4 approaches to involve cyclists in your design challenges?
Bike along studies

In-depth understanding of the act of cycling on a specific location or trajectory in your city. Analyze experiences, collect in-depth insights on specific locations, understand route choices as well as habitual behaviours.
VR Cycling experiments

Test (general) preferences and experiences of (potential) cyclist in predetermined scenarios using VR technology and break the ice between experts and participants in an appealing way for young and old
Living LAB

Test spatial concepts in a real environment and analyze and monitor behaviour of actual cyclist. Get them involved in your design challenge and discuss what they experience and prefer.
Offer an appealing online way to let cyclists share their (subjective) opinions. Provide the city with specific or general insights and experiences while creating community sense.
<table>
<thead>
<tr>
<th>Engagement (potential) cyclists</th>
<th>Bike along</th>
<th>VR experiment</th>
<th>Living LAB</th>
<th>Social media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotional value</td>
<td>--</td>
<td>++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>In-depth knowledge &amp; feedback</td>
<td>++</td>
<td>+/-</td>
<td>+/-</td>
<td>++</td>
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<tr>
<td>Number of participants</td>
<td>--</td>
<td>+</td>
<td>-</td>
<td>++</td>
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<tr>
<td>Uniqueness</td>
<td>+/-</td>
<td>++</td>
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<tr>
<td>Decision making</td>
<td>--</td>
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<tr>
<td>Transferability insights</td>
<td>--</td>
<td>++</td>
<td>+</td>
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</tr>
</tbody>
</table>

| Least effort to conduct      | +         | +/-          | -          | ++           |
| Least time needed to apply   | -         | +            | +/-        | ++           |
| Least time needed analysis   | -         | +            | +/-        | -            |
Conclusion design

- Good cycling design built upon insights from (potential) cyclists

- Different approaches -> in-depth versus general insights and available means

- Designing your bicycle city is fun, engage cyclists in a unique way

“Design bicycle infrastructure the way cyclists appreciate it the most”
HOW TO SELL YOUR CYCLE HIGHWAY
Enabling commuters to increase their usage of cycle highways

Carolien Ruebens
European Cyclists’ Federation

@CHIPS_Euproject
www.cyclehighways.eu
A CYCLE HIGHWAY IS

A MOBILITY PRODUCT
A CYCLE HIGHWAY

AND ITS USERS
HOW DO YOU TRAVEL TO WORK?
WHY ARE PEOPLE (NOT) CYCLING ON YOUR CYCLE HIGHWAY?

**Barriers to cycling**
1. Too many cars on the road
2. I feel exposed and vulnerable to cars
3. No direct cycle routes
4. Drivers are erratic or intimidating

**Motivations to cycle**
- **57%** Motivated by improving their health
- **11%** Reducing commuting time
- **10%** Saving money
- **7%** Helping the environment
- **7%** Not given
- **6%** Other
- **2%** Improving reliability of journey time
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WORKING WITH EMPLOYERS
RESULT
EVALUATE

cycle highway = more cyclists?
Lessons to monitor and evaluate a (network of) cycle highway(s)

Lisette Hoeke | NHTV Breda University of Applied Sciences
Environmental impact

Societal impact

Economical impact
1. Measuring impact of decisions

What is the impact of new cycle infrastructure? Does it contribute to the goals of decision makers?

- Environmental impact
- Societal impact
- Economical impact
1. Measuring impact of decisions
What is the impact of new cycle infrastructure? Does it contribute to the goals of decision makers?

2. Evaluate quality for infrastructure
How to improve the quality and attractiveness of a cycle route? Are improvements needed?
Three reasons to evaluate

1. **Measuring impact of decisions**
   What is the impact of new cycle infrastructure? Does it contribute to the goals of decision makers?

2. **Evaluate quality for infrastructure**
   How to improve the quality and attractiveness of a cycle route? Are improvements needed?

3. **Learning from cycle behavior**
   What is the performance of the cycle network? How to improve cycle policy based on insight in cycle behavior?
HOW

- Cycling counters
- Surveys (route specific)
- GPS data
- Surveys (region/city)
The Province of Flemish Brabant’s Monitoring Program

HOW

cycling counters
Program counter monitoring setup

1. Start with the cycle network of the region. Main connections.

2. Within cities cyclists spread/divide in several directions. Counter before the spreading.

3. Choose a strategic point, like a bridge or tunnel where cyclists ‘collect’.
HOW

(on-route) survey

BELFAST intercept survey
Insights after on-route survey

**OD-relation:** home and work address

**Purpose:** 95% commuters (7AM-9AM)

**How often:** > 3 days a week

**Feedback:** dog walkers, no light
Performance of a cycle highway (or cycle infrastructure network)
Cycleprint: GPS-data visualization and analysis

Examples: City of Amsterdam, the Netherlands

- Heat map: Discover heavy cycling traffic on the network
- Speed map: Discover the actual speeds of cyclists
- Route map: Discover origin and destination of cyclists on specific links
- Delay map: Discover delays cyclists experience in their daily travel
HOW

GPS tracks
Knowledge from research and data is evidence towards policy makers, decision makers and city planners to invest in cycle infrastructure and continue developing and improving the cycle infrastructure.
Thank you!

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Interreg
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CHIPS
European Regional Development Fund

Thank you!

@CHIPS_Euproject
www.cyclehighways.eu