Planning Long-Distance Bikeways for Economic Benefits in Rural Communities

Assignment 4: White Paper // USP-565 — Pedestrian and Bicycle Planning

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Introduction

This report is intended to support planning processes for long-distance bikeways. Long-distance bikeways create meaningful and safe routes to use by bicycle for short or multi-day trips. The report draws on relevant literature for strategies to strengthen their cultural and economic benefits. The report is organized in three major sections. *Impacts of Bicycle Tourism* describes the economic benefits seen from bicycle and multi-use trail investments. *Planning In Rural Communities* considers some of the challenges related to bicycle planning in rural communities and potential strategies for success. *Planning Bikeways* documents elements that can make the bikeway desirable to potential tourists and appreciated by local communities.

This report does not investigate planning the route alignment. It is assumed to already have been chosen and includes connections with small or rural communities. Similarly, this report does not research bikeway facility types. Instead, it is meant to apply to any type of facility, including both multi-use off-street paths and designated on-street routes. However, prevailing literature is weighted toward off-street paths, particularly rail-trails. It is reasonable that findings from rail-trails could be applied to all bikeways, however it should be noted that tourists have been found to prefer off-street paths over on-street routes (Deenihan & Caulfield, 2015). Therefore, success for on-street bikeways may be limited or more challenging than for off-street paths.

Impacts of Bicycle Tourism

Bicycle touring can be a high-quality, immersive, environmentally-respectful, and physically

active means of vacationing. By traveling secondary routes, bicycle tourists experience small towns that would not be seen while traveling primary highways. Because they travel at lower speeds, they take in more detail of the scenery. The lack of barriers between people traveling by bike and their surroundings makes the experience multi-sensory; they are connected to the terrain, feel the weather, smell the air, and engage with their surroundings.

Bicycle tourists can bring substantial impacts to the economies they visit. With relatively short travel distances and low carrying capacity, they tend to consume a high amount of supportive goods and services through their journey. They make frequent stops, often in small towns and rural areas. A 2012 report estimates that people spent nearly $400 million on bicycle-related travel in Oregon (Dean Runyan Associates, 2013). People making bike-related trips spent an average of $116 per day, and those making independent bicycle tours spent $144 per day (see Appendix Table A1). Similar impacts have been seen elsewhere. A 2014 Montana study finds bicycle tourists spend more per-day and stay longer than non-bicycle tourists (Nickerson, et al., 2014). A 2010 Wisconsin report estimates that recreational bicyclists directly contribute over $500 million to their state economy annually (Grabow, 2010). Bicycle investments in North Carolina's Northern Outer Banks, a coastal tourist town, were shown to have annual economic benefits nine times greater than the initial investment (Meletiou, 2005).

Rail-trails, multi-use paths converted from defunct railways, have been the subject of a number of studies. Wisconsin's Elroy-Sparta, completed in 1971, is one of the first rail-trail conversions and one of the first to be economically assessed. A 1989 report found that trail use contributed $2.6 million[1] to the local economy and nearly one half of users were from out of state (Schwecke et al., 1989).

[1] Adjusted for inflation to $2018. Original 1988 amount: $1.26 million.

The 150 mile Great Allegheny Passage (GAP) connects with the C&O Canal Towpath to create a 335 mile off-street path from Pittsburgh to Washington, DC. The GAP begins in Cumberland, Maryland, and winds through the Allegheny mountains of rural Maryland and Pennsylvania, connecting with ten small towns before ending at Pittsburgh. Economic development along the trail has been fostered by the Trail Town Program, which actively works to empower adjacent communities. The Program also continuously monitors the economic conditions with regular surveys of trail users and local businesses. Between their first survey in 2008 and the most recent in 2014, they have seen a net gain of 65 new businesses and the share of sales related to trail traffic increase from 25% to 40% (Trail Town Program, 2016). The estimated 2012 overall direct economic impact of the trail is $50 million.

Connecting a bikeway, either as a rail-trail or as an on-street route designation, to rural communities can be mutually beneficial to visiting users of the trail and local residents. Visitors experience the unique culture of the community while enjoying food, lodging, and services there. Residents, on the other hand, receive an economic boost from tourists bringing outside money into their economy. And they, too, can enjoy the bikeway.

Planning in Rural Communities

Planning for bicycling facilities in rural areas and small towns can be different than in urban areas. A study of ten small Colorado communities found that contentious perspectives of bicycling (as a mode of transportation) were common (McAndrews et al., 2018). Many stakeholders held negative stereotypes of bicyclists and were reluctant to give up motor vehicle road space. Few of the stakeholders were aware of the benefits of bicycling, either for recreation or for transportation. Further compounding these challenges, many regional and

state policies were not supportive of bicycling facilities. This required planners to build support through broad outreach to local communities, stakeholders, and elected officials. They discovered that, despite the opposition to on-street facilities, there was political support for recreational cycling, giving them an opening to develop off-street paths. As with all planning, it is important to approach each community with sensitivity and be prepared for initial stakeholder and political opposition. Connecting a bikeway with their community, though, can initiate conversations about the values of bicycle facilities and, over time, warm perceptions of the activity.

The economic pressures rural and small communities experience are also often different from those experienced by urban areas (Center for Sustainable Communities, 2013). Each community is unique and facing its own set of challenges. For example, a town may be far from metropolitan areas and struggling to attract employers or maintain economic vitality. Or it may be adjacent to an urban area and feel encroachment from an expanding metropolitan population. The Center for Sustainable Communities outlines a series of strategies for successfully implementing economic development projects in rural and small communities. These were created to help revitalization planning projects based on redevelopment or reuse of underutilized sites. Bikeways, though not specifically referenced in the report, often fit this description and can surely benefit from the strategies.

Community strategies

- Engage the community in the planning process from the very start. Be sure to include those who may not be initially supportive. This is generally good planning advice, but especially important in a small community. A diverse group of stakeholders will give a

fuller picture of the local perspective. Those who are initially opposed to the project may shed light on potential concerns; including them creates an opportunity to win them over and builds community trust in the project team.

- Make the most of potential partnerships. Think creatively about what kinds of stakeholders may be interested and how they may be able to help the project succeed. Public-private partnerships may open new opportunities for the project.
- Maintain the historical and cultural character. This is a big asset of small communities and can be leveraged to attract visitors and reinforce local identity.

Economic strategies

- Make the process easy for developers. These investments may not be highly lucrative, so get creative with financing to make the project possible.
- Use strategic partnerships to take advantage of available tax incentives.
- Bring in technical experts to make the most of financing options.
- Establish long term relationships to see through implementation and sustain economic momentum.

Applying these to a bikeway project requires additional consideration. Because a bikeway involves many communities along its length, these strategies will have to be implemented multiple times. This takes a substantial amount of time and resources. It is possible that geographically- and culturally-proximate towns could be brought together in a single planning process. Certainly all communities will be stakeholders for the complete route and have opportunities to communicate amongst one another. For example, the GAP formed the Allegheny Trail Alliance, a coalition of communities to guide and maintain the trail (Allegheny Trail Alliance, 2005). However, because communities tend to have unique internal concerns,

there will likely be greater success if each is considered independently as well. This could be done by building partnerships with local advocates or residents who have the resources to take on these strategies. Their positions as insiders will give them an advantage because they will already have rapport with the community.

Planning Bikeways

Economic benefits for these communities is dependent upon successful bikeways. A number of studies have focused on understanding the elements of successful long-distance routes — including rail-trails and self-guided tour trails. Elements include community outreach, important features, desired amenities, and the visitor experience.

Community Outreach

Suggested outreach strategies overlap with the rural economic development strategies outlined above. For example, Taylor (2015) emphasizes the importance of stakeholder cooperation because of the many communities linked by a rail-trail project. The report also asserts the value of providing services for trail users, and how support from local businesses, nonprofits, and public bodies is necessary to make them viable. It is important to foster supportive public-private partnerships because of the role private businesses play in providing amenities. Sustainable forms of funding are emphasized for ongoing maintenance needs and providing support for economic development.

MacLeod (2016) explores the elements that make a successful self-guided tour. Reaching out and including residents is important to ensure the tour is culturally appropriate and celebrates their heritage. The process can help strengthen the community by encouraging interaction,

reflection, and place-making. The report recommends seeking out alternative narratives of the area's history and including them in the tour.

Important Features

The route should have unique features and these features highlighted (MacLeod, 2016). Elements with *tourism appeal,* such as scenic views and historic elements, are highly desired by trail users (Willard & Beeton, 2012). The length of the trail is an important consideration for tourists; people are willing to travel further to visit longer trails (Reis & Jellum, 2012). A systemic marketing campaign is vital for getting the word out to potential visitors. The use of professional organizations is recommended to manage marketing campaigns (Taylor, 2015).

The bikeway can draw on its connection with the surrounding land. Rail-trails, for instance, are strongly tied to a region's history by being built on an historic railroad track. A well-planned rail-trail helps to preserve and celebrate this cultural heritage. The trail gives users an opportunity to learn the stories of the various communities they travel through. Great lengths of these old railroads are in rural and wild areas with exceptional scenery, which trail planners can accentuate and market to outside audiences. A trail can be used as a protected natural corridor, giving wildlife a migration route and creating a buffer zone between uses. This enhances the attractiveness of the trail and strengthen the regions environment. It can also be leveraged politically to help gain support from environmentalists.

Desired Amenities

Ancillary services, particularly quality businesses, were the most desired trail features as rated by rail-trail users in Australia (Willard & Beeton, 2012). Also highly rated were *environmental features*, like toilet availability and safe conditions, and *trail characteristics*, including public

transport at the ends of the trail and availability of a public phone in areas with limited cell reception (see Table A2 for an abbreviated list). Gateway towns or hubs are often used as entry and exit points from the trail. These are ideal locations to provide amenities like lodging, food, bike service, and trail information (Taylor, 2015). Integrating the route with adjacent communities using wayfinding, information, and businesses that cater to the needs of users strengthens the experience for trail users and the communities (MacLeod, 2016).

Visitor Experience

Considering and designing for the visitor's trail experience is strongly emphasized throughout the literature. Taylor states that interpreting unique features of the trail and its surroundings is "a key component of the visitor experience" (2015, p. 89). Lemky (2017) describes the process for Canada's Cabot Trail, where a cohesive brand identity was created for the trail with local elements incorporated at each community to celebrate its unique identity. Taylor encourages taking this off trail, as well, with easy links to nearby attractions — expanding the user experience.

MacLeod further explores the visitor experience by considering how self-guided trails, including routes for any mode — walking, biking, driving — affect tourists' perception of spaces (2017). The design and inclusion of interpretive elements, wayfinding, and branding guides users' experience. MacLeod stresses that a wide variety of perspectives must be included when designing the interpretive elements of a trail to be sure the trail honors the diversity of its heritage. It is also important for the trail to be designed to immerse and engage the tourist, encouraging interaction and multi-sensory stimulation. The risk of ignoring this is creating a one-dimensional experience where tourists consume the trail without understanding or engaging with the local context.

Organization

These elements require planning over a variety of disciplines and with many stakeholders. It may be beneficial to establish an organization to see this process through and continue with ongoing strategies. Forming a coalition of towns or regions along a trail, such as the Allegheny Trail Alliance (ATA), can help by giving the trail a unifying direction led by a representative board. The ATA is the caretaker of the GAP, managing the promotion and enhancement of the trail. Therefore it supports towns along the GAP with strategies for community-building and economic success (Allegheny Trail Alliance, 2005). There are groups focused on economic revitalization of these rural communities. The Trail Town Program, which is also organized around — but not exclusive to — the GAP, provides information and helps with funding for business developments. Their Trail Town Guide (2017) is a comprehensive manual of business development strategies for communities with trail tourism. The Trail Town Program monitors progress by regularly measuring economic indicators of the communities they work with (Trail Town Program, 2016).

Limitations

This report is intended to apply to routes that can be used for bicycle touring. It is limited by available research. Few studies have specifically focused on this activity, so this report draws on related or broader topics. For example, many of the studies cited focus on rail-trails, which are often used by people touring by bicycle, but are also used for walking, horseback riding, and other types of biking. Some studies consider self-guided tour routes, which, similarly, can be done by bicycle or other modes. Despite the fact that this literature is applicable, studies focused exclusively on bicycle touring could shed light on more of the nuances specific to the activity. There are also limitations within each of these studies. Most research and economic

calculations are based on stated-preference surveys with limited sample sizes. These are better used as estimates than exact numbers. These estimates are still useful to understand the scale of impact from these facilities.

It is also worth acknowledging that the focus on economic development of small, rural towns runs the risk of transforming them into a service-oriented economies catering to tourists. Broad economic development is outside the scope of this paper, however it is recommended that tourist development be used as one of many tools to strengthen a community's economy. Additionally, as mentioned earlier, it is important to be inclusive with members of the community to maintain and celebrate the local culture.

Conclusion

Bicycle touring can be mutually beneficial to the traveller and to the local communities along the tour. The traveller enjoys an active, immersive, cultural experience, while the locals receive economic benefits, community-building, and improved bicycle facilities. Bringing this mutually beneficial relationship into fruition requires deliberate planning with strategies such as:

- Reach out to communities along the route early and be inclusive.
- Find creative funding mechanisms for local business developments.
- Be sensitive to the unique interests of each community and be creative with potential partnerships.
- Celebrate the culture and history through each area the route passes.
- Seek out different narratives from the residents and include these perspectives in interpretive elements along the route.
- Leverage the surrounding land and regional history to enhance the environment and the trail.

- Use professional marketing to spread the word and entice people to visit.
- Integrate the trail in adjacent towns to draw trail users in and give them a meaningful experience.
- Encourage these towns to invest in businesses that provide food, lodging, and other services that support trail users.
- Empower them with information and funding for business development.
- Consider building an immersive, engaging experience for tourists so that they may better understand local culture.
- Organize a group to implement these strategies, empower communities, and continue enhancing the route.

Implementing these strategies can help create an economically- and environmentally-sustainable bikeway that celebrates local culture and is rewarding for both visitors and residents to enjoy.

Appendix: Tables

Table A1: Average party expenditures per trip for travel with bicycle activity in Oregon

	Day Trip	Overnight Trip	
	Expenditures ($/Trip)	Expenditures ($/Trip)	Length (nights)
Independent bike touring	144	788	4.8
Organized group tour	109	900	4.5
As a recreational rider	131	844	3.7
Sanctioned bicycle race	144	794	2.6
Day mountain bike ride	125	732	3.4
Organized non-competitive group ride	168	697	4
Day road ride	98	606	2.8
Other cycling event	158	552	2.6
Overall bicycle trip average	**116**	**744**	**3.6**
All Oregon travel	**—**	**620**	**3.3**

Source: Dean Runyan Associates, 2013

Table A2: Rail-trail service quality attributes*

Ancillary services
Business operators providing service in an efficient manner
Business operators willing to accommodate needs of rail-trail cyclists
Commitment of business operators to deliver service as promised
Convenient opening hours
Business operators having previous business knowledge and experience
Availability of miscellaneous services (e.g. bicycle repairs, other retail outlets)

Tourism appeal
Good vantage points offering scenic views
Heritage values (e.g. Victorian-era railway architecture)
Tourism attractions en-route (e.g. wineries, historic sites and national parks)
Appealing plants and wildlife

Environmental features
Provision of toilet facilities at refreshment stops
Few traffic hazards (e.g. cycling along busy roads)
Surface suitable for all rail-trail cyclists Safe and secure environment for rail-trail cyclists of all ages

Trail characteristics
Access to public telephones in townships (as mobile phone coverage not available)
Other cyclists en-route
Public transport access to head and/or tail end of rail trail

Source: Willard & Beeton, 2012
* This list isolates the top attributes based on a factor loading of 0.5 and higher.

Annotated Bibliography

Allegheny Trail Alliance. (2005). Trail Towns: Capturing Trail-based Tourism (A guide for Communities in Pennsylvania). Retrieved from http://www.atatrail.org/docs/1TTManual.pdf

A guide for Pennsylvania towns along long-distance trails to enhance their communities as tourist destinations for trail users. Includes frameworks for local public participation, economic restructuring, physical design elements, and marketing.

Center for Sustainable Communities. (2013). Asset-Based Economic Development and Building Sustainable Rural Communities. Retrieved from https://icma.org/sites/default/files/305453_Sustainability Briefing paper 1-6.pdf

A collection of six papers focusing on sustainable economic development in small and rural communities. Uses case studies to illustrate best practices around industry, natural resources, existing infrastructure and historic resources, adaptive reuse of sites, transportation networks, and renewable energy.

Dean Runyan Associates. (2013). *The Economic Significance of Bicycle-Related Travel in Oregon*. Portland, Oregon.

A report for Travel Oregon to document the economic impacts of bicycle-related travel in the state. Documents impacts by type of activity, by region, and includes demographic characteristics by activity type.

Deenihan, G., & Caulfield, B. (2015). Do tourists value different levels of cycling infrastructure? *Tourism Management*, *46*(April 2010), 92–101. https://doi.org/10.1016/j.tourman.2014.06.012

Studies cycling facilities preferences for Dublin tourists based on an intercept stated preference survey. Considers factors of weather, comfort, distance, slope, time, and cost. Finds tourists are willing to double the amount of cycling time in order to use a cycling facility that is fully separated from auto traffic.

Grabow, M., Hahn, M., & Whited, M. (2010). Valuing Bicycling's Economic and Health Impacts in Wisconsin. Madison, Wisconsin.

Reports the impacts bicycling has on the economy of Wisconsin and the health of its residents and environment. Economic impacts are sizeable. Health and environmental benefits are substantial, and the potential benefits from more bicycling are huge. Recommends continued public assistance to increase bicycling, build safer bike facilities, and support the bicycle industry.

Lemky, K. (2017). The revitalization of a heritage travel route: Canada's Cabot Trail. Journal of Heritage Tourism, 12(5), 526–535. https://doi.org/10.1080/1743873X.2016.1242592

Describes the process of revitalizing the aging Cabot Trail in Nova Scotia. The trail is considered a heritage route, linking many historic sights over rugged terrain. Led by the non-profit Cabot Trail Working Association, a 5-year collaborative planning process was performed to revitalize the route to attract more tourists. A brand identity was formed for the entire route, with local elements incorporate to celebrate local community contexts.

MacLeod, N. (2016). Self-guided trails - A route to more responsible tourism? *Tourism Recreation Research*, *41*(2), 134–144. https://doi.org/10.1080/02508281.2016.1147222

Considers the potential for self-guided trails to be socially and environmentally responsible tourist attractions. Looks at the Cornwall's Mineral Tramways project as a case study, a network of pedestrian, cycle, and equestrian trails in southwest UK. Makes recommendations based on the case study, including: explore a theme appropriate to the region, make it educational, celebrate

local identity, integrate with other trail networks, link to local businesses, and make the trail safe and comfortable.

MacLeod, N. (2017). The role of trails in the creation of tourist space. *Journal of Heritage Tourism*, *12*(5), 423–430. https://doi.org/10.1080/1743873X.2016.1242590

Considers the power trails have to inform and shape tourists' perception of a place. Recommends trails be used to celebrate the location they are in, making it a more nuanced and fulfilling experience for tourists and increasing engagement and appreciation by locals.

McAndrews, C., Tabatabaie, S., & Litt, J. S. (2018). Motivations and Strategies for Bicycle Planning in Rural, Suburban, and Low-Density Communities: The Need for New Best Practices. *Journal of the American Planning Association*, *84*(2), 99–111. https://doi.org/10.1080/01944363.2018.1438849

Studies how ten rural, suburban, or low-density Colorado communities planned for bicycling as part of Kaiser Permanente's Walk and Wheel program. Found that bicycle planning in these communities differs greatly from planning in an urban context. They lack political and cultural support, even among communities that would likely benefit from it. Recommends developing a new best practice for bicycle planning in these areas that includes a robust public process.

Meletiou, M., Lawrie, J., Cook, T., O'Brien, S., & Guenther, J. (2005). Economic Impact of Investments in Bicycle Facilities: Case Study of North Carolina's Northern Outer Banks. *Transportation Research Record: Journal of the Transportation Research Board*, *1939*, 15–21. https://doi.org/10.3141/1939-02

Quantifies the economic impact bicycling brings to the Northern Outer Banks in North Carolina. Using intercept surveys of cyclists and self-administered surveys of tourists, the study estimates the annual income from cycling tourists to be nine times the one-time initial investment in the cycling infrastructure.

Nickerson, N. P., Jorgenson, J., Berry, M., Kwenye, J., Kozel, D., & Schutz, J. (2014). Bicycle Tourism: Providing Economic Development Opportunities for Montana. *Montana Business Quarterly*, (Summer), 3–7.

Quantifies the economic impact bicycle tourists bring to Montana based on survey responses. Estimates each bicycle tourist spends $6 more per day than the average out of state tourist, and each bicycle tourist spends an average of two days longer in the state. Also documents qualitative survey responses of bicycle tourists' requests for services and facilities.

Reis, A. C., & Jellum, C. (2012). Rail Trail Development: A Conceptual Model for Sustainable Tourism. Tourism Planning & Development, 9(2), 133–147. https://doi.org/10.1080/21568316.2011.630748

Evaluates rail trails as a tourism product, with Australia's Otaga Central Rail Trail as a case study. Identifies six factors to consider: length of trail, physical features, scenery, environmental aspects, gateways, and heritage.

Schwecke, T., Sprehn, D., & Hamilton, S. (1989). A look at the visitors on Wisconsin's Elroy-Sparta Bike Trail. University of Wisconsin Cooperative Extension Service. Madison, Wisconsin

Uses a survey to gather information about users of the Elroy-Sparta rail-trail in Wisconsin, including demographics and expenditures. Finds that nearly half of the visitors are from out of state. Estimates trail users spend an average of $25.14 ($1989) on trip-related expenses.

Taylor, P. (2015). What factors make rail trails successful as tourism attractions? Developing a conceptual framework from relevant literature. Journal of Outdoor Recreation and Tourism, 12, 89–98.

Researches existing literature to identify factors for creating a successful rail trail. Some key elements include: cooperative planning among the diverse stakeholders along the route, skilled marketing of the trail, focus on the visitor experience, sustainable funding for ongoing maintenance and development, local public and private support, links to secondary attractions, and opportunities for visitors to interpret unique trail features.

Trail Town Program. (2016). Economic Impact of Regional Trails. Retrieved from https://www.trailtowns.org/wp-content/uploads/2015/08/Economic-impact-of-all-Trails-1.pdf

Summary of the economic impacts of rail-trails on rural communities in Pennsylvania and Maryland. Based on regular surveys.

Trail Town Program. (2017). Trail Town Guide. Greensburg, Pennsylvania. Retrieved from https://www.trailtowns.org/wp-content/uploads/2017/10/TrailTownGuide.2.pdf

A comprehensive guide on economic revitalization aimed for communities on long-distance mixed-use trails. Details strategies for businesses, residents, and governments to capitalize on visitors using the trail. Includes information on building partnerships, assessing the town, connecting to the trail, developing the town for economic growth, and marketing the town. Based on the Great Allegheny Passage rail-trail, but designed to be applied anywhere.

Willard, P., & Beeton, S. (2012). Low Impact Experiences: Developing Successful Rail Trail Tourism. Tourism Planning and Development, 9(1), 5–13. https://doi.org/10.1080/21568316.2012.653476

Evaluates importance of various elements of rail trails using a stated preference survey of members of Rail Trail Australia. Finds quality of ancillary services to be a highly valued element, then environmental and trail characteristics, followed by tourism appeal.