

Recent developments in enforcement

ITS.BE Congress · Jonathan Kreps, Sigmax



Smarter parking management and enforcement

**1 Aim: Making parking space available
to the right users, at the right time**

making enforcement an efficient
digitalised process

01

Parking rules

White zones, short-stay shopping and EV charging. Evolving needs: how do we control them?

02

Permits and exemptions

Residents, businesses and loading activities, through a user-friendly citizen portal.

03

Digital services and enforcement

Applications and checks on the street, with fluid processing and interconnected steps.



Parking rules

White zones, urban bicycle management,
short-stay shopping and EV charging.
Evolving needs: how do we control them?

digital
white
zone

&

Public
EV charging

From blue disc to white zone



Today blue zone

Physical parking disc and
visual verification.

→ The scan car has to pass more often
to establish the parking duration.

Tomorrow digital white zone

Free parking session on
the license plate.

→ The scan car checks the session status in
a central system.

Possible locally: set up and convert zones, with a free time slot within the parking regulation.

Not possible locally: change the federal road code and the physical blue disc.

One system, different parameters per zone

1

Park

The driver parks in the designated zone.

2

Activate

Licence plate and zone via QR code, app or parking meter.

3

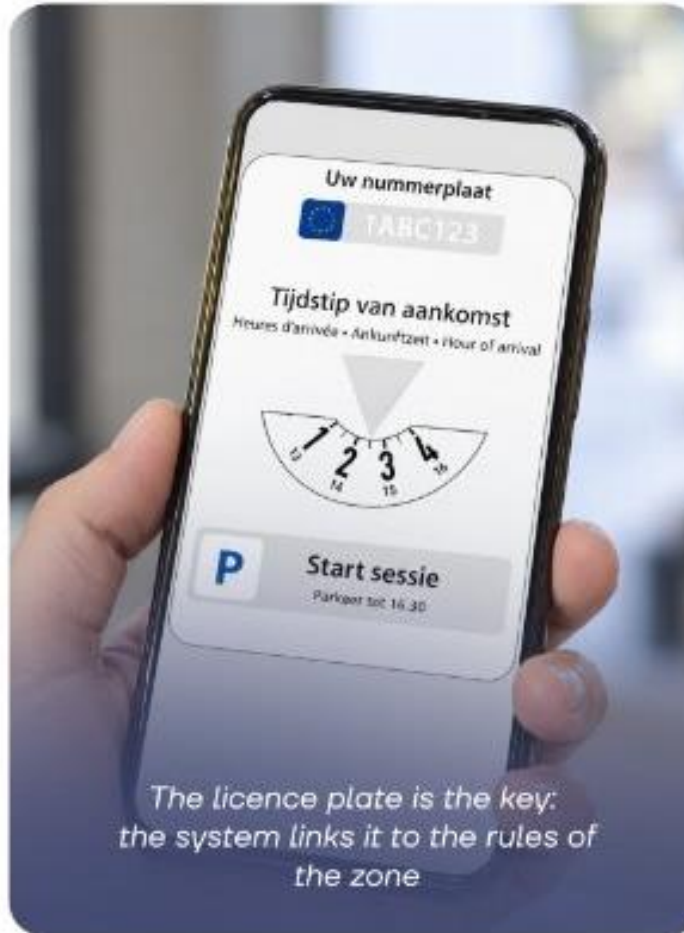
Register

Session with start and end time, linked to the licence plate.

4

Check

The scan car consults the valid parking rights.



Parameters per zone

- Maximum free duration
- Permitted length of stay
- Price: € 0 in a white zone

The same technology works for white, red and other zones.

Policy options per zone

- Short-stay shopping: 30 min free
- Neighbourhood zone: 120 min free
- Market days: fixed days and hours

Short-stay parking: turnover, not revenue

*Illustrative example:
gaining time*



Who benefits from turnover?

Residents

A free space in their own neighbourhood.

Visitors

A better chance of an available space.

Local shops

A steady flow of customers.

Parking and charging: two rights

Parking right

May the vehicle stand here?

Managed via a parking platform or parking meter.



Charging right

May the vehicle charge here?

Managed via the charge point or a charging platform.

Enforcement checks both rights in the same place, with both parking and charging data.

Detecting: vehicle, charge point and scan car

Three data sources, one assessment: manual or automatic

1

Scan car

Image of the licence plate and the bay, during the regular patrol round.

2

Vehicle

>>> *Electric or not?*

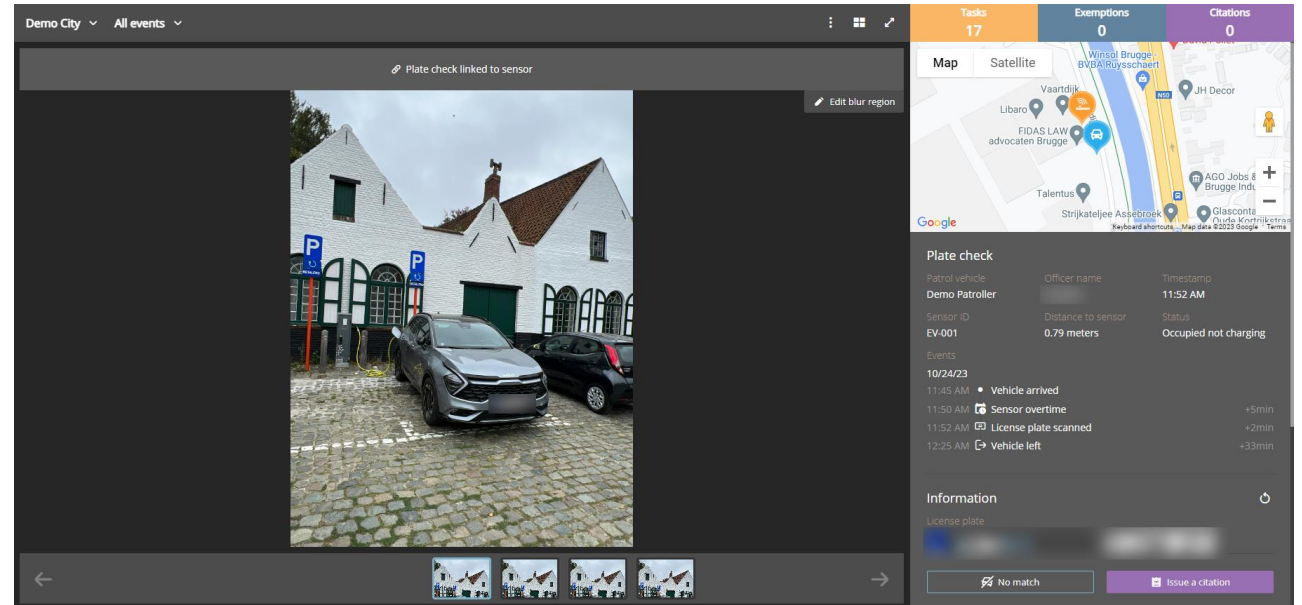
The licence-plate attributes give the answer, as in existing applications.

3

Charge point and sensor

>>> *Occupied or free?*

Is the vehicle charging, or fully charged but still plugged in?

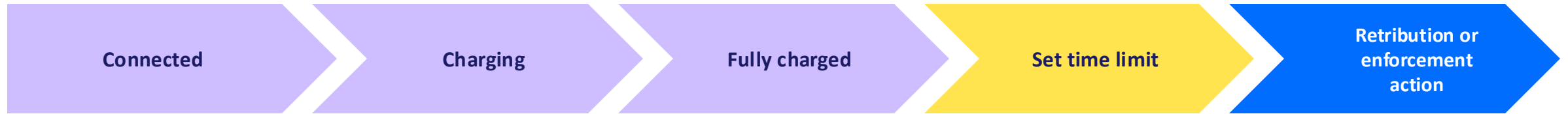


Example: assessment screen for the enforcement officer

Check: manual or automatic.

Belgian, French and Dutch scenarios are conceivable.

Full but still plugged in: tariff and charge



Model A the municipality decides

- Parking tariff and charge are set by the municipality.
- Transparency about the tariffs for the user.

Model B the operator has a say

- The energy supplier or charge-point operator sets part of the price.
- The municipality keeps the rules for parking.

Incentives for charging behaviour

- Free parking for correct charging behaviour.
- A higher retribution for staying plugged in for long.



Permits & exemptions

Residents, businesses and loading activities, through a user-friendly citizen portal.

.....

digital
rights

&

citizen
portal

Permits and exemptions as digital rights



1

Residents

Resident permit and visitor rights for their own street or zone.

Parameters: zone, validity, number of plates, visitor time

2

Businesses

Company vehicles, service providers and the short stays of customers.

Parameters: zone, vehicles, validity, time window

3

Loading activities

Time-boxed exemptions for deliveries, loading and unloading.

Parameters: loading bay or zone, time window, maximum duration

One check on the street: the scan car consults parking sessions, permits and exemptions in the same system, with no paper permit behind the windscreen.



A user-friendly citizen portal

Apply once online: the right is registered on the licence plate and checked on the street

Apply online

Check the file

Register on the plate

Check on the street

For the citizen

Apply, renew and change plates online, at any time.
See the status of the application and the permit.
No paper permit or card behind the windscreen.

For the municipality

Less manual handling of applications and changes.
Rules per zone configured centrally.
One register for permits, exemptions and parking sessions.

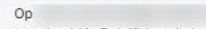
Same principle in bike enforcement:
owners search online at any time..



Deze week gevonden



Je fiets of voorwerp kwijt?

Op  staan voorwerpen en fietsen die zijn opgehaald in België (o.a. in Leuven en Antwerpen). Door de samenwerking van de steden, politie en lokale fietsendepots bevat deze website een volledig overzicht van alle gevonden voorwerpen en fietsen. De kans is dus groot dat jouw voorwerp of fiets erbij staat.

In nauwe samenwerking met andere overheidspartners zullen regelmatig nieuwe organisaties aangesloten worden waardoor we streven naar een nationale dekking.

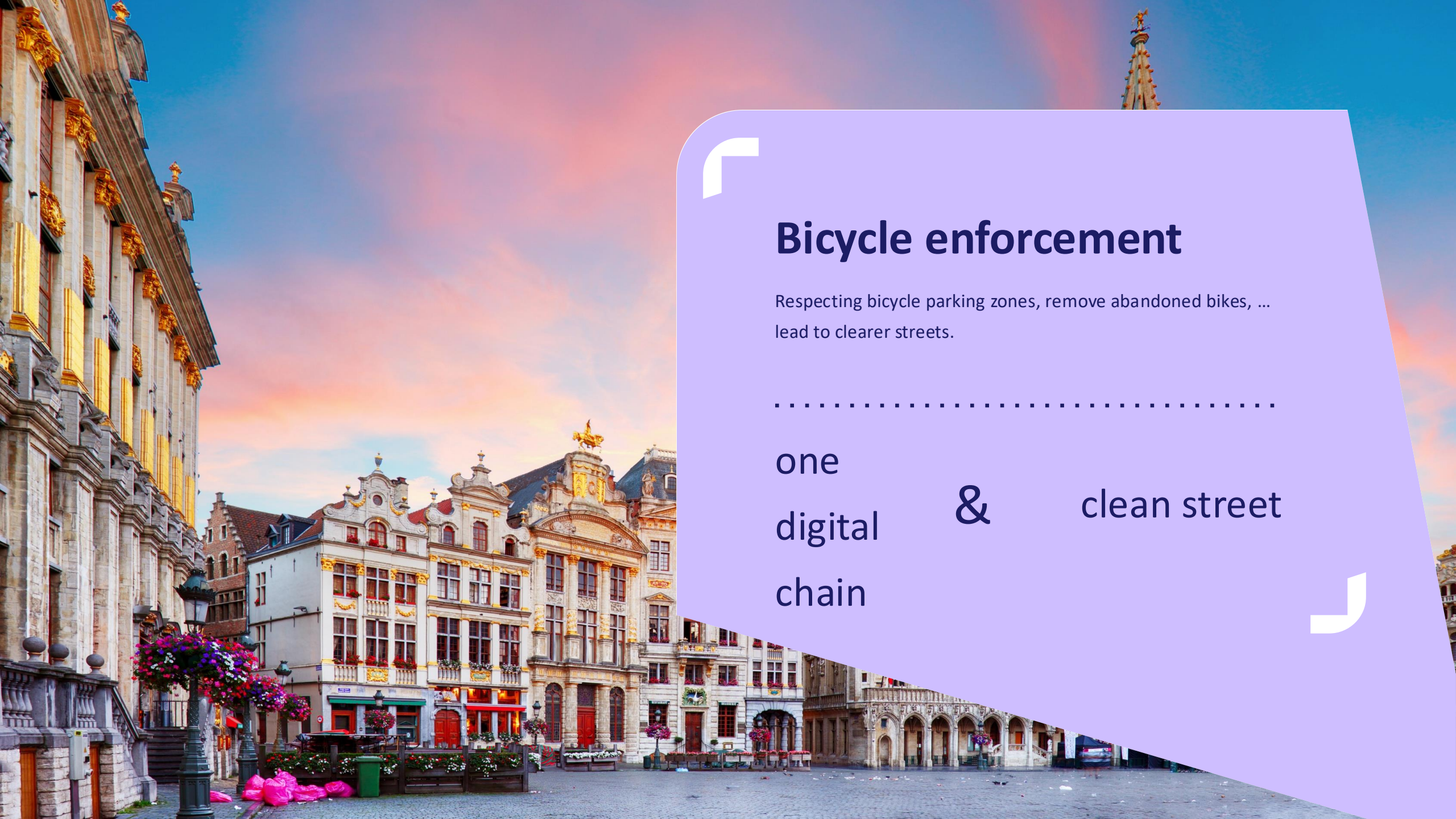
Zoeken

Staat je fiets of voorwerp er niet bij?

Gebruik bij het zoeken zoveel mogelijk relevante trefwoorden, zoals kleur, merk, type of plaats en pas de filters aan in het zoekresultaat.

Als je (brom)fiets er niet tussen staat, kan deze gestolen zijn. We raden je aan om aangifte te doen van diefstal. Dit kan online bij het E-loket van de Politie of bij je politiekantoor.

Voorwerp aanmelden



Bicycle enforcement

Respecting bicycle parking zones, remove abandoned bikes, ...
lead to clearer streets.

.....

one & clean street
digital chain

From label on the street to return to the owner



1 Detection on the street

Scan the label with a mobile app: photo, location and category in one registration.



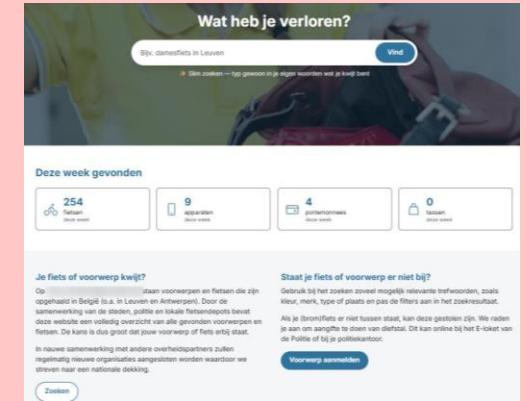
2 Waiting period

The label gives the owner a configurable period to collect the bike.



3 Depot and file

Every bike gets one file: characteristics, photos and retention period.



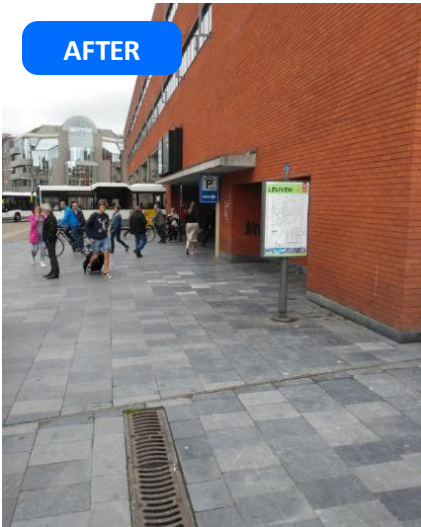
4 Return or repurposing

Owners search online themselves. After the period, the bike is repurposed.

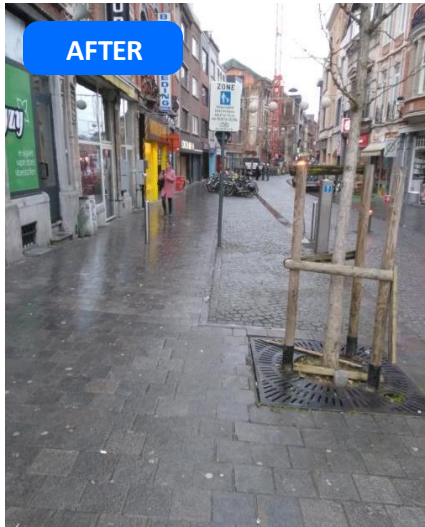
In practice: the street is clear again



Martelarenplein (station area)



Start of Diestsestraat



7,879

bikes removed in 2025

71%

of wrongly parked bikes
return to the owner

9.5%

of abandoned (orphan) bikes
return to the owner

Wrongly parked bikes in no-parking zones are removed immediately.
Abandoned bikes only after the label has been attached for 3 weeks.

Source: Fietscentrale Leuven, site visit 13/10/2026 (2025 figures).

Smarter parking mgmt and enforcement

**Making parking space available
to the right users, at the right time**

**making enforcement an efficient
digitalised process**

01

Parking rules

Translate evolving needs into clear rules per zone, register them digitally and control selectively.

02

Permits and exemptions

One register for every right and one user-friendly citizen portal.

03

Digital services and enforcement

Let software assist and connect the steps, and keep people in charge of decisions.

Shaping tomorrow's society. Today. Together.

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