

SmartTrips Ithaca: Encouraging Sustainable Transportation Options Through a Personalized Educational Campaign

Final Report



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Notice

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Abstract

SmartTrips Ithaca is a neighborhood-based personalized educational campaign that encouraged residents of downtown Ithaca to try out sustainable modes of transportation such as walking, biking, transit, and carsharing through incentives and communication customized to each program participant as a stepping stone towards living a car-free or car-lite lifestyle. The report offers a case study in how the SmartTrips model was adjusted to the unique context of a small college town, and summarizes the positive results in trip reduction and mode shift that occurred in a before-and-after survey of program participants.

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Keywords

Ithaca, Tompkins County, New York, Community-Based Social Marketing, Transportation Demand Management, SmartTrips, Way2Go Transportation Education, Ithaca Carshare, Individualized Marketing

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We would finally like to thank the over 100 residents that engaged with us during our Downtown Ithaca Transportation Survey in the fall of 2015, as well as the 79 residents that participated in the SmartTrips Ithaca 2016 program.

Table of Contents

Notice.....	ii
Preferred Citation.....	ii
Abstract	iii
Keywords.....	iii
Acknowledgements	iv
List of Figures	vii
List of Tables.....	vii
Acronyms & Abbreviations	viii
Executive Summary.....	ES-1
1 Background.....	1
1.1 Project Area.....	1
1.2 Project Rationale	3
2 Approach	5
2.1 Transportation Demand Management	5
2.2 Previous SmartTrips Programs	5
2.3 Community Based Social Marketing	6
3 Project Planning and Development	8
3.1 Project Timeline.....	8
3.2 Project Management and Staffing.....	9
3.3 Outreach Campaign Development.....	10
3.3.1 Market Segmentation	10
3.3.1.1 American Community Survey	10
3.3.1.2 Downtown Ithaca Transportation Survey	12
3.4 Program Development	16
3.4.1 Branding & Messaging	16
3.4.2 Incentives	19
3.4.3 Commitment & Modeling	19
3.4.4 Prompts	20
3.5 Service Package Development.....	22
3.5.1 Emergency Ride Home	22
3.5.2 Remote Parking.....	23
3.5.3 Additional Findings	23

4	Outreach Implementation	25
4.1	Outreach Campaign Timeline	25
4.2	Campaign Launch	25
4.3	Registration	28
4.4	Onboarding.....	29
4.5	General Engagement	31
4.6	Involved Engagement	33
4.6.1	MySmartTrips Online Trip Tracking Tool	33
4.6.2	Workshops & Group Activities.....	35
4.6.2.1	Workshops	35
4.6.2.2	Group Activities	37
4.6.3	Final Celebration	38
5	Outcomes	39
5.1	Project Goals.....	39
5.2	Engagement	39
5.3	Awareness & Utility	40
5.4	Mode Shift	42
6	Recommendations	45
6.1	Timeline and Staffing	45
6.2	Location.....	46
6.3	Implementation.....	46
6.4	Evaluation.....	46
6.5	Overall Approach	47
	Appendix A: Independent Contractor Agreement	A-1
	Appendix B: Ithaca SmartTrips Implementation Guide	B-1
	Appendix C: Downtown Ithaca Transportation Survey Form	C-1
	Appendix D: Downtown Transportation Survey Report.....	D-1
	Appendix E: Calculation & Discussion of Averages from 2009 NHTS	E-1
	Appendix F: SmartTrips Ithaca Style Guide	F-1
	Appendix G: Registration Form	G-1
	Appendix H: Press Release.....	H-1
	Appendix I: Ithaca Journal Article “No Car, No Problem”	I-1
	Appendix J: DIY Bike Basket Workshop Guide	J-1
	Appendix K: Final Survey Form	K-1

List of Figures

Figure 1 – Terrain Map of Ithaca, NY with Downtown Area Outlined	1
Figure 2 – Ithacans enjoying a festival on The Commons in downtown Ithaca	2
Figure 3 - Mode of Transportation to Work, City of Ithaca	3
Figure 4 – Age Distribution in Downtown Ithaca	11
Figure 5 – Mode Share to Work in Downtown Ithaca	12
Figure 6 – Primary Occupation of Downtown Residents.....	13
Figure 7 – Modes of Transportation by Frequency of Use by Downtown Ithaca Residents	14
Figure 8 – Radar Chart of Desired TCAT Improvements by Frequency of Selection	15
Figure 9 – Radar Chart of Desired Biking Improvements by Frequency of Selection.....	16
Figure 10 – SmartTrips Ithaca Brand: Logo and Mode Icons.....	17
Figure 11 – Sample of SmartTrips Ithaca Print and Web Materials	18
Figure 12 – Incentives for Start-Up Kit	19
Figure 13 – Pledge Card	20
Figure 14 – Excerpt of June Newsletter to Participants with TCAT Start-Up Kit.....	21
Figure 15 – SmartTrips Ithaca Staff and Partners Testing Buffalo BikeShare.....	24
Figure 16 – Print Material Sequence for Initial Three-Part Mailing Campaign.....	26
Figure 17 – Testimonial from Chris Cowan About TCAT	27
Figure 18 – SmartTrips Ithaca Tabling at Sustainability Center Event	27
Figure 19 – Photo of SmartTrips Ithaca team on the Ithaca Journal	28
Figure 20 – Registration Form Start-Up Kit Customization Section	29
Figure 21 – SmartTrips Participants with their Start-Up Kits	31
Figure 22 – Anna K., Tompkins County legislator and SmartTrips Participant.....	33
Figure 23 – Screenshot of MySmartTrips Dashboard.....	34
Figure 24 – Facebook Post for DIY Bike Basket Workshop.....	36
Figure 25 – SmartTrips Participants and Friends at the Final Celebration.....	38
Figure 26 – Score Changes by Program Impact Questions.....	41
Figure 27 – Program Elements by Number of Participants That Found Them Helpful.....	42

List of Tables

Table 1 – Simplified Timeline of Major Project Tasks	8
Table 2 – Simplified Timeline of Outreach Campaign Phases & Activities.....	25
Table 3 – Average Number of Days per Week of Use of Each Mode	43
Table 4 – Calculation of Estimated Program Impacts	43
Table 5 – Respondents Who Indicated Shift in Commute & Neighborhood Travel Modes.....	44

Acronyms & Abbreviations

ACS	American Community Survey
CBSM	Community Based Social Marketing
CCETC	Cornell Cooperative Extension of Tompkins County
DIA	Downtown Ithaca Alliance
ERH	Emergency Ride Home
TCAT	Tompkins Consolidated Area Transit
TDM	transportation demand management
SOV	single-occupant vehicle
VMT	vehicle miles traveled

Executive Summary

Ithaca Carshare, with the Downtown Ithaca Alliance (DIA) and the Way2Go transportation education program of Cornell Cooperative Extension of Tompkins County (CCETC), undertook an individualized educational campaign with the overall goal of shifting downtown Ithaca residents toward more economically and environmentally friendly modes of travel, ideally to reduce road and parking demand in the downtown area.

The project began with an inventory of existing transportation resources, recognizing that the wealth and variety of transportation options in downtown Ithaca make a car-free or car-lite lifestyle possible and advantageous. However, navigating the shift to this lifestyle is not always simple or quick. The SmartTrips Ithaca project provided personal guidance through this shift, specifically helping residents to get acquainted with and try out new transportation options. This was done through a subcontract with CCETC's Way2Go program for a highly targeted, individualized educational campaign reinforced by incentives and supportive activities, following the concepts of community based social marketing (CBSM). This campaign was modeled closely on other SmartTrips projects done previously in North America.

Specific goals of the project were to:

- Engage eight percent of target audience to participate.
- Engage each member of the target audience three times, participants seven times.
- Increase awareness and use of environmentally friendly modes.
- Reduce drive-alone trips.
- Reduce vehicle miles traveled.
- Demonstrate a shift in primary commute and neighborhood mode choice.

Two outreach campaigns were conducted, the first to support market segmentation and the second to promote the mode-shift encouragement campaign. The initial data analysis showed an eclectic mix of graduate students, young and middle-aged professionals, and some retirees. Very few families with children live in the area and most households were single person rentals with high population turnover. Walking and transit use were very high to start. After the data analysis, the project focused on non-commute trips because far more households used their vehicles for trips other than driving to work. Outreach was done in person, by paper mail, and by electronic means, covering both habits and barriers for using sustainable transportation more often. Branding and messaging was designed to be clear, and

welcome kits included physical items as incentives (visibility & utility gear for bicycling and walking, as well as maps and transit schedules). Other activities were promoted later in the project period. Participants committed to shifting a certain number of weekly trips to bike, bus, or walking (“SmartTrips”), and project staff followed up with prompts and one-on-one support. Participants were also automatically registered into an online trip tracker so they could record their travel habits, compare their efforts with other participants, and virtually measure their impact.

At the start of the program, project partners focused on bringing two new services to the area to support project goals: a remote parking program and an emergency ride home service. Project research supported the importance of the emergency ride home for the wider community, but did not suggest the remote parking would have as much of an impact as initially expected. Both projects were explored further and by the end of the project period, the emergency ride home service was very close to implementation by Tompkins Consolidated Area Transit.

Overall project engagement and individual outreach methods varied in effectiveness. In fact, the first project goal of engaging eight percent of the target audience was not met, most likely because many target area residents were students who were away during the summertime project period. However, there was also significant participation from residents in neighborhoods next to the downtown target area, within “The Flats” area of Ithaca where transportation is also readily available. The second project goal to engage target audience members at least three times and participants at least seven times was successfully exceeded.

Looking at the third goal of transportation option awareness and utility, the project most strongly increased awareness of options, and somewhat increased ease of use and motivation to try new modes. Participants noted that the physical Start-Up Kits, SmartTrips pledges, and email reminders were the most helpful aspects of the project.

Perhaps the most important success of the program, actual mode shift, was reported by program participants in comparative before/after surveys, specifically increases in biking (22 percent more days using this mode) and carpooling (54 percent) and decreases in driving alone (24 percent fewer days). From this, we estimate that the SmartTrips Ithaca program reduced a cumulative 791 single-occupant vehicle (SOV) trips through the 10-week public outreach period, a reduction of 3,058 vehicle miles traveled (VMT). Most of the mode shift occurred in participants’ grocery store trips, which was the neighborhood trip singled out by SmartTrips Ithaca for the most opportunity for improvement.

Challenges included a fixed project period, which prevented the program from being implemented when downtown apartments are fully occupied, and the need for more time and staffing than originally planned for given the demands of the initial project development phase. Additionally, the lack of a control sample means that not all of the reported mode shift can be attributed to SmartTrips.

A number of other specific recommendations are outlined to support future projects. The program should be implemented right after the usual move-in time based on Cornell's academic calendar to attract the largest number of participants with activities planned and scheduled before launch. SmartTrips teams starting in new regions should allocate more time and staff to plan their first or pilot program, though more limited outreach staffing may be able to implement pre-existing plans later on. While it may be helpful to redo SmartTrips Ithaca in downtown during the fall, moving the SmartTrips target area to a well-defined neighborhood more dependent on SOV may be more effective. Simplifying the registration and onboarding process is highly recommended if the program will be expanded to a wider population. If resources allow it, an additional survey should be sent out one year after the start of the program to participants to see if the impact of SmartTrips lingers on well after the program's end. If the program were implemented again in downtown Ithaca, an increased focus in addressing the barriers specific to two segments of the population – potential bike riders and potential TCAT riders – may enable more people to make a shift, especially if the program was paired with improvements in the bike network or bus system. SmartTrips should be part of an organization with a stated focus on transportation demand management, so that a SmartTrips campaign can work in harmony with the aforementioned suggested changes.

1 Background

1.1 Project Area

Ithaca, NY is a vibrant and growing city in Upstate New York, economically anchored to its institutions of higher education – Cornell University and Ithaca College – and the industries and services that support its students and employees. According to the U.S. Census Bureau’s American Communities Survey, about 30,400 people resided within the city boundaries in 2014, including over 15,000 undergraduate students and almost 3,400 graduate and professional students. Geographically, the City of Ithaca is bound by Cayuga Lake to the north and by steep hills to its west, east, and south; it is on these hills where the area’s biggest employers are located. However, in the center of the city and extending from the lake is an area of flat ground, locally known as “the Flats,” where several well-defined residential, commercial, and mixed-use neighborhoods house many of the city’s residents and provide a significant number of Tompkins County’s employment, shopping, dining, and entertainment opportunities. At the very center of the city is downtown Ithaca, a compact mixed-use neighborhood of about 1,500 residents and 5,120 jobs frequented by locals and students alike due to its wealth of employment and entertainment opportunities, and its central location to both colleges and other shopping destinations.

Figure 1 – Terrain Map of Ithaca, NY with Downtown Area Outlined

Source: U.S. Geological Service

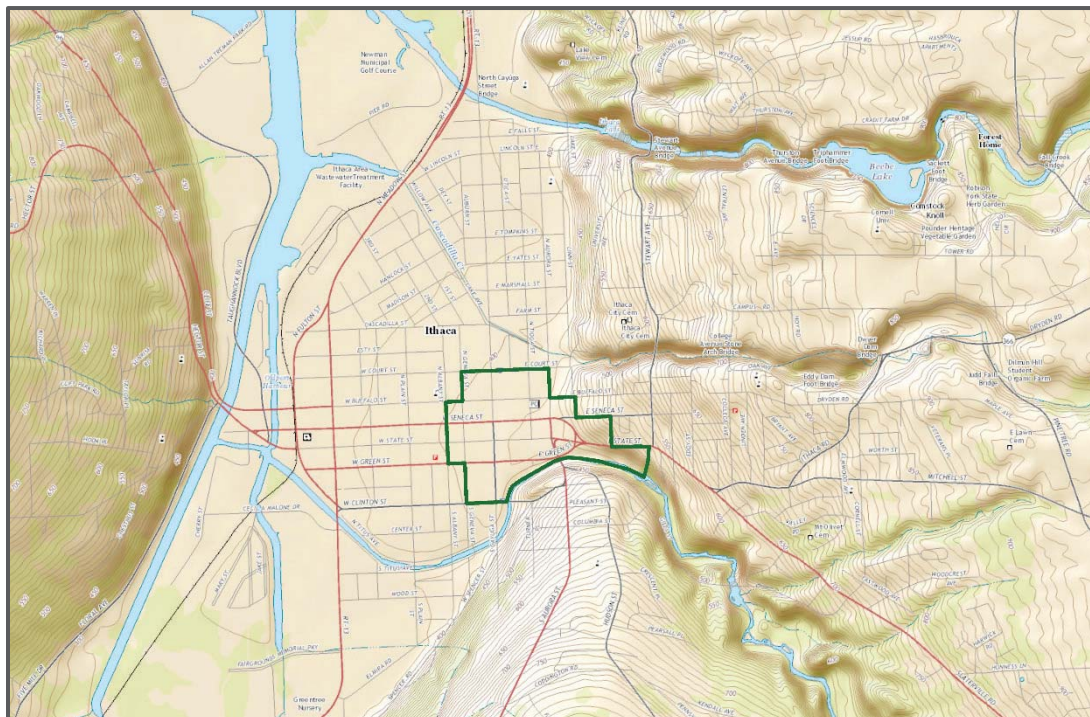


Figure 2 – Ithacans enjoying a festival on The Commons in downtown Ithaca

Source: Downtown Ithaca Alliance



To move people throughout the county, especially in and out of downtown Ithaca, local governments and non-profit institutions have collaborated to create and sustain several transportation networks:

- A substantial pedestrian network including The Commons, downtown Ithaca’s pedestrian-only street, all supported by newly-implemented sidewalk improvement districts.
- A growing bike network with new bike lanes, a new bicycle boulevard system, and several multi-use recreational paths including a recently completed Cayuga Waterfront Trail.
- Tompkins Consolidated Area Transit (TCAT), an extensive transit system serving Tompkins County with over 30 routes, most going to and from two downtown bus stations.
- Ithaca Carshare, a growing carshare organization with 25 vehicles, 13 of which are located in the Flats.
- Several highways coming into or nearby downtown Ithaca, including NY Routes 13, 34, 79, 89, 96 & 96B, and 366.
- A combination of parking options including metered and unmetered street parking, two municipal garages, a private garage, and private surface parking lots within downtown.

These networks are further bolstered by several organizations and initiatives aimed at supporting city residents and commuters to reduce their dependency on single-occupant vehicles (SOVs), including elements within the City of Ithaca such as the Bicycle and Pedestrian Advisory Council and the Downtown Ithaca Alliance (DIA), as well as public sector agencies like Cornell Cooperative Extension of Tompkins County (CCETC) and Bike Walk Tompkins.

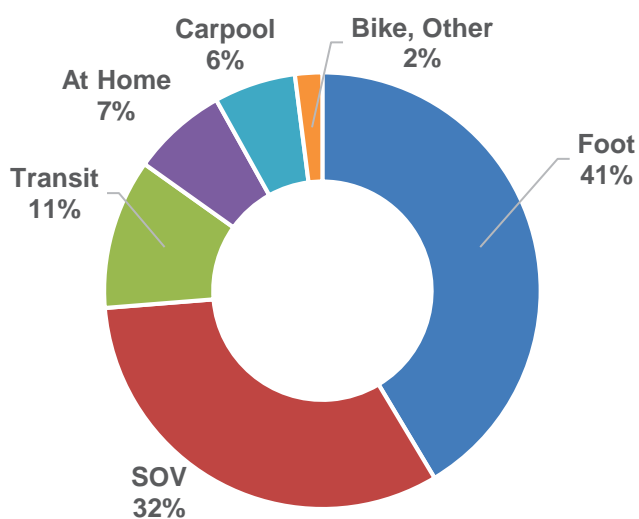
1.2 Project Rationale

While the intent of most of the transportation networks previously mentioned is to move commuters in and out of downtown, the convergence of all the networks within downtown means that residents have easy access to the greatest number of transportation options in the city. A wealth of transportation options makes a car-free or car-lite lifestyle possible or even more advantageous than owning a car. This makes downtown Ithaca an ideal neighborhood to implement a program encouraging a mode shift from SOVs to more sustainable transportation options. However, navigating this lifestyle shift is not always simple or quick.

The SmartTrips Ithaca project aims to make this lifestyle shift more attainable for downtown residents by guiding them through the initial stage of becoming acquainted with, and trying out, the transportation options available to them. The project is linked to Tompkins County's goal of reducing 80 percent of 2008-level CO2 emissions by 2050 as stated in its [Energy Roadmap](#), partly by eliminating "48 percent of the projected vehicle miles traveled (VMT) in 2050" through transportation demand management strategies, even as the county's population is projected to increase. Similar desires are also expressed in the City of Ithaca's recently published comprehensive plan, Plan Ithaca, which encourages "providing safe and convenient transportation alternatives to private cars" to reduce traffic and protect the environment while supporting the City's desired growth patterns.

Figure 3 - Mode of Transportation to Work, City of Ithaca

Source: 2014 ACS Five-Year Average



The issue that these long-range plans touch on – reducing SOV use while growing in population – is already affecting dense neighborhoods like downtown Ithaca, where more than 10 projects valued at approximately \$140 million were in development in 2015 according to the DIA. This significant commercial and housing development in downtown is putting pressure on the already-limited road and parking capacity. Currently, 70 to 98 percent of garage space is full on a typical weekday with traffic jams often occurring on major downtown roads during peak hours. Even though most city residents commute to work on foot, many still commute by SOV with 11 percent commute by public transit and two percent by bicycle. Further analysis also points to increased vehicle use for non-work trips. It is clear that to meet growing transportation demand and head toward sustainability, existing transportation capacity must shift vehicle trips to walking, biking, and public transit in areas that already have the transportation resources to support it. Downtown Ithaca has both the development pressures and the existing transportation networks that make an ideal testing ground for the SmartTrips project.

2 Approach

SmartTrips Ithaca sought to address people's perception that they "need" a car for transportation by enticing individuals to utilize the full suite of options available to them as downtown residents. To encourage residents to begin to shift away from SOV use, Ithaca Carshare subcontracted the Way2Go program of CCETC to conduct a highly targeted educational campaign that encouraged and incentivized the use of sustainable modes of transportation (see Appendix A). The campaign was modeled on similar projects conducted in larger cities across the U.S. such as Portland, OR, and Salt Lake City, UT. The goal of the project was to test whether the model could adapt to the transportation conditions of a small urban area. Knowledge of the two supporting strategies of the model, namely transportation demand management and community-based social marketing, is necessary to understand how SmartTrips can create and sustain a measurable change in the transportation attitudes and behaviors of the community.

2.1 Transportation Demand Management

Programs that focus on addressing the information gap and the lack of motivation to try different modes of transportation are part of an emerging field called transportation demand management (TDM). According to Mobility Lab, a TDM research group based out of Arlington, VA, TDM addresses the human dimension of transportation issues by informing, encouraging, and incentivizing people to make the most out of the existing transportation infrastructure. TDM's focus on marketing and education makes them programs cost-effective ways to increase walking, biking, transit, and carpooling as sustainable modes of transportation. Traditionally, TDM programs primarily focused on the commute to work. However, the SmartTrips model brings TDM to the context of a residential neighborhood, encouraging households to make a change not only in their home-to-work commute, but in all other trips as well.

2.2 Previous SmartTrips Programs

The SmartTrips model was first pioneered in the U.S. in Portland, OR, through the Portland SmartTrips program. Since 2004, the City of Portland's Bureau of Transportation has led a neighborhood-based personalized educational campaign to shift transportation demand on a different neighborhood in the city each year. To do this, they first begin by conducting a transportation survey of all households in the area to understand existing transportation use. Survey results serve as a baseline to measure the impact of the program. The program would then publicly launch in the targeted neighborhood in the spring, recruiting interested residents primarily through mail. When registering, residents had a choice of several resources and a free gift that could help and motivate them to try out their transportation options beyond single-

occupant vehicles. Some resources were tailored to the neighborhood, such as neighborhood biking maps. Other resources were personalized to the individual, such as schedules for specific transit routes. These resources would then be delivered door-to-door on a bike, allowing residents to have one-on-one interaction with program staff, known as transportation ambassadors. Throughout the summer, residents continue to receive motivational newsletters, emails, and phone calls personalized to the transportation changes they wanted to make. After a year, another survey would be administered throughout the neighborhood to measure the impact of the program. In Portland, the impact of the program throughout the years has reduced neighborhood-wide use of SOV by eight to ten percent with a corresponding increase in non-SOV use, for both SmartTrips participants and those who had opted out of participating.

Due to the success of their regular SmartTrips program, Portland tried variations that were found to be very successful. In 2010, they conducted the program to coincide with the opening of a new light rail line and found that the adoption of transit was higher within SmartTrips members than those that did not participate. Later in 2011, they created Welcome SmartTrips, which only targeted households that recently moved to three different neighborhoods. The hypothesis was that people who are new to an area are more willing to seek out information and adopt new ways of getting around. TDM agencies in other cities also adopted the Portland SmartTrips model for various neighborhoods in their cities. In preparation for Ithaca's pilot program, SmartTrips-style programs from Kelowna, BC; Saint Paul, MN; Salt Lake City, UT; and Bellingham, WA, were studied in addition to Portland's to understand how to adjust the model to the context of Ithaca. Of particular interest was Bellingham's Whatcom Smart Trips, which offered an online trip tracking tool so participants could keep a log of their trips and be incentivized to keep making smart commuting choices over time. The similarities and differences of each, as well as a generalized model of a SmartTrips-style program, can be found in Appendix B.

2.3 Community Based Social Marketing

Through the research of previous programs, the SmartTrips Ithaca team became familiar with the concepts behind community based social marketing (CBSM), which underpins all SmartTrips-like programs. CBSM is a strategy that seeks to induce a change in behavior in people by understanding the barriers that individuals face and using social processes to motivate a person to make the desired change. Starting from a solid foundation of research about the intended target audience, a CBSM framework encourages behavior change through gradual increases in personal commitment, well-timed prompts, effective use of incentives, and exposure to other people that have modeled the behavior shift,

among other tactics. Because it is not tied to a particular discipline, CBSM has been used for programs that have dealt with energy conservation, HIV prevention, and clean air. SmartTrips is CBSM applied to the transportation realm, and Portland SmartTrips is a commonly-cited “success story” of the CBSM strategy. Since instances of SmartTrips-like programs in other cities have been based on CBSM, the SmartTrips Ithaca team familiarized itself with CBSM strategies when developing their program. In the following section, CBSM strategies will be referenced as they appear. To learn more about CBSM and other projects based on it, refer to the [Tools of Change](#) website.

3 Project Planning and Development

3.1 Project Timeline

Work on the SmartTrips Ithaca project began in April 2015 and took off after the contract and subcontract were signed in mid-May of that year. From the start, the SmartTrips team had the challenge of working with a proposed timeline of 12 months based on a cursory review of previous SmartTrips programs. Upon more careful research, the team determined more time was needed for this pilot phase of the project – to properly research the target audience, develop new materials, and implementation strategies. The project timeline was eventually extended to 18 months, but due to the start of the project and grant limitations, the project would miss downtown Ithaca’s major move-in period in order to finish within the grant’s parameters. Future SmartTrips projects should coordinate planning and development with major move-in periods. In Ithaca, the educational institutions dictate that period, which usually occurs in late August. Other cities that do not experience seasonal fluctuations in population may still want to start outreach in early fall when routines begin emerging after summer vacation season. SmartTrips programs in new areas should also consider spending extra time to plan their first or pilot project, as a considerable amount of time is required to develop relationships, create new materials, and put processes in place.

Table 1 – Simplified Timeline of Major Project Tasks

Major Tasks	2015										2016							
	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
Project Management																		
Campaign Development																		
Service Package Dev.																		
Project Staffing																		
Survey Tool																		
Outreach Implementation																		

The project timeline shown in Table 1 demonstrates how the project components work together in line with the grant’s list of tasks. Of note is the two separate outreach periods, one in the fall of 2015 to survey downtown residents and one in the summer of 2016 to market SmartTrips Ithaca based on the survey results. The staggered surveying and project staffing periods that preceded both outreach periods reflect the different surveying needs and staffing requirements for each, which are explained in their respective sections of the report. The bulk of service package development and campaign development happened

between the start of the project up to the start of the main outreach campaign. Some of the outreach materials and educational activities were still being developed throughout the duration of the main campaign as denoted by the light green shading. This is to be expected in a pilot project as different aspects are developed and tested on the fly.

3.2 Project Management and Staffing

The SmartTrips team included a full-time Transportation Demand Manager position (Norma Gutierrez and Sarah Liberatore filled this role at different times), a part-time research assistant (Hector Chang), and part-time outreach staff (Sam Bosco and Hector Chang). The Manager was fully dedicated for the length of the project to implement various aspects of the project. Responsibilities included guiding the SmartTrips team members in promoting the project to downtown residents through various public outreach efforts as well as facilitating and attending meetings with project partners and stakeholders.

One challenge of the project timeline was the duration and process it took Way2Go of CCETC to hire staff for the project. It was helpful to have the roles of the Manager position determined at the start of the project to support the hiring of research and outreach assistants. The first two months focused on developing the job description and assigning the research assistant role through an internal hire. Work then commenced to research best practices of similar programs and develop an implementation guide for the SmartTrips Ithaca project.

It took an additional four months to hire an outreach assistant. Way2Go was required to develop a job description, send out a call for applications, and interview potential candidates. Unfortunately, the time committed for hiring reduced the time available for the development of the campaign, which was underway. It was determined that the part-time research assistant could also assist with the earlier aspects of outreach campaign development, thereby promoting him to full time, while the search for another outreach assistant continued. The new outreach assistant took the lead in outreach efforts when he was hired, while the research assistant continued working on outreach tasks given the needs of the program.

It was essential that all team members worked closely with the program development guidance team (members included Jennifer Dotson of Ithaca Carshare and Gary Ferguson of the Downtown Ithaca Alliance, in addition to Jonathan Maddison and Sharon Anderson of CCETC) to develop and coordinate

a direct outreach campaign. The guidance team took the lead on the creation and administration of the service development package, maintaining relationships with local media and transportation service providers, and assembling program findings into recommendations for future transportation services and incentive programs. For more information on project staffing and roles, refer to Appendix A.

3.3 Outreach Campaign Development

Two outreach campaigns were conducted with downtown residents. The first was a survey launched in the fall of 2015 to help with market segmentation, which would inform the second campaign that introduced SmartTrips Ithaca in the summer of 2016. In preparation for the second campaign, ample development time was necessary to become familiar with CBSM concepts, adapt the SmartTrips model to the local context, create a brand and apply it to new marketing materials, and develop the partnerships necessary to implement the program.

3.3.1 Market Segmentation

The first campaign in the fall of 2015 collected neighborhood-level information that would otherwise be unavailable for program development. A CBSM strategy builds upon a solid understanding of the target audience: demographics, lifestyle preferences, challenges, and motivations to make behavior changes. While some of these questions could be answered with publicly available data, additional research through surveys and focus groups are highly recommended to truly understand the intended audience and to keep realistic expectations. For the first phase of the project, the team collected publicly available information about downtown Ithaca and administered a detailed transportation survey to 94 residents in conjunction with informal meet-and-greets to understand the residents' barriers to moving sustainably.

3.3.1.1 American Community Survey

Publicly available data was used to understand the demographics of residents in the target area. The main source of information was from the U.S. Census Bureau, in particular its 2014 American Community Survey (ACS) five-year averages, which provided basic demographics as well as information on income, household living situation, and commute-to-work. Additional information was also collected from project and community partners, such as Ithaca-Tompkins County Transportation Council, Cornell University, the Downtown Ithaca Alliance, and Ithaca Carshare. While there were a few surprises in the data gathered, our findings from this inquiry aligned with the common knowledge of the neighborhood:

- Our target area has a population of about 1,120 people in 720 households.
- People age 22-29 primarily occupy downtown Ithaca, followed by people age 30-44, and then those 45 and up.
- Very few residents are age 18-21, the age range of traditional undergraduate students, and even fewer are children under 18.
- Of those 18 and over, 42 percent are enrolled in college or graduate school.
- About 70 percent of households in the downtown area are occupied by one person, while 18 percent are occupied by non-related 2+ persons.
- Ninety-seven percent of all households are rentals.
- Forty-five percent of households reported owning at least one vehicle.
- Most people take transit for their commute to work, but significant amounts of people also drive alone or walk to work.

Figure 4 – Age Distribution in Downtown Ithaca

Source: 2014 ACS Five-Year Average

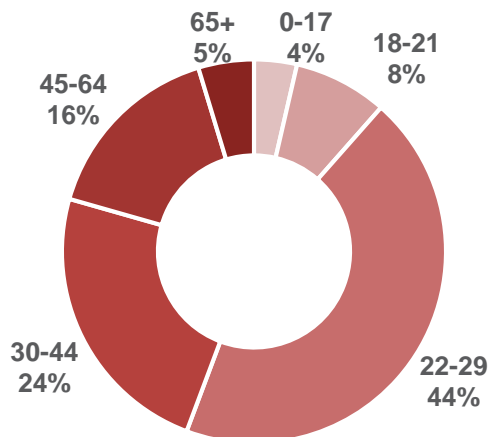
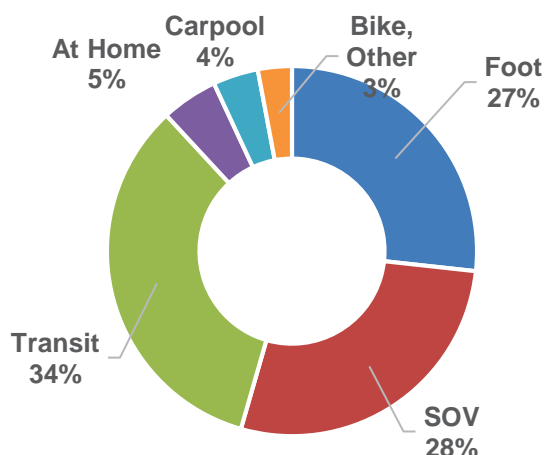


Figure 5 – Mode Share to Work in Downtown Ithaca

Source: 2014 ACS Five-Year Average



The initial data analysis confirmed the team’s observations that the target area is made up primarily of an eclectic mix of graduate students, young and middle-aged professionals, and some retirees. Very few families with children live in the area and most households are live-alone rentals. Altogether, the demographics paint a picture of a community that is lively but not deeply rooted or interconnected, with potentially high levels of turnover typical of a college-centered town.

The relatively low adoption of vehicles and the very high transit and walking mode shares in commute-to-work trips was a positive finding but brought questions about the necessity of a SmartTrips-like project in the downtown core. Ultimately, it was decided more information was needed to explore if the SmartTrips model could be adapted to reduce car use even further. The discrepancy between the mode share of SOVs for the journey-to-work and the percentage of households that owned a vehicle clued the team in that SmartTrips Ithaca would have to address trips beyond the daily commute to have an impact in reducing SOV use.

3.3.1.2 Downtown Ithaca Transportation Survey

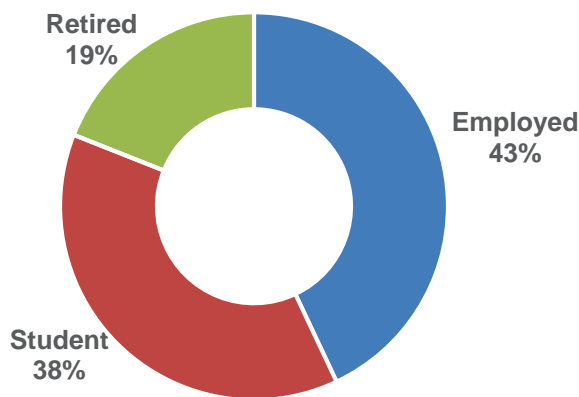
To further understand residents’ travel patterns as well as their transportation attitudes and barriers, the SmartTrips team partnered with the DIA to develop a downtown living and transportation survey. The survey was distributed both electronically through landlord-controlled email lists, as well as on paper at informal meet & greets at some of the larger apartment complexes in the downtown area. A copy of the paper version of the survey can be found in Appendix C. The surveys and meet and greets were the first outreach campaign of the project as a way to better understand the target area for the next campaign.

Approximately 560 residents were exposed in one way or another to the survey request and – by the end of the campaign – the survey garnered 95 valid responses, a 17 percent response rate. Compared to ACS data, survey respondents were demographically representative of the downtown population. Findings from the survey corroborated data collection findings and expanded upon them:

- 19 percent of downtown residents are retired, while the rest are evenly split between those who primarily work and those who are university students.
- 44 percent of respondents moved downtown within the last year, primarily students, and mostly from outside Tompkins County
- 56 percent of car owners drove their vehicles a couple of times a week or less.
- The most popular mode for grocery and shopping trips is single-occupant vehicles.
- A majority of car owners parked their vehicles in private parking lots next to their apartments.
- 13 percent of respondents indicated they had never taken TCAT buses, 72 percent indicated they had never biked in Ithaca, while 85 percent indicated they had never used Ithaca Carshare (see Figure 6).

Figure 6 – Primary Occupation of Downtown Residents

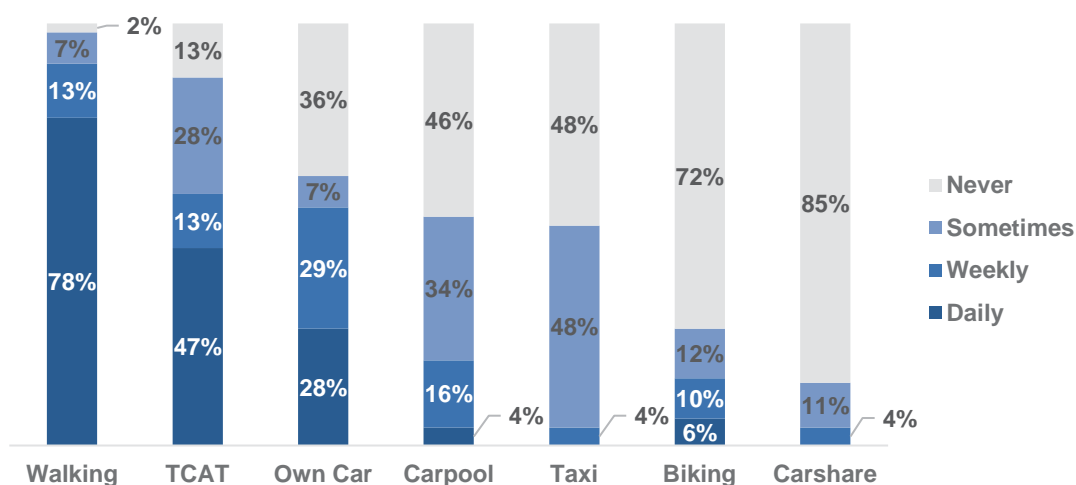
Source: 2015 Downtown Ithaca Transportation Survey



The survey showed that addressing grocery and other shopping trips is an effective way to reduce VMT and SOV use. Other modes would have to absorb the shift, with the most promising being biking as residents showed significant interest. The area's grocery stores are just over one mile away from downtown Ithaca on very flat ground – a very bikeable trip.

Figure 7 – Modes of Transportation by Frequency of Use by Downtown Ithaca Residents

Source: 2015 Downtown Ithaca Transportation Survey

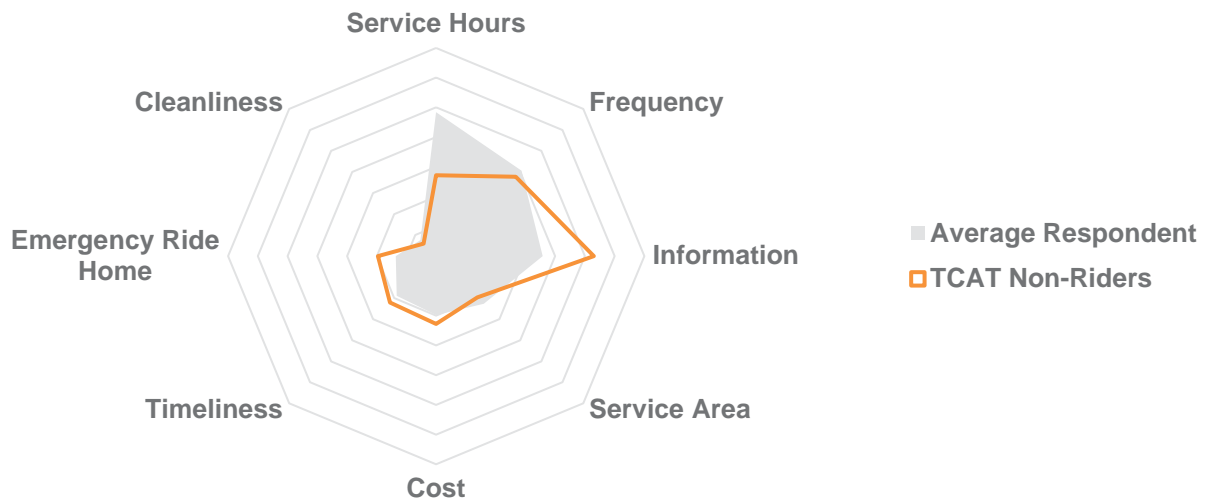


The survey asked questions about people’s barriers to biking and transit, and illuminated the challenges the team would address for people to shift away from SOV use. The results were then cross-tabulated to understand the differing barriers people perceived depending on their usage of each mode of transportation. In-depth analysis of these results are in Appendix D. Two highlights are:

- While respondents most often selected “longer service hours” as a desired TCAT improvement, respondents who seldom or never used TCAT most often selected “information on routes and schedules” as their desired TCAT improvement.
- While respondents most often selected Ithaca’s terrain as their top barrier regarding biking, occasional bike riders often selected “more bike lanes” and “separated bike lanes” as their top barriers.

Figure 8 – Radar Chart of Desired TCAT Improvements by Frequency of Selection

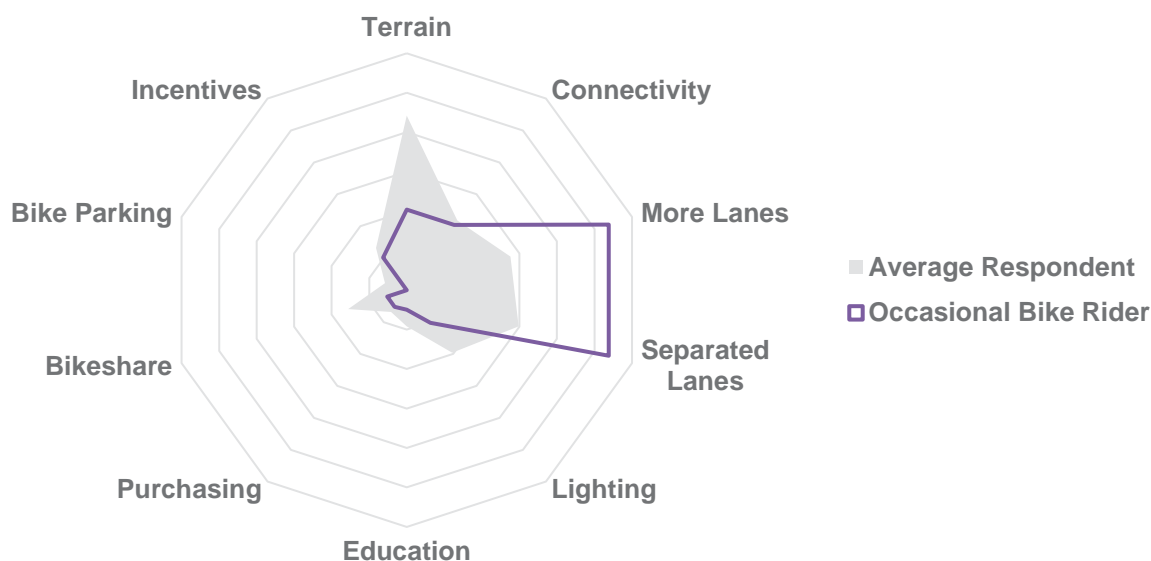
Source: 2015 Downtown Ithaca Transportation Survey



Ithaca has a fairly sophisticated transit system for a community of its size, with over 30 routes and several different service patterns throughout the week, so information about the transit system can be confusing for people who have not used public transit. A project like SmartTrips Ithaca could help address this barrier. On the other hand, occasional bike riders' request for more bike lanes and separated bike lanes were outside the scope of the project. However, the team interpreted this as a call for safer biking conditions, which could be addressed by the project through helpful incentives and education. Results of the survey were shared at various presentations with transportation partners to start conversations about the barriers that could not be addressed by the SmartTrips project alone.

Figure 9 – Radar Chart of Desired Biking Improvements by Frequency of Selection

Source: 2015 Downtown Ithaca Transportation Survey



3.4 Program Development

Development of the second phase of the SmartTrips Ithaca program began by considering the barriers indicated in the fall survey and comparing them to the transportation infrastructure and services that would be available to participants during the public outreach phase in the summer. In addition to the efforts conducted as part of the service package development of the project, recent changes to the city's transportation mix included the new bicycle boulevards, the completion of the Cayuga Waterfront Trail, and TCAT's summer transit service changes. While some of the changes, such as the bicycle boulevards, could address the concerns of prospective SmartTrips members, others like TCAT's summer service changes could create additional barriers to adoption. During program development, the team took the changes in the transportation landscape into consideration to develop program elements to help participants overcome their barriers to sustainable transportation.

3.4.1 Branding & Messaging

The different components of the outreach campaign followed the template set out by past SmartTrips projects and the overall CBSM strategy. The first development was a communications strategy with a clear brand and messaging. The brand was designed to be positive, personable, helpful, and simple. Two bright theme colors were chosen as part of the logotype, and four simple icons representing modes of transportation were designed. A style guide summarizing the design elements of the brand kept the

look of all communications cohesive (see Appendix F). Based on the style guide, a website was created with WordPress and promotional materials for the second phase of public outreach were also developed. Print and web materials were bright, clear, and concise; with a focus on people instead of “modes” being deliberate as it made the transportation behaviors being promoted personable and achievable.

Figure 10 – SmartTrips Ithaca Brand: Logo and Mode Icons



Figure 11 – Sample of SmartTrips Ithaca Print and Web Materials



3.4.2 Incentives

Incentives are a strong CBSM strategy and major development time was spent on the sign-up incentive “Start-Up Kit” during the course of the program. The Start-Up Kits were printed canvas bags which contained transportation information and an incentive of moderate value inside. All the kits were customized to each participant’s preferences as indicated in the registration form they completed at sign up (see Appendix G). The incentives in the Start-Up Kit, advertised prominently in initial promotional materials, were the main draw for registrants of the program. The purpose of the incentive is not only to draw attention, but also to serve as a kick-start to a desired behavior by lowering the barriers to entry or making the behavior more enticing. Four incentives in total were developed, one for each mode. Participants who wanted to try out TCAT or Ithaca Carshare could get a free 30-day bus pass or a free registration for Ithaca Carshare; both were in-kind contributions from program partners. Participants who wanted to walk more often were given a “Stay Active Kit” with gear that would allow them to walk in all types of weather common during the summer. Lastly, those who wanted to bike more often were given a “Starter Bike Kit” with items to help riders feel safer on the streets, partially addressing the concerns received through previous public feedback. By honing the incentives to the behaviors the program encouraged, the incentives themselves could have a lasting effect on the results.

Figure 12 – Incentives for Start-Up Kit

Actual incentives distributed differed in color and shape.



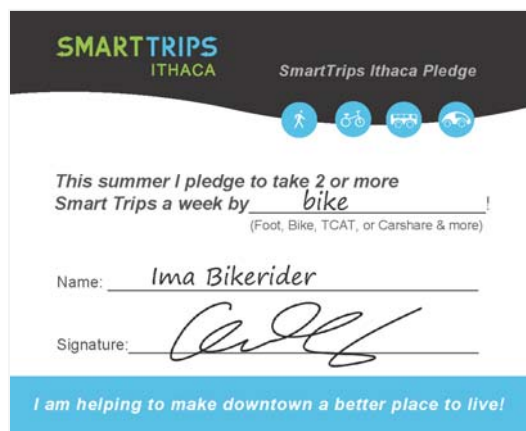
3.4.3 Commitment & Modeling

The distribution of the start-up kits was another moment where other CBSM strategies were applied. Depending on the choice selected by participants, the kits were either delivered to their residence by bike or picked up at the Ithaca Carshare office located downtown. At the point of contact, participants could talk to a staff member familiar with sustainable commute choices who could answer questions about the transportation options available downtown. Staff also developed several workshops and group

activities for biking, public transit, and walking to provide opportunities to try out the desired behavior changes in a more structured setting. This combination of expert advice and example setting is part of the CBSM strategy of modeling and setting social norms so the desired behavior change seems achievable and encouraged by other people.

At the end of the initial meeting, participants were encouraged to sign a pledge card stating their name and the mode of transportation they promise to take more often during the course of the program. The pledge card was a way to instill commitment in participants, which is another CBSM strategy to induce and maintain behavior. A participant commented at the end of the program that “pledging actually made me be much more intentional about biking rather than driving my car.” Participants were then encouraged to track their commitment to their pledge using an online trip tracking tool developed by RideAmigos. The online tool, developed for use with the SmartTrips Ithaca website, allowed the team to see the commitment level of participants and reward those who met their pledge. Adding an element of commitment to the program prompts people to consider which trips they can switch to a more sustainable mode. If participants continue making the switch every week, the mode shift may become a habit and last beyond the program’s end.

Figure 13 – Pledge Card

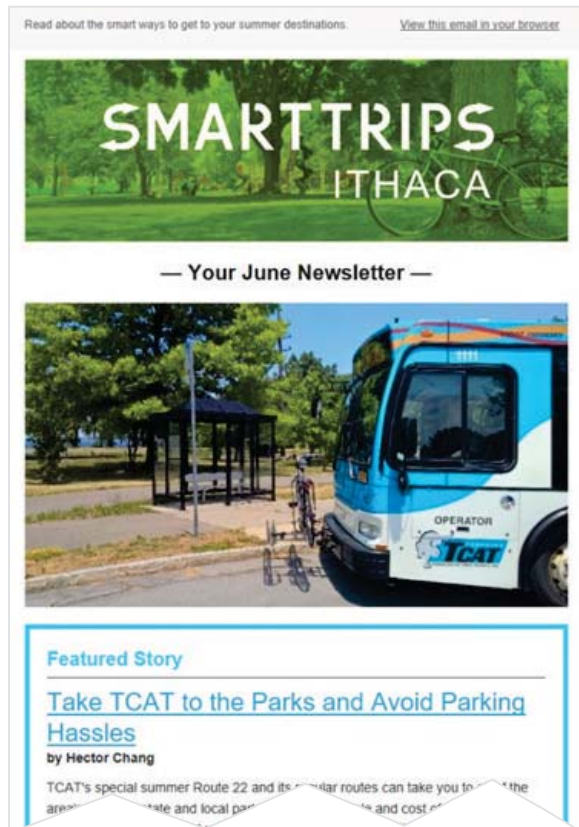
The image shows a 'SmartTrips Ithaca Pledge' card. At the top, it has the 'SMARTTRIPS ITHACA' logo and the title 'SmartTrips Ithaca Pledge'. Below the title are four circular icons representing different modes of transport: a person walking, a bicycle, a car with a person inside, and a car with a person and a bicycle inside. The main text on the card reads: 'This summer I pledge to take 2 or more Smart Trips a week by bike!'. Below this, in smaller text, it says '(Foot, Bike, TCAT, or Carshare & more)'. There are two lines for personal information: 'Name: Ima Bikerider' and 'Signature: [Handwritten Signature]'. At the bottom, a blue banner contains the text 'I am helping to make downtown a better place to live!'.

3.4.4 Prompts

For the length of the program, additional prompts that encouraged taking sustainable transportation were sent to participants in the form of targeted monthly newsletters and emails via MailChimp (see Figure 12). SmartTrips-branded templates were prepared prior to the start of the program, but the content was developed during the outreach period to keep the prompts topical. The newsletters targeted participants with the start-up kit they requested and the top stories often reflected current events or transportation

changes relevant to people's lives, such as a proposed "crackdown" on jaywalking or severe public transit detours. The newsletters and weekly email reminders to log trips online kept the program relevant in participants' minds throughout the engagement period.

Figure 14 – Excerpt of June Newsletter to Participants with TCAT Start-Up Kit



Because this was the first instance of the program, most of the development time was focused on visual and electronic aspects that are one-time only, such as the branding, website, trip tracking platform, marketing email platform, and initial print materials. These were made to be adaptable and editable so that future iterations would require less time to develop materials. Should funding become available to resume the project, the next iteration of the team will only have to update the data, text, and pictures to match transportation conditions of the place and time where the program is being implemented, bringing the positive and helpful aspects of the brand with them.

3.5 Service Package Development

The service package development aspect of the project focused on providing new transportation services, and was dependent on several factors. The results of the initial market segmentation analyses were very important in identifying services where there was significant demand and results from the analyses were shared with program partners. We were also limited by the services that existing organizations introduced and for which funding, staffing, and similar resources were available.

Going into the project, there was strong interest from community players and project partners in two new services: remote long-term parking and an emergency/guaranteed ride home service, both of which were expected to have a large impact on the number of vehicles parked in the downtown area. The DIA's transportation demand management activities focused on this goal as housing and commercial development continue in the area. The availability of parking is generally static and development of new municipal parking supply is expensive and politically difficult.

3.5.1 Emergency Ride Home

An Emergency Ride Home (ERH) program has been under consideration by TCAT service development and marketing staff since spring 2014. Once the SmartTrips Ithaca project was underway, ERH moved into an implementation mode, but it spent much of the project period in legal and board review. TCAT approached the project with a review of similar services available across North America. As it turned out, many agencies offering ERH (or the similar guaranteed ride home service) had not undertaken the extensive liability review that TCAT undertook. The model TCAT is pursuing would use local taxi services to provide the rides, which would be paid for by TCAT, to anyone with a monthly or longer-term TCAT pass. Total annual costs for these rides are anticipated to be approximately \$1,000 and incorporated into TCAT's budget. However, it is not clear how participants would access the rides. In most programs, the ride provider confirms the participant's eligibility and bills the sponsor agency directly. Another approach, which TCAT appears to be pursuing in order to reduce liability concerns, is for participants to pay for the ride and then submit the receipt to TCAT for reimbursement. This approach limits the effectiveness of the program because participants must front the cost of each trip at the time of service representing a barrier for those without financial resources. At the time of this writing, it is unclear when TCAT might launch an Emergency Ride Home program to the public.

Through the Downtown Ithaca Transportation Survey conducted during the first outreach period, the effectiveness of an ERH program as an incentive to take TCAT was measured. Results reported low interest in such a program in the downtown area, primarily because other concerns about service hours and information ranked higher. Downtown residents have access to some of TCAT's most frequent routes with the longest service hours, reducing the need for an ERH program. On the other hand, ERH may be a vital service to TCAT riders residing in areas where buses are less frequent. Within downtown, a correlation was noticed between respondents who wanted ERH and college students who requested TCAT provide Sunday late-night service from campus to downtown, which is currently non-existent. These concerns were communicated to relevant project partners and ERH was determined to be of minimal concern for the program.

3.5.2 Remote Parking

Despite initial interest from project partners in pursuing a Remote Parking Program, the results from the Downtown Ithaca Transportation Survey did not indicate a high demand. There was mild interest from people who parked on the street overnight compared to those with access to private or public garage locations, possibly for cost reasons. The number of people likely interested in a Remote Parking Program is small – 55 percent of households in the downtown area do not own a car, and a majority of those who do, park in private parking lots adjoining their apartments, not in public garages or on the street.

Early investigations of options for a Remote Parking Program focused on reaching out to Cornell University to explore options. Because this program would be attractive to only a small number of individuals, and therefore move only a few cars out of downtown garages, the urgency to implement a program was low.

3.5.3 Additional Findings

Since a primary goal of the DIA is to reduce parking demand downtown, the intersection of this goal with the mode shift goals of the program came up frequently in internal discussions. Some questions and insights relevant for future downtown transportation demand management projects include:

- Perhaps downtown residents are not the primary drivers of downtown parking demand. It may be fruitful to review the addresses of monthly parking pass holders in downtown municipal garages to understand better who is using these facilities.

- Though a minority (45 percent) of downtown residents are car owners, a majority of those (56 percent) use their cars only occasionally, generally for trips heavily oriented towards grocery and other shopping trips. Not all SmartTrips travel modes are appropriate for these shopping trips, as walking and TCAT pose particular challenges. Two other options are Ithaca Carshare, which is less attractive to those who already own a car, and biking, feasible only with equipment that does not come standard with bikes.
- For some downtown residents, the inconvenience of not having their own personal car accessible for challenging or spontaneous errands could outweigh other incentives to park remotely.

The SmartTrips Ithaca project explored new services to address transportation barriers. For instance, following a contact made at the June Mobility Solutions Summit, a bikeshare bike from the Buffalo BikeShare was left in downtown and made available to a limited group for testing throughout the project period.

Figure 15 – SmartTrips Ithaca Staff and Partners Testing Buffalo BikeShare



4 Outreach Implementation

4.1 Outreach Campaign Timeline

After the bulk of development for the second phase of outreach was completed, the SmartTrips Ithaca program was introduced to the target audience of downtown Ithaca residents and registration launched on May 23, 2016. Onboarding of program registrants soon followed as 79 participants completed their registration forms throughout the month of June and the team customized and delivered the Start-Up Kits to each registrant generally within one to two weeks. After onboarding and through the end of the outreach period, all participants were engaged several times through general activities, and some participated in activities that appealed to more active SmartTrips participants.

Table 2 – Simplified Timeline of Outreach Campaign Phases & Activities

Outreach Phases	May		June				July				August				
	4	5	1	2	3	4	1	2	3	4	1	2	3	4	5
Campaign Launch															
Registration															
Onboarding															
General Engagement															
<i>Newsletters</i>															
<i>Personal Phone Calls</i>															
<i>Final Survey</i>															
Involved Engagement															
<i>Trip Tracking & Prizes</i>															
<i>Workshops & Activities</i>															
<i>Final Celebration</i>															

4.2 Campaign Launch

The formal outreach to residents within the downtown target area was on May 10, 2016, which was a three-part bulk mailing series to 720 addresses and consisted of:

1. **A teaser postcard** introduced the branding, imaging, messaging, and contact information of SmartTrips Ithaca so potential participants would develop interest and familiarity with our branding. Our phone number, the SmartTripsIthaca.org web address, help@smarttripsithaca.org email, as well as social media handles (@SmartTripsIthaca on Facebook and Instagram, @SmartTripsIth on Twitter) were included so interested recipients could begin engaging immediately. The initial mailer also served as an announcement to lookout for our subsequent, and more important mailing.

2. **The registration form** (see Appendix G) was sent on May 24, 2016, in an eye-catching envelope along with a pre-paid business reply mail envelope. Recipients had the option to complete the paper copy of the registration form sent to them or to complete the form online for quicker access to the incentives being offered by the program. All contact methods were included again to build content continuity, trust, and interest among the recipients.
3. **A reminder postcard** (see below) was sent on June 3, 2016, as a reminder to complete registrations either by mail or online before June 10th in order to receive incentive packages. The date was a soft deadline to compel registrants to submit their form quickly.

Figure 16 – Print Material Sequence for Initial Three-Part Mailing Campaign



Along with the outreach done via postal mail, a press release (see Appendix H) was sent to local media outlets, neighborhood email lists, organizational email lists, and social media pages of relevant neighborhood associations and organizations on May 25, 2016 to encourage downtown residents to register online on our website. Our organization, Way2Go, was selected for a front-page story on the Ithaca Journal, the local newspaper (see Appendix I), which provided additional exposure to the SmartTrips program.

Testimonials and photos of people already moving sustainably were collected prior to the program launch with the goal of modeling, setting neighborhood norms, and encouraging members of the target audience to participate. To promote the program, these were included on the SmartTrips website and on printed promotional materials, which were distributed to various locations frequented by locals in the downtown area. These materials were also distributed at several community events where SmartTrips team members were participants.

Figure 17 – Testimonial from Chris Cowan About TCAT



Figure 18 – SmartTrips Ithaca Tabling at Sustainability Center Event

Source: Finger Lakes ReUse



Because of the extensive public outreach conducted for the launch of the program, people residing outside the target area also tried registering for SmartTrips. Most of these registrants lived in neighborhoods immediately adjacent to the target area and could also conceivably be referred to as “downtown” Ithaca even though they had a different character than the core. The team decided to expand the eligibility area for the program to neighborhoods adjacent to downtown while keeping track of the residents within the target area. Registration officially closed on July 4, 2016 with 79 registered participants, 37 of which resided in the target area.

Figure 19 – Photo of SmartTrips Ithaca team on the Ithaca Journal

Source: Nick Reynolds, The Ithaca Journal



4.3 Registration

Registration was required for the program for three purposes: to collect contact information for eligibility purposes and for future engagement; to survey registrants about their current transportation habits and attitudes; and to customize each participants’ Start-Up Kit. Through a month-long process of developing and refining the questions needed for registration, the final set of questions could be answered by prospective registrants in less than eight minutes. The finalized registration form was a simple, visually attractive, double-sided, letter-size form with a matching version on the web (see Appendix G).

The main draw were the incentives, but the program provided other helpful items such as printed resources on all transportation options as well as Optional Activities as part of the customizations available for program registrants.

Figure 20 – Registration Form Start-Up Kit Customization Section

4 Customize Your FREE SmartTrips Ithaca Start-Up Kit		
<p>Resources Choose all the info you would like to receive. Good for both new and experienced users alike. Each set includes a small gift! Select any or all options.</p> <ul style="list-style-type: none"> <input type="checkbox"/>  Bicycling (maps, skills, community) <input type="checkbox"/>  TCAT Bus (schedules, trip planning) <input type="checkbox"/>  Share-a-Ride & Driving (fuel saving, carshare) <input type="checkbox"/>  Walking (maps, events) 	<p>Start-Up Kit Choose something that will help you take fewer trips by car or try out a new sustainable mode of transportation. We may contact you to confirm your selections. <u>Select one only.</u></p> <ul style="list-style-type: none"> <input type="checkbox"/>  Starter Bike Kit (lights, bell, band, and special item) <input type="checkbox"/>  30-Day TCAT Bus Pass (good for unlimited rides) <input type="checkbox"/>  Free Ithaca Carshare Application (valid driver's licence required) <input type="checkbox"/>  Stay Active Kit (water bottle, umbrella, pedometer) 	<p>Optional Activities Let us know if you are interested in participating in any or all of the following fun learning activities. Select any or all options.</p> <ul style="list-style-type: none"> <input type="checkbox"/> One-on-one learning (e.g. taking TCAT, bike riding basics or tune-ups) <input type="checkbox"/> Workshops (e.g. biking with groceries, retiring from driving) <input type="checkbox"/> Group Activities (e.g. bike rides or walks) <input type="checkbox"/> I have an idea...

After the registration forms were received online or by mail, the team worked together to assemble the Start-Up Kits for each eligible participant, including prepared sets of printed resources for each mode that was selected and one incentive package of choice. Useful items were offered as incentives as a way to help with transportation challenges, or as a motivation and ranged from a pair of high quality rechargeable LED bike lights that increased bicycle riding safety, to a pedometer that may motivate a participant to walk more often. The free incentives given to participants were well communicated in our efforts to launch and build a program audience. Outreach media such as public flyers, bulk mailings, and social media posts all emphasized that SmartTrips Ithaca wanted to invest in their transportation, whether they're walking or trying out the TCAT bus system for the first time. Interest indicated in Optional Activities was noted and saved for the involved engagement part of the program.

4.4 Onboarding

As each registrant signed up, a series of tasks were conducted to finalize registration and assemble their personalized Start-Up Kits. Some of the tasks happened automatically, such as emails, but most required manual labor. The following list was repeated 79 times, once for each registrant, throughout the onboarding period from June to mid-July:

1. First SmartTrips email sent confirming registration. Registrants under 18, who indicated they will move away from Ithaca during the outreach period, and/or lived outside the eligibility area were informed they were disqualified from joining. Emails were automatically sent via MailChimp after an inspection of registrant information.
2. SmartTrips staff created an account for the registrant on trip tracking platform (MySmartTrips).
3. SmartTrips staff put together their personalized Start-Up Kit. Registrants could select as many resources as they wanted to receive. To make it easier to assemble the kits, the resources were grouped by mode and a preselected set of printed materials were included for each mode.

4. Second email sent with MySmartTrips login and Start-Up Kit pick-up or delivery information.
5. Participants received their Start-Up Kit upon pick-up at Ithaca Carshare's downtown office or it was hand-delivered to their home at a predetermined time. After the Start-Up Kit was given, Ithaca Carshare or SmartTrips staff addressed transportation questions and encouraged participants to sign the SmartTrips Pledge Card.

The Start-Up Kits were either picked up at the Ithaca Carshare office, or the participants designated a time for staff to hand deliver the Start-Up Kit. The team used the free online service You Can Book Me for participants to self-select Start-Up Kit delivery dates that worked for them. Participants were given as much choice as possible throughout the entire on-boarding and incentive delivering process. A guiding principle of the approach was that each participant is unique, so the goal was for him or her to feel that SmartTrips offered a personalized experience. The amount of choices made the onboarding process convoluted at times, but it remained manageable given the small size of the pilot program. In a future larger iteration of the program, a more standardized onboarding process may be necessary to handle larger volumes of participants.

Upon pick-up or during most deliveries, participants were greeted by an Ithaca Carshare or SmartTrips Ithaca staff member and received a SmartTrips Ithaca-branded canvas tote bag containing their selections. The bag contained a welcome note that included instructions for using *MySmartTrips*, the trip tracking tool, as well as a pledge card where they put in writing their pledge to take at least two SmartTrips a week through the duration of the program. Participants had the opportunity to ask any transportation questions or issues that could be addressed by the staff member. To close the conversation, participants were asked to sign their pledge cards and, optionally, take a photo with their Start-Up Kits.

Figure 21 – SmartTrips Participants with their Start-Up Kits

From left: Helen T., David H., and Myra F.



There were varying levels of participation among SmartTrips participants, which was to be expected. Some participants found the individualized approach really resonated with them and stayed engaged throughout the program, particularly in the involved engagement activities. Others remained distant throughout the project; they received their Start-Up Kit but did not actively participate. The majority fell between those two ends of the spectrum where they engaged in some of the general engagement aspects of the program, but did not take full advantage of the program offerings for various reasons.

4.5 General Engagement

After onboarding, the SmartTrips staff's attention shifted to keeping participants engaged through the program period. The efforts of the staff were guided by a contractual program goal of engaging participants at least seven times throughout over the course of the campaign. This number included the initial three times participants were contacted to sign up for the program, leaving staff to engage participants at least four additional times. This was primarily achieved through the following general engagement activities, defined as those where engagement was more one-sided and informational:

- Monthly e-newsletters offering a range of content from TCAT service changes to opinion pieces on topical transportation issues, along with photos and a local events calendar.
- Several additional email blasts to advertise optional activities and mid-program questionnaires.

- Individual calls to participants who indicated their interest in receiving one-on-one assistance with personal transportation issues.
- Additional mailings during the program to provide the activities calendar and the final survey & celebration invite.
- Text messages to encourage people to complete the final survey and attend the celebration.
- Several social media posts highlighting different sustainable transportation stories, models, ideas, and questions locally and from around the world.
- Bus advertisements that encouraged participants and the general public to move sustainably.

While the goal was at least five additional engagements with participants, each participant was contacted many more times through general engagement alone. Additionally, open lines of communication meant that participants themselves occasionally reached out to the team to address issues regarding transportation options or the trip tracking tool. Due to their serendipity, these additional engagements were not systematically tracked, but it was a confirmation that participants saw SmartTrips Ithaca as their transportation resource in downtown.

The effectiveness of the engagements was probably limited due to the passive nature of the general engagement activities. Email blasts and e-newsletters were opened by 39 to 65 percent of the recipients, and nine to 17 percent of recipients clicked on e-newsletter articles to read more. Only two participants unsubscribed from the bulk emails. Personal phone calls to the 10 people who requested one-on-one assistance sometimes went unanswered, partly due to the mid-day timing of most calls. However, when participants answered, they were prompted with three questions to assess and respond to their needs as well as check-in about their experience and perception of SmartTrips thus far. Calls lasted between three to seven minutes for those who answered, and voicemail messages were left for those who did not answer.

Social media posts had lukewarm engagement as well. Photos posted on our Facebook page reached 110 users on average, with an average of eight actions on each photo (likes, shares, or comments), while Instagram posts had similar levels of exposure and engagement. This is due to the low number of Facebook and Instagram users who followed the SmartTrips Ithaca accounts, which limited the potential number of exposures. Other social media strategies, such as a Twitter account or a private Facebook page for SmartTrips participants, were not effective.

Even though engagement levels after onboarding were mediocre, the presence itself in emails, social media feeds, and voicemail boxes served as prompts to participants of their pledged commitment and the incentives they received at the beginning of the program. Getting participants engaged was not the endgame, but only a method to remind and reinforce the concepts introduced earlier in the program. Most participants remained tuned-in to the program, even if they were not enthusiastically engaging with it, as the majority of participants completed and submitted our final survey at the end (see Appendix K).

Figure 22 – Anna K., Tompkins County legislator and SmartTrips Participant



4.6 Involved Engagement

Whereas general engagement referred to activities more passive in nature, involved engagement covers activities that depended on active use of participants. These activities were not required, but were highly recommended and promoted. Within the program, participants could be more involved by logging their daily trips on the online trip tracking platform, *MySmartTrips*, or joining a workshop or group activity.

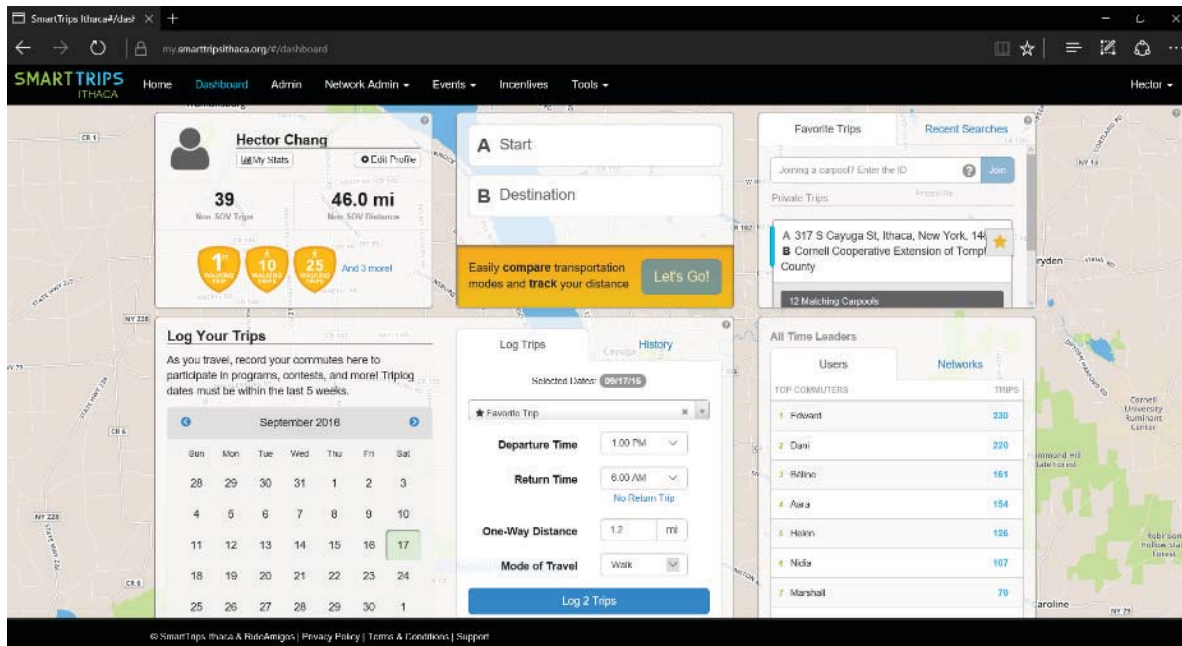
4.6.1 *MySmartTrips* Online Trip Tracking Tool

About 40 percent of SmartTrips participants used their accounts on MySmartTrips, which helped users compare the advantages of each mode of transportation and gamify their use. All participants were encouraged to log their activity on my.smarttripsithaca.org through weekly email reminders and monthly gift card drawings during the outreach period. As the project progressed, participants were

further motivated by features within the trip tracking platform itself, such as leaderboards, milestone badges, personalized statistics of calories burned and CO2 reduced, and easier-to-use trip planning tools. By the end of the project, active MySmartTrips users logged over 1,800 individual trips, a cumulative 3,546 miles travelled on sustainable modes of transportation, and almost 90,000 calories burned.

Figure 23 – Screenshot of MySmartTrips Dashboard

Source: RideAmigos, Corp.



MySmartTrips was developed by a company called RideAmigos in conjunction with the SmartTrips research assistant, who had advanced knowledge of geographic information systems (GIS) and could develop a General Transit Feed Specification (GTFS) feed for the local transit system, which currently doesn't provide one. Additional GIS data and a GTFS feed were necessary to make elements of *MySmartTrips* work, such as the trip planning tool that compared the advantages of each mode and geolocation data for place names. Staff at RideAmigos were very accommodating to the needs of SmartTrips Ithaca and incorporated changes to their platform that were within their scope of work very quickly. However, other programs may want to explore the accuracy of the geographic data of their region on OpenStreetMap, the availability of a GTFS feed for their transit system, and time constraints, as developing the *MySmartTrips* tool with RideAmigos took more time than anticipated and slightly delayed the launch of the SmartTrips Ithaca project.

A caveat of the trip tracking tool, as with all technological solutions, is the fact that it may exclude people who find using computers difficult. A significant number of calls and emails to the SmartTrips team were prompted by challenges related to the use of *MySmartTrips*, particularly among elderly program participants. Some were able to use the online tools after a few instructions, and they found that its features were very helpful. Others were unable to overcome these issues and stopped engaging with it, although they usually remained active in other aspects of the program.

4.6.2 Workshops & Group Activities

Our workshops and group activities were inspired by other SmartTrips programs and relevant local happenings to enhance the accessibility and safety of sustainable transportation. The individual activities were developed after the program started and were designed to match the interests expressed during registration, potential needs of our participants, and resources available among our project partners and local community.

The SmartTrips Ithaca team did not have the workshops and group activities already planned out at the time of launch, so offering a specific menu of choices or calendar of activities during the onboarding process was not possible. For future iterations of SmartTrips, it is recommended to have a calendar of activities already planned so staff can promote them as part of their onboarding conversations and participants can plan ahead. Initial interest in these optional activities was significant at the start of the program as stated on participants' registration forms. From the initial survey, a total of 15 participants were interested in workshops and 20 participants were interested in group activities. However, only a total of five participants attended the workshops and group activities.

4.6.2.1 Workshops

Workshops were designed to be educational opportunities where participants would learn a new skill or make something that would aid in their transportation. There were two workshops, both geared towards people who owned a bike, DIY Bike Baskets and Bike Like a Ninja. Because the pre-program survey as well as the SmartTrips program registration indicated that participants had a range of bike riding skills, each of these were geared toward a different ability level. One of our goals for offering these workshops was to have attendees feel better equipped for their daily trips. The workshops were held on weekend afternoons and lasted between two to three hours.

DIY Bike Baskets was the program's most popular workshop. The main purpose was to help transform participants' bikes from simple transportation tools to machines better equipped to fulfill the rider's needs. Adding cargo carrying capacity to a bicycle can help reduce the need of using a car for small to medium errands. This workshop was designed as an upcycling project by taking used icing buckets from the bakery section in local grocery stores and, with the addition of some hardware, turning them into useful and durable bicycle baskets. This particular design was based off a similar workshop organized by Liz Denham of Bike Walk Wichita. Permission to use her planning documents and design was obtained through email. Four participants registered for this workshop and three attended. For adequate workspace with access to tools we utilized Ithaca Generator, a local makerspace. Documents used for the workshop are located in Appendix J.

Figure 24 – Facebook Post for DIY Bike Basket Workshop



Bike Like a Ninja, on the other hand, was a workshop intended for participants who felt less comfortable riding a bicycle and wanted a riding and traffic safety “101-level” experience. This course was developed collaboratively with Victoria Armstrong, director of Bike Walk Ithaca, and Susan Powell, active transportation program coordinator for Cornell University. Both are League of American Bicyclists (LAB) cycling instructors. This collaboration was beneficial because the LAB has ready-to-go courses with syllabi and content already available, and certified instructors are insured by the LAB to cover incidents while riding on city streets. One downside was that this coverage required workshop participants to be at least 16 years. This prevented two interested participants from enrolling with their children. The workshop was cancelled due to low enrollment, but the organization process and the unexpected interest from parents served as a learning experience and illuminated an unmet need in the community.

4.6.2.2 Group Activities

Because group activities were more sought after by participants in their registration forms, it was the goal to offer a large number of diverse activities. Two TCAT bus rides to local state parks, two walking tours of downtown public art, and one group bicycle ride comprised the selection of choices for group activities. The group activities were designed to be social in nature with minimal educational or skill-building components. The team wanted to focus on encouraging sustainable transportation choices through more personal aspects of health and social engagement.

Program participants were encouraged to RSVP for the group activities, but there were very few replies. Only two group activities were officially cancelled, and a staff member was present for the three remaining activities in case any participants showed up. Only one TCAT bus ride to Taughannock Falls State Park was actually completed, with two participants present.

While participation was low in both workshops and group activities, responses received in the final survey indicated that many participants were interested, but the times provided were not convenient or conflicted with other events during the event-heavy summer season. Future iterations of the program must have a calendar of events set before the program start so there is ample time to advertise the activities to anyone interested in participating. Adjusting the entire timeframe of the program to start in the fall may also help increase activity and workshop attendance.

4.6.3 Final Celebration

Near the end of the program, participants were invited to a final celebration. This event provided staff the opportunity to engage both participants and general members of the community, give a summary of participants' achievements, share lessons learned, and offer tips for continuing taking smart trips. Participants were asked to complete and submit their final surveys. More than 15 people attended, the majority being SmartTrips participants who were congratulated on taking smarter trips for both positive reinforcement and to encourage others in the audience to consider following their footsteps.

Figure 25 – SmartTrips Participants and Friends at the Final Celebration



5 Outcomes

5.1 Project Goals

Evaluation for the SmartTrips Ithaca project consisted primarily of a before-and-after comparison of survey results collected from program participants. This included the required survey that was part of their registration and an optional survey at the end of the program. Survey questions were geared toward measuring goals stated in the grant proposal:

- Engage eight percent of target audience to participate Δ
- Engage each member of the target audience three times, participants seven times \checkmark
- Increase awareness and use of environmentally friendly modes \checkmark
- Reduce drive-alone trips \checkmark
- Reduce vehicle miles traveled \checkmark
- Demonstrate a shift in primary commute and neighborhood mode choice Δ

A total of 79 participants signed up to participate in the program, and 44 answered both the start and end survey questions. The profile of the smaller group (age, occupation, residence location, and car ownership) is reflective of the whole, with a few key differences. Results from both the before and after surveys in this section were computed solely from the responses of the smaller group to remain consistent when comparing responses.

5.2 Engagement

Out of 79 participants, 37 were from the target area. A total of 720 individual households were contacted for the project through regular mail. The overall participation rate from the target area was 5.1 percent. Therefore, Goal 1 was not met. However, it was expected that a significant number of households would be vacant during the engagement period, which was during the summer months when a majority of students are not residing in Ithaca. We are unable to calculate the number of households that were unoccupied during the summer, but if a conservative 30 percent vacancy rate were applied to the households contacted (our November survey found 40 percent of downtown residents are students), the participating rate would be projected to rise up to 7.3 percent.

As previously stated in the Registration sub-section, all 720 households were contacted by mail three times with a teaser postcard, a registration form, and a reminder postcard during the period mid-May to early June. This was in addition to news articles, mailing lists, and posters that target area residents may

have seen. Program participants were contacted at least four times, but often more during the course of SmartTrips Ithaca, adding up to over seven engagement points throughout the campaign, completing the second goal related to engagement.

5.3 Awareness & Utility

Perceptions of the program from participants were captured in the final survey, where respondents ranked from 1 to 5 (strongly disagree to strongly agree) their agreement to the following statements:

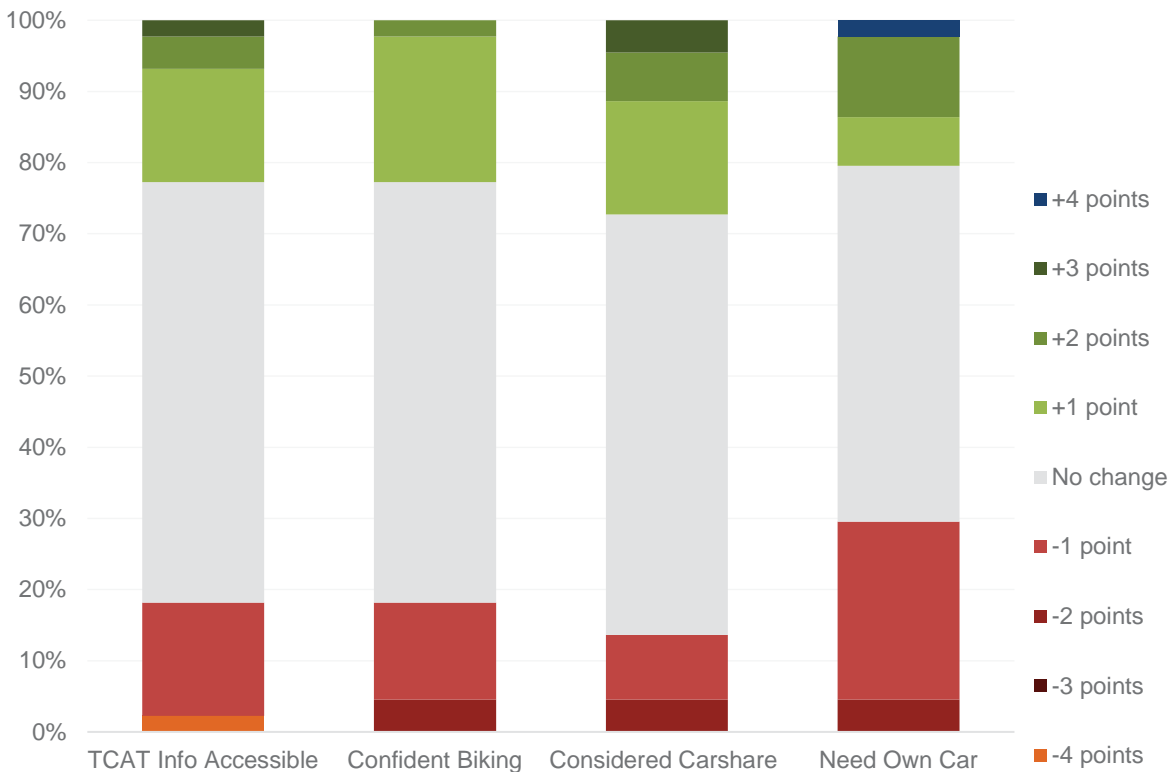
- "SmartTrips Ithaca has increased my awareness of the transportation options available to me."
 - Score: 3.8/5 (mild agreement)
- "SmartTrips Ithaca has made it easier for me to move in a more sustainable way."
 - Score: 3.5/5 (mild agreement)
- "SmartTrips Ithaca has motivated me to try out a new way to move around."
 - Score: 3.6/5 (mild agreement)

While all three statements only had mild agreement among respondents, the more positive bias for the first statement over the others suggests that SmartTrips did have an impact on participant's awareness, but not enough to profoundly affect the way that they move around. Similar findings are also echoed by the results of before-and-after questions in the survey that refer to short-term objectives of the SmartTrips program. Score changes are stronger on prompts that are most affected by access to information (TCAT and Ithaca Carshare) and weaker on prompts that are affected by factors beyond what SmartTrips Ithaca was able to offer.

- "I have considered using Ithaca Carshare."
 - Final Score: 3.4/5 (.31-point increase)
- "I can easily access information on routes and schedules for TCAT buses."
 - Final Score: 4.0/5 (.17-point increase)¹
- "I feel confident riding a bicycle in and around downtown streets."
 - Final Score: 3.1/5 (.05-point increase)
- "I need to own a personal car to take all the trips I need in Ithaca."
 - Final Score: 2.4/5 (.05-point decrease)¹

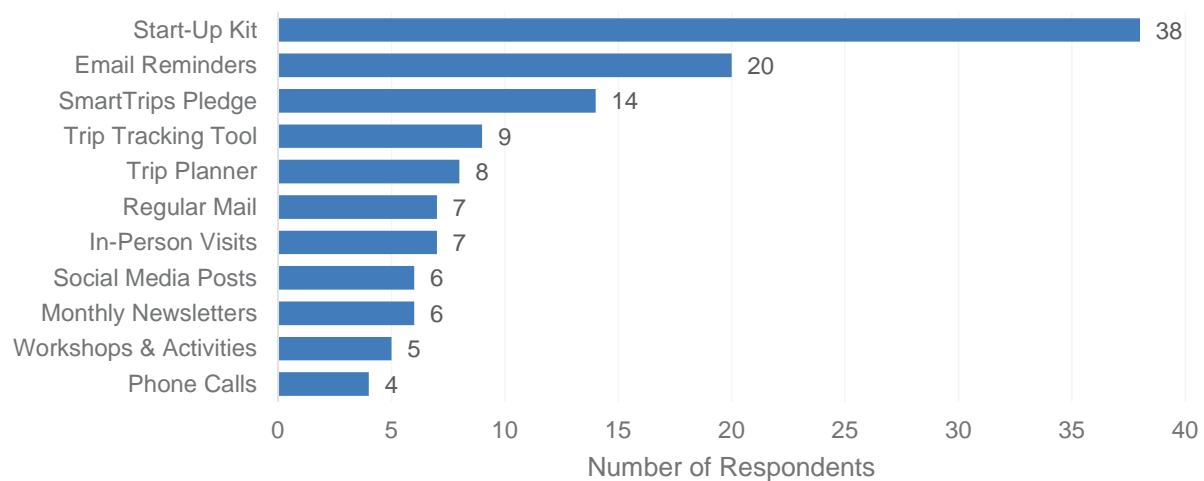
¹ Outlier responses (4-point change) were removed from these two answers to calculate this final score and point increase/decrease. The outlier responses can still be seen within Figure 23.

Figure 26 – Score Changes by Program Impact Questions



When asked about which specific aspects did they find most helpful, SmartTrips participants chose their Start-Up Kit most often (87 percent, see Figure 27), followed by email reminders (45 percent) and their SmartTrips pledge (32 percent). These three aspects were heavily used as part of the onboarding process of the program, which highlights how important that first point of contact is to the overall strategy. Future iterations of the SmartTrips program may want to consider improving the onboarding process for a greater impact.

Figure 27 – Program Elements by Number of Participants That Found Them Helpful



When prompted with the open-ended question “What would you tell a friend or neighbor about SmartTrips Ithaca?” participants often commented on the information, incentives, and encouraging messaging provided through the program:

- “I’d tell them it’s a cool way to get motivated to bike/walk more.”
- “Awesome staff, great workshops & incentives.”
- “It’s a great way to gain knowledge and explore all the transportation options Ithaca has.”
- “That if they’re considering using forms of transportation other than their car, SmartTrips can help!”
- “I think it is a great way to get supplies I needed for my bike...”
- “It’s great! Lots of motivating free stuff & information!”
- “It’s a great way to find out about alternative transportation modes, especially for people who are new to town.”
- “It is a great way to be introduced to living in Ithaca.”
- “That it supports sustainability and encourages eco-friendly travel.”

5.4 Mode Shift

Mode shift was captured through a comparison of simplified weeklong trip diaries in the initial registration form and the final survey. To make the surveys simpler, participants were asked how many days in the previous seven days (counted from the time they filled out each survey) they used five specific travel modes. As compared to a standard trip diary, this method does not count individual trips made, but it gives enough information to understand average weekly travel patterns for the group as a whole.

Table 3 – Average Number of Days per Week of Use of Each Mode

MODE	BEFORE	AFTER	CHANGE	% CHANGE ^a
WALK	5.09	4.98	-0.11	-4%
BIKE	1.39	1.73	0.34	22%
TCAT	2.16	2.02	-0.14	-8%
CARPOOL	1.07	1.68	0.61	54%
SOV	1.95	1.52	-0.43	-24%

^a Percentage changes have been adjusted to account for the increased frequency of all modes combined in the “after” survey.

Participants who answered both the initial and final surveys reported driving less often during the week, and biking and carpooling more often after the program. Negligible changes were noticed in walking and TCAT bus use, but both remain more frequently used than all the other modes.

Using averages from a tabulation for Tompkins County of the 2009 National Household Travel Survey, estimates of the reduction in SOV trips and vehicle-miles traveled can be computed from the information provided by participants. Because the averages are for the countywide population including rural areas, a more conservative estimate of vehicle trips and VMT per day was computed from disaggregated data that matches the demographic profile of downtown Ithaca (see Appendix E for details). Assuming that mode shift results are applicable to all 79 participants, it is estimated that the SmartTrips program reduced a cumulative 791 SOV trips through the 10-week public outreach period, a reduction of 3,058 VMT.

Table 4 – Calculation of Estimated Program Impacts

AVERAGE VEHICLE USE	2.33	TRIPS/DAY ^A
CHANGE IN SOV USE	× -0.43	days/week ^b
	-1.00	trips/week
PROGRAM LENGTH	× 10	weeks
	-10.02	trips per participant
PARTICIPANTS	× 79	participants
CHANGE IN SOV TRIPS	-791.85	trips
AVERAGE TRIP LENGTH	× 3.86	VMT/trip ^a
CHANGE IN VMT	-3058.19	VMT
	(-38.71	VMT/participant)

^a See Appendix E for the calculation of these averages.

^b See Table 3

An insight into which trips were shifted away from SOV use can be found in the comparison of primary and secondary modes to work or school and to the grocery store. Most of the mode shift occurred in participants' grocery store trip, the neighborhood trip that was singled out by SmartTrips Ithaca for

most opportunity for improvement. Within the eight respondents that reported a positive primary mode shift to the grocery store, half switched from SOV to carpooling while the other half switched from SOV to biking. Both correlate to the self-reported changes in weekly mode usage.

Table 5 – Respondents Who Indicated Shift in Commute & Neighborhood Travel Modes

	WORK/SCHOOL	GROCERY STORE
POSITIVE PRIMARY MODE SHIFT	0	8
POSITIVE SECONDARY MODE SHIFT	1	5
TOTAL POSITIVE MODE SHIFTS	1 (2%)	13 (30%)

While the mode shifts from SOV to carpooling and biking are notable and SmartTrips may have had an impact on them, without a control sample for the analyses, we cannot confirm the extent of the impact. The shift may have also been influenced by the change in weather from May to August or new biking infrastructure being installed nearby. There is also evidence of selection bias among the respondents of the final survey. Respondents who completed the final survey were similar in age, occupation, and car ownership to the entire pool of participants, but final survey respondents were 33 percent more likely to own a bicycle. Bicycle ownership allows people to switch to a bicycle for their neighborhood trips more easily, and they may be more receptive to messages about sustainable transportation. Nevertheless, the above survey results are all computed from the same sample of respondents for both pre-program and post-program figures, so the changes in mode are not attributed to different compositions of people in each sample (i.e., the same group of people were biking less often before the program than at the end of the program).

6 Recommendations

Future SmartTrips Ithaca teams should follow the recommendations to increase the impact of their program on participants and the general public, as well as to fully account for their impact. The recommendations are suggested in several sections of the report, but they are being repeated here for your convenience.

6.1 Timeline and Staffing

The program should be implemented right after the usual move-in time to attract the largest number of participants. The move-in times in Ithaca are based on the academic year, and therefore the next iteration of SmartTrips Ithaca should occur from late August to October. Otherwise, SmartTrips Ithaca – or similar programs – should be implemented upon the launch of new transportation infrastructure to increase the adoption of said infrastructure (see Overall Approach).

Workshops and group rides should be planned and scheduled before program launch. By having them ready at launch, the activities could be proposed as solutions to transportation challenges participants mention during regular conversation, especially during the first meeting when the Start-Up Kits are being delivered. The fall season timing of a future program may also help increase participation in workshops and group rides as they will avoid competition from summer events. Alternatively, SmartTrips should promote relevant workshops and events already happening in the community and connect participants to them.

SmartTrips teams starting in new regions should allocate more time and staff to plan their first or pilot program. Full staffing is needed from the start of the project to plan, develop, and implement the project together, given that the majority of the first year will be spent creating new materials and programming plans to use year after year in addition to implementation during the outreach period. For the second year and beyond, outreach staff may only be needed to implement pre-existing plans with minor modifications during the outreach period.

6.2 Location

While it may be helpful to redo SmartTrips Ithaca in downtown during the fall, moving the target area to a well-defined neighborhood more dependent on SOVs may be more effective. This is because downtown residents already have relatively low levels of car ownership and commute sustainably for a majority of their trips. This new target area, however, must have access to multiple transportation options to accommodate the mode shift that the program is asking participants to do.

6.3 Implementation

Simplifying the registration and onboarding process is highly recommended if the program will be expanded to a wider population. While some participants may have enjoyed the amount of choice they had while tailoring the program, for each additional step some participants fell through the cracks and had to be personally contacted several times, using up significant staff time. Start-Up Kit pick-ups took too long because participants sometimes forgot about them. Future teams should stick to only doing deliveries of start-up kits and do them when people are most likely to be at home. While originally thought of as problematic due their restricted access, multi-unit residences were not as much of a concern in this case as the Start-Up Kit were solicited by residents who provided their name, apartment number, and phone number. Having this information on hand made it easy to contact participants through apartment intercoms or by phone to meet staff at the apartment entrance to receive their Start-Up Kits.

6.4 Evaluation

In future SmartTrips projects, it is recommended to add a control population to truly determine the impact of the SmartTrips program. To have a controlled population, some people within the same target area must be excluded from direct engagement with the program, which will reduce the number of potential participants. Therefore, a control should be used only when the SmartTrips program is expanded so that both the control and the participant pools are big enough for their survey responses to be statistically significant. If resources allow it, an additional survey should be sent out to participants one year after the start of the program to see if the impact of SmartTrips is still relevant after the program's end.

6.5 Overall Approach

If the program were implemented again in downtown Ithaca, an increased focus in addressing the barriers specific to two segments of the population – potential bike riders and potential TCAT riders – may enable more people to make a shift. For potential bike riders, providing safe bicycling routes to and from common destinations, such as the grocery stores just over one mile away from downtown Ithaca, and providing an easy way for people to access bicycles for the occasional errand may be more effective than encouragement alone. For potential TCAT riders, giving out 15-trip passes instead of monthly passes may be more helpful as typical downtown residents do not need to use TCAT every day. The full implementation of an official GTFS feed with real-time updates on buses would alleviate the lack of clear information that interested TCAT riders face. Major simplification of TCAT routes and more frequent buses to shopping destinations could make taking public transit less burdensome and more feasible for spontaneous trips. SmartTrips should be part of an overall transportation demand management strategy both implemented and monitored by local government, so that a SmartTrips campaign can work in sync with the aforementioned suggested changes.

If parking pressures in the downtown area are a major motivator for TDM programming, a pivot towards targeting commute trips into the business district may reduce parking demand. A commuter-focused TDM program would work with employers to provide incentives and workplace arrangements that will encourage a person to take alternative forms of transportation for their home-to-work trip. There is more of a precedent for employer-based TDM programs – especially in larger cities – and such a program may be relevant in the near future given upcoming office and commercial developments in downtown Ithaca.

Appendix A: Independent Contractor Agreement

INDEPENDENT CONTRACTOR AGREEMENT

Ithaca Carshare (hereby referred to as Carshare) agrees to contract the Cornell Cooperative Extension Association of Tompkins County (hereby referred to as CCETC), to perform the following work or service:

DESCRIPTION OF WORK OR SERVICE: The Way2Go program of CCETC will work with Carshare on “Targeting Individuals to Encourage Low-Carbon Travel Choices” to perform the tasks described in **Attachment A** *Scope of Work*.

1. CCETC agrees to provide the work or services to Carshare for the cost herein stated.
2. The total fee will be 87,366 dollars to be paid no more frequently than monthly after the completion of deliverables and submission of required reports.
3. CCETC will meet with Carshare personnel in order to obtain the information necessary for carrying out this contract.
4. It should be understood that it is the intent of Carshare to secure CCETC’s services because of the organization’s ability and reputation, and CCETC shall, therefore, not assign the work to be performed hereunder to any other party without Carshare’s prior written consent.
5. CCETC shall obtain the approval of Carshare for the general scope and nature of the services performed hereunder. If the work or service is instructional in nature, CCETC shall, however, remain solely responsible for the establishment and development of actual project content, manner of delivery, and all similar elements of the services provided.
6. CCETC shall comply with all laws, rules, orders, regulations, and requirements of federal, state, and municipal governments applicable thereto.
7. The relationship of the parties arising out of this agreement shall be that of a contractor. CCETC staff shall not, as the result of this agreement, be considered employees of Carshare, nor shall CCETC or its staff represent that such employee relationship exists, arising out of this contract.
8. CCETC staff shall not be eligible to participate in the Carshare fringe benefit program.
9. Carshare shall not be required to provide CCETC with staff, materials, supplies, office space, secretarial support or equipment.
10. CCETC is not covered by any insurance from Carshare.
11. Any claims, disputes or disagreement over the terms of this agreement shall be subject to binding arbitration venued in the County of Tompkins and governed by the rules of the American Arbitration Association or the New York Supreme Court of the same county.

12. Carshare reserves the right at any time during the performance of this agreement to omit any portion of the work as may be deemed reasonably necessary without constituting grounds for any claim for allowance for damages. If such change or alteration results in a reduction of the work covered by the agreement, a proportionate deduction shall be made from the consideration herein.

12. This contract may be modified and amended by a written, dated agreement signed by authorized agents of Carshare and CCETC.

Executive Director, Ithaca Carshare

Date

Executive Director, Cornell Cooperative Extension Association of Tompkins County

Date

Address of CCETC: 615 Willow Avenue, Ithaca, NY 14850

Federal Tax ID of CCETC

Attachment A: Scope of Work

In this project, Cornell Cooperative Extension of Tompkins County (CCETC) will launch a comprehensive strategy that includes highly targeted outreach to residents in downtown Ithaca to encourage and incentivize them to use sustainable transportation options, including transit, walking, biking, carpooling, carsharing and combining trips. This model has been used in several other cities across the US, including Salt Lake City (UT), Eugene (OR), Boulder (CO) and is recognized as a Landmark case study by Tools of Change.

This project will involve individualized and personal contact with carefully selected market segments in the downtown area. In particular, education and incentives will target residents who have recently moved into the downtown Ithaca area. Research by Bamberg, Rolle and Weber (2003) shows that individualized marketing interventions yield greater shifts in sustainable transportation choices when consumers are in a “new decision context” (such as immediately after relocation).

This scope of work is a subcontract with Ithaca Carshare for a project funded by NYSERDA titled “Targeting Individuals to Encourage Low-Carbon Travel Choices”. The project is a partnership between Ithaca Carshare, the Downtown Ithaca Alliance (the downtown business improvement district), and CCETC. A Program Development Guidance Team will review progress and provide guidance throughout the project. The Team will consist of NYSERDA Project Managers, Downtown Ithaca Alliance (DIA) staff, the Program Manager of the Way2Go Transportation Education Program of Cornell Cooperative Extension of Tompkins County, and Tompkins Consolidated Area Transit staff (as available).

Progress and Other Reports

CCETC will provide monthly Progress Reports electronically to Ithaca Carshare that cover the progress of the project during the reporting period, any identification of problems & planned solutions, schedule (as compared with projected schedule), costs (analysis of actual cost incurred in relation to budget and progress to date, and ability to complete project within contract budget), and other impacts of the work completed, where appropriate. CCETC will also collaborate with Ithaca Carshare staff to compile progress reports into formats suitable for presentation to various stakeholders, including NYSERDA. Much if not all of the content of the reports will be a recap of the ongoing collaborative work between CCETC and Ithaca Carshare.

Project Meetings

CCETC will support Ithaca Carshare in holding meetings with NYSERDA and other stakeholders at milestone times for the year-long project, with tasks allocated as agreed between CCETC and Ithaca Carshare staff.

Project Staffing

Ithaca Carshare’s Executive Director and Project Director of “Targeting Individuals to Encourage Low-Carbon Travel Choices” will be CCETC’s primary contact at Ithaca Carshare. CCETC staff (Way2Go Program Manager) is responsible for ensuring that the work of the Transportation Demand Manager, Research Assistant, and Direct Outreach Staff is completed in a manner satisfactory to Ithaca Carshare.

CCETC shall provide staffing to fill the roles of the Transportation Demand Manager, a Research Assistant, and two Direct Outreach staff as detailed below.

Transportation Demand Manager. This individual shall work approximately 40 hours per week for the length of the project to implement various aspects of the project, particularly development, implementation and evaluation of the SmartTrips-style outreach. Responsibilities shall include promoting the project to downtown residents and commuters, through various public outreach efforts, such as:

- Facilitating and attending meetings with downtown residents and commuters.
- Communicating with commuters through existing channels, including employer channels.
- Creating incentives for participating in programs.
- Working with the advisory team of local marketing professionals to develop a set of messages, and
- Maintaining local media relationships.
- Coordinating direct outreach staff during their two campaign periods.
- Processing survey data and feedback from outreach efforts
- Facilitating follow-up meetings with neighborhood stakeholders.
- Assembling survey data and feedback into recommendations for future transportation services and incentive programs.
- Working with local and regional transportation providers and education programs
- Implementing behavior change incentive programs, and administering them where appropriate.

Research Assistant. This individual shall work approximately 25 hours per week for the length of the project to assist in developing survey instruments to be included where possible in outreach efforts, analyzing results for continuous improvement of the program and recommendations for future transportation services and incentive programs, as well as enumerating impacts of this program. The Research Assistant shall also assist in producing public reports to support replication of this approach in other New York State communities and for other goals, as well as supporting the work of the Transportation Demand Manager as appropriate and necessary.

Direct Outreach Staff. These two individuals shall each work approximately 20 hrs per week for six months and be responsible for much of the direct outreach delivery. Activities shall include making contact with community members via methods such as door-to-door, in-person, event presences, telephone, online, etc., as well as supporting direct mail campaigns. The Transportation Demand Manager shall supervise and guide their work on a day-to-day basis, as well as performing some of these tasks during non-campaign periods when these staff members are not available.

Project Implementation

CCETC shall oversee the following project tasks:

Outreach Campaign Development

- The Transportation Demand Manager will select start dates for two rounds of outreach campaigns that coordinate with seasonal population fluctuations in Ithaca.
- The Transportation Demand Manager will develop two campaigns that utilize market segmentation and use an individualized, multiple contacts, opt-in approach that is modeled after Portland (OR) SmartTrips incorporating the input of the Downtown Ithaca Alliance's Marketing Advisory Team.
- The Transportation Demand Manager will identify specific market segments. Market segments shall be chosen to represent individuals with characteristics that indicate that travel behavior change is most likely.
- The Transportation Demand Manager will develop a package of web and print marketing materials that package existing transportation services for the previously identified market segments of the downtown community incorporating the input of the Marketing Advisory Team.
- The Transportation Demand Manager will provide evaluation data from the outreach campaigns to guide the Program Development Guidance Team in the establishment of new services, incentive packages or modifications to existing services to maximize behavior change in the target markets and other segments of the downtown community.

The Research Assistant will assist the Transportation Demand Manager for these tasks as appropriate.

Deliverables in this area include: Target market identified (attributes and estimated size), outreach campaign plans and materials in place, written interim report outlining the creation of needed new incentives and service modifications or additions.

Outreach Implementation

- The Transportation Demand Manager and Direct Outreach Staff will launch the campaigns publically with a concentrated press and social media launch to inform the general public of the campaign.
- The Direct Outreach Staff, supported by the Transportation Demand Manager, will contact market segments multiple times with information about green and active transportation modes using multiple methods (direct mail, flyers in the area, telephone call, direct in-person contact, web and social media presence, etc.).
- The Direct Outreach Staff will make follow-up contacts with residents/commuters who express interest in further support for behavior shifts.
- The Transportation Demand Manager will sustain a community presence through online, in-person, and phone correspondence with community members, an office presence, and by participating in outreach opportunities as time allows.

Deliverables in this area include: Number of target market contacts made, and records of three contacts made with each member of the target audience, active engagement of eight percent of target audience as participants (could include website traffic, participation in project-related events, or audience members contacting project staff) and contact with each participant at least seven times.

Analysis of Results and Development of Recommendations

- The Transportation Demand Manager and Research Assistant, supported as needed by the Program Development Guidance Team, will develop survey instruments that will measure progress towards six stated project objectives:
 1. Reduce vehicle miles traveled (VMT),
 2. Reduce drive-alone trips,
 3. Increase awareness and use of environmentally friendly modes,
 4. Engage eight percent of the target audience to actively participate in the campaigns through visiting the website, attending project-related events, or contacting project staff,
 5. Demonstrate a shift in primary commute and neighborhood mode choice, and
 6. Contact each member of the target audience three times and participants seven times.
- The Research Assistant will implement the survey tool to measure changes in behavior and progress towards project objectives (as listed above).
- The Research Assistant and the Transportation Demand Manager shall compile, analyze and synthesize survey results for each campaign and make recommendations for future targeted marketing, service modifications, and new services that will support future behavior change impacts.
- The Transportation Demand Manager will share the results of the analysis and evaluation with local providers, planners and decision makers. This subtask also includes sharing results, best practices and lessons learned with other communities in Upstate New York via at least one webinar.

Deliverables in this area include: Outreach/survey results included in progress reports including number of individuals reached, nature, type and duration of contacts, and new/modified service recommendations, and best practices for delivering a successful outreach campaign based on the targeted, individualized model.

Appendix B: Ithaca SmartTrips Implementation Guide

Ithaca SmartTrips Implementation Guide

Changelog (07/07/2015)

- Timeline > General SmartTrips Schedule: two added timelines are shorter (12 month or less), but come with the caveat of having to do the trip diaries right before and after the engagement period.
- Identifying New Movers > New Movers Mailing List: contacted Fernando, who said the county does not have data; contacted several mailing list companies for price and data comparisons (list incomplete)
- Trip Tracker > Options: created comparison chart of different services that provide trackers; let me know if/when they should be contacted
- Additional Resources: included links to implementation guides provided by other SmartTrip projects

For Your Consideration

It is worth noting that most SmartTrip programs that were examined for this guide targeted all residents within specific neighborhoods, including Portland. “Welcome SmartTrips” is a subset of Portland’s general SmartTrips program that targets new residents, and it started in 2011. Since it seems that the procedures for the targeted and general SmartTrips programs are administered similarly, other than the targets, information from both types is included in the following guide.

The guide is organized step-by-step from program start to finish. Participation rates for each step, a timeline, and funding information are included at the end.

Pilot Phases

Portland piloted its first CBSM TDM program in 2003 under the name TravelSmart. It was not targeted at new residents; instead it targeted 600 households in a neighborhood in Portland. A report could not be found from that year. “Pilots” conducted in Kelowna and for Welcome SmartTrips in Portland were much larger.

Additional Notes

- Portland: 2012 Welcome SmartTrips pilot targeted 5400 households
 - Three areas targeted with less than ideal transportation conditions
- Portland: 2003 TravelSmart pilot targeted 600 households (1200 people)
 - Pilot conducted in [Multnomah](#)/Hillsdale neighborhood outside of downtown Portland
 - Dense residential neighborhood with single-family homes and commercial strip
 - Somewhat walkable urban-edge neighborhood
 - Relatively flat neighborhood with some bike lanes
 - Somewhat inadequate, bus-only transit access
 - Used individualized marketing firm Socialdata to implement 2003 pilot and 2004 full program
 - No more information could be found about the pilot
 - Possible contact person: Derek Hofbauer at Alta P+D (read [interview](#), Gary Cremeens knows him)

- Expanded and renamed SmartTrips in 2005, all in-house
 - Changes made included:
 - Reducing cost through less intensive surveying
 - Adding hands-on experiential activities such as bike rides and neighborhood walks
 - Extending contact period to 8 months (March to November)
 - "Welcome SmartTrips" targeting new residents implemented later
- Kelowna: 2012 SmartTrips pilot targeted 1497 households (3554 people)
 - Pilot conducted in [Pandosy](#) neighborhood close to downtown Kelowna
 - Dense residential neighborhood with single-family homes and commercial core
 - Very walkable urban neighborhood
 - Relatively flat neighborhood with many bike lanes
 - Inadequate bus-only transit access (but relatively high for Kelowna transit)
 - Implemented in-house with assistance from outside contractors for engagement and sponsorships
 - Program restarted in 2013 in suburban neighborhood; no more programs since
 - Program targeted all residents, not new movers
- St. Paul: Program went big from the start with 7100 households targeted

Identifying New Movers

Given that the focus area of the program contains mainly apartment buildings, cooperation with property managers is crucial for the initial contact, administration, and success of the project. There are other methods available that can be used.

Property Managers

- Train property managers to add SmartTrip to check-in/key pickup procedure
 - Probably best method in Ithaca if they agree to help
- Target all mailboxes in specific apartment buildings right after move-in period
 - Need access to all mailboxes, or pay postage

Other "Registration" Points

- Make SmartTrip materials part of "orientation packages" for new residents
 - Second best method in Ithaca
 - Targets groups of people rather than locations
 - Potential locations: employers, universities, library, DMV, City Hall

New Movers Mailing List

- Portland bought mailing list from provider of data services targeted to munis (Infogroup.com)
 - Providers collect addresses from deed transfers, **utility companies**, Imagitas (USPS)...
 - Ask county/cities to see if they already purchase the service
- Searches online from business-targeted services have priced the list from \$25 to \$100
 - Query: Ithaca, NY or 2 mi radius from 107 E State St, movers since 1 Jan 2015
 - Almost instantaneous response after you pay
 - There's services which will also print and mail postcards for you (\$50 + 79c/card)
- Caveats
 - Renters should, but generally don't, submit a move on USPS

- Should wait a month or more after move-in peak to buy updated list
- Fernando Dearagon says the county does not have access to such data

Options

Company	Melissa Data	Experian	Infogroup	Directmail
<i>Price</i>	(N/A)	\$100 min.		
<i>Leads</i>	200	50-70/month		
<i>Sources</i>	Landline connections	Proprietary		
<i>Contact</i>	Allon Bieberman allon@melissadata.com	small.business@ experian.com		
<i>Rating</i>	☹	☹		

Every Door Direct Mail

- Generally used by businesses to target all residents on specific delivery routes
 - Very inexpensive method to distribute mass mail
 - Send SmartTrip mailing right after move-in peak
 - Commons + E State St before Stewart Ave: \$117 for 639 addresses
 - \$0.18/address, cheaper than stamps!
- Caveats
 - Targets everyone in specific mailing route
 - Mailing routes don't necessarily coincide with perceived "neighborhoods"

Data Collection

Two types of data should be collected to measure progress: trip diaries and program feedback. Information below explains in detail what each type entails and the best methods to collect such data. It is then followed by examples of what previous SmartTrip programs did individually.

Trip Diary Surveys

Description

- Asks for destinations and modes of travel for trips taken on previous day, demographic data
 - "Where did you go after you left home? What did you use to get there?"
 - "Where did you go after that? What did you use to get there?" (then repeat)
 - SmartTrips projects also add questions about primary modes and perceptions of modes
- Most reliable method for measuring VMT and mode split
- Time-consuming, slightly boring, depends on ability for people to recall their trips
- Encourage survey completion with prize raffles
 - Portland: \$50 supermarket gift card
 - St Paul: \$50 local bike shop or shoe store gift card
- Possible people to contact for survey design help: Fernando Dearagon
 - Previous Portland SmartTrips Welcome Survey ([link](#))
 - Previous St. Paul Smart Trips Phone Survey ([link](#), pg 49)
 - National Household Travel Survey User Guide ([link](#))
 - 2009 NHTS Tompkins MPO Results, includes county VMT figures ([link](#))

Methods

- Mailed surveys with online option (preferred)

- Better targeting, least costly (especially with a high online response rate)
- Potential online platforms: [Google Forms](#), [Qualtrics](#), [SurveyMonkey](#)
- Needs survey expert to craft questions
- Manual data entry could be a hassle
- Needs incentive (raffle) and prepaid return postage
- Phone surveys (not recommended)
 - Time intensive, skews towards older people as only landlines can be reached

Program Development and Evaluation

Description

Information may need to be targeted to the specific use cases of the target population (ex. Seniors, mothers with young children, Cornell employees, etc.). Feedback specifically concerning the program should also be obtained from registered participants after the conclusion of the program but before the second trip diary survey.

Methods

Focus Groups

- Useful to extract information specific to focus area or to specific population for materials development
 - St. Paul focus groups targeted transportation challenges of "mothers with young children," "senior home residents," etc.
- Also useful for post-completion program development
- Incentives must be high enough for regular participants to take time for focus group
 - Kelowna's focus group only attended by bike enthusiasts
 - St Paul provided \$50 cash to all participants

Surveying

- Asks participants for opinions on program for further development
 - Add to online platform for convenience
 - St Paul online survey ([link](#), pg 26)
- Results could be skewed due to self-selection, but no better alternative
 - Online survey: least costly, possible selection bias
 - Phone calls: select participants to ensure variety, time consuming (but less so due to smaller pool)
 - Mailed along with "after" trip diary, if necessary

Less Effective Methods

- Screenline counts
 - Count pedestrians and bicyclists at key pathways over short periods of time
 - Great for determining current levels of bike/ped activity at fine scale
 - Could be unreliable due to small impact pilot will have
 - National Bicycle and Pedestrian Documentation Project ([link](#))
- Bus ridership counts
 - TCAT stop-by-stop boarding counts to see demand changes
 - Could be unreliable due to small impact pilot will have

Program Examples

Portland

- Before and after trip diary survey with target (5400 HH) and control (1352 HH) group
 - Survey asks for the destination and mode of yesterday's last four trips
 - Also asks for perceived challenges, opinions about each mode, and demographic data
 - GHG emissions and mode shifts extrapolated from the survey data with city-wide averages
 - Survey participation incentivized with raffle
- Contact tracking done with Microsoft Access database and ArcGIS
 - Encouraged online order form to avoid manual data entry

Kelowna

- Before and after survey with general questions of mode use
 - Survey asks for mode use over the week, perceived challenges, opinions
 - Opinion: questions were not very effective
 - No control group as whole neighborhood was targeted
 - Organizers lamented in report for the need of a control group
- Online trip tracking tool used mainly for engagement (with high satisfaction)
 - No results in terms of mode shift and GHGs presented in report
 - Possibly because there's no "before" to compare; self-selecting group
- Tried to use municipal bike/ped counts and bus boardings, but too much noise

St. Paul

- Before and after trip diary phone surveys with target and control group
 - Survey asks for the destination and mode of all of yesterday's trips
 - Mode shift measured by comparing phone survey data
 - Phone surveys skewed heavily towards older population
- Online survey only to participants to measure program effect and satisfaction
- Tried to do screenline bike/ped counts but results inconclusive

Data Management

A Microsoft Access database should be used to track data coming from multiple sources but linked to each participant. Access allows easy data manipulation, quick making of graphs and query results, and integration with ArcGIS.

Registration/Order Forms

The order form is where the program is introduced in full and will “make or break” the program. Guaranteed gifts are a good way to incentivize participation in the program. Generally, the forms are sent three weeks before activities start over fair-weather months, but this may be changed given Ithaca’s move-in pattern. Residents can submit the form until a month or two before the program ends, and reminder postcards before and after the form has been sent entice residents to look for the form before it arrives or in their junk mail pile.

Order Form Contents

- Potential information to request, separated by modes
- Choose your own gift (map headband, fluorescent velcro strap, pedometer, umbrella)
- Personal contact info and some demographic data
- Pledge to change X number of trips to bike/walk/transit/etc

Order Form Delivery Methods

- Collaborate with property owners (experimental)
 - Make SmartTrips part of apartment check-in/key pick-up
 - Should prepare property managers to be representatives of program
- Mailed forms with online option
 - Really encourage online option to reduce data entry, seamless registration
 - Get hold of email and cellphone number for future contact

Package Delivery

This will be the trickiest part given the pilot's target area. The usual method employed by many SmartTrips programs, a bike-riding transportation expert, does not work as well for apartment buildings. Portland's SmartTrips program has tried to address this by collaborating with property owners and setting up in common areas. Additional strategies are also included below.

Collaborate with Property Owners

- Get apartment access (common room) or individual mailbox access
- General mailbox access will not work as the orders differ from apt to apt
- Door-to-door delivery inside apartment will be considered odd

Tabling

- Set up information booth near apartments for face-to-face interaction
 - Outside on the commons or inside store/library/visitor center
 - Potentially train visitor center staff to be part of program
- Requires time commitment, potential sponsor

Package Mail

- Expensive alternative, especially if incentives are not flat and must be shipped as package in a box or thick envelope
- Could be used as "last resort" for uncollected packages after tabling

Bike Courier

- Method of all previous SmartTrip programs, but perhaps not as useful in Ithaca pilot
- Good method because it allows face-to-face interaction with residents
 - Bike courier was usually a transportation expert working for the program that answered questions

Consistent Engagement

Various methods have been used to keep registered SmartTrip participants engaged in the program and in their goals. Communications should be tailored to participants' specified needs by grouping them into different segments and crafting emails for each segment. More general communications, such as newsletters, can be tailored to each geographical area to keep them relevant. Below are all strategies ordered by (perceived) effectiveness in terms of user engagement.

Mailed Newsletter

- Inexpensive option if not targeted by person (direct mail)
- Substitute for eNewsletters when email not provided or by participant's choice

Coupon Books and Business Partnerships

- Encourage local shopping (and therefore walking/biking)
- Time-consuming to develop partnerships from scratch; use existing DIA coupons/partnerships
- If developing partnership, make sure businesses know what the program is all about
 - Highly targeted: small # of coupon recipients and thus small usage
 - However, recipients are neighbors and we have good demographic data on them
 - Develop promotions that appeal to potential user base to maximize sales
- "Bike/Walk/Transit" deals that will "counter" parking validation

Trip Tracker

- Keeps enthusiastic participants engaged
- Can micro-target people, create friendly competitions, track VMT/GHGs, etc.
- Must find platform provider, be trained to use analytics on it
- Combine with emergency ride home program to encourage use?

Options

Company	Rideamigos	RideShark	NuRide	Zimride	Modeify
<i>Pros</i>	·Advertised at \$25/month ·Norma has knowledge of company		·Combines trip tracker w/ incentives	·Existing platform ·Signs people up for Zimride	·Visually appealing user interface ·Open source, configurable
<i>Cons</i>			·Not that visually appealing	·Must find way to separate SmartTrippers	·Must set up yourself ·No TCAT GTFS data
<i>Contact</i>					
<i>Rating</i>					

Phone Calls

- Social encouragement to shift modes and answer questions with targeted info
- Time consuming, need to find people to call at odd hours

Walking and Biking Tours/Workshops

- Low participation rates but very effective for those who participate; need big registered base
- Can be targeted to specific use cases ("Women on Bikes," "Senior Strolls")
- Encourage people to register to pre-existing tours and workshops rather than start one specifically for the pilot program
- Mail calendar with all tours and workshops and registration info in case they change their mind

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- Can be targeted to specific use cases ("Women on Bikes," "Senior Strolls")
- Encourage people to register to pre-existing tours and workshops rather than start one specifically for the pilot program
- Mail calendar with all tours and workshops and registration info in case they change their mind

Kiosks and Events

- Same issues with walking/biking tours and workshops, but same solutions
- Potential additional way to recruit more participants

Participation Rates

In general, the order form, which introduces and registers people to the program, had a response rate of 7-11%. Further forms of engagement that require effort on the user's part had similar response rates. eNewsletters seem to be the most cost-effective way to reach program participants.

Engagement tools that required participants to take time off and go somewhere had the lowest engagement levels, but are effective and fun for those who do participate. Thus it is recommended that these "experiential activities" be done in conjunction with other programs to ensure more people come. Industry figures are averages for direct marketing.

Table

Engagement Tool	Reported Engagement (% or #)			
	Portland	Kelowna	St Paul	Industry*
<i>Order Form</i>	11%	7%	11%	3%
<i>Phone Surveys</i>			5%	6%
<i>Paper Surveys</i>	15%	17%		
<i>Online Surveys</i>	N/A	34%	12%	
<i>Trip Tracker</i>		42%		
<i>eNewsletter</i>	N/A	44%	N/A	20%
<i>Focus Groups</i>		~15	6-21	
<i>Open House/Party</i>		45-80	N/A	
<i>Info Kiosks</i>		~25		
<i>Bike Rides</i>	☺		2-20	
<i>Guided Walks</i>	☺		11-15	
<i>Workshops</i>		3-9	6-15	
<i>Coupon Books</i>	☺	☺	☺	

	Tool not used by ST project
--	-----------------------------

Timeline

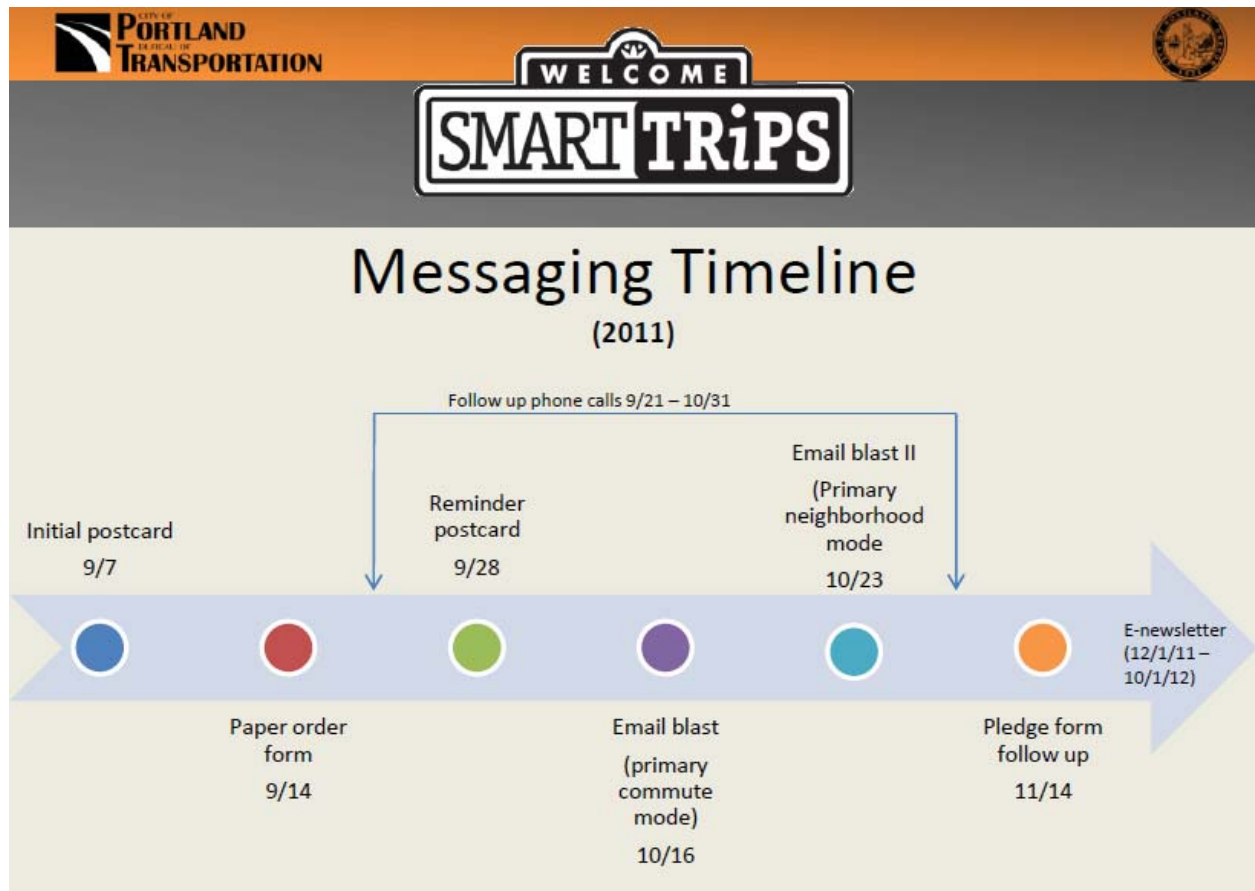
Generally, most programs had a 16-month cycle “bookended” by trip surveys and an extended ramp-up to a busy engagement period over the summer. Two other projects had a 12-month period or less, meaning their trip diary surveys were administered just before and after the engagement period. While this may be enticing, the shorter projects also lament not having trip diaries that were 12 months apart to see whether mode shift was caused either by weather or by the intervention. Regardless, a custom schedule should be created for Ithaca given its unique move-in season. Project period is measured in months.

General SmartTrips Schedule

	Project Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Portland (September)	Trip Surveys	■												■			
	Project Planning & Evaluation			■	■	■	■	■								■	■
	Newsletters (every 2 mo.)							■		■		■		■		■	
	Order Form Period								■	■	■	■	■				
	Experiential Activities									■	■	■	■	■	■		
Kelowna (September)	Trip Surveys	■												■			
	Newsletters (weekly)								■	■	■						
	Information Kiosks (weekly)								■	■	■						
	Program Registration Period								■	■	■						
	Open House/Wrap-Up Party								■			■					
St Paul (February)	Trip Surveys					■											■
	Project Planning & Evaluation	■	■	■	■	■					■		■				
	Newsletters (monthly)					■		■	■	■	■						
	Order Form Period					■	■	■	■	■							
	Focus Group						■	■						■			
Eugene (January)	Trip Surveys					■					■						
	Project Planning & Evaluation	■	■	■	■	■										■	
	Newsletters				■			■		■							
	Order Form Period					■	■	■	■	■							
	Experiential Activities					■	■	■	■	■							
Springfield (January)	Trip Surveys			■						■							
	Project Planning & Evaluation	■	■	■													■
	Order Form Period				■	■	■	■	■								
	Experiential Activities					■	■	■	■								

Welcome SmartTrips Schedule

Portland's Welcome SmartTrips program that targets new movers had a modified schedule in 2011.



Funding

Most SmartTrips programs are either run as part of a city's or MPO's TDM strategy, or can be subcontracted to a non-profit. Government-based programs are funded by an array of general transportation funds, federal and state clean air or energy efficiency grants, and sponsorships and donations from businesses. Expenditures are mostly for staff time and materials. Figures of \$ expenditure/household are mostly used to measure the return on investment and is not actually a "unit price" that is billed to taxpayers or grant funders.

Program Examples

Portland

- Based from City with several staff dedicated to the program
- Funded with general transportation revenues, energy efficiency & clean air grants, and sponsorships from healthcare providers and insurers

Kelowna

- Based from City with two FTEs devoted to the project

- Funded by various governmental agencies, business donations for prizes
- Big chunk of expenditures used for contractors for business engagement, surveying, and program delivery

St. Paul

- Run as a separate non-profit with some staff, interns (paid and unpaid), and volunteers
- Funded by federal clean air grant, Bike/Walk Twin Cities
- Collaborates with other non-profits for program delivery (youth groups, etc.)

Additional Resources

Other implementation guides

- St. Paul: http://www.smart-trips.org/wp-content/uploads/2014/03/LessonsLearned_110311.pdf
- Whatcom County, WA: https://www.whatcomsmarttrips.org/news/program_implementation

Appendix C: Downtown Ithaca Transportation Survey Form



2015 ITCTC & Downtown Ithaca Alliance Transportation Survey



The Ithaca-Tompkins County Transportation Council (ITCTC) and Downtown Ithaca Alliance are interested in how downtown Ithaca residents like you live and get around so we can target future improvements in the downtown area. The survey should take **less than 10 minutes** to finish. Completing it will enter you into a prize drawing for a **\$100 Downtown Ithaca Gift Card** redeemable at over 100 shops and restaurants! The answers to your survey are confidential and will be used for research purposes only. You may also complete this survey online at surveymonkey.com/r/godowntown. **Let's get started!**

Tell us about yourself.

1. What best represents your age category?

- ☐ Under 18
- ☐ 18 – 21
- ☐ 22 – 29
- ☐ 30 – 44
- ☐ 45 – 64
- ☐ 65 and older

2. What is your gender?

- ☐ Male ☐ Female ☐ Other

3. What is your race/ethnicity?

Select all that apply.

- ☐ American Indian or Alaska Native
- ☐ Asian or Pacific Islander
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ Mixed (two or more races)
- ☐ White or Caucasian
- ☐ Other:

4. How many related people (e.g. spouse, children, parents) live with you?

5. How many unrelated individuals (e.g. roommates) live with you?

6. How many people under the age of 18 live with you?

For all following questions, "the Commons" and "downtown Ithaca" refer to the following highlighted areas.



7. Would you describe yourself as...

Select all that apply

- ☐ Undergraduate student at...
 - ☐ Cornell ☐ Ithaca College ☐ TC3
 - ☐ Other:
- ☐ Graduate/professional student at...
 - ☐ Cornell ☐ Ithaca College ☐ TC3
 - ☐ Other:
- ☐ Employed at...
 - ☐ Cornell ☐ Ithaca College ☐ TC3
 - ☐ On the Commons or within a 1-mile radius from the Commons
 - ☐ Within a 1 to 5-mile radius from the Commons
 - ☐ Within a 5 to 10-mile radius from the Commons
 - ☐ Over 10 miles away from the Commons
- ☐ Self-employed
- ☐ Stay-at-home
- ☐ Retired
- ☐ Other:

8. In what range does your annual income (or your family's income, if you currently reside with related people) fall?

- ☐ \$15,000 or under
- ☐ \$15,001 to \$30,000
- ☐ \$30,001 to \$45,000
- ☐ \$45,001 to \$70,000
- ☐ \$70,001 to \$100,000
- ☐ \$100,001 or over
- ☐ I decline to answer

(Continue on page 2)

Tell us about your experience living in downtown Ithaca.

9. When did you move to downtown Ithaca?

- ☐ Less than 1 year ago
- ☐ 1 – 2 years ago
- ☐ 3 – 5 years ago
- ☐ 6 – 10 years ago
- ☐ Over 10 years ago
- ☐ I don't live in downtown Ithaca

10. What was the ZIP code at your previous address?

11. Please select your **top three** reasons for why you moved to downtown Ithaca

- ☐ Closer to work or school
- ☐ Educational opportunities (for yourself or partner)
- ☐ Convenient access to services, shopping, and the Commons
- ☐ Bikeable and walkable neighborhood
- ☐ Access to public transit
- ☐ Proximity to family or friends
- ☐ Access to natural amenities such as waterfalls, lakes, and parks
- ☐ Lower cost of living
- ☐ Assisted living or managed property (no lawn mowing and snow shoveling)
- ☐ Better winter maintenance
- ☐ Lower crime rate

Other

12. Please respond to the following statements:

"I feel safe living in downtown Ithaca."

- ☐ Completely disagree
- ☐ Mostly disagree
- ☐ Mostly agree
- ☐ Completely agree

(Question 12 continues on the top-right)

12. (continued)

"The downtown area is clean and well maintained."

- ☐ Completely disagree
- ☐ Mostly disagree
- ☐ Mostly agree
- ☐ Completely agree

"The downtown area meets my shopping needs."

- ☐ Completely disagree
- ☐ Mostly disagree
- ☐ Mostly agree
- ☐ Completely agree

13. Please respond to the following questions:

How often do you shop downtown?

- ☐ Never ☐ Seldom ☐ About monthly
- ☐ About weekly ☐ About daily

How often do you dine out downtown?

- ☐ Never ☐ Seldom ☐ About monthly
- ☐ About weekly ☐ About daily

How often do you go to entertainment venues (e.g. movies, concerts) downtown?

- ☐ Never ☐ Seldom ☐ About monthly
- ☐ About weekly ☐ About daily

14. What is your favorite location (anywhere in Tompkins County) to...

Purchase groceries

Shop for clothing

Dine out

Find entertainment (e.g. movies, concerts)

Meet friends/family

(Continue on page 3)

Tell us about your transportation habits in Ithaca.

15. What is your most frequently used mode of transportation when you go to...

Purchase groceries

- ☐ Walking ☐ Biking ☐ TCAT bus
☐ Personal car ☐ Carpool ☐ Taxi
☐ Ithaca Carshare ☐ Other

Shop for clothing

- ☐ Walking ☐ Biking ☐ TCAT bus
☐ Personal car ☐ Carpool ☐ Taxi
☐ Ithaca Carshare ☐ Other

Dine out

- ☐ Walking ☐ Biking ☐ TCAT bus
☐ Personal car ☐ Carpool ☐ Taxi
☐ Ithaca Carshare ☐ Other

Find entertainment (e.g. movies, concerts)

- ☐ Walking ☐ Biking ☐ TCAT bus
☐ Personal car ☐ Carpool ☐ Taxi
☐ Ithaca Carshare ☐ Other

Meet friends/family

- ☐ Walking ☐ Biking ☐ TCAT bus
☐ Personal car ☐ Carpool ☐ Taxi
☐ Ithaca Carshare ☐ Other

(Question 16 continues at the top-right)

16. How often do you travel using each mode of transportation?

Personal car/motorized vehicle

- ☐ Never ☐ Seldom ☐ About monthly
☐ About weekly ☐ About daily

Carpool/rideshare

- ☐ Never ☐ Seldom ☐ About monthly
☐ About weekly ☐ About daily

TCAT bus/Gadabout

- ☐ Never ☐ Seldom ☐ About monthly
☐ About weekly ☐ About daily

Ithaca Carshare

- ☐ Never ☐ Seldom ☐ About monthly
☐ About weekly ☐ About daily

Taxi

- ☐ Never ☐ Seldom ☐ About monthly
☐ About weekly ☐ About daily

Biking

- ☐ Never ☐ Seldom ☐ About monthly
☐ About weekly ☐ About daily

Walking (including mobility devices)

- ☐ Never ☐ Seldom ☐ About monthly
☐ About weekly ☐ About daily

Tell us about the transportation vehicles (i.e. bicycles and motorized vehicles) you own in Ithaca.
 Motorized vehicles are those which require a driver's license to operate on NY roads (e.g. cars, motorcycles, mopeds)

17. How many bicycles does your household have? ☐ None (Go to question 20)

- ☐ 1 ☐ 2 ☐ 3+

18. What is your primary reason for having a bike in Ithaca?

- ☐ Work/school ☐ Shopping/errands
☐ Recreation/exercise
☐ Other:

19. Where do you most often store your bike overnight?

- ☐ Inside own apartment
☐ Bike storage room
☐ Outdoor bike rack
☐ Other:

20. How many motorized vehicles does your household have in Ithaca? ☐ 1 ☐ 2

- ☐ None (Go to question 23) ☐ 3+

21. Where do you most often park your vehicle when not in use?

- ☐ Downtown public garage
☐ Apartment's parking lot/garage
☐ On downtown streets
☐ Parking lot/garage/street outside the downtown area
☐ Other:

22. If you currently park your car downtown, would you be interested in saving money by parking outside of downtown Ithaca (e.g. in a Cornell parking lot) at a reduced price?

- ☐ Yes ☐ Maybe ☐ No ☐ N/A

Tell us what would motivate you to move differently.

23. Please select your **top three** options that would help you bike more often in Ithaca.

- ☐ I am not interested in biking more often
(Go to question 24)
- ☐ An easy way up the hills
- ☐ More painted bike lanes
- ☐ Separated bike lanes
- ☐ Education on cycling safety and tips
- ☐ A bike mentor, or someone to bike with
- ☐ Information on how to load a bike on the TCAT bus
- ☐ Better lit streets
- ☐ Available overnight bike parking
- ☐ A bikeshare program
- ☐ Better-connected bike lanes
- ☐ Information or discounts for purchasing a bike and equipment
- ☐ Bike benefits redeemable at local shops rewarding you for biking

Other

24. Please select your **top three** options that would help you walk more often in Ithaca.

- ☐ I am not interested in walking more often
(Go to question 25)
- ☐ An easy way up the hills
- ☐ Education on pedestrian safety tips
- ☐ Better lit streets and sidewalks
- ☐ More pedestrian walkways and trails
- ☐ More accessible pedestrian sidewalks
- ☐ Information on how to use a mobility device on the TCAT bus
- ☐ Safer street crossings
- ☐ Connectivity of pedestrian sidewalks

Other

25. Please select your **top three** options that would help you take TCAT more often.

- ☐ I am not interested in taking TCAT buses more often
(Go to bottom of page)
- ☐ Just-in-case plan
(e.g. emergency taxi ride home)
- ☐ Buses that come more frequently
- ☐ Buses that are on-time
- ☐ Longer service hours (e.g. late-night service)
- ☐ Stops/routes closer to my destinations
- ☐ Real-time information on routes and schedules
- ☐ Cleaner, more comfortable shelters and buses
- ☐ More available bike racks at stops or on the bus
- ☐ Discounted or free bus passes

Other

Thank you for completing the survey! Do not forget to complete your raffle entry form for the \$100 gift card.

(Optional) In your own words...

What is your biggest downtown living and transportation challenge?

What would improve your overall experience as a downtown Ithaca resident?

Other comments or feedback?

Appendix D: Downtown Transportation Survey Report

2015 Downtown Ithaca Alliance & ITCTC

Downtown Transportation Survey Report

Contents

Neighborhood Demographics.....	3
Population	3
Age & Sex.....	3
Household Types.....	3
Occupation	4
New Movers.....	4
Car Ownership.....	5
Considerations for a Downtown Transportation Demand Management Program.....	5
Transportation Behaviors	6
Destinations	6
Work and School	6
Groceries and Shopping (for Clothing).....	7
Dining, Entertainment, and Other Social Gatherings.....	8
Barriers & Issues.....	8
TCAT	8
Biking.....	9
Parking.....	10
Ithaca Carshare.....	10
Considerations for a Transportation Demand Management Program	11

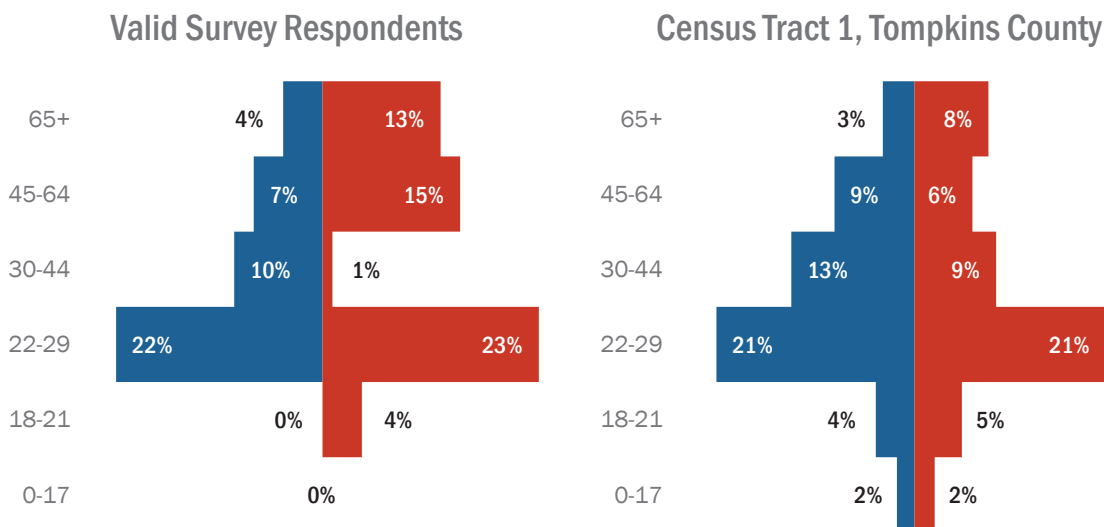
Neighborhood Demographics

Population

The population of downtown Ithaca, as defined by the boundaries of the Downtown Ithaca Alliance's tax jurisdiction, is around **1120 people and 797 households**. Not all buildings were targeted for the survey. The estimated population of the buildings that were surveyed is around 560, and 17% of those residents completed the survey in full.

Age & Sex

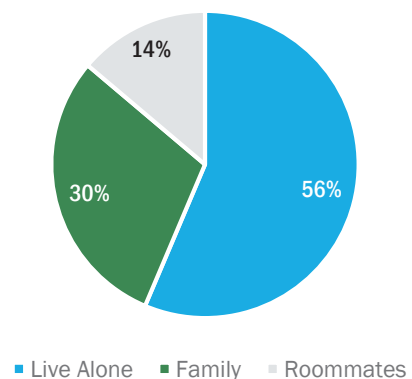
The makeup of downtown residents can be summarized in two groups: **a slight majority of people under 30 and a complementary group of people over 30**, where both groups are gender-balanced (see Census Tract 1 chart). Survey respondents match the expected breakdown in terms of age with a slight majority of people under 30. The differences, such as an overrepresentation of women over 45 and an underrepresentation of middle-aged women, arise from the specific buildings that were targeted in the survey.



Household Types

The types of households that exist in the downtown reflect the stock of rental apartments available in the area, which are primarily studios and 1 bedroom apartments. **The average number of people living in each household amongst survey respondents is 1.53.**

Types of Households



Occupation

The occupations of the survey respondents can be roughly defined as **40% students, 40% workers, and 20% retirees**. Within the employed population there is a variety of ages. It should be noted that since the survey has a larger proportion of respondents over 45, the proportion of retirees in the downtown population is possibly lower. Nevertheless, this split between “life stages” could be used to segment the population, especially as transportation barriers and benefits differ between each segment.

New Movers

People who moved within the past year make up 44% of the survey respondents, a proportion that is congruent with census data. Amongst the new movers in the survey, **students are the primary group of new movers into the downtown core**, followed by workers under 30.

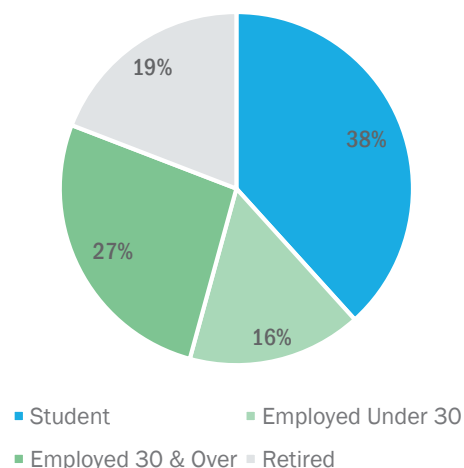
Within new movers who answered the survey, **two-thirds come from outside the county**, providing a large cohort that would benefit greatly from a transportation program that introduces them to their options in Tompkins County. Using ZIP code data provided by the respondents, it was determined that **nearly 60% of new movers from outside the county come from an urban area**.

Given this information, there are both benefits and challenges that come from targeting new movers:

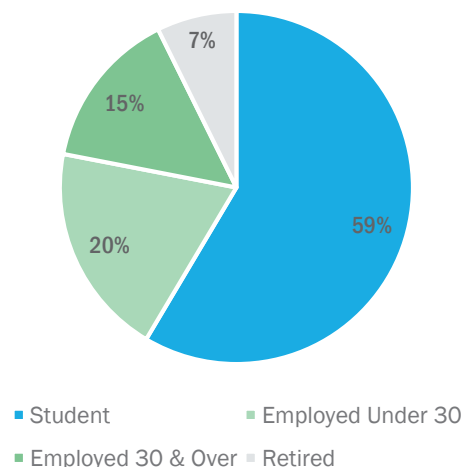
Benefits	Challenges
Potentially more influential population* Can influence decision to bring vehicle	Primarily younger audience Higher turnover rate

* Survey results did not indicate increased receptivity of a transportation program amongst those who have moved recently, but other TDM programs have reported that new movers may be able to implement changes in their daily routines. New movers in Ithaca seem to quickly adopt the transportation behaviours of their peers.

Occupation of Residents



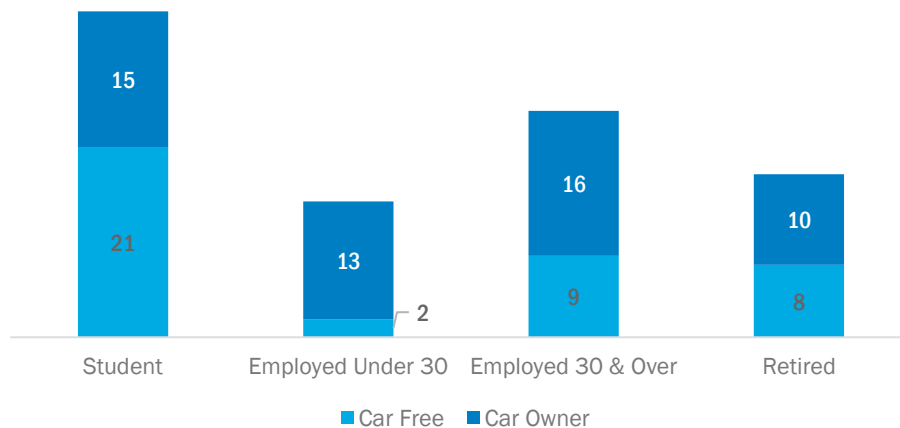
Occupation of New Movers



Car Ownership

While there are a variety of transportation options available to downtown residents, **57% of survey respondents indicated that they own a car in Ithaca**. Most tellingly, a majority of new movers to the downtown area (56%) bring their cars with them. Car ownership rates vary by “life stage.”

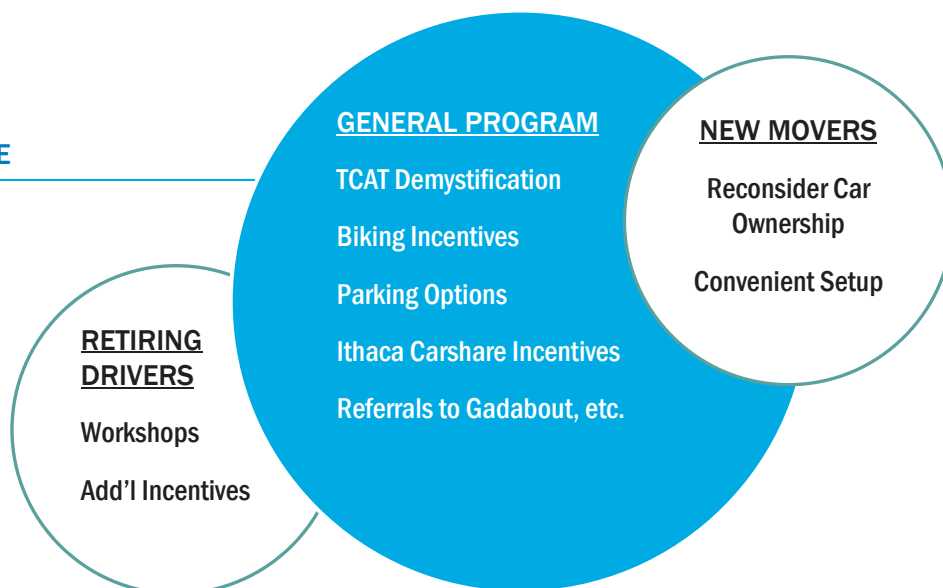
Car Ownership by Occupation



Considerations for a Downtown Transportation Demand Management Program

A TDM program in downtown Ithaca should target new movers with the intent of reducing car ownership so that newcomers are motivated to use the transportation options available to them. However, new movers did not seem to be more receptive to a TDM program compared to non-movers in the same situation, and the effects of targeting new movers exclusively will diminish over time due to turnover. Targeting all downtown residents with a general program, with additional initiatives tailored to new movers (a “VIP treatment”), may be a good way to overcome these two obstacles.

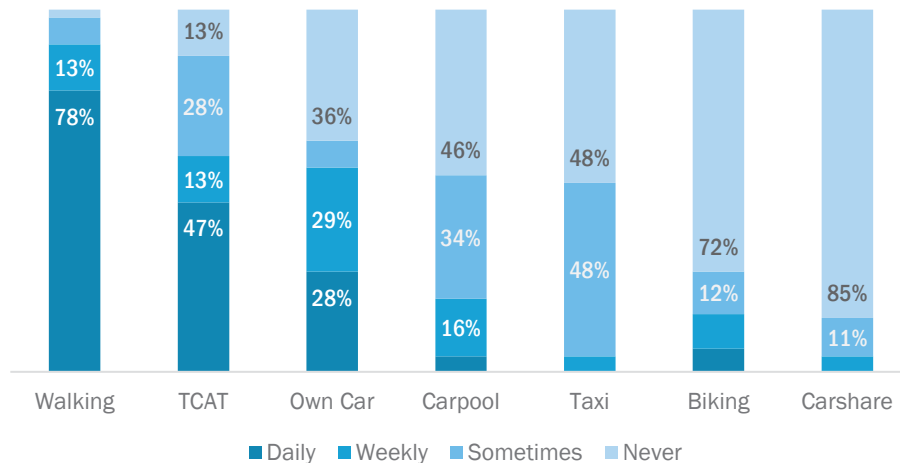
EXAMPLE PROGRAM STRUCTURE



Transportation Behaviors

Due to the demographics of downtown residents and the amenities and services that are concentrated in the area, the adoption rate is very high for two sustainable modes of transportation: walking and transit. However, a fair number of trips occur via personal vehicle, which hints at unmet needs in terms of transportation and downtown amenities. The low levels of biking and carshare, which could replace personal vehicle trips, could be pointing to barriers in their use.

Frequency of Use of Modes of Transportation

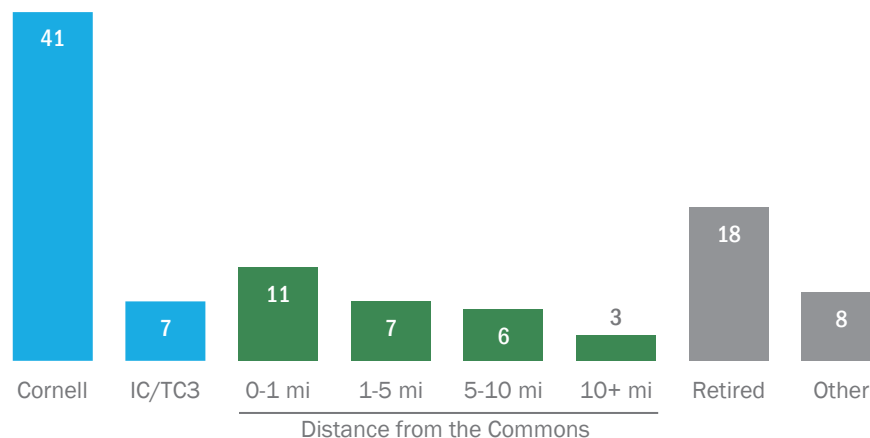


Destinations

Work and School

Most survey respondents indicated that they go to Cornell for work or school. Of those who worked outside of a college, most tended to work in or close to downtown. Additionally, a significant number of residents indicated that they are retired, self-employed, or stay-at-home parents so their travel patterns may not be as discrete as a typical commuter's patterns.

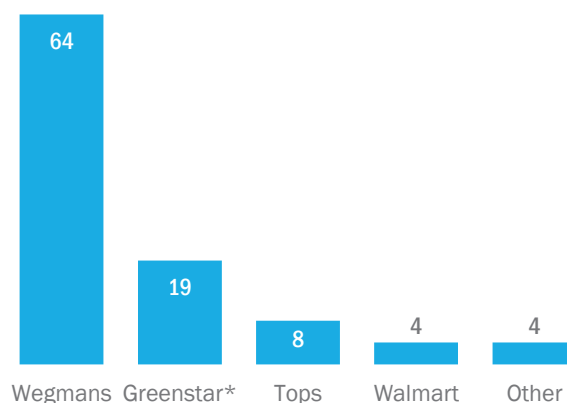
Work or School Destination



Groceries and Shopping (for Clothing)

While the top grocery store in Tompkins County is not a surprise, the overwhelming preference for it is. Greenstar is the second-top choice; however, survey respondents did not specify to a large degree whether they shopped at the main Greenstar location or the smaller downtown Greenstar “Oasis” location in Dewitt Mall.

Favorite Grocery Destination



To shop for clothing, most respondents go to chain stores outside the downtown area such as Target, Kohl's, TJ Maxx, and Ithaca Mall in general. Some respondents noted the Internet as a place where they shop. Two stores in the downtown area that were mentioned more than once were Trader K's and Benjamin Peters.

The lack of appealing destinations for grocery and general shopping means that some “neighborhood” trips actually occur outside of the downtown area. While not far, these trips go to places where transit, biking, and walking are less accessible or less appealing modes of transportation. This is apparent in the mode share for each of these kinds of trips.

Mode Share for Groceries

1. Own Car (50%)

2. Walking (15%)

3. TCAT (14%)

4. Carpool (9%)

5. Biking (5%)

6. Ithaca Carshare (4%)

Mode Share for Shopping

1. Own Car (45%)

2. Walking (26%)

3. TCAT (22%)

4. Carpool (6%)

5. (TIE). Biking (1%)

6. (TIE). Taxi (1%)

Dining, Entertainment, and Other Social Gatherings

A variety of establishments in downtown Ithaca serve as respondents' favorite dining establishment, with Viva Taqueria, Just a Taste, and Taste of Thai being mentioned several times. When prompted for their favorite entertainment venue, over 20 respondents wrote in Cinemapolis. Lastly, when asked for their favorite place to meet friends and family, respondents answered with various downtown establishments or simply with "The Commons" or "Downtown." **Survey responses underscore downtown Ithaca's function as the city (and the county's) civic center, especially for those that live within its confines.** Respondents indicated that they usually walk for these types of trips.

Barriers & Issues

The barriers to taking TCAT and biking are examined in-depth due to the depth of questions in the survey regarding those two modes. Walking was a mode that elicited little examination with its high adoption rate of over 90% (weekly and daily). Parking concerns and carshare use are also examined.

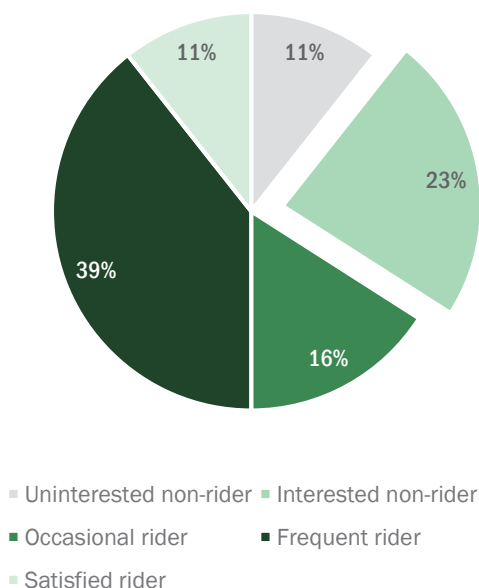
TCAT

By comparing respondents' frequency of taking TCAT with the improvements they would like to see in the system, a better picture was produced of the barriers faced by potential and current riders.

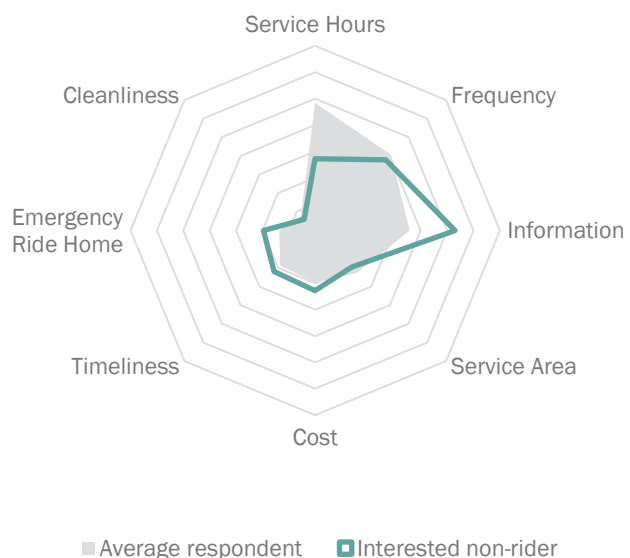
Respondents were grouped by how often they take TCAT and the responses to a question about TCAT improvements were compared between groups to see how respondents in each state of change value those possible improvements differently.

Most interestingly, the analysis found that about **a quarter of respondents have never or seldom taken TCAT but would be interested in taking it more often primarily if information about it were improved.** These interested non-riders are primarily not Cornell-affiliated frequent car users. Additional profiles of TCAT barriers by state of change can be found in page 12.

TCAT State of Change of Respondents



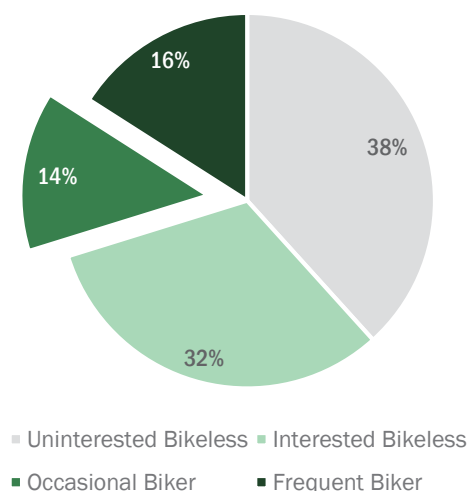
Ranking of TCAT Improvements



Biking

Similarly, respondents were divided depending on their biking frequency, access to a bike, and the improvements they would like to see regarding the experience of biking in Ithaca.

Biking State of Change of Respondents

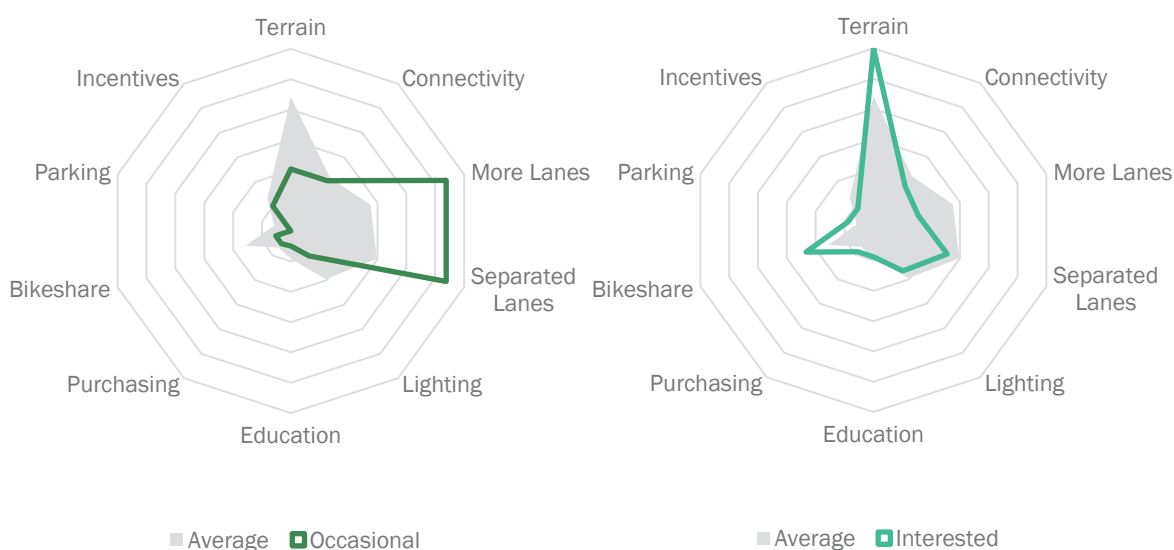


The segmentation revealed that **over 60% of respondents would like to bike more often but half of those do not own bikes**. Of those who do own bikes, half only bike occasionally, mainly for recreation rather than as a serious mode of transportation. The barriers that frequent, occasional, and interested bikers face differ between them, and depending on the focus of this TDM program one group will benefit from certain improvements more than others.

Occasional bikers overwhelmingly chose additional bike lanes and separated bike lanes as an improvement that would encourage them to bike more, which may echo concerns about safety which can be partly addressed by education (even

though education-focused improvements polled rather low overall). **Interested but currently bikeless respondents indicated Ithaca's terrains and the unavailability of a bikeshare system as barriers to biking**. Upon further examination, most interested respondents are students at Cornell University, so a biking-focused program aimed at this demographic should clearly focus on people's trips in Ithaca's flatlands and not their trips up the hill. Additional profiles and a discussion on current bicycle parking conditions are available in page 14.

Ranking of Biking Improvements



Parking

With car ownership rates at 57% among survey respondents, parking conditions were included in the scope of the survey and even beyond as some respondents wrote about parking problems in optional open-ended questions. **Concerns about parking touch upon pricing, availability, and inconvenience of existing options for long-term or overnight parking.** These concerns arise from downtown Ithaca's unique parking situation within the county, confusing and limited information, and a mismatch of parking expectations that is not addressed before residents bring their vehicles downtown.

The majority of respondents indicated that they parked their vehicles in parking lots that are adjacent to their apartments, often for an extra fee attached to their rent. The majority may also be reflective of the fact that the majority of buildings surveyed had adjacent apartment parking.

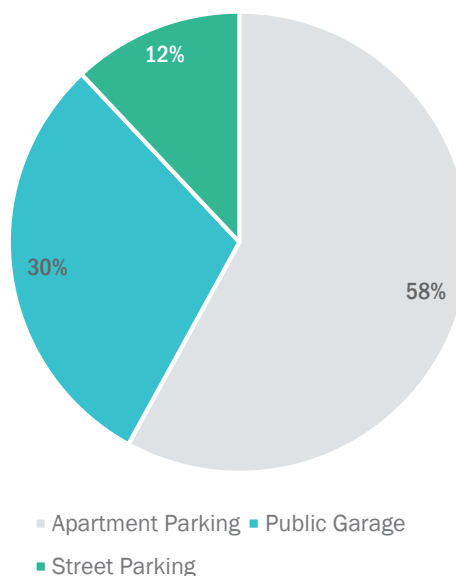
Residents in buildings without adjacent parking, often student-centered buildings, parked their vehicles in public garages or on the street.

Given that most people park nearby their apartments, it was not unexpected that enthusiasm for remote parking was lukewarm at best. The idea of remote parking fared better with respondents who parked overnight on the street, followed by those in public garages. **The cost of remote parking may be influential in the success of the project given that people who currently park on the street overnight do so for free.**

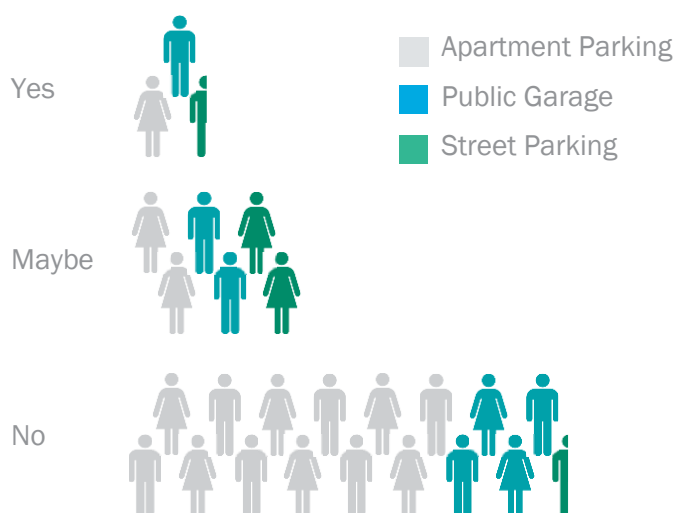
Ithaca Carshare

The low adoption of Ithaca Carshare by respondents show potential for improvement in registrations and further reduction in car ownership within the downtown core. Ithaca Carshare covers the transportation needs that other modes are not suitable for. Due to the lack of questions regarding carshare in the survey, there are no findings from the survey. However, an analysis of membership data provided by Ithaca Carshare shows that the majority of members in the downtown core are Cornell students. A complete analysis of the results can be found in page 17. Regardless, **membership in Ithaca Carshare may be an attractive incentive to convince people to go car-free in downtown Ithaca.** A flowchart that explains the changes in the decision-making process that a TDM program could have can also be found in page 19.

Overnight Parking Location



Interest in Remote Parking by Current Parking Location



Considerations for a Transportation Demand Management Program

The segmentation exercise by state of change shows that survey respondents from all walks of life are interested in moving more sustainably. For a TDM program to be most impactful, however, messaging should be focused to the specific segments (life stage, movers, or affiliation) that are most interested in each transportation mode or initiative. This does not preclude people who may not fit the prescribed focus segment to participate in the program of their choice. Due to the outsized impact students and Cornell University has on the segmentation of downtown residents, **cooperation with the university is essential to target Cornell-affiliated potential and current residents.**

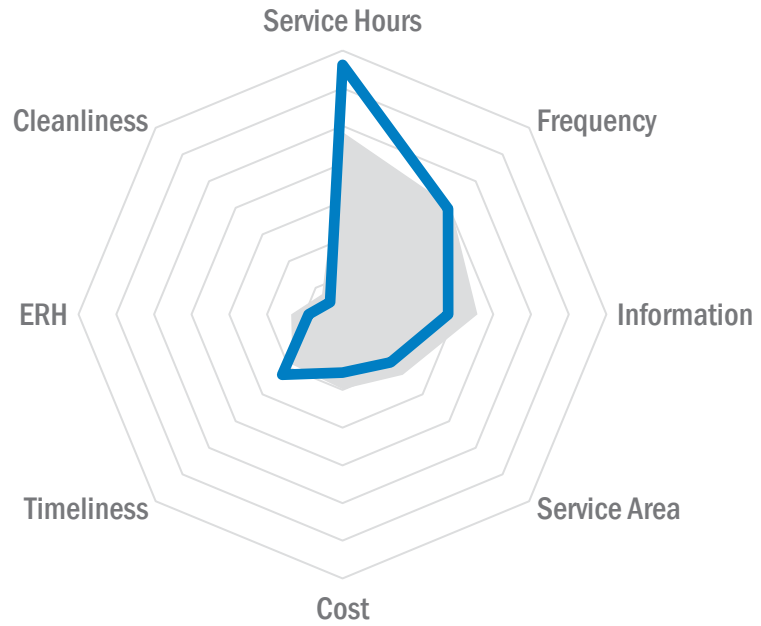
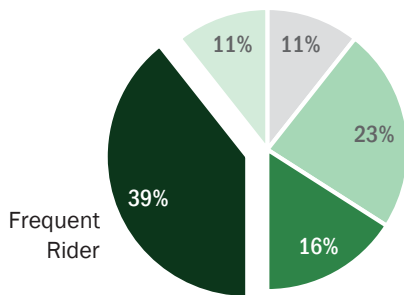
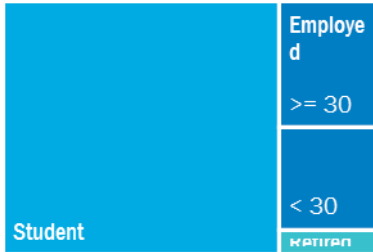
Additionally, **cooperation with property owners will be key to contact new movers prior to their arrival to downtown Ithaca.**

Target Segment		Target Mode Shift or Initiative
Students or university affiliates	➡	Biking in and around downtown
Non-students or non-affiliated	➡	TCAT introduction and encouragement
Potential movers with vehicles*	➡	Parking and Ithaca Carshare comparison

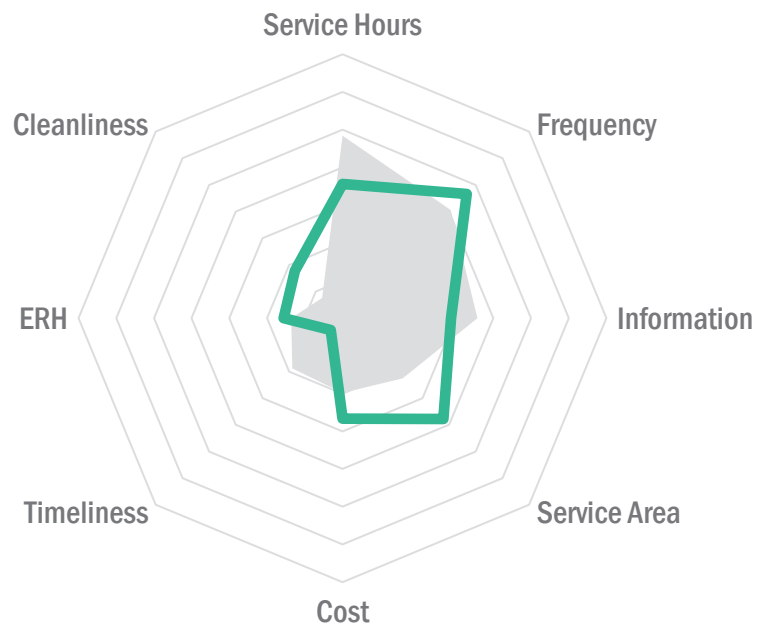
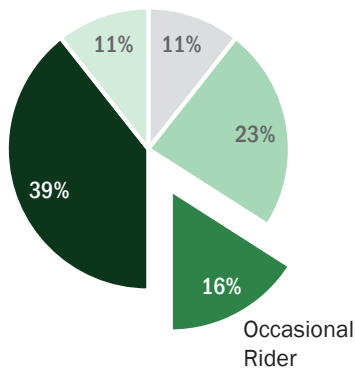
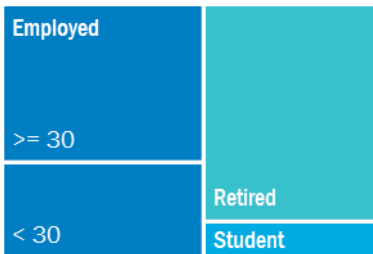
* Potential movers with vehicles would be introduced to their corresponding initiative *prior to their arrival to downtown Ithaca and in addition to their appropriate target segment*, while potential movers without vehicles would be introduced to their appropriate target segment primarily.

TCAT Priorities by State of Change Segmentation

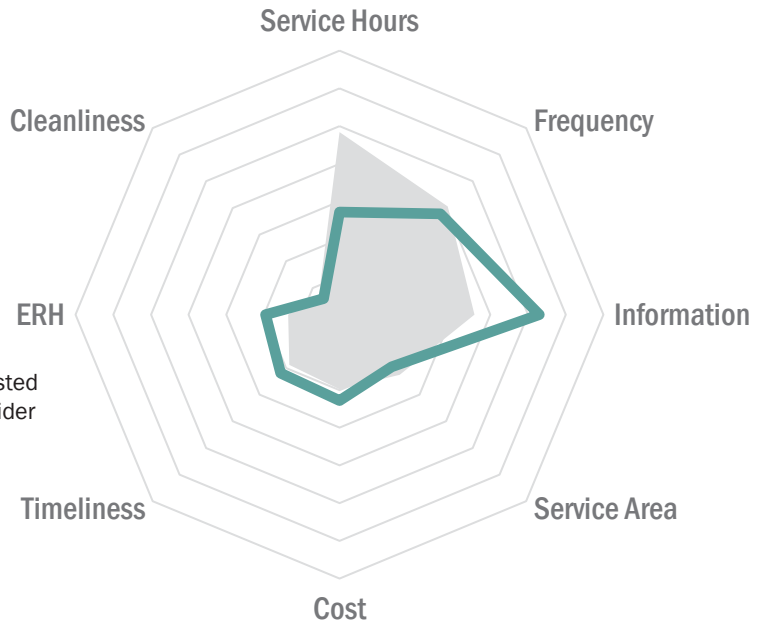
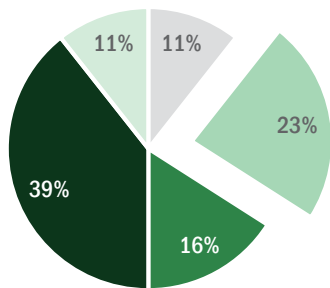
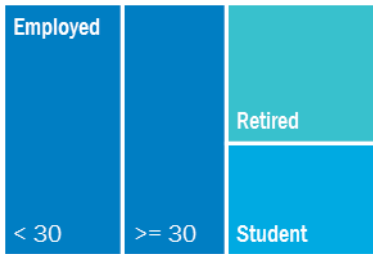
Frequent Rider (Average respondent in grey)



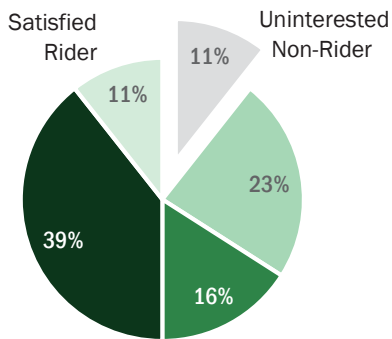
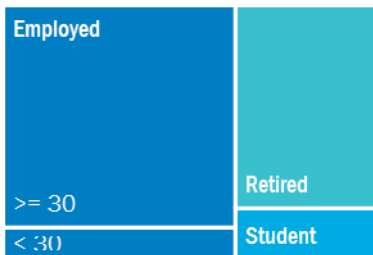
Occasional Rider



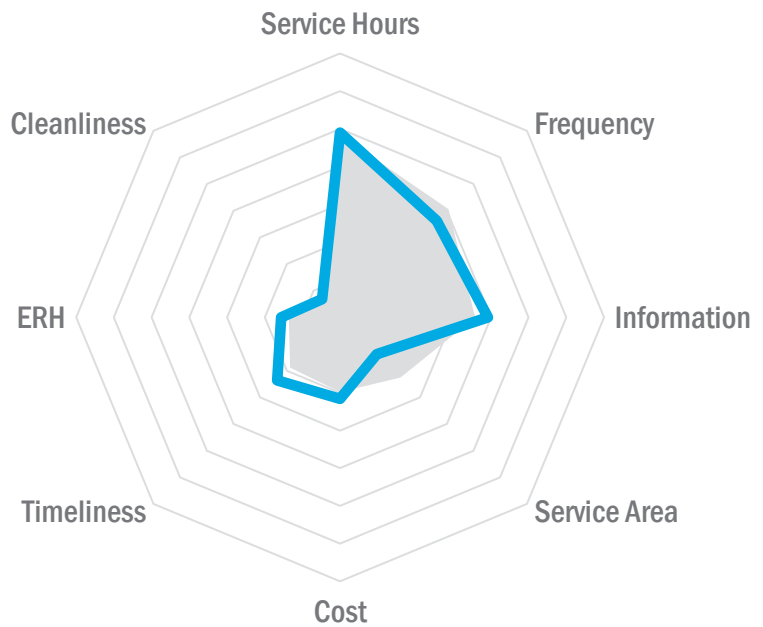
Interested Non-Rider



Uninterested Non-Rider

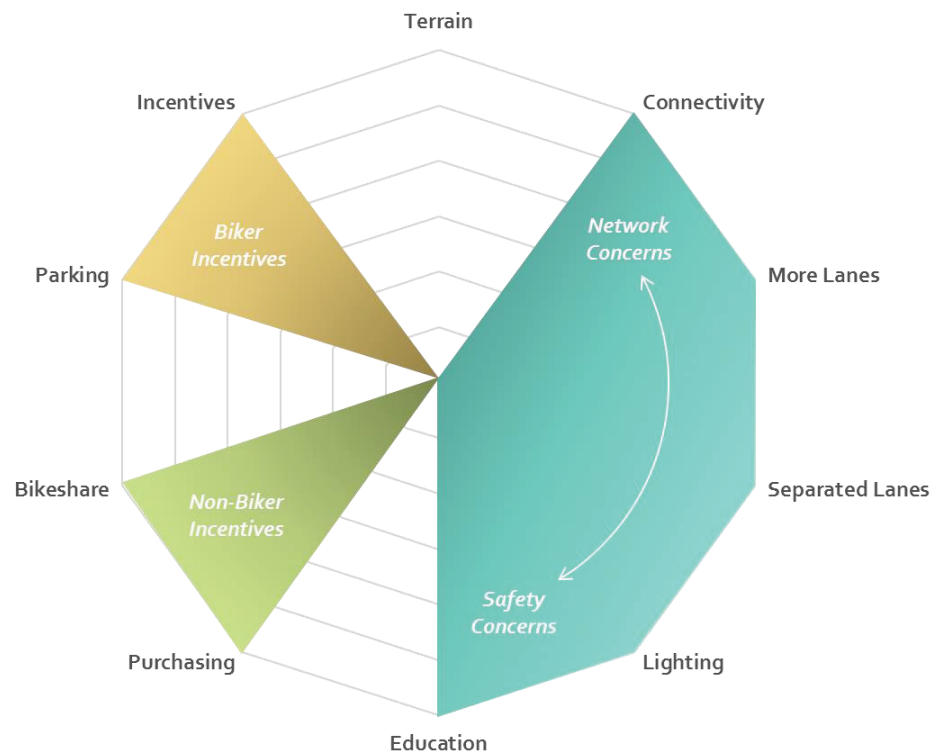


New Mover (Less than 1 year ago)

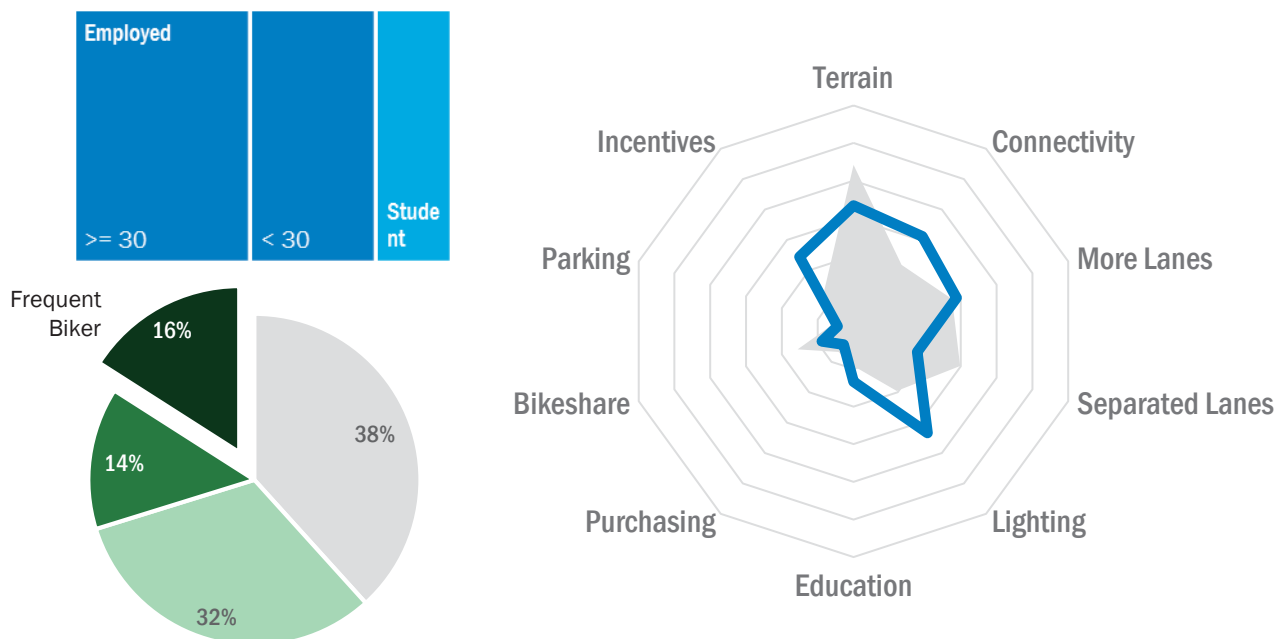


Biking Priorities by State of Change Segmentation

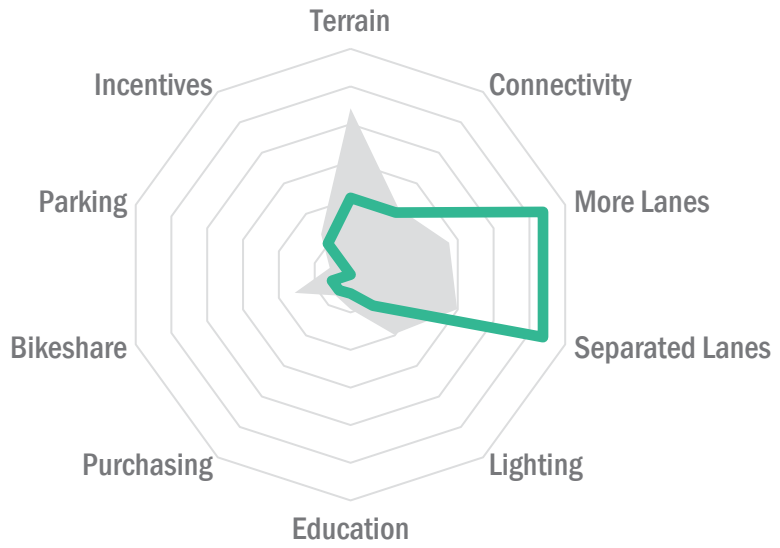
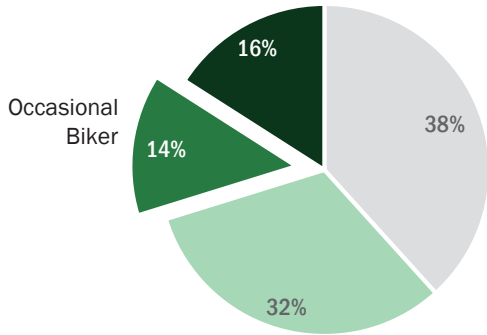
How to Interpret Radar Chart Priorities



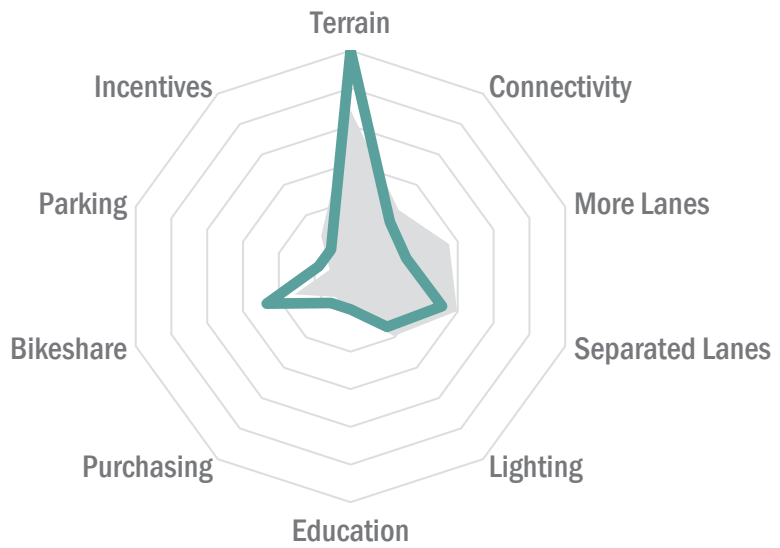
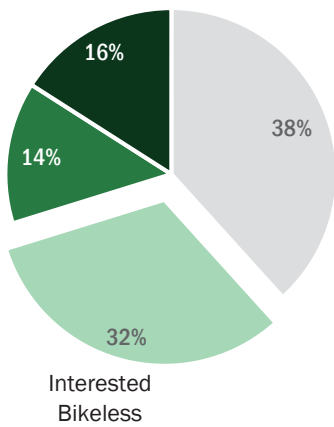
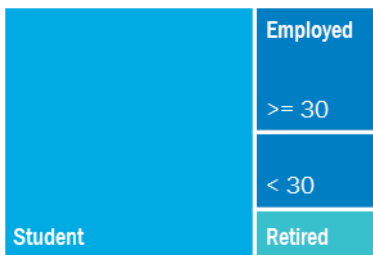
Frequent Biker (Average respondent in grey)



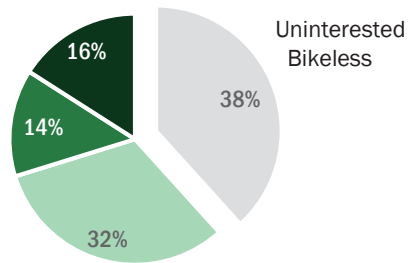
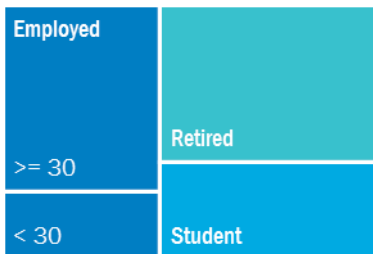
Occasional Biker



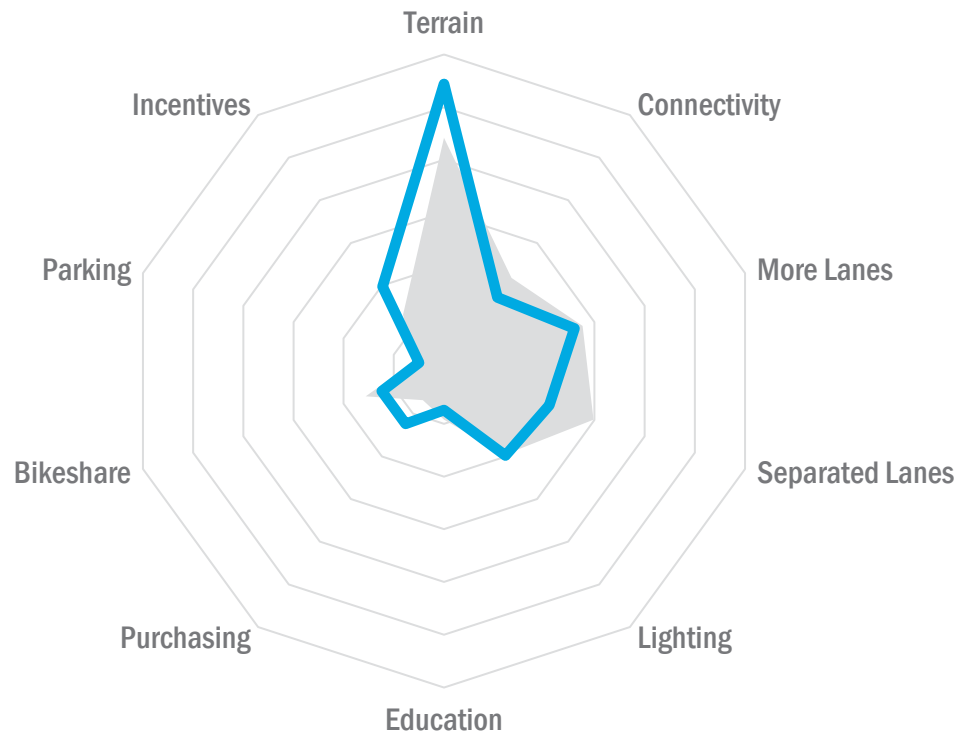
Interested Bikeless



Uninterested Bikeless



New Mover (Less than 1 year ago)



Bicycle Parking

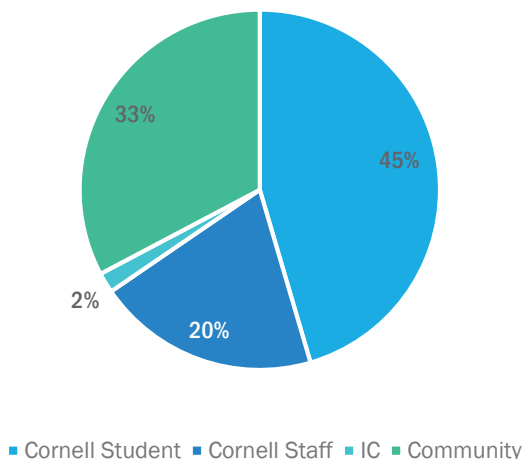
Currently, **72 percent of survey respondents who own bicycles store them overnight inside their own apartments**, while a few lock them to outdoor bike racks and even fewer store them in bicycle storage rooms. While this seems to bode well for the idea of a secure bicycle parking facility in the downtown area, **only five respondents indicated that bicycle parking would encourage them to bike more often**, and four of the five respondents do not currently own a bike.

Bicycle parking would be a behavior change incentive that would be attractive to a few individuals, and it would address a potential but minor barrier to owning and riding a bicycle in Ithaca. Planned investments in bicycle parking should be repurposed to address the more challenging barriers to biking as indicated by survey respondents.

Ithaca Carshare Membership Analysis

Results from the downtown survey indicated that very few respondents used Ithaca Carshare. By using membership data provided by the service, we can determine the full extent of Carshare's downtown members, past and present.

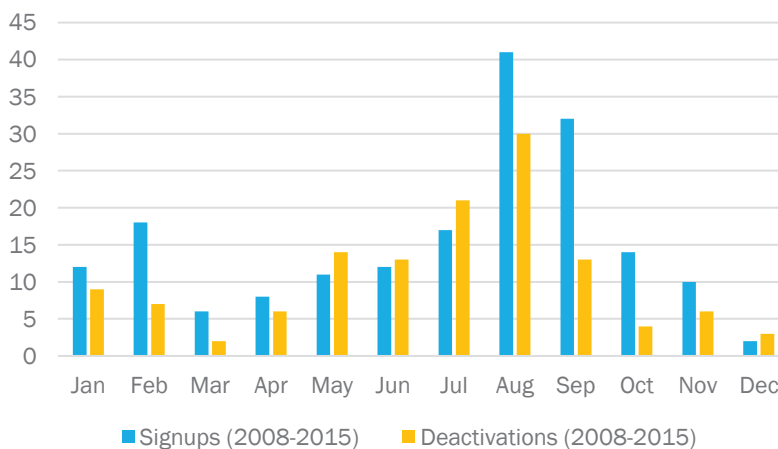
Affiliations of Active Downtown Carshare Members



At the time the Carshare data was provided (November 2, 2015), **there were 55 active downtown members in the Carshare system**. Cornell-affiliates, especially Cornell staff, are overrepresented within Carshare's membership when compared with the [occupation of residents](#). This may be a result of the membership incentives given by Cornell as well as members' choice to live a car-free lifestyle. However, at 55 active members, **Carshare members constitute around 5 percent of the downtown resident population**.

Given the high share of Cornell students within Ithaca Carshare's membership, it is expected that turnover is high. **Signups and deactivations for Ithaca Carshare coincide with the academic year**. Most signups for Ithaca Carshare occur during the August-September move-in period, and most deactivations pick up starting in May.

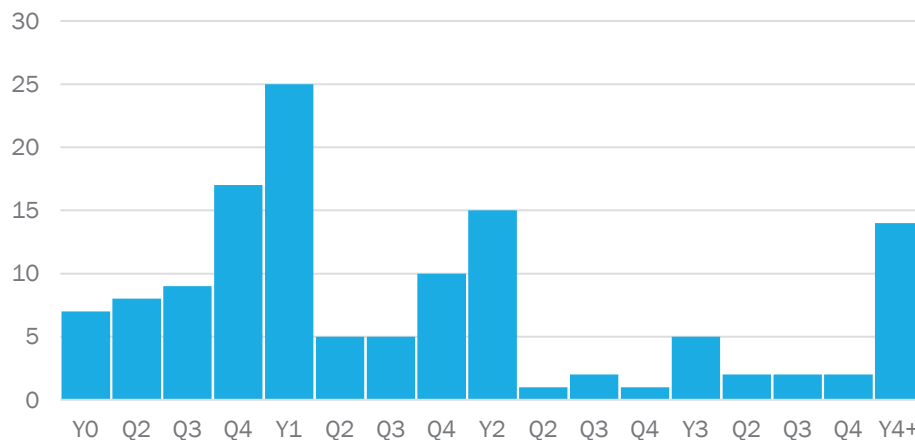
Downtown Carshare Signups and Deactivations



Another way of looking at Carshare membership turnover is the average length of membership of the accounts that have been deactivated. While the average length of a deactivated account is 20 months, **the median membership length is 13 months** (i.e., half of all members in the downtown quit within 13 months after they sign up). Given the fact that most Cornell students in the downtown are graduate students, it is probable that **most members sign up after spending a year in Ithaca without being a Carshare member**, possibly after finding difficulties living without access to a car for a year. An alternate theory may be that members may be mostly undergraduate students who sign

up during their final year, when they turn 21 and when insurance requirements for Ithaca Carshare are less stringent. Regardless, memberships are generally deactivated by members in 12-month cycles.

**Membership Length of Deactivated
Downtown Carshare Accounts**



Potential For Improvement

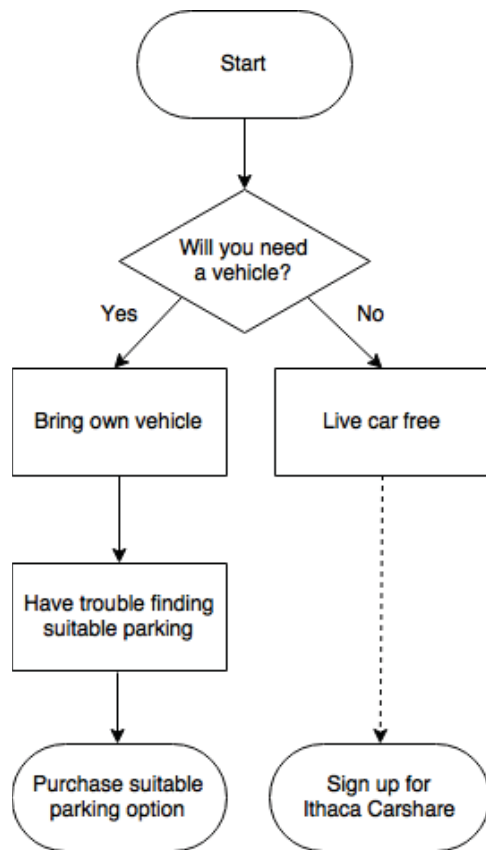
On average, Ithaca Carshare registers 23 downtown applicants every year, with about 9 registering during move-in season. These applicants amount to less than five percent of new movers, and about 10 percent of new movers without vehicles. Targeted marketing to reach these individuals may increase the share of Carshare membership in downtown Ithaca.

Incentives for Ithaca Carshare should bring the cost of entry down. The impact of free memberships can be seen within the Cornell student members, where the Just In Case plan does not charge a monthly fee for membership even though the cost for using the car is higher. The Just In Case plan also works better for infrequent drivers, which makes it more suitable for the once-a-week grocery or general shopping trip which is not easily accomplished via other modes.

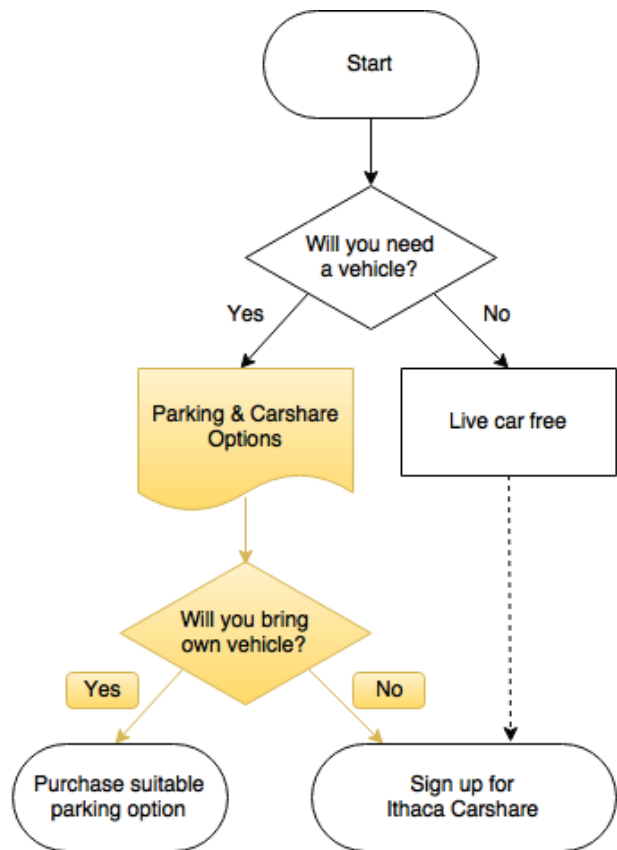
Affiliation	Easy Access	Just In Case	It's My Car
Community	4	8	6
Ithaca College			1
Cornell Staff		4	7
Cornell Student		20	5

Registering members upon arrival in Ithaca or even earlier would lengthen the average membership time and potentially reduce car ownership. When presented with the costs of car ownership specific to downtown Ithaca, and the car-free and car-light lifestyle most downtown residents live, new residents may be convinced to leave their vehicles at home and live car-free while they stay in Ithaca. Ithaca Carshare, in addition to being marketed as a supplement to other modes, should also be marketed as the car you have while you're in Ithaca (*your Ithacar*). The next page shows a TDM intervention that could encourage new signups for Ithaca Carshare in the context of the transportation challenges a prospective downtown Ithaca resident may face.

Before TDM Intervention



After TDM Intervention



Appendix E: Calculation & Discussion of Averages from 2009 NHTS

The most recent National Household Travel Survey (NHTS) was released in 2009 and the Ithaca-Tompkins County Transportation Council (ITCTC) requested a special tabulation of the NHTS with figures that were reflective of the population at the county level. The NHTS estimated that the typical Tompkins County household made 5.05 vehicle trips a day, driving a total of 37.89 VMT daily. Given that the county has both rural, suburban, and urban neighborhoods, and the special tabulation did not provide averages at the neighborhood or municipal level, the county-wide averages may not reflect the transportation patterns of an urban, less car-dependent area like downtown Ithaca.

To provide a more conservative estimate of vehicle trip and mileage reduction for the downtown-focused SmartTrips Ithaca project, a lower average was computed for daily household vehicle trips and VMT based on the composition of households in the downtown area according to the American Community Survey and using data provided on Table 5-07 from the aforementioned special tabulation of the NHTS.

Table E-1 – Selected Figures Used In Calculations

Source: 2009 National Household Travel Survey, New York Add-On, Ithaca MPO, Table 5-07

<i>Household Composition [h]</i>	<i>Vehicle Trips (All Days)^b [A]</i>	<i>VMT (All Days) [B]</i>	<i>Avg. Trip Length (All Days) [C]</i>	<i>Percentage of Downtown Households^c [D]</i>	<i>Avg Size of. Downtown Household^c [s]</i>
1 Adult, No Child	2.23	11.49	5.15	56.9%	1.45 persons
1 Adult, Retired, No Child	1.26	6.09	6.68	11.2%	
2+ Adults, No Child ^a	6.14	40.55	4.85	31.9%	

^a 2+ Adults, No Child figures were used to account for all other household compositions that do not match the first two types given the small percentage of households with children in the downtown area.

^b “All Days” refers to a weighted average of weekday and weekend trips

^c The percentage of downtown households by household composition and average size of households were obtained from the 2014 ACS 5-Year Average

Equation E-1 – Weighted Average of Daily Vehicle Trips per Household in Downtown Ithaca

$$\sum_{h=1}^3 A_h D_h / s = (2.23 * 56.9\% + 1.26 * 11.2\% + 6.14 * 31.9\%) / 1.45 = 2.32 \text{ vehicle trips/day/person}$$


Equation E-2 – Weighted Average Trip Length for Households in Downtown Ithaca

$$\sum_{h=1}^3 C_h D_h / s = (5.15 * 56.9\% + 4.85 * 11.2\% + 6.68 * 31.9\%) / 1.45 = 3.86 \text{ VMT/day/person}$$

Appendix F: SmartTrips Ithaca Style Guide

Smart Trips Ithaca Style Guide	Logo/logotype greyscale color			Title Font 18pt Arial Bold Italic grey			Sub title Text Arial Bold 16			Body Text Arial 12 16-18 lead (baseline spacing)			Links: Arial bold grey 33333/underline on hover: blue			Color Family Code Key		
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Appendix G: Registration Form



Registration Form

Thank you for choosing to join SmartTrips Ithaca! Complete this form to get your **FREE START-UP KIT** with useful items based on your transportation choices (one per household). Your responses on this form are confidential and will be used to make SmartTrips more relevant to you and for general program results. Personally identifiable information will never be shared outside of the SmartTrips program. Get started by signing up with this form or online at www.smarttripsithaca.org.

To receive your start-up kit sooner, sign up online at www.smarttripsithaca.org

1

Contact Info all fields required

First Name _____

Last Name _____

Email _____

Local Address _____

Ithaca

City/Town _____

State _____

NY

Apartment # _____

14850

ZIP Code _____

Did you move downtown within the last **12 months**? ☐ Yes ☐ No

Will you be in Ithaca for the next **12 weeks**? ☐ Yes ☐ No

What is the **primary** way for us to contact you? Select one.

☐ Email
☐ Mail

☐ Phone call
☐ Facebook message

☐ Text/SMS

2

About You required fields marked with *, optional fields for reporting purposes only

What is your age?*

☐ Under 18
☐ 18 – 21
☐ 22 – 29

☐ 30 – 44
☐ 45 – 64
☐ 65 and over

What is your gender?

☐ Male ☐ Female ☐ Other

Are you of Hispanic/Latino origin?

☐ Yes ☐ No

What is your race? Select all that apply.

☐ Asian

☐ Black or African American

☐ Native American

☐ Pacific Islander

☐ White

☐ Other: _____

What is your occupation in Ithaca?*

Select all that apply. If applicable, complete the blanks so we understand your typical commute.

☐ Student at: _____

☐ Retired

☐ Employed at: _____

☐ Unemployed

☐ Other: _____

3

Current Transportation Preferences all fields required

Do you own a car in Ithaca?

☐ Yes ☐ No

Do you own a bicycle in Ithaca?

☐ Yes ☐ No

Complete the following table with all the trips you have taken in the **previous 7 days**.

I used...	Number of Days Used (0 to 7 days)
Walking	days
Biking	days
TCAT Bus	days
Drive Alone	days
Carpool	days

What is your **primary** way to go to the following places? If applicable, include a secondary way. Choose from: Walk, Bike, Bus, Car/Drive Alone, Carpool, Ithaca Carshare, Taxi, or Online/Delivery.

Work or School

Primary _____

Secondary (if applicable) _____

☐ I do not go to work or school

Grocery store

Primary _____

Secondary (if applicable) _____

Circle the number on the scale that matches your opinion of each statement. (1 = Strongly Disagree, 5 = Strongly Agree)

"I can easily access information on routes and schedules for TCAT buses."

1 2 3 4 5

"I feel confident riding a bicycle in and around downtown streets."

1 2 3 4 5

"I have considered using Ithaca Carshare."

1 2 3 4 5

"I need to own a personal car to take all the trips I need in Ithaca."

1 2 3 4 5

4

Customize Your FREE SmartTrips Ithaca Start-Up Kit

Resources

Choose all the info you would like to receive. Good for both new and experienced users alike. Each set includes a small gift!
Select any or all options.

- ☐  **Bicycling**
(maps, skills, community)
- ☐  **TCAT Bus**
(schedules, trip planning)
- ☐  **Share-a-Ride & Driving**
(fuel saving, carshare)
- ☐  **Walking**
(maps, events)

Start-Up Kit

Choose something that will help you take fewer trips by car or try out a new sustainable mode of transportation.

We may contact you to confirm your selections.

Select one only.

- ☐  **Starter Bike Kit**
(lights, bell, band, and special item)
- ☐  **30-Day TCAT Bus Pass**
(good for unlimited rides)
- ☐  **Free Ithaca Carshare Application**
(valid driver's licence required)
- ☐  **Stay Active Kit**
(water bottle, umbrella, pedometer)

Optional Activities

Let us know if you are interested in participating in any or all of the following fun learning activities.
Select any or all options.

- ☐ **One-on-one learning**
(e.g. taking TCAT, bike riding basics or tune-ups)
- ☐ **Workshops**
(e.g. biking with groceries, retiring from driving)
- ☐ **Group Activities**
(e.g. bike rides or walks)
- ☐ **I have an idea...**

5

Start-Up Kit Delivery Options

How would you like to receive your personalized start-up kit?
Select one. We will contact you when your start-up kit is ready a week after we receive this form.

- ☐ I would like to pick up my start-up kit at a downtown location
- ☐ I would like my start-up kit to be delivered to my apartment door
- ☐ Neither option works for me, please contact me to arrange other options

6

Take the SmartTrips Ithaca Pledge!

I will move around town in a greener, healthier and more enjoyable way by pledging to take fewer car trips or to try a new sustainable mode of transportation.

As a member of SmartTrips, I pledge to take two or more SmartTrips a week by...


- ☐ Foot ☐ Bike ☐ TCAT Bus ☐ Ithaca Carshare & other sustainable modes


Signature _____

Contact us!

www.smarttripsithaca.org

 help@smarttripsithaca.org

 (607) 252-6801

 @SmartTripsITH

  @SmartTripsIthaca

Thanks for joining!

Have you completed both sides of the form?

If so, return it with the prepaid envelope or bring it to us at:

Cornell Cooperative Extension
Attn: SmartTrips Ithaca
615 Willow Ave
Ithaca, NY 14850

SmartTrips Ithaca
is supported by:

 **Way2Go**
Take Charge of Your Transportation

 **Ithaca**
Cooperative Extension

 **Ithaca Carshare**

 **TCAT**

 **NEW YORK STATE**
Department of Transportation

 **NYSDOT**
Department of Transportation

REGFORM-FINAL

SMARTTRIPS
ITHACA

Let SmartTrips Ithaca help you take steps towards healthier, greener, and more enjoyable ways of getting around town!



Why should I join SmartTrips?

Learn how to take TCAT buses
Feel more confident on your bike

Be part of Ithaca Carshare

Pledge to make a positive change in your transportation choices

Get one-on-one support to make those changes

And get rewarded for it! It's all FREE!

How does it work?

1. Sign Up & Pledge

online at www.smarttripsithaca.org
or with this registration form by June 10

2. Receive your FREE Start-Up Kit

with items that will help you get on your way to make more sustainable trips

3. Log Your SmartTrips

and be eligible to win monthly prizes all summer long

Don't forget! Registration ends June 10!

Let's get started!

Register at www.smarttripsithaca.org
and get your FREE gifts sooner!

Appendix H: Press Release



Sign up at SmartTripsIthaca.org

Call us at 607-272-2292

Help@SmartTripsIthaca.org

Contact: Norma Gutierrez, SmartTrips Project Manager

Tel: 607-272-2292 x 162

Email: ng32@cornell.edu

FOR IMMEDIATE RELEASE

SmartTrips Ithaca encourages downtown residents to improve the way they get around town and connects new movers to easy access to information on nearby transportation options. Downtowners can experience first-hand the many benefits of sharing a ride, going by foot, bike, bus or car-share.

SmartTrips Ithaca is designed to help individuals overcome common barriers to going car-lite. This innovative pilot program will offer personalized education, activities and incentives to encourage residents to use healthy, green, and economical ways to get around town.

Several local organizations and businesses will offer cool benefits to SmartTrips Ithaca participants. The first 100 downtown residents to sign-up at SmartTripsIthaca.org by June 10th will receive discounts, information, and free items designed to help them overcome specific barriers to taking SmartTrips more often. Participants who take and log their SmartTrip on their personal profile will automatically be entered into our monthly drawings of gift cards worth \$50, and the final drawing of gift cards worth \$100.

Late spring and summer months are ideal for making a change. With a little planning between the months of May and August, SmartTrips can help you choose an option that makes the most sense for you. For every mile you choose to share a ride, go by foot, bike, or bus means more money in your pocket, a healthier more active you, not to mention fresher air to breathe, less cars on the road, and no more parking lots to build...Way2Go!

SmartTrips Ithaca was developed by Way2Go, a program of Cornell Cooperative Extension of Tompkins County in partnership with Ithaca Carshare, Downtown Ithaca Alliance, Ithaca Tompkins County Transportation Council, City of Ithaca and Tompkins Consolidated Area Transit (TCAT).

This project is made possible by pilot grant funding through the New York State Energy and Research Authority (NYSERDA) in coordination with New York State Department of Transportation. Thank you to all who made this project possible.



Appendix I: Ithaca Journal Article “No Car, No Problem”

NO CAR? NO PROBLEM



Norma Gutierrez, Sam Bosco and Hector Chang ride down Buffalo Street in downtown Ithaca. Their organization, Way2Go, wants to connect more people with the city's existing transportation infrastructure.

LIVING IN ITHACA: No Car? No Problem

Nick Reynolds, Ithaca Journal

nreynolds@ithacajournal.com

EDT June 9, 2016

Ithaca group wants people to take advantage of transportation options

NICK REYNOLDS
NREYNOLDS@ITHACAJOURNAL.COM

Chris Szabla arrived in Ithaca accustomed to the car-less lifestyle. He moved here from New York City, where cabs, subway, rail, bicycles and walking fill a palette of transportation options. In a city with the right infrastructure, Szabla said, the decision to ditch one's car is an easy one and ultimately could save a fair amount of money.

That seems to make sense until you have to travel somewhere out of the way.

"The biggest problem is if you want to go to one of the big-box stores on the outskirts, like Wegmans or whatever, then you need a car," said Szabla, a downtown resident. "But I found that was rare enough that CarShare took care of it for me."

Ithaca CarShare, founded in June 2008, provides access to a car for a fee — membership ranges from \$60 to \$300 a year, and users also pay an hourly rate and mileage. It's not a car rental company per se, but more a piece of infrastructure in the city's transportation network, akin to the bicycle docking stations in New York City used by a member-supported bike transit program.

Ithaca CarShare has 1,400 members who use the service for various reasons: they've downsized and don't have room for a car; they need another car for the family; they want to save on maintenance costs;

"People like this idea of not owning a car, but then you think, 'How am I going to get my groceries?' or 'How am I going to get my kid to a rehearsal if it's all the way in Lansing?' I would emphasize car shares as a piece of this system of transportation options that allows you to still make it work when you have those extended trips in your life."

ANNA COOK
ITHACA CARSHARE
OPERATIONS
MANAGER



NICK REYNOLDS / ITHA

Car

Continued from Page 1A

or they decided they no longer need a car. Forty percent of CarShare members are affiliated with Cornell University.

For people like Szabla, the cost of car ownership — a little less than \$9,000 a year, according to AAA — and the frustration of living in the downtown of a busy commuter community where parking is at a premium — 13,400 people, or 80 percent of all workers, drive in from outside Ithaca — have served as deterrents to having a car.

That's not to say cars aren't useful sometimes.

"Having access to a car share fleet, you don't have to commit yourself to not owning a car," Ithaca CarShare Operations Manager Anna Cook said.

"People like this idea of not owning a car, but then you think, 'How am I going to get my groceries?' or 'How am I going to get my kid to a rehearsal if it's all the way in Lansing?' I would emphasize car shares as a piece of this system of transportation options that allows you to still make it work when you have those extended trips in your life."

Though there are extended travel options for CarShare members, longer trips typically require a rental, something available only at the airport. Without a car, the only way to get there without a long trek up Route 13 would entail taking a cab or finding the right bus to get you there.

Ultimately, the intent of CarShare isn't to replace your car, though the nonprofit estimates each vehicle in its fleet offsets the impact of 15 personal cars; it exists to serve as another option in the local transportation network. Their 25 vehicles racked up 235,000 miles last year from mostly short trips, usually lasting less than an hour each.

Getting people off the road

According to census data from 2012, 29 percent of Ithaca city residents reported they took solo car trips to work each day. A group with Tompkins County Cornell Cooperative Extension wants to reduce that number even further.

Using a nearly \$137,000 state grant, Way2Go Ithaca — a sustainable transportation advocacy group that works with Cornell Cooperative Extension — wants to introduce a three-month-long pilot project based off similar national initiatives to encourage more people to take advantage of existing resources.

"Because they live in such a walkable, bikeable, busable community, we should be seeing much lower numbers of drive-alone car trips," said Samuel Bosco, a transportation outreach assistant with Way2Go. "We're really trying to prove the concept education can do this and we feel the downtown core has the resources most accessible to them."

The initiative will offer personalized information on car-free commutes and how to navigate them, providing help on how to use the bus and understand route maps. The program will determine the impact an educational initiative could have on the ways people commute in the downtown core. The goal of the program is to reduce car usage 8 percent to 10 percent among program participants.

A survey of 100 residents by Way2Go in the downtown Ithaca area revealed the group's work is cut out for them. Of those surveyed, 43 percent said they would use TCAT more if they had clearer information, so Way2Go is working out a trip planner to help potential TCAT riders determine which bus to take.

While the grant won't cover new infrastructure, the team can paint people

to existing bike lanes and bike boulevards, said Hector Chang, research assistant at Way2Go.

"The resources are best in downtown — the infrastructure is more or less the best you can get in the county — so we want to see what happens if we get people past those initial barriers," Chang said. "Maybe they feel a little unsafe biking in the streets because they tried Seneca instead of Buffalo."

The group plans to get the word out through direct communication: so far, 700 mailers have been sent throughout the downtown core, and online and social media will be used to make people aware. For visibility, the group plans to set up an office — in a parking space downtown — to get sign up participants.

Bosco said the group feels once a person signs up, tangible milestones like money saved and calories burned will help make that person aware of the impact their lifestyle changes have had. The idea is to get participants to start new habits. For instance, to get people to use TCAT, a free 30-day bus pass will be issued.

If successful, the Way2Go program could be funded to expand into other communities and tailored to match existing resources. Commuters in Groton could be taught how best to take advantage of TCAT, while residents on the edge of Fall Creek could learn the best way to bike the mile to downtown.

In the future, the initiative could prove more useful as the city's network of streets and bike boulevards extends throughout the city under the new comprehensive plan.

"It's easy in a town like Ithaca," Szabla said about living without a car. "In a place where it's more spread out with less parking — it would make a lot less sense."

Follow Nick Reynolds on Twitter @IthacaWatch.

Appendix J: DIY Bike Basket Workshop Guide

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DIY Bucket Panniers



Adapted with permission from Liz Denham at Bike Walk Wichita.

After reviewing several designs for “Do It Yourself” bicycle panniers, this design was chosen for its simplicity, utility, durability, and affordability. These are basic instructions, but the bucket panniers can be modified in many ways. For example, you can add a thin cutting board to the lid, add a spout at the bottom for cleaning dishes or draining the beer cooler, add reflective tape or paint for design and safety. Buckets can also be used for seating & storage during you bike adventures. Average cost is \$10/pair.

Supplies:

Items can be sourced for free or can easily be purchased in local stores. We used icing buckets from Wegmans bakeries, which were obtained for free. All other items can be purchased at your local hardware store. Also check the ReUse Center or Significant Elements for antique and upcycle-able materials.

		<u>Price</u>
• 1 Bucket with lid	Free	\$0.00
• 2x Tarp Hooks .212D, 2 holes	\$0.99 ea	\$1.98
• 4x M5x12 bolts	\$0.65 ea	\$2.60
• 4x M5 washers	\$0.25 ea	\$1.00
• 4x M5 lock-tight nuts	\$0.80 ea	\$3.20
• 4 3/16" Fender washers	\$0.12 ea	\$0.48
• 2 M6x12 bolts	\$0.70 ea	\$1.40
• 2x M6 lock-tight nuts	\$0.43 ea	\$0.86
• 1" S-hook	\$1.59 for 4	\$1.59
• 1 used slime-free inner tube	Free	\$0.00
• Utility knife & marker	<u>Total</u>	<u>\$13.11</u>
• Drill or other means for making a hole		
• Stickers, decorations & other modifications		



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Source: Bike Walk Wichita, Inc. 2016

Each step will be repeated on the second bucket (if you are making a pair).

Step 1: Clean the bucket really well inside and out to remove any grease or residue.

Step 2: Using utility knife, cut 2 pieces of inner tube approximately 12" in length. Cut each tube piece in half lengthwise. Set aside. (4 total pieces)

Step 3: Take your 2 hooks and place them on the bucket so that the hook is just underneath the top lip of the bucket (so that the lid can still attach) and about 2" in from each side. Use marker to mark the location of the holes & down each side of the hook to mark any plastic lips that will need to be cut down.

Step 4: Carefully use a utility knife to cut through any plastic lips. Your hook needs to lay snug against the side of the bucket. Repeat for second hook.



Step 5: Drill 4 holes for the hooks. Attach hooks using screws, washers and nuts.

Step 6: Using marker, mark two holes straight down from the hooks, just above the half way point between the top & bottom of the bucket.

Step 7: Mark two holes about 2" from the bottom of the bucket & just outside of the middle marks.

Step 8: Drill 4 holes.

Step 9: Tie a knot in one end of an inner tube piece. Thread it from the inside through the hole & back inside. Tension should be pretty loose. Tie a loose knot (adjust the slack later) to secure the rubber strap.

Step 10: For the bottom strap, secure the rubber piece with extra large washers and nuts. Tension should be pulled tight.

Step 11: Hang the S hook on the upper strap and pinch it closed to secure it to strap.

Fit on bike, adjust straps, tighten knots & trim. Use rubber bands or something on hooks to reduce rattle.



Add your own flare & ride.

SmartTrips Ithaca is a project of Way2Go (part of Cornell Cooperative Extension)
www.smarttripsithaca.org



Other DIY Bicycle Cargo Ideas

Rear bags

Pros: easy to find, affordable

Cons: flimsy, not waterproof



Shopping bags, with handles sewn together and reinforced with Masonite/wood



Large rice bag attached to rear rack with metal hooks

Rear boxes

Pros: strong, lockable, can be free

Cons: Carries weight up high which can throw off balance



Metal (or plastic) classic style mailbox secured to a rear rack



Plastic crate with DIY lid for locking capabilities

Rear buckets

Pros: strong, can be found for free, waterproof with lids

Cons: can be challenging to attach



Simple trashcans



5 gallon round buckets



Cat litter containers

Bungee cords are great for securing large or bundled items



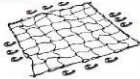
Front Baskets

Pros: strong, stylish, puts goods within sight and reach

Cons: weight over front wheel can throw off balance

Cargo Nets

hold steady items that don't pack well and keep fragile items safe during transit



Wicker or woven baskets add a mid-century style to your bike



Wooden crates are sturdy and stylish, and can be customized with simple carpentry skills



Frame Storage

Pros: Good use of 'dead' space, keeps weight centered

Cons: Can be difficult to build, may interfere with pedaling



Straps of "webbing" to create a large mesh pocket



Custom made picnic storage




Simple lunch carrier

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Appendix K: Final Survey Form



Give Us Your Feedback

Congratulations for participating in the first SmartTrips Ithaca! We would like to know how we can make it better in the future. For your thoughts about the program, you'll be entered to **win one of two \$100 Downtown Ithaca gift cards**. Complete and send the form using the enclosed envelope by **August 12** to be eligible for the gift card raffle.

To complete this form online, visit www.smarttripsithaca.org/feedback

1

Contact Info all fields required to contact raffle winner

First Name

Last Name

Email




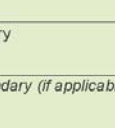
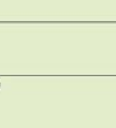
Phone Number

2

Current Transportation Use all fields required

Complete the following table with all the trips you have taken in the **previous 7 days**.

I used...	Number of Days Used (0 to 7 days)
Walking	<input style="width: 80%;" type="text"/> days
Biking	<input style="width: 80%;" type="text"/> days
TCAT Bus	<input style="width: 80%;" type="text"/> days
Drive Alone	<input style="width: 80%;" type="text"/> days
Share-a-ride	<input style="width: 80%;" type="text"/> days

What is your primary way to go to **work or school**?
Choose from: Walk, Bike, Bus, Drive Alone, Ithaca Carshare, Online, Share-a-ride, Taxi.

Primary

Secondary (if applicable)

☐ I do not go to work or school

What is your primary way to go **grocery shopping**?
Choose from: Walk, Bike, Bus, Drive Alone, Ithaca Carshare, Online, Share-a-ride, Taxi.

Primary

Secondary (if applicable)

Circle the number on the scale that matches your opinion of each statement.
(1 = Strongly Disagree, 5 = Strongly Agree)

"I can easily access information on routes and schedules for TCAT buses."

1 2 3 4 5

"I feel confident riding a bicycle in and around downtown streets."

1 2 3 4 5

"I have considered using Ithaca Carshare."

1 2 3 4 5

"I need to own a personal car to take all the trips I need in Ithaca."

1 2 3 4 5

3

Your SmartTrips Experience all fields required

Circle the number on the scale that matches your opinion of each statement.
(1 = Strongly Disagree, 5 = Strongly Agree)

SmartTrips Ithaca has increased my awareness of the transportation options available to me.

1 2 3 4 5

SmartTrips Ithaca has made it easier for me to move in a more sustainable way.

1 2 3 4 5

SmartTrips Ithaca has motivated me to try out a new way to move around.

1 2 3 4 5

What aspects of the SmartTrips program were helpful to you?
Check all that apply.

- ☐ Start-Up Kit (bike kit, TCAT pass, etc.)
- ☐ MySmartTrips Trip Planner
- ☐ MySmartTrips Trip Tracking Tool
- ☐ Your Pledge (2+ SmartTrips a week)
- ☐ Monthly Newsletters
- ☐ Email Reminders
- ☐ In-Person Visits
- ☐ Personal Phone Calls
- ☐ Regular Mail
- ☐ Social Media Posts
- ☐ Workshops & Group Activities
- ☐ Other:

What would you tell a friend or neighbor about SmartTrips Ithaca?
Answer required.

4

Open-Ended Questions optional

What transportation needs were and were not successfully addressed by SmartTrips Ithaca?

Other comments, concerns, or suggestions for improvement of the SmartTrips program?

*Thank you for your feedback and
for taking part in SmartTrips Ithaca!*

www.smarttripsithaca.org



help@smarttripsithaca.org



(607) 252-6801



@SmartTripsIthaca

SmartTrips Ithaca
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Feedback Form

Your feedback about the SmartTrips program is very important to us. You may give us your feedback online at www.smarttripsithaca.org/feedback



Complete the form to get a chance to win!

\$100

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