MEMORANDUM

To: Patrick Trouba
Mid-America Regional Council

From: Riley Mitts, P.E., RSP$_1$
Anthony Gallo, P.E., RSP$_1$
Kimley-Horn and Associates, Inc.

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Subject: MARC Bikeway – Regional Bicycle Data Collection Program Memo

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1. Introduction

This memo provides a framework for advancing MARC's regional counting efforts by (1) identifying the existing bicycle counting practices in the MARC region, (2) documenting available data collection methods, (3) understanding national best practices and (4) exploring what partnership among local jurisdictions and MARC might look like. This memo provides recommendations for implementing a regional bicycle count program and the potential benefits associated with a regional count program.

PROGRAM GOALS

Defining the goals and use case(s) of a Kansas City Metro regional bicycle count program are essential to designing a regional bicycle count program. Based on input from MARC's Bicycle-Pedestrian Advisory Committee (BPAC) and regional stakeholders, the following are key use cases for bicycle count data:

- **Volume Trends:** Providing a better understanding of seasonal, weekly, and year-to-year trends in bicycle use across the Kansas City Metro, as well as insights into which facilities are the most heavily used.
- **Before and After Analyses**: Understanding how changes to the built environment influence mode split, bicycle use, and where people cycle.
- **Local Agency Understanding**: Providing a tool for local jurisdictions to understand their bicycle traffic patterns as well as patterns of the neighboring communities.
- **General Spatial Analysis**: Providing the ability to overlay bicycle count data with regional bicycle plans, crash data, and other relevant datasets to gain deeper insights into the state of bicycle transportation across the MARC region.
- **Evaluating Bicycle Exposure:** Understanding where bicyclists travel today and overlaying that with vehicular traffic and/or bicycle crashes can provide insights into bicyclist exposure and risk.

These use cases informed the recommendations for a regional bicycle count program aligning with MARC's goals.

2. Existing Conditions

The Kansas City region has expanded its capacity to track bicycling activity, but data collection remains uneven and infrequent. Jurisdictions use a variety of data sources: Overland Park, Kansas has deployed trail-use counters; Kansas City, Missouri has completed project specific counts; and BikeWalkKC provides trip-usage data from RideKC bicycles. MARC's Active Transportation program has previously owned, and partnered with local governments to deploy, temporary bicycle and pedestrian counters in the last decade to measure activity on trails and bikeways. Currently, these efforts are paused due to the degradation of equipment. When active, data collection was often isolated, inconsistently reported, and ultimately kept internal to the individual communities collecting the bicycle counts. Municipalities in the region have expressed support for before and after counts on bicycle infrastructure projects and the value bicycle volumes have for safety analysis. However, collection frequency, locations, and data formats vary widely. Establishing common protocols, a network of permanent counters, and a centralized data repository will be an important step toward creating a coordinated and effective regional monitoring program.

RideKC Bicycle 2024 Annual Report

This report highlights bike-share activity across the region, documenting ridership levels, trip patterns, and advocacy efforts. The report provides insight into how bike-share is being used as a transportation option in Kansas City, including trends in demand, seasonal variation, and trip origins and destinations. This information is useful for understanding bicycle use in urban areas where bike-share programs operate, though it represents shared-bicycle activity rather than the broader cycling population.

Aggregated Bike-Share Data

Complementing RideKC's reporting, MySidewalk offers experimental aggregated bike-share data which allows annual analysis of ridership trends. This data dashboard provides interactive views of usage patterns, enabling agencies and stakeholders to better visualize when and where bikeshare bicycles are being used across the region. While still experimental, this platform illustrates the potential for data driven solutions to enhance regional understanding of bicycling activity beyond what manual counts can provide. It should be noted that this dataset is based on RideKC bike-share pings and is therefore expected to be skewed toward locations with RideKC bike-share stations.

MARC Temporary Count Loaner Program

In the early 2010s, MARC purchased mobile bicycle and pedestrian counters for use by jurisdictions across the Kansas City region. These included both pneumatic and infrared devices. The counters were loaned to leading jurisdictions across the region such as Overland Park and Kansas City, Missouri. However, the resulting counts were kept for internal use by local agencies and not shared externally. By the time of this plan, all equipment has been retired due to age.

Overland Park Count Program

One of the goals of Overland Park's 2015 Bicycle Plan was to initiate a bicycle count program to measure and evaluate the City's progress toward increasing bicycle safety and use. In 2016, the City purchased four pneumatic Eco-Counters with the intent of deploying them at approximately 50 locations over the course of the year and continuing to use these counters to measure progress towards their goals of increasing bicycle safety and ridership. Overland Park also partnered with MARC to supplement its effort using additional bicycle counters available through the regional program. The intended approach was to install these temporary counters cyclically to monitor trends and identify increases in bicycle activity.

In 2017, Overland Park purchased and installed three permanent trail counters. Two were installed on Indian Creek Trail and one was installed on the Tomahawk Creek Trail. Eco-Counter (the count

equipment manufacturer) hosts a website where an individual agency's data is uploaded and stored for better insights and useability. Overland Park's data is not posted online.

3. Bicycle Counting Technology State-of-Play

This section outlines available Big Data sources, in-field bicycle counting technologies, and existing data repositories. There are a variety of technologies available to count or estimate bicycle trips; each have their own strengths, weaknesses, and applications.

BIG DATA RESEARCH

Big data refers to large datasets that are typically analyzed computationally to reveal patterns, trends, and associations. The datasets often begin with passively collected datasets from phones, GPS, apps, and shared mobility systems. For bicycling, sources like Replica, StreetLight, Strava Metro, bike-share trip logs, and crowdsourced maps display traffic counts, including trips by bicycle, across the network beyond limited count sites. These datasets can be biased, so they work best when calibrated with local counts.

Replica

Replica is an activity-based mobility data platform using anonymous signals from phones and other sources to model and estimate how people move around a region. It provides "typical day" snapshots (weekday/weekend) and downloadable tables with model outputs of where trips start and end, how long they are, and which streets or trails people use. This dataset is helpful for understanding travel patterns, identifying busy corridors and areas, and observing year-to-year changes in ridership (year-to-year comparisons should be validated using another proxy or metric), but it does not provide weekly or seasonal volume estimates.

StreetLight Data

Similar to Replica, StreetLight turns anonymous location data from phones and other sources into ready-made maps and tables around travel patterns. StreetLight provides the ability to select a place and time to see metrics around cycling and walking trips, origins and destinations, and how activity changes over months or years. Similar to Replica, StreetLight is helpful for understanding travel patterns and identifying busy corridors and areas, with the added benefit of providing more granularity for estimating weekly and seasonal trends.

Strava Metro

Strava Metro aggregates ride data from the Strava app, widely used by recreational cyclists. There are concerns about how well this platform captures non-recreational bicycle trips. The platform provides origin-destination patterns, route preferences, and temporary trends. It is best for understanding high-use corridors but may overrepresent fitness-oriented riders.

Bicycle Share System Data (ex: RideKC)

As noted previously, aggregated data is available from RideKC bicycles. This provides detailed trip-level information including trip duration, start and end stations, and spatial usage patterns. This data is useful for understanding purpose-based bicycle travel, though limited to shared system users and likely skews trips based on their proximity to bike-share hubs.

Ride-Hailing and Mobility App Data (ex: Lyft Business)

While primarily focused on motor vehicle and transit activity, some mobility platforms are expanding their datasets to include micromobility trips (including bicycles and e-bikes). These sources can potentially offer insights into mode shift and multimodal travel behavior.

Who is Leveraging Big Data Today?

Bicycle count programs often rely on a mix of permanent counts, cyclical counts, and manual counts. However, organizations also leverage Big Data to supplement bicycle count data or in some cases fully replace physical counting devices. This is not common practice for a couple of reasons:

- Big Data sources and laws are constantly changing, leading to inconsistencies year-to-year (i.e., lack of consistent ability to track trends over time due to changes in underlying data).
- There simply isn't as much trust in the data, as it is not as physical as counts but rather modeled estimates.

The **Indianapolis MPO** (IMPO) utilizes StreetLight Data to estimate bicycle traffic for off-street bicycle facilities. It should be noted that the IMPO is currently in the process of switching over to Replica data as their primary provider of aggregated bicycle trip data.

Wasatch Front Regional Council (WFRC),the MPO for the Salt Lake City area, and its partners are currently evaluating how to best leverage Strava Metro data to run a comprehensive active transportation count program. This effort should be monitored as it is unique in its efforts to combine Big Data with actual counts to provide regional, comprehensive bicycle count estimates.

Lastly, there are a variety of safety dashboards leveraging Big Data such as Replica at a block group, tract, or other geographical boundary to identify locations with a concentration of bicycle trips. The Caltrans 2023 Vulnerable Road User Safety Assessment provides Replica bicycle activity estimates as a heatmap and aggregated to a hex grid. Big Data models are more accurate when aggregating data at a larger geographic area rather than the individual roadway link level; this analysis style avoids many of the oddities that are observed when viewing Big Data outputs at the roadway link level.

IN-FIELD COUNTERS RESEARCH

There are three primary bicycle count methods for field data collection, and within each count method there are a variety of vendors and technologies that can be leveraged for obtaining accurate, detailed data. These include:

- Continuous, permanent counters
- Temporary counters
- Manual counters

All three methods provide distinct advantages and challenges, meet different programmatic needs, and require different levels of setup and calibration. Effective count programs often leverage a combination of all three methods to establish a robust baseline of bicycle activity data. Permanent counters are expensive but essential to understanding annual, seasonal, and weekly fluctuations in bicycle volumes. Temporary counters are cheaper, nimbler, and can cover a wide range of locations as they can be moved weekly. Temporary counters require more staff time to set up, move, and calibrate. Lastly, manual counters are ideal for short counts and before-and-after studies and require the least setup but are expensive and impractical for any counts longer than a few hours.

Continuous counters can provide the backbone of a count program and can be used to factor temporary or manual counts based on the seasonal, annual, and weekly fluctuations. Temporary or manual counts can be set up cyclically to provide growth estimates over time and are beneficial for increasing the number of locations with data.

Table 1 provides common technology types used for bicycle counting. As shown in the table, there are a variety of count types; each technology has different strengths, weaknesses, and facility applications.

Table 1: Bicycle Count Technology

Technology	Description	Count Type(s)	Application	Modes	Cost	Notes
Inductive Loops	Loops of wire that detect when a ferrous object passes nearby and disrupts the magnetic field of the loop.	Continuous, Temporary	Paved facilities (bicycle lanes, shared use paths, trails)	Bicycles	$$	Common practice, widely used for traffic signal detection, good long-term stability
Magnetometer	No external wires or tubes; the device has a magnetic sensor that identifies ferrous materials passing by and records it.	Continuous, Temporary	Maximum trail width of 6.6 ft	Bicycles	$-$$	Not widely used, more frequently used for unpaved mountain biking trails
Pressure/ Piezoelectric Sensors	Similar to pneumatic sensors, two piezoelectric cables span the facility; when they are compressed, they send an electrical signal to the counter.	Continuous, Temporary	Paved facilities (bicycle lanes, shared use paths, trails)	Bicycles, pedestrians, and scooters	$$	Maintenance should be a consideration as these are typically installed on the surface of the facility
Radar Sensor	Radio waves are emitted; when an object passes by, it changes how the waves are reflected and triggers a count.	Continuous, Temporary	Widely applicable	Bicycles and pedestrians	$-$$	Less common practice, does not differentiate between modes, bolts to existing infrastructure
Seismic Sensor	Detects vibrations in the ground based on approaching bicycles or footfalls.	Continuous	Typically for a more secluded or rural area	Geared towards pedestrians	$$	These are not commonly used and are challenging to use and calibrate in an urban environment
Video Imaging (Automated)	Video records the location; vehicle types are identified and counted either through the detection of moving pixels or AI based algorithms.	Continuous, Temporary	Widely applicable	Can classify a wide variety of modes	$$-$$$	Artificial intelligence (AI) and machine learning (ML) has greatly increased the capabilities of these systems in the last few years, often providing additional metrics beyond just counts Recent studies regarding AI/ML and their impacts on video analytics: FHWA-HRT-22-026 FHWA-HRT-25-020 NCHRP 17-100
Infrared Sensor (Active/Passive)	Uses infrared waves to detect activity. A passive system detects existing infrared radiation, while an active system emits and detects infrared.	Continuous, Temporary	Widely applicable	Bicycles and pedestrians	$-$$	Mounting needs to be precise to avoid picking up adjacent activity
Pneumatic Tubes	Span the facility. When they are compressed, they send a signal to the counter.	Temporary	Paved facilities (bicycle lanes, shared use paths, trails)	Bicycles and pedestrians	$-$$	Maintenance should be a consideration as these are typically installed on the surface of the facility
Video Imaging (Manual)	Camera records video data, and a person manually watches and counts bicycles and pedestrians.	Manual	Widely applicable	Bicycles and pedestrians	$-$$$	These are not a scalable practice
Manual Observers	A person sets up in the field and manually counts bicycles in real-time.	Manual	Widely applicable	Bicycles and pedestrians	$-$$$	These are not a scalable practice

Recommended technology types: **Inductive loops, pneumatic tubes, and active infrared sensors**. These sensor types are commonly used in other jurisdictions, provide accurate counts, long-term stability, and between the three technology types can count most facility types, while balancing cost of infrastructure.

Many of the non-recommended technologies are either not scalable, expensive, or only applicable to a very specific facility type. The one exception is camera technology. Camera technology was not selected

as a recommended technology because it is often more expensive than other counting methods. However, camera technology can provide additional insights as they often leverage machine learning to identify mode types, detect near miss conflicts, and identify high-risk areas.

In-Field Counter Vendors and Data Platforms

For these count technologies, there are a variety of different vendors and data platforms available. Some vendors have integrated dashboards while others provide data in CSVs or other formats. The following lists the common vendors for bicycle counting equipment:

- **Eco-Counter:** one of the most established bicycle counting platforms, they offer a variety of sensor technologies as well as permanent and temporary count options. Their sensors have API keys allowing them to be integrated with online dashboards and automated data management practices. Eco-Counter also supports their own online count data platform.
- **TrafX:** offer infrared systems and magnetometer systems. Systems are geared towards a more isolated or rural setting. As part of a purchase, TrafX provides a 3-year, 5-user plan for their dashboard service, DataNet.
- **RoadSys:** offer piezo-electric, radar, inductive loop, and infrared sensors. The company has multiple systems that leverage AI to provide insights into traffic patterns and provides data hosting and reporting services.
- **MetroCount:** offer pneumatic and piezo-electric systems to count bicycle volumes. Data can be periodically downloaded from the count systems or MetroCount provides a remote access, data service platform called ATLYST.
- **Jamar Technologies:** offer pneumatic tubes and manual style counters. Their website is dated with limited products available for cyclists.

While many of these vendors provide an online dashboard service to accompany their data, they are often only compatible with their own data collection products. The Eco-Counter ecosystem is the most appealing because Overland Park and MARC have already been using Eco-Counter hardware, allowing those counts to be easily integrated with the Eco-Counter dashboard. However, this could be challenging if a jurisdiction in the MARC region wants to utilize another vendor.

There are also standalone data platforms, such as the Bike-Ped Portal, assembled by the Transportation Research and Education Center (TREC) in collaboration with Portland State University. This platform can accept data from a variety of count sources and even manual count efforts. Utilizing a versatile existing platform like this could provide jurisdictions within the MARC region with more choices when it comes to acquiring bicycle counters while still providing a centralized data repository that can be used for collaboration across the Kansas City Metro. A system like this has varying costs depending on the number of users, number of count locations, and if the counters have an API. The estimated startup fee for the Bike-Ped Portal is between $35,000 and $85,000 with an annual subscription fee of $21,000 to $63,000.

Lastly, there are also opportunities to create a custom dashboard using ArcGIS Online or Power BI to display the information while avoiding long term fees. These dashboards would require more data wrangling from MARC staff, but these are widely-used, well-supported tools.

4. National Best Practices

This section summarizes what other jurisdictions across the country are doing to collect and communicate bicycle count trends. The jurisdictions summarized here focus on agencies that span multiple states or jurisdictions and have varied ownership of physical bicycle count infrastructure.

Delaware Valley Regional Planning Commission (DVRPC) - Philadelphia–NJ Region

The DVRPC is the regional planning commission for the Philadelphia metro area which spans Pennsylvania and New Jersey. The DVRPC deploys and operates permanent bicycle and pedestrian counters on the Circuit Trails and on-road facilities; partner municipalities also own count infrastructure. The DVRPC maintains its permanent count sites and runs a cyclical bicycle count program (weeklong counts at around 150 locations on a three-year rotation). Ultimately, the RPC aggregates short-duration and continuous counts across the region, applies seasonal/equipment factors, and publishes Annual Average Daily Bicycle (AADB) metrics. The DVRPC hosts an interactive web map displaying count data and trail information online. Bicycle counting hardware is largely Eco-Counter units.

San Diego Association of Governments (SANDAG)

SANDAG is an association of governments that encompasses San Diego and the surrounding municipalities. The region owns 47 bicycle counters on the regional bicycle network; these devices are owned by a combination of SANDAG and individual cities within the region. Each agency maintains its own counters; SANDAG maintains its 13 sites and runs a quarterly task force for coordination. SANDAG processes temporary and continuous counts into a single regional database. The region has elected to utilize the Eco-Counter system of infrastructure so the dashboard and data aggregation is not resource-intensive.

Metropolitan Washington Council of Governments (MWCOG) – District of Columbia

MWCOG encompasses 24 local jurisdictions in and surrounding the District of Columbia. This includes DC, communities in Maryland, and communities in Virginia. Local agencies own and operate their own counters; for example, Arlington County DOT operates a large permanent Eco-Counter network. Arlington County DOT data and other jurisdictional counts are aggregated into a Bike-Ped Portal dashboard that displays count data across multiple jurisdictions. MWCOG's primary role is to facilitate coordination between jurisdictions and providing a framework for documenting and uploading counts.

Denver (City & County + DRCOG + DPR)

Denver Parks & Recreation (DPR) operates an 18+ site trail-counter network that distinguishes between bicycles and pedestrians. DPR maintains the trail counters it owns, while partner agencies are responsible for maintaining their respective devices. The Denver Regional Council of Government (DRCOG) aggregates regional bicycle and pedestrian counts and publishes them in its Regional Data Catalog/Experience. Many of the counts displayed on this dashboard are shorter counts, with many spanning only a day and others spanning only an hour.

Colorado Department of Transportation (CDOT)

CDOT provides an interactive map that displays bicycle and pedestrian count locations and allows users to easily download data from both continuous and temporary counts. As reference material, CDOT provides a Pedestrian and Bicycle Volume Data Collection Toolkit and Non-Motorized Monitoring Program Evaluation and Implementation Plan. These resources were produced in 2016; while they are a little bit dated, they provide quality guidance on CDOT's data validation efforts and their methodology for using continuous counts to factor temporary count data using factor groups based on the facility context.

Minnesota Department of Transportation (MnDOT)

MnDOT's Pedestrian and Bicyclist Data page provides detailed GIS based counting map, information about their loaner program, and links relevant reports and studies. Their program has a collection of continuous count locations as well as a fleet of temporary counters that are loaned out to partner agencies. Online they provide detailed information about checkout, utilization, and key considerations when using their loaned out temporary counters. Temporary Counters used are the Eco-Counter Pyro

and Eco-Counter Tubes. MnDOT provides a detailed online map with permanent, temporary, and partner count locations and data graphs. However, raw excel data must be requested.

5. Recommendations

This section provides recommendations for a MARC-led regional bicycle counting program based on available data sources and national best practices. Recommendations are split into three areas: interagency coordination, funding mechanisms, and count pilot program.

INTERAGENCY COORDINATION

Most reviewed peer agencies had mixed ownership of bicycle counters. The MPOs, cities, and counties all consistently own and maintain some of the count infrastructure, while the MPOs often provide a centralized place to house the bicycle count data. This program will require significant and ongoing communication between MARC and partner communities. Partner communities should be engaged early to understand how they view a program like this and garner support. This is recommended to happen through MARC roundtables but could include directly reaching out to communities and having one-on-one conversations if they are not engaged in the roundtable. These discussions should outline the benefits of a regional count program and invite input from local jurisdictions. Key topics to address include:

- Identifying preferred locations for permanent counters.
- Initiating conversations about equipment ownership and long-term maintenance responsibilities.
  - These conversations need to be candid and cover the resources and capacity of each jurisdiction to support bicycle count infrastructure.
- Gauging interest in a loaner counter program and determining an effective structure.
- Discussing the current state of bicycle counting within each jurisdiction - what systems are in place, how well they have worked, and where counters are currently located.

This group should continue to be engaged at regular intervals to discuss the program and its effectiveness.

FUNDING MECHANISMS

With MARC being a multi-state MPO, external funding opportunities are more constrained as compared to individual jurisdictions. However, with the concurrent MARC Safe Streets and Roads for All (SS4A) planning effort, there is an opportunity for a SS4A supplemental planning and demonstration grant to kick start a bicycle count program. This funding source does not require a completed safety action plan and lists the following as eligible planning and demonstration activities:

- Follow-up data collection and safety analysis, including road user counts.
- Progress Reporting, including data dashboards for local stakeholders and summary reports of projects/strategies.
- New technology pilot program

A regional count program can satisfy the requirements for all three of these examples posted on the USDOT SS4A website. If a SS4A supplemental planning and demonstration grant is pursued, safety or bicycle exposure will need to be a primary purpose of the program. The Carbon Reduction Program is also an alternative option to acquire funding for a regional bicycle counting program.

This grant application can be developed in partnership with the SS4A planning effort (Comprehensive Safety Action Plan) to promote the safety need for bicycle data and a data repository for the tracking of bicycle volumes and crashes over time. The items requested in this grant application will vary based on

appetite and discussions with local communities about bicycle counts. The following are suggested to include in the grant application:

- 5-10 permanent count locations
- 5-10 temporary counters (depending on interest from the MARC Cities)
- Setup of a system for summarizing data (Bike-Ped Portal, Eco-Counter, or ArcGIS Online)

We recommended that the application focus on Eco-Counter equipment. The brand is well established, and many of their products have API technology that allows for the easiest integration into dashboards. Eco-Counter also provides a wide variety of counting technologies allowing for more versatility when it comes to choosing a setup locations. The actual counter technology used will depend on the locations identified, mode type differentiation, and other desires from localities.

COUNT PILOT PROGRAM

After identifying count locations and securing funding, the next step will be starting the pilot program. This will involve kick starting the count program, setting up equipment, finalizing use agreements, and establishing a data repository or dashboard system. This includes:

- Identifying a data verification system to verify bicycle counts and automated quality assurance process.
- Partnering with localities on equipment setup.
  - Initial data validation and setup calibration.
- Defining count loaner program and how this data is integrated into the dashboard.
  - Priority should be given to locations with safety concerns or locations with changing infrastructure (before-after studies).
- Selecting and linking data to a dashboard/data management system.
  - The data management system/dashboard should be selected based on discussions with local jurisdictions. For applications requiring integration of crash data, advanced data overlays, and a strong safety focus, an ArcGIS Online dashboard is recommended. For reporting bicycle counts alone, platforms such as the Bike-Ped Portal, Eco-Counter dashboard, or a custom Power BI dashboard would all serve as effective options.
- Quality-assure and store existing or historical bicycle count data, these could be manual counts, miovision, or counts from previous bicycle counters.
  - This may be a major effort depending on the data management platform selected and the existing data schema.

We recommend that the data management system does not initially incorporate Big Data sources. MARC should collect a year or more of real count data and then do a data validation analysis, reviewing Big Data sources such as Replica, Strava Metro, StreetLight, or BikeKC datasets. This data validation should evaluate Big Data sources based on:

- **Accessibility/Cost**: how much will this dataset cost over time?
- **Data Consistency**: underlying datasets of Big Data can change dramatically from year to year based on privacy laws and data availability – the Big Data landscape is constantly changing.
- **Accuracy**: how closely does the data source reflect actual traffic counts?
    - Annual trends
    - Seasonal variation
    - Weekly trends
    - Hourly profiles
    - Count magnitude
- **Do we trust the data?** Does the source show bicycle trips on freeways? Do historical bicycle volume estimates align with bicycle facilities and show changes in volume that align with investments to the bicycle facilities? Does the data make sense?

Based on analysis findings, one or multiple Big Data sources (or none) should be incorporated into the bicycle and pedestrian count dashboard. The dashboard should clearly delineate between real count data and Big Data sources that have been factored. The Wasatch Front Regional Council (WFRC) is a couple years into this process and should be monitored to see how they integrate Big Data and physical counts into a comprehensive regional count program.

The bicycle and pedestrian count dashboard should be an internal tool for MARC and local jurisdictions until the data narrative is better understood, and the platform can be used to support – rather than inadvertently undermine – advocacy for bicycle infrastructure.

6. Conclusions

The MARC Regional Bicycle Data Collection Program establishes a clear path toward a consistent, reliable, and regionally coordinated system for monitoring bicycling activity. By combining permanent, temporary, and manual counts and potentially incorporating Big Data sources later, this recommended program balances accuracy, flexibility, and scalability. Lessons learned from national best practices highlight the importance of standardized methods, shared equipment, and centralized data systems, ensuring that local partners can contribute to and benefit from a unified approach.

A regional count program has the potential to provide MARC and its member jurisdictions with the tools to track trends, evaluate projects, and make data-driven decisions that support safe bicycling, guide infrastructure investments, and quantify the benefits and usage of existing facilities. With governance through a regional working group, the narrative can be fine-tuned with the eventual goal of providing transparent outputs like public dashboards and reports that advocate for additional bicycle infrastructure. This program will not only strengthen grant applications and planning but also foster a more connected and resilient transportation network across the Kansas City region.