



# Appendix D

## Comprehensive 5E Model



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Various cities have been successful in not only building non-motorized infrastructure, but also in developing a culture that supports and embraces non-motorized travel. Best practices were reviewed among local, national, and international cities who have been successful in developing a positive non-motorized culture, utilizing the 5 E model.

Of all the cities around the world, perhaps there is no other city that has developed a non-motorized culture better than Copenhagen, Denmark. Public officials, planners, architects, engineers, and bicycle advocates travel from all over the world to Copenhagen to gain understanding of what a non-motorized culture looks like. In the article of “How Denmark became a Cycling Nation” explains how it was during the 1960’s when Danish society began to reject automobiles after the public noticed the negative effects regarding rising pollution and automobile crashes. The Danish arts & culture population symbolized bicycling as a form of personal freedom and the bicycle soon become a recurring image that appeared in Danish art, poetry, and music.

During the 1970’s and 80’s the global environmental movement and oil crisis intensified the desire to seek sustainable transportation alternatives. The Danish public rejected proposals to construct bridges that provided automobile access through their scenic lakes and waterways. The extension of bicycle infrastructure rather than automobile infrastructure was viewed as the preferred solution. Since then, Copenhagen has developed one of the world’s most coveted bicycle cities in the world. Still today, Copenhagen works vigilantly towards preserving its bicycle culture through innovative marketing and community programs. “Cycling – especially in a wealthy country like Denmark – is for most an active additional choice which can easily change. So the only way forward is to make it safe, easy and attractive to cycle, and that does not happen solely by changing the infrastructure.”



*Copenhagen, Denmark*

Today, Denmark's three largest cities: Copenhagen, Arhus, and Odesne continue to promote bicycling with innovative branding campaigns on billboards, the internet, and continuing to engage with bicyclists when developing bicycle infrastructure projects.

## Education

Education involves a city's ability and willingness to educate its constituents about non-motorized laws and proper safety measures between motorized and non-motorized travelers. Cities should seek partnerships with local communities and advocacy groups to maximize outreach efforts.

### Bike Pittsburgh

Bike Pittsburgh is a local bicycle advocacy organization serving the Pittsburgh metropolitan area. The ad campaign focused on driver awareness. The ad is an excellent method of how to quickly remind drivers that when they approach a bicyclist on the road, they should be treated equitably with decency and respect. The messaging is effective in showing how these people are not only bicyclists, but they primarily are workers, students, family members, and friends within the community. The ad is also effective in representing diversity, and range of skill levels one may have between a seasoned cyclist who is riding for recreation, and a young student who is still building confidence in bicycle commuting.



*Bike Pittsburgh*

### WalkWise Florida



WalkWise Florida has proven to be an effective program for providing safety education to adults through a targeted grassroots approach. The program leverages citizen involvement and personal commitment to spread the word about pedestrian safety to others to increase

the limited reach of the presentations. Attendees take the WalkWise pledge, committing to safe pedestrian, bicycle, and driver behavior, and become Ambassadors for the program. The program was developed to be easily replicated in other high-priority areas of Florida.



*FDOT Best Practices for Pedestrian & Bicycle*

## **Bike Austin**

Bike Austin is a non-profit bicycle advocacy organization that provides a wide array of bicycle training classes to the Austin community. Training classes are clearly displayed on the Bike Austin website and are offered to any individual/group for a nominal



*Bike Austin*

fee. Interested persons can conveniently see the class schedule on the courses tab and sign-up. The wide range of bicycle education classes provided demonstrates how dynamic bicycle riding can be since there is a significant difference between riding on trails in comparison to riding on dense city streets. Training classes include the following.

- Ride Leader Training
- Traffic Skills 101
- Group Riding Skills
- Learn to Ride
- Learn to Ride Better
- One Hour skills Workshop

## **Enforcement**

Enforcement involves a city's current police policy regarding how law enforcement officers engage and interact with non-motorized travelers. It also includes educating motorists and enforcing the laws that keep pedestrians and bicyclists safe in traffic. Police officers should be trained to understand that pedestrians and bicyclists utilizing roads and sidewalks for travel are equal to motorized travelers and should be treated equitably.

## Chicago Department of Transportation (CDOT)



*CDOT – Crosswalk Enforcement Initiative*

Chicago Department of Transportation (CDOT) was successful in a recent crosswalk enforcement campaign in which police officers strategically staged themselves at highly utilized crosswalks and verified that motorized vehicles were not encroaching upon the crosswalk. Drivers that were caught encroaching crosswalk were first given a warning and also educational materials explaining the law and why it was important to respect pedestrians. Drivers that were habitually encroaching crosswalks received a citation.

## Lauderhill Slow Roll

The City of Lauderhill is a municipality within Broward County already engaging in an excellent program that is replicated in other cities including Detroit, Cleveland, Buffalo, as well as some international cities.

The Slow Roll ride is an episodic event that invites the local community to enjoy a safe group ride along with the Lauderhill Police Department. The ride is not only a chance to ride along with the City's police officers in a safe and friendly environment, but also serves as excellent educational opportunity to learn about proper bicycling laws. Questions such as the following can all be addressed, in a group setting, right next to the experts in a non-confrontational environment. Slow Roll rides are free and open to the public.

- “How do I properly approach a 4-way stop sign intersection?”
- “How do I properly navigate through a roundabout?”
- “What do I do when a bike lane ends along my route?”



*Lauderhill – Slow Roll flyer*

## Florida’s High Visibility Law Enforcement Grant

High Visibility Enforcement grants are provided to Florida law enforcement agencies that want to engage in bicycle and pedestrian education and enforcement campaigns. The enforcement activities are designed to target unsafe behaviors of all road users, including motorists, pedestrians, and bicyclists. The law enforcement agency conducts operations following an education, warning and citation enforcement progression, specifically targeting locations and issues



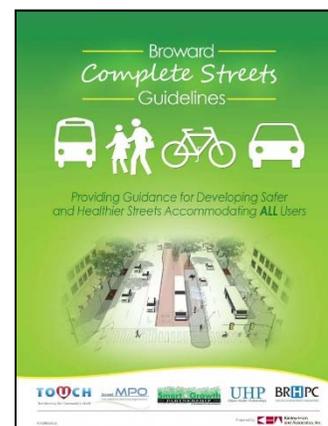
*Orlando Police Department*

identified by crash data. Agency contracts are funded by FDOT and managed by the Center for Urban Transportation Research (CUTR). Currently 20 counties within Florida qualify for High Visibility funding which includes Broward County. All law enforcement agencies within the County are eligible to apply. The online application is available at [www.AlertTodayFlorida.com/HVE](http://www.AlertTodayFlorida.com/HVE).

## Evaluation

Evaluation involves a city’s short, medium, and long-term goals regarding non-motorized planning and data collection practices. This effort requires a city to reflect on its current plans and assess what adjustments need to be made in order to help build an infrastructure that is strategic and coordinated with other complimentary efforts such as green cities, smart cities, and public health.

Broward County already has an advantage being that a Complete Streets Guidelines document is already published and provided to all Broward County municipalities for use. The completion of the Broward MPO Complete Streets Master Plan will further propel complete streets efforts in a coordinated fashion. However, after the plan is completed, it will be important to execute methods that will keep the plan alive, and seek opportunities that will facilitate the implementation of these projects



in the short-term. Once a few of these projects are implemented successfully, it will become easier to execute larger and perhaps for progressive projects in the future.

## **Bicycle Friendly Community Designation**

The League of American Bicyclists is the leading national bicycle advocacy organization in the country. Headquartered in Washington DC, the League provides a free service to all American municipalities who wish to have their community officially designated as a Bicycle Friendly Community. Designations range from Bronze to Diamond levels and last for 4 years before a community needs to re-apply. Municipalities must first complete a comprehensive designation application which evaluates a community's bicycle friendliness utilizing a 5 E framework.



*League of American Bicyclists*

The value in the designation process is not only in the designation itself, but in the detailed evaluation that come with the results of the evaluation. The evaluation explains why a community did or did not receive a designation and provides a suggested plan-of-action which outlines incremental steps to achieve a higher-level designation when they re-apply. In 2013, Broward County submitted an application and was awarded a Bronze level designation. In 2018, Broward County is due to re-submit for designation, and offers an opportunity to assess the steps that have been taken since the first application. In addition to

Broward County, all cities within the county are encouraged to apply for designation as well.

## **Miami-Dade Quick Build Program**

Transit Center is a national foundation based in New York City that supports innovative grassroots multi-modal transportation projects. In 2016, Transit Center granted Miami-based bicycle and pedestrian advocacy organization, Green Mobility Network, with a \$150,000 grant to implement strategic active transportation pilot projects around Miami-Dade County. Green Mobility Network worked with Miami-Dade Department of Transportation and Public Works and community stakeholders to select projects that were considered low-hanging fruit and could be implemented in the short-term with low-cost materials. Today there are approximately 12-15 grassroots active transportation projects in

development. The majority of projects include crosswalk enhancement projects and pop-up protected bike lanes.

The most high-profile project was the successful implementation of the Biscayne Green project. Biscayne Green was considered a legacy project that would transform an existing parking-lot in the heart of downtown Miami, into an active public space, free from cars and serve as an extension of Bayfront park located across Biscayne Boulevard. For a period of one-month, the parking-lot was shut down to cars, and volunteers immediately occupied the space to convert the space with park amenities, public art, and programming that would attract the public to utilize the space for leisure. The project also included a temporary lane elimination component that served as a dedicated bus lane.

While the project was well-received by the community, the project team took the opportunity to exercise data collection throughout the project's durations. Each day, pedestrian counts were made and surveys were distributed to gain valuable feedback from the community regarding what their long-term hopes were for the space. The project was ultimately successful in convincing the public and government officials that this project was necessary and is Biscayne Green is now in the process of becoming a real park space that will repurpose the existing parking lot.



*Biscayne Green*

## Legacy Projects

Further emphasis should be made on legacy projects that possess the ability to galvanize a large demographic of the public to support. The benefits of a large-scale project being completed are far-reaching as they have the capability to elevate the discussion of non-motorized infrastructure and culture to a wider audience, which smaller projects would not have the ability to do. Examples of legacy projects

include the Atlanta BeltLine, Chicago 606, Underline and the High Line. All projects took many years to coordinate and plan, however throughout the process, the public was learning more about their community, learning more about bicycling laws, learning more about innovative events and encouragement programs, learning more about their existing and planned non-motorized network, and more.



*Atlanta Beltline before and after*

## Encouragement

Encouragement involves a city's ability and willingness to promote non-motorized travel modes through special events and/or incentive programs. Partnerships with local community foundations, advocacy groups, and neighborhoods can assist with funding, capacity building, and marketing efforts to maximize participation.

### Bogotá, Colombia

Bogotá, Colombia is another international city that deserves much credit in its effort to develop a non-motorized culture. Bogota's most popular encouragement program, which is now replicated globally is the *Cyclovía*. *Cyclovías*, also known as Open Streets events is program in which the city sponsors an event where streets are shut down to motorized vehicles for a particular duration of time, usually a half-day to full-day, and the streets are welcomed to be occupied by bicyclists, walkers, runners, skateboarders, rollerbladers, etc. The objective of the event is ultimately to encourage people to enjoy their city in a fun and unique way, free from the dangers of motorized vehicles.

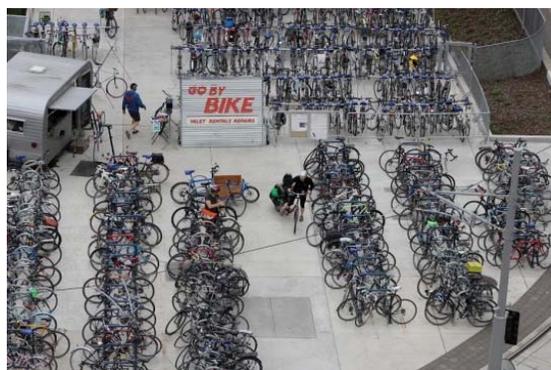


*Bogotá, Colombia - Cyclovía*

Bogota continues with its Cyclovía program every Sunday, year-round. This particular event is family-friendly and welcomes bicyclists of all abilities to gain a new perspective of their city. Other unique features to include in a Cyclovía can include programmed activation of spaces with arts and cultural amenities. Cyclovías are already occurring in local cities including City of Miami, Miami Beach and Coral Gables.

## **Bike Valet**

Bike valet is an innovative service that provides the public with another option to consider when traveling to events and major destinations. Similar to a normal valet service, bicyclists will approach a bike valet service with their bike, and a valet attendant will stage their bike in a secure location while the bicyclist(s) enjoys the event. Bike valets are particularly successful when the event/destination already struggles with traffic congestion and a lack of parking. Not only is bike valet a great service to existing riders, but also serves as a great opportunity to engage and interact with those who drove to the event and educate them about the convenience of riding to the event next time by bike.



*Portland, OR*

When planning a bike valet service, it is important during the planning stages to designate a bike valet area near the main entrance of the venue so that all patrons can see it when they enter and exit the venue. It is also important to include Bike Valet as a service on the event flyer. That way, patrons have prior knowledge about the service and can plan accordingly. The Miami DDA contracts Green Mobility

Network to provide bike valet services at 10 downtown Miami events to help alleviate traffic congestion and provide mobility options to patrons.

## **Bike Walk Missoula Alliance**

Bike Walk Missoula is a local advocacy organization who created a program dedicated specifically to women. With the data-driven understanding that women do not commute by bicycle as much as men, this organization is making a concerted effort to encourage more woman in their community to consider bicycling for commuting, exercise, and general recreation. The program includes training classes and

woman-only group rides along city streets and neighboring trails. As stated previously, when reaching out to current and potential bicyclists, it is important not to group all bicyclists under one umbrella. It is important to make sure an ad is reaching all audiences and addressing underserved groups.

“We have enjoyed a special opportunity to carry out our mission to make biking possible for more women and girls... by collaborating with the Soft Landings Committee and Free Cycles to teach them to bike, and then to bike confidently for transportation. In addition to basic help and rules of the road, we can show them our great paths and bike lanes and help them find the best routes for biking safely to work, school, and errands.”



*Missoula, MT*

### **Charlotte’s LYNX Blue Line Proves Health Benefits**

When promoting the benefits of transit to the public, it is important to promote the health benefits associated with transit commuting. The LYNX Blue Line serves as the first light rail transit (LRT) service in the Charlotte, North Carolina. The service provides daily connections for approximately 10 miles, extending from I-485 at South Boulevard to Uptown Charlotte. The Blue Line LRT service developed from Charlotte’s 2025 Integrated Transit/Land Use Plan, which identified appropriate public transportation and focused growth and development along five primary transportation corridors within the region. A Before and After data



*LYNX Blue Line, Charlotte, North Carolina*

collection study found that persons who used the line for commuting reduced their body mass index (-1.18) and their odds of becoming obese over time (81%), suggesting that LRT combined with land use strategies could improve health outcomes. As society continues to seek lifestyle alternatives to improve health, sharing data related health benefits serves as a significant incentive for the population to consider an adjustment in travel behavior.