



WHAT WORKS ■ ■

Low-cost ways to encourage walking, biking and transit

November 2015



Table of Contents

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Introduction	2
Safe Routes to School.	4
Protected Bike Lanes.	5
Complete Streets Policy	6
Last Mile Connections to Rail	7
Social Marketing.	8
Reducing Parking Demand.	10
Guaranteed Ride Home	11
Open Streets.	12
Travel Maps with Calories.	13
Wayfinding Signs	14
Conclusion and Acknowledgements	16

INTRODUCTION

Today in Massachusetts there are a number of exciting efforts underway to provide people with more transportation options. This is no accident. More and more people want to walk, bike and take public transportation to get around. And, cities, towns, employers, and developers are responding by making it easier, safer, and more fun to travel without a car. The state government is also doing its part. Massachusetts Department of Transportation set a goal to triple the amount of travel done on foot, by bike, and on buses and trains.

This report provides ten examples of low-cost strategies that increase biking, walking, and public transit use. Each case study showcases a project that has created real, on-the-ground benefits and can be implemented relatively quickly – within three years or less.

We provide these successes to help neighborhoods, municipalities, and the state know what works. These low-cost investments are an important complement to more expensive, albeit necessary projects, such as installing a new transit line or retrofitting highways.

We have been inspired by small towns and big cities in Massachusetts, our neighbors in New York City, and by innovators across the country and around the world. Their great work to improve safety and access for people to walk, ride bikes and take public transit has started to build a path towards choice and change.


In the following pages, you'll find stories about how providing information can change the choices people make about how to get around, how towns are working on crucial last mile connections, how changing street design changes the travel choices people make, and more.

Highlights of the efforts we've profiled include:

- ▶ A Safe Routes to School initiative led to 470 more children walking to school in Revere, MA.
- ▶ 51% more people biked when New York City made its streets more bike-friendly.
- ▶ The complete streets policy in Middleton, MA was cited by Smart Growth America as one of the top 10 best in the nation in 2014.
- ▶ Bike lockers and shuttles that connect commuters to rail in Acton, MA are routinely full.
- ▶ In Portland, Oregon, walking and cycling increased up to 4% and car trips fell between 9% and 18% across city neighborhoods.
- ▶ A partnership between the private and public sector resulted in only 40% of workers commuting alone to Kendall Square.
- ▶ Over 8,000 commuters across Massachusetts have peace-of-mind through a guaranteed ride home programs.



We have been inspired by small towns and big cities in Massachusetts, our neighbors in New York City, and by innovators across the country and around the world.



Their great work to improve safety and access for people who walk, ride bikes and take public transit has started to build a path towards choice and change.

- ▶ People biking increased by 18.6% in Copenhagen after its streets were transformed.

- ▶ “Legible London” helped increase walking in London during the Olympics by 8% to 9%, and “Calorie Maps” in Merseyside, England, resulted in 64% of residents now walking for 30 or more minutes, up from 45%.

One of the reasons so many positive changes are taking place in Massachusetts is that the Massachusetts Department of Transportation (MassDOT) is dedicated to being a national leader in providing more transportation options to our residents. In the three years since this statewide goal of tripling the share of travel by bike, foot and transit was set, state agencies and others have steadily laid the groundwork for localities and community groups to launch a wide array of successful efforts. Here is some of the good news in Massachusetts:

- ▶ MassDOT is launching a new Complete Streets program. This initiative will soon offer grants for communities that embrace complete streets policies and actions that advance local goals to increase the number of people walking, biking and taking transit. Up to \$12.5 million will be available in the first two years.

- ▶ We’re looking in to measuring the right things. Massachusetts Department of Public Health (DPH) and MassDOT are currently conducting research into the best ways to quantify mode shift with four regional planning agencies, WalkBoston, and WatsonActive.

- ▶ There are grants for healthy transportation. DPH is currently administering federal grants that tackle chronic health conditions.

- ▶ Transportation Management Associations (TMAs) are making progress. Serving employers and employees, Transportation Management Associations are actively implementing a myriad of efforts to encourage walking, biking and transit use.

- ▶ We’re learning what works too - the Metropolitan Area Planning Council and MassCommute have been documenting the results.

- ▶ Boston has launched Go Boston 2030. This is the City of Boston’s long range transportation planning process which is setting goals for increasing the number of people that walk, bike, and take transit. The plan could fundamentally change the way the city grows and the ways in which its residents get around.

As the state is setting the table for local efforts, cities and towns are innovating solutions to local challenges. Today, many cities and towns are finding low-cost ways to get people out of their cars and on to their feet, on to bikes, and on to buses and trains. In this report, we celebrate these successes.

We hope these stories inspire you to experiment and innovate in your community!

Safe Routes to School

Case Study: **Safe Routes to School**

Location: **Revere, MA**

Setting: **Urban**

The goal of Safe Routes to School (SRTS) is to increase the number of children walking to school instead of travelling in parents' cars, with the additional benefits of including increased physical activity, strengthened community, reduced traffic congestion around schools, and reduced GHG emissions.

WalkBoston worked with many partners, especially Revere Public Schools and Revere on the Move (an initiative of MGH RevereCARES) to create a walk to school program for all six of Revere MA's elementary schools.

Year 1: Began working with parents (either one-on-one or through PTAs), promoted "walking school buses" (a walking school bus is a group of parents and kids walking together), and a SRTS task force was created.

Year 2: Worked more directly with schools, gym teachers increased involvement, and increased tailoring of the program to fit individual schools' needs/interests.

Year 3: Schools begins to take ownership

of SRTS programming, piloting a 2nd grade safety training program.

Year 4: Program is sustained independently by the school department and school champions, who are the P.E. teachers who have integrated SRTS programming into their health and wellness curriculum.

Timeline: September 2012–present

Cost: Approximately \$25,000 annually for 3 years

Funding: MGH Community Benefits, The Barr Foundation

Results:

Morning walk shares (0–.5 miles) grew from between 16% and 57% to between 27% and 61%. Afternoon walk shares (0–.5 miles) grew from between 16% and 66% to between 33% and 68%.

At A.C. Whelan Elementary School during year one, the "Walking Wednesdays" program created a 51% increase in walking rates and 17% reduction in drop-off traffic.

Sources

- WalkBoston, "Revere Safe Routes to School Program: Program Results September 2012-May 2014."
- <http://www.saferoutesinfo.org/about-us/newsroom/our-newsletter/article/spotlight-ac-whelan-elementary-school-revere-mass>
- <http://www.walkboston.org/what-we-do/initiatives/safe-routes-school>
- http://www.mapc.org/sites/default/files/KidsAreCommutersToo_Final_7_16_12.pdf



Results:

During the first two years of implementation all six participating schools saw an increase in the number of children walking to school with a total of an additional **470 children walking to school.**

"Having children walking has made the neighborhood feel safer—people are getting to know more of their neighbors and the neighborhood feels more walkable," said Cate Blackford, Revere Mass in Motion Coordinator.

Results:

The parking-protected bike lanes increased bicycle traffic by **50%** and improved safety, reducing crashes with injuries by **21%**.



Protected Bike Lanes

Case Study: **Columbus Ave, 77th–96th St**

Location: **New York City**

Setting: **Urban**

Overview: Under Mayor Bloomberg, New York City began adding miles of new bike lanes and converting lanes to public plazas, transforming the city. This transformation was propelled by a goal set by the city to double bicycle commuting between 2007 and 2012, a goal which was met an entire year early thanks to a complete system of bicycle routes and infrastructure, including Columbus Ave. This case study profiles that road's transformation and contribution to improving transportation choices and quality of life in New York City.

Travel lanes were narrowed on Columbus Avenue to create room for a parking-protected bike lane. On-street parking and all three travel lanes were maintained in this plan.

Mixing zones were added at one-way cross streets where motorists and bicyclists share a curbside lane, with vehicles using the lane

to make left turns and cyclists using it to either turn or travel through. The mixing zone increases visibility and predictability between users.

Dedicated vehicular turn lanes and separate bicycle signal phases were added at busy cross-town streets, reducing bicycle/vehicle turning conflicts. Landscaped pedestrian safety islands were added to reduce crossing distances and enhance the corridor's aesthetics.

Project Timeline: Implemented over two months in 2010

Impact Studied: 2010–2013

Cost: \$840,000 (estimate from NYC DOT)

Funding: City-funded

Sources

- Columbus Ave – 2011 Preliminary Assessment
- Columbus Ave – Economic Benefits of Sustainable
- Columbus Ave – 2014 Bicycle Path Data Analysis

WHAT WORKS: Low-cost ways to encourage walking, biking and transit

Complete Streets Policy

Case Study: **Middleton Complete Streets Policy**

Location: **Middleton, MA**

Setting: **Small town**

Overview: The town of Middleton committed to and implemented a project to develop a complete streets policy by working collaboratively with the Metropolitan Area Planning Council, the town planner, and other local officials. The policy was recommended by the Planning Board and then adopted by the Board of Selectmen. The policy created an inter-disciplinary town committee that includes the DPW Director to prioritize investments to encourage biking and walking.

Under this policy the town plans to implement a sidewalk improvement program that will prioritize locations for sidewalk extensions and upgrades. Also in the works is a sidewalk installation bylaw that includes a fund that project developers may contribute to that will fund these sidewalk improvements. The town is also interested in creating a town-wide bicycle and pedestrian plan that will prioritize locations for walking and bicycling improvements.

Middleton is building a new \$4 million park where sidewalk connections were added to

the design as a result of the complete streets initiative's focus on improving multi-modal connections.

Timeline: Policy adopted: 2014

Implementation: Ongoing

Cost: One staff coordinator to develop and educate about the policy and to prioritize and implement the policy. Some communities have existing transportation committees that have broadened their charge to include complete streets work. Others have established new committees to focus on complete streets implementation. The committees typically meet every other month. Long term capital funding needed for construction.

Some likely low cost (bike lanes and signage), some medium-high cost like new sidewalks and intersection improvements.

Funding: Town-funded



Results:

The policy was awarded by Smart Growth America as **one of the 10 best policies** of the year.

Sources

- Town of Middleton Complete Streets Policy
- Chris Kuschel, MAPC staff
- Phone interview with Katrina O'Leary, Town Planner

Results:

The bike parking is well utilized. **37 of the 40** bike lockers are rented and 22 bikes were observed parked in the racks during a site visit in September 13, 2011. About 40 riders use the Rail Shuttle service daily.



Last Mile Connections to Rail

Case Study: **South Acton Commuter Rail Last Mile Connections**

Location: **Acton, MA**

Setting: **Suburban town**

Overview: Acton has implemented a number of innovative strategies to solve the last mile connection issue at the South Acton Commuter Rail station. The town offers bike parking at the station with 40 bike lockers and bike racks. The MinuteVan Rail Shuttle ferries riders from two offsite parking lots to the station during peak commute times, located at the West Acton Fire Station and Mt. Calvary Church. The town intends to add another shuttle service to apartment complexes on Route 2A in late 2015 with the Cross-Acton service. The Transportation Management Association (TMA), through CrossTown Connect, provides dispatch services and other ride services like guaranteed ride homes to members as well. In coming years, two regional off-road trails have the potential to connect cyclists with the station as well (Assabet Rail Trail and the Bruce Freeman Rail Trail).

According to Acton Planning Director Roland Bartl, "Commuters need safe, accessible, and convenient access to the train station. Acton is committed to options for all commuters – drivers, riders on the shuttle, bikers, and walkers."

Timeline: 2011–Ongoing

Cost and Funding: MinuteVan Rail Shuttle costs approximately \$100,000 per year to operate. Service is paid for by the town's commuter parking lot fund, which takes in about \$130,000 per year and was enabled through a change in the state law that governs municipal parking revenue. Parking and shuttle service costs \$250 per year.

New Cross-Acton Transit service will begin in late 2015. Initially, this will be funded by local meals tax, but the town intends to shift funding to Lowell Regional Transit Authority assessment and the commuter parking lot fund.

Installation of good quality designed bike racks can range from \$2,000 to \$3,000 for a rack that accommodates approximately 20 bikes. To rent a bike locker, the cost is \$75 per year or \$10/month. The town's planning department manages the bike locker program.

Sources

- Roland Bartl, Planning Director, Town of Acton
- Doug Halley, Town of Acton
- *South Acton Commuter Rail Station Report*, 2012

WHAT WORKS: Low-cost ways to encourage walking, biking and transit

Social Marketing

Case Study: **SmartTrips**

Location: **Portland, OR**

Setting: **Urban**

Overview: SmartTrips is a set of programs designed to encourage alternative transportation choices, largely targeted towards newcomers to Portland, Oregon, through social marketing and communication to the local community. Social marketing is marketing that seeks to benefit the greater social good, and in this instance, is being used to improve the information residents have to help them navigate neighborhoods on foot and by bike.

Through the SmartTrips program, residents and visitors can order “wayfinding” maps, guides, and other materials that are all neighborhood-specific. Programs are focused on one neighborhood at a time, requiring fewer resources.

Programs and materials include the Ten Toe Express, geared towards walkers, which consists of a series of guided walks, maps, and other materials for people who place an order with SmartTrips.

For people who want to bike, the program offers Portland By Cycle, which incorporates rides and classes for adults new to biking or who are interested in biking again, as well as guided bike rides in summer months. This campaign of bicycle map distribution was found to be particularly successful

and was supplemented with other events and programs such as organized summer bike rides, women’s bicycling clinics, small business transportation demand management classes, and youth helmet distribution.

Other resources made available include a road etiquette guide, the Portland Transportation Resource Guide, and SmartTrips Business for employers that want to encourage walking and biking to work.

The pilot neighborhood-level project occurred in the Eastside neighborhood in 2005. The program involved coordinated outreach to the neighborhood of Eastside by building partnerships and programs with health organizations, neighborhoods, businesses, and residents. Through this outreach, SmartTrips implemented programs designed to increase walking, bicycling, public transit, carpooling, and car sharing including sending a “Getting Around Portland” options mailer and “Getting Around Eastside Hub” newsletter, and a SE Portland map was sent to all participants. During the ten-week outreach program for the Eastside neighborhood, 4,000 Ten Toe Express kits were distributed through orders and neighborhood events. They also held 19 guided walks from May to October.



Results:

Overall, the methods showed a greater increase in walking, biking, and public transit with a reduction in single occupancy vehicle trips. The response from the community was overwhelmingly positive,

Overall reduction in drive-alone trips:

▶ Eastside:	8.6%
▶ Northeast:	13.0%
▶ Southeast:	9.4%
▶ North Northwest:	9.3%
▶ Green Line:	18.4%

as one program participant stated, *"I am so impressed that you have been able to put these resources together. I am inspired to literally walk the walk!"*

Timeline:

Neighborhood-level projects:
March–November (2005–2010)

SmartTrips Welcome: (2010–present)

Cost: Cost of operation on average \$645,000 annually (\$10–12 per resident)

- ♦ *2008 Southwest program:*
\$589,000 per year
- ♦ *2010 Green Line program:*
\$722,000 per year
- ♦ *2012 Welcome SmartTrips Portland:*
\$78,000 per year (smaller program)

Funding: Private sector. Kaiser Permanente contributed \$35,000–\$50,000 annually for creating walking maps. The city, via TriMet (which owns Portland's major bus system and light rail) provided transit tracking cards. This project also received federal funding through the IRS Business Energy Tax Credits for SmartTrips business, and through USDOT via the Oregon Metro Travel Options Grant.

Increase in biking

Eastside: increased mode split for biking **23%** (goal: 5%)

Northeast: increased mode split for biking **1.5%**

Southeast: increase in "environmentally-friendly travel modes" by **17.5%** (biking, walking, and public transit)

Increase in walking

Eastside: increased mode split for walking **7%** (goal: 10%)

Northeast: increased mode split for walking **4.7%**

Increase in public transit use

Eastside: increased mode split for transit **41%** (goal: 5%)

Northeast: increased mode split for transit **1.3%**

Sources

- <http://www.portlandoregon.gov/transportation/43801>
- <http://www.pedbikeinfo.org/data/library/details.cfm?id=3961>
- https://kb.osu.edu/dspace/bitstream/handle/1811/68881/ENRAEDE4567_Smart_Trips_Group_sp2015.pdf?sequence=1
- Northeast Final Report

WHAT WORKS: Low-cost ways to encourage walking, biking and transit

Reducing Parking Demand

Case Study: **Cambridge Parking Traffic Demand Management Ordinance**

Location: **Cambridge, MA**

Setting: **Urban**

Overview: The Parking and Transportation Demand Management Ordinance (PTDM) requires property owners to reduce the drive-alone rate for their development, effectively reducing the amount of driving by the people who work or visit the developments. The ordinance is triggered when a non-residential property owner increases parking spaces in a facility that has a total of 5 or more spaces.

If the total number of parking spaces is between 5 and 19 the project is considered a “small project” and if the total number of spaces is 20 or greater the project is considered a “large project”. Small projects are required to implement at least three TDM measures, such as transit pass subsidies, marketing of sustainable modes, or bicycle enhancements.

Large projects are required to commit to limit the drive-alone rate to 10 percent below the 1990 level in the census tract in which the development is located or meet the

estimated drive-alone rate in the project’s Traffic Impact Study, whichever is lower. They are also required to implement a full TDM plan and submit annual monitoring reports. If single-occupancy vehicle trip goals are not being met, the City has the ability to enforce the requirements by charging \$10/space/day until the SOV rate meets the target and in a worst-case scenario, shut down the parking facilities. The penalties for noncompliance serve as a strong incentive for developers or property owners to ensure that they are meeting their vehicle trip reduction targets.

Timeline: Enacted in 1998

Cost: Costs include the cost of TDM measures, depending on the individual PTDM Plan, and annual monitoring, for which most property owners hire a consultant.

Funding: The City pays for the staff person and the employer/developer pays for implementation of the TDM plans and annual monitoring, if applicable.

Sources

• *Transportation Demand Management Case Studies and Regulations*, MAPC; JULY 2015

• Stephanie Groll, Parking and Transportation Demand Management Officer; City of Cambridge

Results:

Implementation of the PTDM ordinance has been credited with smaller parking facilities, less traffic generated by the regulated projects, improved air quality, and increased use of bicycling and public transit. The average goal for all projects is to limit single-occupancy vehicle (SOV) trips to 45% of all trips.

In 2014, SOV trips accounted for only 40% of total PTDM commuting trips.

“If you’re considering adopting a TDM bylaw, make sure you spend a lot of time building relationships and support with developers and property owners,” advised Parking and Transportation Demand Management Officer for the City of Cambridge, Stephanie Groll. ***“We found that if you can manage traffic and have good data that drives a proposal, people will support thoughtful new development.”***

Results:

More data needs to be collected and analyzed for this ongoing program, however it remains a valuable tool in supporting non drive-alone commute modes.



According to MassCommute Executive Director Julia Prange Wallerice, ***“this is a highly valued program amongst participants.”*** *“Ultimately it makes the decision to choose an alternative way (carpool, vanpool, transit, walking, biking) to get to work much easier, more convenient and removes the risk of getting stuck at work.”*

Guaranteed Ride Home

Case Study: **Guaranteed Ride Home TMA services**

Location: **Various**

Overview: Guaranteed or emergency ride home services encourage people to feel comfortable choosing another commute mode other than their personal vehicle knowing they can get home quickly and easily in the event of an emergency, personal or family illness, or unplanned/unexpected overtime.

Guaranteed ride home or emergency ride home services allow an employee to use a taxi free of charge. Across the 12 MassCommute TMAs, 8,417 employees are registered in a guaranteed ride home program, administered and provided by the TMAs.

In the A Better City (ABC) TMA, 3,500 employees are registered. The TMA averages 4 to 5 rides per month which is less than a 2% usage rate.

Seaport TMA provided 45 rides through the program in FY 2014, costing \$3,000. This averages out to less than 4 rides per month and a usage rate of 2.5%.

Staffing these services can require about 20 hours per month, costing \$6,000 to \$8,000 per year.

Timeline: Ongoing

Cost and Funding: Respondents to a national TMA survey in 2014 indicated that annual budgets range from less than \$50,000 to more than \$5 million. More than half of TMAs reported an annual budget between \$100,000 and \$499,999. In Massachusetts, 65% of TMAs' revenue comes from member dues and service fees, with the remaining 35% coming from non-member, public sources. The guaranteed ride home program is one component of TMA services.

Sources:

- Lauren Grymek, Executive Director, Seaport TMA
- Allison Simmons, TMA Manager, A Better City
- Julia Prange Wallerice, Executive Director, MassCommute
- *Making the Shift: How TMAs in Massachusetts Leverage Private Sector Resources to Achieve State Goals and Public Benefits*, August 2015; Prepared by Eastern Research Group, Inc. for MassCommute

WHAT WORKS: Low-cost ways to encourage walking, biking and transit

Open Streets

Case Study: **Copenhagen Street Transformations**

Location: **Nørrebrogade, Copenhagen, Denmark**

Setting: **Urban**

Overview: In 2006, the Technical and Environmental Committee of the City of Copenhagen developed a project to improve Nørrebrogade's functionality as a shopping street by using street closures. Pre-closure, area roads normally carried 33,000 cyclists, 65,000 bus passengers, and 17,000 private cars per day. Nørrebrogade was closed at two different intersections to car traffic for a three-month period starting on October 1, 2008, by use of metal "road-closed" signs; buses and emergency vehicles retained access, and on Queen Louise's Bridge leading into the area, painted bike lanes were widened.

Timeline: Implemented over three months in 2008 (October 1–December 1)

Cost: Metal "road closed" signs for two intersections and paint to widen bike lanes

Funding: City-funded

Results:

Measured in spring 2009, cyclist traffic increased by 18.6% (13,000 trips).

During the closure, bus trips increased 11%, from 2,370 to 2,630 daily rides. MOVIA (the operator) has also said that the 27,000 daily passengers on that stretch "reach their destination 3% more quickly than when buses shared the road with cars. This saving... generates annual savings of three million kroner," (approximately \$460,000 USD).

Expected traffic increases around Nørrebro did not materialize; there was a 7.3% overall decrease of traffic in the surrounding area from 205,000 to 190,000 trips. Increases in personal vehicle trips on all side streets, including large streets such as Tagensvej and Boulevard, was 10,300 trips, or 61.7% of the traffic that decreased on Nørrebrogade, and 5.4% of the total traffic in the Nørrebro area. (WPI)

In 2010, after these changes were made permanent, the modified corridor was noted as the second-highest per-hour pedestrian corridor in Copenhagen, with 794 persons per hour average along the street.

Sources

- (WPI) – Norrebrogade-D09_Traffic_Final_Report
- (Posters) – Norrebrogade-SustainableJagtvej_posters
- (Grimar) – Norrebrogade-Klaus_Grimar-report
- (2010 Status) – Copenhagen – 2010 status report



Results:

During the experiment, bicycle, walking, and public transit trips increased, and an overall decrease was seen in car traffic in the area surrounding the closed streets.

"Our goal of transforming Nørrebrogade into a better place to be, making it easier to be a cyclist, pedestrian and bus passenger, has succeeded", said Klaus Bondam, the councilor in charge of Traffic and Environment. ***"Even among those who choose to drive there is a majority for making the initiative permanent,"*** he added.



Results:

95% of participants thought more about the health benefits of walking for short trips after using the maps. The percentage of those who usually walk for 30 minutes per day or more **increased from 45% to 64%** after using maps, while the percentage of those who usually walk 5 days per week for 30 minutes per day or more **increased from 44% to 58%.**



Travel Maps with Calories

Case Study: **Merseyside Calorie Maps**

Location: **Merseyside, England, United Kingdom**

Setting: **Urban**

Overview: Merseyside Transport Partnership (MTP) is a partnership among boroughs in Merseyside County charged with implementing a Local Transport Plan. TravelWise Merseyside is MTP's campaign to encourage sustainable transit choices (biking, walking, and public transit). TravelWise Merseyside created travel maps that explained how many calories are burned when walking between varieties of common attractions.

Timeline: 6-month evaluation period

Cost: \$9,250

Total includes designing routes, calculating calories, and printing maps for 3 regions (about 15,000 maps total).

Funding: The project was funded by a public health initiative called Walk for Health.

By consulting with local officials and healthcare providers, the group created walking routes intended to highlight the public health benefits of walking. Maps were distributed at transit stations and health centers, and had a tear-off evaluation form, designed to assess participant feelings about walking before and after using the maps. In exchange for their participation, those that tried the program would receive a free pedometer.



Sources:

- Atkins Transport Planning, *An Audit of Smarter Choices Implementation in North West England: Final Report*, October 2009.
- Department of Transport and Walk England, *Walking Maps*, June 2008.
- http://www.letstravelwise.org/content65_Walking.html
- http://enviroeconomynorthwest.com/download/climate_change_-_carbon_reduction/research/NW%20Smarter%20Choices%20Implementation%202009.pdf
- http://www.rudi.net/files/paper/optional_file/walking_maps.pdf

WHAT WORKS: Low-cost ways to encourage walking, biking and transit

Wayfinding Signs

Case Study: **Legible London**

Location: **London, England, United Kingdom**

Setting: **Urban**

Overview: A Transport for London survey found that on average 25,000 people get lost in the city each day. Congestion reduction on public transit can make the city easier to navigate for tourists and encourage walking.

The case study involves three kinds of signs: mini-, midi-, and monoliths: walking maps and information combined with transit beacons.

During the timeframe, over 1,300 wayfinding signs were installed across the city, with signs in nearly every borough. The maps and signs have accessibility in mind, depicting pavement widths, steps, and pedestrian crossings, and also include popular landmarks and tourist destinations.

Piloted in 2007 on Bond Street, with three additional locations added in 2009, the Mayor's goal is to have a 1% mode shift in walking annually.

Counts of individuals passing and using Legible London signs took place at 8 locations in Central London, 4 locations in Inner London, and 6 locations in Outer London. The study also conducted 600 face-to-face interviews and twelve "accompanied journeys" to get a better

sense of how pedestrians are actually using the wayfinding system.

While Legible London presents a large and complex municipal effort to implement a wayfinding system, other communities can take more of a "DIY" approach. Tools such as "Walk [Your City]" allow communities to create wayfinding signage for cities, town, and neighborhoods on a smaller scale. Walk [Your City] offers templates that community members can utilize to improve the walkability and navigability of their neighborhood, and provides an opportunity for communities to pilot wayfinding efforts for a modest cost.

Timeline:

- ◆ *First piloted:* 2007
- ◆ *Implemented:* 2012

Cost:

Operations and Infrastructure

- ◆ *Prototype:* \$853,000
(all costs converted to dollars)
- ◆ *Design monitoring cost:* \$161,400
- ◆ *Mapping and design cost:* \$645,500
- ◆ *2 program managers:* \$46,000





Results:

The 2008 Prototype Evaluation Report estimated 30% mode shift from London Underground for very short trips.

During 2012 Olympics walking in London increased 8% to 9%, while Legible London produced 6 million walking maps during this time.

There was also a 33% reduction in the amount of time for walking trips.

Implementation: \$3,455,000 (2010–2013)

- ♦ *Phase 1 implementation:* \$1,919,000
- ♦ *Phase 2 implementation:* \$552,000
- ♦ *Phase 3 implementation:* \$884,000
- ♦ *Ongoing maintenance:* \$999,000

Funding: The city, through Transport for London provided the fully funded prototype and an additional \$1.5 million for implementation. Each London borough is required to create Local Implementation Plan (LIP) in order to receive funding from Transport for London to improve local transit network. Legible London is funded by each borough's LIP. The City of Westminster's Civic Enterprise Fund was responsible for \$615,000 for implementation. Other funding includes the London Business Improvement Districts with \$341,000 for implementation and the Community Infrastructure Levy (tax on all new developments in London) provided \$77,000 for implementation.

Private developers have the option to purchase signs for private land as well.

While Legible London presents a large and complex municipal effort to implement a wayfinding system, other communities can take more of a “DIY” approach.

Sources:

- *Cabinet Member Report, 2008* (see attached)
- *Cabinet Member Report, 2011* (see attached)
- <http://blog.walkyourcity.org/post/93316345127/walking-the-walk-in-legible-london>
- <http://www.impacts.org/euroconference/vienna2013/presentations/London%20Walking%20-%20Vienna%20May%202013.pdf>
- <https://tfl.gov.uk/info-for/boroughs/legible-london>
- http://www.slate.com/articles/life/signs/2010/03/legible_london.html
- <http://applied.rukcooray.com/projects/legible-london-overview/>

WHAT WORKS: Low-cost ways to encourage walking, biking and transit

Conclusion

We hope these stories inspire you to experiment and innovate in your community. Creating more transportation options results in a more robust, interconnected transportation network. Encouraging shifts in how people travel will make getting to where you need to go easier, healthy and more enjoyable whether you walk, bike, take transit, drive, taxi, or carpool.

The 10 case studies highlighted are just a sampling, and many more efforts are underway in Massachusetts and around the world. We are excited to track the progress being made around the state, and share the creative and inspiring solutions that employers, cities, towns, and the state are generating everyday. If you have something exciting going on in your community, let us know. We'd love to share your story with others!

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