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Smart mobility Halden municipality

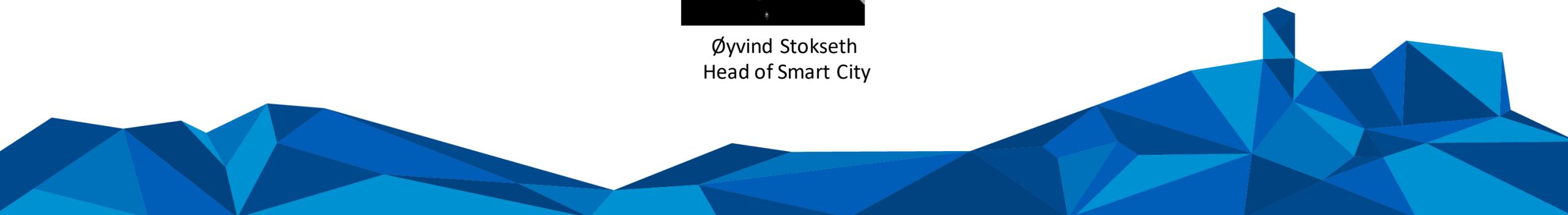
Car sharing as a tool for reorganizing the municipality's vehicle fleet



Smart City



Øyvind Stokseth
Head of Smart City





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About Halden

- Population: 31.373 (2020)
- Geographical location: south-east in Norway
- Area: 642.4 km²

Halden borders

- the Norwegian municipalities of Hvaler, Sarpsborg, Rakkestad and Aremark
- the Swedish municipalities of Strömstad, Dals-Ed and Tanum



Question 2018 : Do we have optimal travels between meetings?



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- *1/3 of the employees got driving allowances for trips less than 4 km (In total 16 000 compensated travels in 2017)*
- *1 million kilometer was driven*
- *Fossil cars only*
- *We did not know how many cars we owned, and how many cars we leased? Neither did we know how much cost we hade for driving allowances?*

Sharing electrical cars and bikes with the citizens



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**The municipality rent electrical cars
08:00 -16:00, five days a week**

**The cars are available for citizens when not used by the
municipality**

All kind of electrical cars

Also electrical bikes

Everything can be booked in the same app

Several locations in the city center



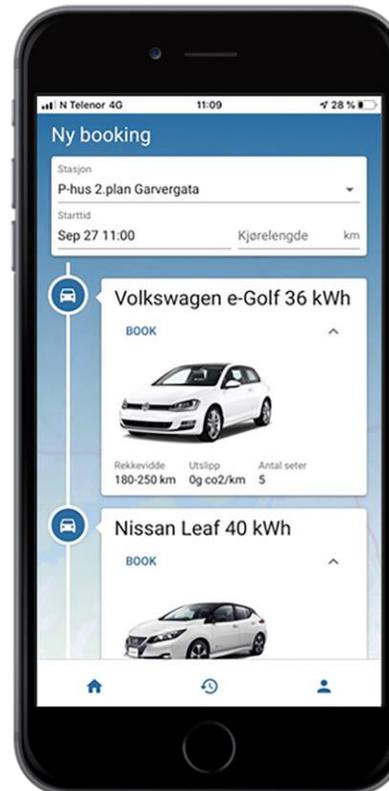
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All kind of cars





Easy to book a car with the app



«The Kinderegg-effect»



Better climate – sustainability



Better economy



Reducing the inequalities between the people

FNs BÆREKRAFTSMÅL



*branded with UN's
Sustainability
Development Goals!*



Developing the project



- ✓ Establishing charging hubs outside city centre at schools where more people live. The cars can be rented evenings and weekends.
- ✓ Cooperation with Østfold University College
- ✓ Directional signs at all locations
- ✓ Using the cars for spesial properties
 - ✓ Food delivery for isolated persons having Covid19
 - ✓ Use of cars in property valuation





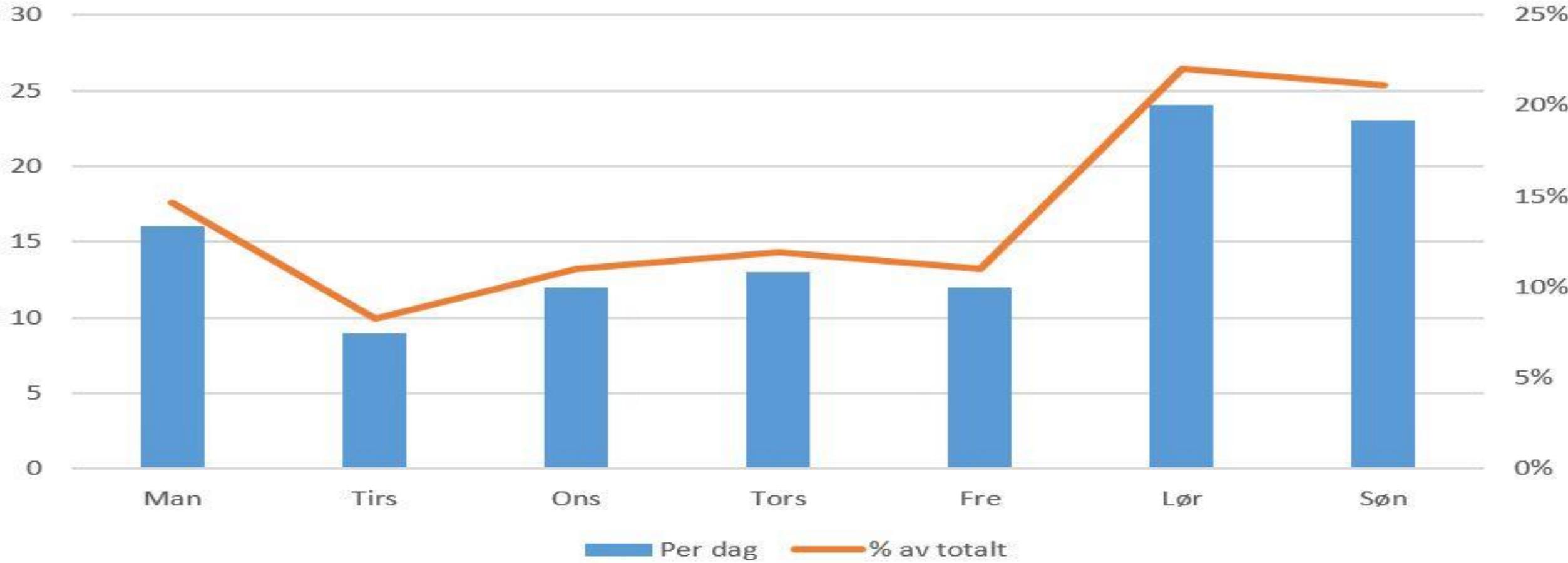
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Volunteer program «Together»

*bring a lonely person on a trip -
the car is on us!*

Booking per ukedag





Challenges

- Get employees to use the cars
- Get residents to use the cars
- Ensure that the you have right number of cars (not too many and not too few)
- Ensure that cars available for booking have enough power
- Find right locations the cars should be placed
- Ensure good enough information for employees and residents
- Have a good organization around the scheme - Who does what?
- What happens if someone occupies a parking slot for sharing cars?



Why use a car sharing solution between the municipality and residents?

Checklist:

- Do the employees need the cars only during normal working hours?
- Are the locations you want to place the cars close to municipal works and at the same time in an area attractive for residents to book a car?
- Do the municipality has large costs for driving allowance
- Do the municipality have areas that can be used

Halden municipality - Pilot Aim

Establish & promote Halden as the pioneer municipality in Norway to enable shared eco-system of private EV chargers



Management

Manage municipality charging points by setting own rules and prices



Sharing

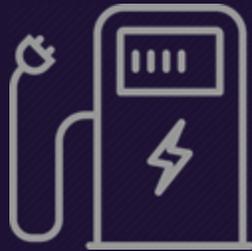
Sharing chargers internally and externally between municipalities employees and citizens



Shared Benefits

Sharing benefits between various organizations in Halden

Pilot in Halden



Charger Provider

Halden municipallity



C H A R G E N B



EV users

Employees with EVs of
Halden municipallity

Citizen with EVs

Overall Scope

Test and validate the sharing of Chargers

Halden municipality pilot project

Main Goal: Manage, Share and create value of private chargers of Municipality

Following are some of the **sub-goals** for the project:

- Quantify the value of sharing existing infrastructure for a Halden municipality
- Develop and enable a charger sharing model with the requirements of municipality and citizens.
- Evaluate best cases for enabling circular economy principle in EV charging
- Conduct usability study, and design eco-system model for shared private chargers



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Some videos

