BEMOBILE

Urban Access Control
DISCO project and Belgian Cities

Bart Lannoo, 27/03/2024

BE-MOBILE INTRODUCTION

Market leader in the Benelux for **smart mobility solutions**

- **145 employees**, mainly spread over Belgium (ca. 110) and The Netherlands

- **Leading mobility platforms**: traffic information, traffic management, C-ITS, parking and access management, tolling, fleet management

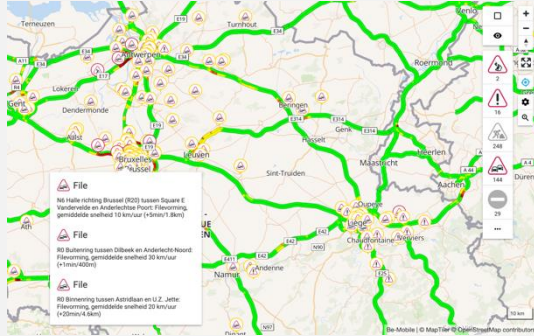- **Four community apps**: Flitsmeister, Truckmeister, 4411, Sway.

- **Four running EU projects**: SCALE-UP [H2020], SYNCHROMODE [Horizon Europe], DISCO [Horizon Europe], C-ROADS Antwerp-Helmond [CEF]

MOBILITY PLATFORMS

Traffic information & analysis

Information on travel times, events, density, jams & historical, real-time and predictive traffic analysis
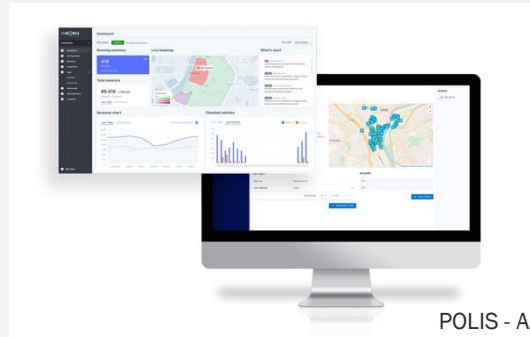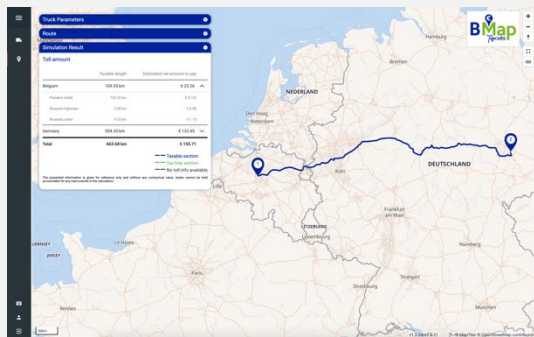

Traffic management & C-ITS

Guiding traffic by enabling communication between infrastructure, vehicles & road users

Parking, access & toll payment

Parking / access / toll control center for payment & simulation

Urban Access Control

CITIES ARE SETTING RULES TO STEER MOBILITY

Examples from Flanders:

- **Ghent**: Obtain permit for car-free zone and enter all day, except pedestrian zone not between 11:00 and 18.00

- **Antwerp**: Deliver between 07.00 and 11.00. Deliveries after 11.00 are possible, but must request a permit

- **Hasselt**: Deliver between 07.00 and 11.00 in pedestrian zone & also between 18:00 and 20:00 in car-free zone

- **Leuven**: Deliver between 06.00 and 11.00 & 18:30 and 20:30 in pedestrian zone / (un)loading all day in car-free zone
 + different rules for Bondgenotenlaan / Martelarenplein

- ....

LOGISTICS SERVICE PROVIDERS SITUATION

Challenges logistics service providers

- Hire dedicated planners who know all rules

- Keep inventory of digital permits, physical cards to lower bollards

- Often pay fines as certain rules are breached, or cargo cannot be delivered in time

Needs

- Share rules with logistics service providers

- Offer route planner / fleet platform

- Optimize deliveries, adapted to access rules and via hubs if applicable
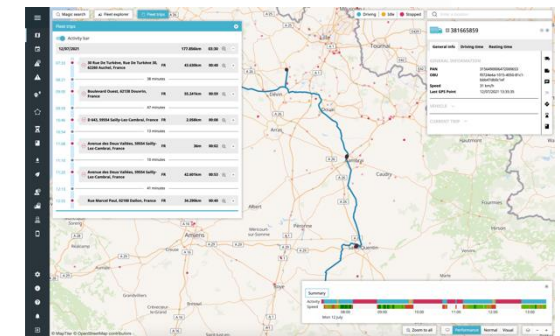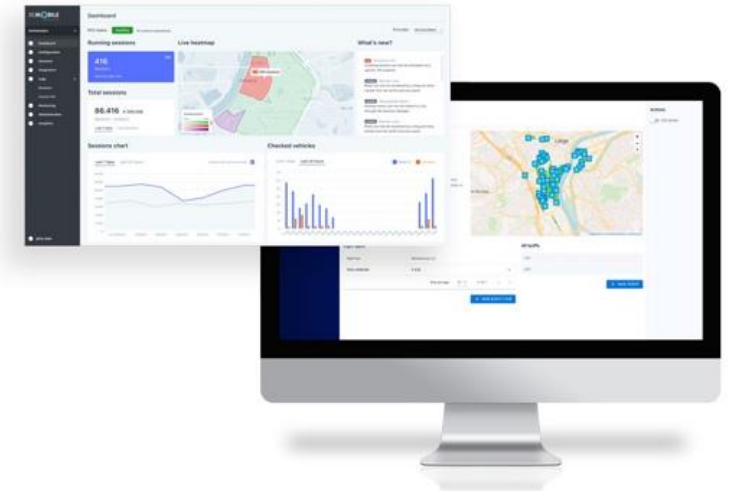
MANAGING URBAN ACCESS – BEMOBILE VISION

Mobility rules grouped in 3 categories

1. **Stationary in the city center**
Determine where vehicles stop (and load/unload) in the city center.

2. **Arriving at the city center**
Steer mobility by e.g., giving priority to low-emission transport, keeping heavy goods vehicles out of the city center or school zones.

3. **Moving in the city center**
Give route advice in the city to reduce congestion and increase safety. Ultimately, implement Road User Charging to apply the user / polluter-pays principle.

Be-Mobile technology

Zone management	Rule management	Route management
Drawing zones with geo-based rules	Configuring business rules to steer traffic	Offering route planning, guidance & cost calculation

Managing **single source of truth**
for zones, permissions and tariffs
of urban access, parking and road charging.

MANAGING URBAN ACCESS – LOGISTICS PROJECTS

Running projects for steering city logistics
with smart access, parking rules and route guidance

1. **Stationary in the city center**
Determine where vehicles stop (and load/unload) in the city center.

DISCO   *Smart City Distribution*

2. **Arriving at the city center**
Steer mobility by e.g., giving priority to low-emission transport, keeping heavy goods vehicles out of the city center or school zones.

gent: HASSELT HEEFT HET.   leuven

3. **Moving in the city center**
Give route advice in the city to reduce congestion and increase safety. Ultimately, implement Road User Charging to apply the user / polluter-pays principle.

mobility by COLAS

VILLE DE PARIS

PLANNING TOOL CITY LOGISTICS
## AS BUILDING BLOCK OF THE PHYSICAL INTERNET

DISCOPROXI = Proximity-based last mile solutions with optimal routing and consolidation at localized micro-hubs with low emission vehicles

- **Pre-trip Route Planning**: offer logistics providers the best routes in advance (incl. trip cost), factoring in all known city regulations, traffic conditions, and other relevant data points
  + suggestions for green last-mile delivery via city hubs

- **On-trip Route Guidance**: real-time route adjustments based on urban dynamics
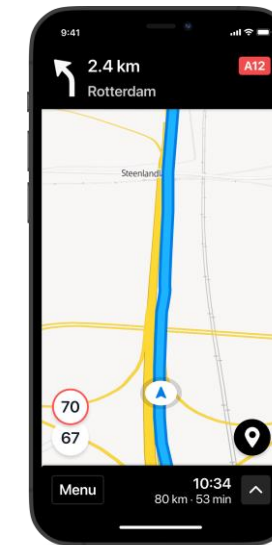
Routing   Warnings
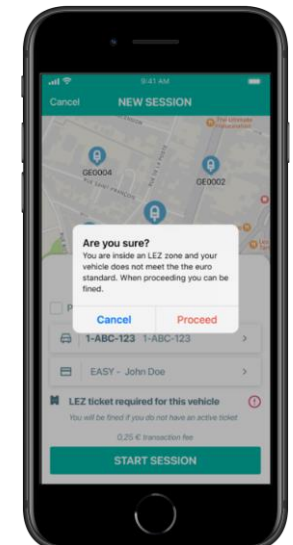
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