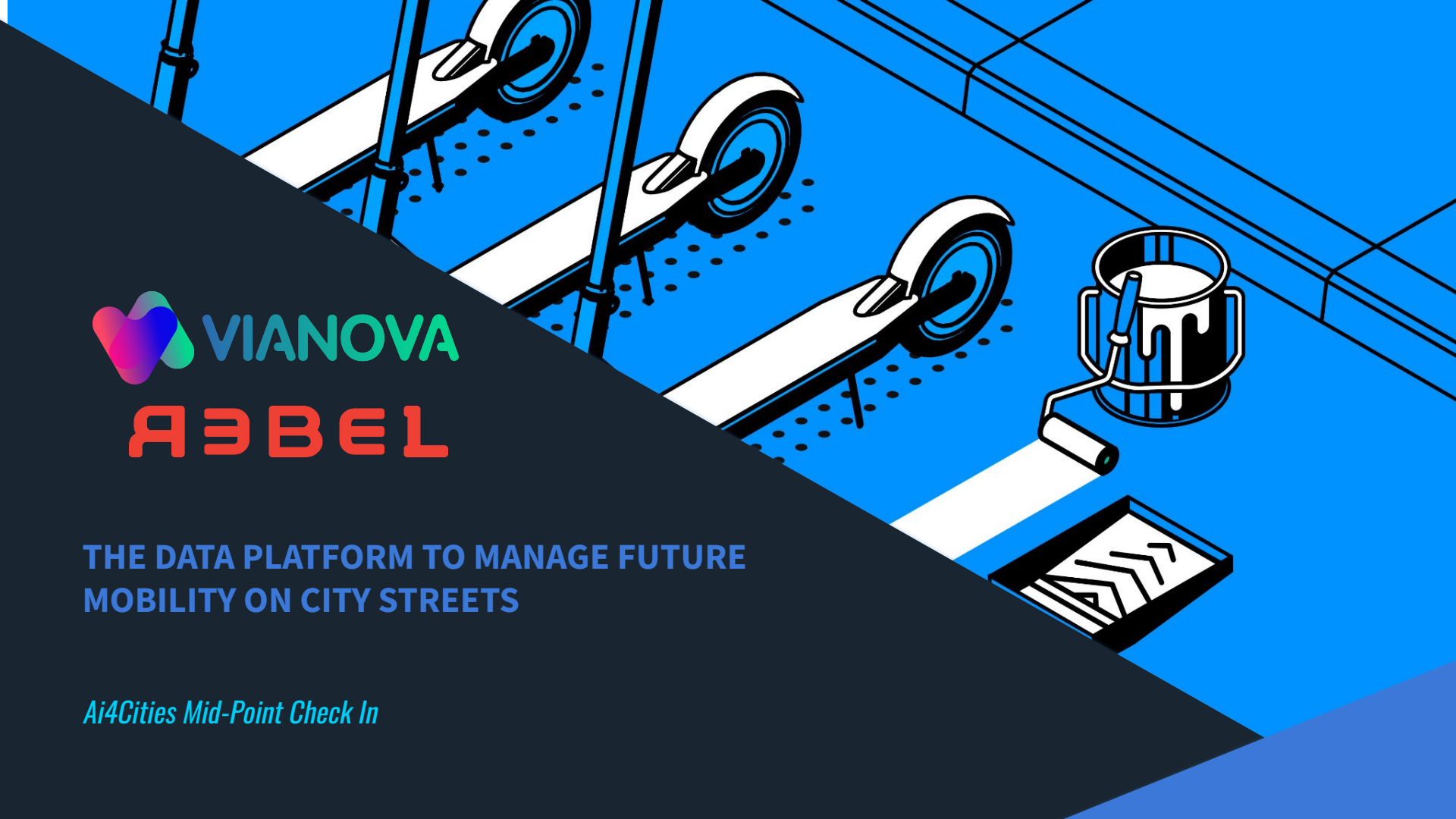


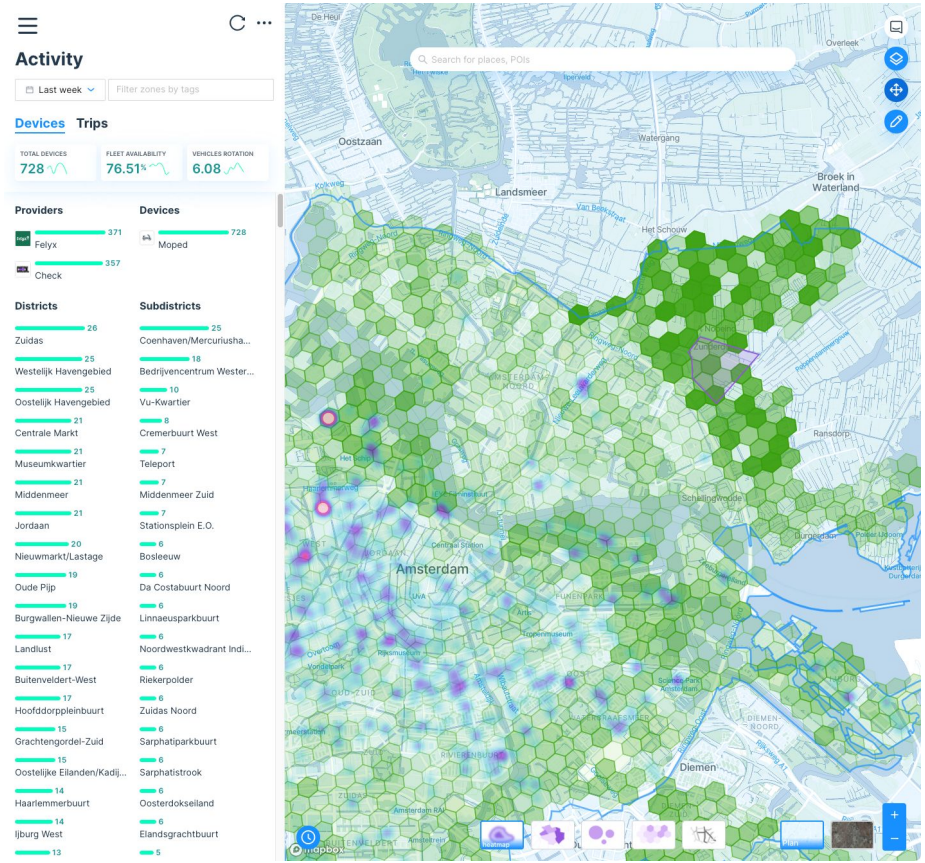
VIANOVA

ABEL

THE DATA PLATFORM TO MANAGE FUTURE MOBILITY ON CITY STREETS

Ai4Cities Mid-Point Check In

Agenda for Today



- Introduction and Background
- Concept of the MPAT
- Pilot Development and Evolution
- Artificial Intelligence
- Co2 Projections and Modelling
- Project and Work Planning

Project Team

French start-up building the “Air Traffic Control for Urban Mobility”: Cityscope

Frederic Robinet
Technical Implementation

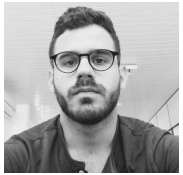
Alex Pazuchanics
Product Development

Jack Reilly
Back-End Engineering

Dutch strategy & policy advisory firm, focusing on issues that affect our future, including sustainability, transportation, and urban development

Ditti Osikovicz
Project Management

Francisco Macedo
Policy Expert



Kamen Todorov
Data Science

Cityscope Core Architecture

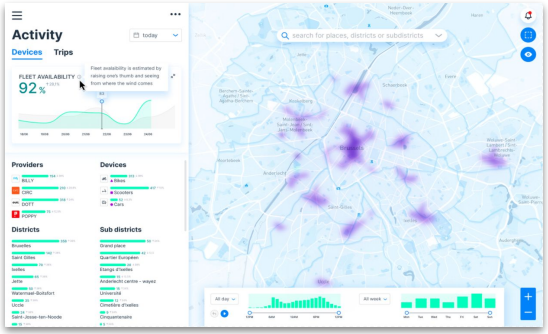
Mobility fleets

- Shared micro-mobility
- Ride-hailing
- Micro- transit
- Delivery

Mobility data →

← Monitoring and Auditing

City data platform



Insights and Intelligence →

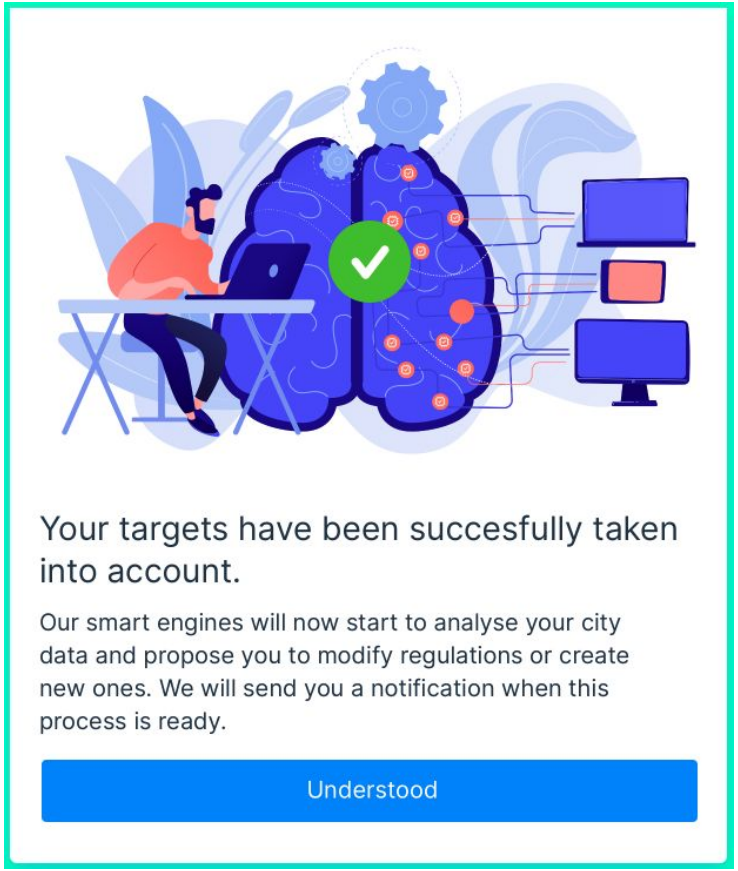
← Policy data

Cities

- Transport authorities
- Infrastructure managers
- Public operator

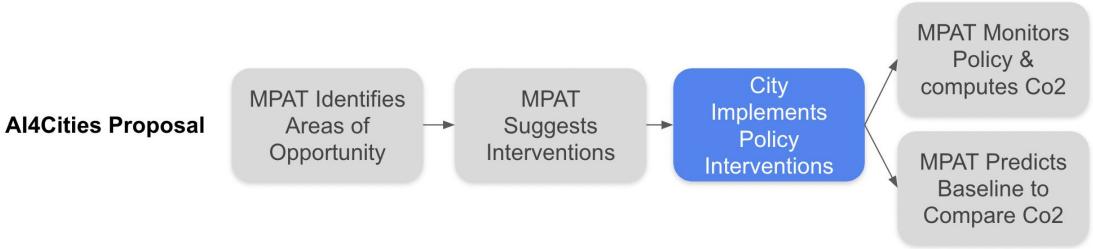
- Existing platform requires heavy human interaction
- Existing platform creates policy in a “dumb” way
- Existing platform monitors, but there is no baseline other than history

The Mobility Policy Auto-Tuner (MPAT) in a Nutshell



- Recommend to cities the **optimal distributions of shared vehicles** that would achieve the **highest CO2 reduction** when balanced against other priorities of the city
- Build the funnel from priority to policy- ease the design and modification of shared mobility policy requirements
- **Continuously assess** the effectiveness of adopted policies in achieving **CO2 reduction** and other policy goals

Initial Pilot Approach- Implement and Monitor

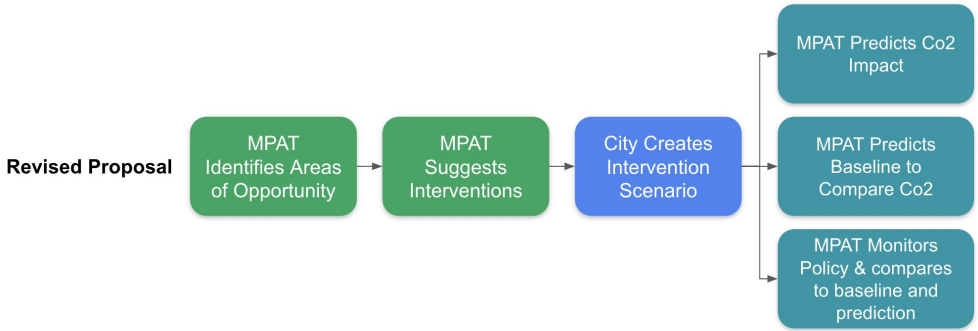


-Goal of the Ai is to predict the baseline and compare against the reality of a new policy

-Difference between the reality and the projection is the effect of the policy

-Effect of the policy can then be quantified

Revised Approach- Scenario Planning



-Cities are simply not able to move swiftly enough to implement policies and monitor results

-Takes time for innovation liaisons to find the appropriate piloting partners within city governments

-Cities have legal and political timelines for implementing policies

Application of the MPAT

Tallinn

Develop the initial model of mode replacement

From known data and industry best practice, what is the potential impact of one additional trip by walking, cycling, or shared mobility?

Identify the policy toolkit to achieve changes to outcomes

How much impact would policy X have on increasing trips on a more sustainable mode?

What are the range of available policies (scored on practicality, cost, impact, etc.)

How do we model the change in intensity of these policies?

(Potentially) Model the Co2 savings as a result of the change

How much Co2 would be saved if this policy was as effective as it could be?

Amsterdam

Refine the initial model of mode replacement

From known data and industry best practice, what is the potential impact of one additional trip by shared mobility (shared mopeds for sure, shared cars if data is available)

Identify areas with the biggest potential area to target interventions

What geographies have the biggest mismatch between vehicle trips and shared mobility usage?

Identify the policy toolkit to achieve changes to outcomes

How much impact would policy X have on increasing trips on a more sustainable mode?

What are the range of available policies (scored on practicality, cost, impact, etc.)

Model the Co2 effectiveness of the policy

How much Co2 would be saved if this policy was as effective as it could be?

What is the projected difference between doing nothing and implementing the policy?

Integrate with Cityscope to allow Creation & Monitoring of the policy

Underlying Ai

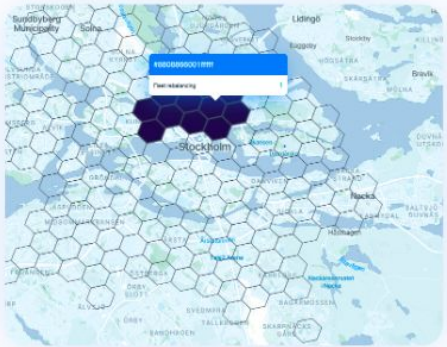
-Goal is to predict 1) # of devices in an area each day (fleet size) and 2) # of trips commencing as a result of that fleet size

-More complex to predict the change in # devices and # of trips as a result of a policy intervention

-Known challenges: effect of pricing, small geography of policies, normalization for weather

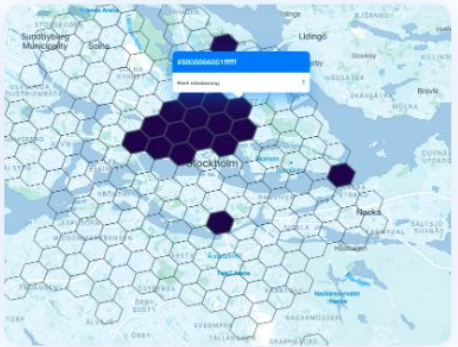
-Will ideally pilot projections for shared mobility, other active mobility, public transport (for Tallinn)

Morning



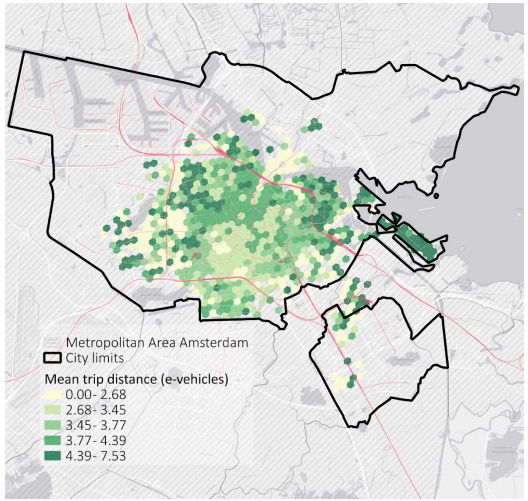
Afternoon

Night

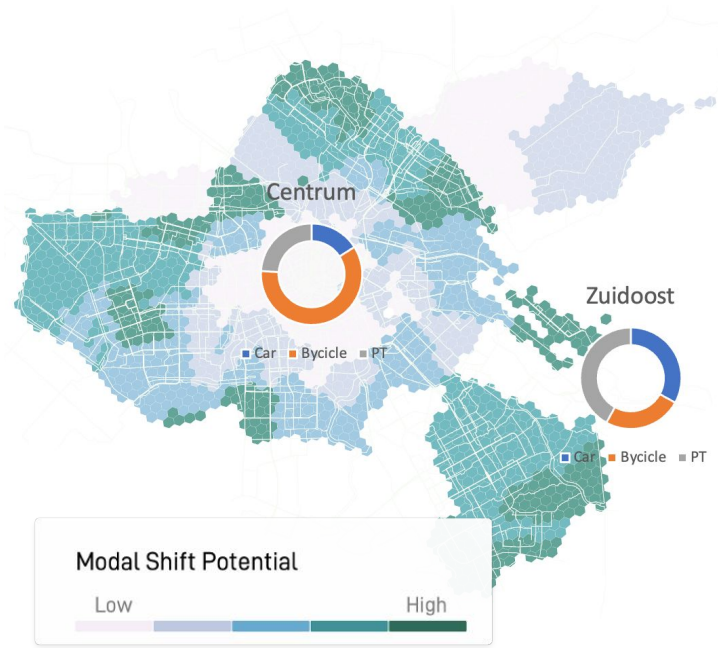


Calculating potential CO2 impact (until 2025)

Existing market demand



Modal shift potential



Municipal plans

Does our Solution Create Emissions Savings?

-Our tool helps cities make smarter decisions for the most Co2 impact

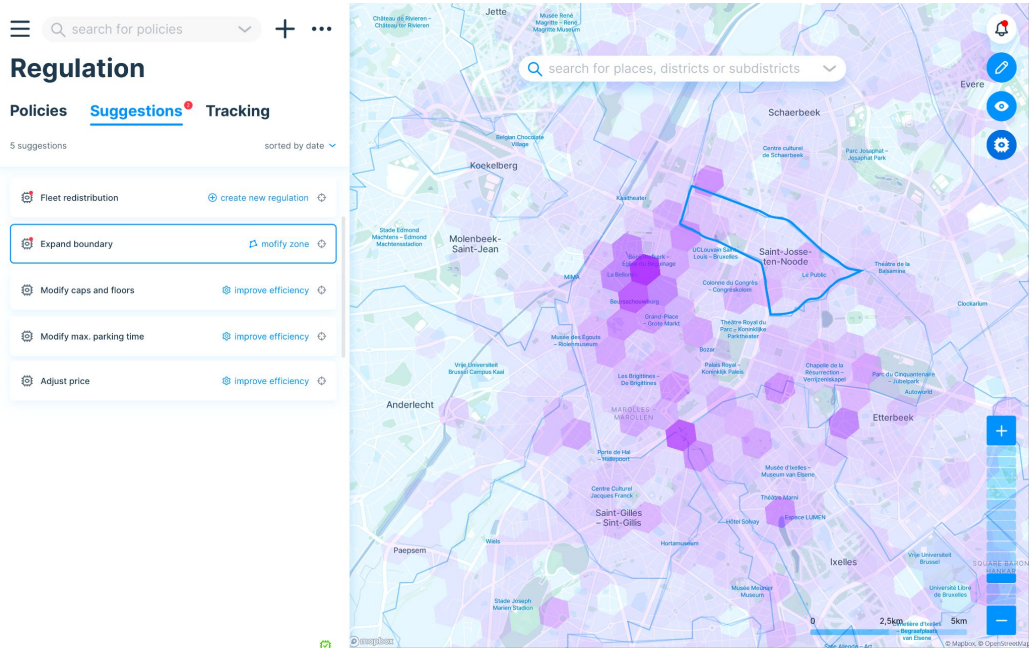
-Depending on the city's readiness, the tool can compare:

- A scenario with an intervention to a scenario with no intervention
- The actual outcome of an intervention to a scenario with no intervention

-Co2 savings are indirect but significant: operating at the scale of the city

-Incredibly difficult to *measure* the direct Co2 impact of an intervention, but it can be *modeled*

- Co2 savings = Co2 Emissions of a "good" trip vs. the Co2 Emissions of what that trip would have otherwise been



Separate Components Converging in the Pilot

	Done and Doing	**To Be Done**
Data Science	Creating a Model Projecting Demand and Usage	Expand Reliability of Prediction over longer time and smaller geography
UX & Front End	Wireframe the decision-making workflow	Creating the “Scenario Planning” Experience for the user
Methodology	Developing a Modal Split substitution model for Amsterdam and Tallinn	Apply methodology for Co2 emissions in the output of the tool
Policy	Designing Scenarios for investigation based on on-the-ground policy reality in Amsterdam and Tallinn	Add ability to evaluate the intensity of the policy intervention

Questions / Discussion