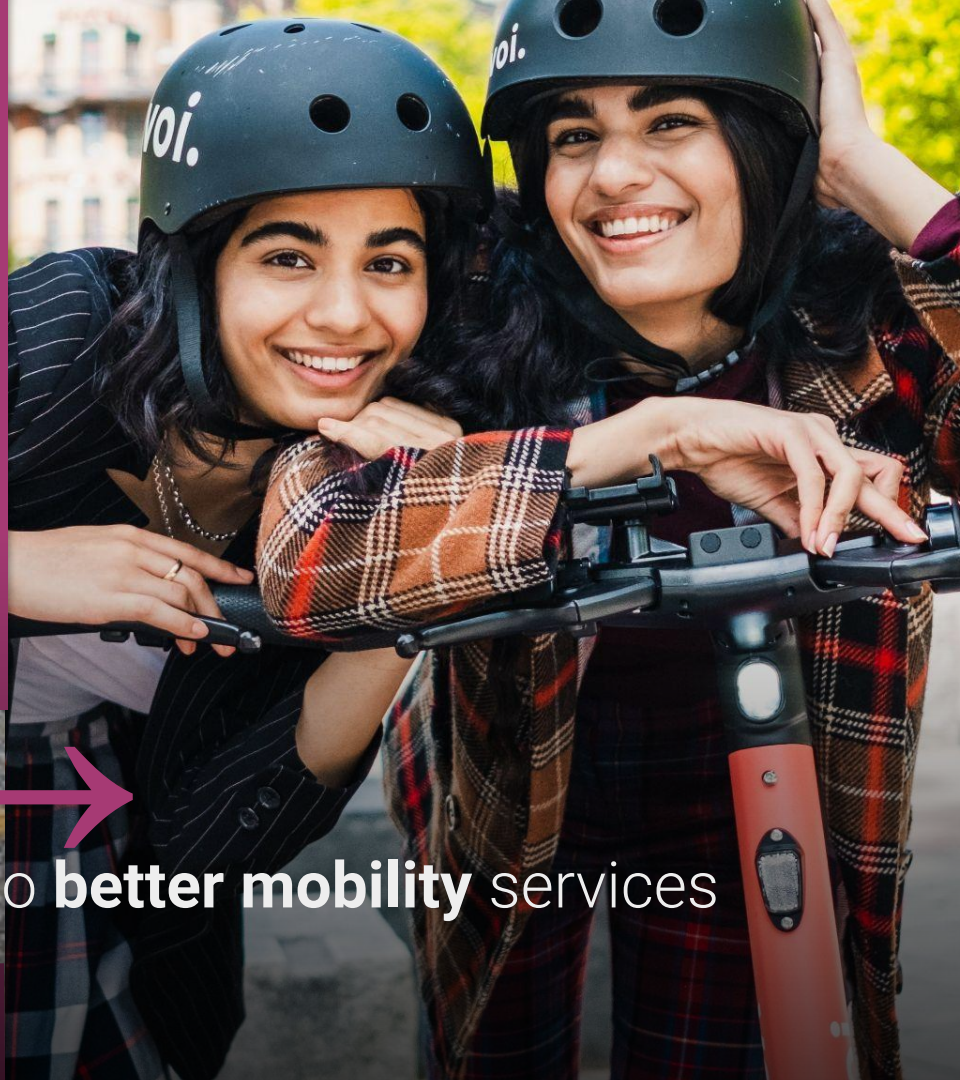




Digital regulation & promotion of connected mobility services.

Harald Sævareid | CEO & co-founder
www.nivel.no +47-92081006 / harald@nivel.no / @NivelRegulator
RT9 Mikromobilitet | Lindholmen, Gøteborg

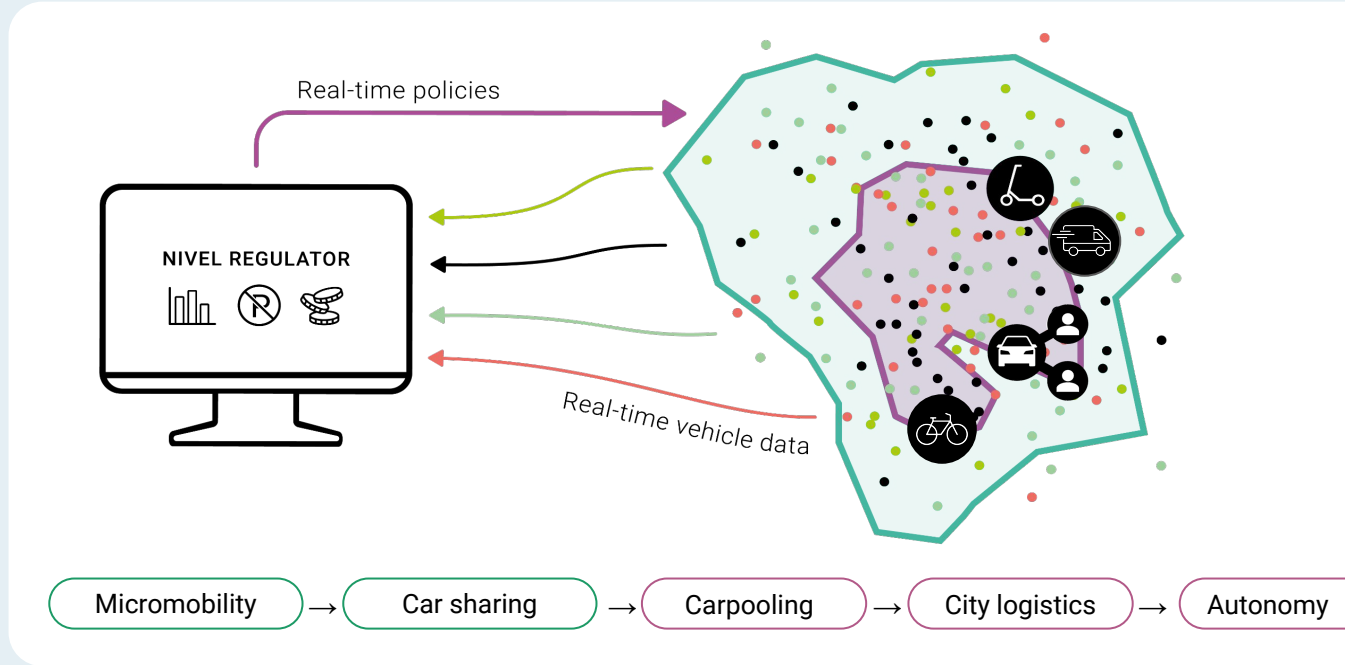




From **cluttered streets** to **better mobility** services

Incentivising connected mobility

We enable **cities & businesses** to **control & promote** mobility services, by putting **standardised data** to work



RT9: Experiences from Norway x 14 ++

1. Regulation principles for better mobility
2. Parking solutions
3. Vehicle caps
4. Dynamic incentives
5. From national laws to local regulations



Real-time

regulator.nivel.no/scooters

No-go zones

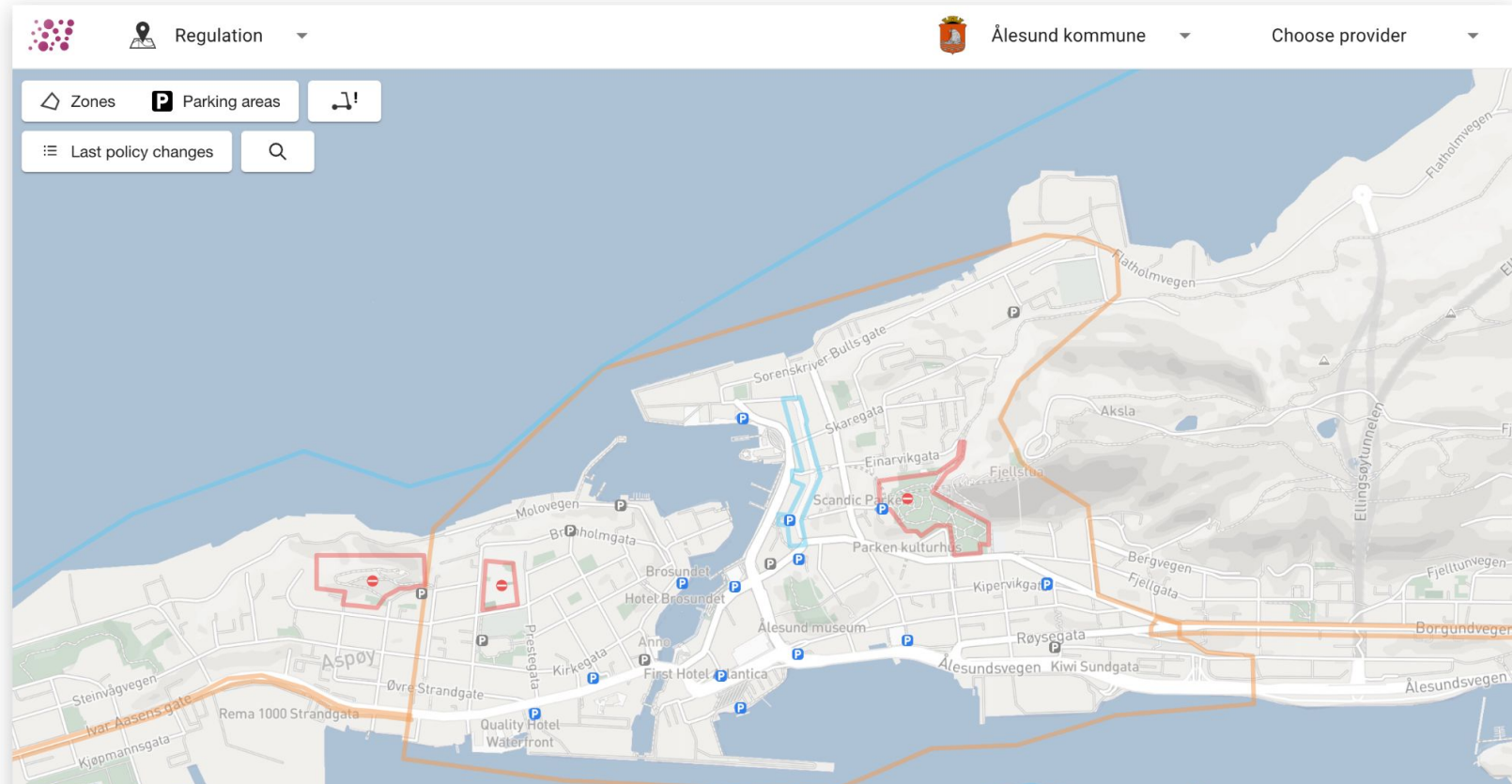
The image displays a map application interface for electric scooters. The top left shows a red dot icon and the text "Electric scooters". A white overlay menu on the left contains the following items:

- Navigation icons: back, search, and close.
- Location: "No-go - Stemmemyren kunstgress 3" with a diamond icon.
- Restriction: "Driving forbidden" with a no-entry sign icon.
- Interaction: "Add comment" with a speech bubble icon.

The map shows a residential area with several red-outlined polygons indicating no-go zones. A blue line highlights a specific path or boundary. The background is a satellite-style map with street names like "Helleveien", "Sparbygarden", and "Kastanveier".

Overlaid on the right is a news article from BA (Barn og ungdom) with the headline: "Fear of ruined football fields: - Kids are using them as playgrounds". The article features a photo of a man in a blue jacket crouching on a green artificial turf field. Below the photo, the text reads: "Barn og unge som «burner» på kunstgressbaner i Sædalen il fører til uopprettelige skader på baner. Foto: EMIL WEATHERHEAD BREISTEIN". The author is listed as "Av Hannah Grace Taylor". At the bottom right, there is a publication date "Publisert: 18.05.21 03:00" and a "Del" button.

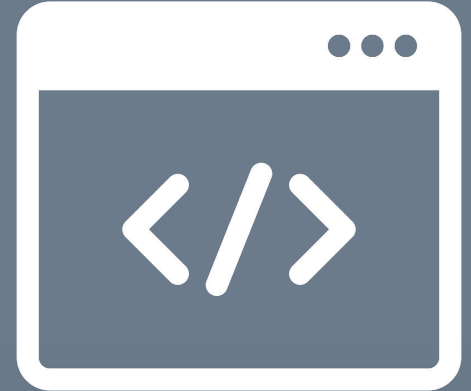
The policies are dynamic



Paradigm shift in governance



Paper rules
[months]



APIs between systems
[minutes]

Better parking



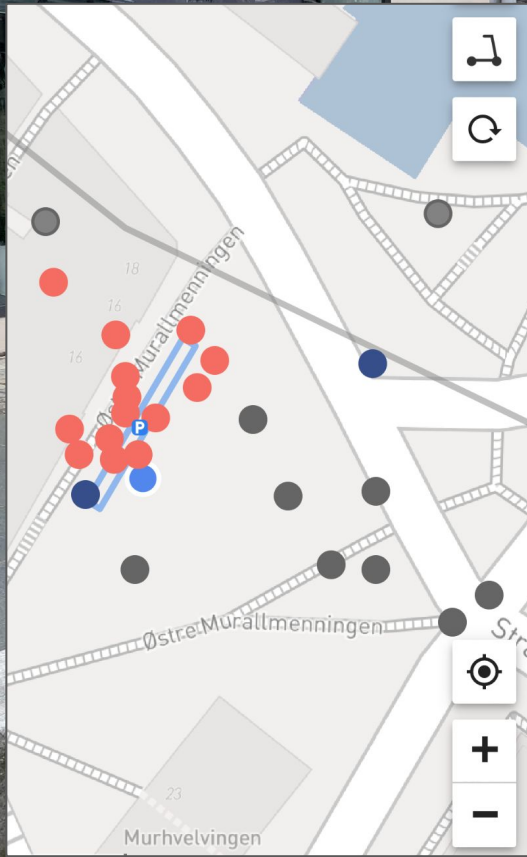
HAVERN FRISØR
Studio Miljøarbeid

HAVERN FRISØR
Studio Miljøarbeid

sundet ten

Bergen Marinesenter





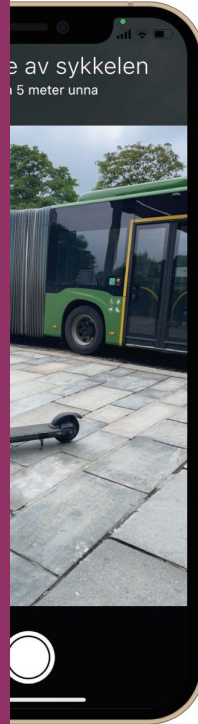


Humans
compensate for
GPS inaccuracy

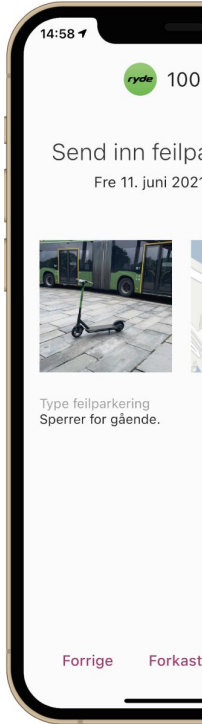
Better parking, with dedicated **parking areas**,
and simple **on-street labelling**.

Poor parkings

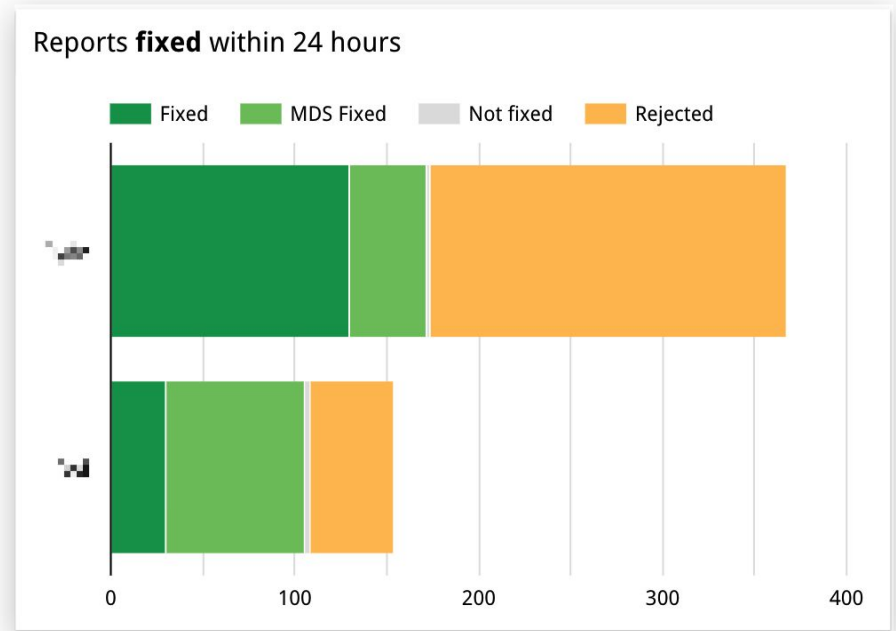
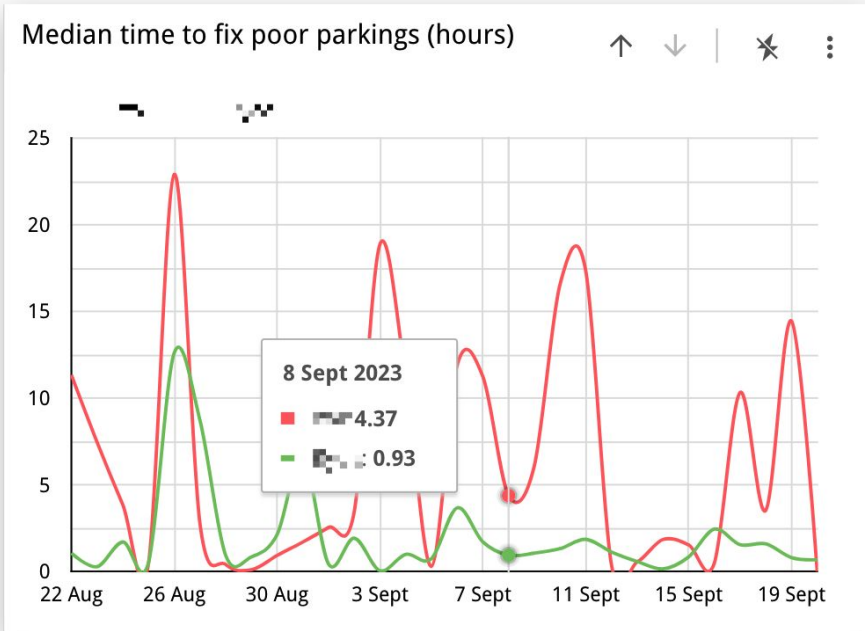
Engaging the public



App for reporting poor parkings, used by both parking guards and the public



Documenting **operators'** response time



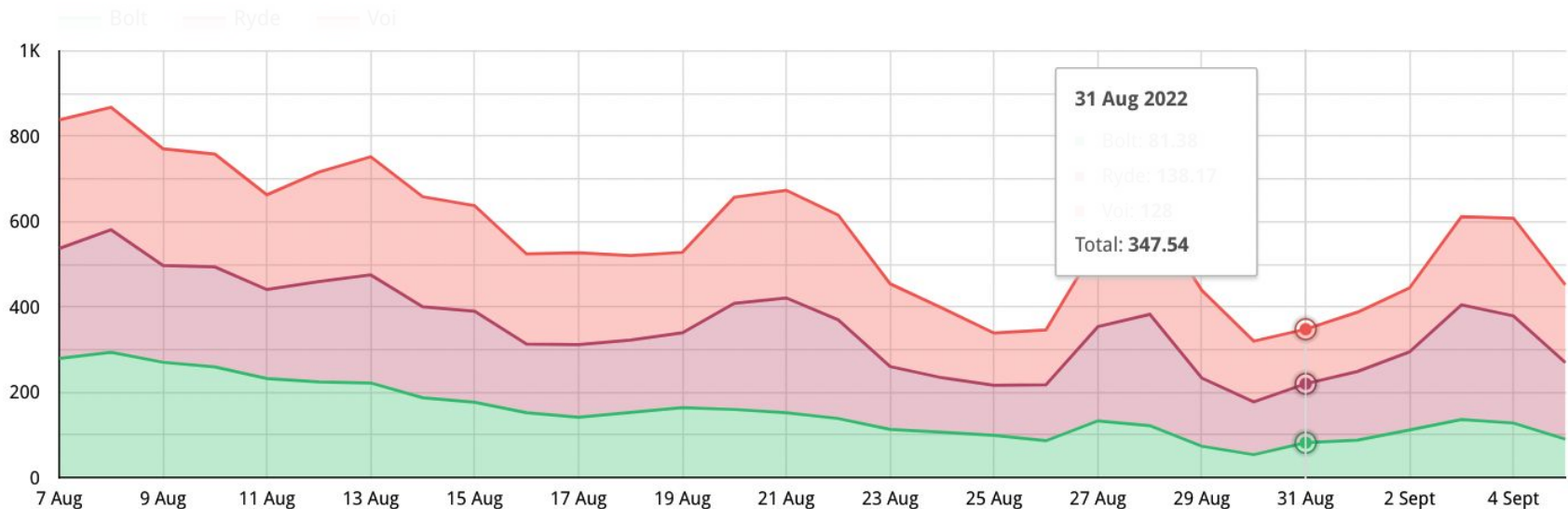
Better distribution

Monitoring fleet sizes

Antall kjøretøy på gaten per døgn

Velg fordelingsdimensjon: Operatør

Velg analysesone: 1 - Indre sent... (1)

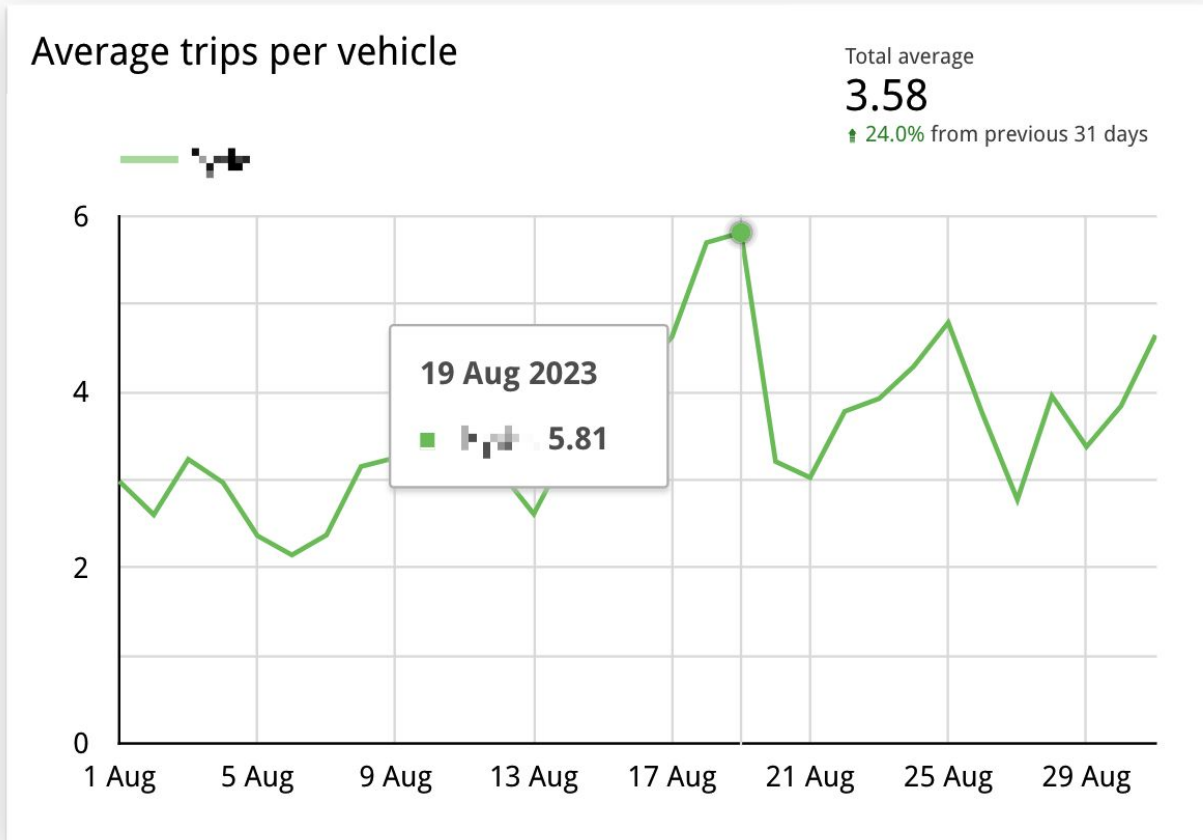




Managing a limited resource

Control, not just understand.

Monitor utilization



Stjørdal: From the train station



Replacing car trips



Norwegian law system

National law

Local regulations

Permits

Digital regulation

2.

Følgende priser skal brukes ved utleie av grunn til mikromobilitetsaktører:

- Sone 1 – innenfor Ring 1: 8 kroner per døgn
- Sone 2 – mellom Ring 1 og 2 6 kroner per døgn
- Sone 3 – mellom Ring 2 og 3 3 kroner per døgn
- Sone 4 – resten av Oslo Gratis

Oslo bystyre,
19. mai 2021

Bymiljøetaten kan endre satsene etter behov, og også opprette mindre soner med ulik prising- og innføre negativ gategrunnsleie for bedre distribusjon.

§ 5. Gebyr

Kommunen kan gi forskrift om gebyr for å dekke kommunens utgifter i forbindelse med administrasjon og tilrettelegging for, samt utgifter til tilsyn og kontroll med, utleievirksomhet regulert i denne loven.

Stortinget,
18. juni 2021

In the meantime...

Dagens industri START BÖRS MARKNADSNYTT BEVAKNINGAR Prenumerera Logga in

MOBILITET

Elscooterbolaget flyr Västerås – har nu Europas högsta avgifter

Tyska elscooter-operatören Tier har beslutat att upphöra med all verksamhet i både Karlstad och Västerås. Anledningen är de höga avgifterna.

Uppdaterad: 22 februari 2023, 14:00
Publicerad: 22 februari 2023, 13:20

Spara

 **Per Mattsson** 
Text



...krav på oss, och det är rimligt. Men om de
...ett öka användandet

Norwegian law system

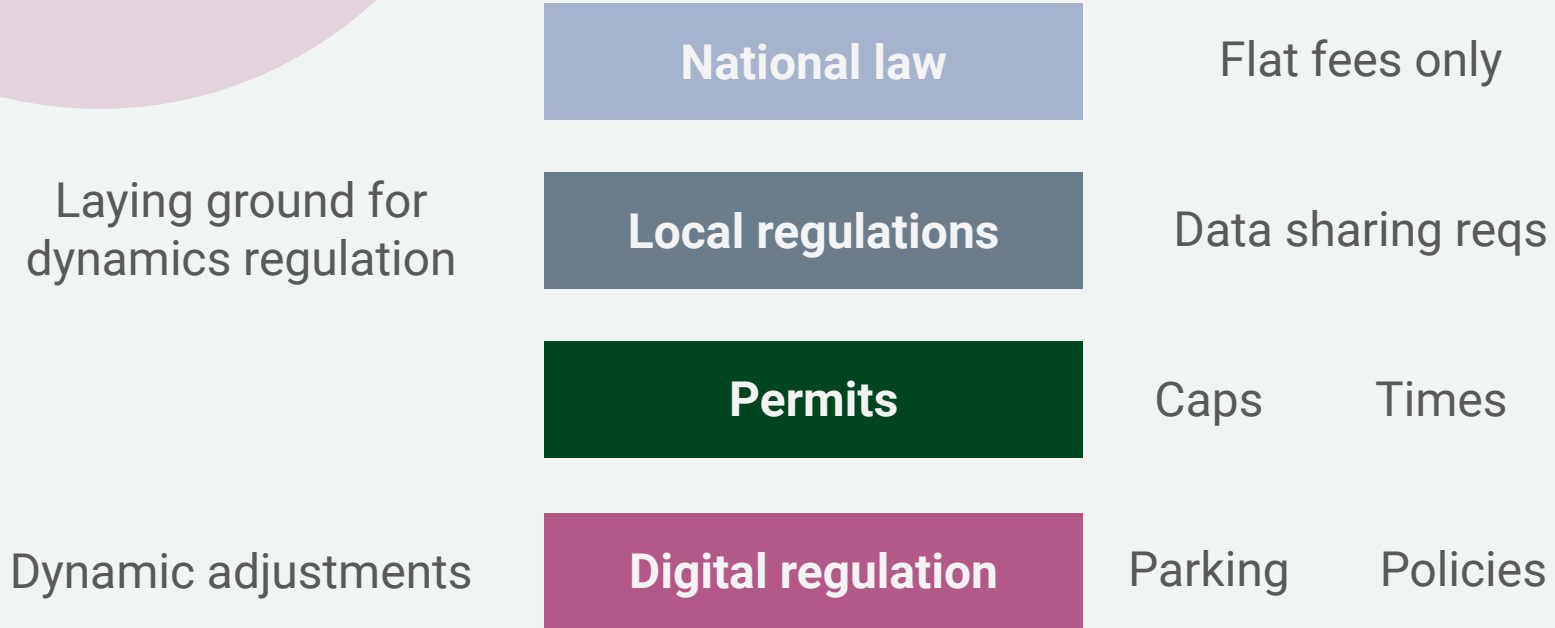
National law

Local regulations

Permits

Digital regulation

Norwegian law system





Forskrift om utleie av små elektriske kjøretøy på offentlig grunn, Sandefjord kommune



§ 1. Formål

Forskriften skal legge til rette for at utleie av små elektriske kjøretøy på offentlig grunn i Sandefjord kommune bidrar til fremkommelige og trygge offentlige rom, effektiv forvaltning, klimavennlige løsninger, og godt miljø og lokalmiljø.

§ 2. Definisjoner

I forskriften menes med

- a. *offentlig grunn*: de deler av Sandefjord kommune der kommunen, fylkeskommunen eller staten er eier av grunnen, for eksempel veier, fortau, parker og torg.
- b. *små elektriske kjøretøy*: små elektriske kjøretøy og sykkel med hjelpemotor (elsykkel).
- c. *utleier*: virksomhet som leier ut små elektriske kjøretøy.
- d. *plassering*: enhver plassering, utplassering, flytting, omplassering eller rydding som utleier, eller representanter som opptrer på deres vegne, utfører med utleiers små elektriske kjøretøy.

§ 3. Krav om tillatelse for utleie av små elektriske kjøretøy

Utleie av små elektriske kjøretøy på offentlig grunn i Sandefjord kommune kan bare skje med tillatelse fra Sandefjord kommune.

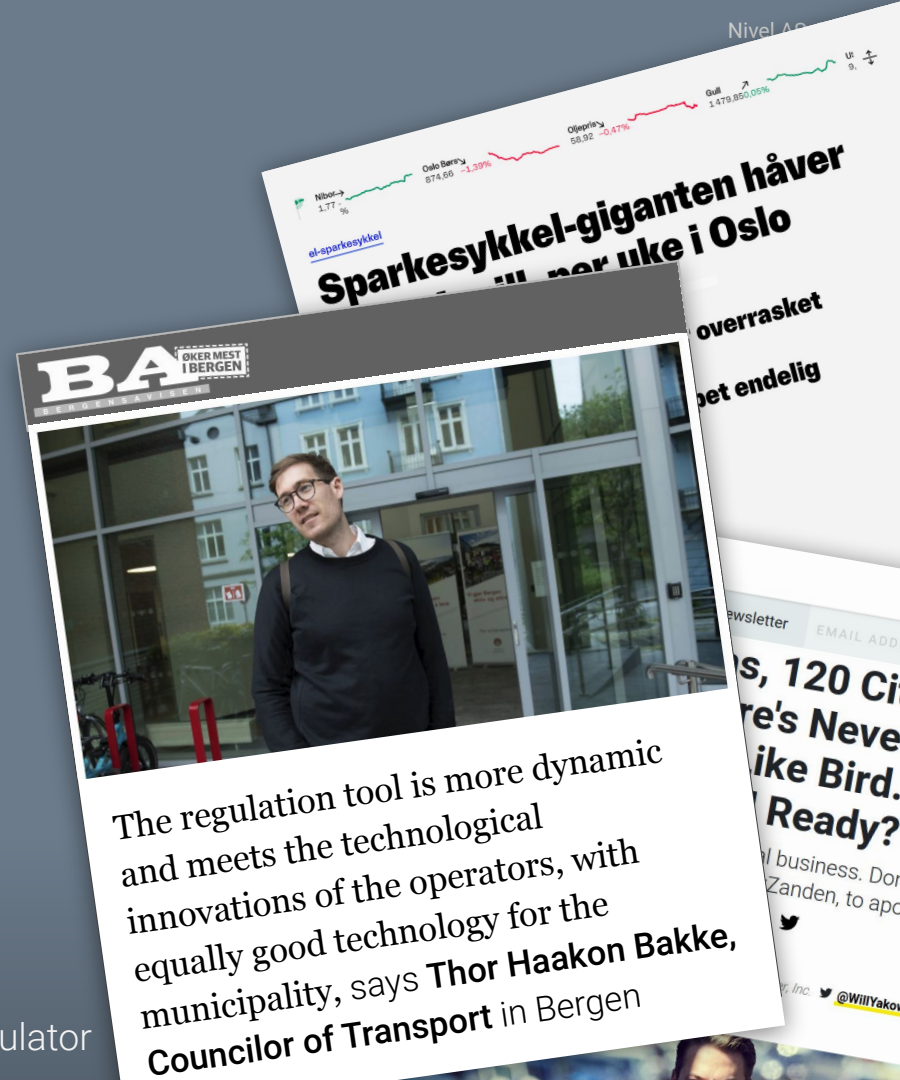
Sandefjord kommune gir tillatelse til utleie av små elektriske kjøretøy i Sandefjord kommune etter søknad. Alle søkere som oppfyller søknadskravene blir gitt tillatelse. Tillatelsen varer i 1 år, og kan forlenges etter ny søknad.

§ 4. Tildeling av tillatelse

Kommunen behandler søknader fortløpende.

Dynamic governance

1. **Digital regulation works**
2. **Sound competition** on equal terms, with **equal rules, the right level** of regulation
3. Strict **parking restrictions** reduces the need for vehicle caps
4. Employ **pricing incentive**





Better cities with digital regulations

Nivel AS // [sverige@nivel.no](mailto: sverige@nivel.no) // +47-92081006 / @NivelRegulator

Data with **impact**,
not just to understand

Backup slides

Questions & discussions

1. How often do you use the regulation system?
2. What is best? Langflytt or kortflytt?
3. Promillegrense eller nattetengning?
4. Could you have differentiated subsidies for bikes vs ebikes?
5. How can you know what is the right fleet size?
6. How can you incentivise towards a more just mobility offering?
7. ...



Interreg
North Sea Region
ART-Forum
European Regional Development Fund



Digital regulation of the connected and automated vehicles of the future



CITY OF
BERGEN

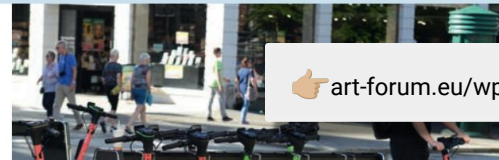
How can regulators make sure that automated vehicles in the future actually make cities more liveable? The digital regulation pilot in the city of Bergen has explored a method to manage large fleets of shared, connected vehicles in a city. Since large fleets of automated vehicles are not yet available, shared e-scooters were used to test the concept. A digital regulation tool has been developed for the pilot. The operators were

required to send live MDS data to the city, allowing real time monitoring of around 6000 vehicles. The City of Bergen used the tool to create geofenced zones to regulate speed, parking and set vehicle caps.

These rules were pushed to the operators digitally through the MDS Policy API, allowing for a flexible and dynamic regulation. Fees for the use of public space were also calculated by the tool.

Some key findings:

- The MDS standard has proven to be reliable and valuable as a tool to manage large fleets of



art-forum.eu/wp-content/uploads/Output_Bergen.pdf

City evaluations: **Cost efficiency & usability**

Nivel's regulation system best meet the City's needs. There is no doubt that [redacted] has a good system, but in way the City of Bergen is using the system, [redacted]'s system feels a bit more cumbersome. Nivel achieves the highest score on user-friendliness.

Professional users
deserve **good**
products at work

Nivel provides a product that stands out clearly as a more refined and user-friendly solution. The product appears more self-service-oriented with a lower degree of complexity. The functionality according to the specifications is on par with the other providers but is better implemented in terms of UX, interface, dashboards, and processes.