programmatic, and project objectives. UTA is another important LPRP partner that provides project staff and funding. The federal government does not dictate project eligibility criteria. WFRC has used its flexibility as an MPO to add explicit FLMC criteria to the CMAQ and TAP programs as an incentive for new projects. In the last year, WFRC embedded additional points to be allocated to projects that include FLMC strategies through CMAQ and TAP.

The LPRP provides municipalities, counties, townships, and local governments under the Wasatch Front Regional Council’s jurisdiction with technical assistance to integrate land use and regional transportation plans. The LPRP is a support mechanism for the consideration of the Wasatch Choice 2040 vision to reduce single-occupant vehicle travel demand and promote alternative travel choices through land development strategies. Through LPRP, WFRC and Salt Lake County offer staff time, consulting, or training to eligible applicants. The LPRP focuses on local development plans, including street and train connectivity and transportation at the local level directly related to FLMC strategies. Incorporated into the technical assistance program, WFRC has a policy program to ensure all users are considered in street designs and investments. At the regional level, WFRC works top-down with local communities to develop Complete Streets polices. As a part of the Wasatch Choice for 2040 and the Complete Streets program, WFRC created StreetPlan.net, a web-based platform used to stimulate collective community dialogue through graphical, visual, and interactive street elements.

The LPRP aims to help local jurisdictions connect people to jobs through transit, ultimately driving regional growth as outlined in the Wasatch Choice for 2040 vision. Local projects are selected based on compatibility with the Wasatch Choice for 2040 vision; meaning growth itself would have positive impacts for regional transportation and quality of life. This includes transit-oriented development (TOD), strengthening existing downtowns and boulevard communities, supporting infilling and redevelopment, and walkability. WFRC has criteria for the LPRP that relates to the Wasatch Choice for 2040. As a safeguard for collaboration, a panel consisting of a representative from UTA, UDOT, and Salt Lake County score the LPRP project applications.

The LPRP produces regional collaboration benefits, however it also highlights ongoing challenges. Traditionally, direct funding through STP requires a high match rate that often leaves out smaller and low-income communities. Through the LPRP, WFRC offers a lower funding match to include a more diverse pool of applicants. However, because the LPRP transcends cross-boundary organizational responsibilities (i.e., land use) it can create a sensitive environment for dialogue. For the LPRP to effectively function, strong and open cross-boundary partnerships are essential. Another challenge is the number of applications, which has a detrimental effect on FLMC prioritization. Currently, there is a 6:1 application to project selection. Thus, projects are selected based on conformance, and how much they encompass, the Wasatch Choice for 2040 regional and economic growth principles. When it comes to prioritizing applications, FLMC strategies and policies criteria do not have enough weight to become an explicit target for an LPRP project.²¹ There is risk in evaluating only FLMC strategies and policies over the holistic TOD approach due to the high number of small cities and towns undergoing great population and economic growth. Ultimately, \$620,000 is not enough for all project requests.

First and Last Mile Connections Strategies Study

For several years, the UTA has been working on various efforts to help customers reach transit stations and improve their transit experience. UTA administers passenger enhancement projects, including improved bus structures, American with Disabilities Act (ADA) compliance, sidewalk connection projects, bike lane striping, bike lockers at stations, and bike repair stands. This First and Last Mile Connections Strategies Study, completed in April 2015, represents the first real effort to coordinate and analyze all potential FLMC strategies, and to recommend strategies will mostly likely improve ridership.

The study examined the feasibility and applicability of national and international FLMC best practices in the Salt Lake City region. This study was initiated to better understand, develop, and implement first and last mile strategies to reach the UTA’s ambitious goal of doubling ridership by 2020. The study was a collaborative effort sponsored by UTA, UDOT, WFRC, and the Mountainland Association of Governments. These organizations formed the managing First/Last Mile Strategies Study Steering Committee that also included the University of Utah’s Traffic Lab. The Stakeholder Group is an even more comprehensive set of partners, including all members of the First/Last Mile Strategies Study Steering Committee

along with members of the UTA Board of Trustees, Bike Utah, Davis County Health Department, Enterprise Car Share, GREENbike, Salt Lake City Mayor’s Accessibility Council, Salt Lake County, University of Utah Commuter Services, and the Utah Department of Health. The project team has engaged a wide range of stakeholders to help identify and prioritize FLMC strategies and station areas. The study details barriers and challenges, and provides a framework for enhancing transportation infrastructure. The study also defines the proposed FLMC strategy capital construction costs, and annual and maintenance costs. The UTA would ultimately like to see a shift in mode split. The implementation of small FLMC projects is substantially more cost-effective compared to the traditional build-out of a new rail line or bus system.

The study identified 63 station areas to move forward with implementing FLMC strategies. Using the combination of researched national and international FLMC best practices, an FLMC toolbox, six station typologies and organization categories, and station network analyses, the UTA created a recommendations framework to apply to each TRAX station area, represented in Figure 1.2. The UTA collaborated with the First/Last Mile Strategies Study Steering Committee and Stakeholder Group to refine the list, determine strategies to prioritize, and apply the strategies to each of the stations based on typologies.

As data was collected for this study, UTA also established metrics and benchmarks. Every UTA station has a unique a typology that correlated to a set of recommended strategies. The UTA also looked at health, environmental, and ridership impacts of future implementation. Results are based on the implementation of the recommendations for all of the stations.

Figure 1.2: UTA –First-Last Mile Strategies Study

Urban	<ul style="list-style-type: none"> ❖ Wayfinding and Information ❖ Bicycle Network Improvements ❖ Bike Share Stations ❖ Car Share Stations 	<ul style="list-style-type: none"> • Planetarium • Arena • Temple Square • City Center • Gallivan Plaza 	<ul style="list-style-type: none"> • Courthouse • 900 South • Library • Trolley • 900 East
Multi-Modal	<ul style="list-style-type: none"> ❖ Wayfinding and Information ❖ Bicycle Network Improvements ❖ Access Connections ❖ Pedestrian Network Improvements ❖ Crossing Treatments ❖ Rail/Bus Stop Enhancements 	<ul style="list-style-type: none"> • 1940 W North Temple • Power • Fairpark • Jackson/Euclid • North Temple Bridge/Guadalupe • North Temple • Redwood Junction 	<ul style="list-style-type: none"> • West Valley Central • Salt Lake Central • Old Greektown • Ball Park • Central Pointe • Millcreek • Sandy Expo
Institutional	<ul style="list-style-type: none"> ❖ Bicycle Network Improvements ❖ Bike Share Stations 	<ul style="list-style-type: none"> • Orem • Stadium • University South Campus 	<ul style="list-style-type: none"> • For Douglas • University Medical Center
Suburban Non-Residential	<ul style="list-style-type: none"> ❖ Wayfinding and Information ❖ Bicycle Network Improvements ❖ Bike Share Stations ❖ Rail/Bus Stop Enhancements 	<ul style="list-style-type: none"> • Ogden • Meadowbrook • Murray North • Murray Central • Fashion Place West 	<ul style="list-style-type: none"> • Sandy Civic Center • River Trail • Decker Lake • Draper • Lehi
Suburban	<ul style="list-style-type: none"> ❖ Wayfinding and Information ❖ Bicycle Network Improvements ❖ Pedestrian Network Improvements ❖ Crossing Treatments 	<ul style="list-style-type: none"> • Midvale Fort Union • Midvale Center • Historic Sandy • Crescent View • Kimballis Lane • Draper Town Center 	<ul style="list-style-type: none"> • Bingham Junction • Historic Gardner • West Jordan City Center • Jordan Valley • 4800 W Old Bingham Hwy • Provo
Auto-Dependent	<ul style="list-style-type: none"> ❖ Wayfinding and Information ❖ Bicycle Network Improvements ❖ Access Connections ❖ Pedestrian Network Improvements ❖ Crossing Treatments 	<ul style="list-style-type: none"> • Pleasant View • Roy • Clearfield • Layton • Farmington • Woods Cross • South Jordan 	<ul style="list-style-type: none"> • American Fork • 270 W Sugar Factory Road • 5600 W Old Bingham Hwy • South Jordan Parkway • Daybreak Parkway

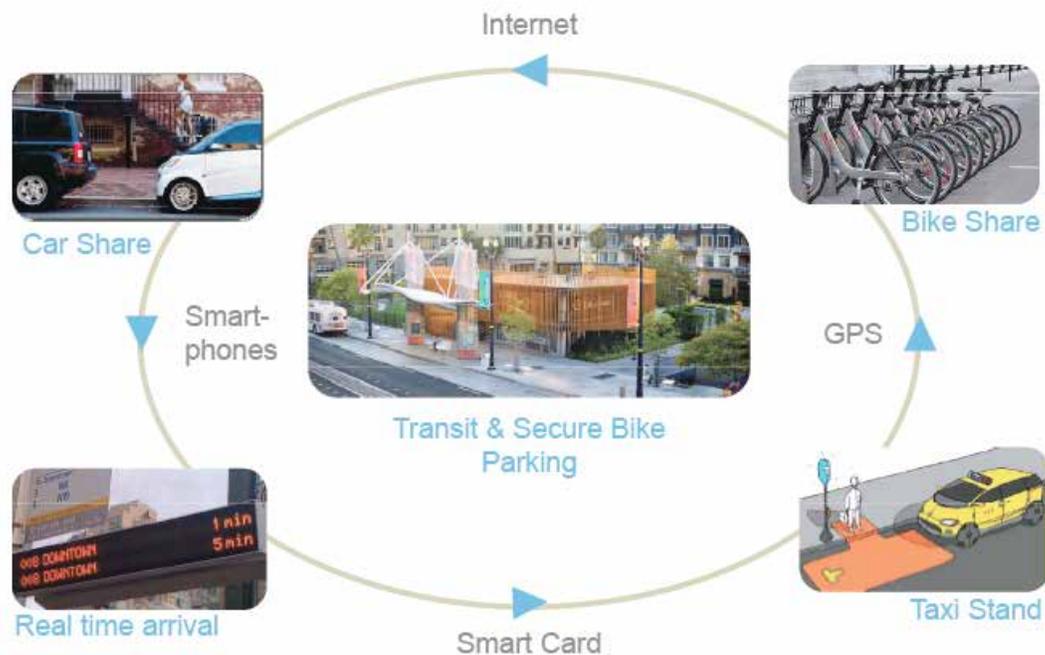
Volume of ridership, station characteristics, and online or on-the-ground survey information was collected, and remains a method for measuring and monitoring progress for this study. This database is housed across the UTA, UDOT, WFRC, and MAG. A critical infrastructure analysis of station connectivity and walkability was used to develop strategies around vehicle and bicycle parking supply, future population and employment growth, and TODs. In 2013, the Utah Collaborative Active Transportation Study (UCATS) identified and evaluated the percent of land area within one mile of TRAX and FrontRunner stations that were “connected” through walkable access.

A successful transit system requires a sustainable FLMC strategies ecosystem with supportive options, information, and technologies within five classifications: bicycle, pedestrian, transit, auto, and transportation demand.²² Figure I.3 shows the FLMC strategies ecosystem used as a topical framework to examine the individual pieces and prioritize FLMC developments. The FLMC Strategies Ecosystem is the foundation for the subsequent Transit Access Toolbox, a comprehensive list of strategies of the best practices in bicycle, pedestrian, transportation demand management, transit access information, and auto access tools.

The UTA has implemented some major FLMC strategies to connect riders to stations. The GREENbike Share Program is a public/private partnership providing short-term bike rental at various stations. GREENbike also uses B-cycle and Spotcycle mobile apps for real-time locations and rental availabilities. TRAX and the FrontRunner also now provide on-board bicycle accommodations with storage space and hanging racks. Enterprise’s Car Share Program has expanded to new TRAX and FrontRunner stations. In the face of drastic population growth, and the subsequent travel demand, UDOT has developed TravelWise. With a high level of collaboration between businesses, individuals, communities, and organizations, TravelWise strategies aim to curb energy consumption, optimize mobility, and improve air quality. Strategies built into TravelWise include active transportation, alternative work schedules, telecommuting, increased public transit, and carpool and vanpooling options. Lastly, the UTA has increased station shuttle and ride-matching (carpool and vanpool) services, and wayfinding signage.

The UTA’s completion of the First and Last Mile Connections Strategies Study is a big step in the right direction. However, the strategies still need to be implemented. The UTA has created an action plan for FLMC strategy implementation by type, requiring a high level of collaboration between the “lead agency/ies” and “supporting partners.” The following table exemplifies the UTA’s coordinated effort with county, state, regional, and local jurisdiction partners.

Figure I.3: UTA –First/Last Mile Strategies Study



Strategy Type	Lead Agency	Supporting Partner	Potential Improvements
<i>Wayfinding and Information Improvements</i>	UTA	UDOT, local communities	Pedestrian and bicycle signage, map kiosks
<i>Bicycle Network Improvements</i>	UDOT, local communities	UTA	On-street facilities, and intersection upgrades
<i>Access Connections</i>	UTA	Local communities	Removal of walls and fencing
<i>Pedestrian Network Improvements</i>	UDOT, local communities	UTA	Sidewalks and pathways
<i>Crossing Treatments</i>	UDOT, local communities	UTA	Crosswalk striping, pedestrian signal installation
<i>Bike Sharing Programs</i>	GREENbike, UTA	Regional transportation agencies, local communities	New station installations and expansion of regional program
<i>Car Sharing</i>	Enterprise Car Share	UTA, local communities	Continue coordination and expansion of new service stations
<i>Station Stop Enhancements</i>	UTA	Local communities, UDOT	Bus shelters, maps and schedules, trash receptacles, pedestrian-scale lighting, digital message systems, bike racks and lockers

We have yet to see how the implementation of proposed FLMC projects will unfold and how the metrics and measurements will make a compelling story for the First and Last Mile Connections Strategies Study. Going forward, the UTA needs to conduct an analysis to see if the UTA, First/Last Mile Strategies Study Steering Committee, and Stakeholder Group’s predictions were accurate. They will also need to determine which recommendations are working and not working, and why.²³ Project and process metrics will be critical to making responsible choices during implementation. Some of these metrics will include an analysis of ridership volume and change in mode split by station access. If bike/walk access goes up, car access goes down, and ridership increases, UTA will be on the right track.

Peer Transit Agencies Comparison

The First /Last Mile Connections Strategies Study reflects great regional and city strides as well as existing opportunities for intricate collaboration across all partnering public, private, and community-based organizations. Figure 1.4 depicts the peer transit agencies strategies comparison of various FLMC strategies used by comparable transit agency peers. The results provide a good baseline comparison, especially between the UTA and Denver’s Regional Transportation District (RTD). The post-comparison peer transit agencies summary reaffirmed the challenges and opportunities of cross-boundary partnerships. Moving forward with all compared agencies, there is a need to rethink existing transit services, focus on peak service areas and times, develop a better marketing and messaging framework, engage and involve the public, cultivate funding pots, and build FLMC strategies into business planning.²⁴

FIGURE 1.4: UTA –First-Last Mile Strategies Study Peer Comparison

FIRST LAST MILE STRATEGIES USED	CTA (Chicago)	RTD (Denver)	WMATA (DC)	TriMet (Portland)	Capital Metro (Austin)	UTA
Bike Share	●	●	●	●	●	●
Bike and Ride Facilities	●	●	●	●	●	●
Bike Parking	●	●	●	●	●	●
Bike-on-Transit Accommodations	●	●	●	●	●	●
Pedestrian Access Improvements	●	●	●	●	●	●
Bicycle Access Improvements	●	●	●	●	●	●
Car Share	●	●	●	●	●	●
Park and Ride	●	●	●	●	●	●
Shuttles (private or partner funded/operated)	●	●	●		●	●
Connector/ Circulator Routes (agency funded or operated)	●	●			●	●
Restructured Public Transit Routes	●		●	●	●	●
Real-time Arrival Information (apps and/or displays)	●		●	●	●	●
Call and Ride (demand response)		●				
Preferential Parking for Carpools and Vanpools				●		
Kiss and Ride		●	●			●
Transfer Agreements			●			
Special Marketing/ Branding			●		●	●

Model Partnerships

UTA, UDOT, MAG, and WFRC coordinated on the 2013 Utah Collaborative Active Transportation Study (UCATS), which stemmed from the need for a backbone Regional Bicycle Network with mutual partner prioritization. Salt Lake City was also highly involved with this regional collaboration milestone.

UCATS represents a partnership among transportation agencies across the Wasatch Front supporting active transportation enhancements for healthier and more vibrant communities. UCATS was used to evaluate and guide the future construction of 25 Regional Bicycle Network projects. The identified projects focused heavily on pedestrian and bicycle infrastructure improvements around transit stations. UCATS revealed that every 5 percent increase in a community's walkability for designated projects would lead to a 6.5 percent reduction in vehicle miles traveled (VMT) per person.²⁵ UCATS also revealed an increase in transit ridership with the implementation of effective bike facilities. UCATS partners support the Wasatch Choice for 2040, a regional vision for accommodating growth sustainably while preserving Utah's high quality of life.²⁶ Recommendations in UCATS span from creating entire bicycle tracks to onboard bike storage on UTA service lines. The main goals of UCATS are to: (1) increase safety for cyclists, pedestrians, and drivers; (2) increase retail sales in commercial districts; and (3) increase property values near walkable communities. Additionally, UCATS was designed to reduce environmental impacts like greenhouse gas emissions and vehicle miles traveled (VMTs).

The current First and Last Mile Connections Strategies Study deliberately incorporates various elements and parallel recommendations of UCATS. The UTA secures a lot of buy in because information is reflective from other plans. The UTA coordinates with Salt Lake City regularly regarding new projects and ideas. The UTA is not recommending anything outside of the scope of Salt Lake City's municipal master plans.²⁷ Using UCATS, WFRC and partners will examine transportation and related development in a central corridor along I-15, the commuter rail, light rail, and FrontRunner. All transit options in the corridor are within three miles of each other and UDOT, UTA, and WFRC will be looking at the need to explore enhancements and alternatives as congestion mounts.

The UTA understands the connection between land use and transportation, however it does not have control of land use planning. The UTA can recommend bike network improvements leading up to the station, but without strong coordination and support from the city, county, and MPOs those improvements will never come to fruition. As a smaller partner, Salt Lake City has not been highly involved in the current First/Last Mile Strategies Study process. However, Salt Lake City trusts their regional partners and pledge to follow their recommendations and guidance.

Leadership Landscape and Process Streamlining

Regarding the 2015 First/Last Mile Strategies Study, the UTA Board of Trustees made it a 2014 goal to cultivate FLMC strategies and recommendations. The UTA took the lead since they had been in conversation with all the partner agencies. The UTA can easily procure consultants, which helps to streamline current projects. The agency's procurement team understands federal regulations and has the manpower in place to functionally proceed with projects. Salt Lake City intends to use the FLMC study to inform their transportation master plan. They can seamlessly incorporate the FLMC work into the transportation master plan. The UTA often takes a supportive role with UDOT, WFRC, or MAG (responsible for Utah County and Park City). The UTA is also involved with an unofficial Joint Projects Group—that includes UDOT, WFRC, and MAG—which meets bi-weekly to discuss project ideas.²⁸ Also, this collaboration allows representative groups to take the lead when projects are selected. The longstanding partnerships between organizations and agencies have spawned a non-competitive environment. Additionally, the partnerships reduce plan and project redundancy. Part of this successful relationship is also due to a mutual understanding of limited resources.

Equity and Community-based Organizations

The UTA's top priority is to increase ridership. The First and Last Mile Connections Strategies Study does not have an explicit focus on increasing equitable transit options for low-income, immigrant, and communities of color. The FLMC Strategies Study assumes a strong correlation between transit-dependent ridership and low-income people of color in their priority areas. While the First and Last Mile Connections Strategies Study is a great achievement for the Salt Lake City region, this highlights a recurring national challenge to FLMC. The study is ultimately after ridership increase, and leaves out a fundamental understanding of the needs and impacts first and last mile advances have on low-income communities of color. The study does not tie in active work and community needs from advocacy and community-based organizations.

WFRC is currently building programs to help low-income and people of color with employment opportunities, and have been using additional programs to inform and support transportation decisions. Developing an overall strategy for improving outcomes for unrepresented and low-income populations is a challenge. Community needs for FLMC vary from single homes and families to large-scale neighborhood and community needs. Furthermore, FLMC enhancements may contribute to gentrification depending on city and jurisdiction geography. When good infrastructure and transit access are built, it often become “attractive” to non-community residents. This can lead to property value and tax increases, and eventual gentrification. WFRC has mapped a fair amount of equity issues through their Sustainable Communities Initiatives. This helped launch the Utah Community Data Project (UCDP), which has a fundamental focus on improving equity outcomes and their website is comparable to Mile High Connects’ Equity Atlas. The need remains for a comprehensive FLMC strategy that ties into a regional communication plan.

Envision Utah is a community-based organization with a strong focus on community development and transportation issues. The organization is currently increasing their focus on low-income families, and the WFRC is working as a conduit to help small CBOs serve lower-income populations. However, there is a need to map out how to work more effectively with several additional community-based organizations.

One of the best community-based resources available is Utah’s own Bicycle Collective. The Bicycle Collective provides refurbished bicycles and educational opportunities to the communities in Salt Lake City, Provo, and Ogden, and has an explicit focus on low-income populations and youth. The Bicycle Collective’s vision is to promote cycling as an environmentally economically sustainable form of transportation. The Bicycle Collective hosts a number of community services, including: refurbished bicycles for nominal resale and charity purposes; community bike shops in Salt Lake City, Ogden, and Provo with bicycle repair; bicycle parking at the Downtown Farmer’s Market, Twilight Concert Series, Utah Arts Festival and other events, Earn-A-Bike program for kids, Bicycle mechanic courses and certifications, frame building courses, and the general distribution of free bikes to the neediest community members.²⁹

The Bicycle Collective’s partnerships are usually mutually beneficial arrangements, meaning the program does not receive any government funding. While this “is annoying considering the scale that we’re operating on, it ultimately means less overhead due to administration and reporting requirements. It also speaks to our self-sufficiency: all we primarily need to scale are more donated bikes.”³⁰ As a result of the Bicycle Collective’s partnerships, the Salt Lake City, Provo, and Ogden donate all non-recovered police evidence bikes. Salt Lake County, a larger metropolitan area, does the same. The Bicycle Collective also participates in the Governor’s outdoor economic development meetings, Utah Clean Air Partnership, and participates in UDOT and Highway Patrol’s Road Respect Tour, a statewide initiative to get cars and bikes to share the road amicably. These are mostly networking opportunities and rarely result in established partnerships, but in 2007–2008 the Bicycle Collective received UDOT funds to run a Safe Routes to School and a League Cycling Instructor (LCI) instruction program.

Regional Progress for Denver

There is a lot of good work happening around FLMC in the Denver metro region. At the local level, transportation management associations (TMA) have worked to create solutions to specific geographies with FLMC issues. As an example, the southeast business partnership TMA and US 36 CC TMA recently completed first and last mile studies funded through Denver Regional Council of Governments (DRCOG). DRCOG has also funded numerous FLMC station area master plans, as well as bicycle, pedestrian, and transit projects that improve multimodal connections adjacent to transit stations. At the regional level, DRCOG is progressing toward developing an “active transportation plan.” DRCOG has worked to cultivate a stronger presence in regional active transportation, including a bicycle and pedestrian plan, guidelines for successful pedestrian and bicycle facilities in the Denver region, and the congestion mitigation toolkit, all of which address active transportation. RTD staff has also proposed that senior management develop a first and final mile strategic plan. RTD is currently seeking funds from DRCOG to support this plan, however the collaborative effort is not entirely clear.

The current round of adopted DRCOG Transportation Improvement Program (TIP) funding is in the amount of \$2.4 million over the next four years to support planning efforts for station areas and urban centers. Each of the funded and planned studies will address a number of FLMC issues. Prior to this, DRCOG invested nearly \$6 million in similar studies across the region, which ultimately assisted member governments and RTD in identifying issues and prioritizing improvements. DRCOG’s Metro Vision plan recognizes 104 urban centers around the region. The urban centers are high priority growth areas for local governments and represent a key part of DRCOG’s overall growth framework. Project evaluation criteria in recent TIPs have prioritized projects in urban centers over the past few years. In the most recent TIP, points were awarded

specifically to projects that were identified in urban center and station area plans. This strengthens connections between DRCOG-funded local planning efforts, local project identification, and support for those projects through the process to allocate federal transportation dollars.

DRCOG regularly participates in peer exchanges, such as the Four Corners MPOs peer exchanges. DRCOG has also participates in peer exchanges with other MPOs in a variety of venues: several peer regions that received HUD Sustainable Communities funds have met over the past 18 months or so to work together on key issues. Lastly, DRCOG has also become increasingly involved in a group of COGs/MPOs focusing on livable community programs (leveraging federal transportation dollars).

RECOMMENDATIONS

- **First and Last Mile Connections and Strategies Study:** The Denver Regional Council of Governments (DRCOG) and RTD should strategically partner to undertake an FLMC strategies study. We would recommend an explicit equity and low-income component to this study. A collaborative study of this nature will create a clear and accepted definition of FLMC, and bring attention to barriers and opportunities around FLMC policymaking in the Denver area. In addition to assessing and strategizing FLMC advancements, the study will draw out funding mechanisms and opportunities for regional leadership. An FLMC study will also help identify subsequent technical assistance needs.
- **Explicit Peer-to-Peer Exchange:** An exclusive regional peer-to-peer exchange between WFRC and DRCOG, UTA, and RTD would be mutually beneficial. From research and interviews, it is clear that both the Denver and Salt Lake City regions have a high mutual respect. WFRC has a strong relationship with DRCOG and their long-range planning team. A peer-to-peer exchange would foster creative new FLMC ideas around policy, education and funding.
- **Promote Active Transportation:** Elevate active transportation projects and initiatives with local jurisdictions. DRCOG can play a role by convening local staff working in active transportation and establishing a cohort of peers.
- **Local Resource Planning Program:** With its MPO perspective and funding power, DRCOG should develop a technical assistance program to help allocate, direct, and prioritize funding sources for FLMC enhancements.
- **RTD and Colorado Department of Transportation (CDOT) Representation and Voting Rights in DRCOG:** WFRC provides UTA and UDOT with council voting rights. Additionally, a top-level UTA representative is the chair of WFRC's Joint Policy Advisory Committee. DRCOG should provide board voting rights to RTD and CDOT.
- **Sub-Regionalize Denver Metro County Priorities:** One of DRCOG's greatest internal challenges lies in unanimous regional prioritization of FLMC strategies and policies. One avenue for compromise may be through sub-regionalizing counties and partners interested in FLMC strategies, such as building out bicycle and pedestrian infrastructure. Sub-regionalizing may increase FLM enhancements, as well as allow partners to participate by choice.
- **Cross-boundary Dialogue:** This recommendation intends to drive the inter-agency relationship building process. DRCOG and RTD have been disjointed in their approach and prioritization of FLMC efforts. Start the difficult conversation to incorporate transit agencies talking about land use.

CONCLUSION

The Salt Lake City region is making valuable progress toward advancing FLMC strategies, policies, and projects. A critical strength in accomplishing public improvements comes from the effective and collaborative inter-organization partnerships between regional entities, the transit agency, and local jurisdictions. This high level of function and respect across boundaries has stimulated constructive decision-making on FLMC programs and developments given normal funding constraints. The Denver region is incrementally progressing toward prioritizing FLMC. DRCOG and RTD already have strong relationships with the WFRC and UTA, and should be able to emulate best practices for structuring and prioritizing FLMC projects. DRCOG may be able to provide technical assistance to local jurisdictions, and stimulate a more collaborative environment for this issue area. RTD may also be able to work more proactively with municipalities and communities on FLMC projects. Lastly, local jurisdictions in the Denver region would benefit by embracing and building active transportation as a way to stimulate transit utilization across modes. If additional funding were allocated to active transportation more basic FLMC projects could be accomplished. Even though the Denver region has a ways to go in the FLMC world, it is highly regarded and respected in the west for its urban accomplishments.

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