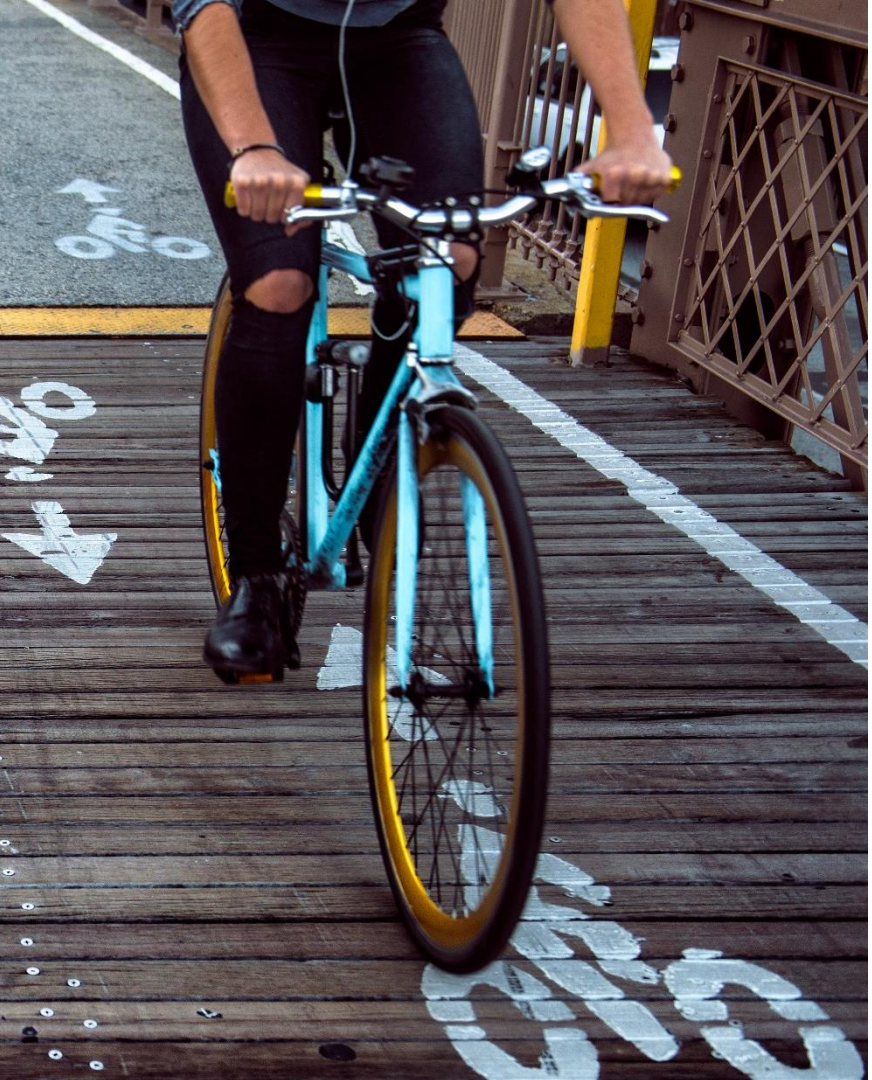


# Making Count Data Count

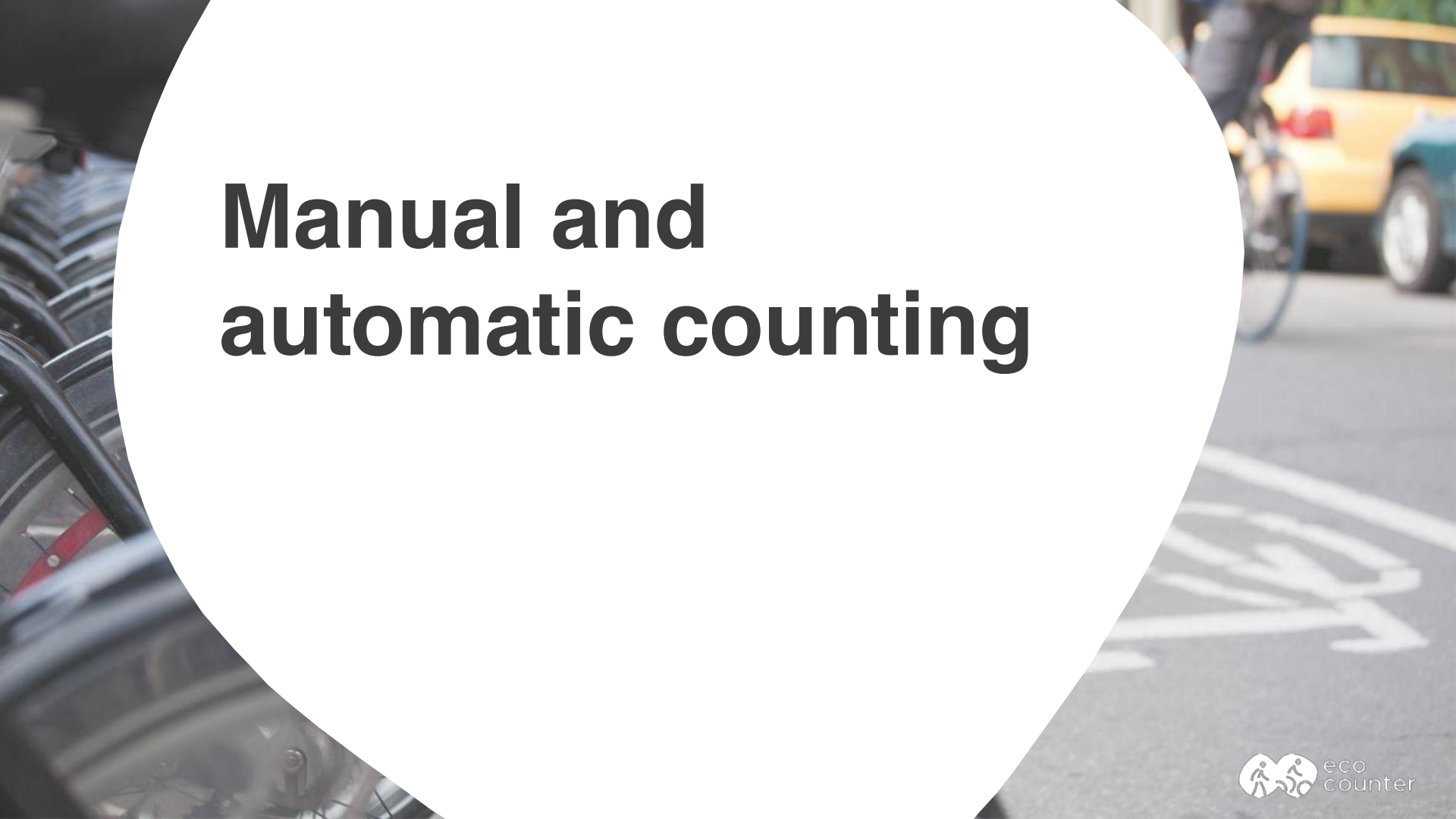
## Best practices for collecting, managing, and sharing data

July 20, 2021

eco counter

# A step-by-step guide to building a count program

# Manual and automatic counting



# Manual counting

**Best Practices**

- At least 30 minutes at a time
- Schedule - varying times and days
- Varying weather conditions

**Define parameters**

- Who gets counted?
- Where do they get counted?
- What characteristics get recorded?

# Automatic counting

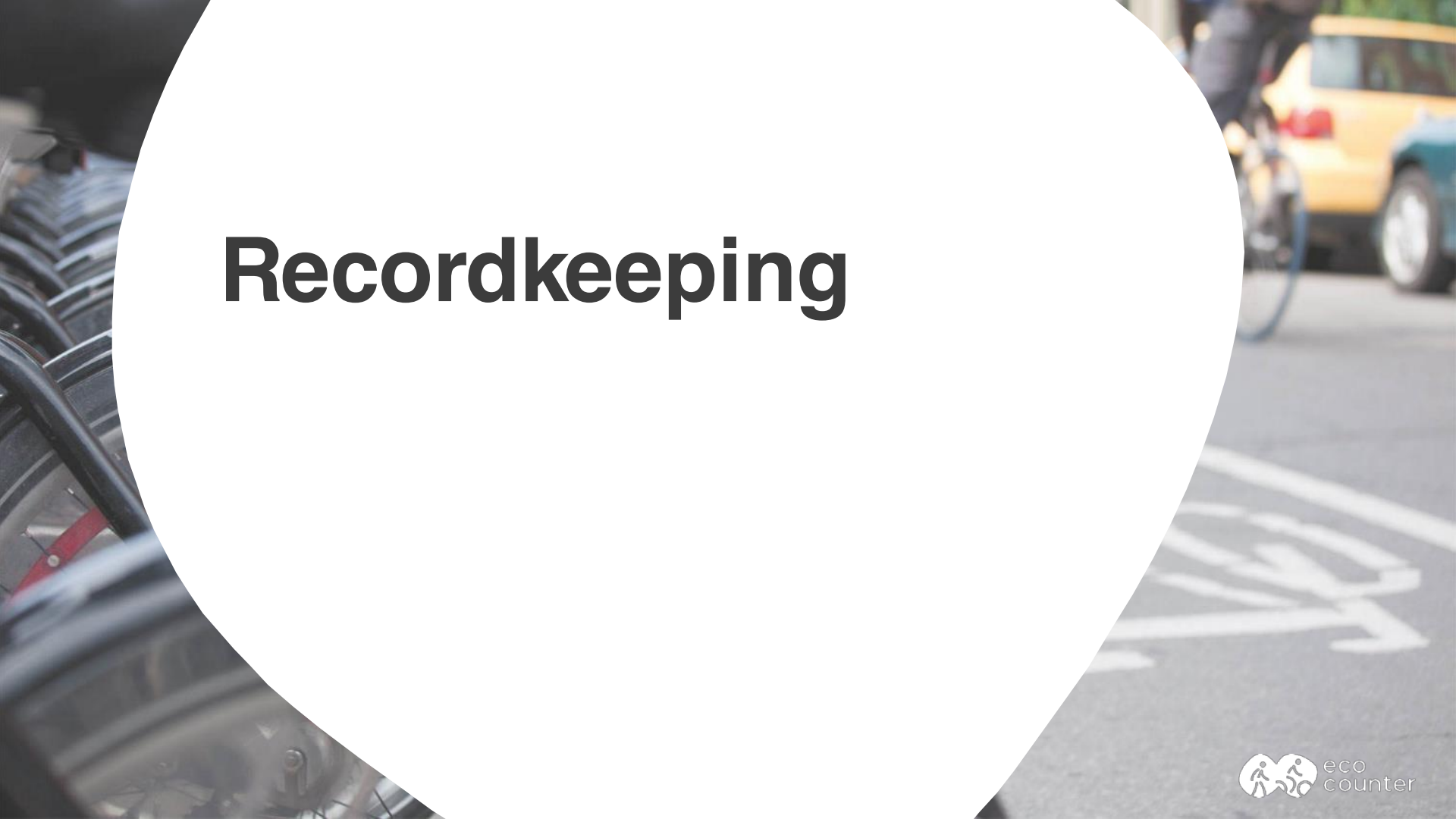
## Best Practices

- Site selection
- Equipment selection
- Proper installation
- Counter validation
- Regular care and maintenance

## Short-term Counts

- Create a schedule
- At least 2 weeks per site

# Recordkeeping



# Site photos

**Take photos of each count site**

- Future reference and replication
- Useful for reports and presentations

**Take photos of counter installation**

- Troubleshooting
- Counter maintenance and field visits

# Location

**Record site location**

- GPS coordinates
- Street address
- Side of street/trail

**Why?**

- Consistency and replication
- Counter maintenance visits
- Mapping and GIS


| Latitude | Longitude |
| --- | --- |
| 45.48265510084659 | -73.56359482859263 |

# Direction of travel

**Record traffic flows by direction**

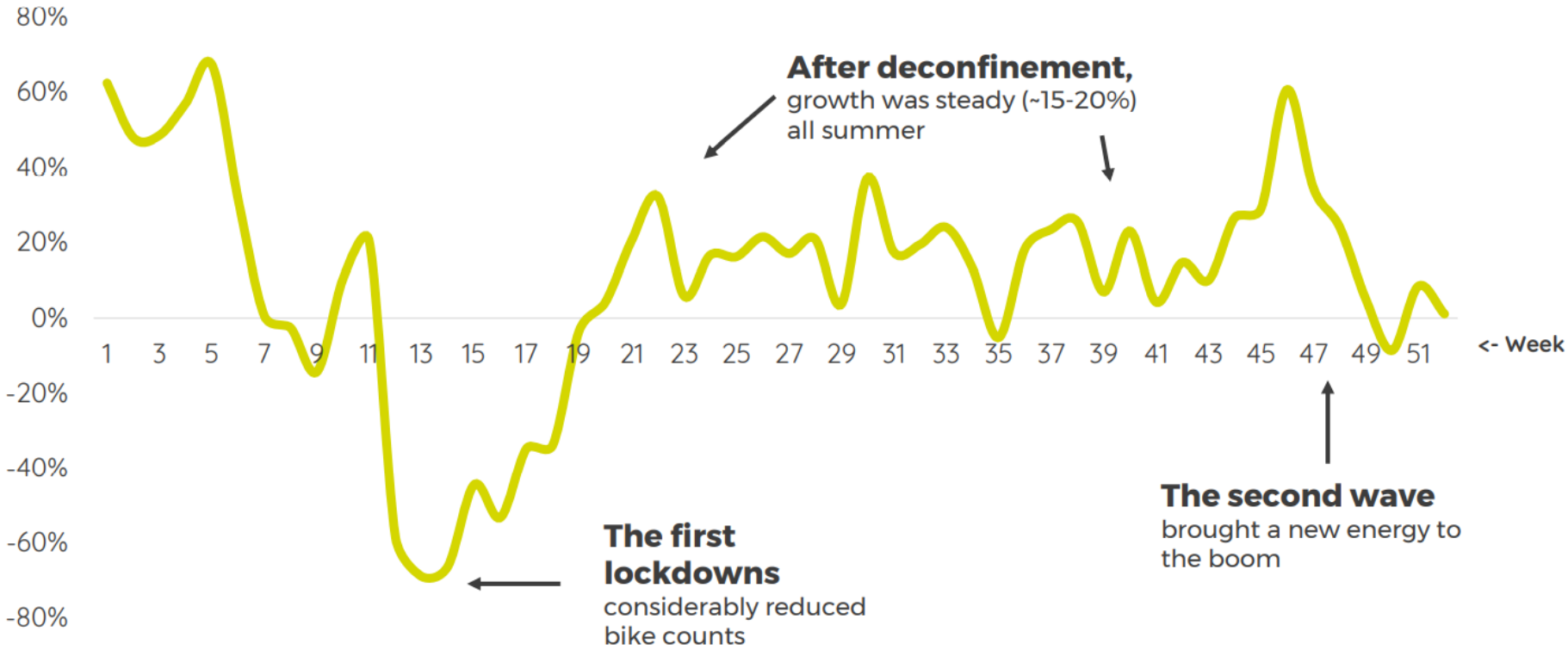
- Distinguish counts by direction
- Record directions consistently (e.g. north/south, east/west)
- For manual counts, define thresholds

# Events

**Take note of events that may impact count data, such as:**

- Festivals
- Road work
- Trail closures
- COVID-19 restrictions
- Bike to Work Day
- Extreme weather events

# COVID-19 measures' impact on bike counts

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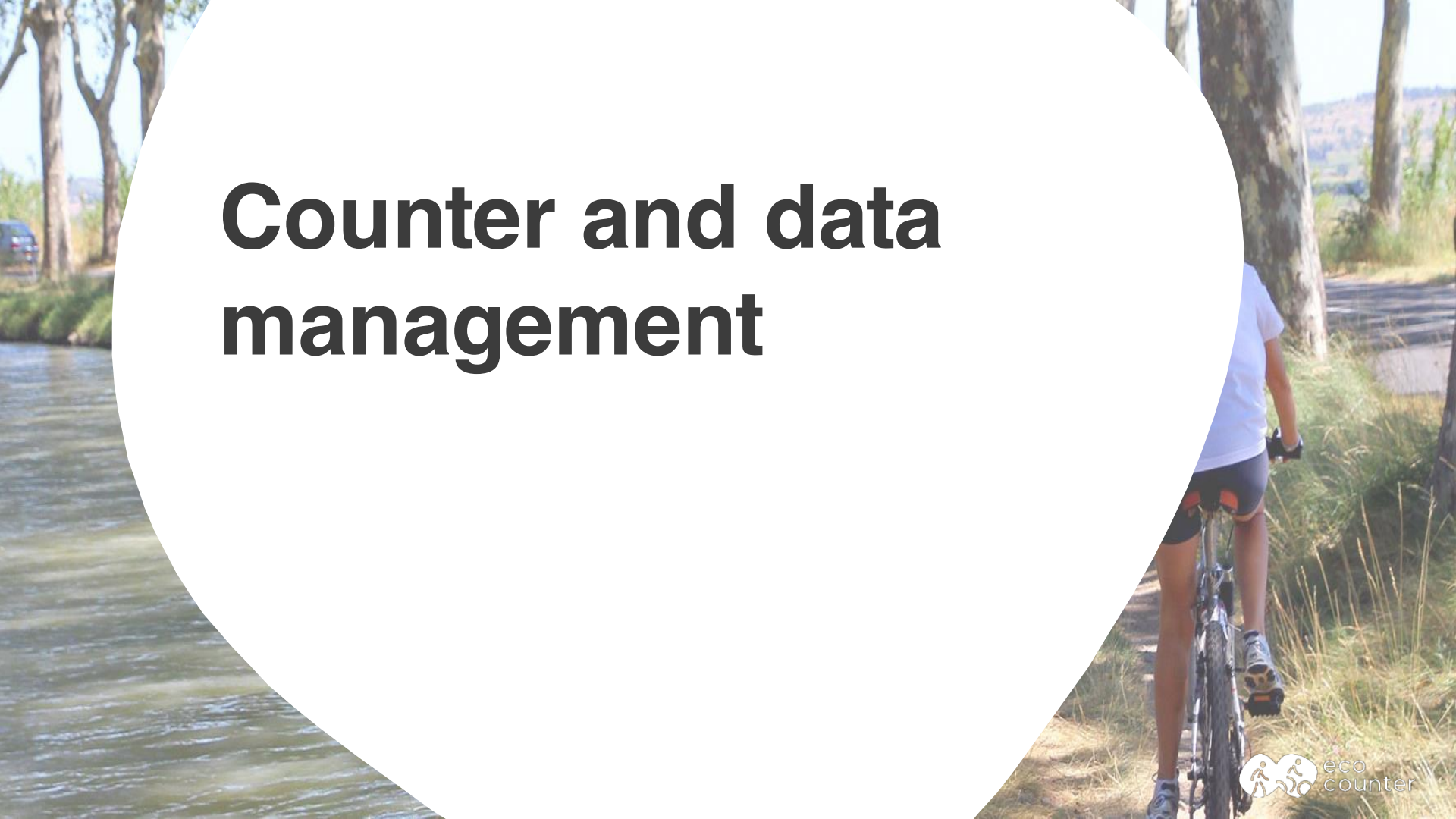
# Weather

**Weather data can be recorded manually or automatically**

- Record extreme events like ice storms or wildfires
- Day-to-day weather data is nice info for automatic counts, and important info for manual counts

# Counter and data management



# Validate counts

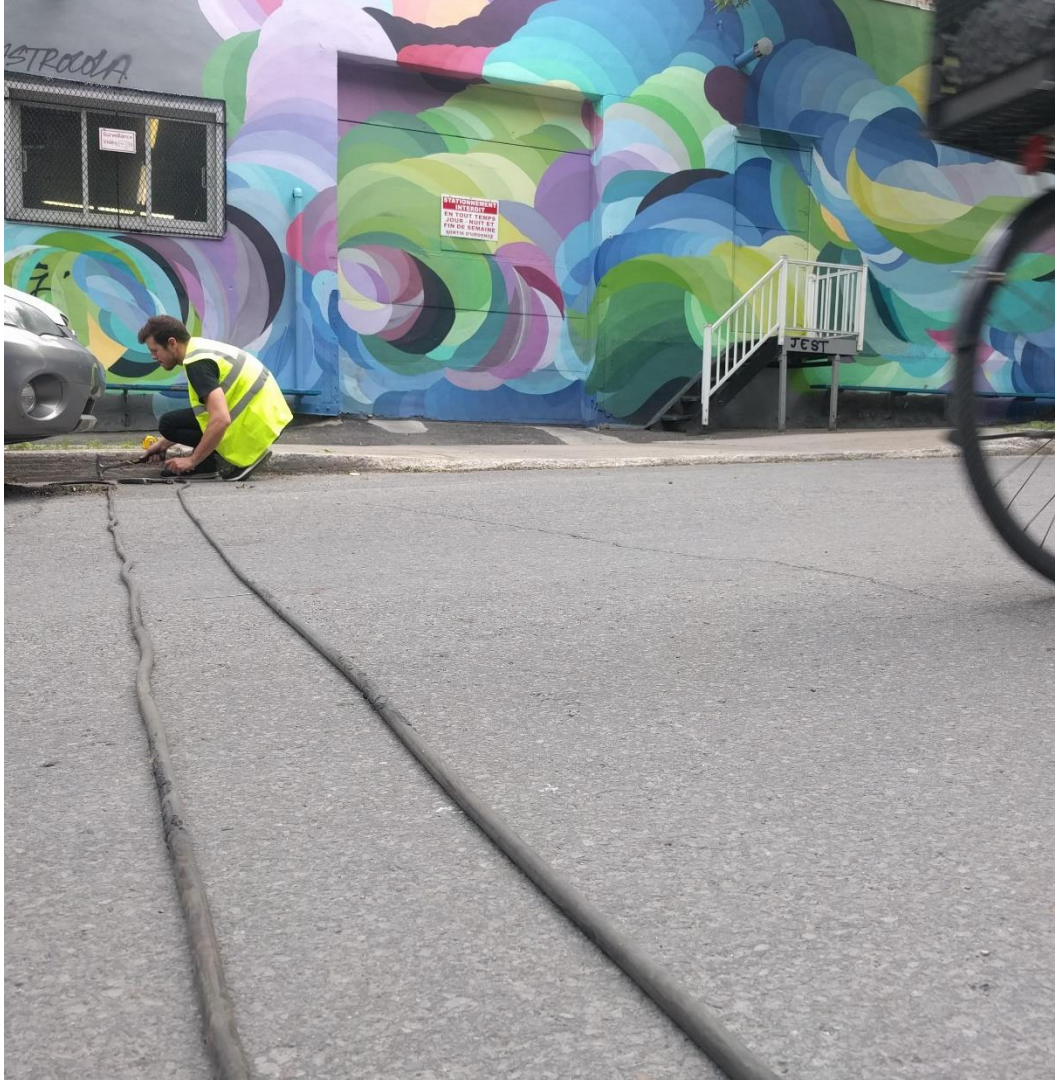
**Make sure automatic counters are functioning properly**

- Validate automatic counters with manual counts
- Calibrate counter accordingly by adjusting settings and sensitivity
- Apply a correction factor if needed

# Counter maintenance

**Outdoor counters require regular care and maintenance!**

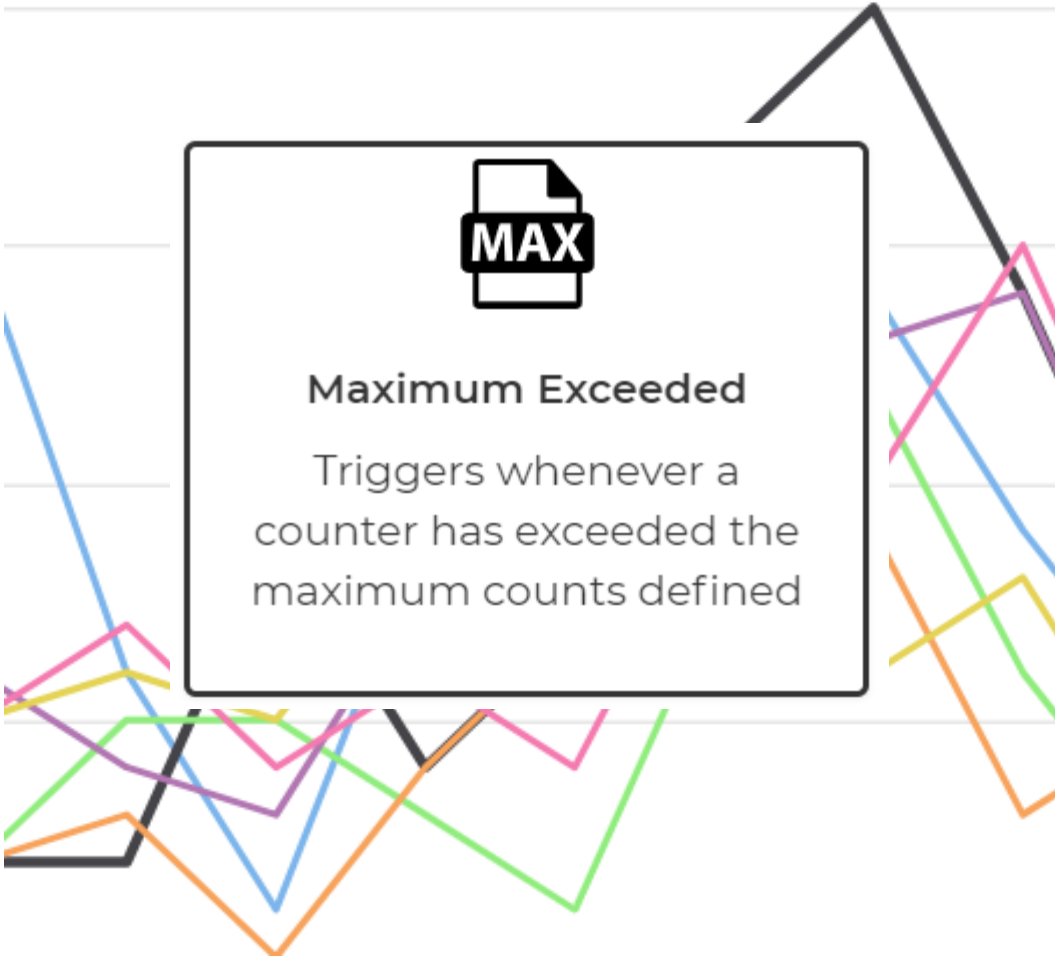
- Visit the site regularly
- Check sensor position and direction
- Check for obstructions (e.g. insects, debris, parked vehicles)
- Clean components
- Check battery



# Data management

**Keep an eye on your data**

- Compile data in a database (e.g. spreadsheet, vendor software)
- Routinely monitor data to check for anomalies (e.g. unusually high or low counts)
- Eco-Visio's Eco-Alert service sends email alerts



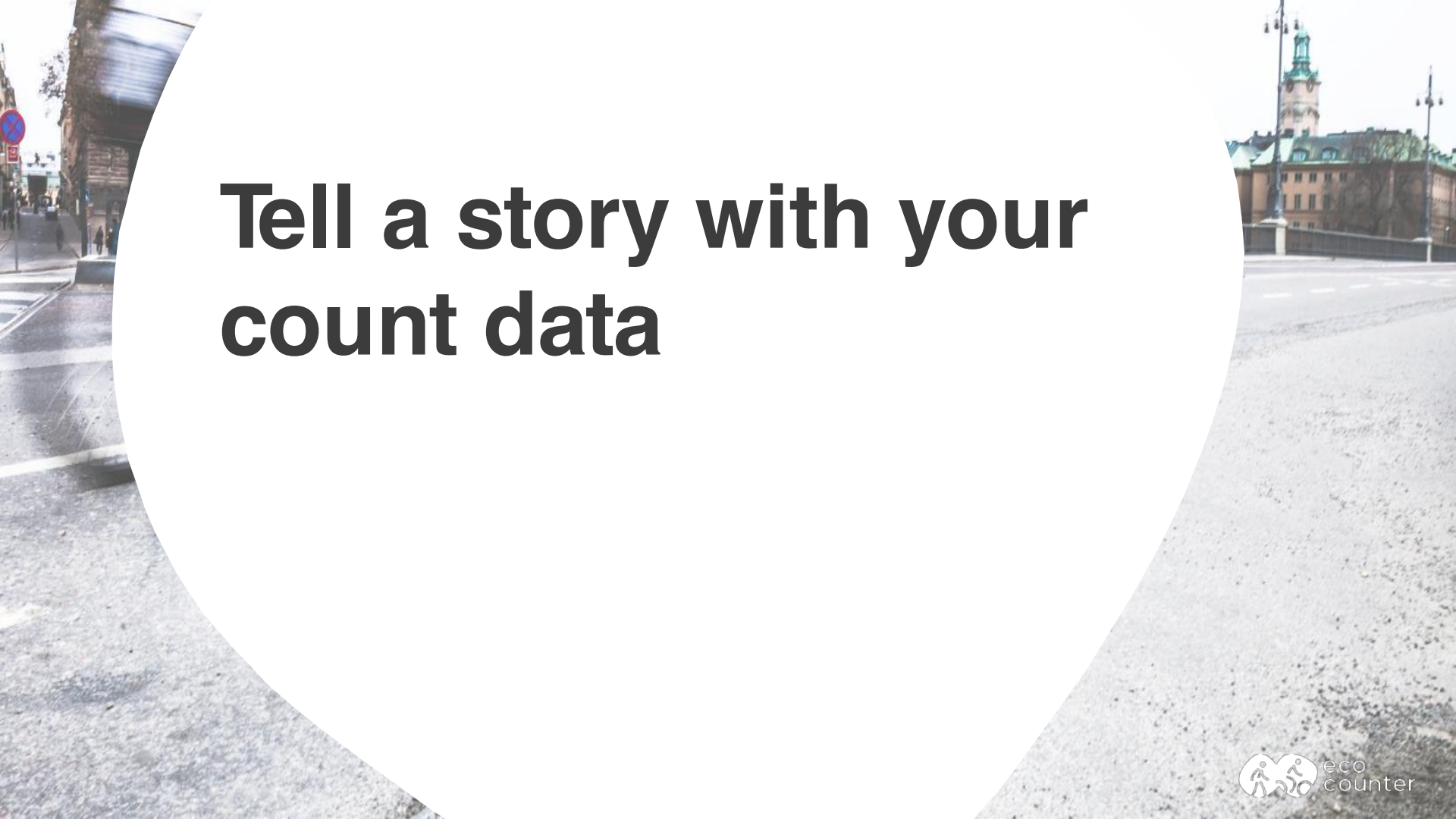
# Data reconstruction

**Sometimes automatic counters will lose count**

- Explain unusually high or low counts – was there an event?
- Omit or reconstruct incorrect data

**Eco-Counter tools**

- Eco-Visio auto-reconstruction tool
- Eco-Counter Data Services team



# Tell a story with your count data

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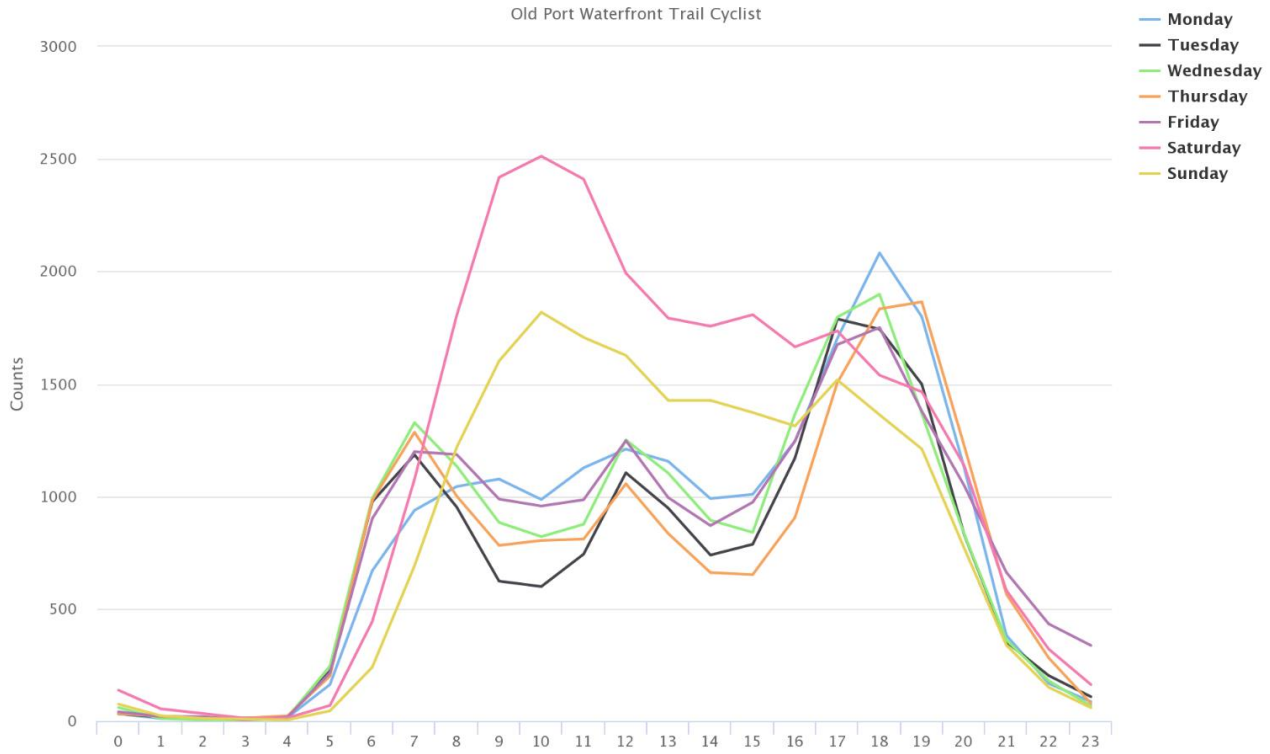
# Observe patterns and trends

**What's important to you?**

- Direction of travel
- Weekend vs. weekday
- Mode (e.g. bike, pedestrian)

*Weekday to weekend comparison demonstrates this trail is both a commuter and recreational facility*

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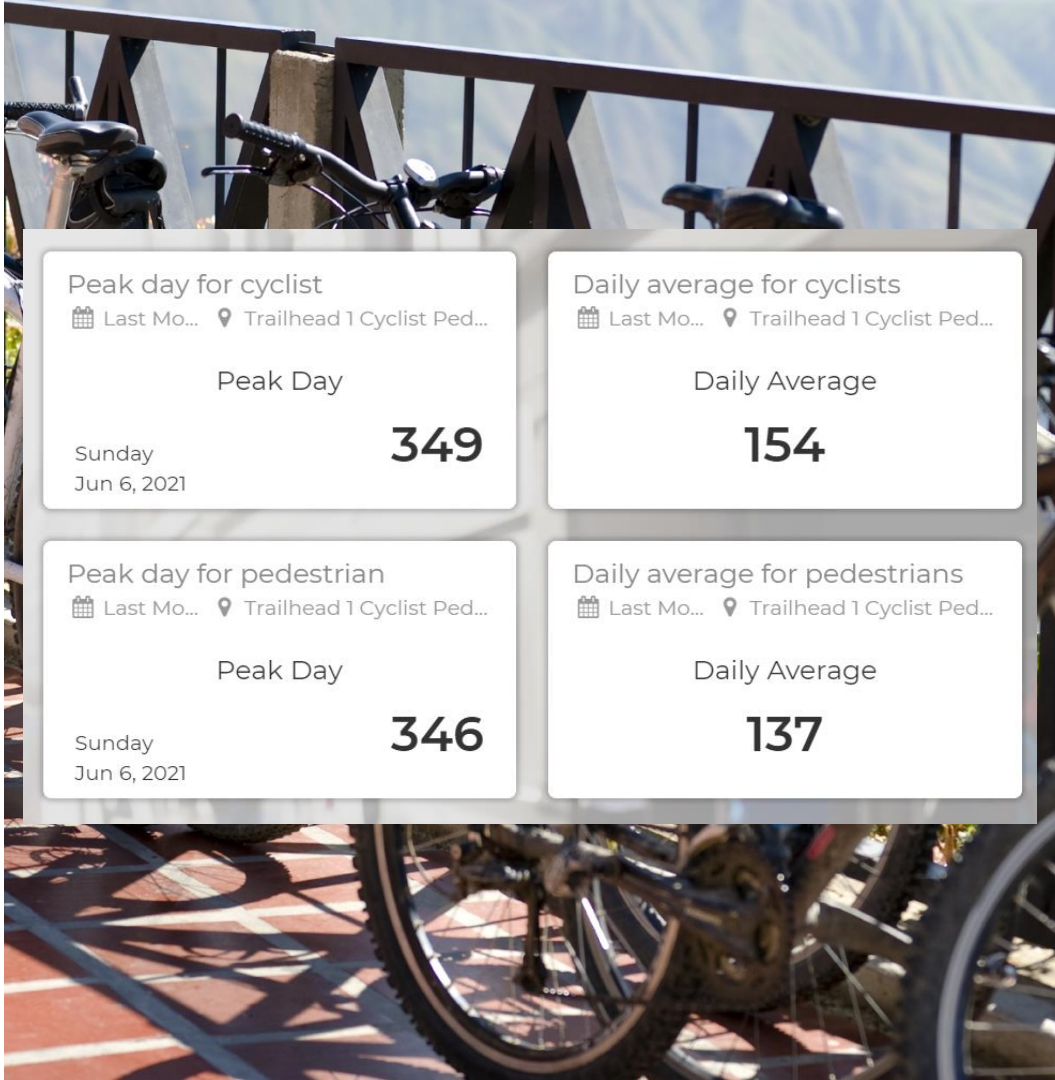
# Highlight key figures

**Sometimes less is more!**

- Peak hour
- Peak day
- Daily average



# 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

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# Qualitative data

Combine count data with qualitative data to understand user profiles

**Examples of qualitative data**

- Gender
- Age
- Dollars spent in the region
- Origin and destination

**Methods include**

- Intercept surveys
- Online surveys
- Manual observation

# Share

**Share your counting expertise!**

- Documenting your process and sharing with others helps to establish best practices
- Transparency and credibility

**Share your findings!**

- Engages community
- Demonstrates the value of active transportation facilities
- Justifies investments

# Recap: how to get the most out of count data

Make a plan for what you want to study, create a schedule

Keep records of count sites and track events


Regularly report on data

Keep an eye on your data

Engage key local partners (tourism agencies, universities etc.)

Combine with other data sources (ticket data, survey data)

Tell stories with even the smallest data points

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# Thank you

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