

Bike Flows



Road segment bike traffic flows

Overview

VianoVA Bike Flows is a data product designed to provide detailed insights into bike traffic patterns on a street segment level. By aggregating data from connected bikes and mobile phones, our product offers daily counts of bike trips passing through each

street segment in a city. This valuable information enables city planners, transportation agencies, and urban developers to optimize infrastructure, enhance bike safety, and promote sustainable mobility.

Key Features

- **Street Segment-Level Data:** VianoVA Bike Flows delivers precise bike traffic information at the street segment level, offering granular insights into the number of bike trips for each segment in the city.
- **Daily Trip Counts:** Our product provides daily updates on bike traffic, allowing users to monitor and analyse fluctuations in bike usage over time, identify trends, and make data-driven decisions.
- **Comprehensive Data Sources:** By leveraging data from connected bikes and mobile phones, VianoVA Bike Flows ensures comprehensive coverage and accuracy in capturing bike trip counts across the entire city.
- **Interactive Visualization Tools:** Users can access intuitive visualisation tools to map bike traffic flows, identify high-traffic areas, and generate insightful visual representations of bike usage patterns.

Key Attributes

Dimension	Type	Example	Notes
way_id	string		Unique ID of the roadway segment - Open Street Maps
date	date		Date on which the data was computed
time_bucket	string		Portion of the day/portion of the week in which the data was aggregated
count_electric	integer		Count of unique trips using the road segment
count_nonelectric	integer		Count of unique trips using the road segment
count_cargo	integer		Count of unique trips using the road segment
count_cargoelectric	integer		Count of unique trips using the road segment
share_trips	integer		Total count of trips using segment in time bucket over total count of trips for time bucket

Coverage

[Netherlands](#)

Characteristics

Latency - 1 day, 1 month, 3 months

Frequency of Data Collection - 10s-1min

Delivery

- Vianova Intelligence Platform
- REST API

Use Cases

■ Urban Planning

City planners can utilise Vianova Bike Flows to design and implement bike-friendly infrastructure, such as dedicated bike lanes and bike-sharing stations, based on actual usage patterns and demand.

■ Traffic Management

Transportation agencies can use bike flow data to optimise traffic signals, improve bike safety at intersections, and reduce conflicts between bikes and motor vehicles.

■ Infrastructure Investment

Policymakers and government agencies can prioritise investments in bike infrastructure, ensuring resources are allocated to areas with the highest demand and potential impact on bike safety and accessibility.

■ Environmental Impact Analysis

Environmental organisations can use bike traffic data to assess the environmental benefits of cycling, such as reduced carbon emissions and improved air quality, and advocate for policies that support sustainable urban mobility.

■ Mode Split Modelling

Transportation engineers can use bike traffic data to project traveller thru-put, per mode, along corridors. Data can also be used to model the impact of changes to roadway design.

■ Retail and Public Space Management

Data can be used to understand the anticipated out-of-home addressable market of cyclists and the optimal location of services targeted to cyclists.