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**TRB** TRANSPORTATION RESEARCH BOARD

# TRB Webinar: Pop-Up Power—Research and Practice on Quick-Build Bike Facilities

*October 10, 2023*

*11:00 AM – 12:30 PM*



# PDH Certification Information

1.5 Professional Development Hours (PDH) – see follow-up email

You must attend the entire webinar.

Questions? Contact Andie Pitchford at [TRBwebinar@nas.edu](mailto:TRBwebinar@nas.edu)

*The Transportation Research Board has met the standards and requirements of the Registered Continuing Education Program. Credit earned on completion of this program will be reported to RCEP at RCEP.net. A certificate of completion will be issued to each participant. As such, it does not include content that may be deemed or construed to be an approval or endorsement by the RCEP.*



# AICP Credit Information

1.5 American Institute of Certified Planners Certification  
Maintenance Credits

You must attend the entire webinar

Log into the American Planning Association website to claim your  
credits

Contact AICP, not TRB, with questions

# Purpose Statement

This webinar will explore the state-of-the-practice in quick-build bicycle facility planning and design, including safety outcomes, community engagement, and local politics.

# Learning Objectives

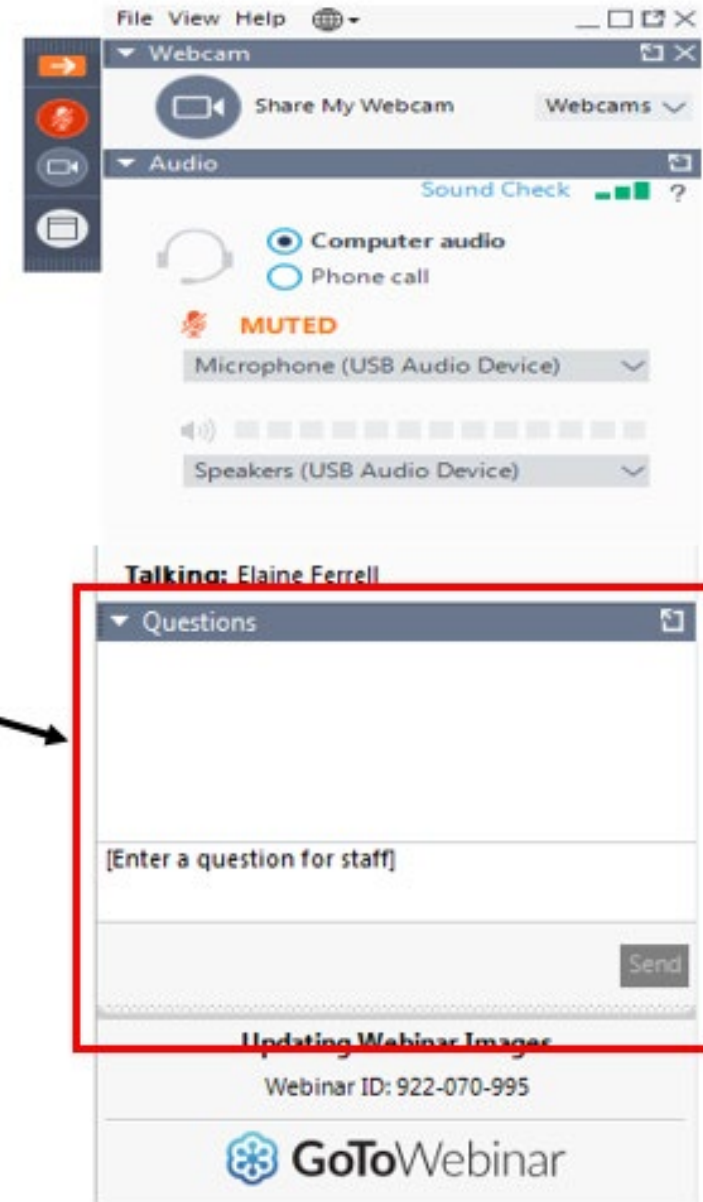
At the end of this webinar, you will be able to:

- Clarify the state-of-the-practice for implementation
- Evaluate the safety implications
- Identify research questions for continued assessment



# Questions and Answers

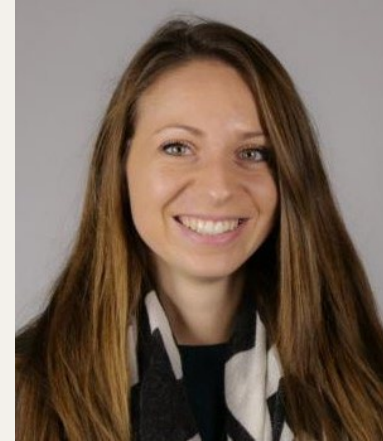
- Please type your questions into your webinar control panel
- We will read your questions out loud, and answer as many as time allows



# Today's presenters



Nick Foster  
[nfoster@kittelson.com](mailto:nfoster@kittelson.com)  
*Kittelson & Associates, Inc.*



Hannah Younes  
[Hny3@ejb.rutgers.edu](mailto:Hny3@ejb.rutgers.edu)  
*Alan M. Voorhees Transportation Center*



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Megan Mello  
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*Kittelson & Associates, Inc.*



# Cycling through the COVID-19 pandemic to a more sustainable transport future



# Literature

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Literature developing rapidly:

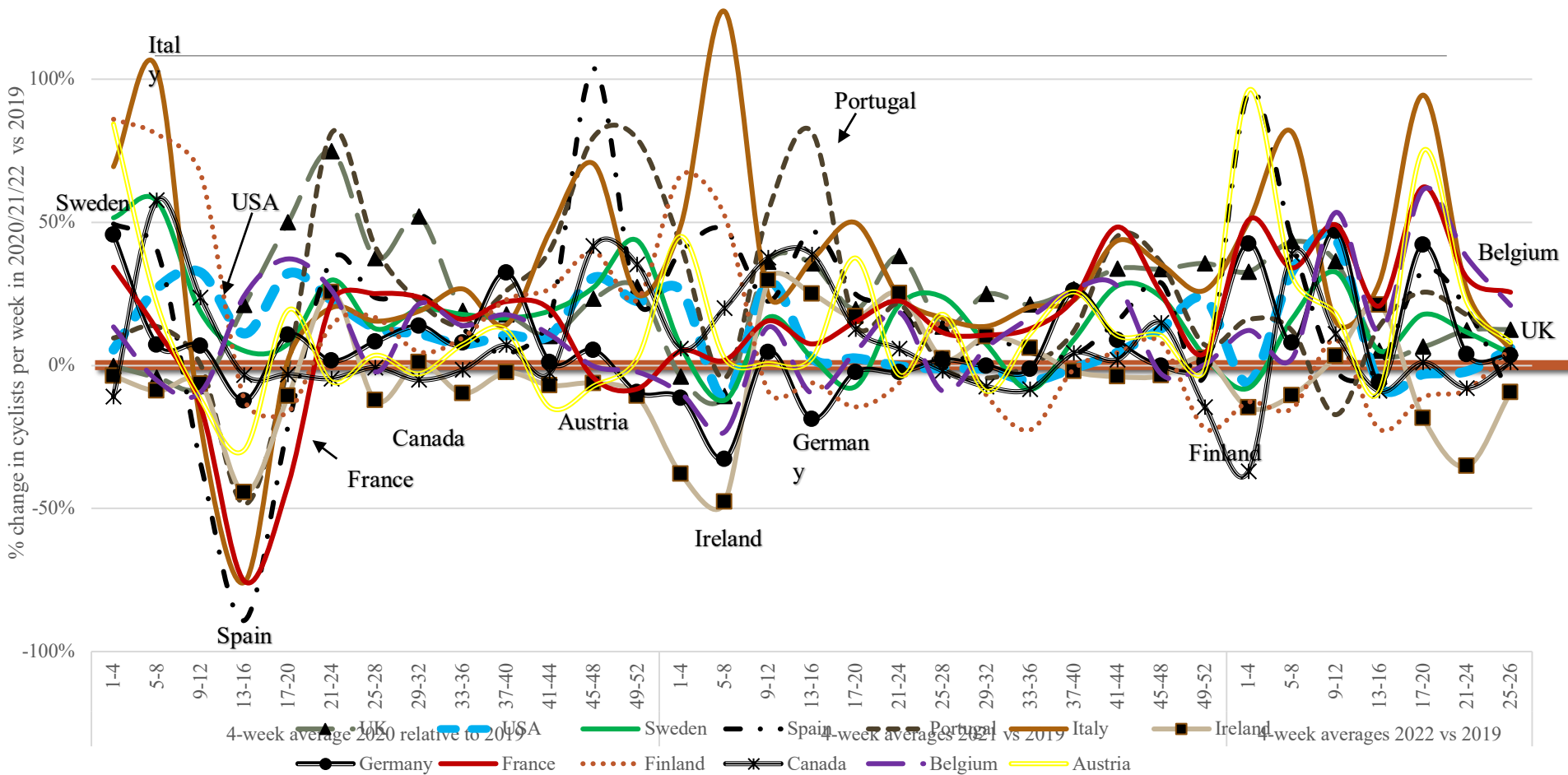
- more than 100 peer-reviewed articles since 2020

Cycling levels:

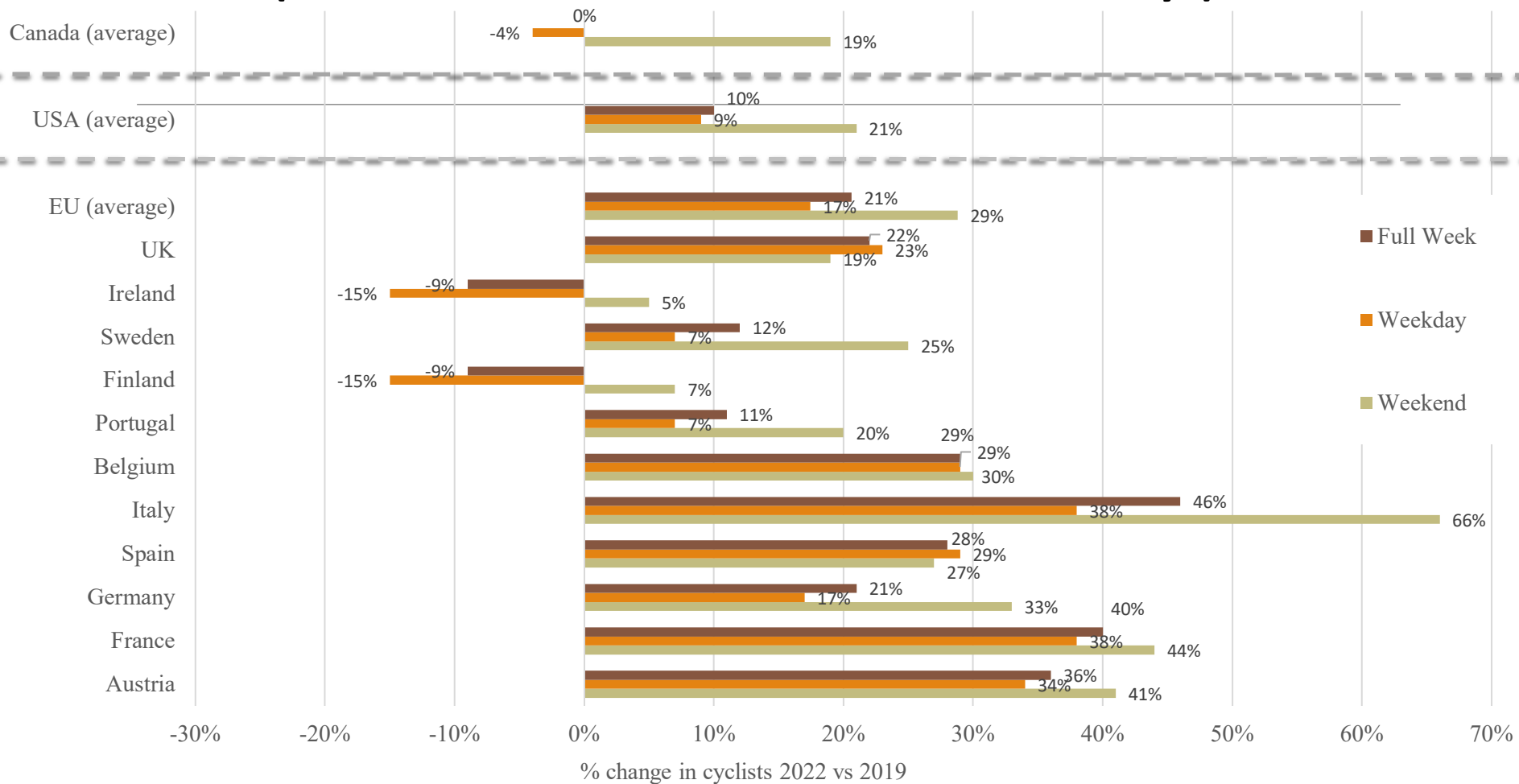
- Large fluctuations overtime, among countries and cities
- Net increases in cycling
- Increases in recreational cycling
- Increases in weekend cycling
- Decreases in utilitarian cycling



# Fluctuation in percentage change in 2020, 2021, 2022 cycling levels relative to 2019 in 11 European countries, the USA, and Canada (4-week averages compared to same period in 2019)



# Percentage change in cycling levels in 2022 compared to 2019 in 11 European Countries, Canada, and the USA (for entire weeks, weekends, and weekdays)



# Sample findings from the literature on pop-up bike lanes

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- 106 European cities installed an average of 11.5 km of pop-up bike lanes per city in the first 4 months of COVID → cycling increased in mid to late 2020 by 11%–48% compared to cycling on the same streets before COVID (Kraus & Koch, [2021](#)).
- Cycling increased between 30% to 500% on six pop-up cycling facilities in Sydney between July 2020 and April 2021 (Harris & McCue, [2023](#)).
- Cycling increased by 73% along a pop-up bike lane in Berlin in 2020 compared to 2019 (Becker et al., [2022](#)).
- Based on a database created by Combs and Pardo (2021), Kutela et al. ([2022](#)) found that bike lanes were the most likely to be made permanent, followed by full-street closures to motor vehicles (open streets) (analysis of measures implemented 2020–2022).

# Case Studies

City Name (country; pop.)	Bike Modal Share Before COVID-19	Cycling Trends 2019-2021
Portland, OR, USA (650)		
Austin, TX, USA (950)		
Washington, DC, USA (690)		
Vancouver, CA (680)		
Montreal, QC (1,800)		
London, UK (9,000)		
Brussels, BE (2,100)		
Paris, FR (2,200)		
Strasbourg, FR (280)		
Sevilla, ES (690)		
Barcelona, ES (1,700)		
Berlin, DE (3,600)		
Munich, DE (1,500)		
Freiburg, DE (230)		



# Case Studies

City Name (country; pop.)	Bike Modal Share Before COVID-19	Cycling Trends 2019-2021
Portland, OR, USA (650)	5%	
Austin, TX, USA (950)	2%	
Washington, DC, USA (690)	5%	
Vancouver, CA (680)	6%	
Montreal, QC (1,800)	4%	
London, UK (9,000)	2%	
Brussels, BE (2,100)	4%	
Paris, FR (2,200)	5%	
Strasbourg, FR (280)	16%	
Sevilla, ES (690)	4%	
Barcelona, ES (1,700)	3%	
Berlin, DE (3,600)	18%	
Munich, DE (1,500)	18%	
Freiburg, DE (230)	34%	

# Case Studies

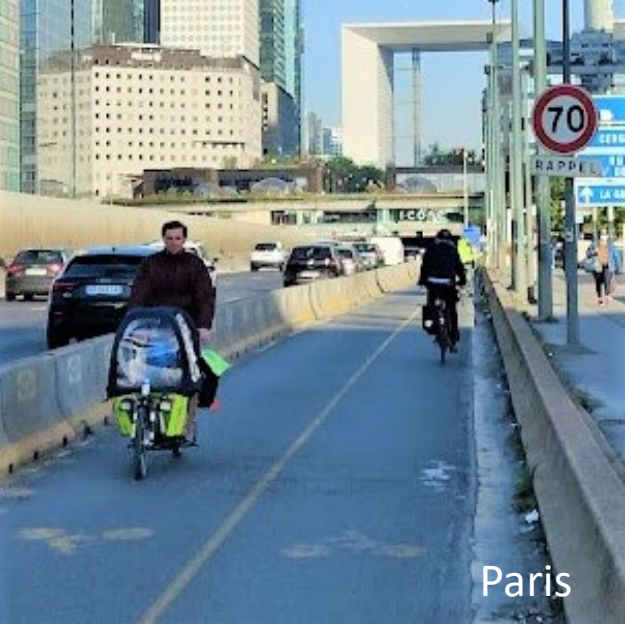
City Name (country; pop.)	Bike Modal Share Before COVID-19	Cycling Trends 2019-2021
Portland, OR, USA (650)	5%	decrease
Austin, TX, USA (950)	2%	mixed
Washington, DC, USA (690)	5%	mixed
Vancouver, CA (680)	6%	mixed
Montreal, QC (1,800)	4%	mixed
London, UK (9,000)	2%	large increase
Brussels, BE (2,100)	4%	large increase
Paris, FR (2,200)	5%	large increase
Strasbourg, FR (280)	16%	increase
Sevilla, ES (690)	4%	decrease
Barcelona, ES (1,700)	3%	mixed
Berlin, DE (3,600)	18%	increase
Munich, DE (1,500)	18%	large increase
Freiburg, DE (230)	34%	decrease



# Pop-up Bike Lanes



Brussels



Paris



Munich

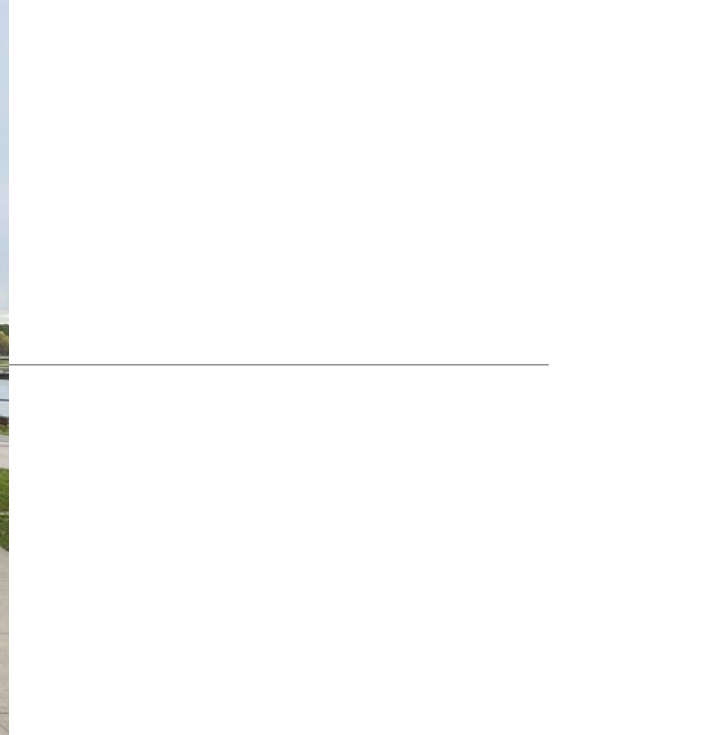


Barcelona



Berlin





Vancouver

# From pop-up to permanent bikeway: Beach Avenue in Vancouver



Vancouver



# Permanent and Improved Bike Facilities



Munich



Freiburg



Montreal



Paris



# 2020: Rue de Rivoli in Paris converted to cycling street



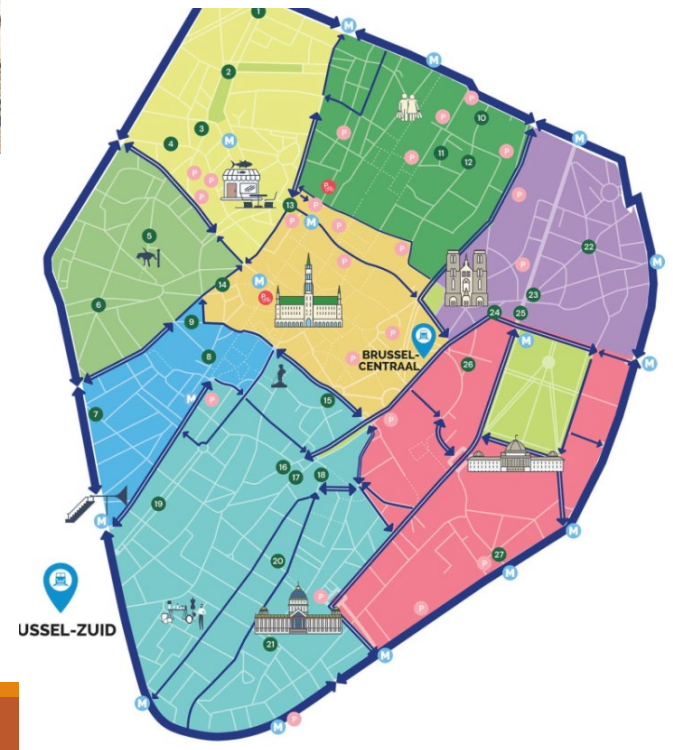
Source: City of Paris

# 2021: 30km/h (19mph) speed limit citywide in Paris

# Slow Streets and Traffic Calming



London



Brussels

# More Funding for Bicycling

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**Austin** will triple annual funding to expand protected facilities in between 2020 and 2025 from \$3 million to \$9 million

**Strasbourg** established an accelerated cycling program (Plan Velo) for the next 5 years with € 100m funding

**Berlin** increased funding for bicycling by 74% compared to 2019 funding and hired 7 additional bicycling staff members

**Munich** increased funding for walking and cycling by €25million per year and hired 30 additional city bicycling staff

**Freiburg** approved a seven-fold increase in the city's annual budget for cycling

**Paris** will spend 250 million Euros on bicycle promotion between 2022-2026



# Expanded Bikeshare

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**Vancouver** expanded the public bikesharing system through the addition of 500 E-bikes to the existing fleet of 2,000 regular bikes; 50 new docking stations (30 for E-bikes) for a total of 250; and an expanded service area

**Capital Bikeshare** added 23 docking stations and 600 E-bikes to its fleet; with plans to add more stations and double the number of bikeshare bicycles

**Barcelona** added 2,000 E-bikes to the Bicing bikesharing program

**Freiburg** expanded bikesharing system that had launched in 2019, reaching 86 docking stations, 615 bikes, 20 cargo bikes, and up to 47,000 trips per month in April 2022

# E-bike Incentive Programs

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**Paris** paid one third of the purchase price (up to €600) for 85,000 E-bikes and E-cargo bikes between 2009 and 2022

Since 2020 **Strasbourg** has been offering a subsidy of 300-500 Euros for purchases of E-bikes, with the amount depending on type and cost of the E-bikes

**Munich** continued a program that started in 2017, the city subsidized the purchase of E-bikes and E-cargo bikes in 2020 and 2021 by paying for 25% of the cost of an E-bike, up to 1,000 Euros

# Other Policies

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**London:** As of March 2021, all trucks over 12,000kg must have cameras and audio warnings to drivers about pedestrians and cyclists in blind spots. Crucial because trucks account for about half of cyclist fatalities

**DC City Council** voted to ban right-turn on red for cars and to allow cyclists to treat stop signs as yield signs

**Brussels** has the goal to cut car traffic by 24% and to remove 65,000 car parking spaces by 2030

**Freiburg** increased the cost of residential car parking permits from €30 per year to €240-480

# Conclusions

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Cycling increased in most countries and many cities

- Mainly on weekends and in the afternoon
- Declines in cycling to work, on weekdays, and during morning commute hours

Almost all cities studied implemented pop-up bike lanes with success

- Many cities report significant increases in cycling along these new facilities

Some cities used COVID-19 to speed up their pre-COVID plans for bicycle promotion

Other policies complemented pop-up bike lanes during the pandemic

Many pro-cycling and car-restrictive policies thought impossible before the pandemic were indeed possible to implement due to the public and political support generated by a crisis situation

# Thank you!

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**Buehler, R., Pucher, J.** 2023. “[COVID-19 and cycling: a review of the literature on changes in cycling levels and government policies from 2019 to 2022](#),” *Transport Reviews*.

**Buehler, R., Pucher, J.** 2022. “[Cycling through the COVID-19 Pandemic to a More Sustainable Transport Future: Evidence from Case Studies of 14 Large Bicycle-Friendly Cities in Europe and North America](#)” *Sustainability* 14, no. 12: 7293. <https://doi.org/10.3390/su14127293>

**Buehler, R., Pucher, J.** 2021. “[COVID-19 Impacts on Bicycling](#),” *Transport Reviews*, Vol. 41 (Note: invited editorial).

# Pilot Demonstration to Enhance Road User Safety in Asbury Park, NJ

HANNAH YOUNES, LEIGH ANN VON HAGEN,  
WENWEN ZHANG, ROBERT B. NOLAND, JIE  
GONG, DESHENG ZHANG, DIMITRI  
METAXAS, CLINTON ANDREWS



National Science Foundation  
WHERE DISCOVERIES BEGIN  
Award CNS-1951890



**RUTGERS**  
THE STATE UNIVERSITY  
OF NEW JERSEY



# Introduction

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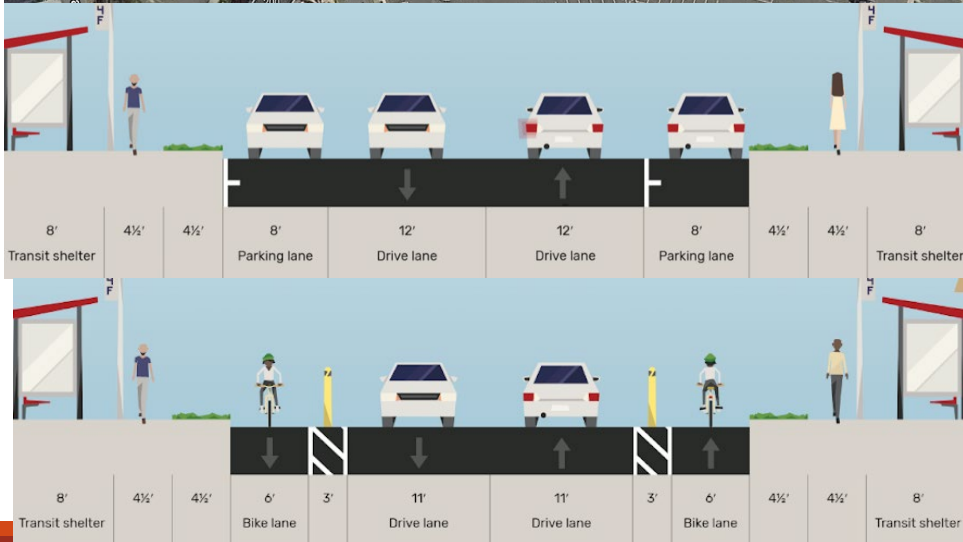
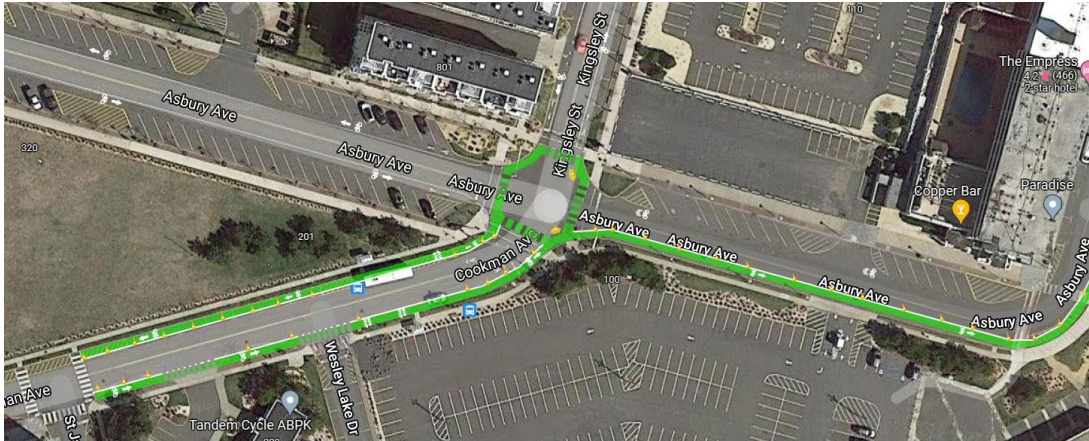
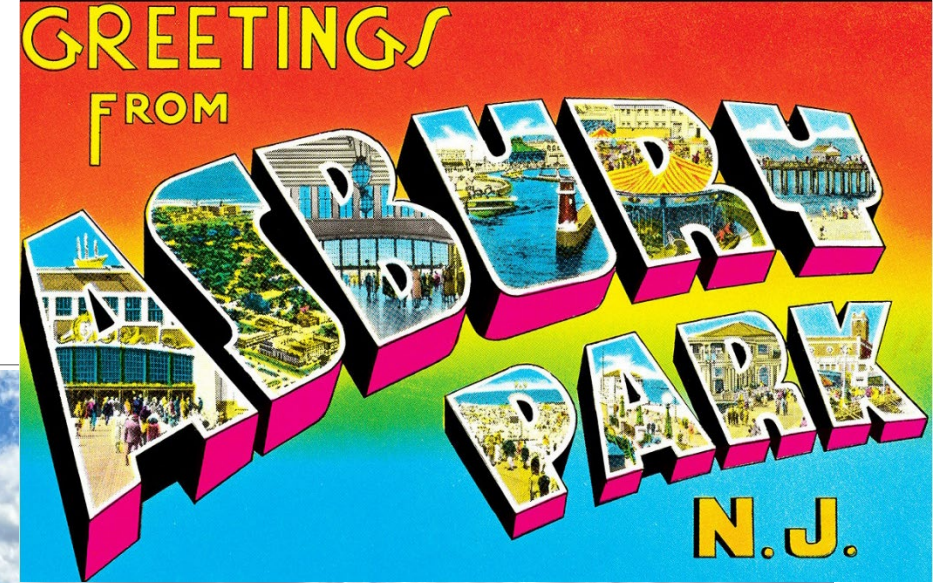
**NSF Project:** Making Micromobility Smarter and Safer 2020-2024

**Transportation Planning Studio in the Spring 2022:** Smart and Connected: Micromobility Demonstration Project in Asbury Park, NJ.

- Objective: To address safety of non-motorists at a high traffic intersection by adding a bicycle lane.
- Methods for assessing safety: intercept survey (online and in-person), traffic camera footage, and biometric sensors.



# Bike lane in Asbury Park





## No Bike Lanes



## Bike Lanes with Paint



## Bike Lanes with Delineators & Cones





# Research Questions

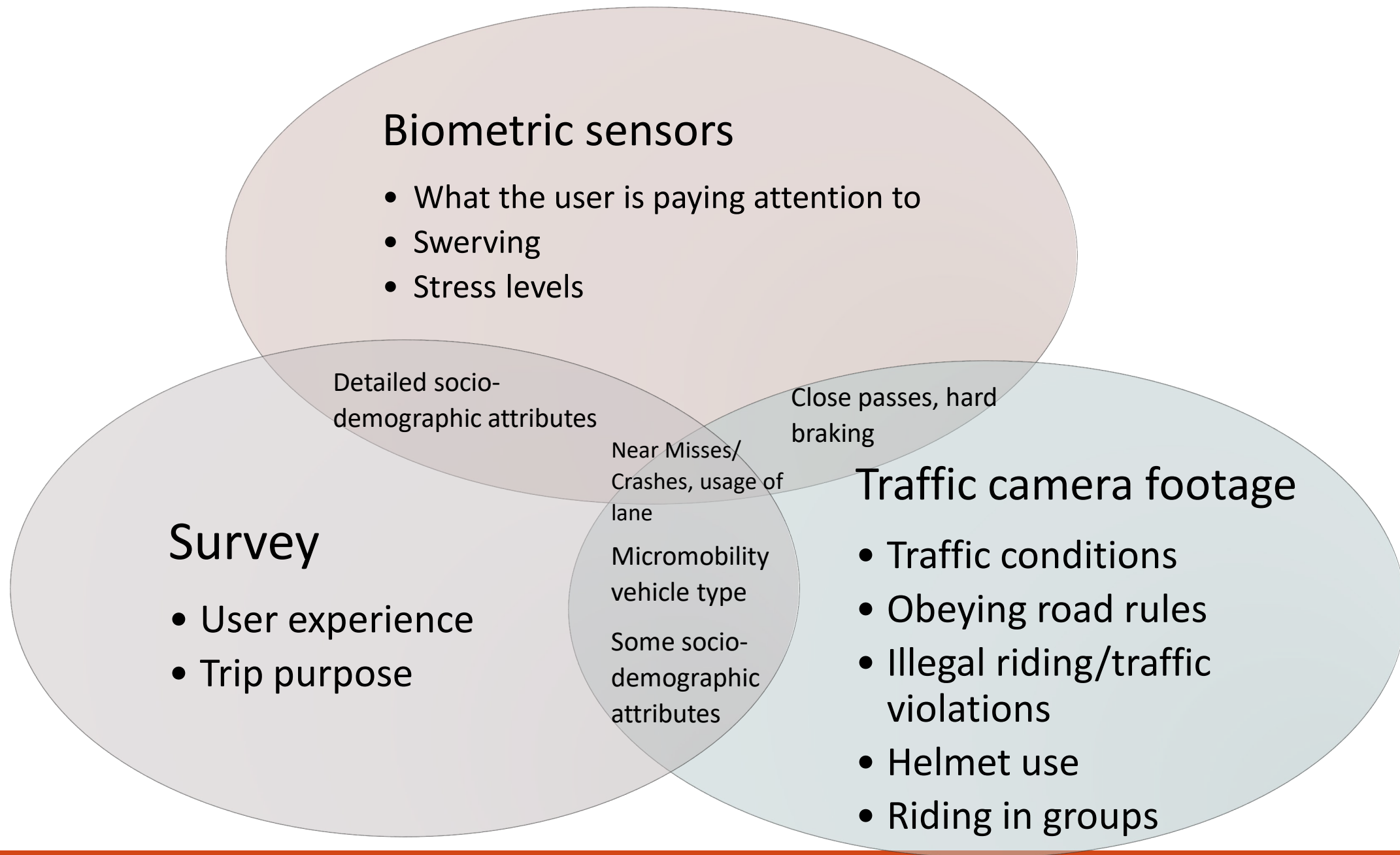
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1. Is it possible to assemble an integrated view of micromobility safety by triangulating with multiple methods?
2. Is such a construct useful for evaluating a tactical urbanism experiment on micromobility safety?

# Methods

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- 1. Survey:** we developed a 5-minute feedback survey in Qualtrics.
  - We aimed to capture sentiments of the pop-up bike lane among pedestrians and cyclists, as well as socio-demographic attributes.
  - The survey was deployed online, although print outs were handed out in the field as an additional option.
- 2. Traffic Camera Footage:** we retrieved 10 days of footage (before, during, and after the removal of the temporary bike lane)
  - We aimed to capture lane usage, helmet use, near-misses, close-calls, and some demographic attributes.
- 3. Biometric Sensors:** we used eye-tracking glasses and Galvanic Skin Response (GSR) sensors
  - We aimed to capture cognitive workload, stress levels, and attention span.





# Survey results

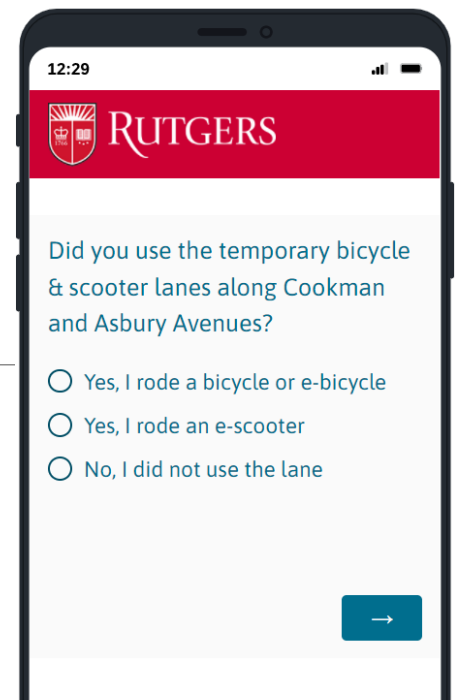
We received 69 responses.

Our survey was skewed towards older individuals; more than half were over 50 years old.

78% were frequent micromobility users: 71% of the respondents are frequent cyclists and 26% are frequent e-scooterists (at least a few times a month).

34% of micromobility users experienced a near-miss or fear for their safety during their last micromobility trip; 77% of those people had no bike-lane available to them.

90% of all respondents wish to see the temporary lane permanent.





Case Studies on Transport Policy

Volume 14, December 2023, 101073



## Gender split and safety behavior of cyclists and e-scooter users in Asbury Park, NJ

Hannah Younes [ORCID](#), Robert B. Noland [ORCID](#), Clinton J. Andrews [ORCID](#)

Edward J. Bloustein School of Planning and Public Policy, Rutgers, The State University of New Jersey, 33 Livingston Avenue, New Brunswick, NJ 08901, USA



# Traffic Camera Footage Part 1: Attributes

35 hours of footage were analyzed via manual counts.

**Research interests:** Prevalence of women riders, of helmet use, riding on bike lane, and riding as a group.

**Helmet use** was low among cyclists, and non-existent among e-scooterists.

The **gender gap** was narrower among e-scooter users.

Shared e-scooters were more likely to be a **group activity** (80%) than private cycling (36%).

65% of micromobility users used the new **bike lane**.



# Traffic Camera Footage

## Part 1: Helmet use

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35% of cyclists wore a helmet.

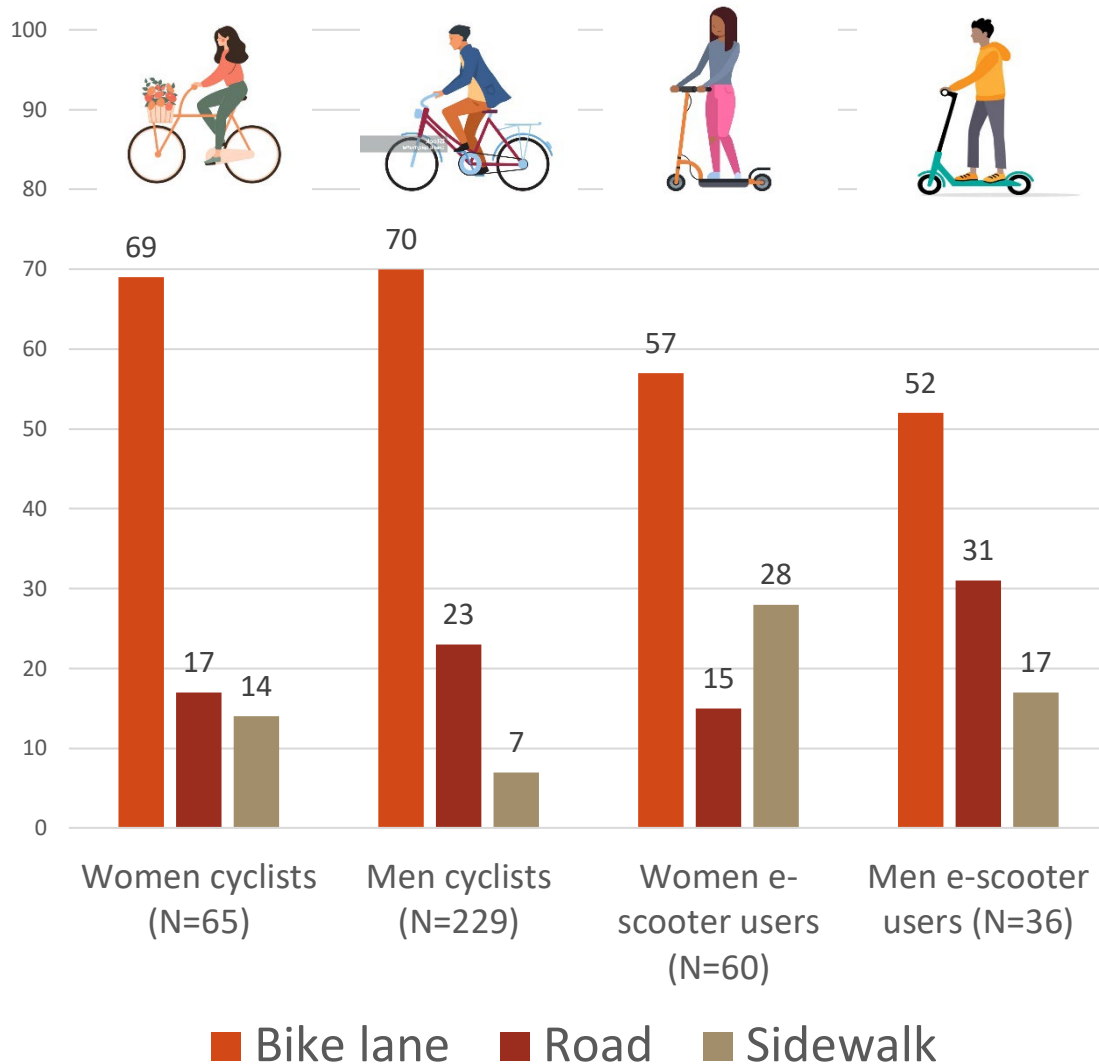
Using a binomial logistic regression (N=493), we found that:

- Cyclists who were **male**, riding in a **group**, riding on the **road**, riding in the morning, and riding on weekends were associated with higher helmet use.

**Risk compensation.** Protective behavior does not necessarily beget protective behavior. Helmet users were less likely to use the bike lane than non-helmet users.

Morning cyclists were 2.7 times as likely to wear a helmet than afternoon cyclists.





# Traffic Camera Footage

## Part 1: Lane use

Using a multinomial logistic regression (N=437), we found that:

- **Users of the bike lanes** tended to be cyclists, not helmet wearers, traveling alone, and afternoon travelers.
- People turning right were five times as likely to use the bike lane than those making a left turn or going straight. This shows that this configuration may not be easily usable by users going in any direction.

The table here shows the percentage of lane usage by gender and micromobility mode.

- **Women and e-scooter users** are more likely to use the **sidewalk** than men and cyclists, respectively.
- Men are more likely to ride on the road than women.

# Traffic Camera Footage Part 2: Trajectory and speed

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40 hours of traffic footage were analyzed via computer vision.

**Research interest: Does the implementation of the bicycle lane have a traffic calming effect?**

SiamMot was used to track pedestrians and vehicles in the intersections. The model was trained using COCO-17 and VOC12 datasets.

2D trajectories are converted into 3D trajectories using LiDAR. 3D trajectories are converted to speed.



# Traffic Camera Footage Part 2: Traffic calming

Data: 12,000+ motor-vehicle trajectories and speeds during 40 hours of traffic camera footage

Methods: Computer vision and generalized linear modeling

## Findings

- The delineator-protected bike lane was associated with a **22% decrease** in speeds for vehicles turning right on Asbury from Cookman, and a 5% decrease in speeds going straight on Cookman/Kingsley.
- The painted-only bike lane was associated with an **10% decrease** in speeds for right-turns, with no other significant decrease in other directions.



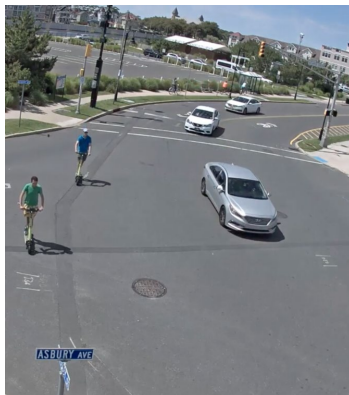


# Traffic Camera Footage Part 3: Detection of near-misses

**Research interest: Can we develop an algorithm that can detect scooters and near-misses between different vehicles? (*Ongoing*)**

Current open-source machine learning models (e.g. YOLOv3) do not properly detect e-scooters.

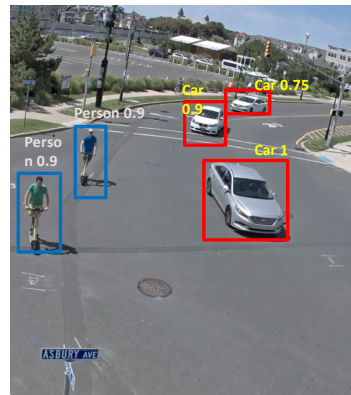
We are currently developing an algorithm that can accurately detect pedestrians, bikes, e-scooters, and vehicles.



Raw Video



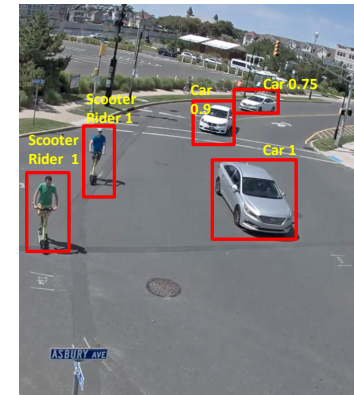
YOLO V3



Video with YOLO pre-train Label



Customized Model

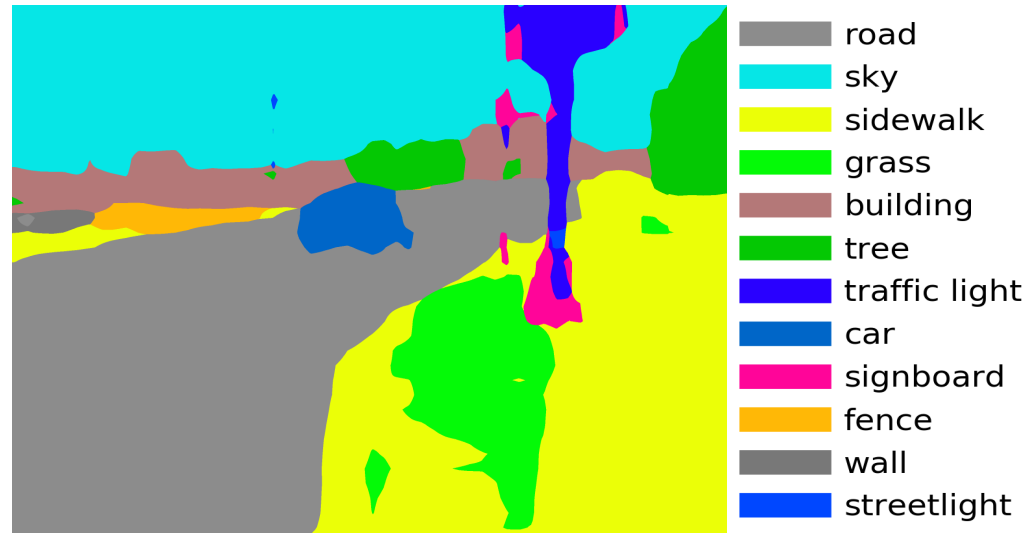
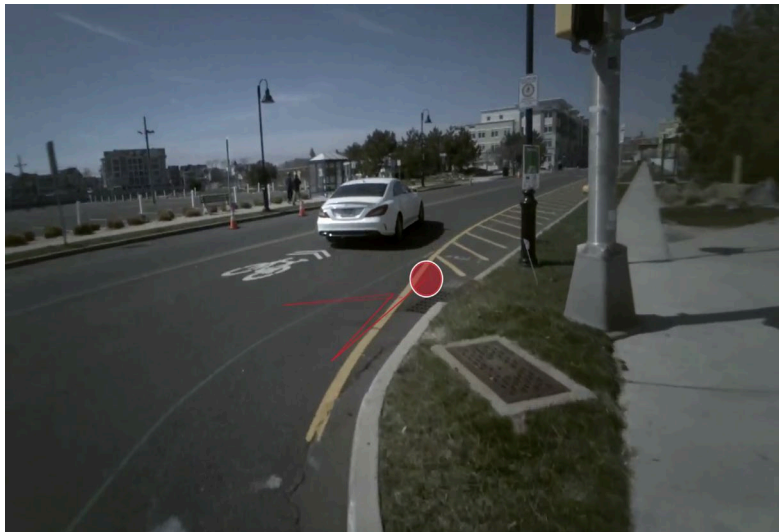


Video with both pre-train Label and Customized Label (biker, Scooter)

# Biometric Sensors

By converting the eye-tracking video to image segmentation using PSPNet, we found that the user paid attention to the road 93% of the time.

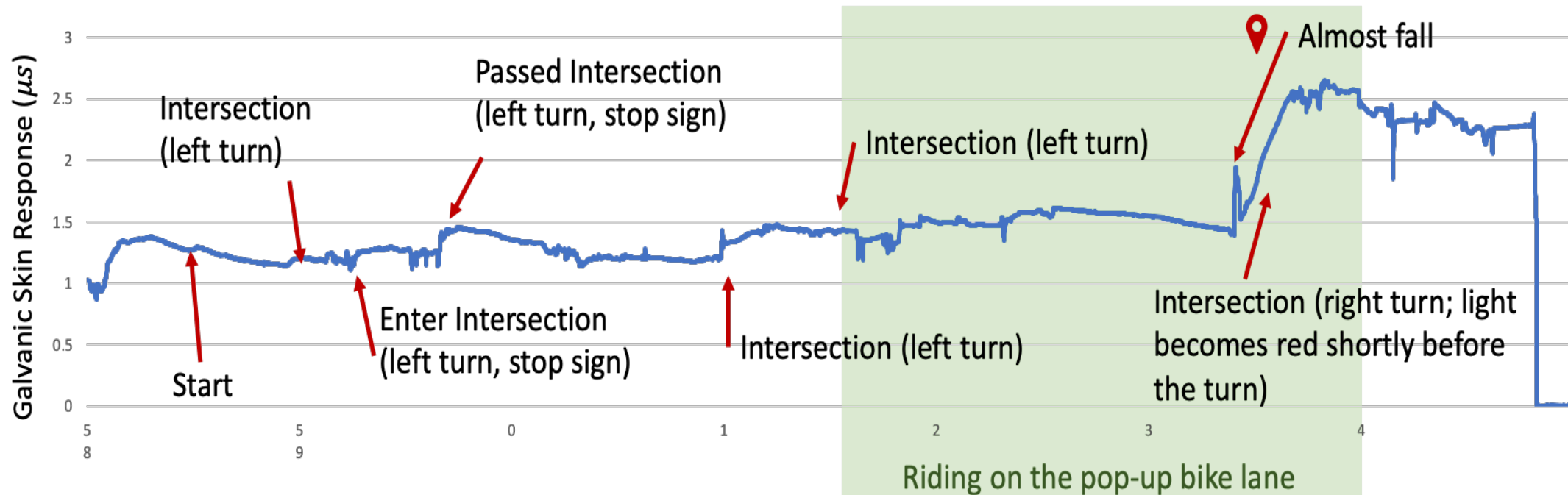
The user paid attention to the road more often when at an intersection than when riding through a road segment.



# Biometric Sensors

GSR offered insights on when stress levels peaked, including information on possible close-calls or near misses.

This experiment is a proof-of-concept and will be deployed as a larger study in the Spring 2023.





# Discussion and conclusion

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Most tactical urbanism studies and near-misses studies use only one or two methods to assess safety.

What have we found?

Yes, it is possible to assemble an integrated view of micromobility safety by triangulating with multiple methods. Yes, such a construct is useful for evaluating a tactical urbanism experiment on micromobility safety.

This study realizes a more integrated view of micromobility safety by using more than one method at once.



<https://bloustein.rutgers.edu/micromobility/>

Corresponding Author: Hannah Younes [hyounes@ejb.rutgers.edu](mailto:hyounes@ejb.rutgers.edu)





# Harnessing Quick-Build Design to Expand Bike Facilities in Orlando, FL

October 10, 2023



Laura Turner  
Planning Services



- **Introduction**
- **The lane that started it all**
- **Developing the Quick-Build Program**
- **Tools for success**
- **Putting it to the test**
- **Looking ahead**



# The lane that started it all





# The lane that started it all

## 2022 BIKE AND ROLL TO SCHOOL DAY **MAY THE FOURTH B(IKE) WITH YOU**



Wednesday, May 4, 2022  
8 A.M.

**START:**  
Leu Gardens,  
1920 N Forest Ave, Orlando, FL 32803

**END:**  
Audubon Park K-8 School  
1500 Falcon Dr, Orlando, FL 32803

For more information, contact Jenn Rhodes at  
jennifer.rhodes@orlando.gov or call 407.246.2231.

City of Orlando in partnership with Safe Routes to School, Audubon Park School, and Orlando Bike Coalition will host a bike to school day event. Join our bike train starting from Leu Gardens as we travel east on Corrine Drive in a pop-up path. The parking lane along the north side of Corrine Drive will be converted into a protected path for walking and biking for one-day, giving users an idea of what's to come as part of the long term Corrine Drive project intended to make the area more bicycle and pedestrian friendly.

[orlando.gov/biketoschool](http://orlando.gov/biketoschool)



May 2022

### BIKE & ROLL TO SCHOOL

will be implementing a biking and walking path on Corrine Drive from Woodlawn Drive to Winter Park Road on May 4, 2022. This demonstration event encourages residents to walk and bike to school on National Bike & Roll to School Day.

To repurpose the north side of Corrine Drive into a temporary protected path using temporary bollards and materials.

For more information, contact Jenn Rhodes at [jennifer.rhodes@cityoforlando.net](mailto:jennifer.rhodes@cityoforlando.net) or visit [biketoschool.org/](http://biketoschool.org/)

Volunteer

Continued

Volunteer

Volunteer

2 Volunteers at school

TO AUDUBON K-8

WOODLAWN DR

CORRINE DR

WINTER PARK RD

5TH

Corrine Drive Bike & Roll to School Biking and Walking Path Demonstration May 4, 2022

Corrine Drive Bike & Roll to School Pop-up Biking and Walking Path Demonstration May 4, 2022



# The lane that started it all

Corrine Drive Pop-Up Biking and Walking Path

May 2022



### Design Details

Temporary delineators and chalk will be used to define the space for the biking and walking path, providing separation between the vehicles and people walking and biking in the path. Two types of delineators will be evaluated: Dura-Post (left) and Wave (right).



Corrine Drive Bike & Roll to School  
Pop-up Biking and Walking Path Demonstration  
May 4, 2022



## BIKE & ROLL TO SCHOOL

Orlando will be implementing a temporary biking and walking path on Corrine Drive from Maplewood Drive to Winter Park Road on May 4, 2022. This demonstration will encourage students to walk and bike to school on National Bike & Roll to School Day.

The city will repurpose the north side of Corrine Drive into a temporary biking path using temporary markings and materials.

For more information, contact Jenn Rhodes at [jennifer.rhodes@cityoforlando.net](mailto:jennifer.rhodes@cityoforlando.net) or visit [www.walkbiketoschool.org/](http://www.walkbiketoschool.org/)

**MAY 5<sup>TH</sup>**

Temporary parking lane operations resume

Temporary markings may last several days after demonstration.

Corrine Drive Bike & Roll to School  
Pop-up Biking and Walking Path Demonstration  
May 4, 2022



# The lane that started it all

Corrine Drive Pop-Up Biking and Walking Path May 2022

## Corrine Drive Pop-Up Biking and Walking Path

May 4, 2022 National Bike & Roll to School Day

Join our Group Ride to Audubon K-8!

Harry P. Leu Gardens

AUDUBON PARK K-8 SCHOOL

POP-UP BIKING AND WALKING PATH FROM MAPLEWOOD DRIVE TO WINTER PARK ROAD

**WALK BIKE & ROLL TO SCHOOL**

The City of Orlando will be implementing a temporary pop-up biking and walking path on Corrine Drive from Maplewood Drive to Winter Park Road on May 4, 2022. This demonstration lane will encourage students to walk and bike to Audubon Park K-8 School on National Bike & Roll to School Day.

The path design will repurpose the north side parking lane on Corrine Drive into a temporary biking and walking path using temporary pavement markings and materials.

For more information, contact Jenn Rhodes  
407.246.2231 [jennifer.rhodes@cityoforlando.net](mailto:jennifer.rhodes@cityoforlando.net)  
<https://www.walkbiketoschool.org/>

### LANE DEMONSTRATION SCHEDULE

TUESDAY, MAY 3 <sup>RD</sup>	WEDNESDAY, MAY 4 <sup>TH</sup> NATIONAL BIKE & ROLL TO SCHOOL DAY	THURSDAY, MAY 5 <sup>TH</sup>
<ul style="list-style-type: none"> <li>No Parking on Corrine Drive (north side)</li> <li>6:00 pm – Bike/walk path set up</li> </ul>	<ul style="list-style-type: none"> <li>No Parking on Corrine Drive (north side)</li> <li>6-8:00 am – Finalize installation</li> <li>8:00 am – Group ride with Commissioner starting at Leu Gardens</li> <li>8:00-8:45 am – School Arrival: Bike/walk path active*</li> <li>2:00-2:45 pm – School Dismissal: Bike/walk path active*</li> <li>6:00 pm – Bike/walk path deconstruction begins</li> </ul>	<ul style="list-style-type: none"> <li>Normal parking lane operations resume</li> </ul>

\* Safety volunteers will occupy some of the driveways along route

**BIKE ORLANDO** **VISION ZERO** **Safe Routes APS** **DETACHED BIKE CHALLENGE**

Corrine Drive Bike & Roll to School  
Pop-up Biking and Walking Path Demonstration  
May 4, 2022



# The lane that started it all

## Before



## After





# The lane that started it all

**Project Level  
Demonstration**

**Project Type  
Demonstration Path**

**Materials**

**Wave Delineators**

**Flex Posts**

**K71 Flex Posts**

**Planters**

**Spray Chalk**

**Traffic Tape**

**Stencils**

**Aluminum Signs**





# The lane that started it all

## Evaluation

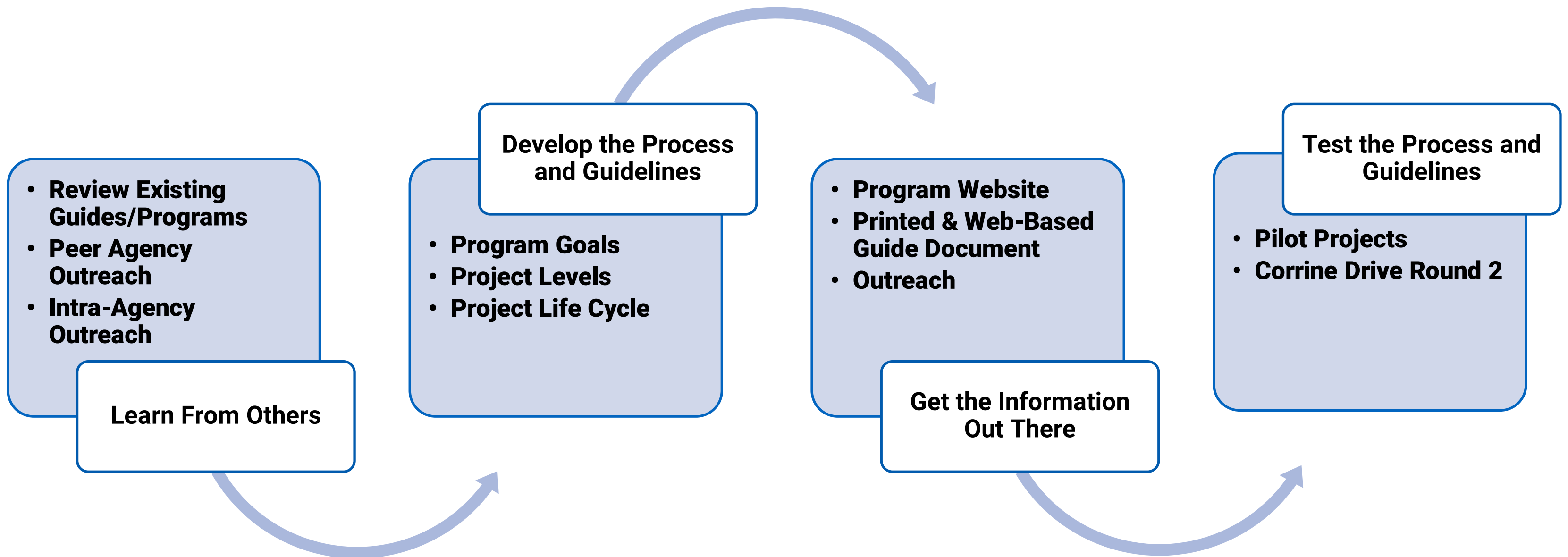
1. Parking Occupancy
2. Vehicle Counts
3. Travel Time
4. Bicycle and Pedestrian Counts







# Developing the Quick-Build Program





# Developing the Quick-Build Program



The screenshot shows the City of Orlando website's "Quick Build Project Guide" page. At the top left is the City of Orlando logo with the tagline "The City Beautiful". A search bar at the top right contains the text "Find almost anything on our website" and a magnifying glass icon. Below the header is a breadcrumb trail: "Home / Our Government / Departments & Offices / Transportation Department / Quick Build Project Guide". The main heading is "Quick Build Project Guide". To the left is a "Table of Contents" with links to Overview, What is a Quick Build Project?, How to Get Started, Step 1: Imagine, Step 2: Plan, Step 3: Build, Step 4: Transition, and Long-Term Success. Below this is a "Related Information" section with links to Materials, Vision Zero, Quick Build Interest Form, and Download the full Quick Build Guide PDF (PDF, 3MB). A central image shows a person on a blue bicycle riding on a green-painted bike lane. Below the image is a paragraph explaining that quick builds are flexible, temporary projects that let people test drive infrastructure changes that could create safer, more livable public spaces. From crosswalks to bike lanes to parklets, quick build projects help communities show the positive impacts of new ideas.





## Program Goals

1. **Increase safety**
2. **Invite public use**
3. **Improve business**
4. **Improve travel options**



# PROJECT LEVEL

**Demonstration Project**  
1 day – 1 week



**Pilot Project**  
3 months – 1 year



**RAPID Project**  
Open ended



**Standard Capital Project**  
Open ended



WHAT IS QUICK BUILD?



## STEP 1: IMAGINE

### DEVELOP YOUR PROJECT IDEA

Start by asking yourself the eligibility questions below and identifying a project site. If your project sounds like a match for the city's quick-build program, fill out our [Interest Form](#).

#### CAN I SPONSOR A QUICK-BUILD PROJECT?

Quick-build project ideas can be submitted by the following groups:

Transportation Department or other city departments

Neighborhood groups or organizations

Micromobility companies, including bike and scooter share

Local businesses or organized business associations

Community-based organizations

Regional and statewide planning and transportation groups

Transit agencies

Community event organizers

Schools or school districts

Non-profits or advocacy organizations



## PROJECT LIFE CYCLE

**1**  
IMAGINE



- Develop the project idea
- Submit [Interest Form](#) (see p. 108)
- Attend strategy session



- City assesses project readiness
- City determines next steps and responsible parties

↓ OR OR REFERRED TO OTHER PROGRAM →

**2**  
PLAN



- Develop the project package, including Evaluation Plan, Outreach Plan and Installation Plan
- Community stakeholders review and approve

**3**  
BUILD



- Install the project
- Hold project opening
- Maintain the project
- Keep reaching out to the community

**4**  
TRANSITION

- Remove or transition to RAPID or capital project
- Debrief



**Who can submit a quick-build project idea? See p. 20**

**Imagine**



**Plan**



**Build**



**Transition**



# Tools for success

## THE COUNTDOWN



### THE BIG EVENT!



## PROJECT TYPES

## WHAT ARE MY MATERIALS?



## Putting it to the test



**Project Level  
Pilot to RAPID**

**Project Type  
Transit Stop Improvement**

**Materials  
Bus Boarding Platform  
Laminated Signs**



# Putting it to the test



**Project Level  
Pilot**

**Project Type  
Bicycle Lane**

**Materials  
Flex Posts  
Dezignline  
Stencils  
Methyl Methacrylate  
(DLPM)  
Aluminum Signs**



- **Continued evaluation**
- **Quick-build project development**
  - Bicycle/Pedestrian Refuge Islands**
  - Shared Street/Slow Streets**
  - Two-Stage Left-Turn Boxes & Bike Boxes**
  - Bike Parking**
  - Shared Micromobility/Bike Corrals**
- **City and community partnerships**





Thank you!

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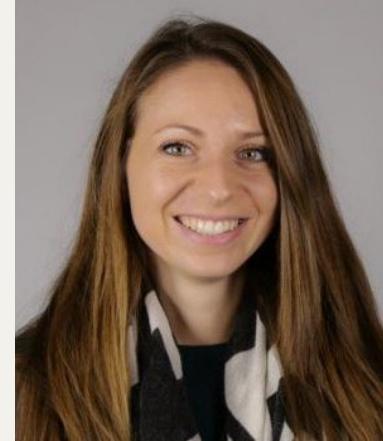
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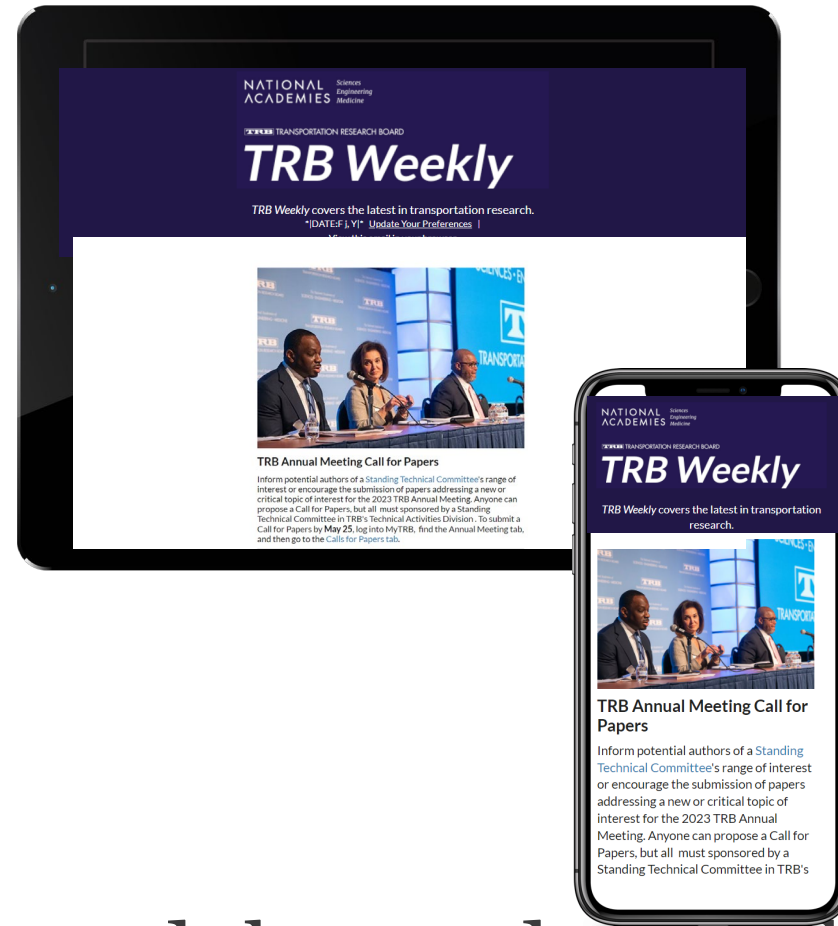


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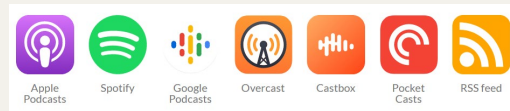
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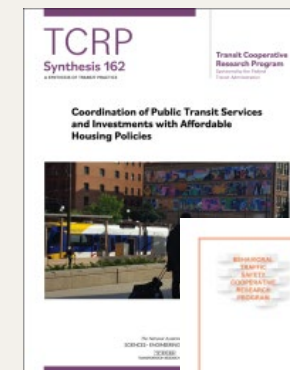
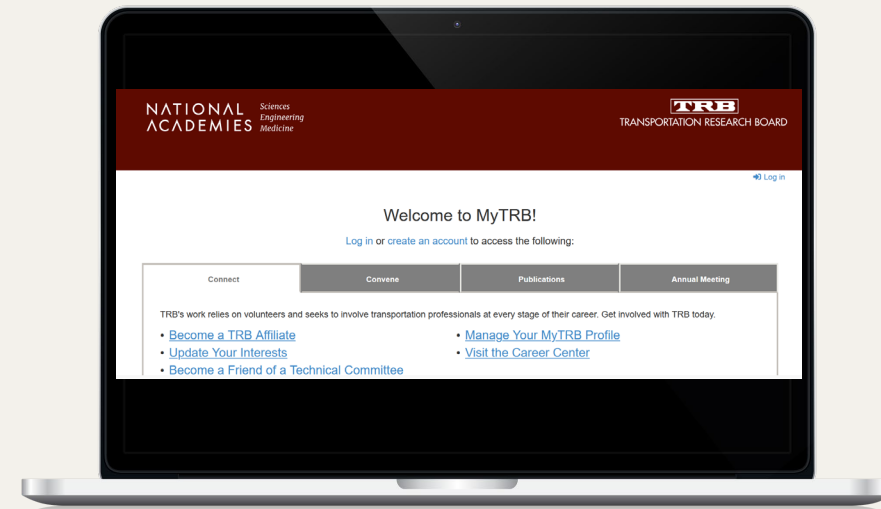
Network and pursue a path to Standing Committee membership

- **Work with a CRP**

- **Listen to our podcast**



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