case studies

Parking management system
Mobility | Eindhoven, NL
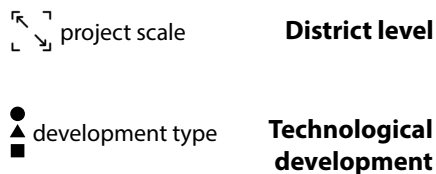

Photo source: Municipality of Eindhoven

A mobility management system which guides motorized transport using 3 large LED display sites, online and via an app. The system will recognize cars using visual license plate recognition and other modes of transport via a smartphone app. Occupancy of parking lots is increased. The most suitable parking lot is recommended and displayed to the user via the screens. If no personalized information are available, general occupancy information are displayed. The system will be able to recognize patterns and adopt the mode of operation. For cyclists and bikes three wayfinders (multidirectional LED screen with route information) were installed.

Measured Impacts

Average parking occupancy percentage per week increased by
11.49%

251 end users are involved

⤢ project scale — **District level**

⬤▲■ development type — **Technological development**

Benefits

☑ Reducing traffic congestion

☑ Improving the air quality

☑ Supporting the sustainable use of land

☑ Promoting sustainable behaviour

☑ Reduced park searching time, extended lifetime of existing hardware, more efficient use of parking space

Lessons learned

- Important to get detailed existing information(hardware, software, infrastructure) with all the vendors and parking systems in the area.
- Understand who the end-user is(residential users/office goers) and what they expect from the management system. What changes are expected in the near future w.r.t service needed in future.
- Useful to have a system which can work with different vendors as it makes it easier to replicate in different regions.

Challenges

Several vendors operate the different parking spots (system integration is necessary, proprietary APIs). Existing parking management system with existing infrastructure and hardware. Digital infrastructure to connect the parking hardware to fibre optic infrastructure. (e.g.. payment system, cameras etc. Maintaining privacy has been a challenge.

Supporting factors

infrastructural
Parking garages with management systems that needed replacement

legal
A deal with the municipality allowed the developer to decrease the number of parking spaces that would have been required in a mixed use area by law - by developing a smart management system. It makes existing analogue hardware digitally controllable.

geographical
Eindhoven – Strijp-S

partners
Mobility S as a parking reservation service provider through permits. Data collected like license plates provided to Mobility S. Real estate company has a major share in the management company.

Contacts

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