Bet on Bikes!

The business case and economic analysis in support of University Circle biking initiatives

Presented by: Justin Held, Katharine Mann, Susanna Mohan, Leigh Orne, and Tsung-Han Tsai
Prepared in collaboration with:

Special thank you to:
Nearly more cars than people.

At the household level, transportation is second only to shelter... transportation is EXPENSIVE.

On average, over 20% of household expenditures are transportation-related in Cleveland.

Source: Driven to Spend: Pumping Dollars out of our Households and Communities
What does this mean for us in University Circle?

- 17 major institutions are based in University Circle (UC).
- Since 2006, UC has added 4,500 full-time jobs.
- UC currently employs the equivalent of 82,000 full-time jobs.
- In the next five years another 3,000 jobs are expected in UC.

We need more room for growth.

Source: www.freshwatercleveland.com
What if we replaced some of these cars with bikes?

Would it be worth the investment?
**RESEARCH SCOPE:**
Economic analysis of the benefits of greater biking in University Circle

**METHODOLOGY:**
Input/Output model

**INPUT:**
Case studies/Comparative data
Transportation plans and studies
Census data

**Illustrative List of Data Sources:**
- NOACA Bicycle Transportation plan
- U.S. Census Bureau
- Victoria Transportation Institute
- Inside Minnesota’s Booming Bike Economy
- Journal of Physical Activity and Health, (2011)

**OUTPUT:**
Cost/Benefit analysis

**SCOPE**
- Transportation Plans & Studies
- Case Studies
- Census Data

**COST/BENEFIT ANALYSIS**
Sneak preview of results...

...the benefits outweigh the costs.
<table>
<thead>
<tr>
<th>CITIES OF COMPARISON:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Minneapolis</td>
<td></td>
</tr>
<tr>
<td>Portland</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SELECTION CRITERIA:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparable weather</td>
<td></td>
</tr>
<tr>
<td>Recent investment in biking</td>
<td></td>
</tr>
<tr>
<td>Growing interest in biking</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Minneapolis Stats:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8,000 commuter bikers</td>
<td></td>
</tr>
<tr>
<td>3.9% biking rate</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average precipitation per month</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Minneapolis</td>
<td>2.5”</td>
</tr>
<tr>
<td>Cleveland</td>
<td>3.2”</td>
</tr>
<tr>
<td>Portland</td>
<td>3.6”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average snow per winter month</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Minneapolis</td>
<td>10.4”</td>
</tr>
<tr>
<td>Cleveland</td>
<td>12”</td>
</tr>
</tbody>
</table>

Weather is not an excuse.

Source: www.intellicast.com
Assumptions:
• Estimated population in target area = 77,126
• Estimated commuter bikers @ 3% = 2,314

Geographic Scope
• Target Area: UC
• Scope: 3 mile radius

Map Key
Blue lines denote bike lanes; total = 65 miles
ASSUMPTIONS

- Bicycling network infrastructure could be established in one year.
- All numbers are in one year figures (including initial investment + annual costs + annual benefits).
- All numbers are adjusted with inflation rate to 2011.
- All biking economic activities in Cleveland are estimated by comparative city.
- Each car has only one commuter.

LIMITATIONS OF ANALYSIS

- Analysis is a high-level view; some costs/benefits may not be included in the model.
- Potential deviation of real benefits/costs from estimation in the model.
- Factors left out of our model, e.g. non-quantified benefits.
Influencing industry standards
Protecting & enhancing brand
Entering new markets
Differentiating products
Reducing energy, waste, materials
Mitigating risks

COSTS
(Adding costs & making trade-offs)

Source: Embedded Sustainability, Chris Laszlo and Nadya Zhembayeva
NOACAH Investment Options

**OPTION A:** $20.6 M

**OPTION B:** $19.8 M

**OPTION C:** $8.8 M
Health = + $1.6 M

Based on approximate savings of $544 per individual per year.

GHG Emissions = + $900 K

Resulting from a reduction in non-GHG air pollution, GHG control costs, and GHG damage costs.
Parking: Individual Benefit = + $4.5 M
Parking: Community Benefit = + $23.5 M

This is not a replacement for revenue generated by a garage, but a supplementation.

Maintenance: Individual Benefit = + $1.6 M

Reduced Congestion: Non quantifiable

Bad already, jobs and # of residents in UC are expected to increase in the next 3 – 5 years.
Product: Transportation Flexibility

- Biking offers an alternative and supplemental product.
- Bikes serve as a single mode of commute.
- Biking is an extension of Cleveland's current offering.
- This sort of offering not only creates value for the consumers already in the market, but entices individuals from other markets (i.e. other cities) to enter the market (i.e. move to Cleveland!).
- Bikes serve as a link in the commute (bike a mile to the bus stop.)
Job Creation = > 500 jobs

Includes the establishment of large retailers, independent retailers, and bike related services.

Industry Growth = + $93M

Tourism: +

Infrastructure development nets 7 jobs over road maintenance for $1 MM spending. Establishment of bike industry estimated to generate over 380 jobs.

VISIT University Circle
From burning river to Green City, Blue Lake.

More people on the streets creates a vibrant community and attracts residents and visitors.
Individual Net Benefit = $7.4 M/yr

Community Net Benefit = $101.5 M/yr

Industry leader status

Approx. $3,200 per year, per cyclist.

Based on average infrastructure costs and benchmark costs.

Minneapolis
Portland
Toronto
NYC
Denver
Biking is not a radical new idea. What is radical is creating a culture of biking capable of generating our estimated impact.

Change will require sophisticated stakeholders from all parts of the community to form partnerships and work together.
Lots of groups are actively involved...
Advocacy Groups +
Community-based Organizations +
Local Government + Coordinating Agencies +
Businesses + Institutions =

Integrated Multi-
Stakeholder Approach

...communication and collaboration are the KEYS to success.
Bike share is an opportunity.
Bike share is everywhere. **Why not here?**
Partnerships are the sustainable approach to success.

There are a variety of different financing options.
Bike share is a first step in normalizing bike culture in Cleveland.