Coordinating Our Transportation Resources: Designing a Rural TMA for Addison County

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Executive Summary

Automobile dependent cultures are inefficient, detrimental to community coherency, and significant contributors to global climate change. This dependence contradicts the small town values of freedom, neighbors helping neighbors, and connection to the natural world. Automobile dependence leads to social injustice by limiting the freedom of the elderly, disabled, and low-income populations. Automobile alternatives are rare in rural settings because low population density limits the abilities of economies of scale to lower the price of public transportation. However, rural communities have a great need for transportation management because of the potential to decrease costs and bolster community solidarity.

Transportation management associations (TMAs) allow businesses, local governments, and other partners to offer diverse transportation options. Communities with these options see increased equity, sustainability, public health and community connectivity. The main direct services that allow these benefits are biking, walking, transit-use and carpool incentives; match making services; and an emergency ride home guarantee. Other TMA functions include consulting, advocacy, data collection and processing, and educational and social marketing.

We recommend the creation of an Addison County TMA (ACTMA). Our vision includes, but is not limited to, the services outlined above. We believe ACTMA will flourish under the supervision of Addison County Transit Resources (ACTR). As planned, ACTMA will not require the employment of more than one additional ACTR employee. Funding will come from Vermont’s High Meadows Fund ($40k for two years) and VTrans ($25k per year). ACTMA will also receive funds from member dues. Approximately five dollars per member business employee per year can be expected based the funding schemes of existing TMAs.

Hopefully, TMA members will experience high employee retention and satisfaction, with increasing results over time as the price of gas increases. Many families with multiple cars may be able decrease the number of cars they own by one, saving about $8,000 dollars per year. The individual benefits will help the entire community because traffic will decrease and fiscal capital will be freed for shopping at local businesses. With its nearly unlimited flexibility to pursue a broad variety of programs—indeed any transportation program deemed good for the community—ACTMA can steer Addison County in a more efficient, more free, and more socially responsible direction.
Part 1: Introduction

The Problems with Transportation Policy

Every American community relies on transportation. We need effective transportation systems in order to bring our children to school, commute to work, visit loved ones, and travel to the many destinations that enrich our lives. In the 1800s, Americans relied on railroads for long-distance trips and horse-and-buggy transport in increasingly urbanized cities. In the early 1900s, Americans began to embrace the newly established automobile—a mode of transportation that has dominated ever since (Black 2010). With the success of the automobile came increased investment in new surface transportation infrastructure to support it. In the 1950s, the federal government started the Highway Trust Fund to pay for the expansion and maintenance of America’s roads (Atkinson and Shultz 2009). This major investment in the automobile has contributed to the current dominance of the Single Occupancy Vehicle (SOV), where Americans drive alone in their automobiles.

While the automobile and its supporting infrastructure effectively shrunk the country by allowing us to travel further in less time, it also brought with it host of unforeseen challenges that now represent major contemporary issues of environmental, social, and economic concern. As more and more Americans drove cars, urban areas began to experience chronic air quality problems—by the 1960s and 1970s, it was evident that tailpipe emissions created smog and polluted the air (Black 2010). Air pollution from automobile emissions can breed environmental injustice, with some groups experiencing disproportionate impacts of decreased air quality (Cairns et al. 2003). We now know that greenhouse gas (GHG) emissions from internal combustion engines represent one of the main factors contributing to the warming of the planet (Sears and Glitman 2011). Roads and highways also have the potential to fragment natural communities and threaten the biological integrity of ecosystems (Trombulak and Frissell 2001).

In addition to environmental concerns, the SOV-dominant transportation system has created social and economic problems. From a public health perspective, the dominance of the automobile (instead of active transportation) has resulted in numerous ‘hidden’ health costs including respiratory illnesses from poor air quality, thousands of deaths each year from traffic crashes, and obesity epidemics resulting from an increasingly sedentary American lifestyle.
Designing a TMA for Addison County

(Urban Design 4 Health 2010). America’s automobile-centric transportation system has helped to develop a system of social inequality, with low-income households spending an increasingly large percentage of their income on travel and automobile maintenance (Spencer 2012). Economically speaking, federal funding of highway infrastructure is becoming more and more unsustainable and ineffective. Sprawling development and decentralized communities filled with strip malls and mega stores imbalance our economy, waste our dollars and fracture our communities.

All of the factors show that the automobile, which was supposed to expand our horizons, has, instead, started to cripple our society. The growing environmental, social, and economic issues associated with America’s predominantly unimodal transportation system are not developing in a vacuum. Municipalities and regional transportation planners across the country recognize the growing stress our existing transportation infrastructure is having on our communities and many are taking steps to shift the transportation paradigm. Indeed, reducing vehicle miles traveled (VMT) and replacing SOV transportation with other modes can reduce GHGs and help people save money (Kooshian 2011). Particularly in rural areas, the need for ‘smart development’—which addresses not just land use, but also the economic, social, public health, and environmental effects of new infrastructure projects—is critical (Partnership for Sustainable Communities 2011). Transportation planners essentially have two types of available tools that help communities move toward a multimodal transportation system: policies that discourage the use of SOVs (sticks) and initiatives that encourage user-friendly alternatives (carrots). “Stick” policies largely focus on restricting access by closing routes or lanes to SOV traffic or raising the cost of SOV travel by hiking up parking or toll costs. Conversely, “carrot” policies either improve non-SOV transportation infrastructure or promote their use. A planner might allocate more funding to a transit agency, expand busing and commuter systems or develop High Occupancy Vehicle (HOV) incentives like priority lanes and parking spots or lower tolls.

In dense, urban communities, these sticks and carrots are especially successful because of congestion and a limited capacity. Because cities have a high concentration of commuters and residents, roadways approach capacity rapidly and consistently, creating a frequent stressor on the transportation system. When a roadway is clogged with commuters during rush hour, the utilization of the SOV in traffic becomes strikingly inefficient. This “stress” and inefficiency can
encourage city planners and commuters to explore transportation options beyond the standard roadway. When the subway can deliver a traveler from point A to point B faster than a SOV, a commuter is often likely to leave the car at home. Population density also aids in the coordination of other transportation systems. When planning the expansion of transit lines or the integration of a carpool service, the transition can be eased if a community is highly concentrated into business and residential nodes. In a high-density environment, a transit stop or a carpool will always be close to something, increasing utilization.

In rural states like Vermont, many of the most effective urban strategies to reduce SOV use are rendered much less effective. To begin with, citizens of rural areas often rely on the automobile as their only form of long-distance transportation due to a comparative lack of trains, buses, or subways more commonly found in urban areas (Sears and Glitman 2011). Another issue is population density. Addison County, Vermont has approximately 48 people per square mile, compared to 26,400 people/mi² in New York City (US Census Bureau 2010). Progressive zoning laws have concentrated some development into Addison County’s small towns and villages, but a traffic jam in downtown Vergennes is still incredibly rare. The roads in Addison County flow with some regularity, and there are not enough people to justify large-scale transit infrastructure. We live in a community where the infrastructure is built for the SOV, and there are few other options that can get a commuter from point A to point B more rapidly and comfortably. This reality presents a challenge, but does not close the door on transportation advocacy and reform. Efficiency is just one component of transportation planning. Concerns about cost, sustainability, public health and community connectivity are often less emphasized, but are equally—if not more—important considerations.

Groups across the state are mobilizing to grapple with these problems. GoVermont, an online resource managed by the Vermont Agency of Transportation (VTrans), is a statewide program that acts as a informational resource for information on reducing the cost and environmental impact of transportation behavior. It provides valuable information on community connectivity; resources on pedestrian, bike and bus services; and it establishes a framework for a rideshare system in Vermont. Addison County Transit Resources (ACTR), which provides bus and other transit service to the county, is spearheading Smart Commute, a service that provides information to individual businesses and organizations on how to improve their employer and employee transportation policies. The program, which is currently sponsored by the High
Meadows Fund and Vermont Agency of Transportation, provides an internal audit of cooperating businesses to analyze barriers and opportunities for transportation innovation.

There is a rising tide for sustainable, multimodal transportation in Addison County. Groups and organizations like ACTR and the Vermont Agency of Transportation are mobilizing resources to grapple with our broken transportation system. People are coming together to work on transportation policy for the sake of equity, sustainability, public health and community connectivity, but, at this juncture, there is a lack of coordination. The resources are abundant and poised, but our community does not currently have the capacity to mobilize businesses, organizations, schools and municipalities around these tools.

A Transportation Management Association offers a solution. A Transportation Management Association (TMA) is “an organized group applying carefully selected approaches to facilitate the movement of people and goods within an area” (NCTR 2001). Fundamentally, TMAs rely on connections between groups and organizations to get a community talking and working toward a common goal of smart and sustainable transportation policy. A TMA is an advocate for transportation planning, a coordinator that bring disparate groups together, a planner that understands transportation issues in their current and future context, and a leader to rally the community around strong transportation initiatives. These entities promote the use of transportation resources that move beyond the SOV, like public transit, high occupancy vehicles (HOVs), and active (bicycle and pedestrian oriented) transportation infrastructure. TMAs provide the institutional knowledge and coordinating capacity that can reshape community transportation into something that is more efficient, more cost effective, more sustainable and healthier. If integrated as a valued stakeholder in community governance, a TMA can act as a valuable liaison and a strong advocate for transportation planning in communities where conversations on mobility are often left by the wayside. Therefore, we recommend the formation of the Addison County Transportation Management Association (ACTMA), a coordinating agency run in partnership with Addison County Transit Resources (ACTR).

**Project Mission Statement**

The Addison County Transportation Management Association (ACTMA) will serve as an engaged representative of transportation interests in Addison County. It will be a transportation resource, a leader in innovative transportation policy, and an advocate for environmentally friendly, economically efficient, and equitable transportation planning.
Project Values

ACTMA is an organization devoted to community. It is an organization designed to bring together groups in the name of transportation cohesion. ACTMA has a holistic vision, one that considers transportation efficiency (in terms of travel from point A to point B), but also related issues of cost, equity, health, the environment and community. To develop this vision, we have developed a set of core principles that inform our work and drive our mission: (1) holistic and community driven functions and services; (2) transportation planning based on equity, health, and the environment; and (3) transportation that is truly accessible all days of the week and during both peak and non-peak times.

First and foremost, it is important that the TMA’s vision be community driven. While ACTMA will provide specific services and information to members, it will serve as an advocate for all transportation interests across Addison County and must consider all components of the transportation system. ACTMA’s efforts will include expanding transportation infrastructure for work, for leisure, and for all lifestyle needs. It is important to integrate individual member businesses’ needs with a holistic transportation vision to rectify the entire community’s transportation issues.

Second, because of the realities of our rural infrastructure, efforts to improve the efficiency of non-SOV travel will require a monetary investment with a minimal monetary return. Instead ACTMA will direct its energies into more community-based goals, advocating for transportation planning for the sake of equity, health, and the environment.

In rural areas, transportation costs associated with the maintenance and use of an SOV can represent a significant portion of household income, especially in low-income communities (Spencer 2012). Transportation in Addison County is a dollars and cents issue, one that has the opportunity to re-connect individuals with their community and the potential to make our fragmented county more accessible for all.

Like all issues of equity, our mobility is intricately linked to contemporary health and environmental crises. A more effective and more intelligently planned system will help to push back against these contemporary crises. We are indeed global citizens in Addison County, and ACTMA’s mission should expand as such. ACTMA’s transportation resources will go toward achieving an ecological balance, healthier lifestyles, a smaller carbon footprint, and a more interconnected community.
The mission of the Addison County TMA, therefore, is one that is firmly rooted in social and environmental welfare. ACTMA is an organization tied to the promotion of the common good rather than commuter efficiency. These are goals that not only improve the way we get to work, but are goals that improve our community and world.

This commitment to the common good requires an expanded mission. If we want to address equity and accessibility, our transportation system must be truly accessible at all times, especially with regard to our low-density system. Therefore, it is important to emphasize our third value, accessibility at all times. While many TMAs are commuter centric, the needs of some workers do not end on Friday evening. We need a system that serves community centers and points of leisure as well as workplaces in order to increase ridership particularly in off-peak (weekend) commuter hours. The social service model we are trying to create addresses transportation concerns for work and leisure. ACTMA should be a transportation advocate for ALL transportation issues in our county and we are committed to not limiting our vision.

**Part 2: What is a TMA?**

TMAs have been addressing transportation problems in the United States for approximately 30 years. The National Center for Transit Research (NCTR) defines TMAs as “organized groups applying carefully selected approaches to facilitating the movement of people and goods within an area (NCTR 2001). They are organized, legal bodies that bridge the gap between the private and public sectors to join forces and solve transportation problems. Most TMAs deal with the dominance of—and reliance on—the personal automobile, a mode of transportation that contributes heavily to air pollution, greenhouse gas (GHG) emissions, traffic congestion, and urban sprawl among other environmental concerns. TMAs facilitate interaction between the transportation sector and other sectors such as land use planning, air quality, and public health. TMAs act as a community building entity through this coordination with other sectors. They also facilitate public-private partnerships; they are particularly focused on working with local member businesses to solve transportation problems through active member participation. Such an organization provides transportation services and resources to member businesses and the broader community, promotes transportation development programs, serves
Designing a TMA for Addison County

as an information clearinghouse for ideas, and advocates for local transportation change (NCTR 2001).

The earliest TMAs were developed in the early 1980s by groups of private businesses interested in improving transportation for their employees (NCTR 2001). These initial partnerships between businesses with common transportation goals drew the attention of the public sector, which began to encourage the establishment of new TMAs through state and federal grants (NCTR 2001). In the early 1990s, TMAs took on a new role by aiding employers in the implementation of Transportation Demand Management (TDM) strategies. According to Erik Ferguson (1990) TDM seeks to modify “travel behavior to avoid more costly expansion of transportation systems.” This goal can be achieved through a wide variety of transportation management strategies such as expanding rideshare programs, transit services, and bicycle/pedestrian infrastructure. The Clean Air Act Amendments (CAAA, 1990) and the Intermodal Surface Transportation Efficiency Act (ISTEA, 1991) set a precedent for TMAs to assist member employers in achieving compliance with air quality standards through participation in TDM programs. This legislation gave businesses a new incentive to continue involvement with TMAs because of ISTEA compliance assistance provided by TMAs (NCTR 2001).

Nowadays, TMAs are becoming increasingly diverse with respect to their institutional structure, scale, type of area served, and goals. The number and geographic range of TMAs has steadily increased since the 1980s, though most successful TMAs are still found in urban metro areas (Ferguson 2007). But several examples of TMAs in other areas exist. Corridor TMAs oversee specific sections of transportation networks (e.g. a stretch of highway and its ‘commutershed’) and industry TMAs serve only one major employer (NCTR 2001).

Part of the reason many TMAs have been successful is due to their flexible nature. A TMA can take on many different roles, such as a provider of services and resources, a consultant that gives advice to employers, or an advocate for long-term transportation planning within the community. Some broad goals of TMAs typically include: (1) reducing the number of SOV trips and VMT within the service area, (2) improving transportation infrastructure in ways that promote multimodal transportation, and (3) advocating land use planning and community development (e.g. Smart Growth) that emphasizes sustainable transportation. While all TMAs likely share common structural characteristics and goals, different communities have different
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needs, thus meriting a diverse corps of TMAs. Highly variable population density, total population, types of member institutions and types of existing transportation infrastructure has lead TMAs to develop the diverse array of services listed in Table 1.

Table 1 - Common TMA Services

<table>
<thead>
<tr>
<th>Service</th>
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<tbody>
<tr>
<td>Safety education programs</td>
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<tr>
<td>Regional transportation, biking and walking maps</td>
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<tr>
<td>Development and maintenance of park-and-ride programs and infrastructure</td>
</tr>
<tr>
<td>Parking and transportation demand zoning analysis</td>
</tr>
<tr>
<td>Interstate transportation options</td>
</tr>
<tr>
<td>Shuttle service</td>
</tr>
<tr>
<td>Bike and walk rewards</td>
</tr>
<tr>
<td>Emergency ride home guarantee</td>
</tr>
<tr>
<td>Carpool matching programs</td>
</tr>
<tr>
<td>Promotional events</td>
</tr>
<tr>
<td>Data collection for future planning efforts</td>
</tr>
<tr>
<td>Seasonal services for winter and summer leisure activities</td>
</tr>
<tr>
<td>Crosswalk implementation</td>
</tr>
<tr>
<td>Bike and pedestrian trail connections</td>
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<tr>
<td>Partnerships and discounts with car share programs such as Zipcar</td>
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<tr>
<td>Commuter contests</td>
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<tr>
<td>Preferential carpool and vanpool parking</td>
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<tr>
<td>Telecommute technical support</td>
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<tr>
<td>Long-term transportation planning suggestions for state and local governments</td>
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<tr>
<td>Smart Commute</td>
</tr>
</tbody>
</table>

Though the design and structure of TMAs continues to evolve, few examples of TMAs geared specifically towards rural or regional services exist. While some 170 TMAs exist throughout the US, a few states and their respective metropolitan areas contain the lion’s share. Figure 1 shows that most TMAs represent urban service areas with high population density (particularly 3000-4000 people/mi²). One of the challenges that we face as we begin to design a TMA for a rural county in Vermont is low population density.
Overall, the importance of TMAs as cooperative, member-based organizations is difficult to overestimate. An initial base of founding members including businesses, educational institutions, residences, and other entities requiring access to transportation is essential to a community supported TMA. Indeed, by bringing employers together within the TMA structure, TMAs can facilitate the sharing of ideas and provide common ground for employers to begin making transportation changes that benefit their employees and hopefully the wider community as well. Finally, TMAs fill a unique position that allows them to integrate a variety of transportation services, resources, and programs in ways that move communities closer to their long-term sustainable transportation futures. Our work has been to apply and adapt our newfound knowledge of TMA structures, roles, and functions to Addison County, VT. In order to provide a more complete understanding of existing TMA models, and to portray the variety of place-based solutions that different TMAs can provide, we will outline five existing TMAs in detail.
TMA Case Studies

1. Upper Valley Transportation Management Association (UVTMA)
2. Campus Area Transportation Management Association (CATMA)
3. Truckee North Tahoe Transportation Management Association (TNTTMA)
4. A Better City Transportation Management Association (ABC TMA)
5. North Florida Transportation Planning Organization (NFTPO)

1. Upper Valley Transportation Management Association (UVTMA)

Website
http://www.vitalcommunities.org/transport/index.htm

Mission Statement
To provide leadership and education to promote planning, development, and implementation of transportation initiatives to mitigate traffic congestion and reduce reliance on single occupancy vehicle commuting.

Community Served
Upper Valley (VT & NH) including Lebanon, Dartmouth, White River Junction, West Lebanon, Hanover, Norwich, and Hartford

Population Size Served
Unknown

Urban/Suburban/Rural
Rural

User Benefits
The website provides helpful links about mobility, transportation, planning, sustainable development, etc. It also provides a database of research papers that provides different points of view on traffic and public transit.

Direct Services
- Smart Commute
- Regional transportation maps
- Suggestions on how to mitigate traffic
- Development and maintenance of park-and-ride facilities
- Mobility checklist for developers, planners, and town boards to help understand how to "think beyond the car" and integrate alternative transportation into their plan development
- Parking and transportation demand management zoning

Unique Roles
UVTMA provides alternative transit options across VT and NH state borders, as well as informs both states of what the other state is doing in terms of sustainable transportation management and transit options.

**Types of Membership** (see UVTMA 2012)
- Municipalities (five)
- Regional planning commissions (three)
- Businesses (six)
- School districts (2)
- Transit providers (four)

**Additional Partners**
- Dartmouth College
- Dartmouth Hitchcock Medical Center
- Kendal at Hanover
- Greater Lebanon Chamber of Commerce

**Member Dues**

<table>
<thead>
<tr>
<th>Member Type</th>
<th>Contribution</th>
</tr>
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<tbody>
<tr>
<td>Business</td>
<td>$10 /full time employee/year</td>
</tr>
<tr>
<td>Institution or non profit</td>
<td>$3 /full time employee/year</td>
</tr>
<tr>
<td>Municipality</td>
<td>$0.30 /resident/year</td>
</tr>
<tr>
<td>School district</td>
<td>$200 /year</td>
</tr>
<tr>
<td>Transit provider or regional planning commission</td>
<td>Free</td>
</tr>
</tbody>
</table>
2. Campus Area Transportation Management Association (CATMA)

Website
http://www.catmavt.org/

Mission Statement
Safe, convenient, and economical transportation and parking are essential for the major institutions and healthcare organizations located in the area to sustain their individual and collective missions. Further, the transportation and parking demands are diverse in the need to serve patients, students, faculty, employees, and the general public. All transportation and parking initiatives should serve these diverse constituents, while minimizing costs to the environment, energy and land use.

Community Served
Burlington, Vermont

Population Size Served
CATMA serves 42,417 people, with a population density of 4,000 people/mi². CATMA is somewhat exclusive because of its focus on member businesses within the “Campus District” of Burlington, so actual population served is probably around 10,000.

Urban/Suburban/Rural
Urban

User Benefits
By joining CATMA, private institutions within the “Campus District” can have their voices heard as the TMA members work to improve multimodal transportation systems and develop more effective transportation policies and programs with the public sector. In addition, member businesses benefit from the contract and partnership that CATMA has with the CCTA (bus service provider in Chittenden County). Employees of CATMA member institutions therefore benefit from special bus service and discounted or free fare.

Direct Services
• Transportation System Management (TSM, an award winning program): a strategy to reduce traffic congestion through the use and provision of shuttle buses
  o Shuttle bus services
  o Shared regional park-and-ride facilities
  o Chittenden County Transportation Authority transit pass discounts and subsidies
  o Off-site parking, such as lots where CATMA-specific shuttles pick up employees and bring them to the Campus District
• Transportation Demand Management (TDM, an award winning program): a strategy to provide more incentives to avoid SOV commuting
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- Bike/Walk Rewards, such as a program that allows participants to select a prize (e.g. a gift card to a local business) if they walk or bicycle to work 3 times per week for an 8 week period
- Bicycle Benefits, such as a program in coordination with Local Motion that gives bicyclists with special helmet stickers discounts at local businesses (e.g. 15% off at Ben & Jerry’s)
- RidesWork, a carpool matching program specifically for the CATMA member network and the VT state employee network (10,000+ people)
- A web-based list of tips for successful carpooling
- A carpool ride board where people post desired rides to/from different towns
- Emergency Rides
- Partnership with CarShare Vermont
- Campus area walking route maps
- Promotional events such as commuter fairs that attempt to inform and educate member employees and the broader community about multimodal commuting
- Special events aimed specifically at getting college and university students involved in non-SOV commuting and transportation habits
- An annual employee transportation survey to gather input, criticism and suggestions
- A variety of links and other web resources

Unique Roles
CATMA primarily serves employers located within a specific geographic area, the Campus District, rather than the entire city of Burlington. CATMA was formed by several core member employers that funded the TMA before additional associate and affiliate member employers became contributors.

Types of Membership
- Core Members
  - Champlain College
  - Fletcher Allen Health Care
  - University of Vermont
- Associate Members
  - Chittenden County Regional Planning Commission
- Affiliate Members
  - American Red Cross
  - Burlington Legacy Project
  - State of Vermont

Extra Information
TSM and TDM programs are promising models as they have earned numerous awards. For example, CATMA has won the following awards: ACT (Association of Commuter Transportation) International award, “Way to Go! Vermont commuter challenge award, and EPA Best Workplaces for Commuters award.
3. Truckee North Tahoe Transportation Management Association (TNTTMA)

Website
http://www.laketahoetransit.com/home

Mission Statement
The Truckee North Tahoe Transportation Management Association is dedicated to fostering public-private partnerships and resources for the advocacy and promotion of innovative solutions to the unique transportation challenges of the Truckee-North Lake Tahoe Resort Triangle.

Community Served
TNTTMA serves the city of Truckee (population 16,000), and 4-6 communities of roughly 2,000 living along the northwest shore of Lake Tahoe.

Population Size Served
Twenty to thirty thousand people

Urban/Suburban/Rural
Rural

User Benefits and Direct Services
- North Lake Tahoe express airport shuttles
- Free winter and summer night rider shuttles
- Truckee-Donner summit shuttle service
- Summer transit connection to south Lake Tahoe
- American Cancer Center’s Road to Recovery, a volunteer driver program
- Google Transit for north Lake Tahoe and Truckee
- Trolley service
- Electronic fare boxes for the local bus agency.
- Seasonal traffic management
- The Adopt a Bus Shelter program (Sponsored by the Tahoe City Rotary Club)
- Bear boxes for bus shelters and busy bus stops
- Enhanced public outreach and marketing
- Crosswalk implementation
- Hourly Highway 89 transit service
- Ride share and van pool services
- Coordinated ski shuttle program
- Improved transit service frequency
- Year round Highway 267 transit service
- Park-and-ride infrastructure
- Bike and pedestrian trail connections
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**Unique Roles**
The TNTTMA provides work, leisure, and recreational transportation options, and is specifically tailored to transporting people to ski mountains and resorts.

**Types of Membership**
- Roughly 100 ski resorts and local businesses

**Additional Partners**
- The Town of Truckee
- Truckee Transportation Company

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4. A Better City Transportation Management Association (ABC TMA)

**Website**
http://www.abctma.com/

**Mission Statement**
To maintain the economic viability of downtown Boston and the Back Bay by reducing traffic congestion and improving air quality through the creation of services and materials which promote transportation alternatives to the single occupancy vehicle.

**Community Served**
The ABC TMA includes employers who represent a variety of industries including finance, medicine, property management, telecommunications, printing, insurance and law in downtown Boston and the Back Bay.

**Population Size Served**
Over 625,000 people with a population density of 13,022 people/mi²

**Urban/Suburban/Rural**
Urban

**User Benefits and Direct Services**
- Guaranteed ride home
- Ride matching
- Bicycle and pedestrian incentives (Colloquial name: Workout to Work)
- Vanpool subsidies
- Carpool subsidies (Colloquial name: Fill’er Up)
- Commuter boat and express bus subsidies (Colloquial name: Express Yourself)
- Zipcar discounts
- Auto and home insurance discounts
- Commuter contests
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- Construction and traffic advisories
- Preferential carpool/vanpool parking
- Vanpool boarding zones
- Park-and-ride facilities
- HOV lanes
- Employee transportation coordinator training
- Quarterly reporting
- Information kiosks and displays
- On-line access to commuter/transportation resources
- City of Boston Transportation Access Plan Agreement (TAPA) compliance suggestions
- Telecommuting
- Shuttle bus services
- Employee transportation surveys
- Commuter mobility work plans
- Construction mitigation

**Unique Roles**

ABC TMA helped manage the transportation challenges of the “Big Dig,” the largest and most technically challenging infrastructure project (Central Artery/Tunnel) undertaken and completed by The City of Boston.

**Types of Membership**

- Businesses
- Residences
- Hotels
- Hospitals

**Additional Partners**

- The Museum of Fine Arts
- The US Environmental Protection Agency
5. **North Florida Transportation Planning Organization (NFTPO)** *(Originally The First Coast Metropolitan Planning Organization)*

**Website**

http://www.firstcoastmpo.com/north_florida_tpo/

**Mission Statement**

To provide a regional forum for developing an effective transportation system that moves people and goods safely, economically and efficiently, maintaining a high quality of life in North Florida.

**Community Served**

Mainly Clay, Duval, Nassau, and St. Johns counties in north Florida (roughly the Jacksonville metro area). Some rural areas are served, though rural services tend to be directed towards movement between the rural areas and Jacksonville.

**Population size served**

192,370 (Clay County) + 870,709 (Duval) + 74,195 (Nassau) + 195,823 (St. Johns) = total population of 1,333,097 people, with a population density of 428.8 people/mi².

**Urban/Rural/other**

Urban

**User Benefits and Direct Services**

- Long-term transportation planning and congestion management (long-term plans, periodic “big” projects)
- Traffic counts
- Ride share board
- Emergency ride home
- Transit advocacy (rail)
- Information on telecommuting and telecommuting promotion
- Personalized transportation plans for individual businesses (focused mostly on carpooling)
- Park-and-ride services
- Alternative fuels services
- Safety education programs
Unique Attributes
The NFTPO seems to deviate from the traditional TMA structure in that it is federally mandated, and congestion management is the central goal.

Type of Membership
• Several cities
• The Port Authority
• Partner planning associations

Additional Partners
• Clean Cities Coalition
• Intelligent Transportation Services Coalition

Member Dues
Each county in the service area provides an “assessment” fee based on their population (based on prior year Census Data, currently $0.25 per capita). Within a service area, there are five Transit Authorities (including those that serve airports and seaports) that pay fees equal to one sixth of their county’s fee.

Extra Information
The board is comprised of elected officials (Mayors and County Commissioners) and several transportation agency representatives.

Lessons from Case Studies
• Case studies 1 and 2 (UVTMA and CATMA) both provide examples of how TMAs can exist in Vermont.

• Case study 3 (Truckee North Tahoe) shows that a TMA can have a specific transportation goal, in this case, to provide transportation for leisure and tourism.

• Case study 4 (A Better City) shows that a TMA can be established to deal with a particular project, in this case, Boston’s Big Dig project.

• Case study 5 (North Florida) shows that a TMA’s primary function can be that of a transportation think tank.
Part 3: Reasons for an Addison County TMA

Rationale for a Rural TMA

Rural areas suffer from some of the same types of transportation-related problems as urban areas do, but they also have unique and often greater difficulties due to the greater dependence on SOV automobiles for mobility (see Part 1). Rural communities typically have long distances between town centers, public services, places of business or employment, and residences (Addison County Transit Resources 2012). There is no one type of rural town, but the flexibility of a TMA model allows for distinct approaches that offer creative solutions to transportation problems in any unique rural setting, in this case that of Addison County. While we have attempted to draw from urban TMA models, we also have come up with creative new ideas that could be used as potential solutions that apply uniquely to this rural scenario.

While there are some challenges associated with the rural context of this project, we have also identified some notable advantages. With small populations come tight-knit communities, strong interpersonal relationships, social cohesion, and more social capital. These interactions and relationships create a sense of solidarity and mutual respect. This becomes important when a group is trying to adopt changes, in this case changes related to mobility and challenges linked to transportation. People in a close community also may feel more comfortable carpooling or participating in a rideshare program when there is a stronger sense of familiarity with the people you are asked to interact with.

The stronger sense of connectedness typical of rural areas increases a community’s belief in group agency, through which the community can act collectively and effectively towards a common goal (Pope 2011). Studies have shown that ‘tight’ communities increase an individual’s self-efficacy, which in turn determines what challenges individuals will take on, their capacity to rise to those challenges, and their ability to deal with change (Pope 2011). Furthermore, the collaborative action between the private sector, public sector, and individuals is more likely to result in solid long-term agreements based on reduced controversy and support for implementation (Pope 2011). When we consider these concepts in the context of ACTMA, it is therefore likely that existing community strength and collaborative partnerships will help bolster the development and long-term success of the new TMA.
Despite the aforementioned challenges of Addison County’s rural context (e.g. low density, heavy investment in road infrastructure), there is considerable need for a TMA. A close look at the county’s current transportation norms reveals a population in need of options but limited by a typical rural emphasis on the SOV. A TMA is likely a better candidate than government to provide these options, because few TMAs fit the mold of typical government sponsored transportation, which often includes funding for highway infrastructure development and consequential reinforcement of the dependence on personal vehicles for mobility. Because TMAs are focused on providing a suite of multimodal transportation services that focus on reducing car dependence and promoting non-SOV transportation options, they advocate for both infrastructure development and behavior change. Additionally, county level planning is often overlooked in Vermont because few governing bodies exist at the county level compared to the state and town levels. While the Addison County Regional Planning Commission (ACRPC) does represent such an existing planning body, countywide development and planning projects can be compromised by the interests of individual towns.

Addison County residents have few transportation choices in part due to the low population density (48 people/mi²; US Census Bureau 2010). Population centers, such as Middlebury and Vergennes, however, have population densities on the order of five times that of the county as a whole. While these town centers are amenable to sustainable transportation (including public transit, walking, and biking), over half of Vermont commuters do not live and work in the same town (Bell et al. 2012). Active transportation (bike/ped) is difficult because distances between nearby towns in Addison County are on the order of ten miles, and the connecting roads commonly have only shoulders, and rarely bicycle lanes. Options like car- or vanpooling, while possible through programs such as GoVermont, are often overlooked because of the often-low individual motivation or awareness of commuters. TMAs can offer employee incentives that not only give commuters the idea of carpooling, but also provide them with benefits if they do, whether it is through GoVermont or simply individual initiative. Aaron Brown, the coordinator of UVTMA, has described employee incentives as the most effective way to bring about transportation behavior change. For example, member businesses may provide a small monetary reward for employees that ride the bus to work.

Incentive-based and commuter-specific programs such as this have been shown to work in rural settings by numerous TMAs. Part 2 discussed rural examples including CATMA,
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UVTMA, and the Truckee TMA, each of which bring together local businesses to provide services that an individual business would not be large enough to merit. The employees of most Vermont businesses live within a 10 mi radius (or 314 mi² area) from their employers, which makes coordinating non-SOV commuting transportation options more challenging for an individual small to medium sized business. As part of a TMA, however, a business would be able to access a network of other businesses and set up carpools or bike commute groups whereby employees from different businesses that live in the same neighborhood and work in the same business district would be able to share rides.

One potential barrier to starting a TMA in Addison County lies in the historical precedent where TMAs began with one large business spearheading programs into which smaller businesses later become incorporated, effectively expanding the membership base and momentum for new TMA initiatives. In Addison County, institutions such as ACTR and the Vermont Community Foundation (which supports the High Meadows Fund, a source of funding for the TMA) are currently driving the development of a new TMA rather than businesses. Further, state government (VTrans) or organizations like the Vermont Clean Cities Coalition may provide additional support to make the new TMA a reality. ACTR in particular has expressed interest in supporting the new TMA. While the non-profit and public support from ACTR and VTrans is vital to the future viability of the TMA, sustained interest and involvement from businesses will likely remain equally essential for TMA success.

**Current Transportation Infrastructure in Addison County**

Two-lane state highways constitute the major corridors linking town centers to one another and to the broader Vermont and northeast regions. While these major roads are paved and maintained for car and truck traffic, many lack wide shoulders that would permit safe and practical bicycle use. If the roads do have sufficiently wide shoulders, they often continue for short sections only. Throughout the county, many town and unpaved dirt roads are unfavorable for bicycle traffic.

Though the network of highways, town roads, and unpaved rural roads in Addison County primarily supports the use of automobiles and heavy trucks, the main routes do permit fairly broad public bus transit coverage via ACTR. Bus routes are currently in place linking the
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town centers of Middlebury, Bristol, New Haven, and Vergennes and throughout the town of Middlebury. Regional link services also connect Middlebury to downtown Burlington in the north and Rutland in the south. In the town of Middlebury, bus coverage is widespread and for most routes, free of charge. Most ACTR bus routes connect relatively population-dense towns centers, though some seasonal routes to more rural nearby ski areas and mountain hiking trails are also offered. Isolated clusters of houses or individual residential properties are generally located along main roadways, though bus service does not extend out to all town centers, particularly in western Addison County.

Sidewalk connectivity and condition is generally good in downtown Middlebury, though in some cases sidewalks are provided on only one side of the road. Likewise, some streets are suitable for bicycling while others lack sufficient shoulders. Passenger rail service in Middlebury is currently nonexistent, though groups like the Vermont Rail Action Network (VRAN) have been working to spearhead a new project that would improve the condition of the existing rail lines from southern Vermont to Burlington so that Amtrak could provide passenger service from Middlebury to Burlington by 2017. Freight trains currently pass through Middlebury on a north to south line.

In the small city of Vergennes, a nearby park-and-ride facility allows commuters to park their automobiles in nearby Ferrisburgh and then ride the bus into Vergennes. Thanks to the bus services provided by ACTR, Vergennes is generally well connected to Addison County’s other population centers. However, the park-and-ride lacks connectivity to Vergennes via sidewalk or bikeway. Generally speaking, sidewalk connectivity is good in downtown Vergennes, though the condition of several stretches of sidewalk is poor. In some cases, such as on the main bridge that crosses the Otter Creek in downtown Vergennes, only one side has a sidewalk (Kelly et al. 2012). As in Middlebury, no passenger rail line passes through Vergennes though there is a north to south freight line.
Missing Links – Building a Multimodal Future

Overall, because the vast majority of people in Addison County rely on automobiles as their primary mode of transportation, there is great potential to reduce transportation costs by offering other choices that are less expensive than SOVs. ACTMA could therefore fill a number of important roles in working with town planning commissions, businesses, and communities in order to develop sidewalk and bikeway infrastructure and thereby improve transportation accessibility. ACTMA would address many of the transportation elements that are crucial in developing a sustainable multimodal system but that are currently missing in Addison County.

Sidewalk connectivity and expansion

By surveying member business employees and other community members, the TMA can identify which sections of sidewalk would permit the most people to incorporate walking into their daily commutes or be most beneficial in encouraging people to walk for more of their daily trips. Furthermore, the TMA could provide maps of the best, most “walkable” sections of town sidewalks or advocate on behalf of community members for funding for new infrastructure. In higher density town centers where TMA member businesses may be in close proximity to one another, employees could take advantage of new and improved sidewalks to more effectively meet goals of programs like Smart Commute (Bell et al. 2012).

Bicycle infrastructure connectivity and expansion

While bicycle infrastructure would likely require considerable funding, the TMA would be in a unique position to apply for state or federal transportation grants to support such initiatives. For example, ACTMA could help advocate for the proposed improved sidewalk and bikeway infrastructure in Vergennes (Kelly et al. 2012). ACTMA could also encourage bicycling through bike commuter competitions, promotional events, or through online informational resources on bike commuting, repair, and safety. As an advocate for businesses and community members interested in expanded bike infrastructure, ACTMA would also encourage town planners to include bike lanes and wide bike-friendly shoulders when updating existing surfaces. Furthermore, a portion of TMA revenue from member businesses (assuming the eventual implementation of a membership fee structure) could be directed to connecting park-and-rides,
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town centers, and housing clusters in order to help member business employees switch to active transportation at least some of the time.

**Expanded bus transit service**

While ACTR already provides excellent service linking the town centers of Vergennes, Middlebury, and Bristol, the hours of operation could be expanded to accommodate riders beyond typical 9-5 weekday business hours. Furthermore, more frequent link services to Burlington and Rutland would also allow more residents to take buses to these cities rather than SOVs. The TMA could help promote existing bus routes and determine based on surveys of member businesses the hours of bus schedule expansion that would be most beneficial.

**Electric vehicle charging stations**

Currently, few public electric vehicle charging stations exist in Addison County, though one such station can be found in downtown Middlebury. As the national vehicle fleet transitions to electric or plug-in hybrid technology or as institutions like Middlebury College begin to add electric vehicles to their fleets (Becker et al. 2012), ACTMA will likely begin working with town planning boards to identify locations for public charging stations. If member businesses incorporate electric vehicles into their company fleets, ACTMA could also help assist with the costs of installing charging stations or set up stations that could be used by several member businesses in the same area.

To more effectively show how ACTMA would go about providing and coordinating resources to address these gaps in multimodal infrastructure, we have developed a conceptual structure that includes resources and services that we deem to be most appropriate for a rural context. While some of ACTMAs functions are similar to those of other existing TMAs, other functions are emphasized because they are more likely to be effective in a rural setting. For example, ACTMA will promote ridesharing as an effective more sustainable alternative for those living in remote parts of the county to which bus services do not reach. Education and social marketing campaigns will also be designed differently from urban models by focusing more on helping people envision what multimodality looks like—effectively expanding awareness of all the other diverse transportation options that are available. We will expand upon the details of ACTMAs functions in the next section.
Part 4: Proposed Functions of the Addison County TMA

Introduction

The functions of a TMA can be placed into a number of different conceptual branches that reflect the diverse ways of addressing community transportation needs and challenges (Figure 2). For the proposed Addison County TMA (ACTMA), we have identified five main branches of the TMA that will each provide specific transportation services to member institutions and the broader communities of Addison County: (1) Direct Services, (2) Consulting, (3) Advocacy, (4) Informational Resources, and (5) Education and Social Marketing. While it may be useful to separate ACTMA services into these different roles, it is equally important to realize that many of these functions overlap and intersect. None of the five categories are truly separate from the others; in reality, all will be interrelated and coordination between the functional groups will be essential. In order to demonstrate how ACTMA will function as a transportation coordinating organization, each of these different branches will be described along with the specific functions that each will provide. Furthermore, it is important to note that ACTMA serves not only commuting employees of member institutions, but also non-commuters and all those seeking transportation for recreational and leisure activities. Thus some of the functions of ACTMA (for example the Trail Finder for biking or hiking paths or a regional link service to a ski mountain) represent transportation facilitation for recreational activities specifically, a role that is not typical of all TMAs.
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A central role of a TMA is to provide direct transportation services that allow member institutions and their constituents to make changes in their transportation behavior. It is important to note that while certain services of ACTMA would be designed specifically for member institutions and their employees, many of the services will benefit communities and individuals even if they are not directly part of the TMA membership structure. This is because some direct services organized and housed under ACTMA will be accessible to all individual community members, like bus routes or inter-county bus services.

Furthermore, ACTMA would seek to integrate existing transportation services in ways that make them more accessible and desirable for communities. For example, ACTMA could

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**Figure 2** – Concept diagram indicating the five main branches of the proposed Addison County Transportation Management Association (ACTMA). For each branch, a number of example services are proposed. See the summary list at the end of Part 4 for detailed descriptions.
coordinate carpooling to and from regional park-and-ride centers that already lie along bus transit routes. This example portrays the ability of ACTMA to identify existing shortcomings in Addison County’s public transportation and to coordinate efforts to tackle these rural limitations. By coordinating carpooling to and from park-and-ride centers, community members could make even more efficient use of existing bus transit routes, thus increasing transportation connectivity in a rural county in which travels are often of long distances. ACTMA could also partner with existing bike/ped organizations, like the Vermont Bicycle & Pedestrian Coalition (http://www.vtbikeped.org), to further coordinate and promote biking and walking in Addison County.

Examples of existing direct services include:
- Coordinated bus transit in association with Addison County Transit Resources (ACTR)
- Carpool and vanpool programs
- Rideshare networks
- Bicycle and pedestrian (bike/ped) route planning
- Regional link services

In addition to improving and connecting existing direct services, ACTMA should consider developing new services that meet transportation needs that are not currently addressed or would not be addressed without increasing existing transportation connectivity. Given Addison County’s rural context, transportation connectivity is integral in addressing transportation shortcomings and is an area in which new direct services would benefit the community greatly. Generally speaking, ACTR already provides a number of bus routes that serve and connect the major population centers in Addison County, such as Middlebury, Vergennes, and Bristol. Once ACTMA is operational and begins to work with member businesses, bus routes may be expanded or otherwise improved so as to increase ridership, accessibility, and desirability. With respect to carpool and vanpool services, ACTMA would be able to recommend strategies that encourage employees to set up convenient carpools and provide online carpool/vanpool ‘ride boards’ to help set up new carpooling arrangements through GoVermont (www.connectingcommuters.org). Closely related to carpool/vanpool programs are rideshare and carshare programs, which would rely on similar ‘share boards’ or eventually links to member business websites that allow employees to sign up to use designated business
vehicles. In this way, a smaller number of vehicles are shared amongst a large group, an effort that requires facilitation and coordination by an organization like ACTMA.

ACTMA might also consider working with members and communities to develop bicycle and pedestrian routes to and from workplaces, town centers, and other destinations. Connecting residential areas to bus transit stops and park-and-ride facilities likely represents one of the major priorities for bicycle/pedestrian route planning. Additionally, ACTMA might consider working to expand regional link services—inter-county bus routes that would allow Addison County residents to efficiently travel to surrounding counties and town centers (e.g. Burlington, Rutland). Lastly, ACTMA would offer new online recreational trail finder resources that allow people to access recreational areas and hiking trails in Addison County through a variety of transportation modes. It is important to note that ACTMA would be building on existing recreation transit services, like ACTR’s bus routes to the Middlebury College Snow Bowl or the Rikert Nordic Center. ACTMA would therefore provide direct services that help anyone - not just commuters - switch to multimodal transportation solutions.

Examples of new or expanded direct services include:

- Expanded bus transit in association with ACTR
- Coordinated carpool and vanpool programs
- Regional bicycle and pedestrian (bike/ped) route planning
- Integrated rideshare networks
- Emergency ride home services
- Park-and-ride facility development
- Regional planning commission connections
- Expanded regional link services
- Compiled online recreational trail finder resources

One purpose of providing such a broad range of services, both existing and new, is to encourage businesses to become members of the TMA. By offering a diverse selection of programs that are uniquely applicable to Addison County’s rural setting, the TMA will likely be more attractive to a wider range of potential partners. Embedded in many of the programs will be incentives that encourage businesses to join the TMA and employees to participate in the programs. For example, through bus services provided by ACTR but coordinated by ACTMA, member businesses of ACTMA may be able to offer employees discounted or free fares.

In addition to the many direct services ACTMA will provide, it is important to consider the time frame for implementation of these services in relation to the formation of the TMA.
Because ACTMA will operate in direct partnership with ACTR, connecting member institutions and their employees with bus transit services may be one of the first ways in which ACTMA can begin helping members reduce the use of SOVs and start saving money. Services like vanpools and carpools are changes that can be implemented relatively instantly, but it takes around 2 years to establish a new bus route in Addison County.

**Consulting**

In addition to direct services, ACTMA would serve as a mobility consultant. As part of membership, businesses and other institutions will receive consulting services through a variety of existing programs. The consulting component is important; it represents an active approach to helping member institutions learn about their current transportation situation and participate in the process of improving how their employees commute to and from work through reducing SOV VMT. Furthermore, consulting allows for relatively standardized evaluation of businesses using checklists, surveys, and other resources that have been developed by existing TMAs (e.g. see UVTMA 2008). Standardized evaluations can allow for effective, comprehensive, and countywide assessments that can point out transportation shortcomings that ACTMA could target. These standardized evaluations coupled with customized, business-specific approaches, like that of Smart Commute, would allow for ACTMA to methodologically address all types of transportation challenges, both locally and regionally. This type of consulting would be an important component of ACTMA because it addresses challenges that are both specific to member businesses but also to a rural context.

ACTMA representatives would help members go through checklists with guidelines to create efficient and livable growth, like the Mobility Checklist designed by UVTMA ([http://www.vitalcommunities.org/transport/docs/Mobility%20Checklist%20Final%29.pdf](http://www.vitalcommunities.org/transport/docs/Mobility%20Checklist%20Final%29.pdf)). Representatives would also help with registration procedures for programs such as Smart Commute and GoVermont. Currently, a pilot Smart Commute program has begun in Middlebury, Vermont (Bell et al. 2012) that seeks to identify ways for employees to have more cost effective, healthy, environmentally friendly, and enjoyable commutes to and from work. GoVermont is another example of a similar type of consulting service, but where Smart Commute consults for businesses who want their employees to commute more effectively, GoVermont consults for individuals who themselves want to carpool or rideshare outside of their
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job. While the GoVermont platform is relatively user-friendly and accessible to individuals, membership in ACTMA would allow members to receive assistance in using GoVermont resources. Another example of such a consulting service would be that of grant writing as a collaborative entity, an effort that ACTMA might provide guidance and consultation on to member institutions that want to apply for transportation-related grant funding.

Finally, the consulting branch of ACTMA (specifically the Smart Commute program) would also distribute quarterly/biannual/yearly transportation and feedback surveys to member institutions and community leaders. Future assessment programs may also be implemented that address bike/ped commuting, recreational transportation, and regional link transportation. In the future, ACTMA, in an attempt to promote multimodal forms of transportation, should consider coming up with new ways to assess bike/ped, recreational, and regional link consulting services to further the use and efficiency of those means of transportation.

Another related component of ACTMA’s operations would be to gather data on the successes and challenges of TMA programs by sending out surveys to member institutions. Results of these surveys will be discussed and general ideas or comments from member institutions would be solicited at ACTMA member meetings. These meetings would be the venue where the quarterly/biannual/yearly transportation and feedback data are reported to member institutions and community leaders.

**Advocacy**

While the relationships and dialog among member institutions form the core of ACTMA, another main role of the organization is that of the community advocate. Generally speaking, a TMA often serves as the nexus for transportation discussions that incorporate the needs, opinions, and suggestions of both TMA members and the broader service area community. As a result, an organization like ACTMA is in a unique position to provide a strong voice for transportation change and improvement in the community—as well as at broader scales—which would help increase the transportation connectivity of rural communities. The role of advocacy is, therefore, essential in keeping discussions of transportation issues going, increasing public awareness about what a TMA does and why, and motivating new businesses to consider joining the TMA structure. When member employers or their employees raise concerns or suggestions regarding transportation issues that affect their commute (e.g. no sidewalk leading to a bus stop)
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or their ability to access non-automobile transportation options, ACTMA will be able to communicate these needs to town and potentially state government in order to bring about needed changes. Thus, ACTMA will strive to engage—and create partnerships with—town planning boards, school boards, local/state representatives, regional planning commissions, and non-member businesses in discussions of transportation infrastructure, planning, improvement, development, management, and solutions.

**Informational Resources**

One strategy for changing transportation behavior may be to provide more information on the benefits of changing the way one gets around. By offering a broad array of ACTMA website, social media, and conventional resources, ACTMA will be able to more effectively fuel the conversation on transportation. Links and articles for commuters, basic transit information, Frequently Asked Questions lists, schedule planning and organization resources, links to other TMA and sustainable transportation sites and organizations, TMA membership information, and a host of educational resources will be available through ACTMA. By providing informational resources, ACTMA would: (1) inform the community about transportation issues and solutions, (2) tell institutions how and why they may wish to consider joining ACTMA (rewards, benefits, success stories, incentives), and (3) make changing transportation behavior easier and more enjoyable. The informational resources section is a passive section of ACTMA that will coordinate and compile transportation resources in one place with easy access. This will work towards addressing a lack of knowledge or information, in turn decreasing barriers to sustainable transportation behaviors. Informational campaigns are often necessary but insufficient when it comes to actually catalyzing change (McKenzie-Mohr 2011), and therefore ACTMA should also include educational and social marketing campaigns to provide a more holistic approach to changing transportation behaviors (McGovern 2005).

**Education and Social Marketing**

The fifth functional branch of ACTMA is responsible for active social marketing campaigns and education events and programs. Because the ACTMA vision is focused on improving Addison County’s transportation paradigm over the long-term, effective education and outreach is one of the most vital ways to prompt behavior and social changes. Along these
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lines, ACTMA events will be aimed at improving community knowledge of transportation issues, options, and solutions. By including the broader community in events, ACTMA will emphasize its interest in helping not just member businesses, but also the wider community to find other ways of moving across the rural landscape. Examples of such rural, transportation-focused events include the Way To Go! Vermont Commuter Challenge in which Vermont towns compete to carpool, bike, walk, take the bus, and telecommute; and Park It Pledge!, a neighborhood-based challenge to reduce car use to benefit your health, wallet, community, and environment (CarShare Vermont 2011).

Advertising campaigns could inform viewers about how the TMA works, why one’s employer may wish to join, or provide ‘tips’ to reduce transportation costs or commute in more active ways. An example of a social marketing campaign could be a multimodal transportation advertising project, which would involve displaying posters in member business workplaces and around Addison County towns promoting multimodal transportation resources and services. ACTMA will embrace the power of the digital age by providing updates, information, and challenges via social media (e.g. Twitter, Facebook). Finally, ACTMA will also hold more traditional transit promotional events, commuter fairs, or community fundraising campaigns for local transportation projects. Finally, events and campaigns will target a variety of stakeholders and community members of different age groups. For example, events designed to encourage kids to walk or bike to school would be different from those that attempt to convince working adults to ride the bus to work three times per week, but both would share common sustainable transportation themes that ACTMA will promote.

**Summary of ACTMA Functions**

Overall, ACTMA would offer a variety of transportation-related information, programs, and solutions within five broad functional categories. **Direct services** are geared towards helping member institutions and interested community members get to their destinations in new ways. The **consulting** branch of ACTMA would provide assessments and surveys for member institutions to spark changes in commuting behavior. As an **advocate** for transportation change and improvement, ACTMA would serve as an active and representative voice at local town meetings and also at the state level. By providing **informational resources**, ACTMA would improve people’s understanding of transportation issues and opportunities while sparking interest
in changing transportation behavior to save money, live healthier, or feel more connected to the community. Finally, ACTMA would undertake **educational and social marketing** campaigns that attempt to attract more member institutions, heighten community interest in transportation management, and strengthen communities. In conclusion, the functions of ACTMA are diverse and strategic, with highly active and specific strategies that engage member institutions and their employees directly (e.g. consulting, direct services), all-inclusive events and programs that aim to engage Addison County as a whole, and more specialized informational resources that prompt exploration of transportation options, all of which keep in mind Addison County’s unique rural context.

**Summary List of Key Services**

**Direct Services**
- **Carpool/ Vanpool Services**: coordinating or incentive programs to encourage individuals to commute together in the same vehicle and transition from SOVs to HOVs.
- **Bus (ACTR)**: the promotion and expansion of an already thriving regional bus service.
- **RideShare**: programs that provide access to one or few cars for many people, reducing the need for multiple SOVs.
- **Emergency Ride Home**: a service to provide non-SOV users a ride home should unforeseen circumstances present themselves.
- **Park-and-Ride**: development of satellite parking sites to take advantage of existing transit routes or shuttle services.
- **Regional Link Services**: expanding transit programs to provide connections to transportation services in other counties.
- **Trail Finder**: searchable internet tools designed to identify and suggest nearby pedestrian trails that may not be visible on more widely utilized mapping tools.

**Consulting**
- **Smart Commute**: a “transportation audit” for participant businesses and organizations designed to suggest an appropriate transportation portfolio to improve employee transit practices.
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- GoVermont: a state-run database of tools and information offering suggestions on how commuters can travel more effectively, which is viewed as a personal consultation service as opposed to a business-specific consultation service.

- Mobility Checklist: A framework for planners and decision makers to develop walkable and bikeable communities.

- Surveys: gauging public interest and opinion on transportation and transit issues.

- Bike/Ped Routes: developing and researching the expansion of new bike and pedestrian paths and routes.

- Other Assessments: any additional consulting tools that the TMA may develop in the future.

**Education and Social Marketing**

- Transit Promotional Events: events that promote the benefits and values of using transit.

- Commuter Challenges: competitions between different businesses and organizations to reduce VMT and increase awareness of non-SOV transportation options.

- Transportation-Based Public Health Campaigns: marketing initiatives designed to stress the public health dimension of transportation and to encourage active transportation (walking, biking, etc.).

- TMA Promotion and Advertising: advertising campaigns designed to promote the use and utilization of transit services and transportation resources.

- Sustainable Transportation Campaigns: marketing initiatives designed to stress the environmental impact of transportation and to encourage more environmentally friendly practices.

**Informational Resources**

- Links for Commuters: provide connections to other transportation and transit services outside Addison County for long-distance commuters.

- Transit Information and Q & A: responding to constituent questions and concerns about transportation issues.

- Schedule Planning and Organization: coordinate transportation actions.

- Links to other Sustainable Transportation (ST) websites: connecting constituents with useful websites and information sources on transportation issues.

- Outreach Materials: tools and fact sheets on transportation issues in Addison County.
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- **TMA Membership Information:** providing member services to TMA businesses and organizations.

**Advocacy**

- **Town/Regional Planning Boards:** acting as transportation specialists and advocates for accessibility when new town/county plans are drafted.

- **Towns/Schools/Businesses:** lobbying town/school/business transportation interests in the public forum.

- **Infrastructure Planning, Improvement, Development, and Management:** suggesting improvements to town plans and design to encourage better accessibility and transportation planning.
Part 5: Proposed Structure of the Addison County TMA

ACTMA will be launched as a program of the nonprofit transportation service provider ACTR (Addison County Transit Resources 2012). This affiliation would connect the existing body of knowledge and transportation expertise around Addison County present within ACTR to the newly formed TMA. Along with the knowledge and expertise inherent in ACTR, existing relationships between ACTR and the local community would provide a foundational support to solidify the workings of the TMA in an effort to become a self-sustaining program of ACTR.

The organizational structure, depicted in Figure 3, would be comprised of an office staff dedicated to developing the TMA, as well as an Advisory Board of Partners. The office staff would initially be comprised of a part time employee serving as the ACTR liaison, as well as a part-time employee functioning as the TMA Coordinator. This part-time employee would require approximately 20-30 h/week in order to fulfill the operational and developmental work as guided by the Advisory Board and TMA Coordinator’s expertise. As the organization’s operational and managerial needs evolve, additions to staff could be made accordingly. This is consistent with all of the studied existing TMAs, though must be considered preliminary given the innovative nature of this rural TMA. The Advisory Board of Partners would consist of representatives of founding members from businesses, municipalities, and other participating institutions and/or organizations. The Advisory Board’s function would encompass strategic planning for the future of ACTMA, as well as an operations committee in order to evaluate the current transportation and local issues faced by the representative members and TMA. In order to further facilitate a collaborative environment among institutions, no individual differentiation between members would be made.
In order to ensure the operations and development of ACTMA, a base of institutional members will be crucial. While the initial capital offered by The High Meadows Fund and VTrans will allow a comfortable budget to launch the program, membership dues generally account for 30 to 75 percent of a TMA’s income (TMA Handbook 2001). Membership dues and fee structures will be a unique challenge given the rural context of Addison County, as the range of institutions served ranges from large educational institutions (e.g. Middlebury College) to small business centers (e.g. The Industrial Park, Exchange Street, downtown Middlebury), as well as other important organizations (e.g. Porter Hospital, Townships/Municipalities, Chambers of Commerce, etc.). Fee structures can take the form of membership “packages”, fees based on separated brackets based on the number of employees, or a consistent annual rate based on a standard fee per employee. Specifics on an optimal fee structure will be incorporated from
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communication and coordination with local institutions, as well as information gathered by the work conducted by Smart Commute in Addison County in order to sufficiently cater to the community’s needs and circumstances.

Financial support for ACTMA will initially be provided by two prominent Vermont based institutions, The High Meadows Fund and VTrans. After the first two or three years, it then will require other sources of continuous revenue in order to be self-sufficient in its operations. The High Meadows Fund provided an initial two-year grant of $40k to start ACTMA under a new Go! Addison County program, though the funding will expire in July of 2014. VTrans has committed an annual grant of approximately $25k for an undetermined amount of time (presumably 1-3 years). These local and state based grants will ensure that there is a sufficient reserve to support the start-up and ongoing expenses of staff, office equipment and upkeep, research and marketing, and other business development functions for two years until revenue from sales (membership) grows. Furthermore, this base of funding will provide substantial buffer room to compensate for unknowns in both expenses and revenues. In order to ensure ACTMA develops as a self-sufficient program of ACTR, long-term solutions must be incorporated in order to further expand membership services and ensure steady revenue streams.

TMAs in the United States are funded in a very diverse manner. Each TMA studied seemed to have developed its own funding strategy based on its specific needs, the availability of governmental or grant funding, and the ability and willingness of constituent organizations to contribute. The following examples showcase the diversity of how TMAs are funded. The Junction TMO in Andover Massachusetts charges companies based on size, with small companies paying around $100 per year and companies with over 1,000 full time employees paying at least $13,000 per year. The Anoka County TMA in Minnesota is federally funded though a congestion mitigation air quality (CMAQ) grant and does not charge.

Potential funding sources to be incorporated into continuing Research & Development:

- Membership dues/assessments
- Fees for services/user fees
- Seed funding and start up grants
- Ongoing service operation and study grants
- Private contributions
- In-kind contributions (non-cash) (e.g. promotional poster printing, volunteer time, etc.)
- Other revenue sources specific to community dynamics
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Part 6: The Pitch for ACTMA

Introduction

As mentioned in previous sections, a TMA would be a vehicle for increased accessibility across our Addison County community. A TMA would be a resource for the advocacy for—and development of—transportation alternatives, an opportunity that makes Addison County a more mobile and accessible community for all citizens. This is especially true for less affluent residents for whom the cost of transportation represents a financial hardship. Transportation advocacy in Addison County is a dollars and cents issue, one that has the opportunity to reconnect individuals with their community and the potential to make our fragmented county more accessible for all.

General Residents

When we discuss accessibility, we try to liberate poorly invested capital. As it stands, families devote significant fiscal capital (money) and social capital (time) to the use and maintenance of one or more SOVs. Low-income families can have a particularly hard time affording their own mobility given the heavy reliance on SOV travel typical of most rural contexts. Given that 11.3% of the population of Addison County lives below the poverty line, and that per capita income between 2006 and 2010 was $26,599 annually, finances are a very relevant concern (US Census Bureau 2012). According to the American Automobile Association, the average person spends up to $9,641 annually for the privilege of driving an SOV (excluding loan payments). When compared with the annual median income of Addison County—$53,422—an annual expense of almost $10,000 represents about one fifth of a household’s income being spent on SOV travel (US Census Bureau 2012).

A Transportation Management Association offers an alternative that would help free this poorly invested capital. The grocery store or the downtown shopping district—areas that may have been only accessible if you were willing to commit enough capital toward SOV mobility, or may not have been accessible at all given previous transportation circumstances—may be accessible for a nominal fee. The cost to engage in the Addison County community is lowered when transportation alternatives are explored and developed by an established advocacy
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organization. In fact, individuals who use public transportation instead of driving can save an estimated $6,500 to $11,000 annually (Sears and Glitman 2010).

These lower costs indicate a more accessible system, freeing up existing sources of capital that were previously being spent on SOV travel. Newly liberated capital is certainly good for the community. TMA users will gain access to resources that can be re-invested in their families and in their community. Newly liberated social capital will give community members more opportunities to build relationships and strengthen community. TMA services inherently strengthen relationships between users and their fellow commuters. These strengthened rural relationships also contribute toward including and benefiting disenfranchised members of the community who traditionally have had less access to mobility.

It is the generation of this fiscal and social capital that makes investing in an Addison County TMA worthwhile, among other factors. Individuals across the community, from business owners to community associations to individual families, stand to gain from an investment in transportation advocacy and investment. It is an investment that provides specific benefits to citizens and, most importantly, makes the community as a whole more economically efficient.

**Small Businesses**

Businesses serve as the bread and butter of the TMA community as they provide a consistent and reliable source of commuter traffic. As direct players in the commuter structure, they provide an opportunity to make a sizable impact on traffic in their community. But, budgets are often tight for the small business owner. From quarter to quarter, business owners are under pressure to balance budgets and pay employee salaries. Why should a small business commit resources to a TMA?

**Employee Benefits**

ACTMA member businesses would be able to supply their employees with valuable and tangible benefits. A business’s TMA membership provides employees with a host of transportation resources, direct services and opportunities. Like healthcare, transportation is a real and regular cost that employees must deal with. Many businesses provide health insurance or some other health related compensation as a part of an employee benefits package. Access to a TMA’s resources provides a similar service to employees and can be seen as a component of a
comprehensive employee benefits package. Comprehensive employee benefits make a business a more attractive workplace and demonstrate that the employer is committed to its employees. Benefits that a TMA would provide include reliable modes of transportation for employees, fewer sick days taken because employees using multimodal forms of transport are healthier, and active efforts toward climate change mitigation (EPA 2012). At the most basic level, comprehensive benefits improve worker retention and at its most altruistic, it is a lesson in responsible management.

**Community Leadership**

ACTMA will be poised to act as a community leader in Addison County. It will be a major player in planning decisions and will act as an effective advocate for sustainable and effective transportation. By joining and engaging in the TMA, a business owner has the opportunity to be an Addison County decision maker. Participant businesses will have a hand in shaping transportation policy and will have the opportunity to shape their community. While this appeals to principles of ambition and leadership, there is also an opportunity to secure resources for a business's own employees. As a member of ACTMA, businesses will have the opportunity to propose problems and solutions that speak to their own concerns. Leadership is a valuable business tool, and an entrepreneur would have the opportunity to make an impact on transportation planning in their community.

**“Walk the Walk”**

Most importantly, access to a TMA and its resources offer business owners the opportunity to do the right thing. Many businesses in Addison County demonstrate a commitment to their communities, social equality and sustainability. Participation in a TMA offers these companies and small businesses the opportunity to live out their mission in a very visible way. Transportation advocacy and investment develops new community linkages, improves accessibility for lower income families and dramatically reduces our collective carbon footprint. ACTMA will champion these causes. It will be a major player for equality and environmentalism in our Addison County community and members will be recognized as businesses and organizations devoted to a higher cause. It’s also important to note that ACTMA will have a “louder voice” and be more persuasive when it comes to sustainable transportation
funding based on its broad-based support in the community. For a socially responsible business owner, a relationship with ACTMA would be second nature, not only in terms of the benefits it would receive but also for the benefits it provides to the community as a whole.

**The Business Community**

While businesses might be more concerned with in-house employee transportation, a town or Chamber of Commerce is always looking out for ways for businesses to be more accessible to potential customers. A Chamber of Commerce is devoted to local investment in a downtown business district. Often, their primary aim revolves around reducing the barriers to shopping locally and raising the profile of local businesses and services through festivals, events and engagement. In addition to facilitating the travel of commuters to and from work, the business community has an interest in shopper mobility and “liberated capital.” They hold a dominant stake in the “weekend commuter,” individuals who need to utilize alternative modes of transportation for leisure and non-work related activities and, thus, attract new businesses to a town. A more accessible business community is a more profitable community. A business community is more likely to be profitable if they can reduce the economic and social cost of transportation for their employees and/or free up resources associated with customer transportation.

ACTMA has the potential to supplement the engagement and outreach of a Chamber of Commerce. By providing transportation assistance to the “weekday and weekend commuter,” the business community will be more likely to thrive. Because ACTMA will provide mobility for the entire week, major components of the Chamber’s mission may be served by the expansion of a TMA’s resources. It is, therefore, in the Chamber’s interest to hold a guiding stake in ACTMA.

**Community Access to Liberated Capital**

As noted above, the cost of maintaining a second vehicle can be significant, especially in low-income households. Yet, these households are still families with capital to spend. If a TMA can reduce the need for a second or third car, families will have access to a potential $11,000 per year (Sears and Glitman 2010). These transportation related savings represent a huge financial opportunity for downtown business districts. This is money that can go toward groceries, products and services from local businesses, a home mortgage or long-term savings. When
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residents spend money in local businesses, the community grows, bolstering the downtown shopping district and making the community more attractive for shoppers and investors. If this capital is instead invested or saved, local banks will have a higher capacity to issue loans, promoting the expansion of the community. At the very least, this is capital that will provide the city and business community with tax revenue, providing an opportunity for downtown investment. This potential new inflow of capital can open the door for new investment and more small business success.

**Directing Transportation Infrastructure**

When encouraging transportation investment, planners often advocate for the development of the urban core, a central business district that is walkable, pleasant, and offers a host of conveniences. It is important to emphasize multi-use and multimodal nodes, sites that are attractive, diverse, and develop a sense of community and character. Similarly, it is a Chamber of Commerce’s mission “to build a better community through a strong economic base” (Addison County Chamber of Commerce 2012). A chamber is committed to bringing consumers into an attractive community and encouraging their spending or investment.

It seems as though the interests of the TMA and the Chamber of Commerce are aligned. The Chamber hopes to attract customers and ACTMA helps isolated households and communities travel into downtown areas for work, shopping, and recreation. ACTMA will provide inroads into local business communities and makes the Chamber’s clientele more accessible. This is important to note because we do not foresee ACTMA and a Chamber of Commerce to be in competition for businesses to sign on as members, but rather that ACTMA will supplement services to members, and we believe that there is potential for cross-marketing between ACTMA and various local and regional chambers.

**Developing a Sense of Community**

While the liberation of financial capital takes the priority in most discussions, it is important to consider the social capital ACTMA has the power to generate. While SOV transportation relies heavily on individuality, SOV alternatives generate a sense of camaraderie and community. As individuals carpool together, take the bus together or bike to work together, we see the development of these micro-communities (Michelle McCauley, pers. comm., October
4, 2012). Micro-communities facilitate the development of relationships, opening up veins of communication and creating inter-dependence. When a dialog is opened, engagement happens. Citizens who had once been isolated and silent begin to connect and speak up due to a re-ignited passion for their neighbors and their communities.

Transportation investment builds communities by creating communities. It helps individuals develop a locally based identity, and it builds a relationship with neighbors across Addison County. ACTMA provides tools and resources that town leaders, community organizations and small businesses can latch onto to develop a culture of civic engagement in community groups who previously did not have a voice.
Bibliography


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Appendices

Additional Sources:


