



Bikes Count in the Big Easy: A snapshot of cycling in New Orleans



Co-hosted by Eco-Counter and the League of American Bicyclists

November 8, 2023



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TOGETHER, LET'S BUILD THE MOVEMENT FOR SAFER STREETS!





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MANUAL

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NATIONAL BIKE SUMMIT 2023
BIKE REVOLUTION!

BIKE REVOLUTION!

THE LEAGUE » NATIONAL BIKE SUMMIT



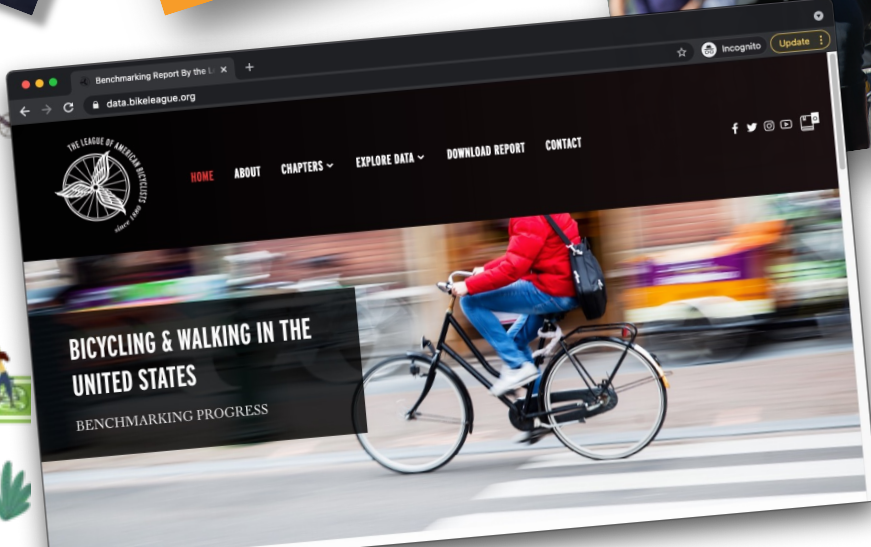
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LEAGUE of AMERICAN BICYCLISTS
presents
BIKE MONTH
MAY 2023
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SAVE THE DATE

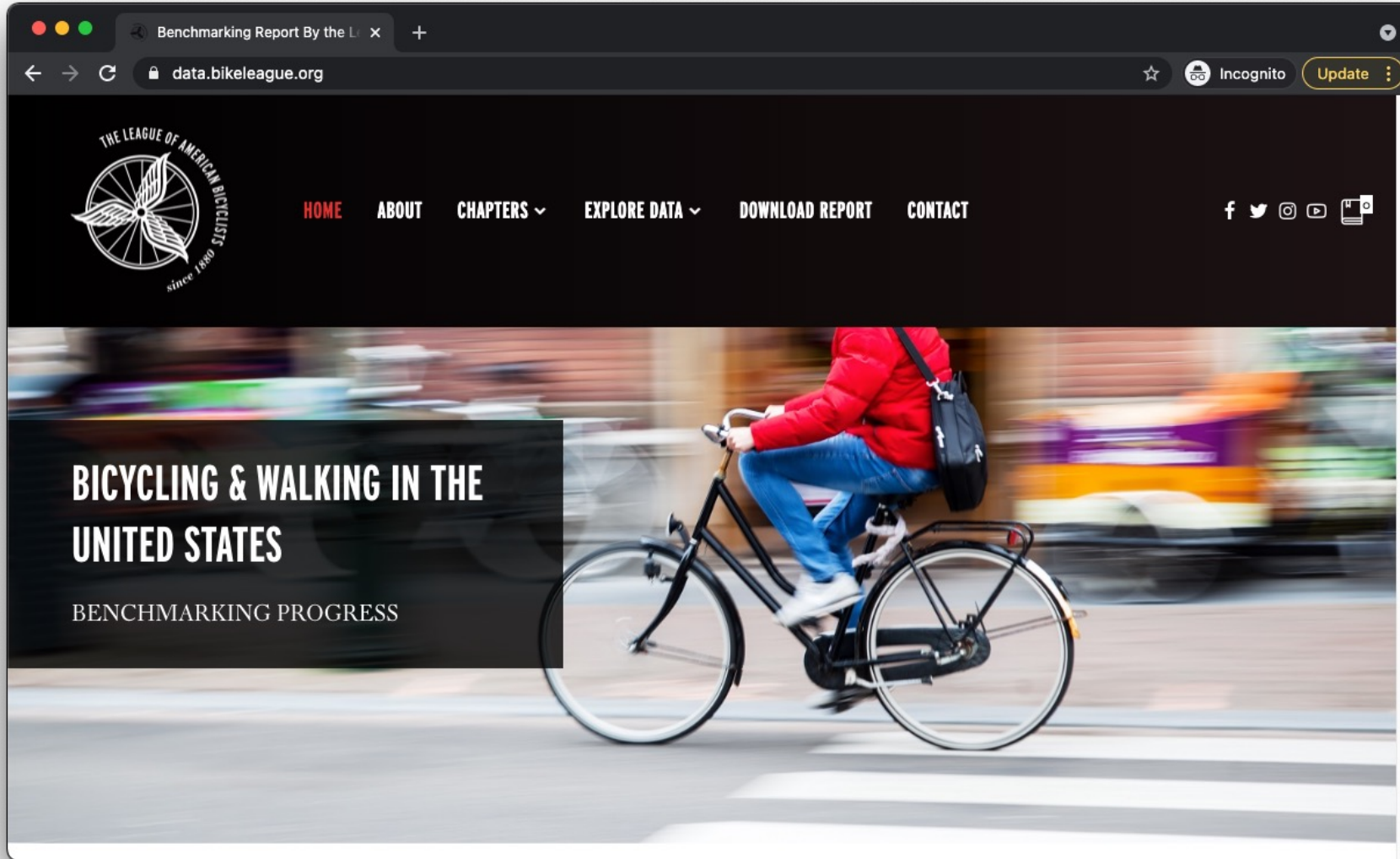
NATIONAL BIKE SUMMIT

MARCH 19-21, 2024

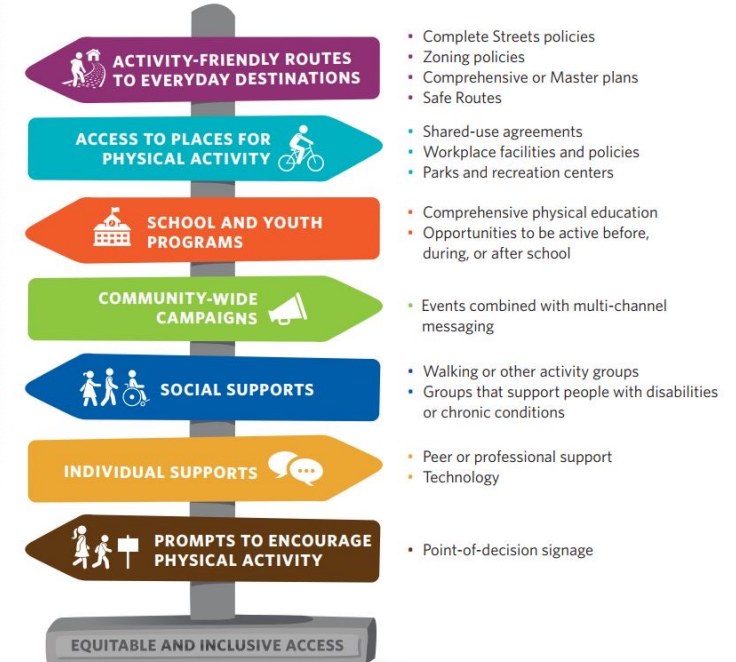


MARTIN LUTHER KING JR. MEMORIAL LIBRARY | 901 G ST. NW | WASHINGTON, DC

Register at bikeleague.org/summit



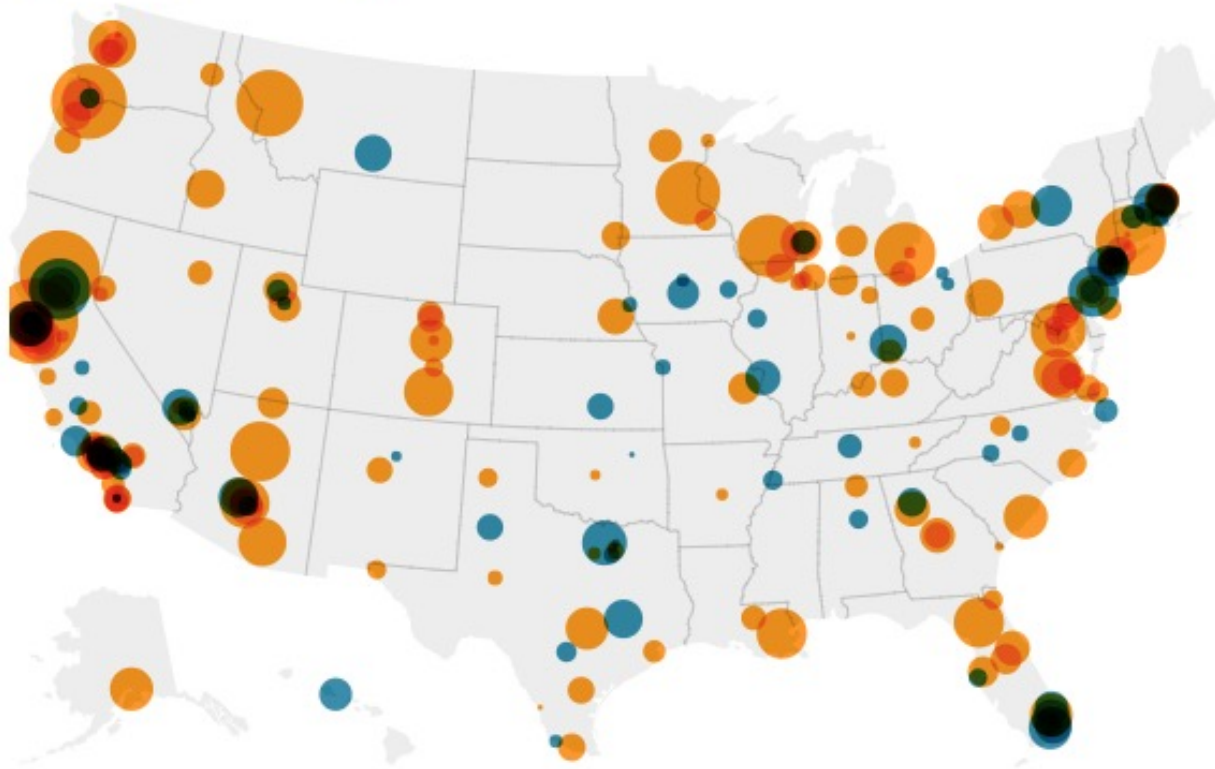
data.bikeleague.org



Changes in Bike Commuting

This map shows the differences between rates of biking to work in census designated places that have a 2022 1-year estimate for bike commuting. For instance, Philadelphia's rate of biking to work went from 2.1% of commuters to 2.3% percent - for a difference of .2 percentage points.

Orange Negative Yellow No Change Blue Positive



This map compares rates of biking to work from the 2019 5-year estimate and 2022 1-year estimate from the American Community Survey, based on the B08006 table.

Map: The League of American Bicyclists • Source: [Census Bureau](#) • [Get the data](#) • [Download image](#) • Created with [Datawrapper](#)

data.bikeleague.org



ACTIVITY-FRIENDLY ROUTES TO EVERYDAY DESTINATIONS

- Complete Streets policies
- Zoning policies
- Comprehensive or Master plans
- Safe Routes

ACCESS TO PLACES FOR PHYSICAL ACTIVITY

- Shared-use agreements
- Workplace facilities and policies
- Parks and recreation centers

SCHOOL AND YOUTH PROGRAMS

- Comprehensive physical education
- Opportunities to be active before, during, or after school

COMMUNITY-WIDE CAMPAIGNS

- Events combined with multi-channel messaging

SOCIAL SUPPORTS

- Walking or other activity groups
- Groups that support people with disabilities or chronic conditions

INDIVIDUAL SUPPORTS

- Peer or professional support
- Technology

PROMPTS TO ENCOURAGE PHYSICAL ACTIVITY

- Point-of-decision signage

EQUITABLE AND INCLUSIVE ACCESS

THE LEAGUE » BICYCLE FRIENDLY AMERICA



BICYCLE FRIENDLY STATE



BICYCLE FRIENDLY COMMUNITY

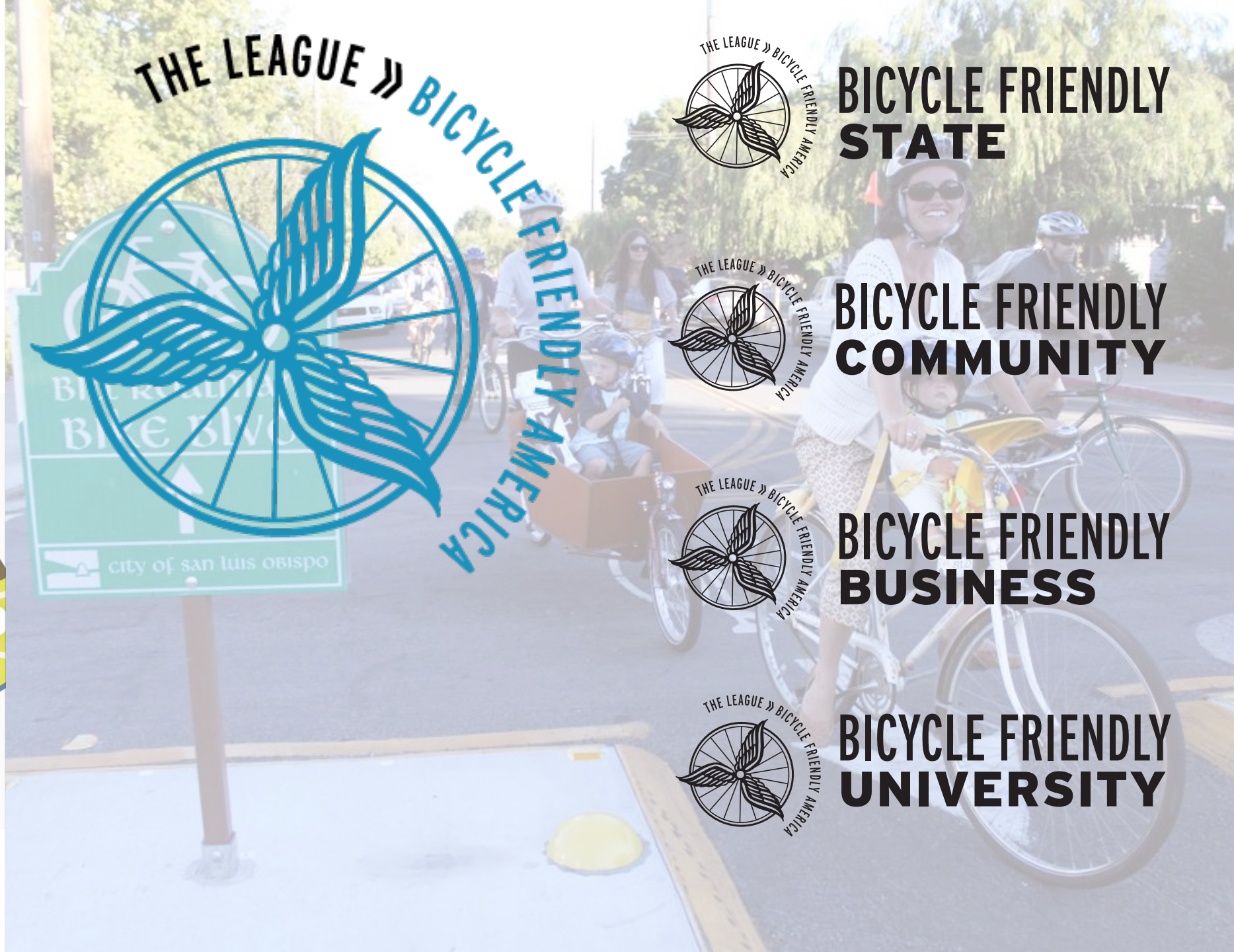


BICYCLE FRIENDLY BUSINESS



BICYCLE FRIENDLY UNIVERSITY





**BICYCLE FRIENDLY
STATE**



**BICYCLE FRIENDLY
COMMUNITY**



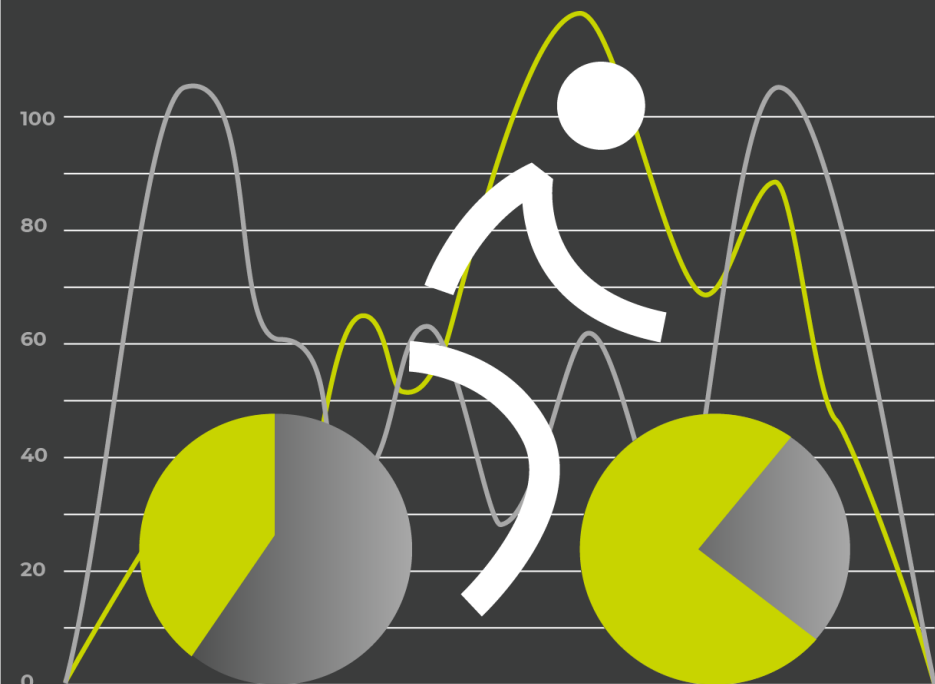
**BICYCLE FRIENDLY
BUSINESS**



**BICYCLE FRIENDLY
UNIVERSITY**

BIKES COUNT:

a data competition this bike month



[Home](#) » [Blog](#) » Bikes Count: 2023 Data Competition Launches

BIKES COUNT: 2023 DATA COMPETITION LAUNCHES

March 21, 2023 / [Amelia Neptune](#)

For the third consecutive year, we are excited to announce that the League is once again partnering with our friends at [Eco-Counter](#) to host the annual **Bikes Count Data Competition**! The 2023 data competition is open for submissions now through May 4th, and a winner will be announced later in May, during [National Bike Month](#).

Are you looking to use **bike data to make an impact in your community**? Have you been putting off analyzing and communicating that messy Excel sheet on your desktop? Do you have some bike data that never really got used or made a splash? **Send us your data!**

Through a competitive application process, one lucky winner will receive from Eco-Counter:

- expert cleaning and analysis of your data from our data services team to extract key trends and insights;
- custom branded infographics, graphs, social media cards and other communication tools with your data;
- best-practice training on analyzing and communicating bike data;
- ... and more!

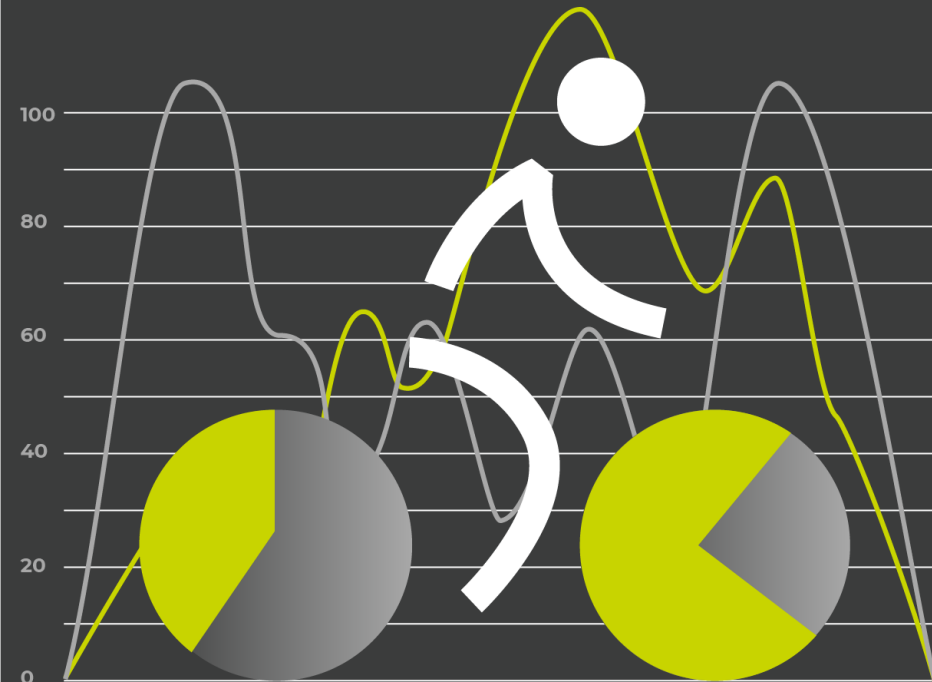
The competition is open to U.S.-based organizations with any kind of bike data, including bike advocacy

BIKES COUNT:

a data competition this bike month



AND THE WINNERS ARE....



BIKES COUNT:

a data competition this bike month

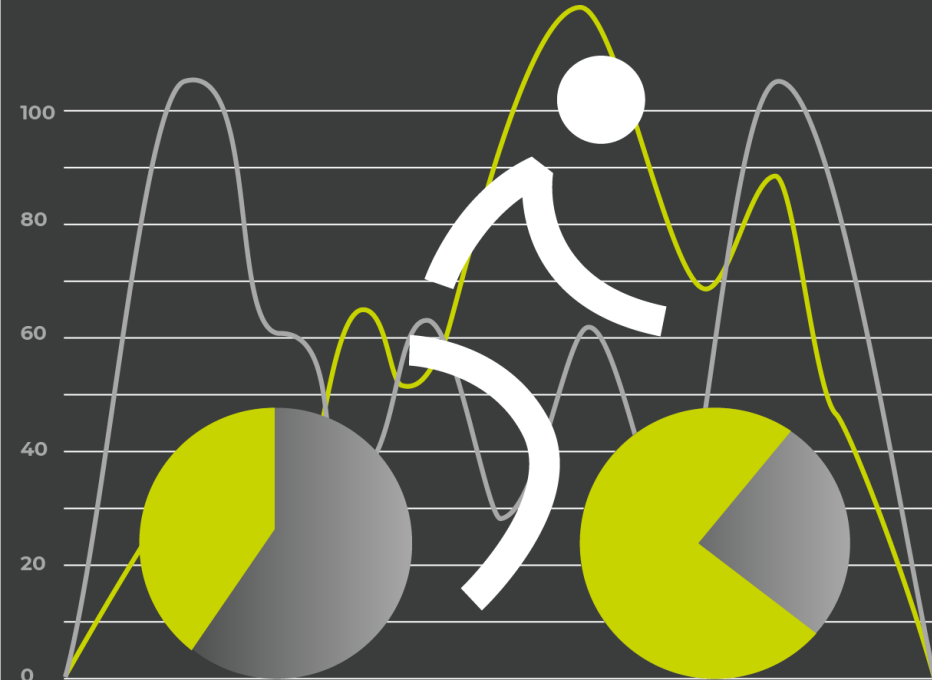


AND THE WINNERS ARE....



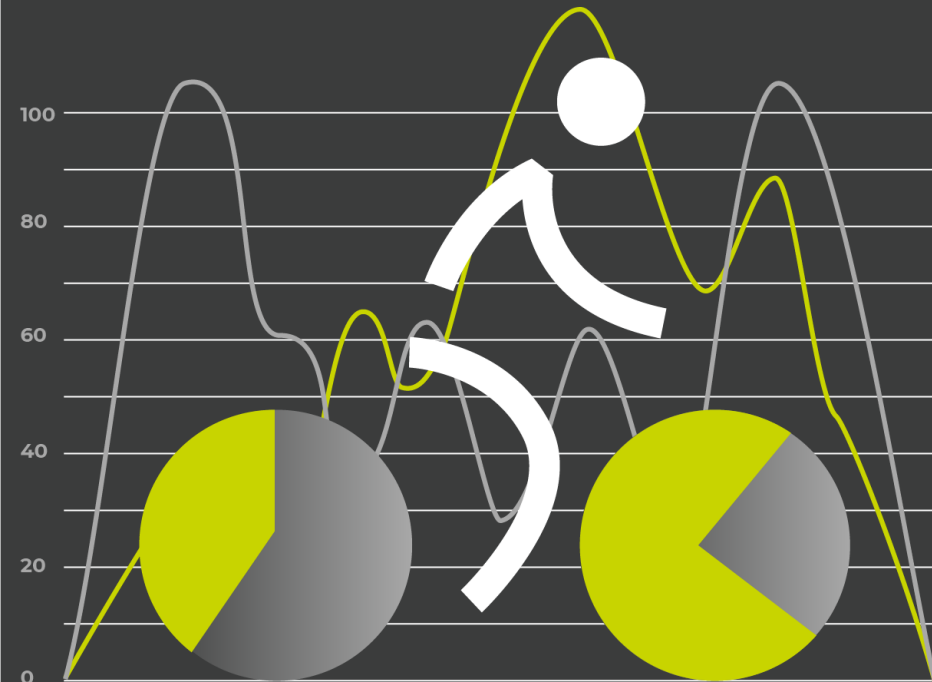
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BIKES COUNT:

a data competition this bike month



AND THE WINNERS ARE....



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City of New Orleans
Mayor LaToya Cantrell



MOVING →
NEW ORLEANS
Bikes



**Count
Dat**



Powered by entergy

Bikes count!

Data collection and analysis to support cycling

Olivia White
November 8th, 2023



About Eco-Counter



Design & manufacture
bike and pedestrian
counters



Work with organizations
to develop count programs



**Enable a data-driven
approach** to bike and
pedestrian planning

Bicycle counting and data communication



**Bicycle
counters**

Data validation

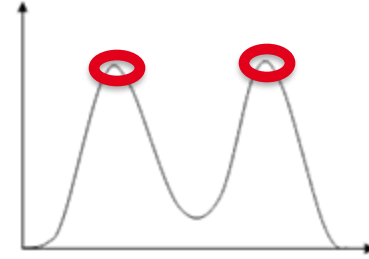
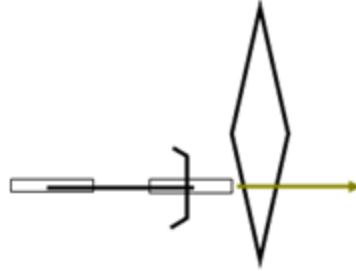
**Data
Reconstruction**

ZELT – Bike Counter



- Counts cyclists and tells direction of travel
- Permanent installation for on both on-street and off-street facilities
- Electromagnetic loops embedded in pavement, soil or gravel
- Battery-powered

ZELT – Bike Counter

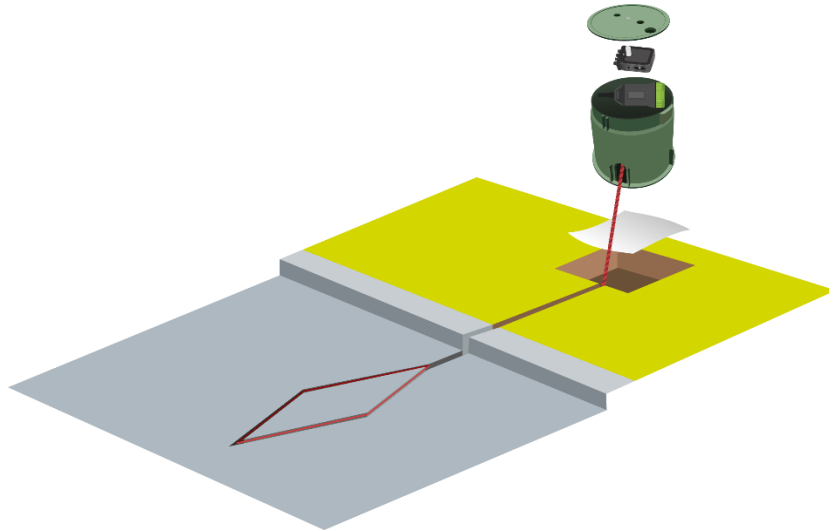


Wheels trigger electromagnetic field

1 signature identified = 1 bicycle counted and classified

ZELT – Bike Counter

Loop wire connects to battery, data logger and sensor



Capture trends over time

2
weeks

- + **Capture** baseline trail use data
- + **Understand** hourly, daily and weekly patterns
- + **Estimate** use trends across a trail network
- + **Determine** mountain bike volumes on different trails and at different network entrance points

6
months

- + **Justify** investment in new or improved trails
- + **Capture** monthly trends and peak usage periods
- + **Adapt** maintenance practices on well-used trails
- + **Communicate** with local stakeholders, such as tourism agencies and local businesses

12
months

- + **Understand** seasonal trends
- + **Determine** high-traffic areas in need of expansion or improvement
- + **Inform** funding and grant applications
- + **Assess** the demand for beginner, intermediate and advanced trails

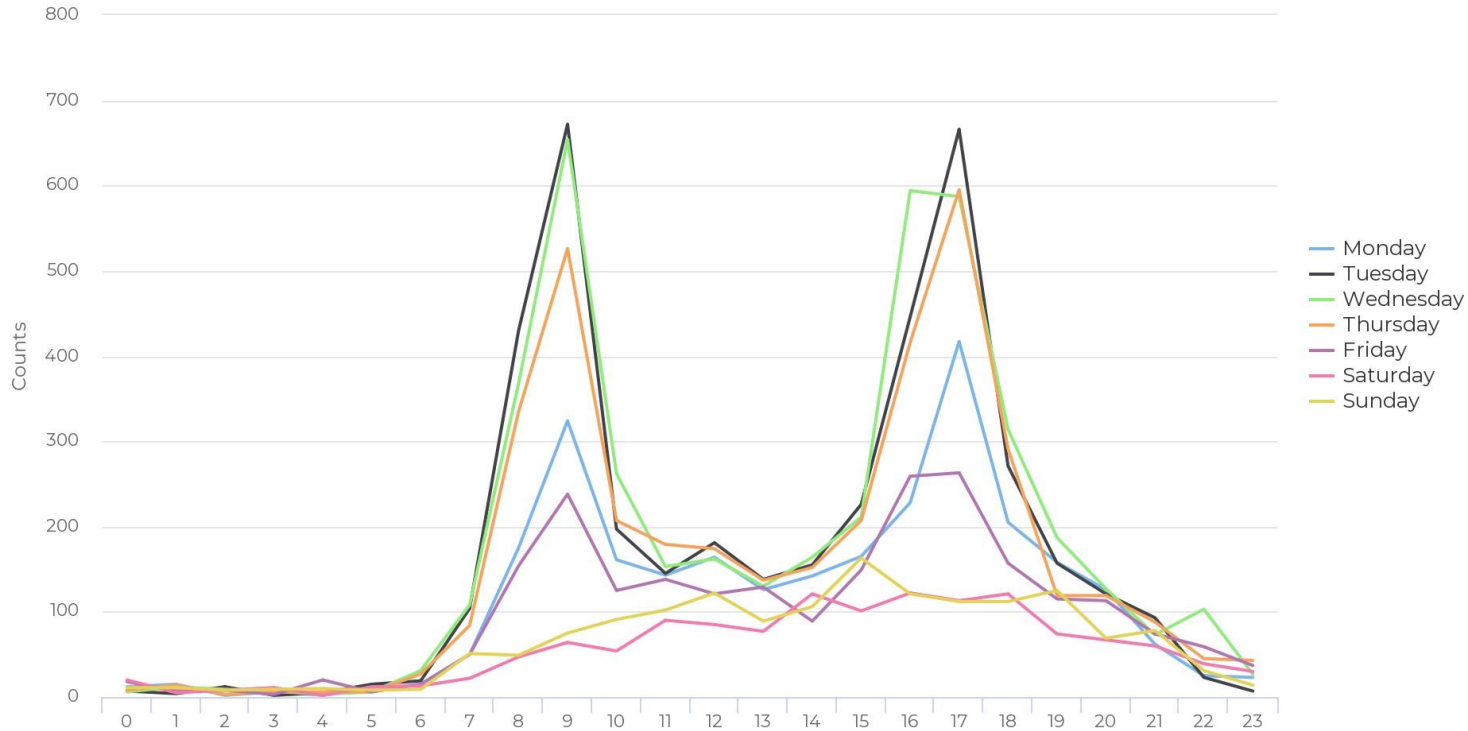
24
months

- + **Publish** long-term monitoring reports
- + **Analyze** year-on-year trends
- + **Quantify** the economic impact to local communities
- + **Justify** network expansion & long-term strategy

Visualizing count data

Hourly comparison by day

January 1, 2023 → November 7, 2023
Transit Hub Trail



Visualizing count data

Daily traffic

📅 Current Year

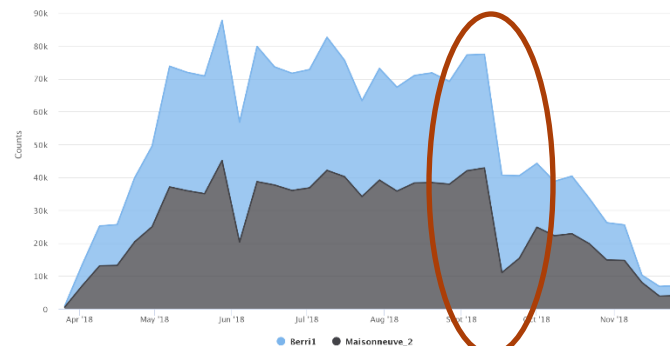
📍 Water Street @ King Street (DCN)



Causes of count data anomalies



Data gaps, increases and decreases



Causes of count data anomalies

Count inconsistencies are caused by:

- Unexpected or unusual **events**,
- **Construction** work
- A **dead battery** etc.
- Vandalism
- Object blocking the counter

These inconsistencies reflect the **reality of real-world counting.**



Public reports of missing data and anomalies

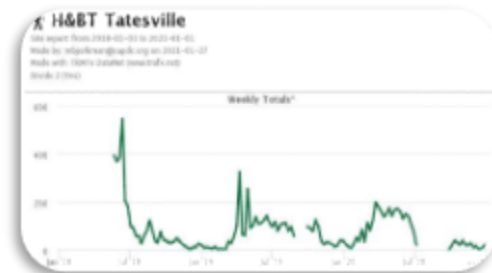


“Trail counter technical issues at the Naugatuck River Greenway in Derby resulted in less than 3 months of usable data, therefore this location is not included in the 2021 aggregated analysis.”

“A counter failure prevented December trail counts collection”



“Some trails will have gaps in the data. This is caused by routine maintenance of counters, resulting in them being pulled from the field and redeployed following the necessary maintenance.”



“ Please note that this counter was not counting during the peak summer season due to tampering on-site as well as wasp interference”

Data validation and reconstruction

A clean dataset is important to:

- counter analysis
- calculate year-over-year growth
- benchmark counting sites
- Fusion with other data sources

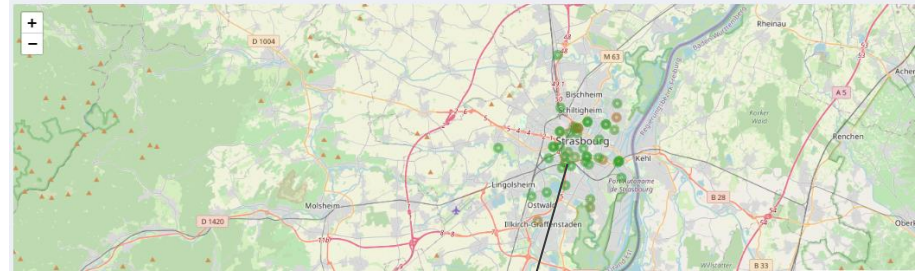
Correction of anomalies in the counting data is a critical step two-stage process.

Step 1: **Validation**

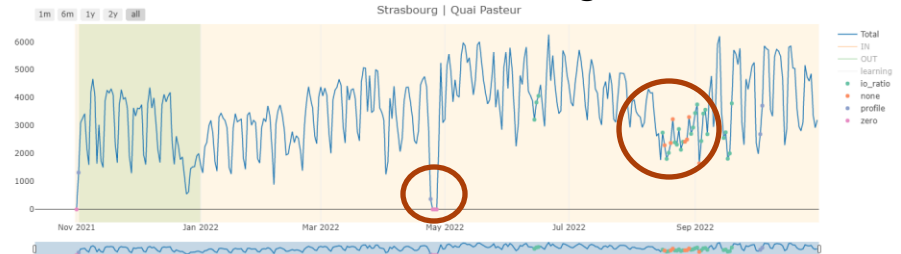
Step 2: **Reconstruction**

Summary of all counting sites

Summary	Edit	Yearly Trend	Correlated Dates							
Domain	Name	# Days	Outliers	missing	incomplete	zero	xtrém	io_ratio	profile	peak_trend
▶ Collectivité Européenne d'Alsace (6)		2,130	1.0%	0	0	0	6	9	6	0
▶ Communauté Urbaine de Strasbourg (1)		365	1.4%	0	0	0	0	1	1	3
▶ Vélo & Territoires (44)		16,060	8.5%	0	0	270	3	854	63	9
		Days: 16615	Outlier: 1399							



Individual counting site



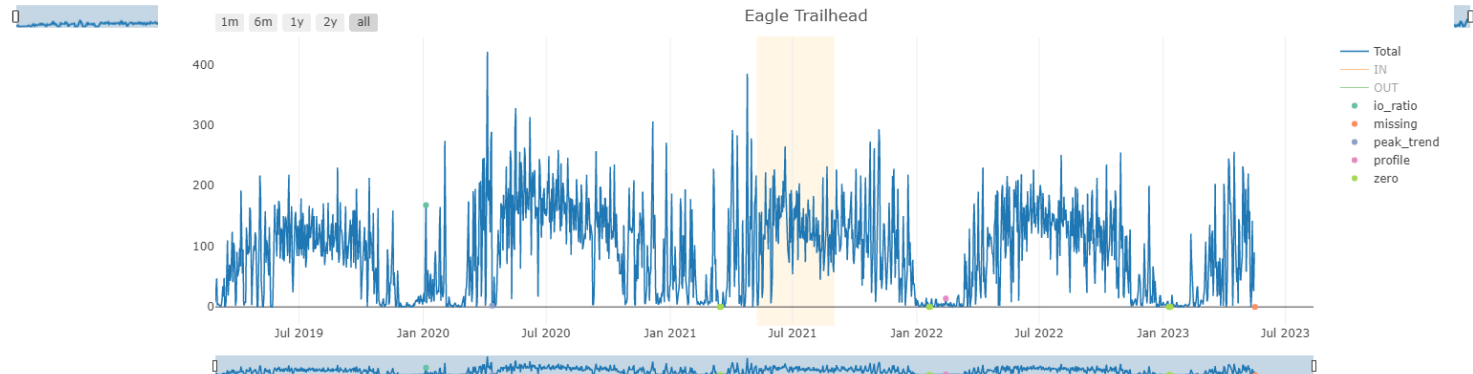
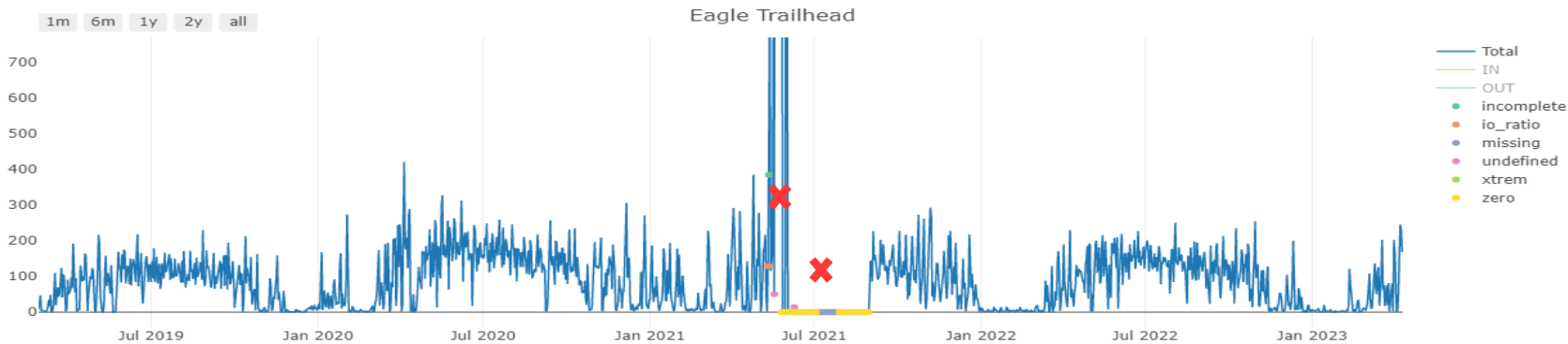
Types of anomalies

- Zero daily counts
- Days with no “null” data
- Extreme high-count values
- Incomplete days: some hours with “null” data
- IN/OUT channel ratio imbalance
- Profile: hourly counts do not fit the expected hourly distribution



Reconstruction example

Trailhead (Bike) - 7% of days were reconstructed



— Importance of data validation

When properly validated, count data is a **valuable metric** to help **plan investments**, measure the **success of actions** and **communicate with the public**

Count data is **ground truth data**; this unbiased source deserves a validation process.

Thank you

Olivia White

owh@eco-counter.com





Bikes Count

Bike count data analysis, trends and key takeaways for the University of New Orleans, Louisiana

November 2023



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— New Orleans:

***Takin' it
to the
streets!***



— New Orleans:

*Takin' it
to the
streets!*



Photo Credit Chris Evangelista Torres

Da Truth Brass Band + Footwerk Family Social Aid & Pleasure Club, 2019



— New Orleans:

***Takin' it
to the
streets!***



“Overflow” bike parking at Jazzfest, New Orleans

— New Orleans:

***Takein' it
to the
streets!***



Photo Credit Take 'Em Down Nola

May 2020 Civil Rights Protest, New Orleans

New Orleans:

***300 years
of active
transportation***



Image Credit: Wikimedia Commons, Left from Tulane "Jambalaya" Yearbook 1969, bottom unattributed; right: photo by author

— New Orleans:

*300 years
of active
transport-
tation*



Get Up N Ride Nola Social Ride –November 2020



New Orleans

Counting people, Because *Our People Count!*

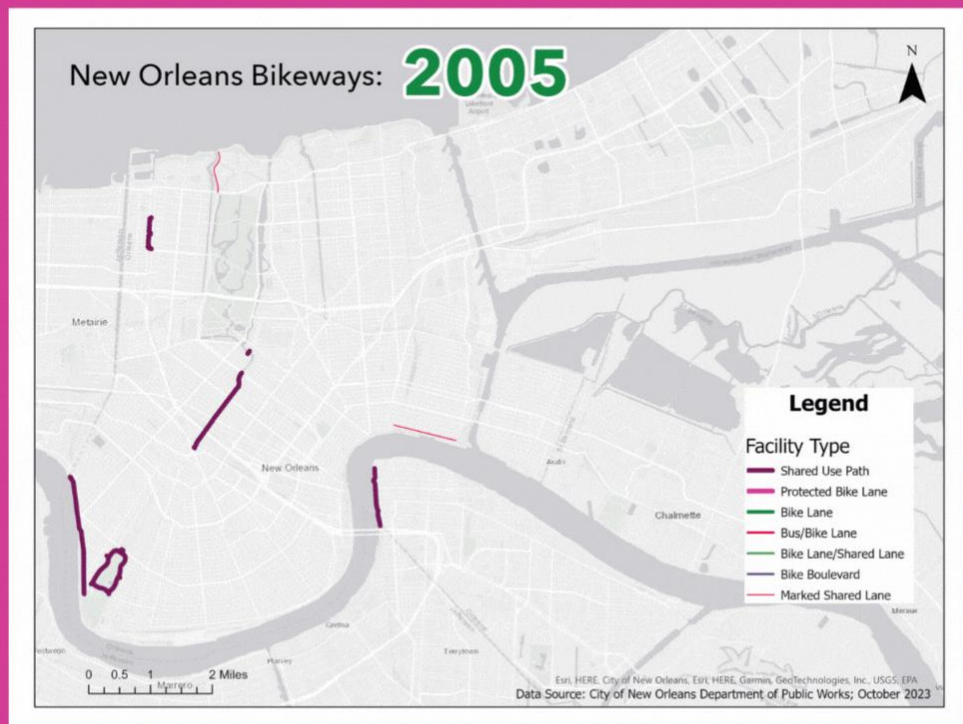
- Track changes in trends over time
- Plan for and prioritize future investments
- Put people walking and biking on level “planning field” with cars
- Benchmark progress toward transportation, health, climate policy goals
- Evaluate investment impacts
- Support applications for state, federal funding
- “What gets measured gets managed”



Bike Easy Bicycle Second Line, 2018 (Photo Courtesy of Bike Easy)

New Orleans' Bikeway Network:

From less than 5 miles of shared-use trails, to ~150 miles of evolving facilities

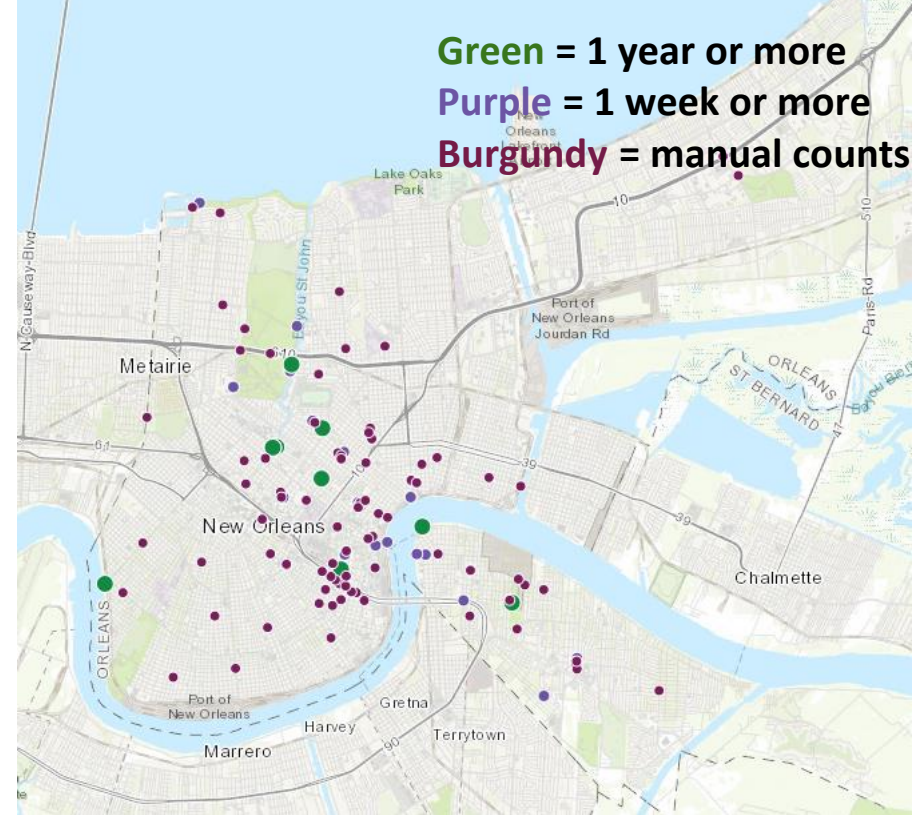


Background:

UNO Transportation Institute has supported bike/ped data collection since 2010

- **New Orleans Regional Planning Commission** “Pedestrian Bicycle Resource Initiative” 2010-2017
- Statewide data collection development with **Louisiana Transportation Research Center** 2016-present
- **Moving New Orleans Bikes/People for Bikes** “Big Jump” initiative 2019-2021

New Orleans Bike/Pedestrian Count Locations, 2010-2023



Current Iteration:



Goal:

to document New Orleans' investments in developing a **connected, low-stress network of walking and bicycling facilities** and **analyzing outcomes** resulting from those investments.

What do we know from more than a decade of studying active mobility in New Orleans?

- **Who, When, Where, How, Why?**
- **What does the data tell us about how to achieve safe, accessible streets and promote a culture of health?**
- **How can we work together to translate data into action and outcomes?**

Partners involved



- Compilation and synthesis of data
- Capacity support for data collection
- Exploratory research & tools
- Student involvement
- Vertical coordination with State, regional agencies

University



City of New Orleans

- Defining the questions + goals
- Infrastructure data
- Lateral coordination: Public Works, IT, Resilience, Health department, etc
- Translating data into action!

Local Government



- Communications strategy
- Promotion and outreach
- Community involvement
- Democratizing data + storytelling!

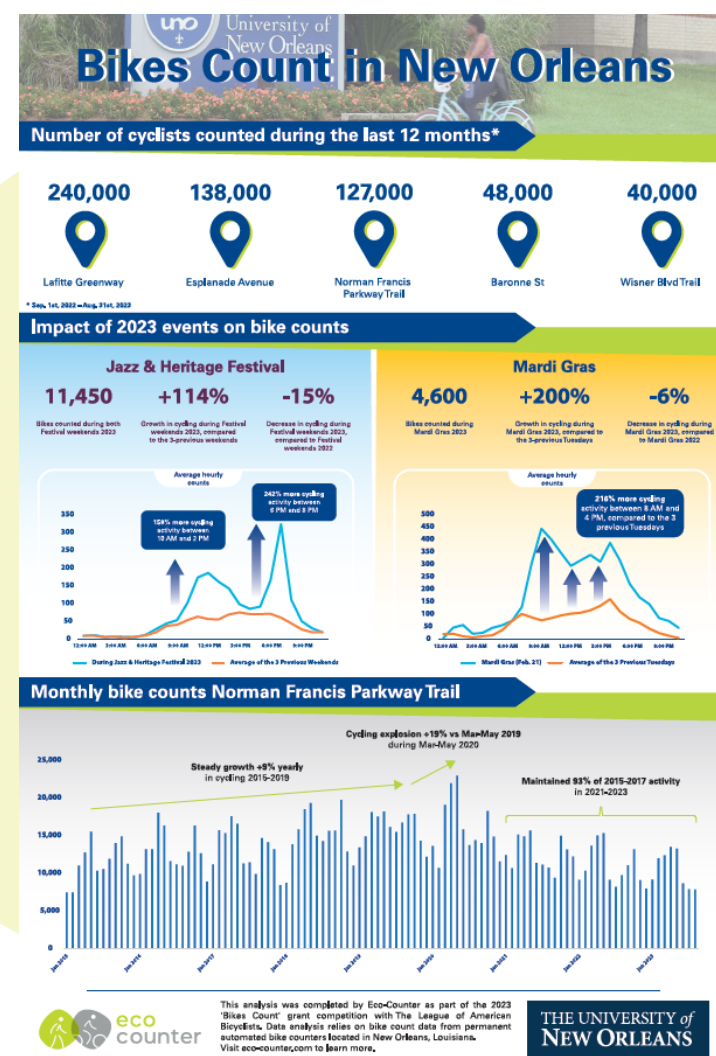
Advocacy

Additional Partners:



Challenge for “Bikes Count” Data Competition:

- 12+ years of EcoCounter data – permanent counters and short duration tube counts
- Help us fill gaps, improve validation, and interpret results
- How can we tell the story of infrastructure impacts better?
- Contextualizing recent (post-COVID) trends



New Orleans key figures (last 12 months*)

5 current, continuous bike count sites (6 sensors)

592,000

Total bikes counted in the last 12 months

1,623

Daily average during the last 12 months

+1%

Growth in cycling during weekdays, compared to the previous year

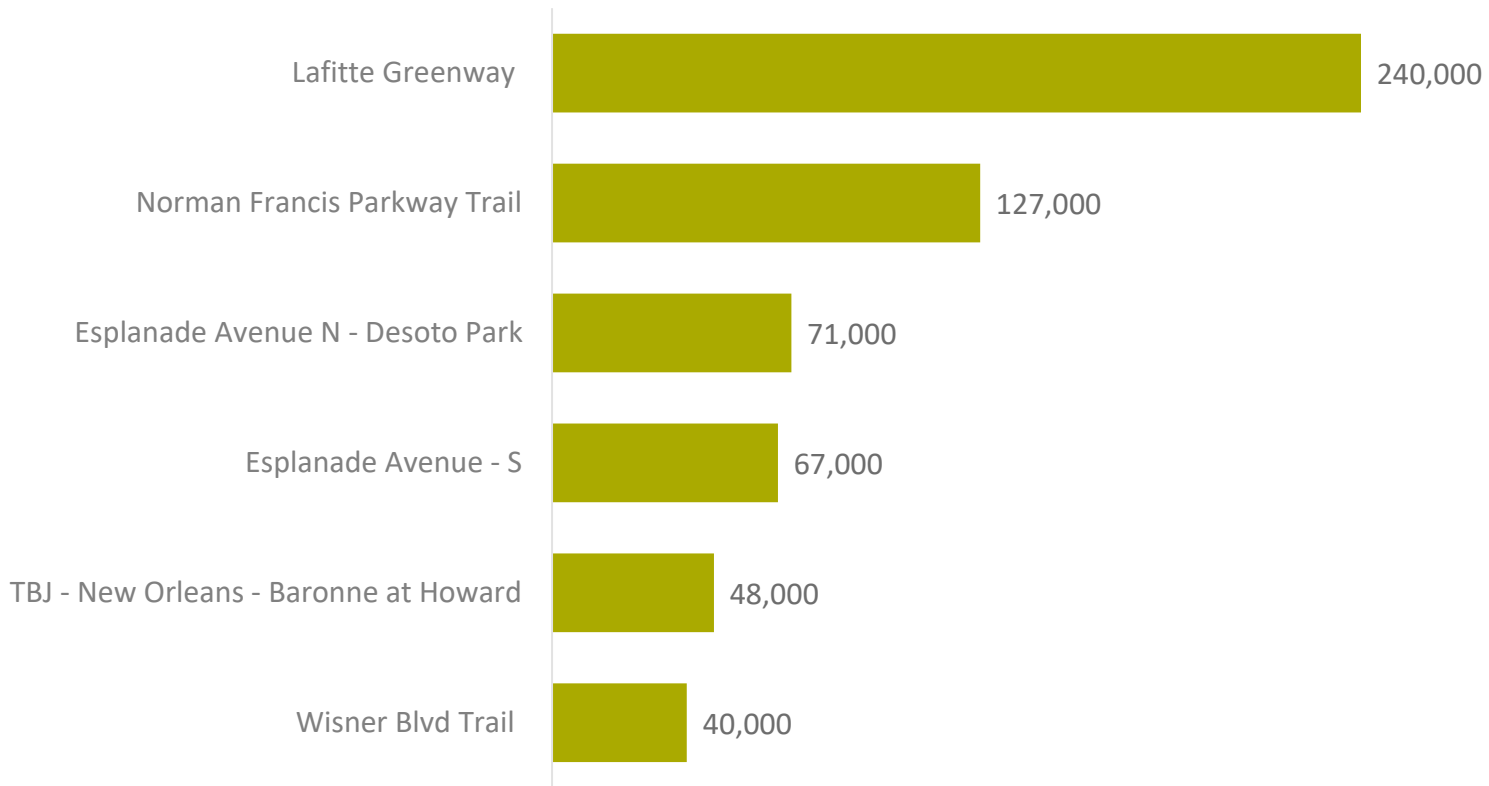
-9%

Decrease in cycling during weekends, compared to the previous year

*September 1st, 2022 – August 31st, 2023

New Orleans busiest cycling locations (last 12 months)*

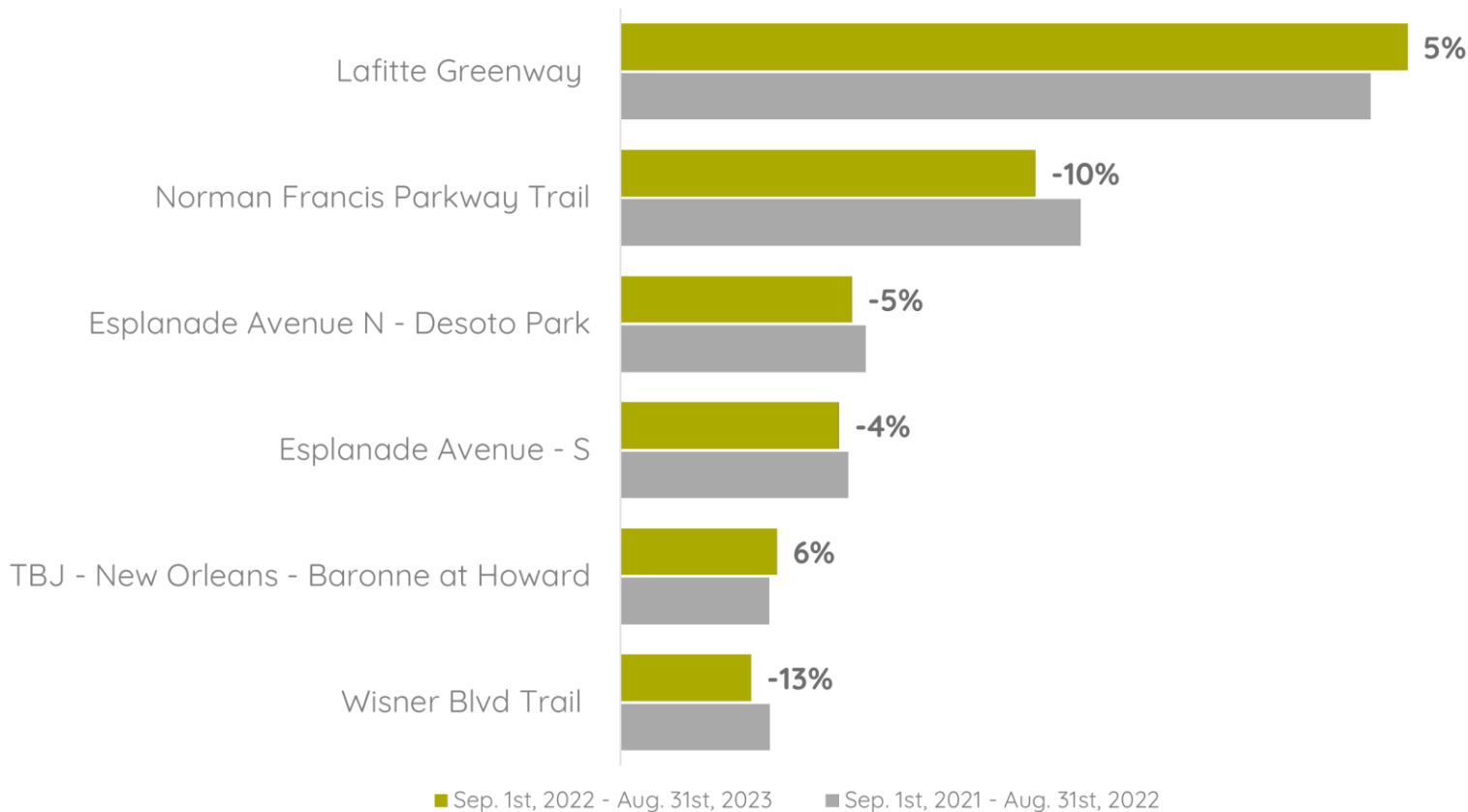
Total bicycle counts



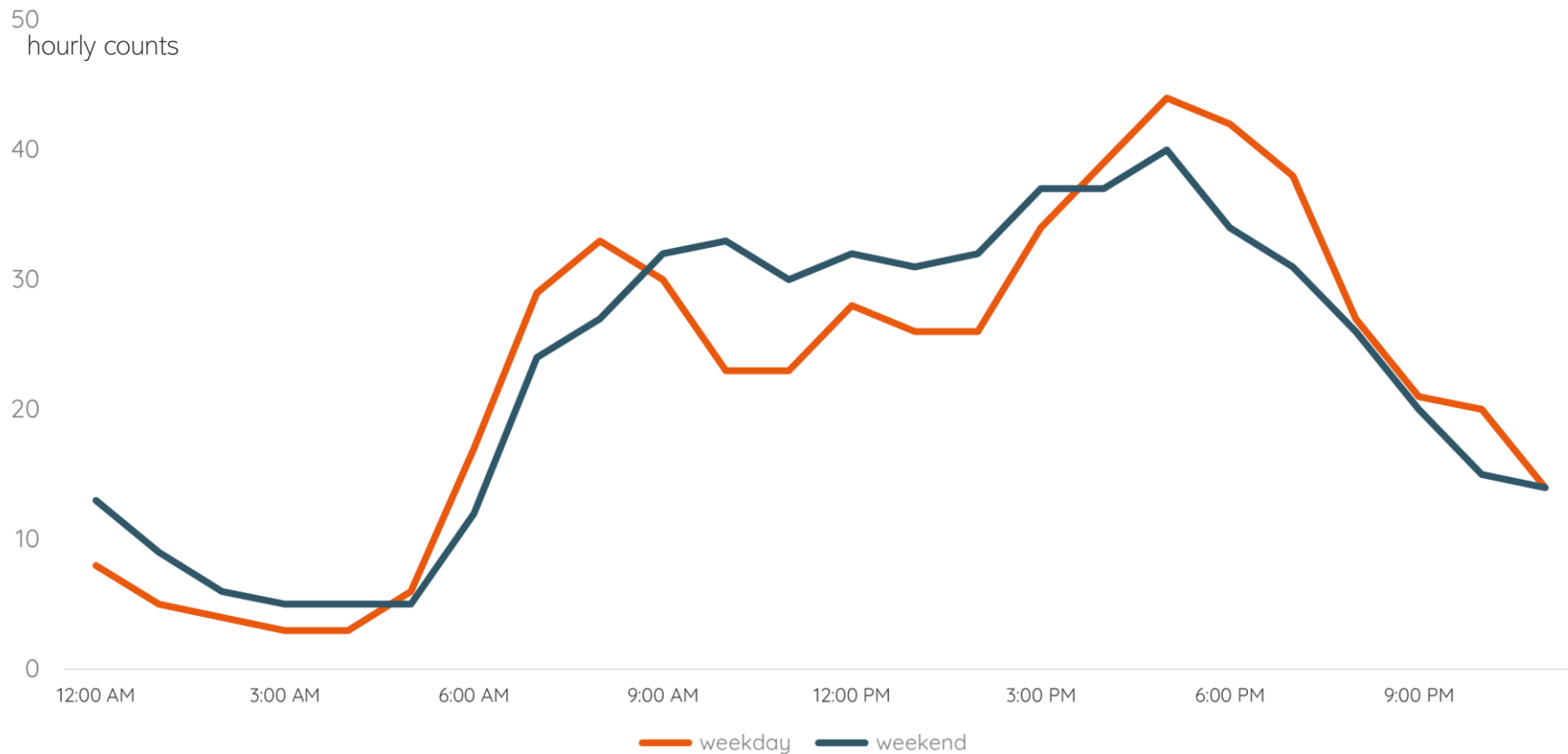
*September 1st, 2022 – August 31st, 2023

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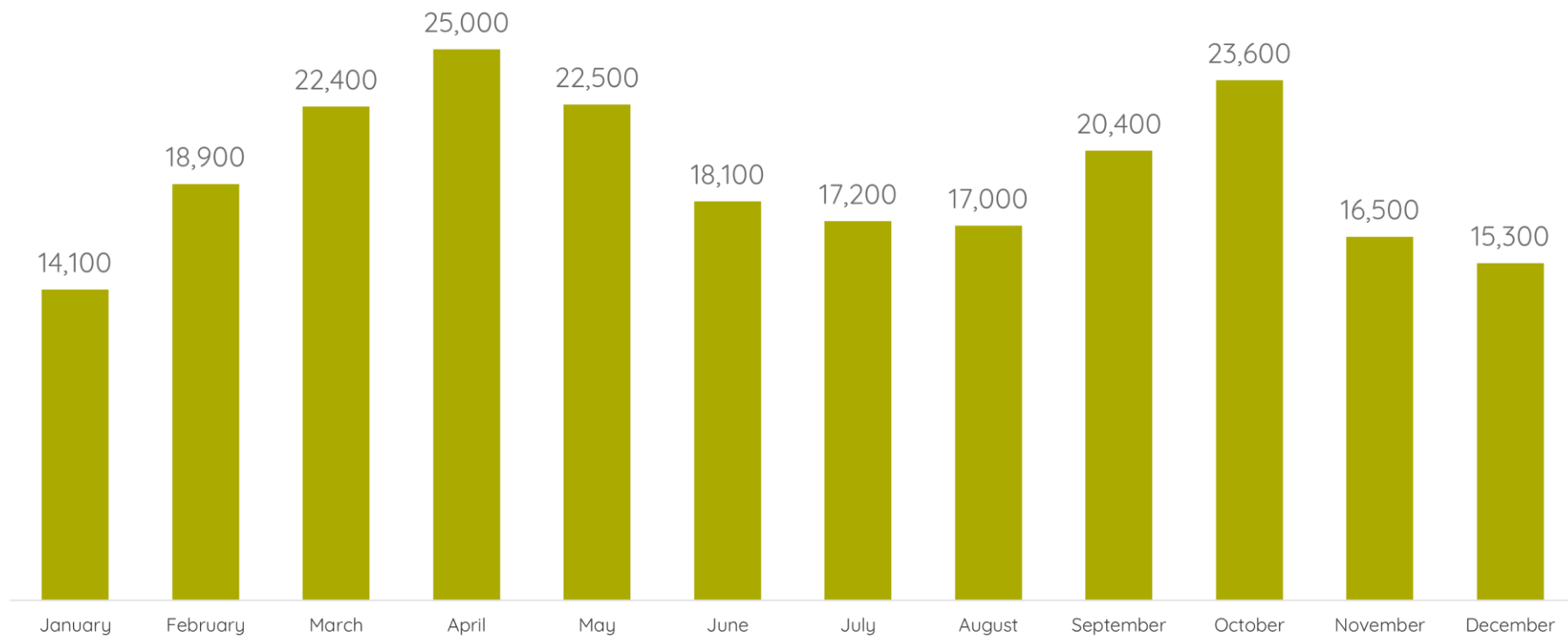


Lafitte Greenway: average hourly bike counts during summer 2023



*June 1st, 2023 – August 31st, 2023

Lafitte Greenway: 2022 total monthly bike counts



Impact of Jazz & Heritage Festival 2023: key indicators

11,450

Bikes counted
during both Festival
weekends 2023

+114%

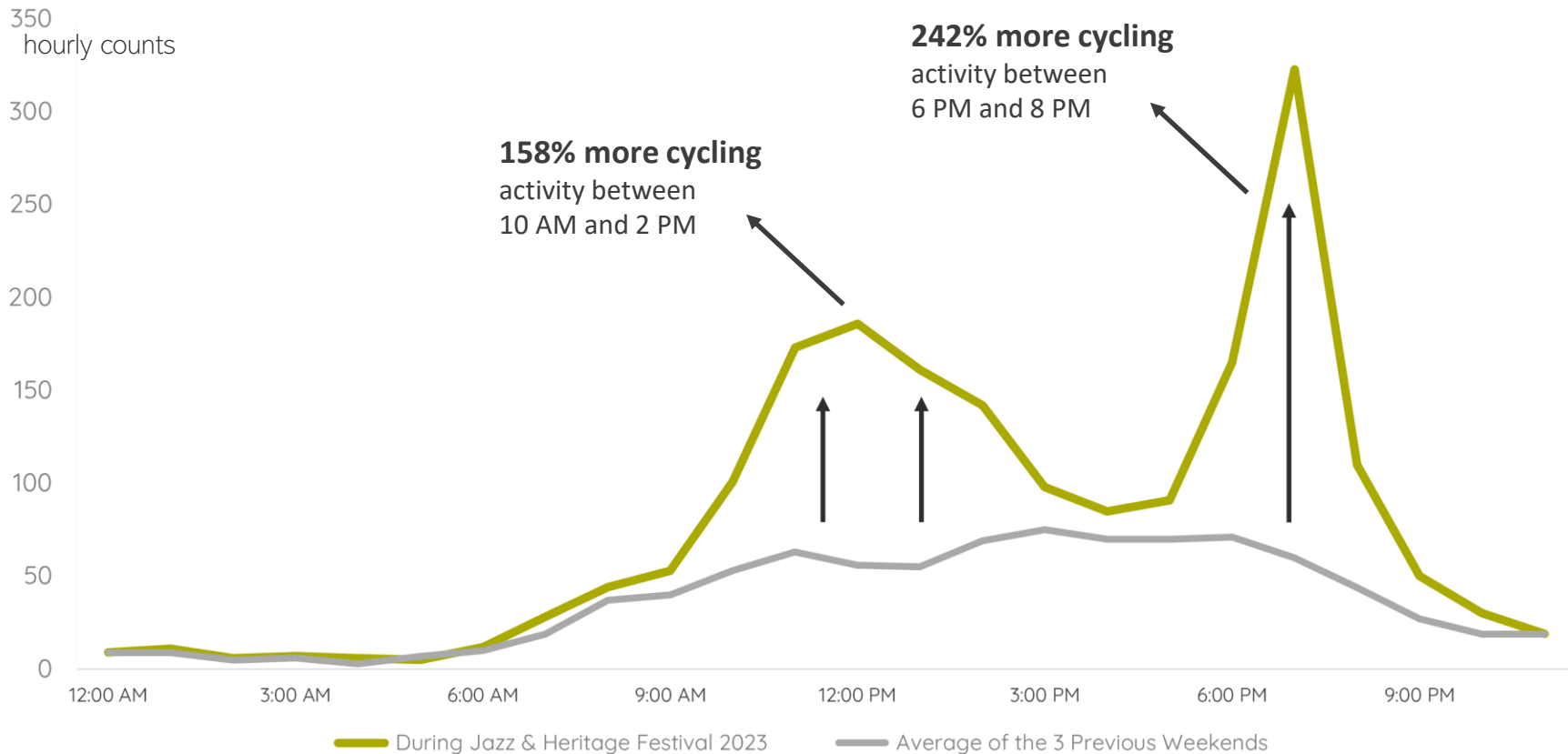
Growth in cycling
during Festival
weekends 2023,
compared to the 3-
previous weekends

-15%

Decrease in cycling
during Festival
weekends 2023,
compared to Festival
weekends 2022

(Overall fest attendance also slightly down)

Impact of Jazz & Heritage Festival 2023: hourly profile



Average hourly counts from Esplanade Avenue N, Esplanade Avenue S and Norman Francis Parkway Trail

Impact of Mardi Gras 2023: key indicators

4,600

Bikes counted
during Mardi Gras
2023

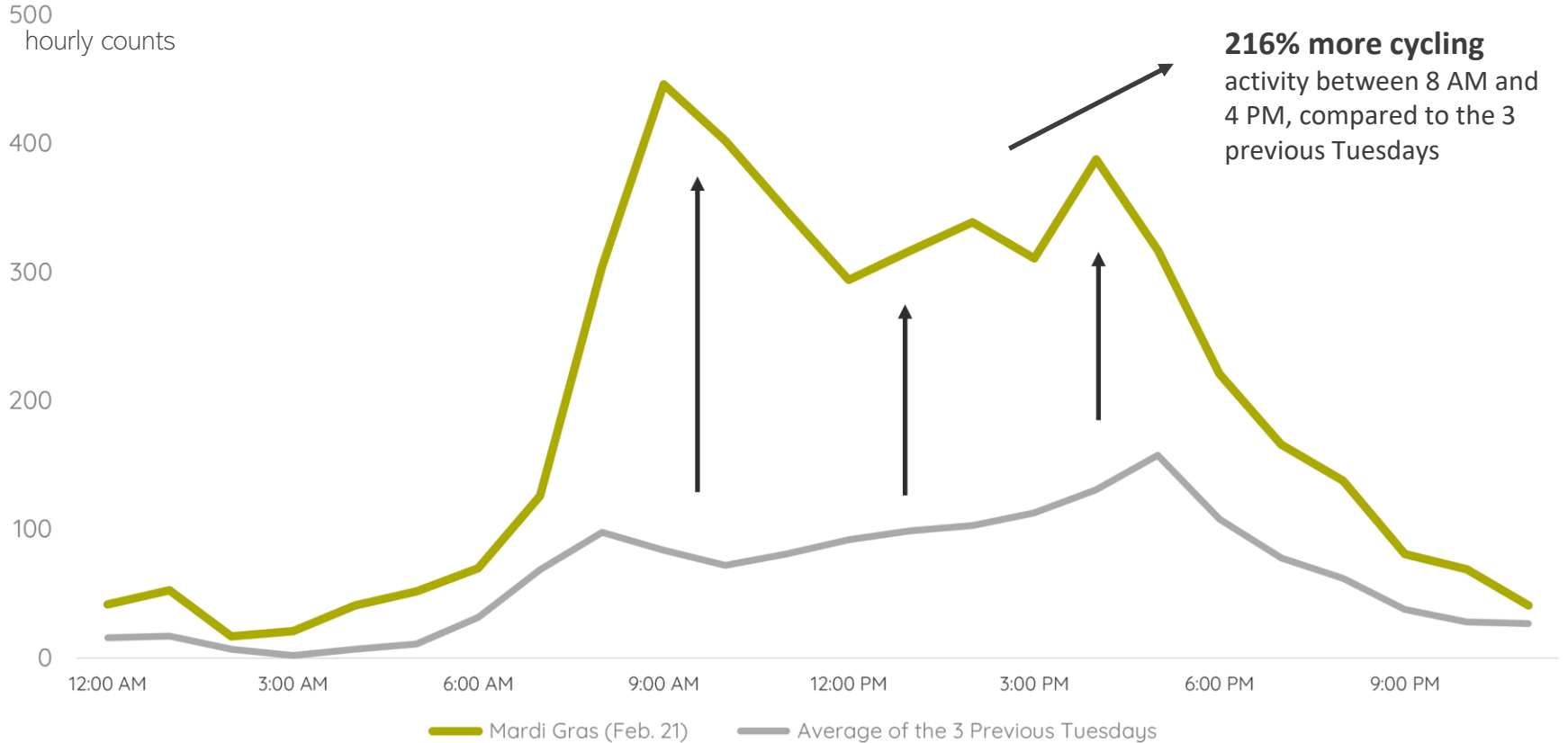
+200%

Growth in cycling
during Mardi Gras
2023, compared to the
3-previous Tuesdays

-6%

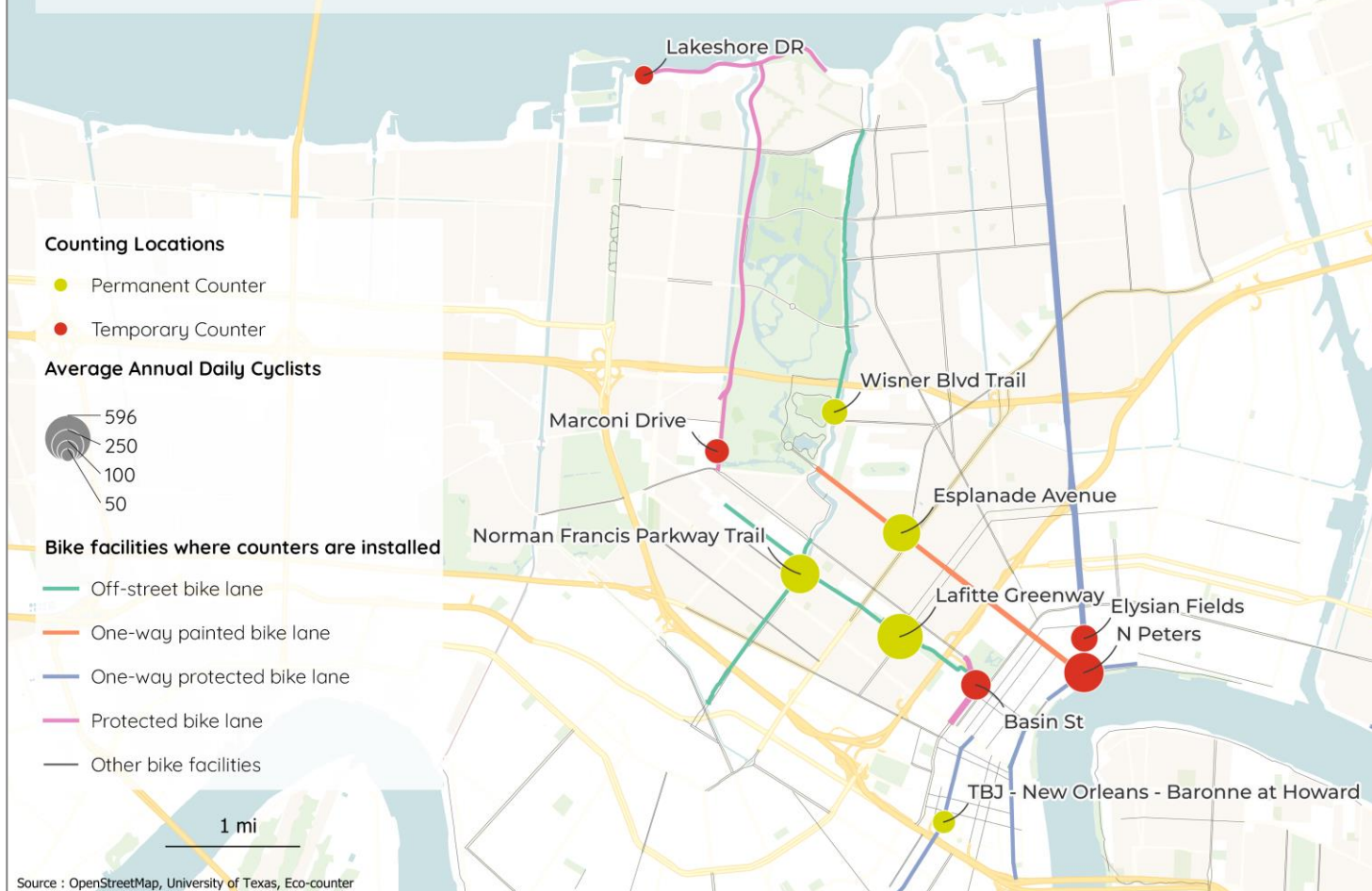
Decrease in cycling
during Mardi Gras
2023, compared to
Mardi Gras 2022

Impact of Mardi Gras 2023 : hourly profile

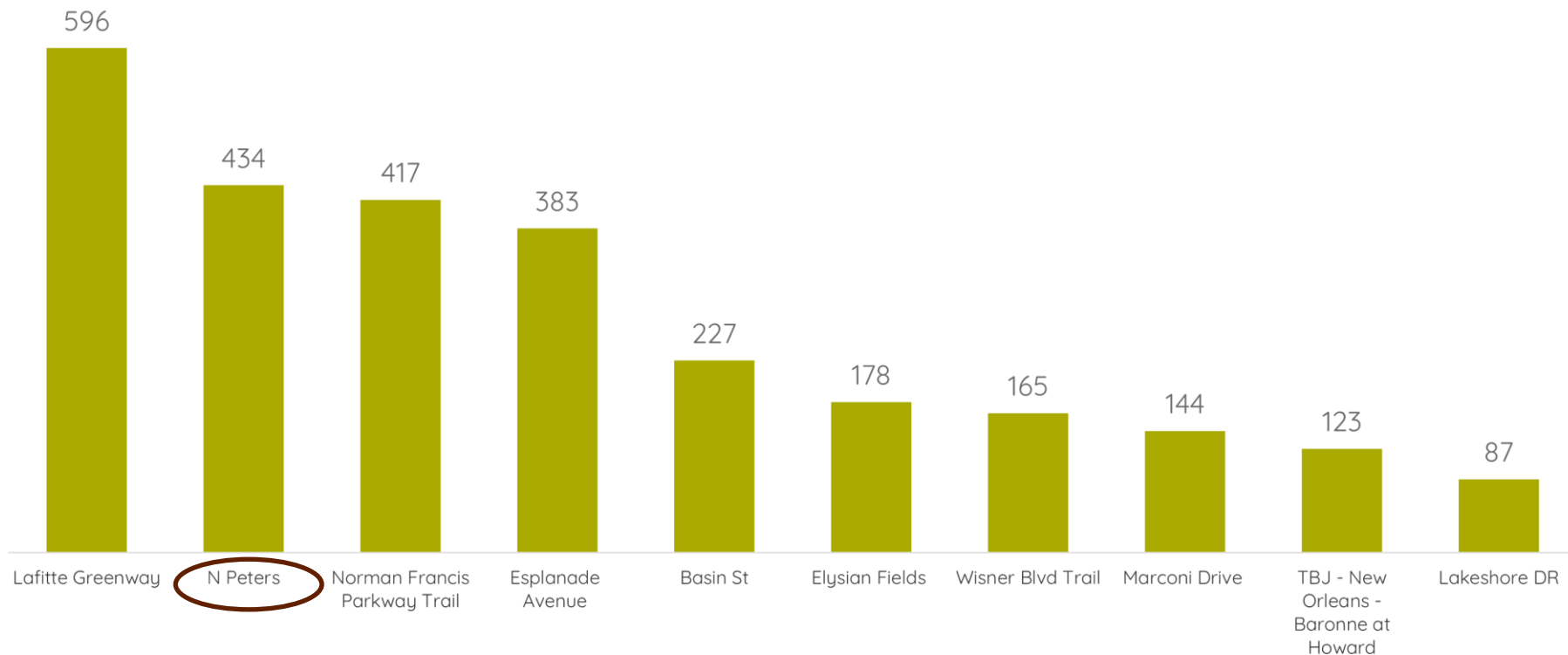


Average hourly counts from Esplanade Avenue N, Esplanade Avenue S, Lafitte Greenway, TBJ Baronne at Howard and Norman Francis Parkway Trail

Average Annual Daily Cyclists at Permanent and Temporary Counting Locations (2021)



Average annual daily cyclists (2021)



Based on average annual daily cyclist estimate at permanent and temporary count locations

Norman Francis Parkway Trail – cycling over the years

138,000

Bikes counted
during 2015

192,000

Bikes counted
during 2020

+46%

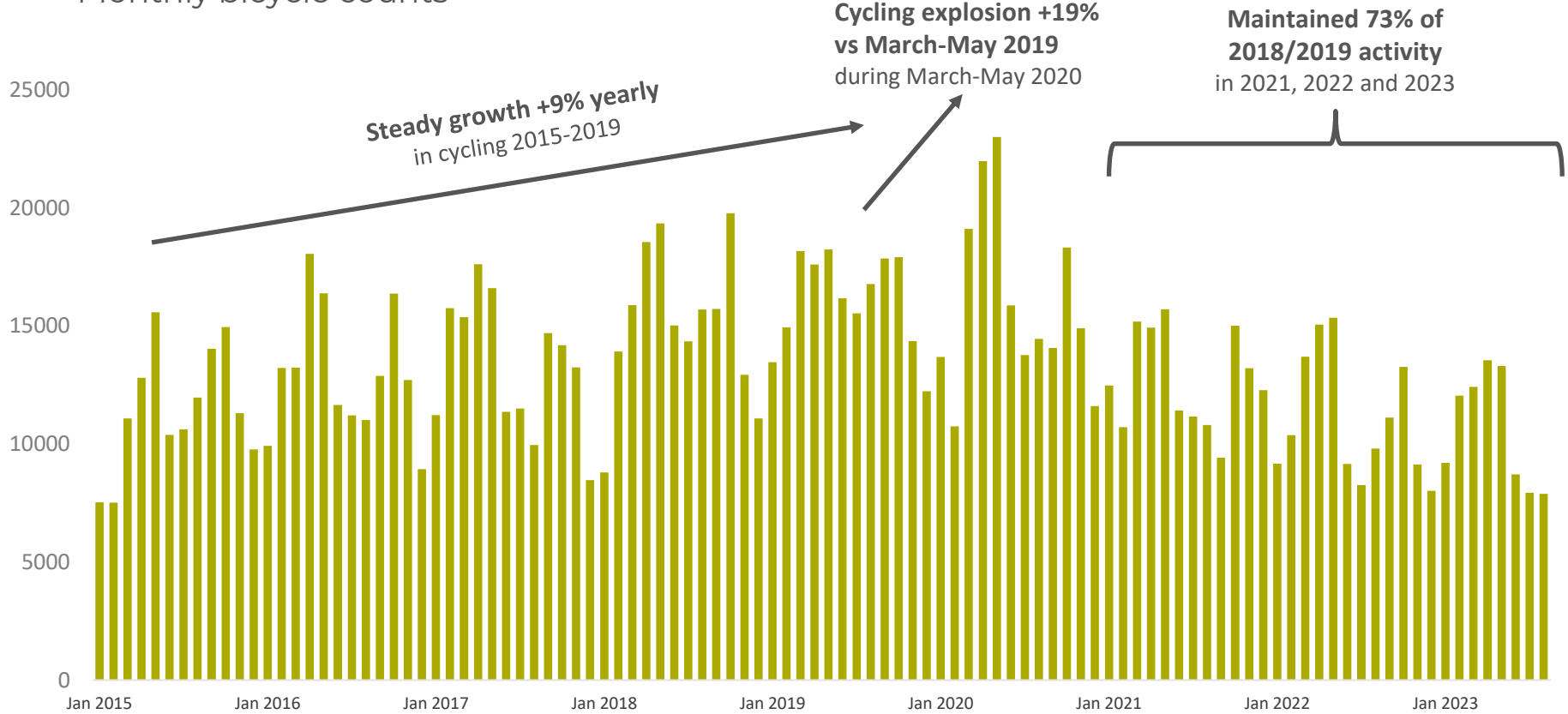
Growth in cycling
during weekend 2020,
compared to 2015

+36%

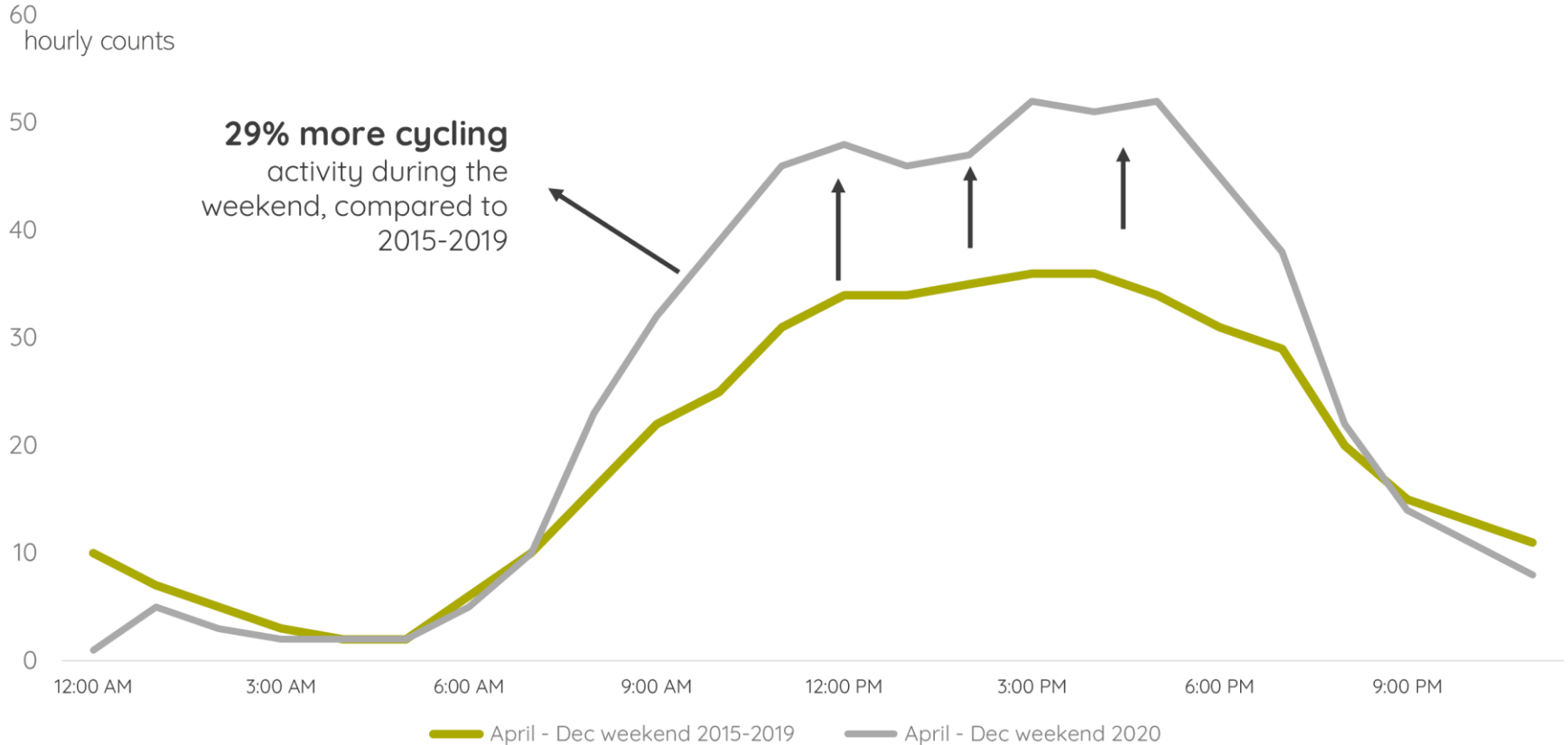
Growth in cycling
during weekdays
2020, compared to
2015

Norman Francis Parkway Trail – cycling over the years

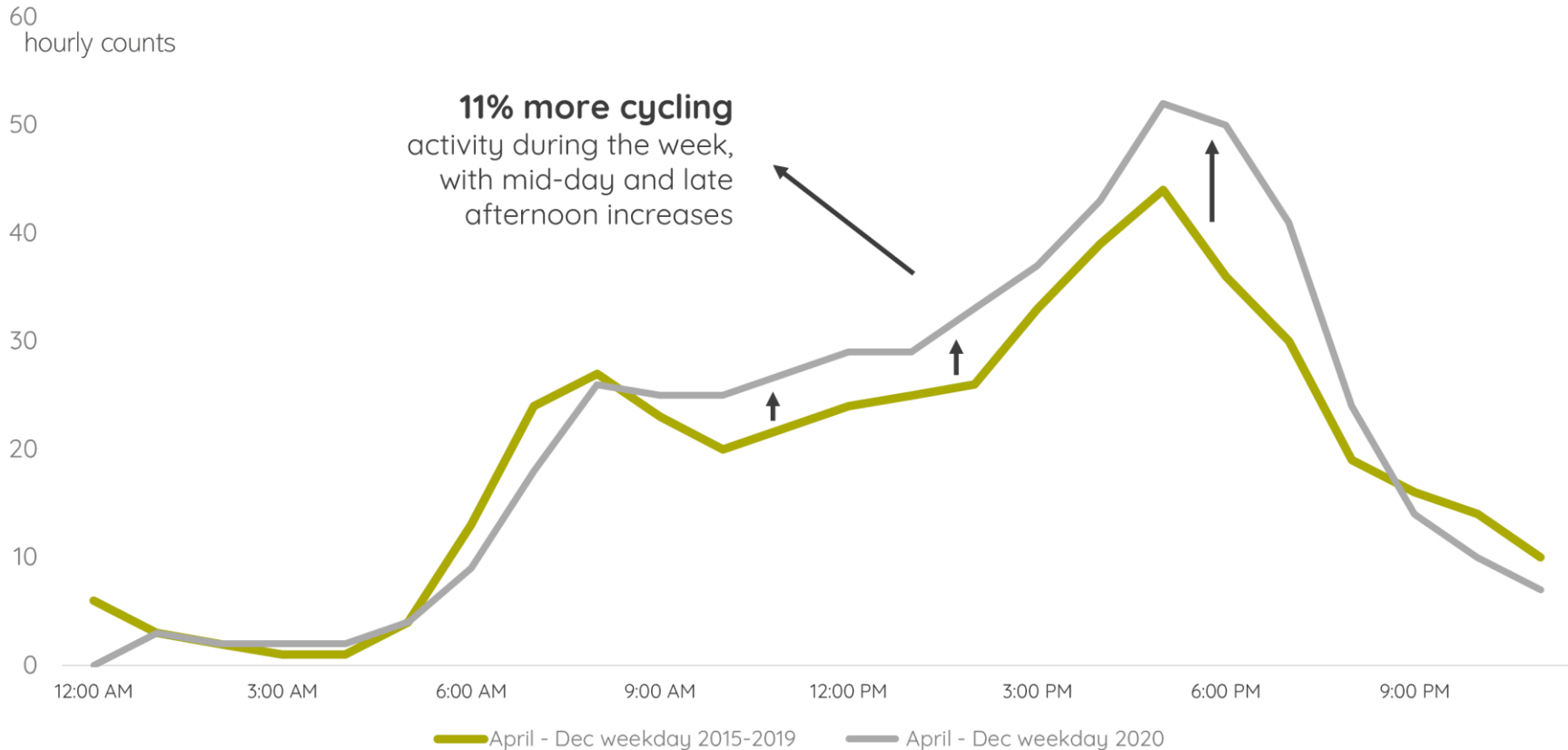
Monthly bicycle counts



Impact of the pandemic: weekend hourly profile – Norman Francis Parkway Trail



Impact of the pandemic: weekday hourly profile – Norman Francis Parkway Trail



Key takeaways

Lafitte Greenway, Esplanade Avenue, and Norman Francis Parkway Trail are heavily used routes within New Orleans' existing cycling network

Events, such as **Mardi Gras** and the **Jazz and Heritage Festival**, have a significant impact on cycling counts

Between 2015-2019, cycling activity at **Norman Francis Parkway Trail** grew steadily, increasing by 9% annually

Introducing **short-term counts** allows for a more **robust understanding** of cycling activity throughout the city in 2021



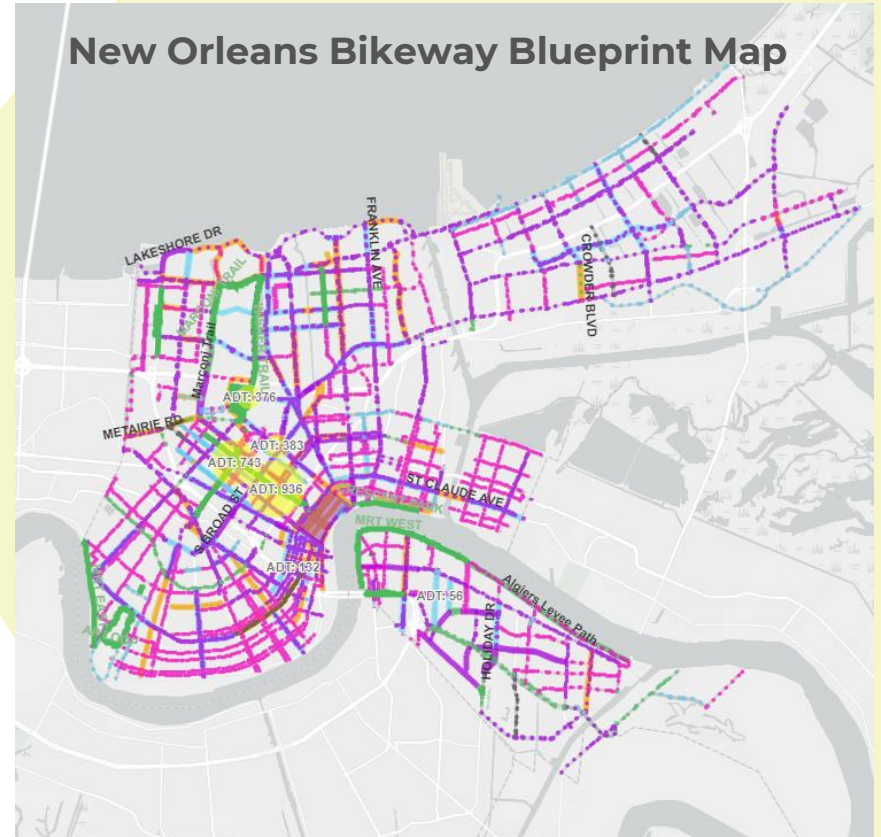
Ongoing Challenges

- **Environmental hazards!** Water, water everywhere
- **Human hazards!** Data loss due to vandalism, **spectacularly bad driving**
- **Program sustainability:** Continually seeking support to keep it going, support our partners, engage future transportation professionals, and facilitate data-driven decision-making



Planning implications:

- How is this data showing current trends, changes over time being interpreted and used to plan and manage infrastructure?
- **How can consistent data collection impact planning, goal-setting, and decision-making in the City of New Orleans?**
- How does telling the story of bicycling (and walking) support advocacy for safer streets, livable communities?
- **Where do we go from here?**





Learn More:



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