POLIS
CITIES AND REGIONS FOR TRANSPORT INNOVATION
ANNUAL CONFERENCE 2023
LEUVEN, BELGIUM • 29-30 NOVEMBER 2023
leuven

POLIS
CITIES AND REGIONS FOR TRANSPORT INNOVATION
ANNUAL CONFERENCE 2023

Local shops, sustainable drops

How the city of Leuven empowers local businesses while talking sustainable city logistics

Marij Lambert

Project leader City Logistics - City of Leuven

system
dataspace
realtime
digital
sensor
modelling
technology
standards
twin
blockchain
smart
platform
library
security
efficiency
iot
data
city
unburdening

leuven

A smart grid for sustainable city logistics

- Smart data & technology:
  - Data collection: who delivers what when
  - Data-driven digital platforms for efficiency gain
- Smart governance:
  - Policy control: hard & soft measures as digital business rules are applied to every delivery
- Smart stakeholders:
  - dialogue, engagement and cocreation
  - Behavioural change

= a "smart grid" for selecting and developing city logistics projects while empowering local businesses

leuven

Framework for a lively city

leuven

POLIS ANNUAL CONFERENCE 2023
CITIES AND REGIONS FOR TRANSPORT INNOVATION

City logistics in Leuven

- Facts and figures

leuven

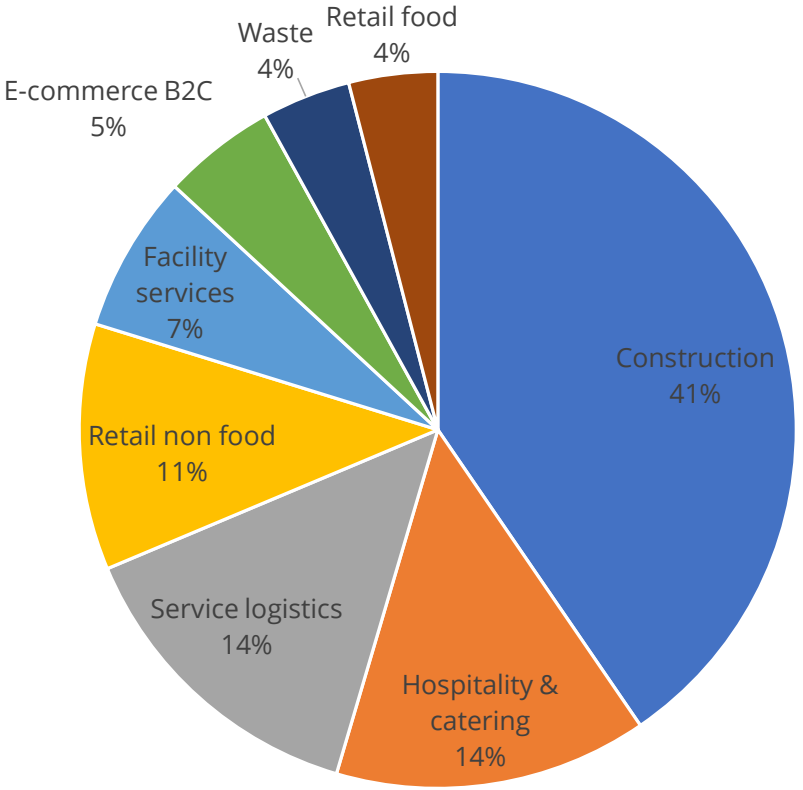
Vehicle kilometers

- 30.000 km/week
- In inner city and ringroad
- 100K inhabitants + 50K students

Source: 2023, REBEL, Digital Platform for City Logistics

Source: 2023, REBEL, VUB/Mobilise, The New Drive, MOW

Proportion of vehicle kilometers per segment



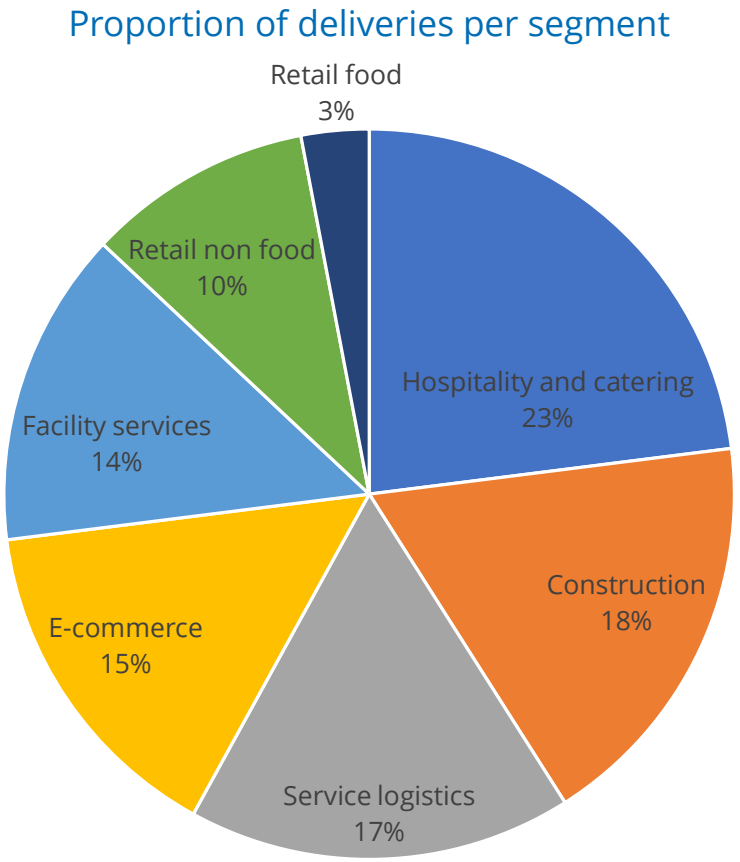
leuven

Deliveries

- 11.000 deliveries/week
- In inner city and ringroad

Heatmap retail, hospitality and catering in Leuven
Source: 2023, REBEL, Digital Platform for City Logistics

Source: 2023, REBEL, VUB/Mobilise, The New Drive, MOW

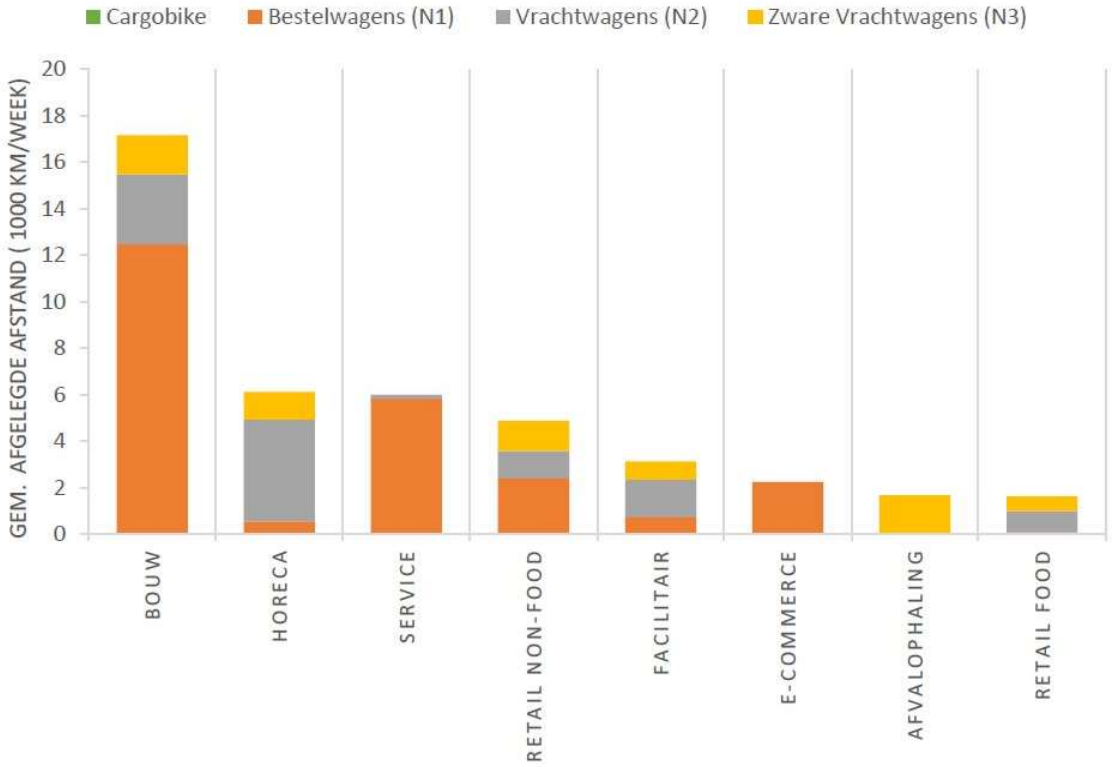


leuven

Km/week per vehicle type

Source: 2023, REBEL, VUB/Mobilise, The New Drive, MOW

- heavy trucks: slower electrification because of tipping point TCO
- alternative solutions needed to save mileage
- => 10 city logistics projects in Leuven (research, pilots, implemented solutions)



leuven

POLIS ANNUAL CONFERENCE 2023
CITIES AND REGIONS FOR TRANSPORT INNOVATION

Smart grid applied to 2 integrated projects

wij.leveren

GREEN-LOG

leuven

We.deliver/wij.leveren

wij.leveren

- = **digital distribution platform** & community
  - For centrally organized, consolidated
  - **first mile** delivery
  - of e-commerce parcels
  - from **local webshops**
- Community of **80 local shops** since go live 2022
- 2 logistic service providers
  - including **EV and cargobikes**
  - Including dense network of **parcel lockers** on public domain
- Objective
  - promoting the local webshops
  - unburdening by central organization of distribution
  - Sustainable first mile:
    - Parcels for local customers are not needlessly transported to national distribution centers
    - Parcels are collected and delivered zero emission and consolidated in Leuven area

VLAIO

Federale Overheidsdienst Mobiliteit en Vervoer

leuven

We.deliver/wij.leveren

wij.leveren

Smart gouvernance

Centrally organised logistics, including contracts and selection of LSP's

Smart stakeholders

Behavioural change: hands on introduction of sustainable, professional distribution in community of 80 shopkeepers
+ end consumers

Smart data & technology

Distribution platform linking demand and supply

Unburdening & efficiency gain for local businesses

leuven

GREEN-LOG

- Building a **Logistics-as-a-Service (LaaS) platform** for we.deliver
  - For **data-driven optimization** of deliveries
  - Linking **demand** (for shipment) and **supply** (TMS)
  - **Sender and/or receiver** can set **delivery preferences**
  - The LaaS gives **delivery options + cost**
- A **dynamic pricing model** determines the cost of delivery and **nudges** towards most efficient/sustainable delivery
- Price is based on the cost of transportation + **external cost** + **compliance level with policy measures**
- Flemish living lab: **Ghent, Mechelen**, Leuven (VIL and University of Antwerp

GREEN-LOG

www.greenlog-project.eu

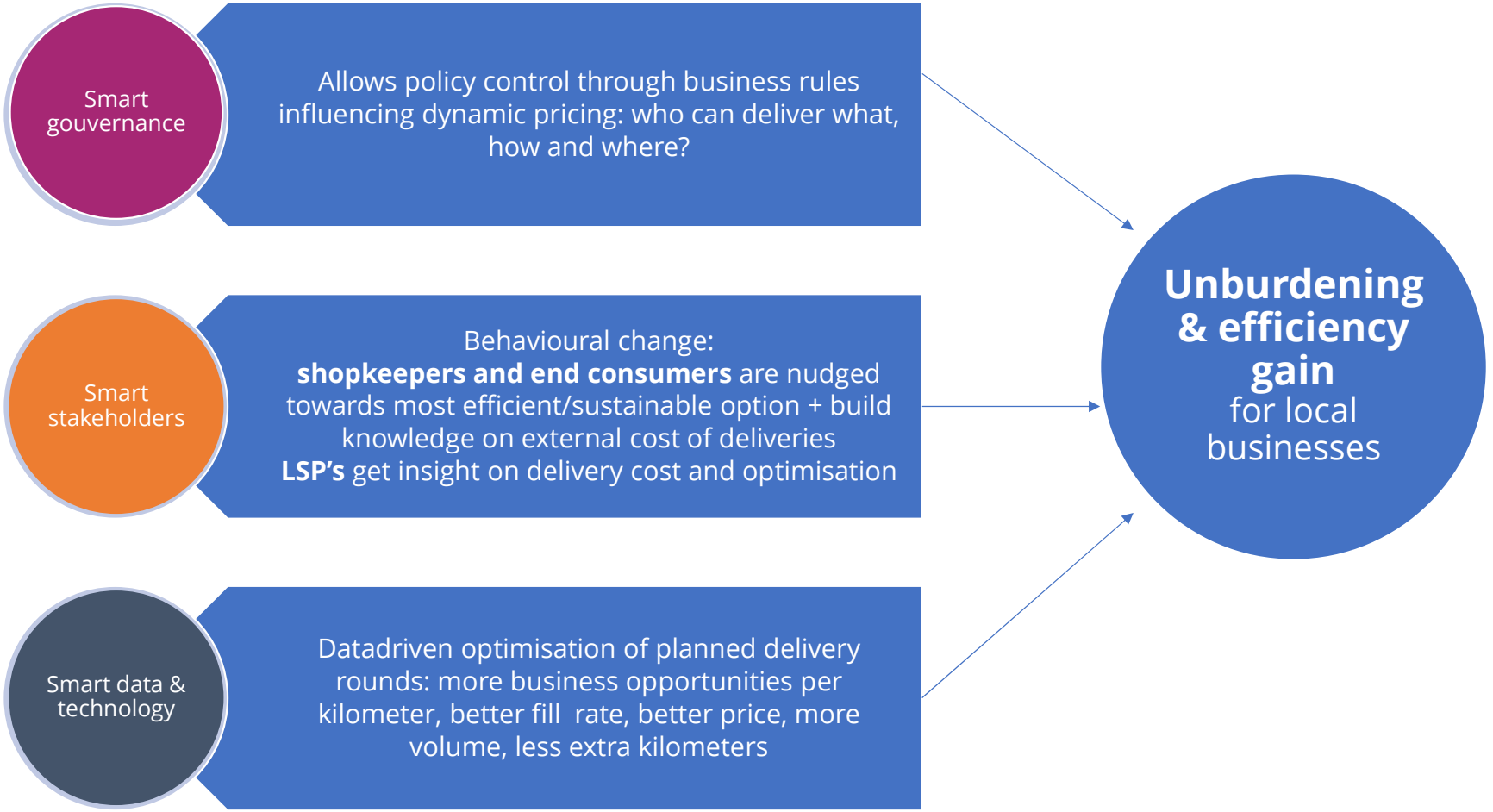
@GREENLOG_HE

GREEN-LOG

Co-funded by the European Union

leuven

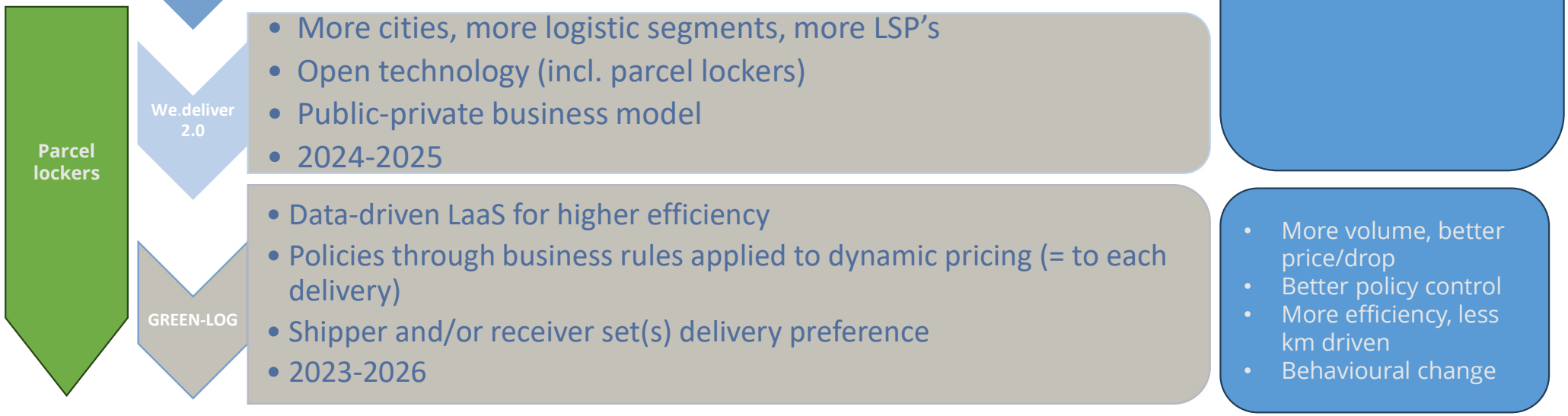
GREEN-LOG



GREEN-LOG

leuven

Interlinking between projects



POLIS ANNUAL CONFERENCE 2023
CITIES AND REGIONS FOR TRANSPORT INNOVATION

Lessons learned

- We.need.volume
- Dialogue, cocreation and cooperation

leuven

POLIS
CITIES AND REGIONS FOR TRANSPORT INNOVATION
ANNUAL CONFERENCE 2023

Thank you for your attention!

leuven

POLIS ANNUAL CONFERENCE 2023
CITIES AND REGIONS FOR TRANSPORT INNOVATION

leuven

For information:

Marij Lambert
Marij.lambert@leuven.be

@POLISnetwork | POLIS Network | polis.network | @polisvideo