Evidence Based and Data-Driven Cycling Infrastructure Improvements – How Multimodal Traffic Count Data and Video Helps to Build Bike and Pedestrian Friendly Cities

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Traffic is a major problem in my city. I want to get people to walk and bike more!

WE NEED SMARTER CITIES
DESIGNED FOR PEOPLE
NOT FOR THROUGHPUT
SPEED
LEVEL OF SERVICE
TRAFFIC

- Bike share scheme
- Bike lanes
- Segregated bike lanes
- Sharrows
- Cycling Highways
- Speed reduction measures
- Road closures for cars
- Optimized traffic light programs
- Bike boxes at intersections
- ...

We need to know that we're:

- looking at the right data,
- asking the right questions, and
- interpreting the data accurately.

Why is the ped & bike count data needed?

- From “gut-feel” to data-driven decisions on pedestrian and bike infrastructure
- Lack of ped & bike data in comparison with data on motorized vehicle data
- Compare success of infrastructure measures using before & after analysis
- Identify long-term trends
- Have (good) data as input for models and simulations
- Benefit of video: auditable data and usefull for behavioural analysis and conflict/safety analysis

Long-term or short term count data?

Program Type	Duration	Purpose
Long-Term Count Program	Continuous counts (24/7) over a few years at a small sample of locations.	Identify activity patterns Used to adjust the short-duration counts into AADP (Average Annual Daily Pedestrians) Allows your short-term counts to be more accurate and extrapolated to a bigger model
Short-Term Count Program	Less than one day to several days up to a few months over various locations.	Capture variation in ped and bike activity through different parts of a community. Determine impacts of projects Conduct safety analysis Trend analysis

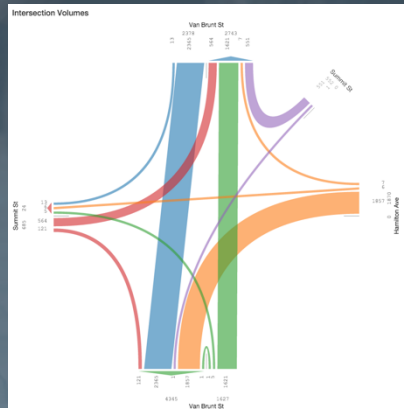
Miovision's Traffic Counting Solution

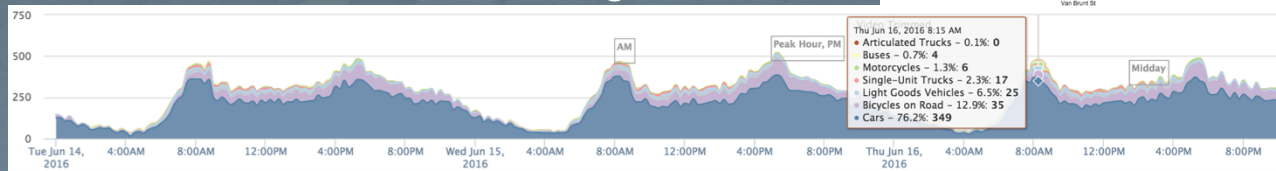
Miovision Scout Camera

- Portable
- Up to 6m high pole mast for bird's eye view
- 3-7 days recording time
- Weatherproof
- Reliable, easy and fast setup at roadside
- Schedule recordings
- Creates video files in open format

Miovision Video Processing

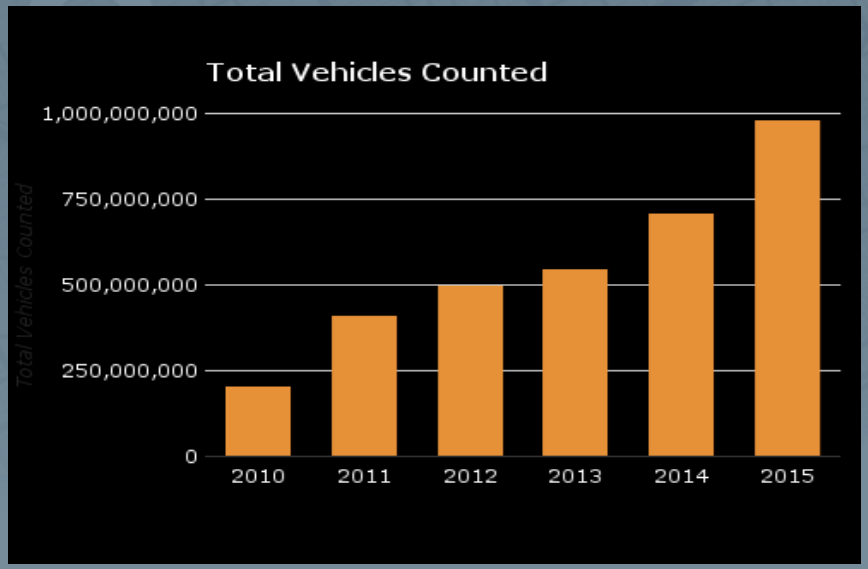
- Turns videos into traffic data
- Intersection turning movement counts, ATR counts, roundabouts, etc.
- Full vehicle classifications
- Including pedestrian and bike count data
- Results: CSV, Excel, PDF reports and interactive diagrams

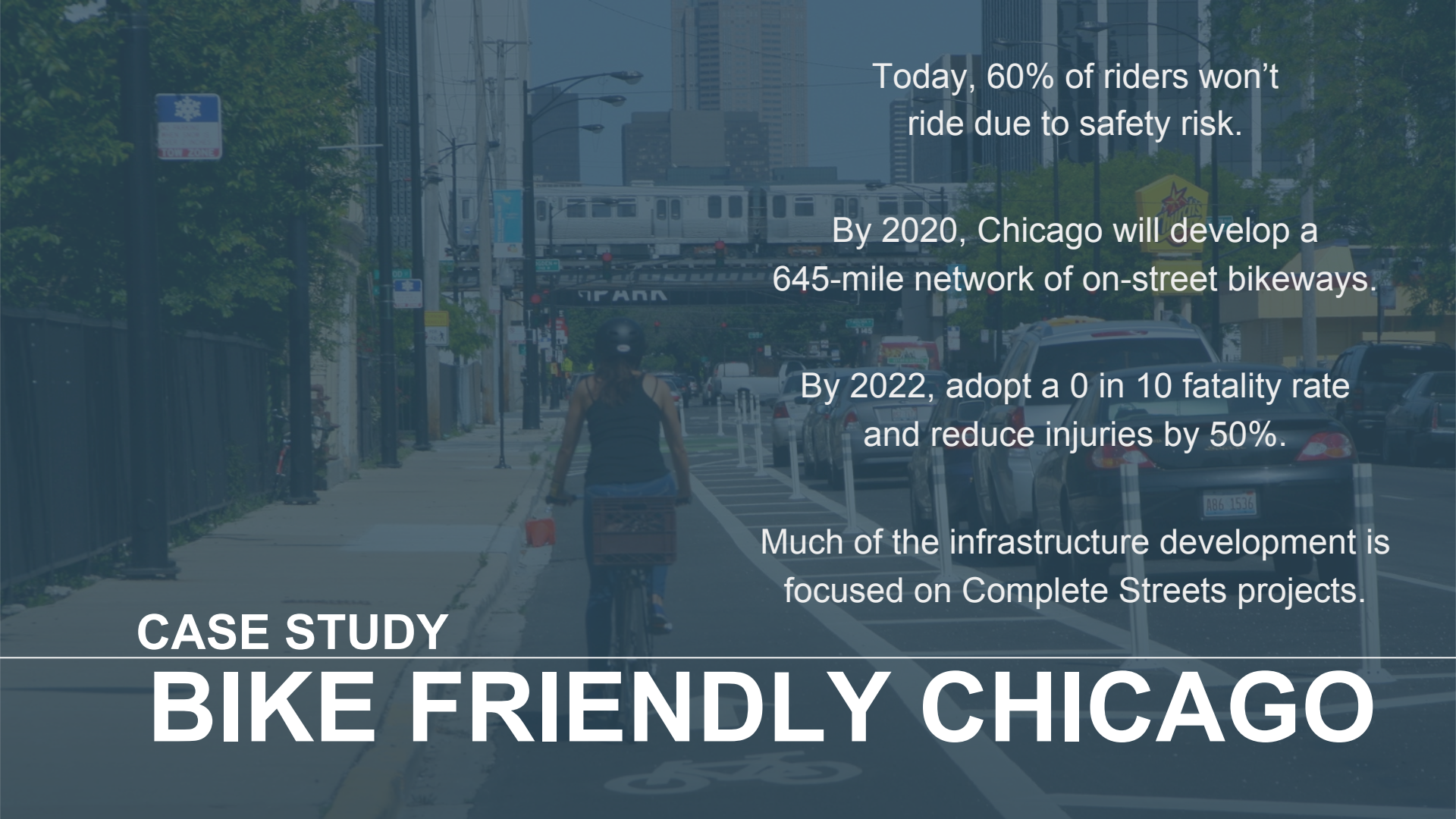




Miovision's Traffic Counting Business

In the last five years, Miovision customers have counted more than 3.3B cars.
And almost 100M pedestrians and bicycles.
In more than 13'000 communities worldwide.





Today, 60% of riders won't ride due to safety risk.

By 2020, Chicago will develop a 645-mile network of on-street bikeways.

By 2022, adopt a 0 in 10 fatality rate and reduce injuries by 50%.

Much of the infrastructure development is focused on Complete Streets projects.

CASE STUDY

BIKE FRIENDLY CHICAGO

FILLING THE GAPS TO REACH THE GOAL

Major gaps determined in current infrared and tube data collection tools.

- Lack of verifiable data.
- More multimodal data required.
- Crash and count data required.
- Need for safer tool deployment.
- Existing methods not working.

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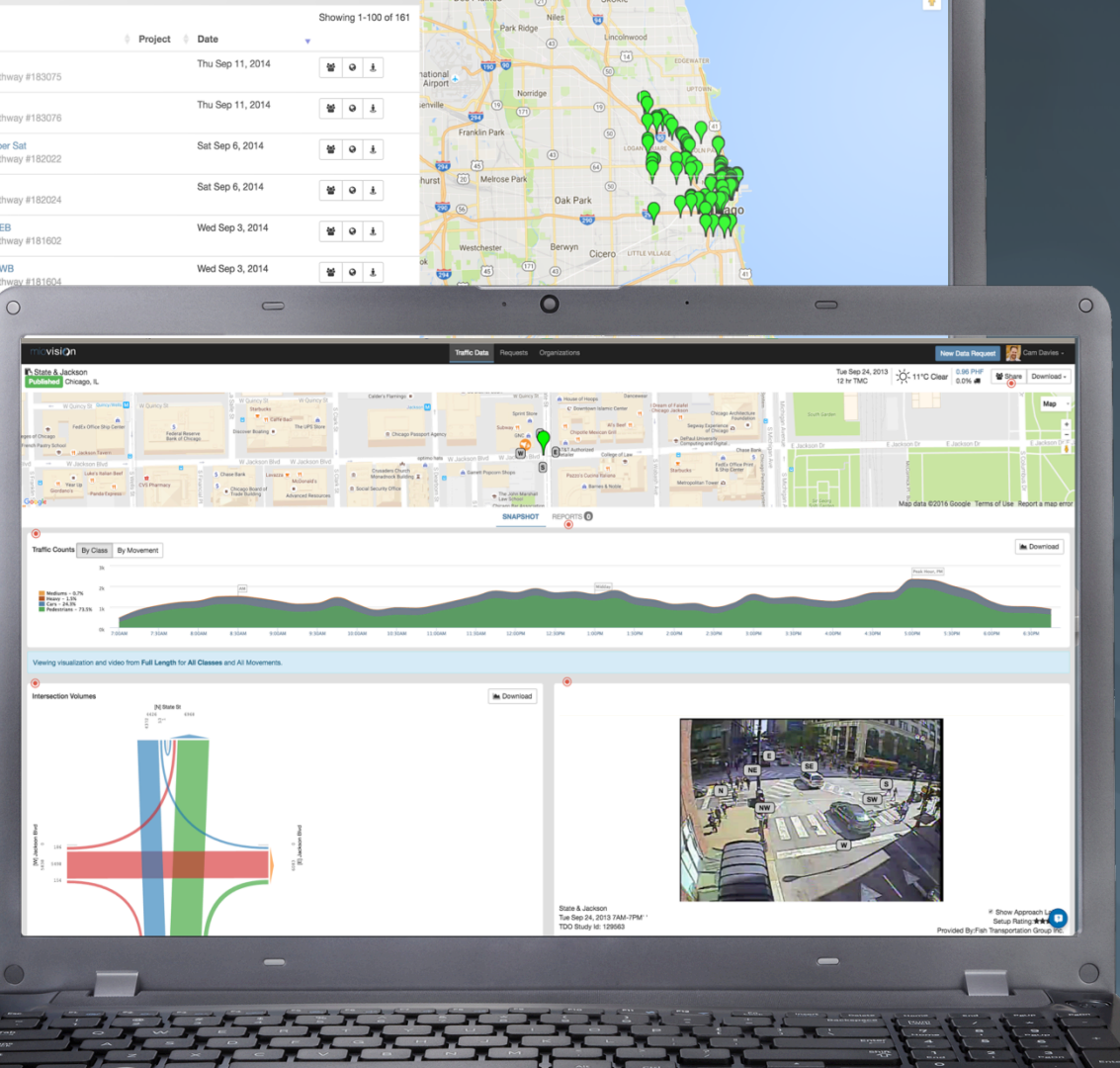

500+ locations in two years.

100 focused in the downtown core.

Data and video used to analyze, observe, model, simulate, monitor success, report, etc.

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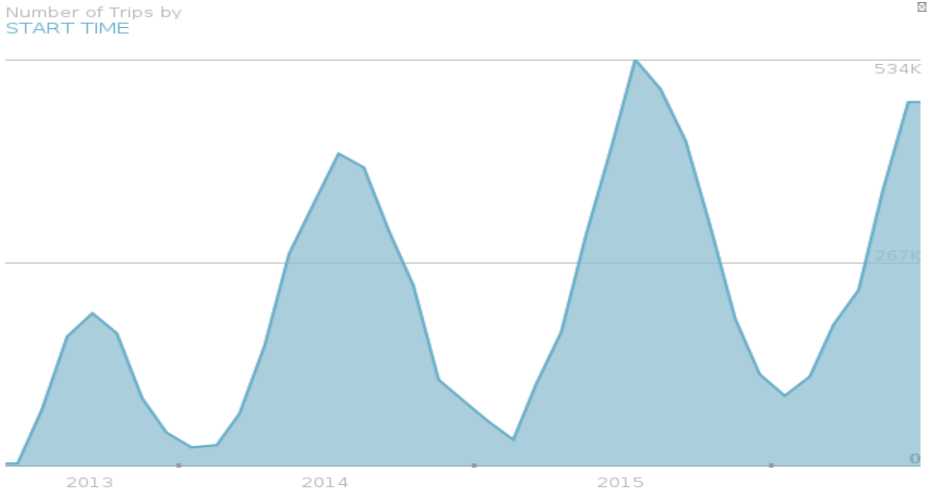
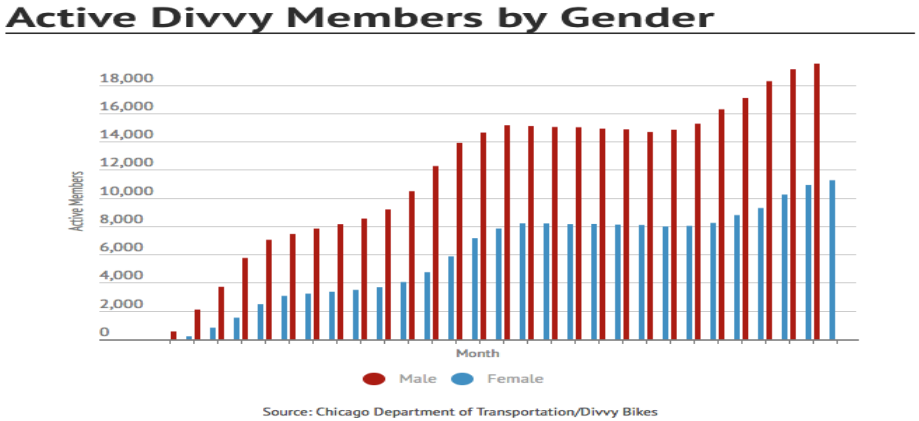
Success of Chicago cycling program





Bike share scheme (Divvy) has **grown** 2013-2016

Chicago Named America's **Top City** For Cycling

Chicago has now more than **200 miles** of on-street protected, buffered and shared bike lanes.

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For more information on Chicago and other Walkable and Bikeable City Info:

- Objection Handling
- Key Metrics to Measure
- Ped and Bike Masterplan Template
- Establish a Count Program
- Technology Overview

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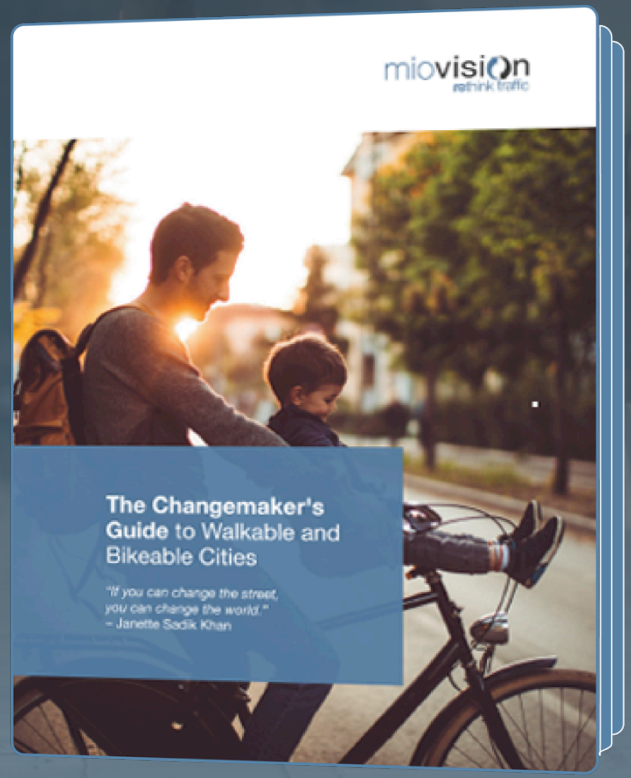

Thank You

Questions? Comments?