## People-Powered Bike Lane Sweeping

Pierre Lermant

CalBike Summit, San Diego, April 19, 2024

# Bike lane construction in the US is exploding:

- Climate change
- Healthy lifestyle
- Safer bike routes



Photo Credit: City of Boulder



Photo credit: City of Redmond

#### In California too:

- Best weather
- Strong advocacy voice



Carlsbad, CA

#### Maintenance issues:

- Debris accumulates
- Riders don't use them
- -> Budget dries up





#### **Current solutions:**

- Street sweepers
- Narrow sweepers





# Street sweeper challenges:

- Costs
- Protected lanes access





# Narrow-size sweepers challenges:

- Costs > \$200K
- Replacement parts
- -> Often not available

#### Expensive sweeper considered for Seattle bikeways









By Chris Legeros

November 27, 2013 at 12:11 pm PST

It's the Ravo-5, built in the Netherlands. The machine isn't sexy by any means, but it carries an exotic sportscar price of \$225,000.

#### Inefficiencies:

- Fixed routes and schedule
- Inclusive?
  - No roadside





#### Our vision:

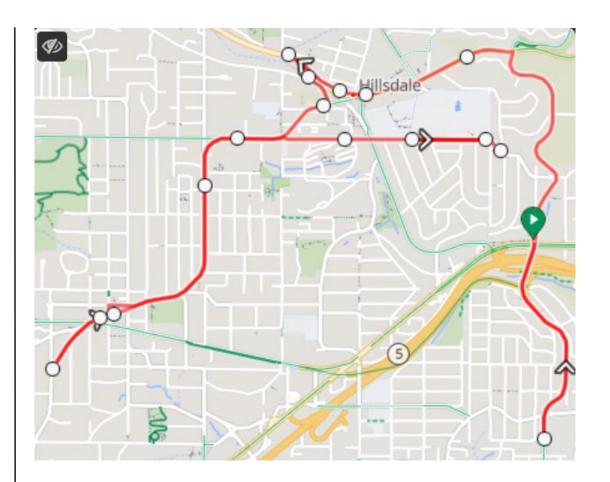
City-owned,
 community-operated
 fleet of eco-sweepers





# Bike lane sweeping "Marketplace":

- Centralized, on-demand sweeping requests
- Community sweepers' action



#### **Eco-Sweepers?**

- Pulled by any bicycle
- Ecological
- Compact+lightweight
- Economical to own and operate



#### Two versions

- Push-aside
  - o e.g. Roadsides
- Pick-up
  - o e.g. Protected lanes





#### Push-aside details

- Only limited by battery
- Displaces debris
- About 3 feet wide



#### Pickup details

- Picks up debris in bins
- Limited capacity
- -> Need disposal plan
- 2.5 feet sweep width



### Capacity mitigations

- Utility tricycle
- Ride-along vehicle
- Scatter dump / gather
- -> Pickup later









#### Project status

- Field tests in North
  America
- -> Sonoma in CA

**BC - Sunshine Coast** 

**CA - Sonoma County** 

**GA- Atlanta** 

**NC - Charlotte** 

**OR** - Portland

### Next big thing(s)

- Scale up
- Tracking





#### Who we are:

- Pierre, CA
- -> Founder
- Cedric, BC
- -> Design / Manufacturing



### Want to help?

- Share ideas, feedback
- Offer resources





### Thank you!

More at bikelanesweeper.com