

Reliably measuring and improving cycling in a multimodal urban environment



# We have the least amount of data on the largest share of urban mobility users...







# **Groningen city centre**

"The livingroom of the region"

# The Challenge

"Cyclists' association wants an end to the chaos for cyclists in Groningen"



"Opinion: who tames the cycling mob?"



## Pilot city centre monitoring

"Groningen seeks new technologies for understanding traffic situations"



"City seeks help from private sector in solving cyclists and pedestrian congestion"



# FlowCube: The sensor

- Counts
- Traveltimes
- Routes





# Privacy by design

FlowCube does not store images

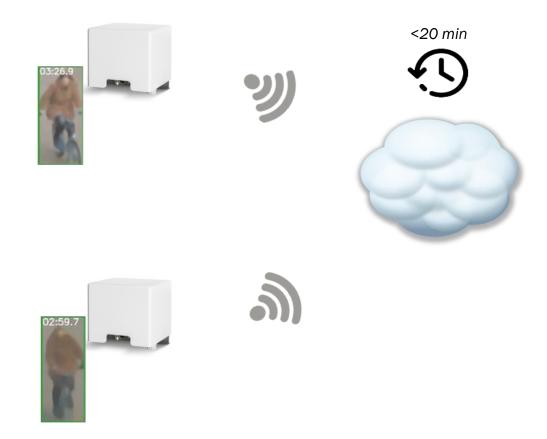
Groningen Rotterdam



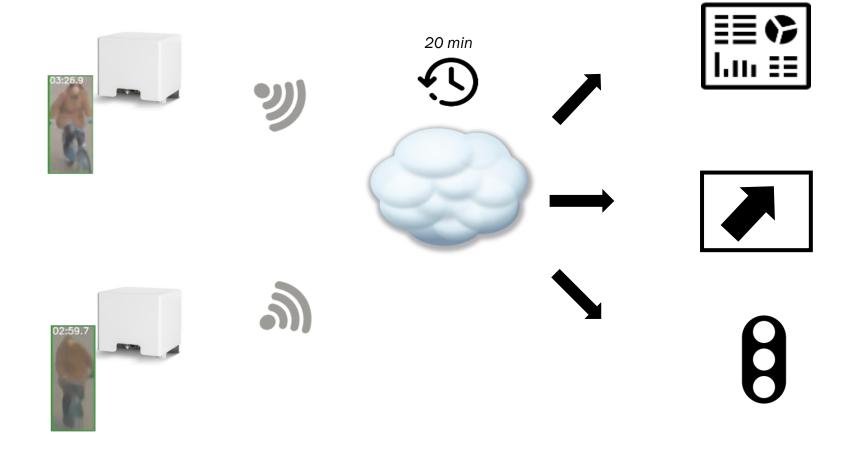


# FlowCube system

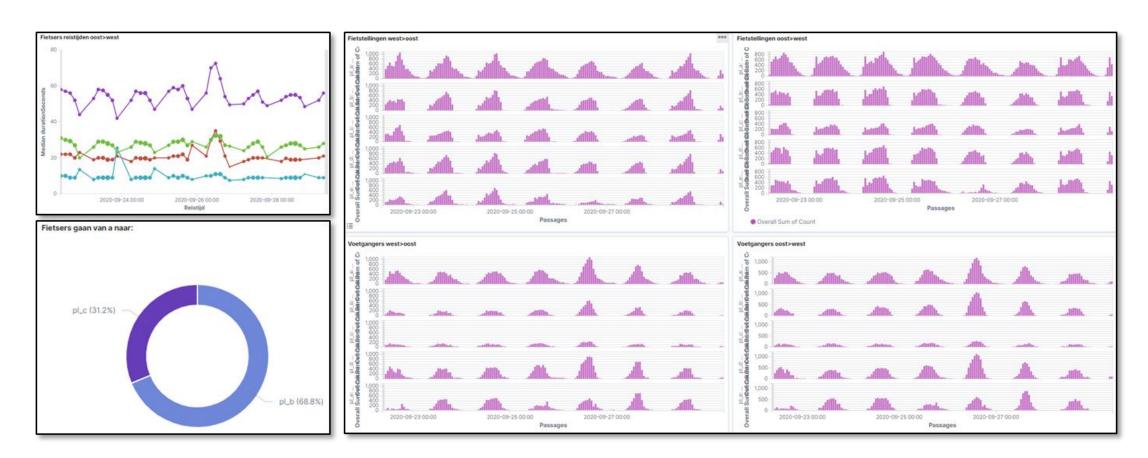




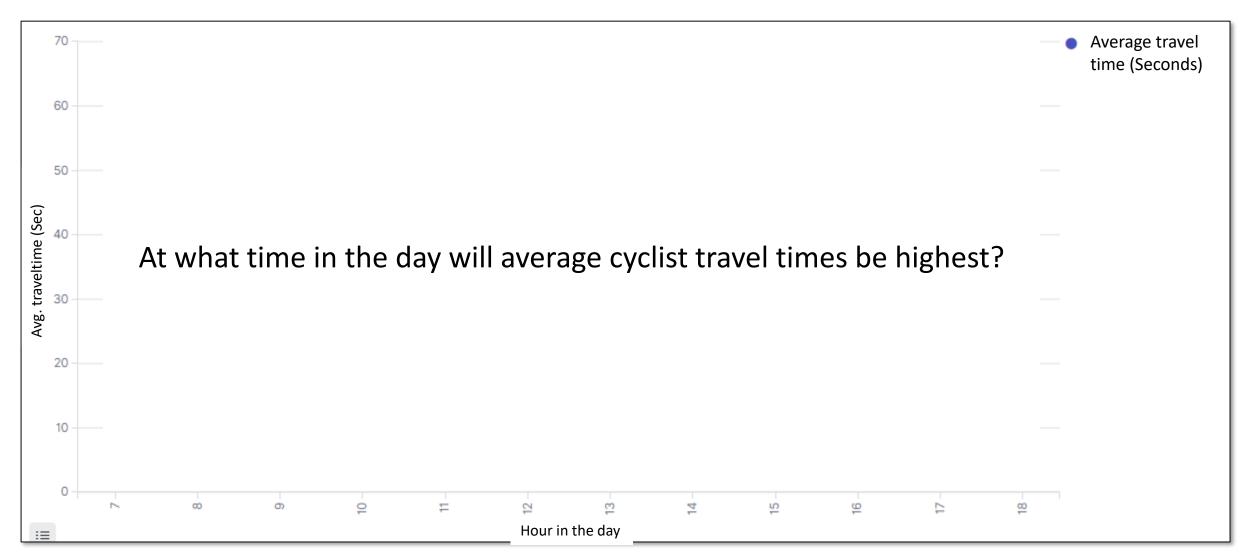
# FlowCube system



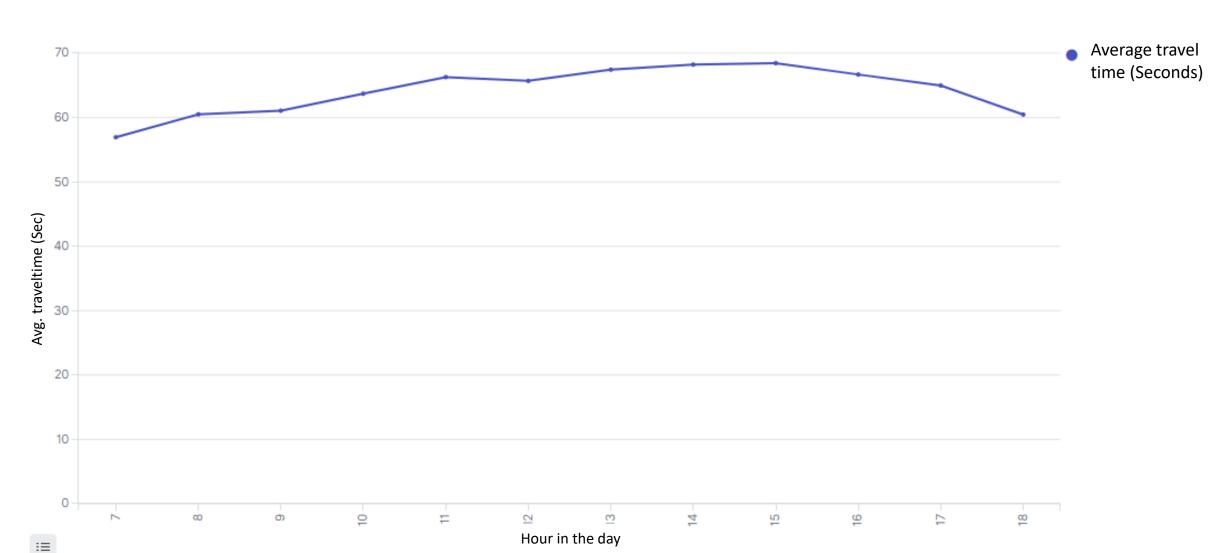
# Dashboard example



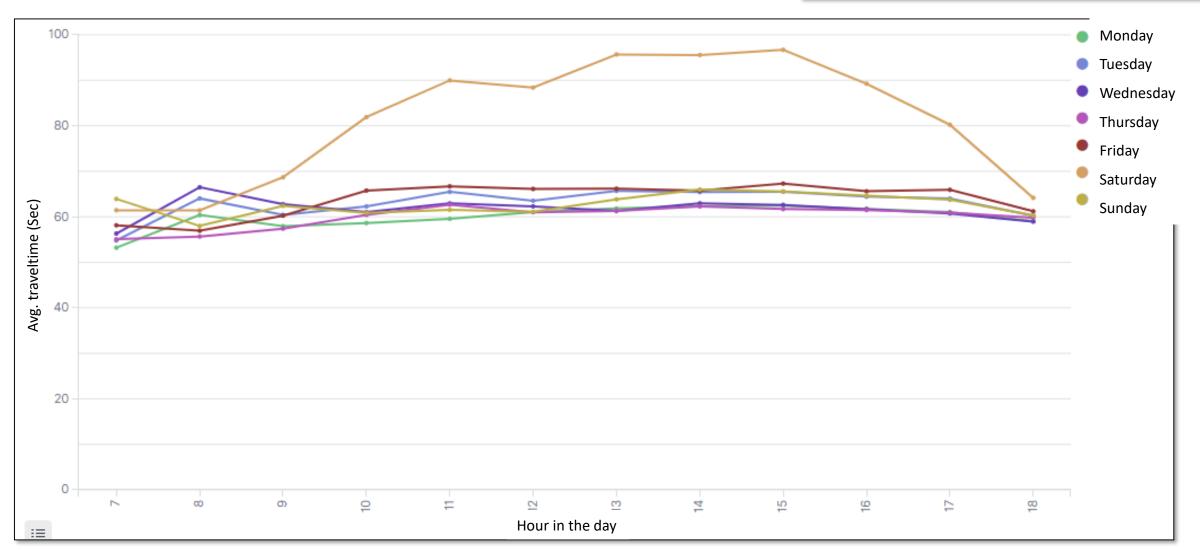






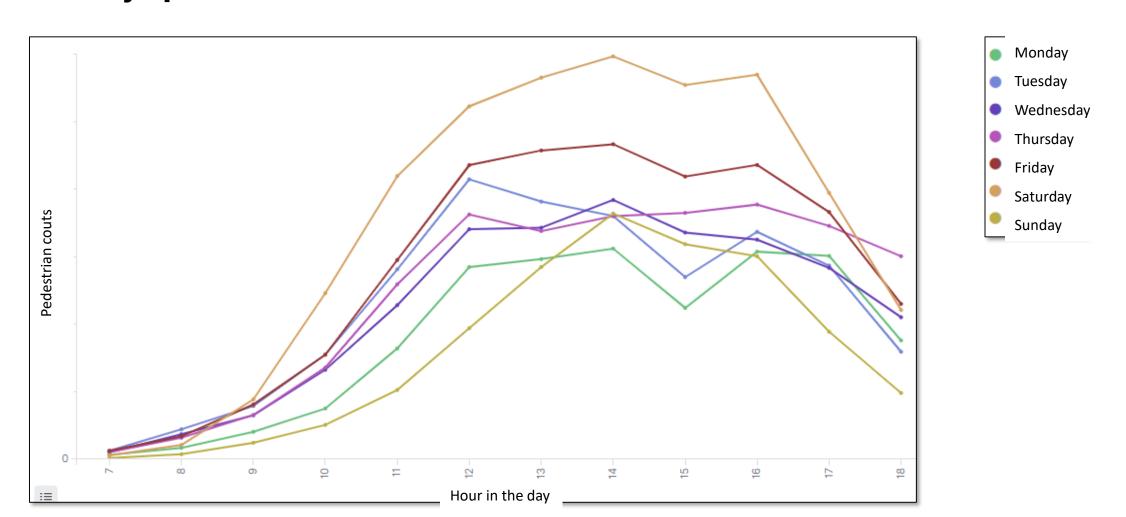








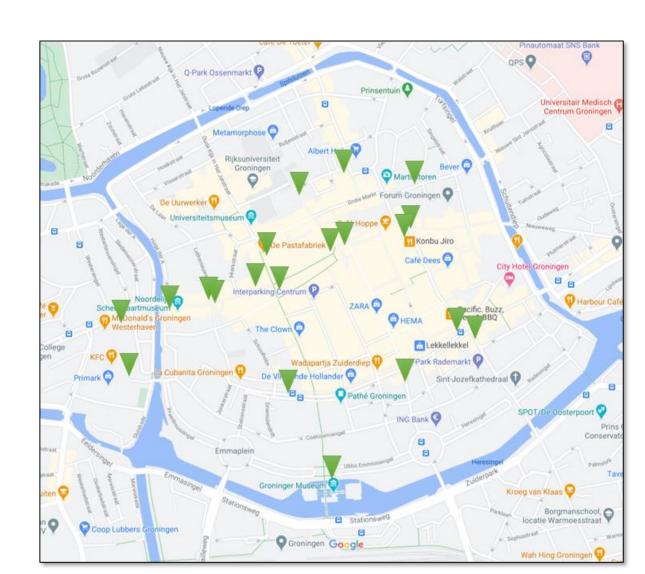
## The key: pedestrian crowds



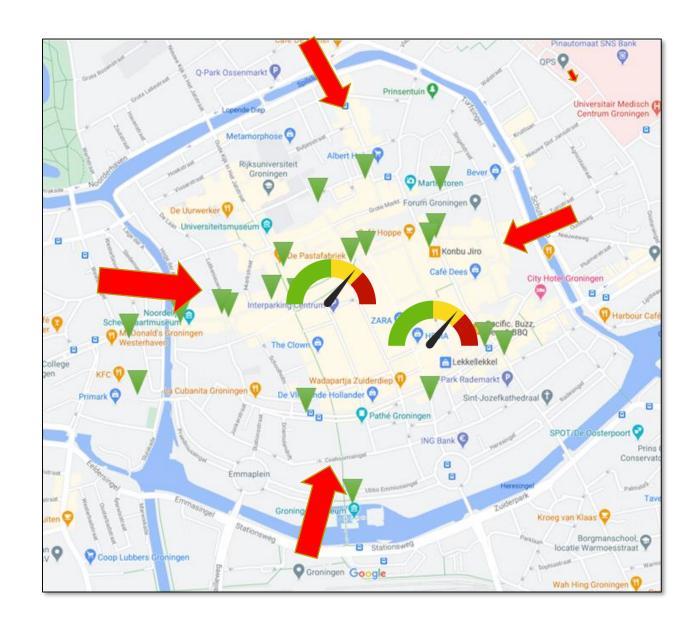
#### Unique with and richness in data

- 24 x 7 x 365
- 20 locations
- 2 directions
- Multiple modalities
- Crowdmonitoring (Social distancing)

#### 1,2M passers-by per week



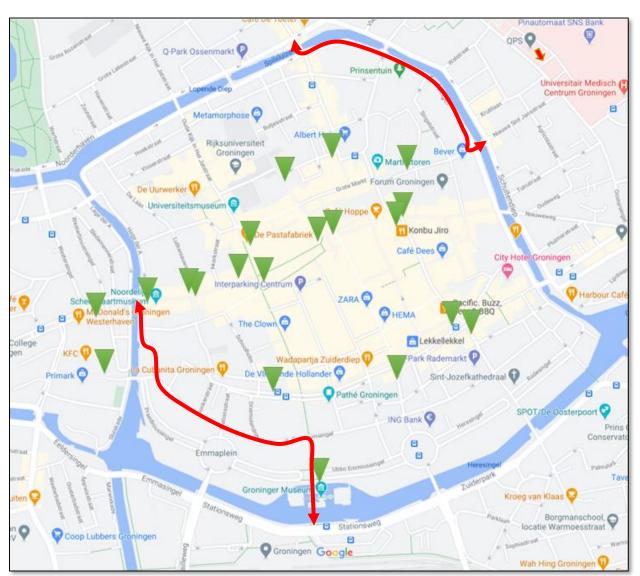
#### Use case example: Predicting crowds



### Use case example: Reroute traffic



Use case example: Evidence based infrastructure adjustments



## In short...





- Reliable data on cyclists, pedestrians and more
- Live and historic
- Your data
- Truly multimodal



Jop Spoelstra

Jop.spoelstra@technolution.nl

Google: FlowCube

