2021 POLIS Annual Conference

02/12-2021

Regaining control of the public ground with shared data and microtransactions

NIVEL

CITY OF BERGEN

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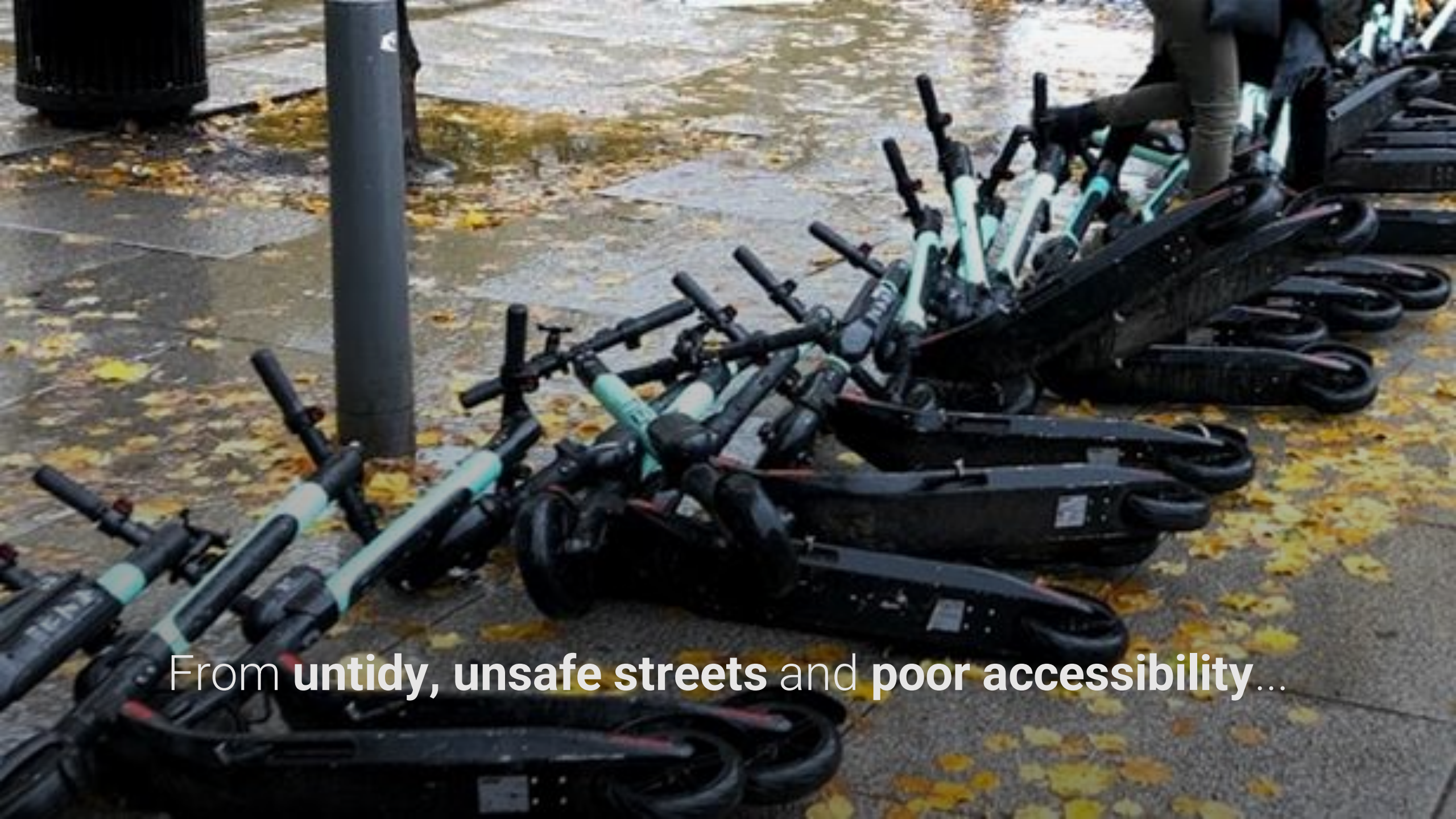
Human-centric, liveable cities

Photo by Birgith Roosipuu on Unsplash



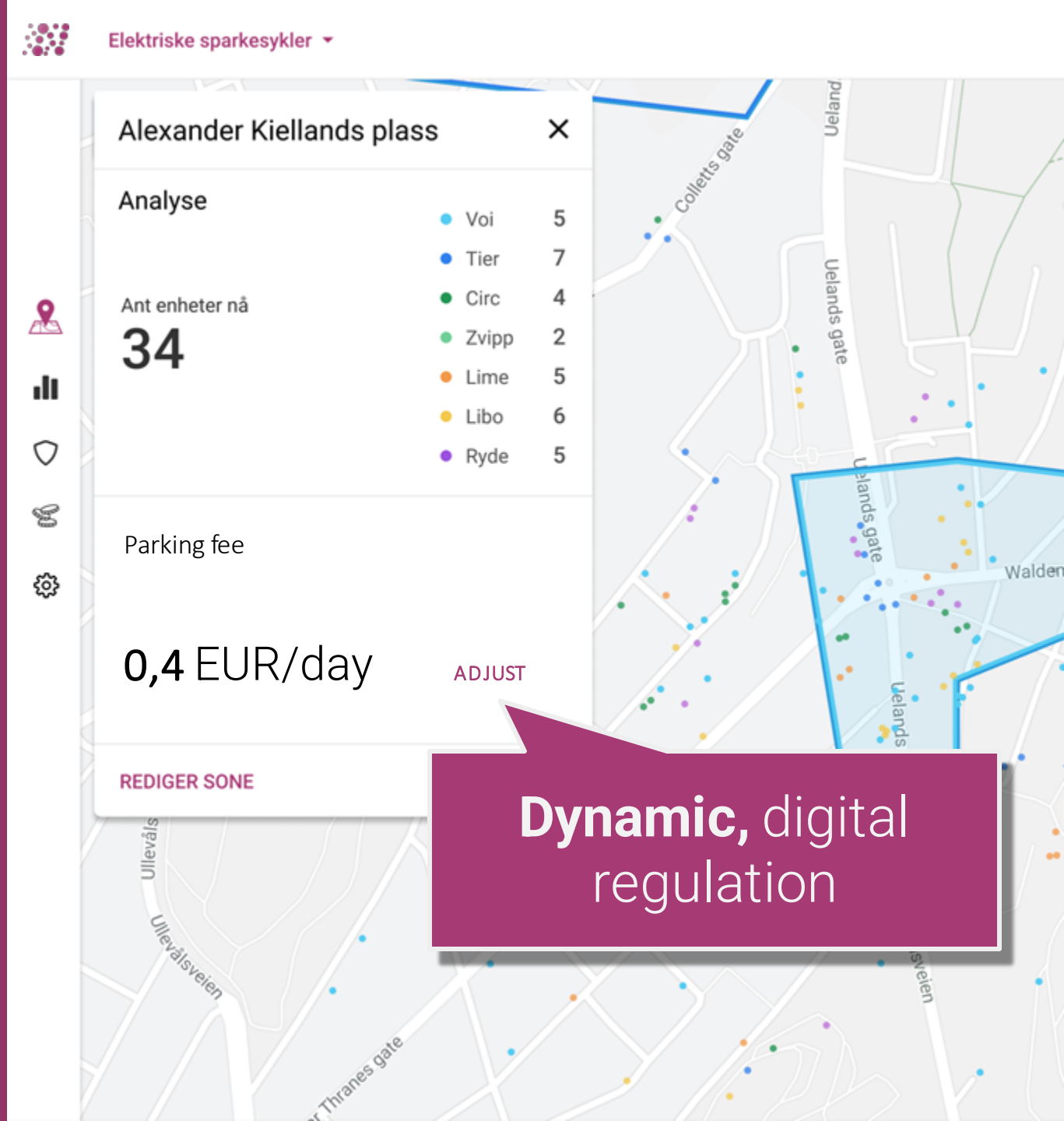
From **untidy, unsafe streets** and **poor accessibility**...

Photo by Christina Spinnen on Unsplash

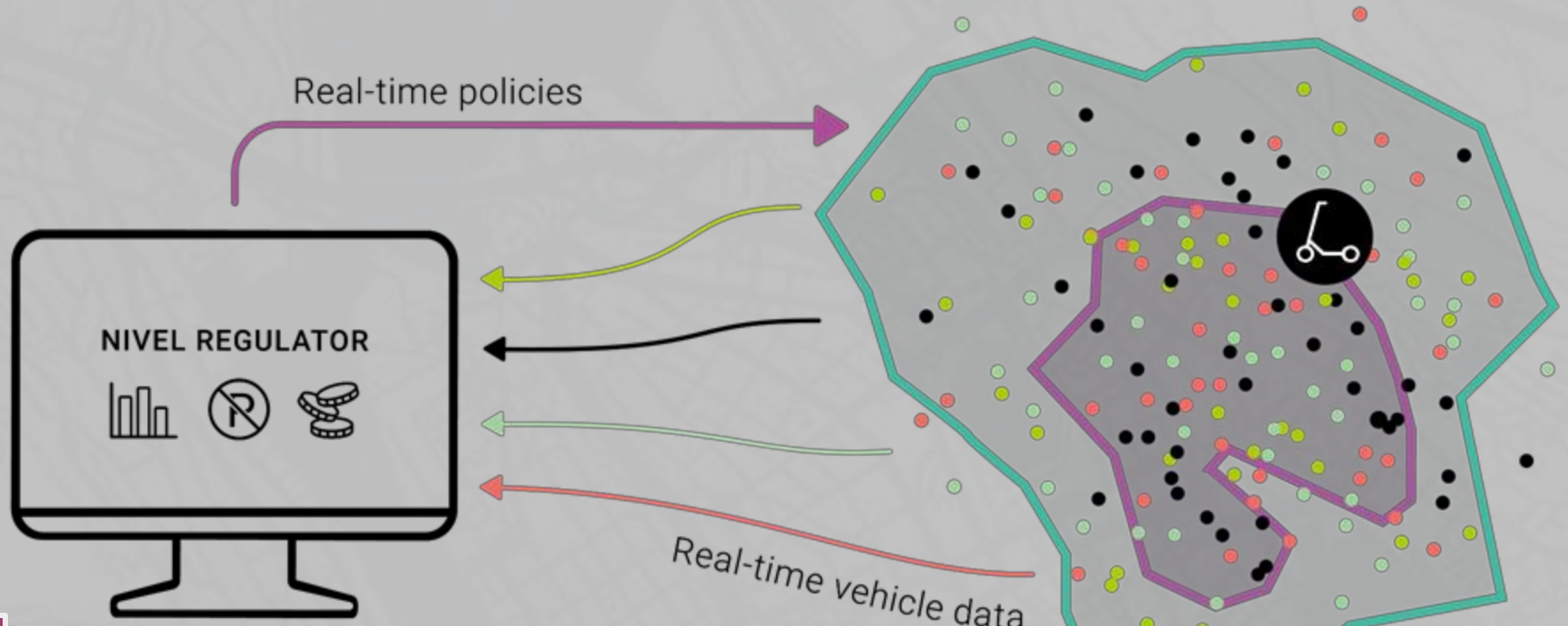
...to a good **mobility offer** and **balanced street** utilization

Nivel Regulator

A **standardised tool** for cities. Enabling cities **regaining control** and reaching their **societal goals**, by putting data to work.



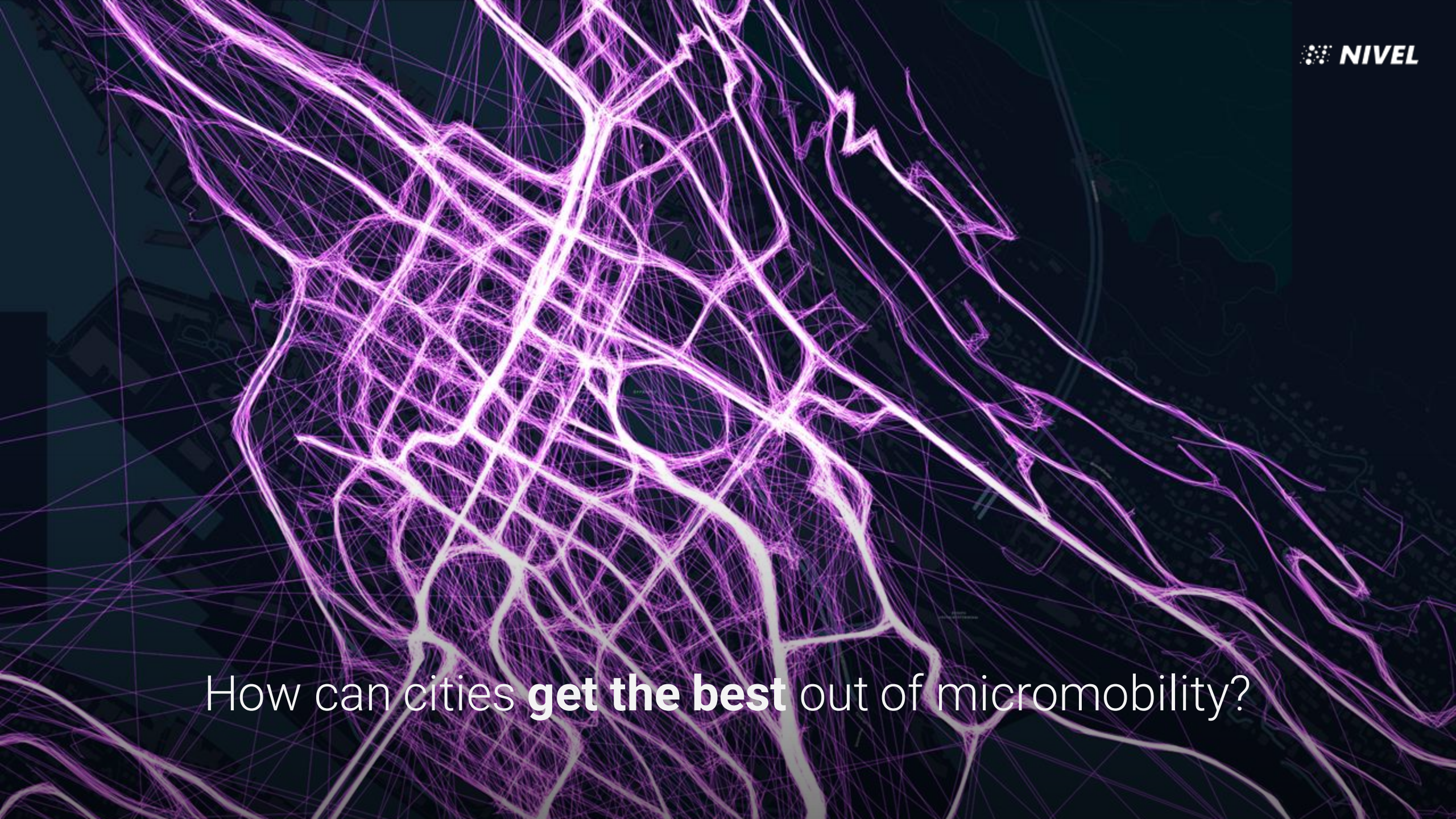
Better cities enabled by **2-way data** exchange

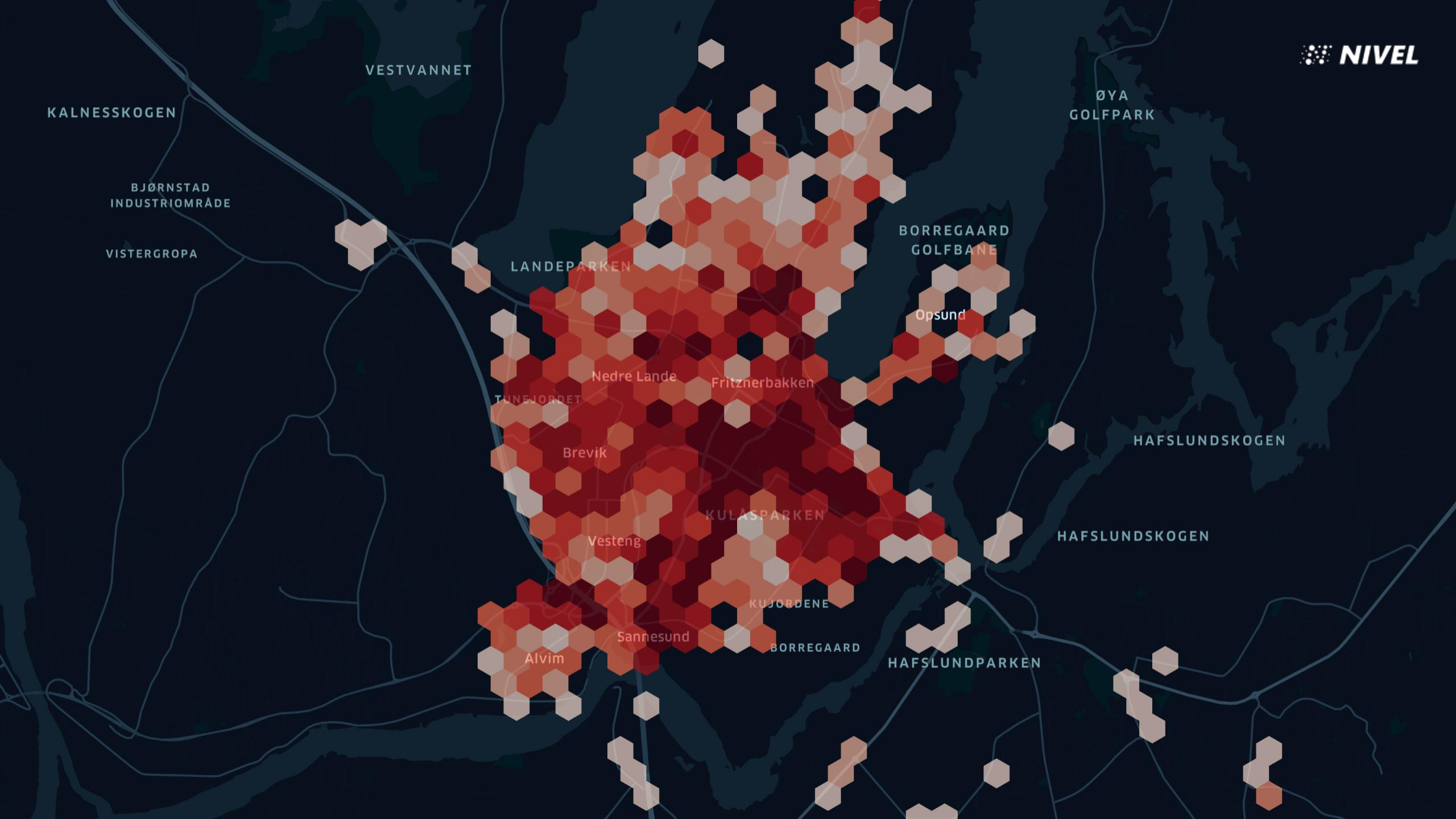


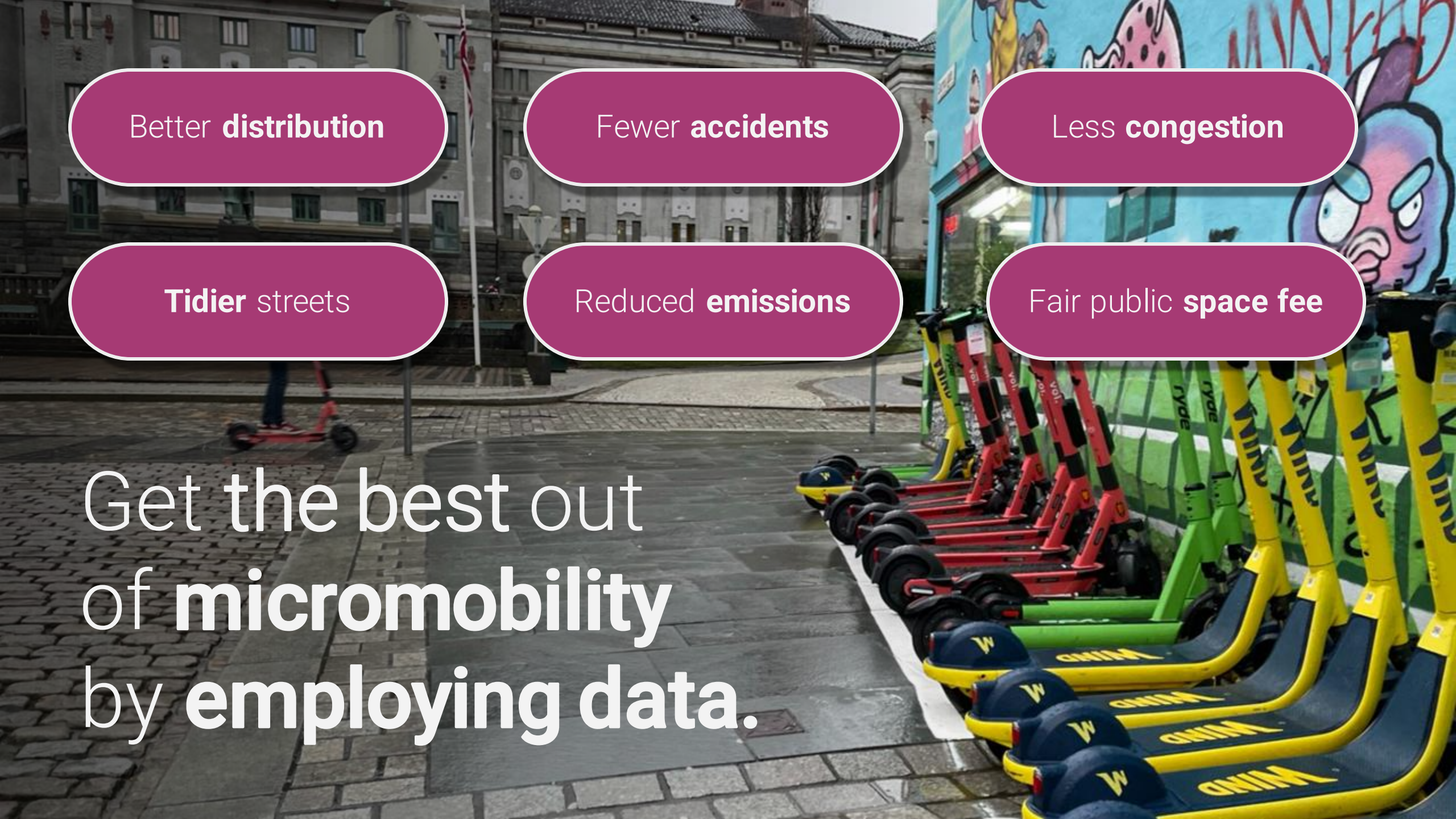
Pushes rules & fees for zones

Analyses mobility data

Calculates fees - or subsidies


NIVEL
How can cities **get the best** out of micromobility?


NIVEL
VESTVANNET
KALNESSKOGEN
ØYA
GOLFPARK
BJØRNSTAD
INDUSTRIOMRÅDE
VISTERGROPA
BORREGAARD
GOLFBANE
LANDEPARKEN
Opsund
Nedre Lande
Fritznerbakken
TUNEJORDET
HAFSLUNDSKOGEN
Brevik
KULÅSPARKEN
HAFSLUNDSKOGEN
Vesteng
KUJORDENE
Sannesund
BORREGAARD
Alvim
HAFSLUNDPARKEN


Better **distribution**
Fewer **accidents**
Less **congestion**
Tidier streets
Reduced **emissions**
Fair public **space fee**
Get **the best** out of **micromobility** by **employing data.**

Pilot project for regulating e-scooters

CITY OF
BERGEN

Bergen

Approx. 285 000 citizens*

5 major operators of shared electric scooters

Estimated ~6000 e-scooters on the street

~8000 in the late summer

CITY OF BERGEN

*Municipality

Pilot project

Partnership with operators

November 2020 – April 2022

Main objectives:

- To ensure **safety, order** and **accessibility** for everyone in the streets and urban spaces.
- Learn more about how micromobility can make a positive contribution to the city’s transport system.

…through developing and testing a digital tool for regulation

Why a pilot?

No law or local regulations existed

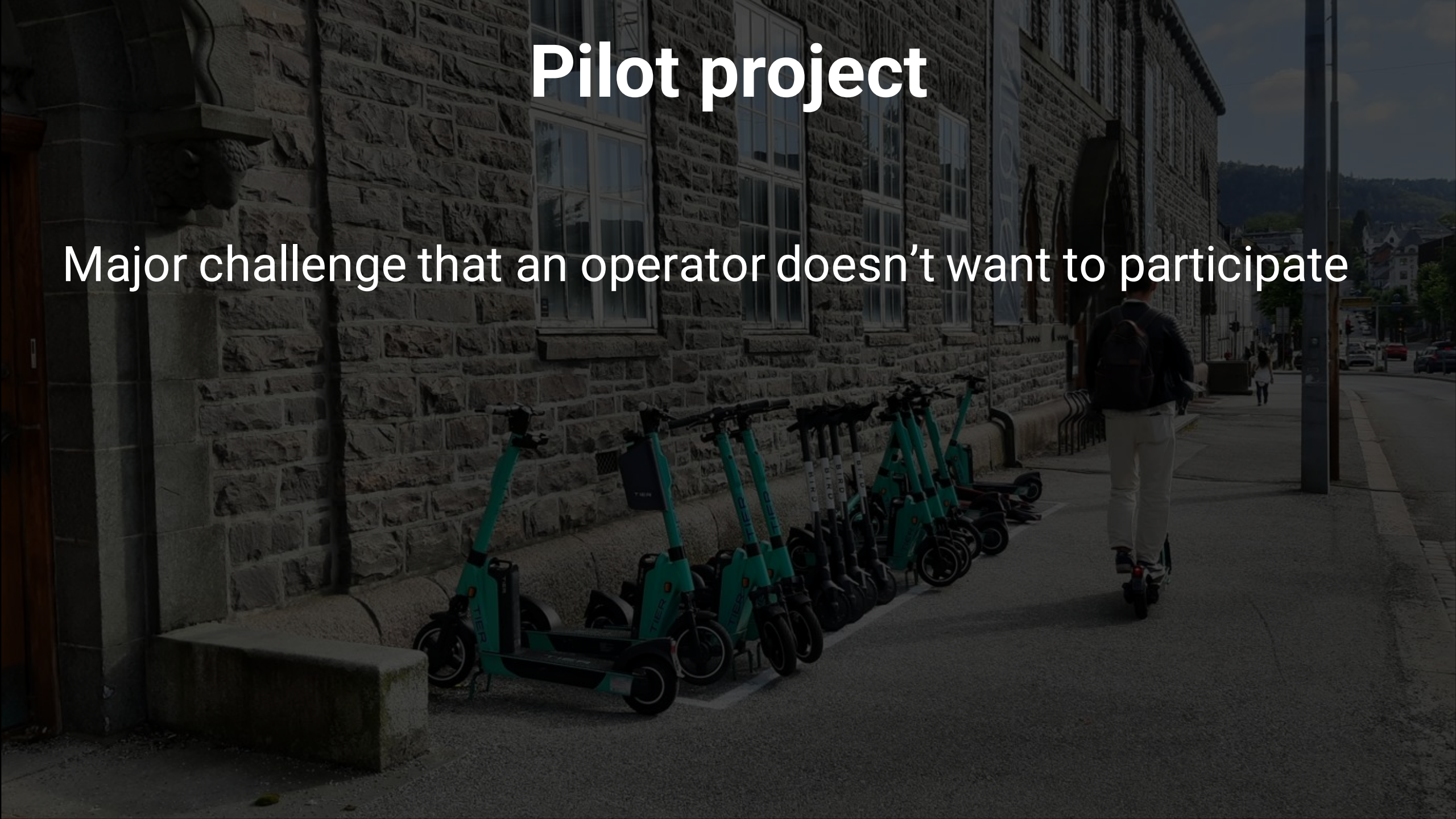
- Cities couldn’t regulate or deny shared e-scooters
- The knowledge acquired forms a basis for the local regulations

Regulation through cooperation

Can act quickly - Often don’t need permits

Pilot project

Major challenge that an operator doesn’t want to participate



Operators

TIER

voi.

Bolt

BIRD

Pulled out

WIND

Started later

Citiride

Started later

getlon

Not in pilot

ryde

Public Space Rental Fee

Also called a street rent / parking fee

Common practice for other use of public space

Public Space Rental Fee

Cost per scooter parked

- Not while in use

Calculated on a minute basis

Can be negative fee

- "Subsidize" for certain areas

Zone	Fee (per day per scooter)
1	4 kr (0.40 €)
2	2 kr (0.20 €)
3	1 kr (0.10 €)
4	No fee

Transactions | October 2021

Overview

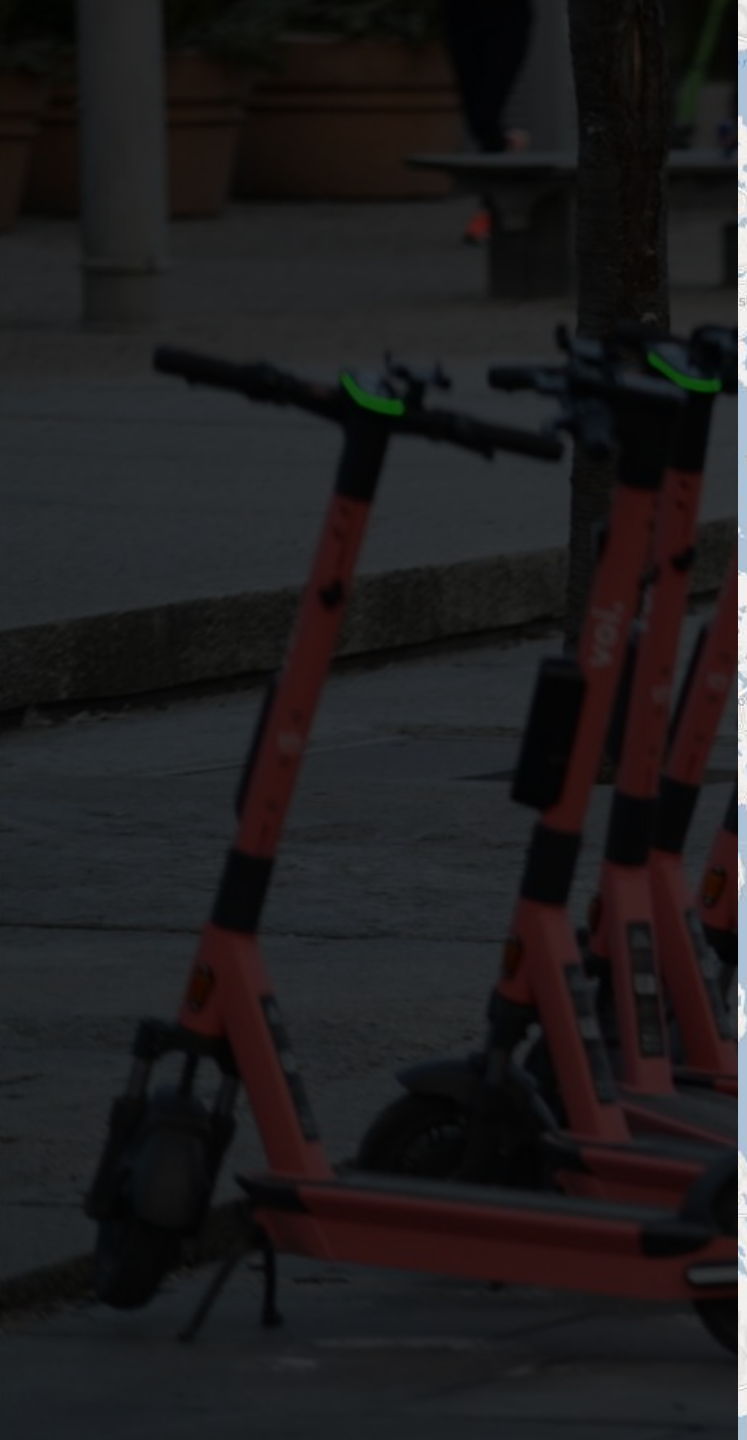
Operator	Street rent	Number of parkings	Parked time (hours)	Fee per day
Bird	[illegible]	[illegible]	[illegible]	[illegible]
Voi	[illegible]	[illegible]	[illegible]	[illegible]
Bolt	[illegible]	[illegible]	[illegible]	[illegible]
Tier	[illegible]	[illegible]	[illegible]	[illegible]
Geton	[illegible]	[illegible]	[illegible]	[illegible]
CitiRide	[illegible]	[illegible]	[illegible]	[illegible]
Total	**211,943.18 kr**	**350086**	**3,608,127.88**	-

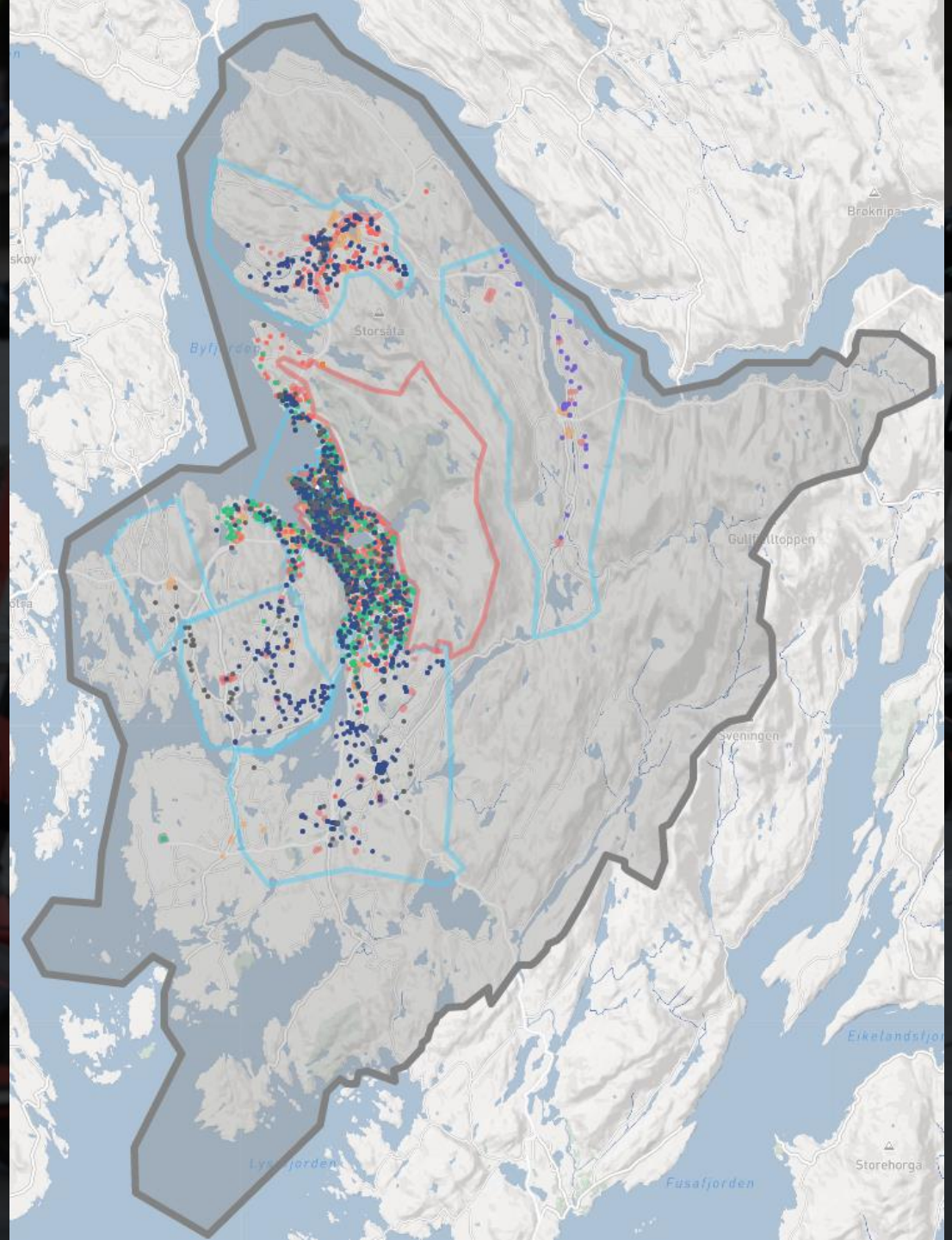
Monthly street rental, calculated by the minute.

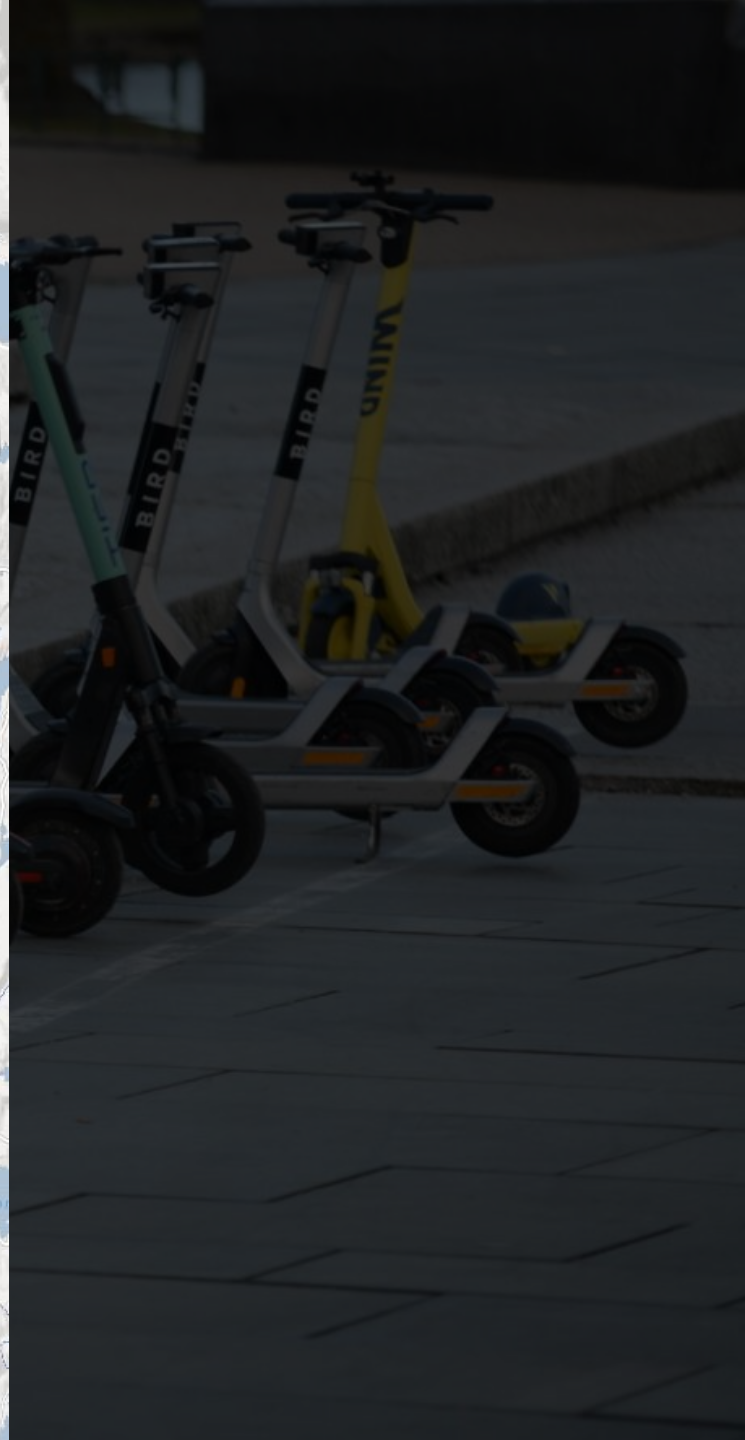
Public Space Rental Fee

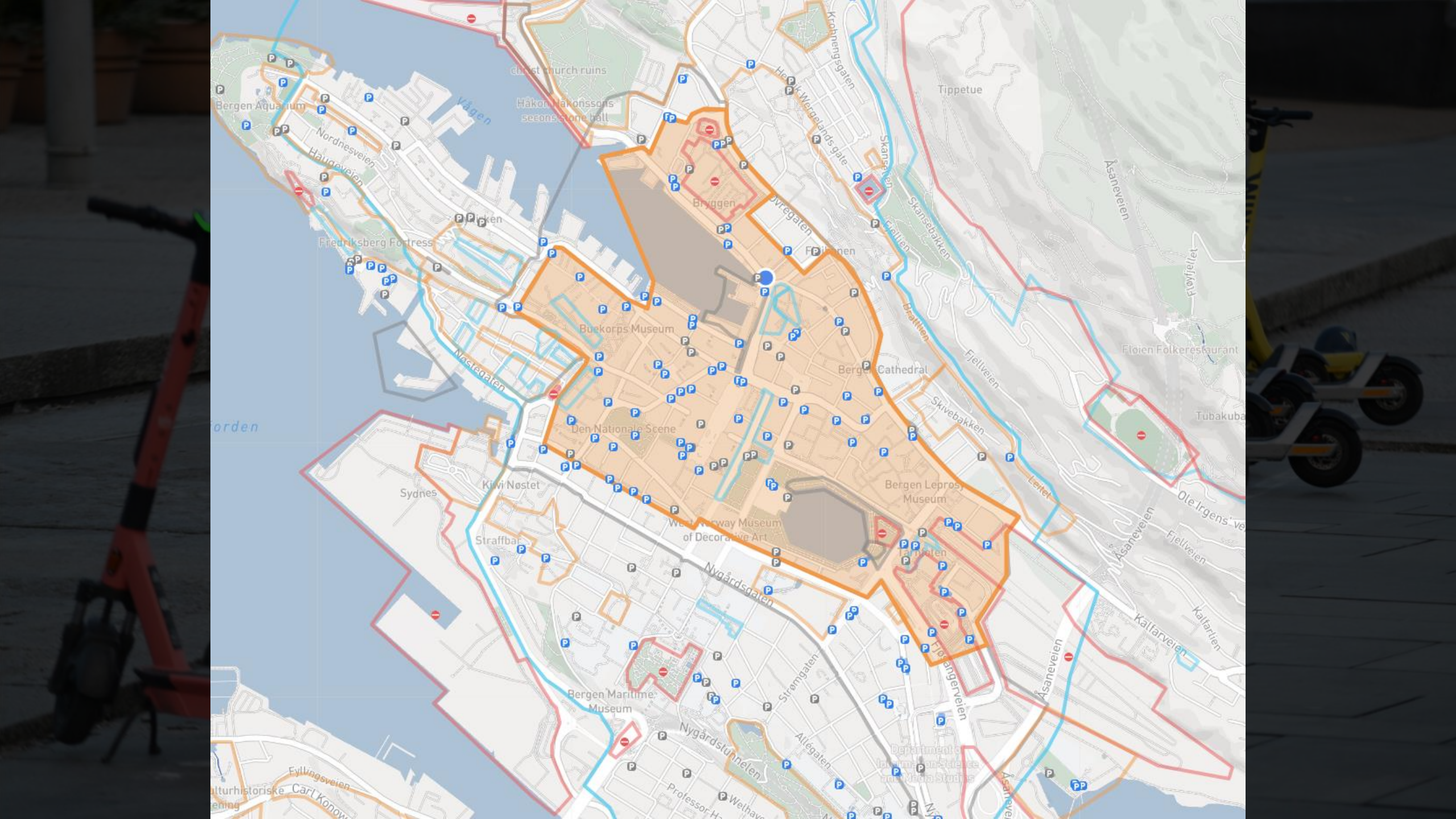
High data quality is required

A new parameter for operators in the fleet optimization.

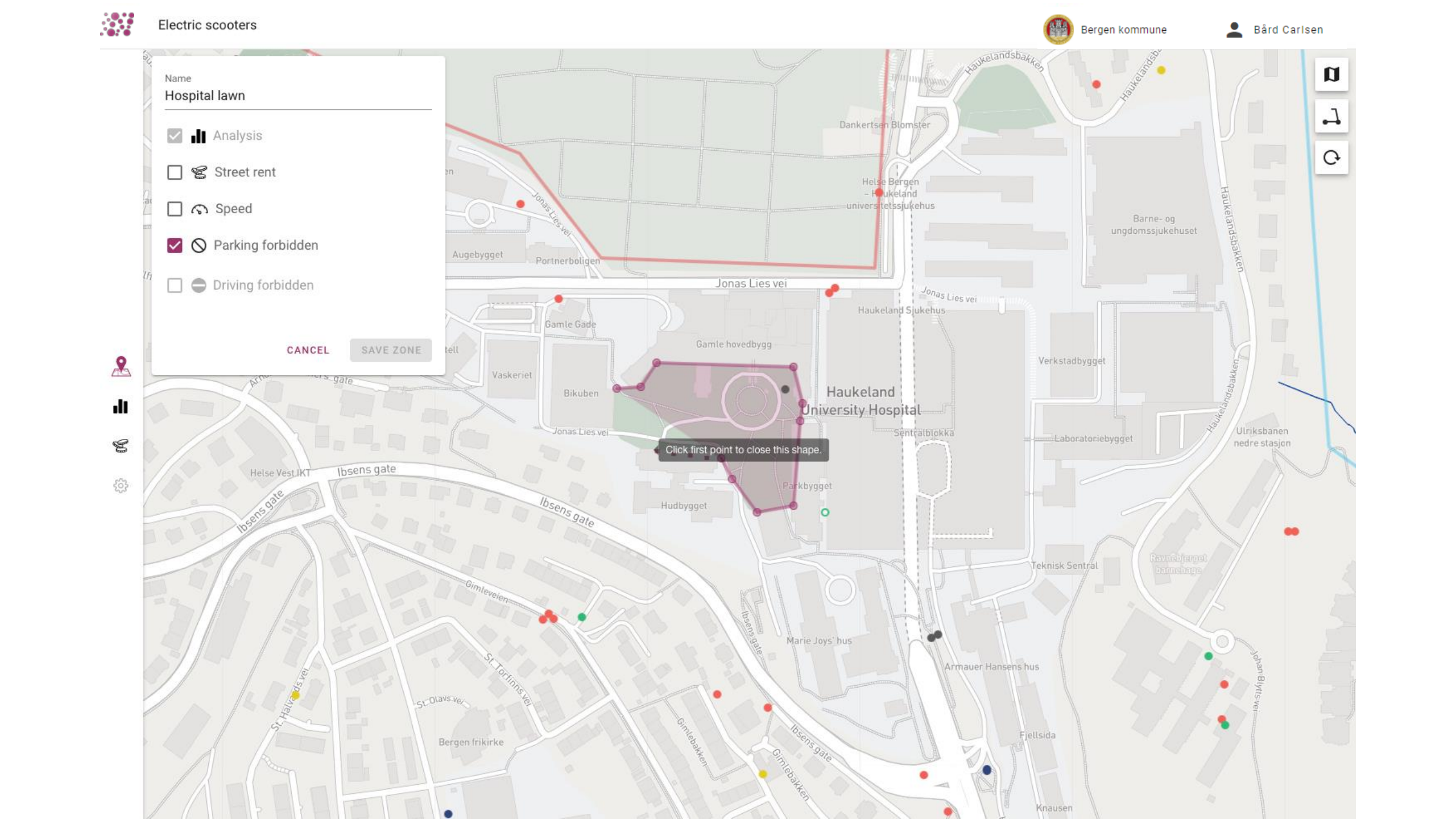



Brøknipa
Storsåta
Byfjorden
Gullfjelltoppen
Sveningen
Eikelandsfjor
Storehorga
Fusafjorden


BIRD
BIRD
BIRD
UNIN



Bergen Aquarium
Nordnesveien
Haugeveien
Vågen
Fredriksberg Fortress
Bryggen
Tippetue
Skansebakken
Åsaneveien
Buekorps Museum
Nøstegaten
Den Nationale Scene
Bergen Cathedral
Fjellveien
Skivebakken
Floien Folkerestaurant
Tubakuba
Sydnes
Kiwi Nøstet
Straffbar
Bergen Leprosy Museum
Nygårdsgaten
Kalfarveien
Kalfarlien
Bergen Maritime Museum
Nygårdstunnelen
Allegaten
Strømgaten
Fyllingsveien


Electric scooters
Bergen kommune
Bård Carlsen
Name
Hospital lawn
Analysis
Street rent
Speed
Parking forbidden
Driving forbidden
CANCEL
SAVE ZONE
Click first point to close this shape.
Haukeland University Hospital
Haukeland Sjukehus
Helse Bergen – Haukeland universitetssjukehus
Barne- og ungdomssjukehuset
Dankertsen Blomster
Jonas Lies vei
Augebygget
Portnerboligen
Gamle Gade
Gamle hovedbygg
Vaskeriet
Bikuben
Hudbygget
Parkbygget
Sentralblokka
Verkstadbygget
Laboratoriebygget
Haukelandsbakken
Ulriksbanen nedre stasjon
Helse Vest IKT
Ibsens gate
Gimleveien
St. Torfinns vei
St. Olavs vei
St. Halvards vei
Bergen frikirke
Gimlebakken
Marie Joys' hus
Armauer Hansens hus
Teknisk Sentral
Fjellsida
Knausen
Johan Blytts vei

Regulator – advantages

Ensure the rules are followed

Common point of contact for 3rd parties

- Citizens, companies, etc.

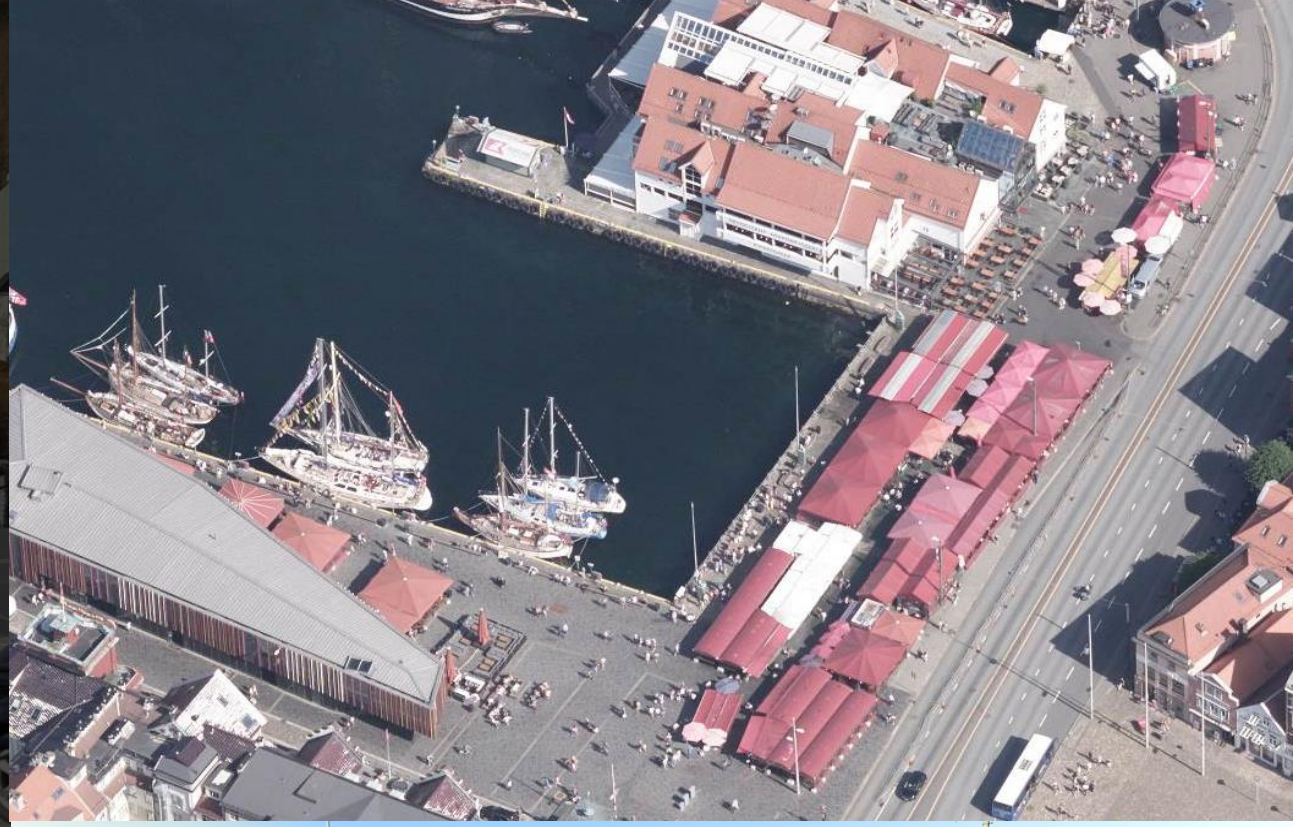
No traffic signs needed

Dynamic

Fisketorget

Example of a dynamic zone

Summer vs Winter



Sakte Fisketorget (inactive)

16 scooters

Max speed **20** km/h

Exception **Mon 10:00 - 20:00**
Max speed **12** km/h

Exception **Tue 10:00 - 20:00**
Max speed **12** km/h

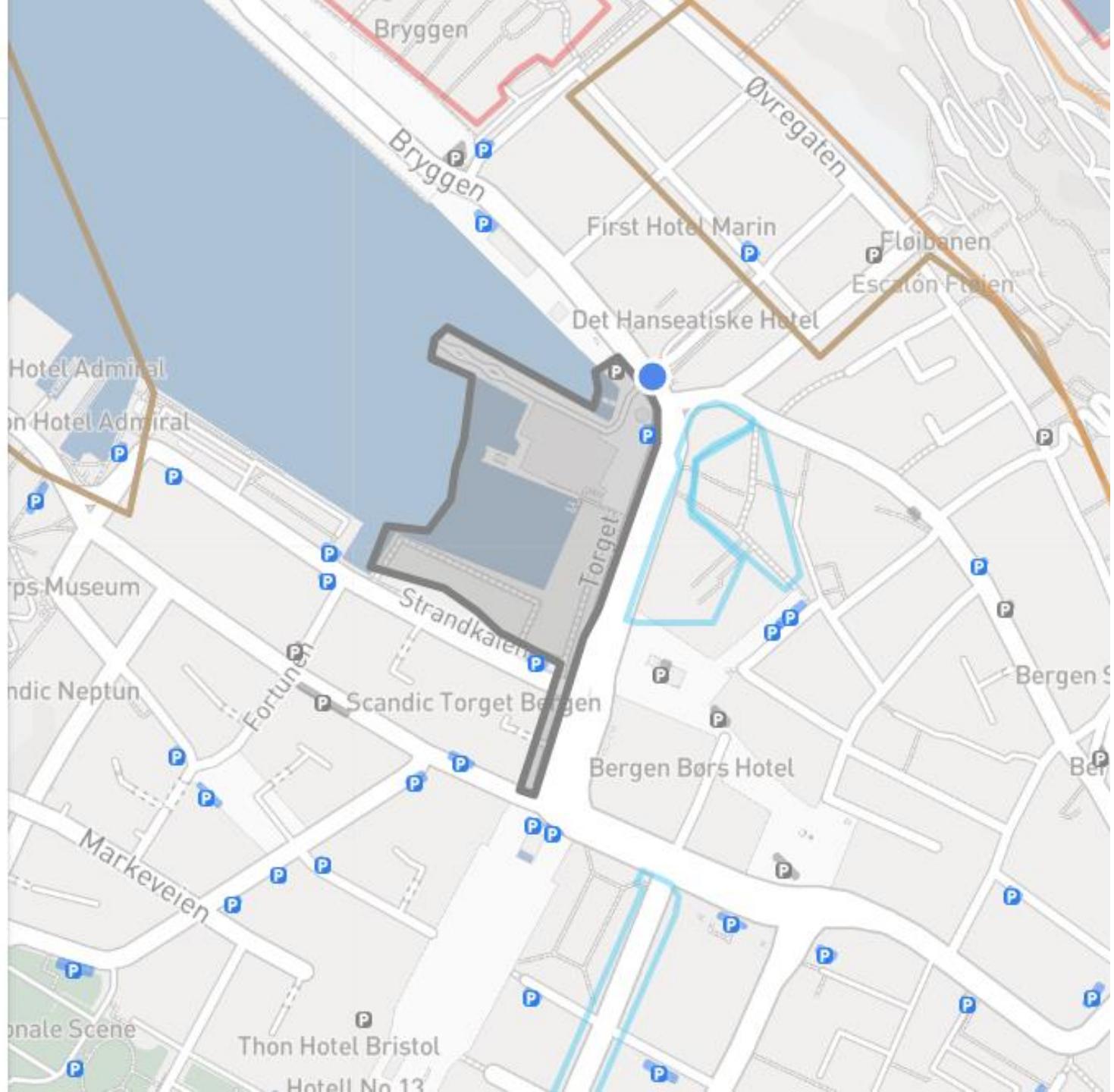
Exception **Wed 10:00 - 20:00**
Max speed **12** km/h

Exception **Thu 10:00 - 20:00**
Max speed **12** km/h

Exception **Fri 10:00 - 20:00**
Max speed **12** km/h

Exception **Sat 10:00 - 20:00**
Max speed **12** km/h

Exception **Sun 10:00 - 20:00**
Max speed **12** km/h



Regulator – challenges

GPS-delay or inaccuracy

- Buffer needed
- Due to tall buildings or roofs
- BLE–beacons?

When to create zones

- Objective and consistent criteria.

Use of standard (MDS)

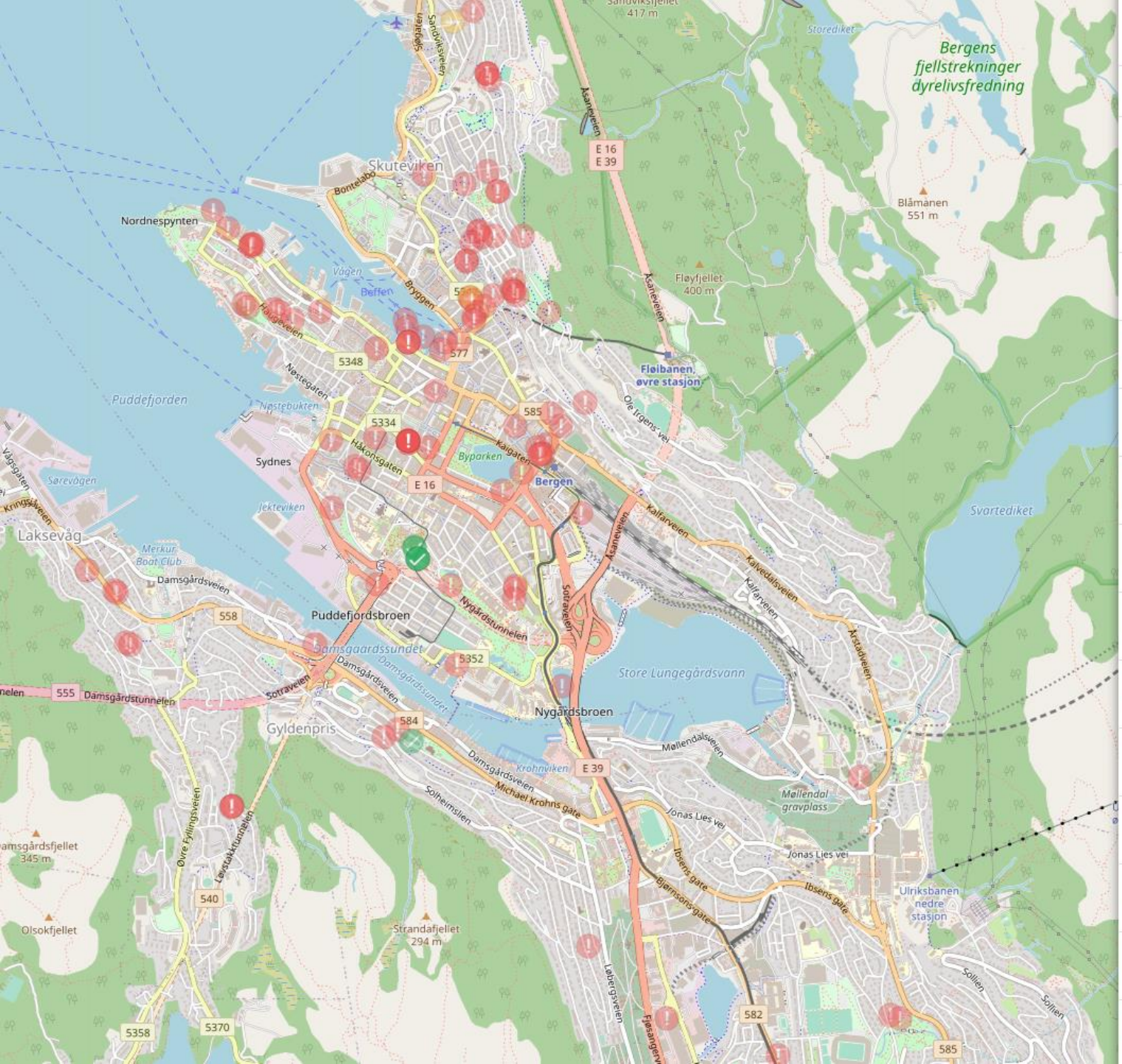
App for reporting poor parking

Data to evaluate operators

- Number of reports
- Type
- Response time

Citizens feel they have an easy way of reporting

Identify problem areas



Poor parkings Bergen

csv

ryde	113664	Active		Today at 09:26
ryde	120711	Active		Today at 09:25
BIRD	6495f2..	Active		Today at 09:24
BIRD	7a88ae..	Active		Today at 09:24
Bolt	353-05..	Active		Today at 09:23
ryde	117790	Active		Today at 08:44
voi.	Z43R	Fixed		Today at 08:23
ryde	104593	Active		Today at 08:16
ryde	111413	Active		Today at 08:09
Bolt	045-33..	Active		Today at 08:08
TIER	AE1389..	Rejected		Today at 08:08
TIER	AE1382..	Rejected		Today at 08:07
ryde	114916	Active		Today at 07:50
ryde		Active		Today at 06:48
Bolt	644-37..	Active		Today at 06:21

Identify problem areas

Pavement reported as blocked several times

Next steps towards **tidier, safer streets** and **better mobility**

1. Demand 2-way **data sharing** to deliver services
2. Set a **price tag** on the public ground
3. **Regulate dynamically:** Adjust zones, fees & rules as you learn

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Thank you

Bård Carlsen & Harald Sævareid

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Interreg North Sea Region ART-Forum

European Regional Development Fund

EUROPEAN UNION