

POLIS

CITIES AND REGIONS FOR TRANSPORT INNOVATION

ANNUAL
CONFERENCE

2022

30 November
1 December, 2022
Brussels, Belgium



#POLIS2022

Implementing geofencing in Swedish cities

Lessons learned and challenges ahead

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An aerial photograph of a city, likely Stockholm, Sweden, showing a large bridge crossing a body of water. The city is densely packed with buildings and greenery. The image has a purple tint. The text "Sustainable growth of our cities - Geofencing in Sweden" is overlaid in white.

Sustainable growth of our cities - Geofencing in Sweden

Smart Urban Traffic zones - demonstrations



Innovation Zone Hornsgatan
Speed adaptation of delivery vehicles depending on the amount of pedestrians in the area



Digitally issued exemptions for construction transports
Increased load efficiency for heavy mass transports through speed limitations



Safe construction site exits
Increased safety for vulnerable road users at constructions site exits



Speed adaption at Hornsgatan with Geofencing



Smart sensors



Traffic safety for pedestrians



6 delivery vehicles,
1 connected loading zone



Digitally issued exemptions for construction transports



1 concrete truck,
load capacity class 1



Issued permit



Vibrations, impact on roads and
buildings



Safe construction site exits



Increased safety for cyclists



1 test vehicle



Smart sensors



Digital warning signs (VMS)



Photo: CLOSER





GeoSense 2021-2024

- Geofencing strategies for implementation in urban traffic management and planning
=> GUIDELINE
- **Design, trial and evaluate geofencing concepts and solutions** for specific cases in cities
 - within the project
 - from other geofencing initiatives
- User acceptance, policies and legislation, governance

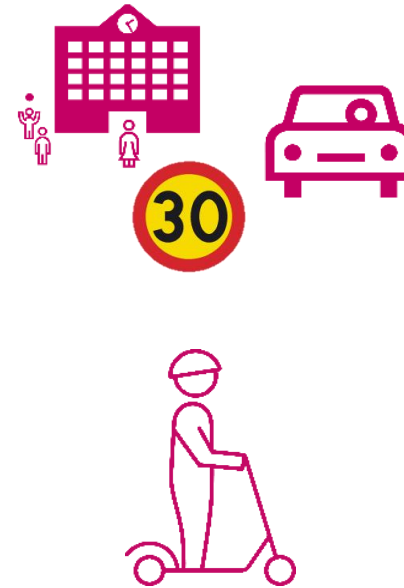
GeoSense – use cases



Gothenburg

Geofencing in public procurement

- Requirements, contracts and compliance
- Tests of low-speed zones to protect vulnerable road users
- Retro-fit of vehicles used for Special Transport Services
- Evaluation of driver experience and acceptance



Stockholm

Unlock the potential of the datasets that enable geofencing applications and other location based services by **reviewing** and **mapping processes and gaps of the existing data flow** of two use cases:

- The city should be a trusted source provider of speed limit data that can be used to geofence the **city's own vehicles**
- The city should be a trusted source provider of data that can be used to geofence **e-scooters** for parking and speed



Munich

Promoting traffic safety by improving parking of e-scooters

- Tests of digital platform to provide local traffic regulations from the city of Munich to the shared mobility providers
- Use of static and flexible (dynamic) geofences
- Before- and after-studies of users, residents and providers to analyse impact and acceptance of geofencing



GeoSence – results and findings so far

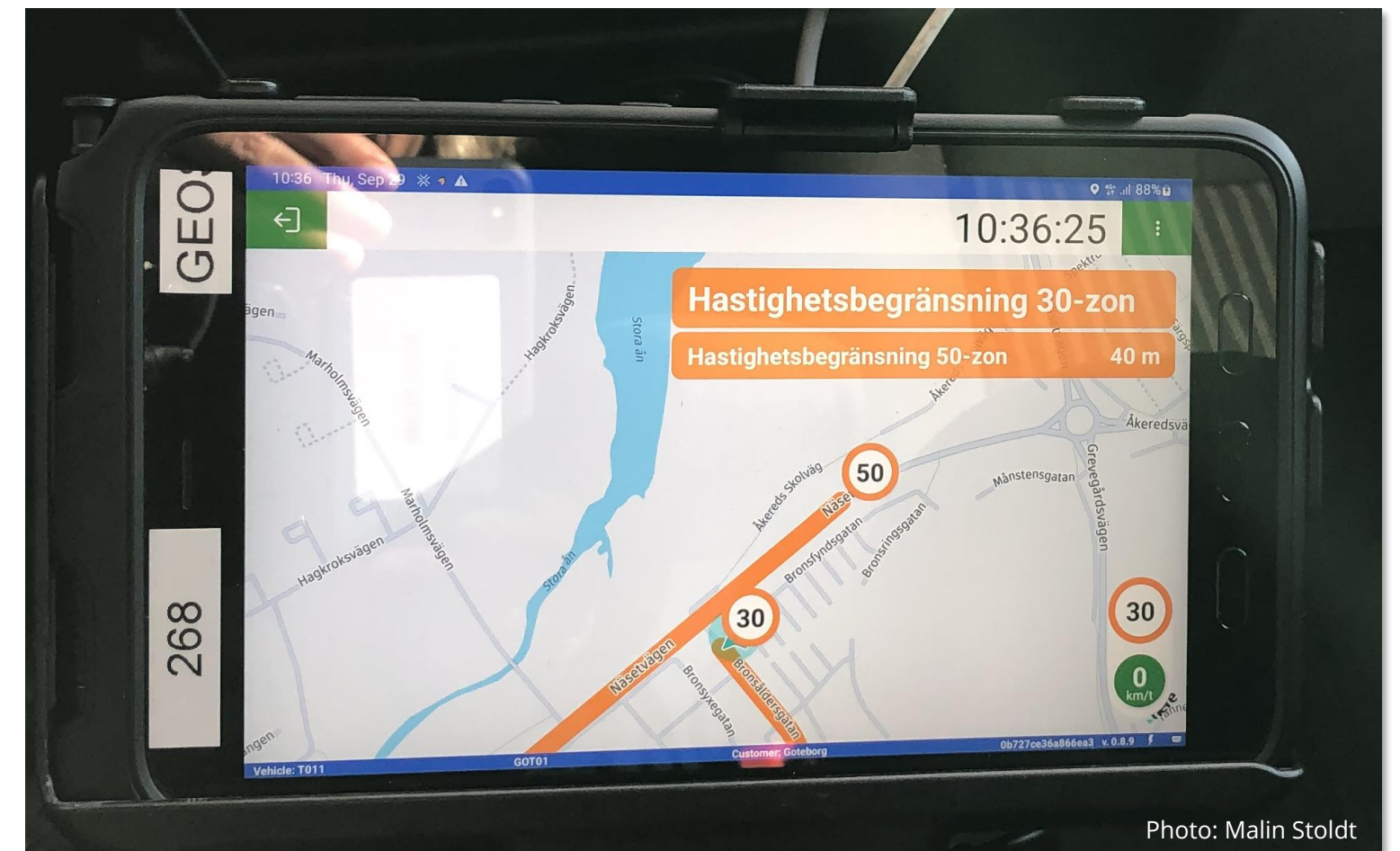
Report "[Challenges and needs of European cities in using geofencing for urban traffic management](#)"

Technical - "The devil is in the details"

- Vehicle models, calibration of equipment, GPS-accuracy
- Zone setup - "design"
- Drivers' experience

Organizational

- Geofencing in procurements
- Include zone management in way-of-working





Challenges ahead

- Eco-system for data exchange in a digitalized transport system
 - National access points (NAP)
 - Standards and formats
 - Data quality
- Continuous collaboration
- User experience
 - Displays, consistent speed information
- Policies and legislation
 - Data collection – GDPR
 - Swedish legislation – permit and signs
 - EU – Real Time Traffic Information (RTTI)
- Push for changes in policies

References

- [National geofencing program](#)
- [Smart Urban Traffic Zones](#)
- [GeoSense](#)

Thank you for your attention!

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