Introduction

- In European cities, and specifically in France, a large percentage (from 70 to 80%) are double-parked deliveries.
- Such behavior creates congestion, pollution and conflicts between road users.
- Delivery Areas were created to improve delivery drivers’ work, and to decrease congestion.
- Nevertheless, deliveries continue to be double-parked, as the delivery areas are regularly occupied by non-authorised vehicles (mainly private cars).

New approach: delivery operators can book Delivery Areas for a limited period in advance and adjust the reservation during the delivery round.

Delivery Area Booking-based process

System Architecture

2. Guided CESNA, a multi-agent based system organizing a computational process with distributed negotiation, allowing static delivery round preparation and dynamic adjustments, if necessary.

3. CEMAVIL, an in-the-field information system that collects occupancy information by in-road sensors, and allows different users (delivery professionals, private drivers, etc.) to receive occupancy information.

Additional services: energy delivery, manipulation equipment, shared lockers, etc.

Modularized solution

Solution based on three modules. It can take into account another one (ad hoc round deliver elaboration software of a freight operator).

1. SyGAL, Interactive system for Delivery Areas booking management, a web-based system able to manage delivery area reservations and to deliver this information in a mobile and distributed way to different actors (logistician & delivery driver) to in-lorry integrated devices and/or personal devices (Smartphone, tablets, etc.).

Conclusions

A proof of concept prototype is working, a real in medium-sized city implementation is yet to be carried out.

Main references