

Over 100 years of Innovation



Fourth Generation of a Belgian Family





















Market Leader in Belgium







Speed Section Control

More than 400 installations - "TaaS"- Model



Crime Prevention

Federal Police Central Software with 1.300 Macq Cameras



Clean Air or Low Emission Zone

More than 400 cameras installed in Brussels City



Parking & Access Control

Free Zones, Bollards, Barriers, Variable Message Signs.

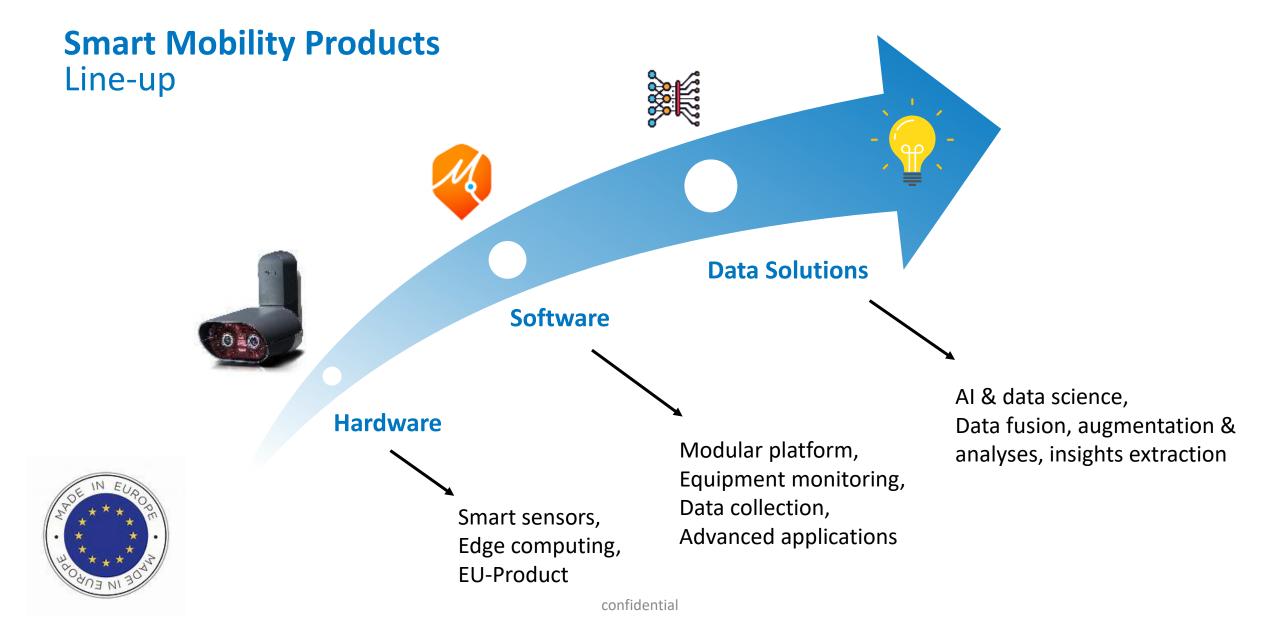


Railway Crossing Protection

Similar Approach to Red Light Runner

OUR GOAL AND AMBITION

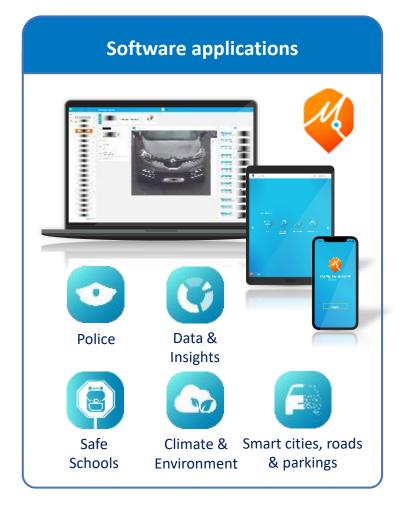
"To be your reliable, valued and preferred business partner for ITS & Smart Mobility."



Smart Mobility Products Overview







confidential

Macq's end-to-end solutions for your mobility ecosystem



Measure with Macq or other ANPR cameras

JENOPTIK





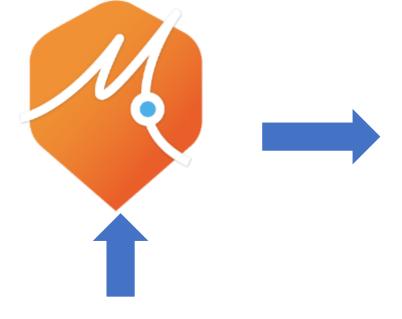










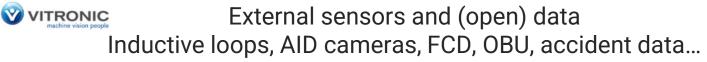


Manage

M³ Applications







Macq's end-to-end solutions for your monitoring ecosystem



Measure with Macq or other ANPR cameras

Macq	CAM5/QCAM5/QCAM3	ANPR	НТТР
Axis		Panoramic	UTMC
Kmar		ANPR	UTMC
Jenoptik		ANPR	UTMC
CatchSystem		ANPR	UTMC
Tattile	Vega Series	ANPR	НТТР, UТМС
Bosch	Dinion	ССТУ	НТТР
Gatso	GS11	Radar	? SFTP through a windows server
Gatso	RT4	Radar	SFTP through a windows server
Redflex	NK7	Radar	SFTP through a windows server
Lidar	?	Radar	SFTP through a windows server
Mesta	?	Radar	SFTP through a windows server

Analyse







Macq's end-to-end solutions for your infraction ecosystem









Transfer to Police

Pro Justice

Police Locale: PZ Dilbeek
Zone de Police: Unit dedicated for Dilbeekpolice zone users

Contrôle de vitesse moyenne numéro du constat: 66cd78e931005ee2c8dadf58

CETTE ANNEXE FAIT PARTIE INTEGRANTE DU PROCES VERBAL DU CONSTAT

distance: 429.88 m, (Dilbeek - IJSBERGSTRAAT 63 - DOYLIJKTRAAT 34)

vitesse mesurée: 57 km/h sur 429.88 m | vitesse autorisée: 50 km/h

certification: P1501503-B-23

DATE: 27 août 2024 8:57:45 CEST



Plaque:	2ERT392
direction:	down
Code pays:	BE
Horloge de temps 1.1:	27 août 2024 8:57:17 CEST
Horloge de temps 1.2:	27 août 2024 8:57:17 CEST
Position 1:	IJSBERGSTRAAT (THV 63) - RICHTING N8 (B) RICHTING N2



Plaque: 2ERT392
direction: down
Code pays: BE
Horloge de temps 2.1:
Horloge de temps 2.2:
27 août 2024 8:57:44 CEST
DOYLUKTRAAT (THV 34) RICHTING N8 (B) RICHTING N282



Smart cameras - QCAM range





QCAM3



- B&W & Color CMOS sensors
- Up to 5 Mpx
- Varifocal & Varifocus
- IR integrated illuminator
- GNSS + Connectivity
- POE++
- Motorised arm
- IP68 & IK10
- Detection up to 300km/h over 4 lanes
- Embedded GPUs
 Up to NVIDIA Orin NX





Smart cameras - QCAM range

Agnostic vision platform



High quality camera system



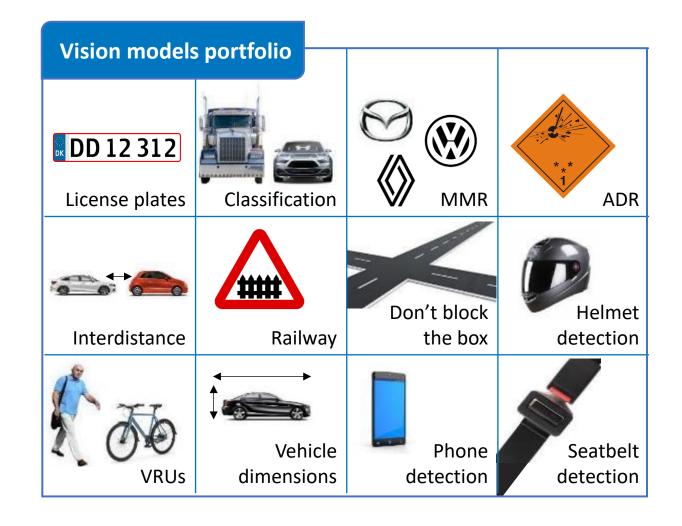
Edge computing



SoTA vision algorithms



Flexibility & expertise in training new models





Vehicle & Object classes

QCAM cameras are build to perform classification as below:

- CAR
- VAN or LCVT
- BUS
- TRAILER TO34 (>3,5T)
- LGT (Light Duty Truck <3,5T)
- HGV (= Heavy Good Veh. >3,5T)
- MOTORBIKE

- TRAIN
- BICYCLES
- PERSONS
- SPECIAL (agricultural vehicules,..)

















Vehicle Characteristics *

- Ambulance
- Vehicle carrying livestock
- Caravan
- Fire brigade
- Law enforcement (police, customs, ...)
- Pickup
- Vehicle with push bumper
- Vehicle with rear mounting
- Vehicle carrying tree trunks







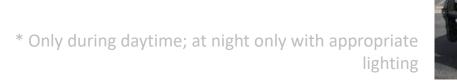














ANPR

Vehicle detection rate >99%

License plate reading rate >99%

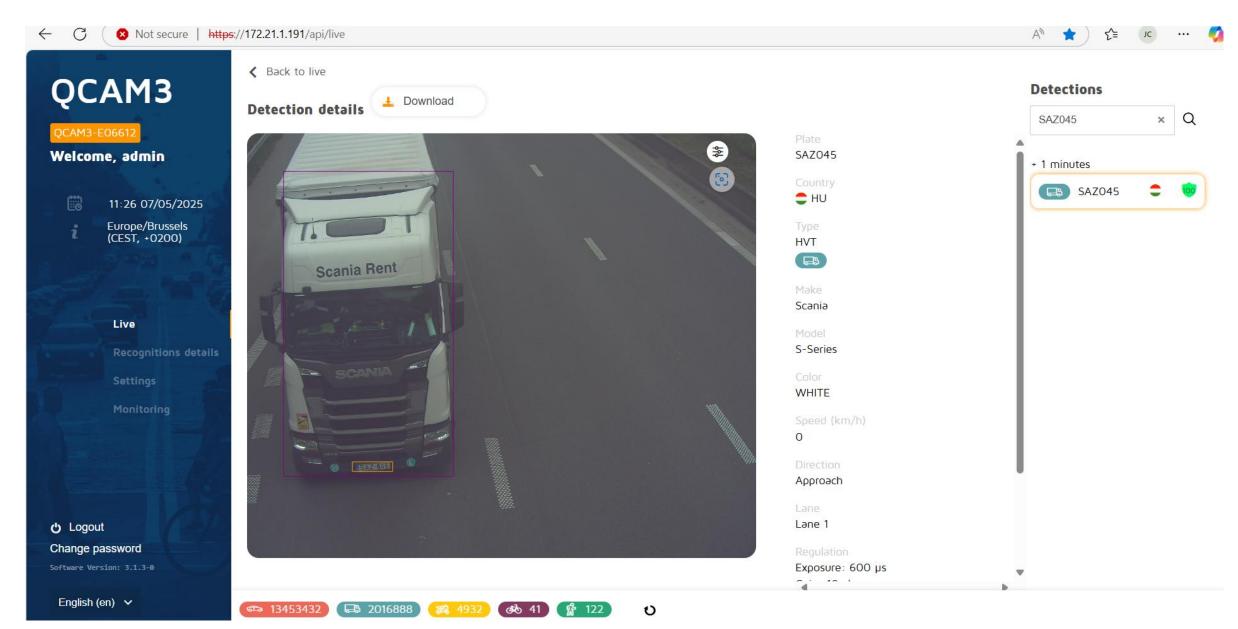
Classification >99%

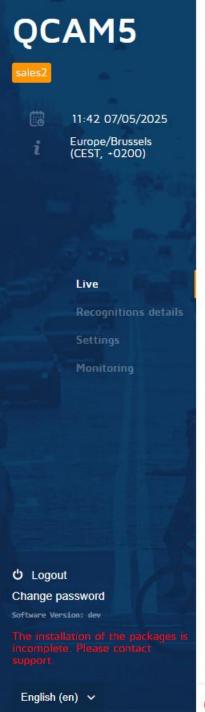
Make & Model * >99%

Color * >95%



Live test with QCAM3

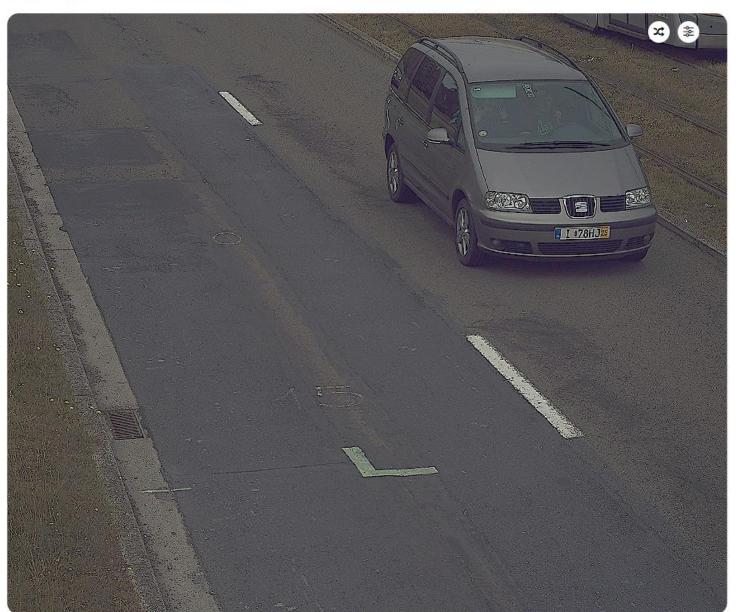






Detection details





Plate

178HJ25



Туре

CAR



Make

Seat

Model

Alhambra

GRAY

59

Approach

Lane 2

Exposure: 750 µs

Gain: 5 cb Power: 0 %

INFRACTION: right seatbelt

13:27:46 03/05/2025 CEST



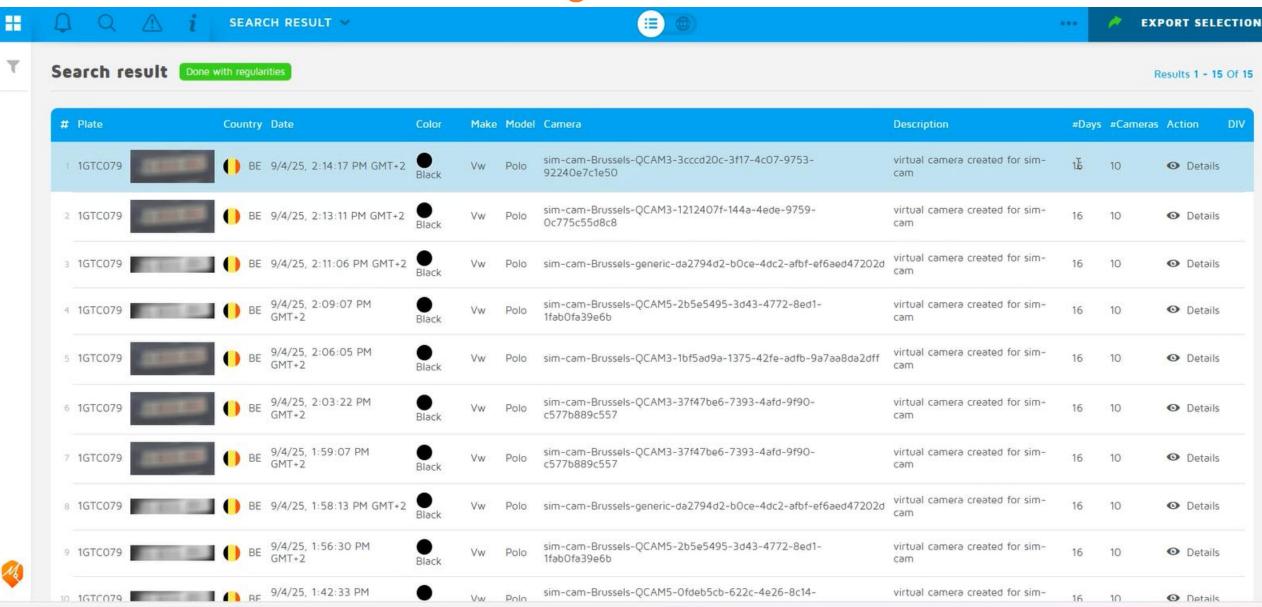




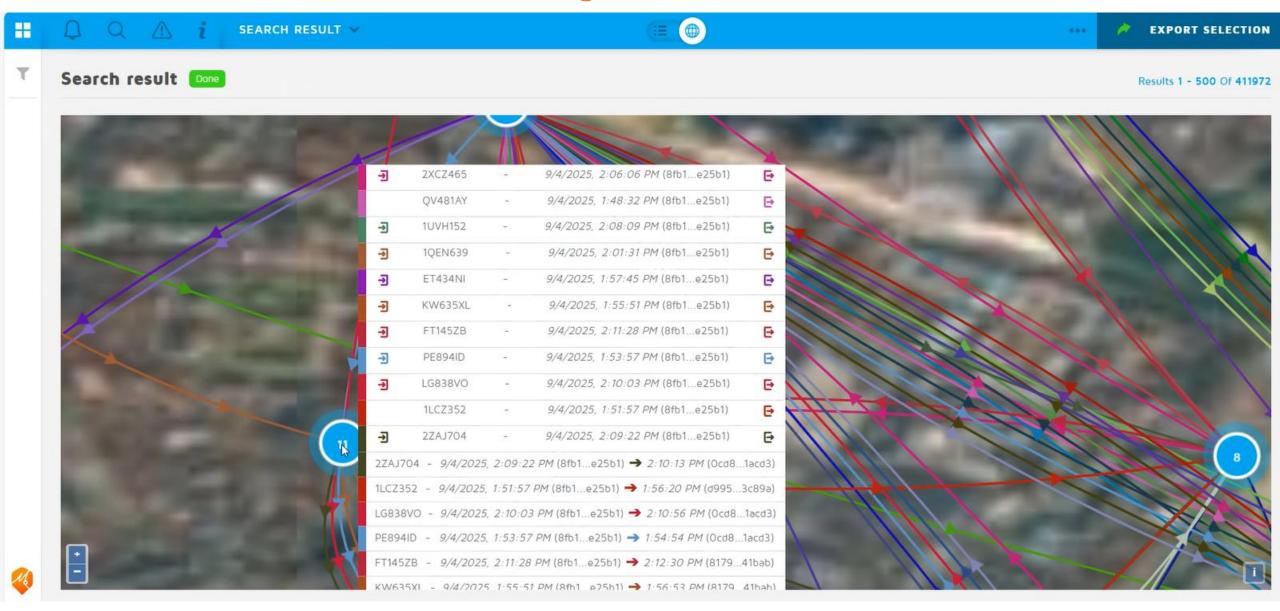




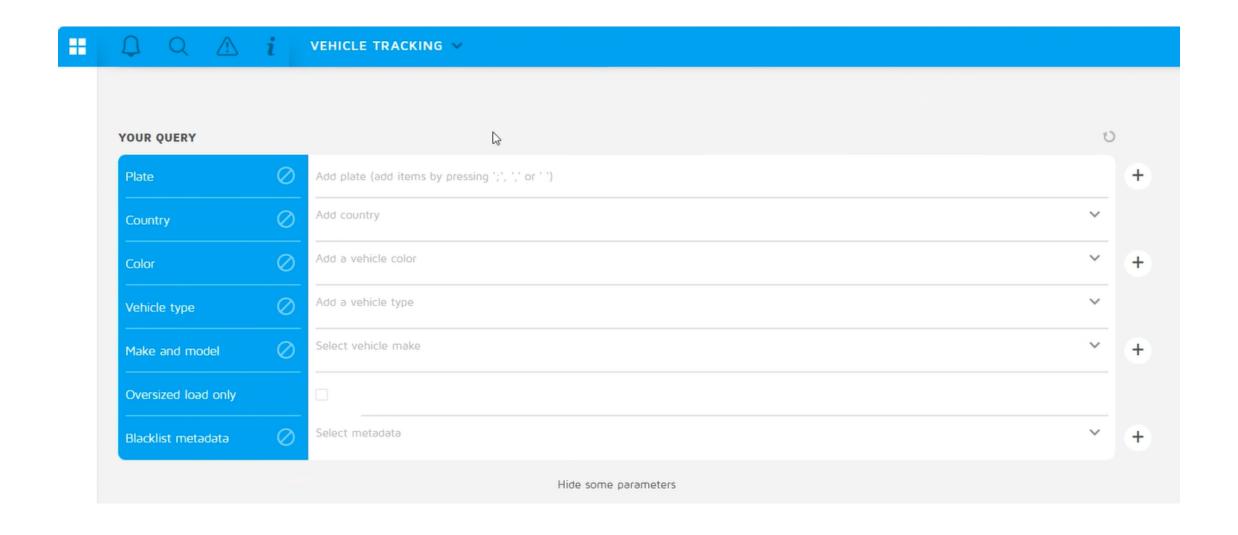
instant hits with regularities in M³

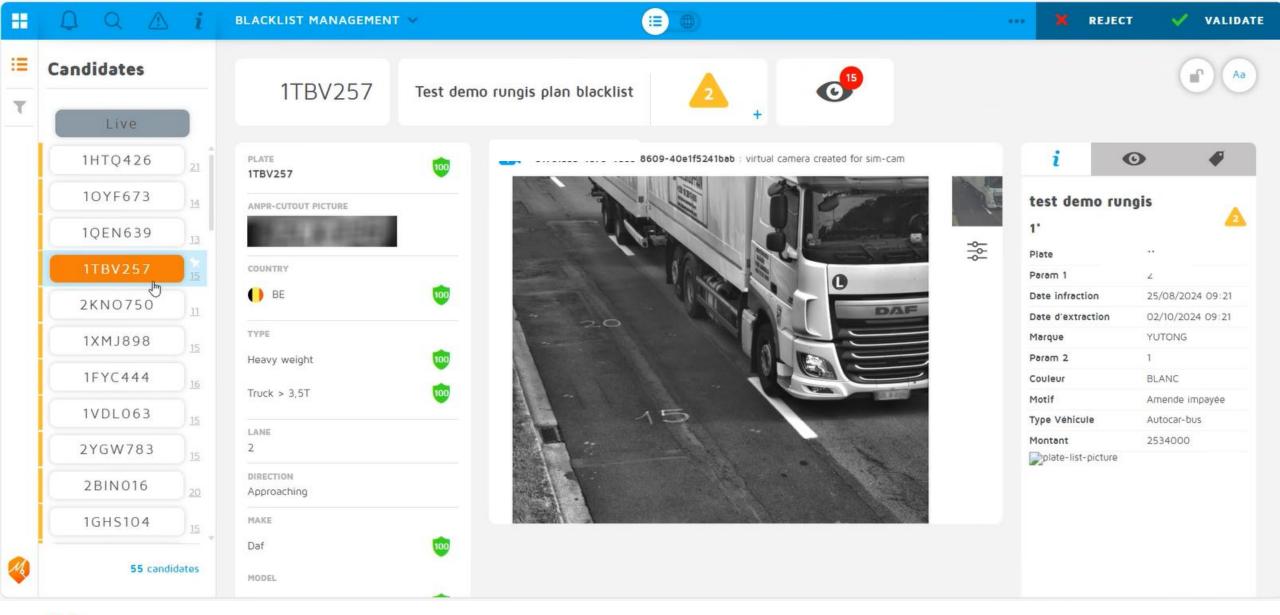


instant hits with regularities in M³

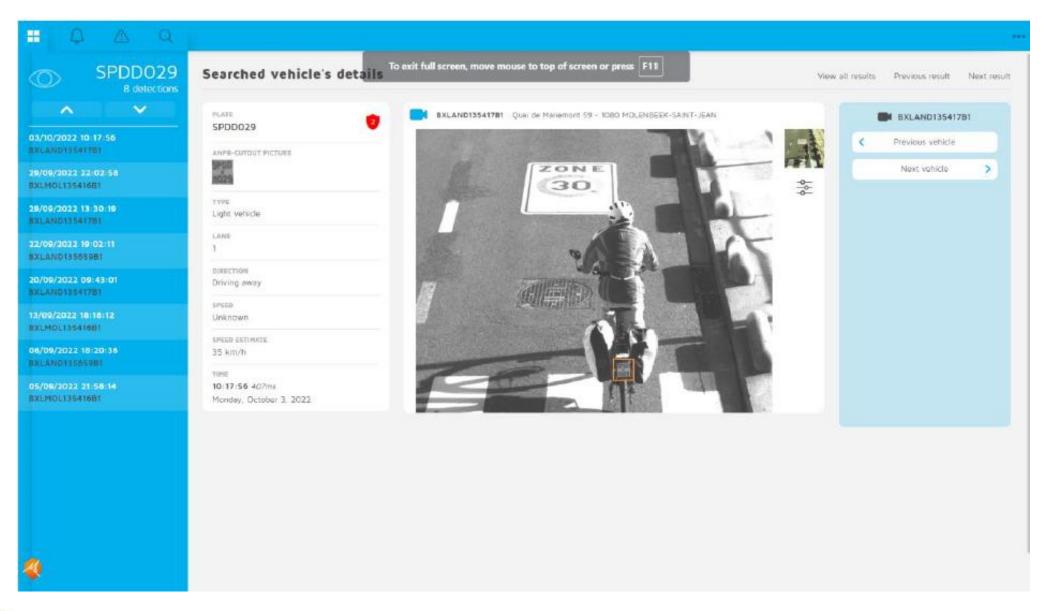


instant hits with regularities in M³



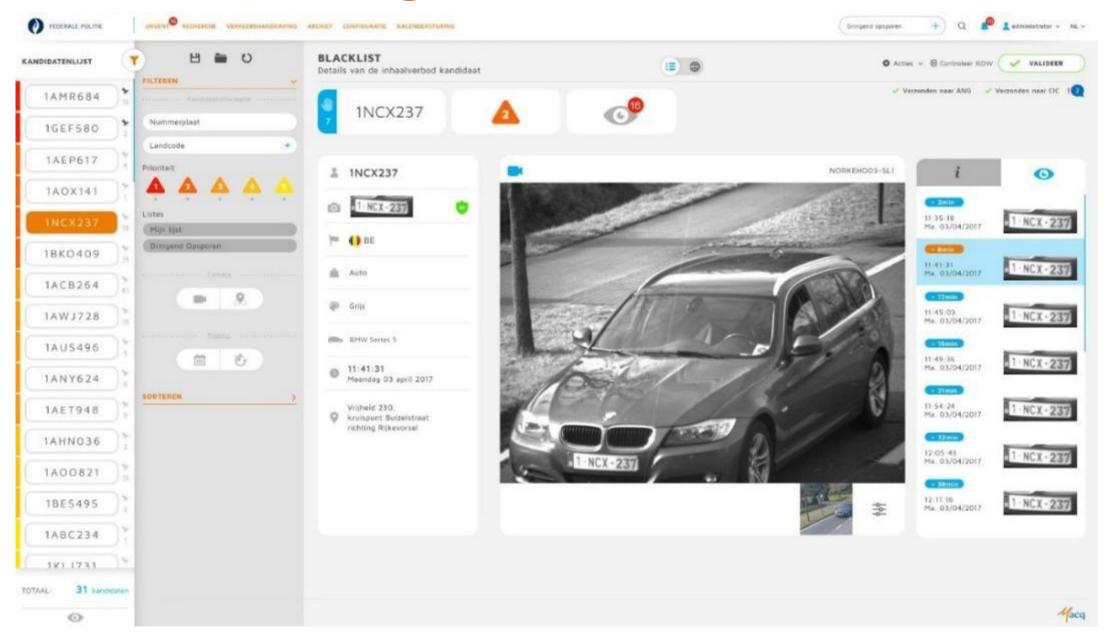


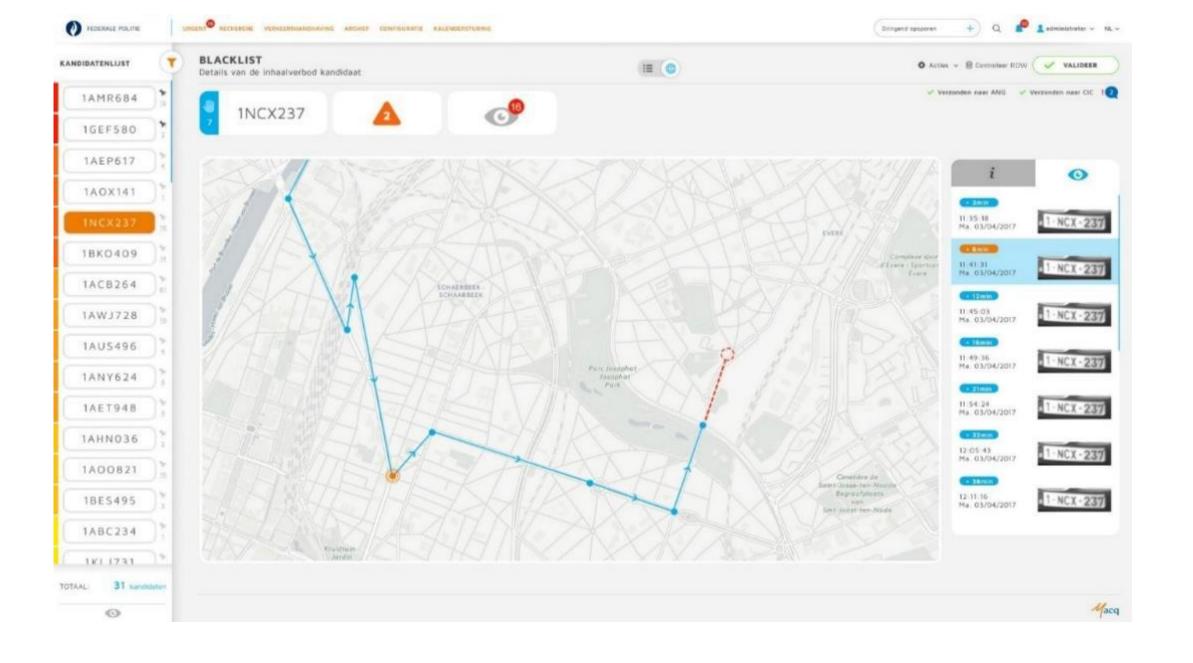






Blacklist at Belgian Federal Police





Blacklist Advanced features

□ Detection possible without license plate recognition based on Make – Model – Colour – Type:
 For example look for all « Peugeot Partner White Van»
 □ Add a whitelist to your plan
 □ Add a scheduler to your plan
 □ Choose your cameras
 □ Priorities Sum-Up
 □ Configure your HIT-Screen: Police – Colour – Fields to show – ...



In-Car ANPR Cameras

Typical ANPR application integrable in our M³





In Car ANPR Cameras

Typical ANPR application integrable in our M³



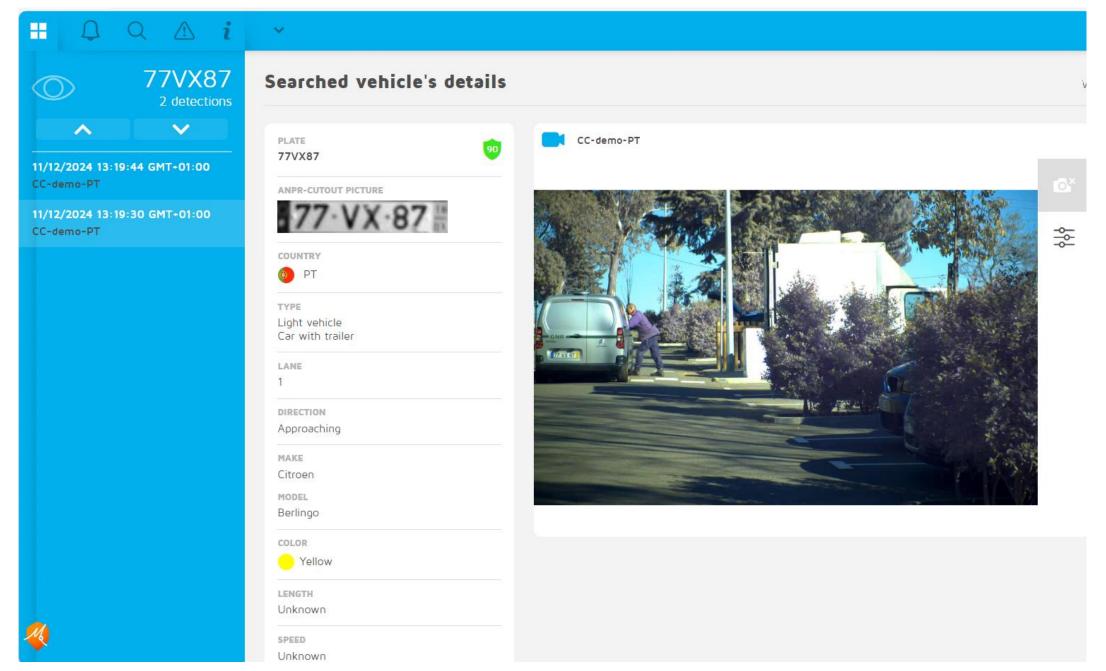




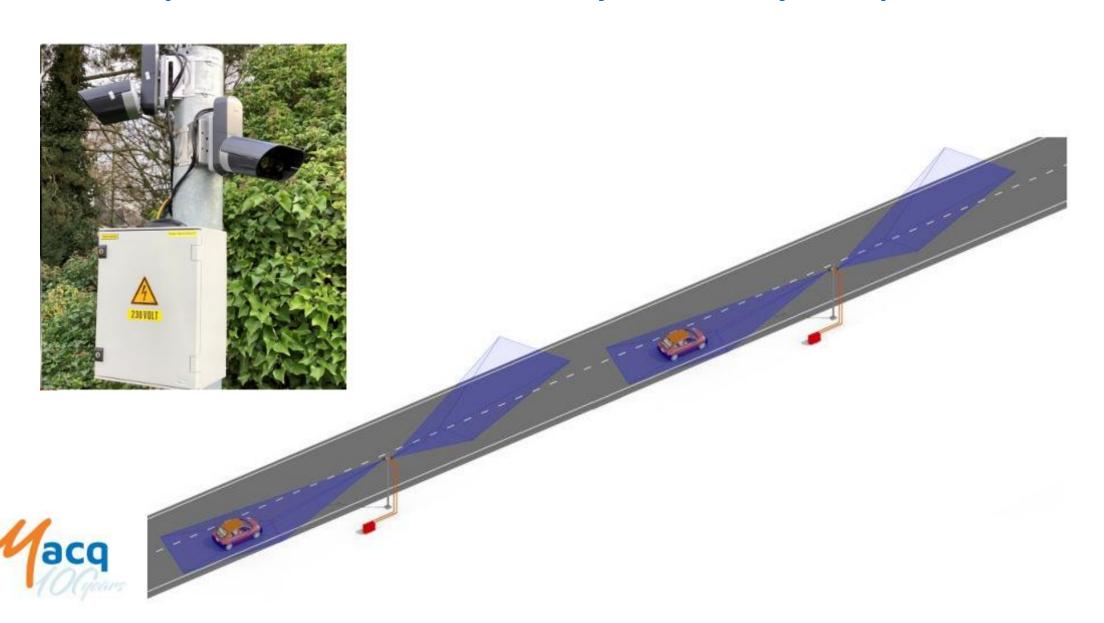
in-car hits instant entries in M³

#	Q Q	△ i ·						P EXPORT SELECTION
T	15 00XL35	00·XL·35 0 PT	11-12-2024 09:21:57 GMT+01:00	Blue	Hyundəi	Kona	CC-demo-PT	O Details
	16 BD74CB	BD74CB 0 PT	11-12-2024 09:21:51 GMT+01:00		Chevrolet	Тгәх	CC-demo-PT	O Details
	17 53ZR65	.53·ZR·65 0 PT	11-12-2024 09:21:50 GMT+01:00				CC-demo-PT	O Details
	18 AZ77EO	AZ77E0 0 PT	11-12-2024 09:21:47 GMT+01:00				CC-demo-PT	O Details
	19 82PV61	.82 PV 61	11-12-2024 09:21:44 GMT+01:00	Blue	Peugeot	2008	CC-demo-PT	• Details
	20 38MN34	38MN34 0 PT	11-12-2024 09:21:41 GMT+01:00				CC-demo-PT	O Details
	21 40XS27	.40 XS 27 0 PT	11-12-2024 09:21:41 GMT+01:00	Blue	Citroen	C-elysee	CC-demo-PT	O Details
	22 BH06FS	BH06FS 0 PT	11-12-2024 09:21:40 GMT+01:00				CC-demo-PT	• Details
	23 38MN34	38MN34 💿 PT	11-12-2024 09:21:38 GMT+01:00	Green	Peugeot	107	CC-demo-PT	O Details
	24 87ZF53	187 ZF 53 🕠 PT	11-12-2024 09:21:36 GMT+01:00				CC-demo-PT	O Details
	25 AU67NH	. AU67NH 💿 PT	11-12-2024 09:21:31 GMT+01:00	White	Peugeot	Partner	CC-demo-PT	• Details
	26 20ZX91	20 ZX 91	11-12-2024 09:21:30 GMT+01:00	Red	Alfa romeo	Giulia	CC-demo-PT	O Details
	27 BJ94SI	BJ94SI 💿 PT	11-12-2024 09:21:27 GMT+01:00	Blue	Bmw	X1	CC-demo-PT	O Details
	28 4352UJ	. 43·52·UJ 💿 PT	11-12-2024 09:21:24 GMT+01:00				CC-demo-PT	• Details
	29 32SA08	.32·SA·08# 🐽 PT	11-12-2024 09:21:23 GMT+01:00	Blue	Renault	Clio	CC-demo-PT	• Details
	30 4352 UJ	43·52·UJ	11-12-2024 09:21:21 GMT+01:00	Blue	Seat		CC-demo-PT	Oetails
W.	31 AH63SL	AH63SL 0 PT	11-12-2024 09:21:20 GMT+01:00				CC-demo-PT	Oetails

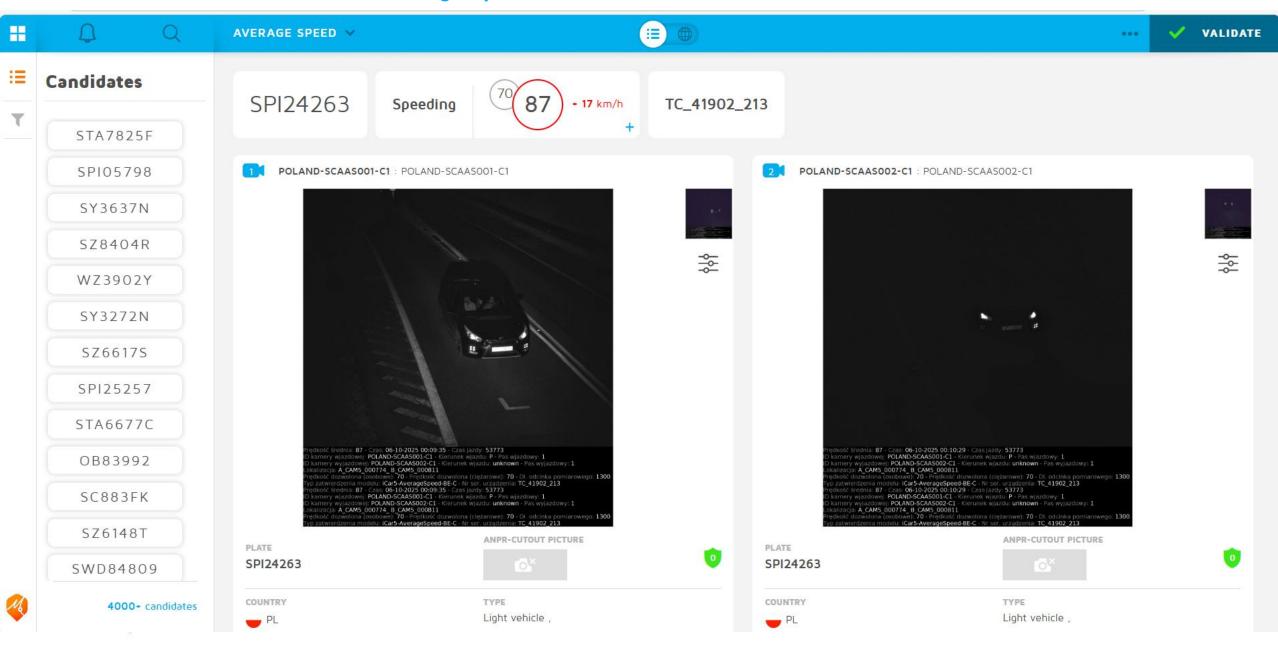
in-car hit overview in M³ including Make and Model recognition



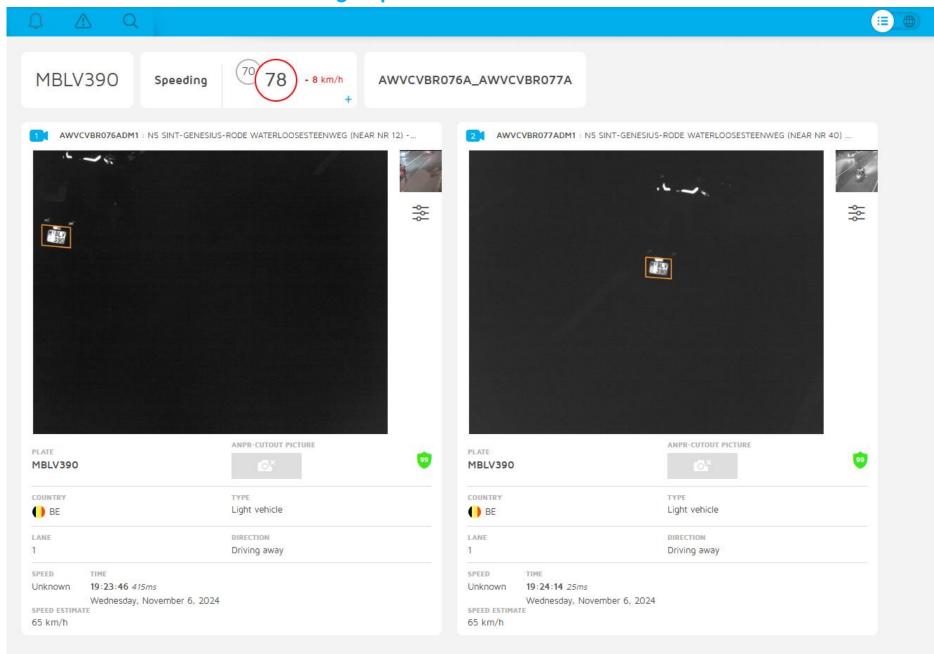
Speed section Control turnkey solution by Macq



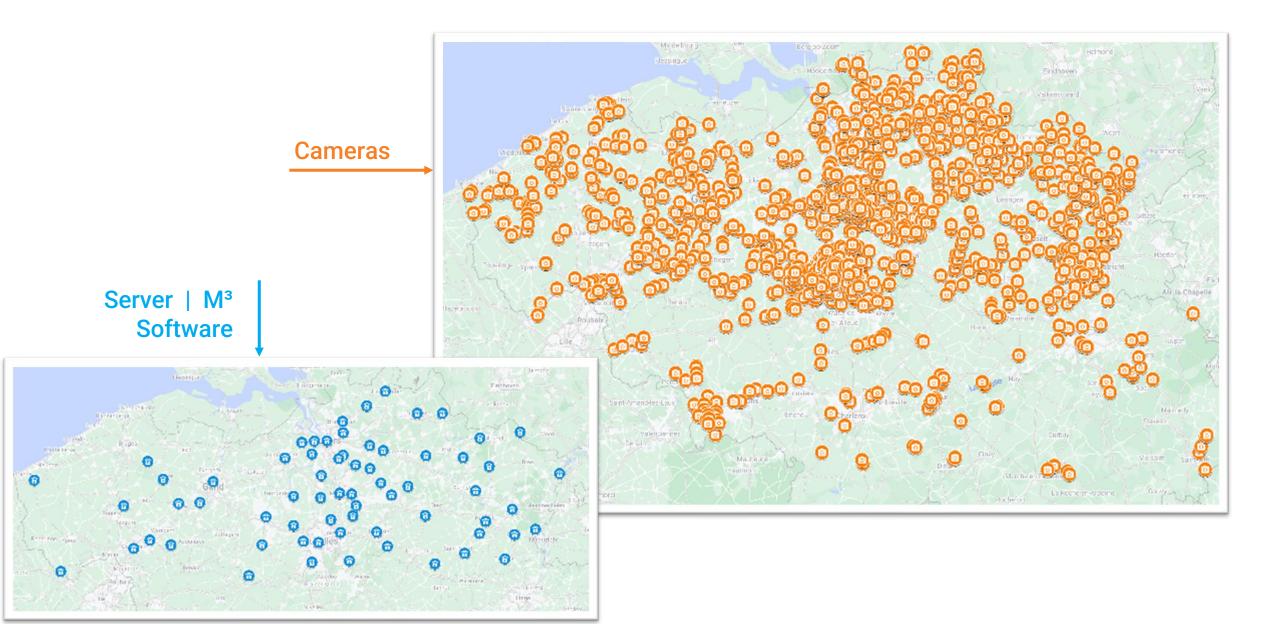
Average speed Server M³ Software



Average speed Server M³ Software



Sites in operation in Belgium



Fact-based positive effects

-30%

-56%

Reduction in the number of accidents

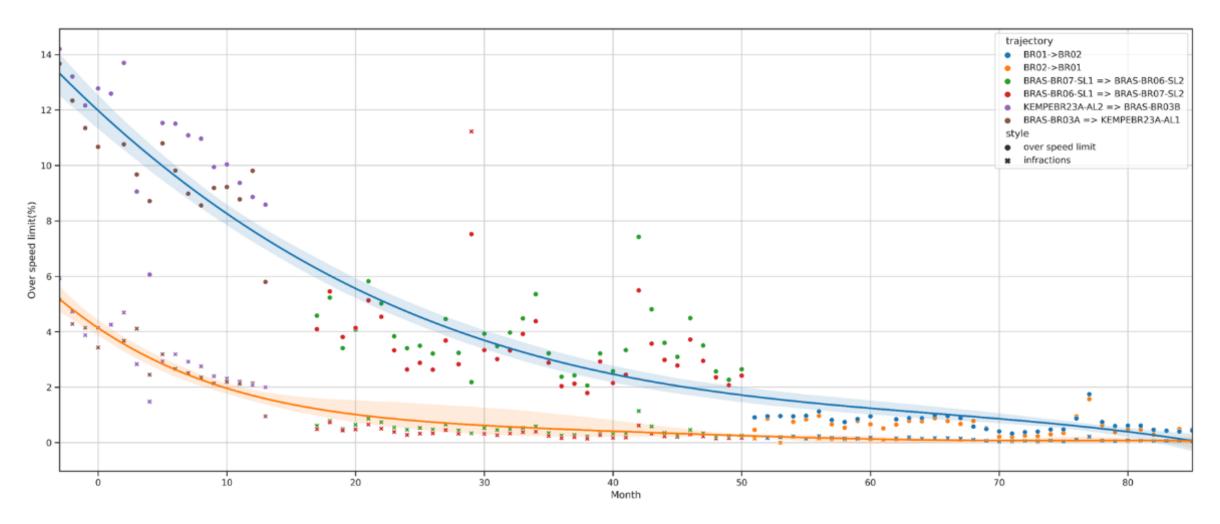
Reduction in the number of accidents with fatalities and serious injuries

Due to

- -> Reduction of average speed
- ->More uniform speed behaviour



Speeding evolution at an example site





NMI Approval

	Class A	Class C		
Speed (max.)	150 km/h	250 km/h		
Section length (min.)	200 m	500 m		







The model good souring is goldig tot 31 december 2000 behaustens very megde introkking.

Opties buiten het meten van de gemiddelde anelheid vallen niet onder de medelgeedkeuring.

heaft geen betrekking op mogelijk to namen valighedemsstregelen.

energetietechnick.

Bijlagen: 3

Dassierbeheerder zihr. I. Marent

De modelgoedsending is van beperkte creiding omville van het beveiligingsalvaar van de aangewende

Het meditoestet, geenstrucerstvolgers het medd geedgebeurd onder het bevondsand profilersingseben. It onderwo part an indereste (it, is berijk ende technische cartrole volgers hijbige 2 m. aan de cartrole van de volgers bestilder begreit in de onderstallen.

Deze modeligzedkeuring waarbogg geenoring de beontwoording aan andere regienentalie beschildingen en

Charlotte
Foote
Signature)

Figure (const.)

C. NOSTE Digrathoold poedkeuring, de ijking en de instalbitie. yen de wet betrettende de politie

Defent 20/03/2023

North Cate III

Koning Albert I - ban 18 D = 1000 DRUSSEL

Internet http://economie.fgov/be nerrology regulations economic flyoubse

Ondernomingenummer: 0314,575,348

Tel: 02/ 277 74 54 Fac 02/27/94/08

se Klarb-Averagebjoeed-III.-Alais vaste

opgenomen in bijlinge 1 van eit.

wrongdo intrekking. eligingariyosu van de oangewende -

for hot boyonstrand

: technische controle volgens bijlage 2 graf exat.

indere regienentalre beschildringen en

er de modelgoedkeuring.

Charlotte Hosts into feries (Signature)

C. ROETE Decrethoofd

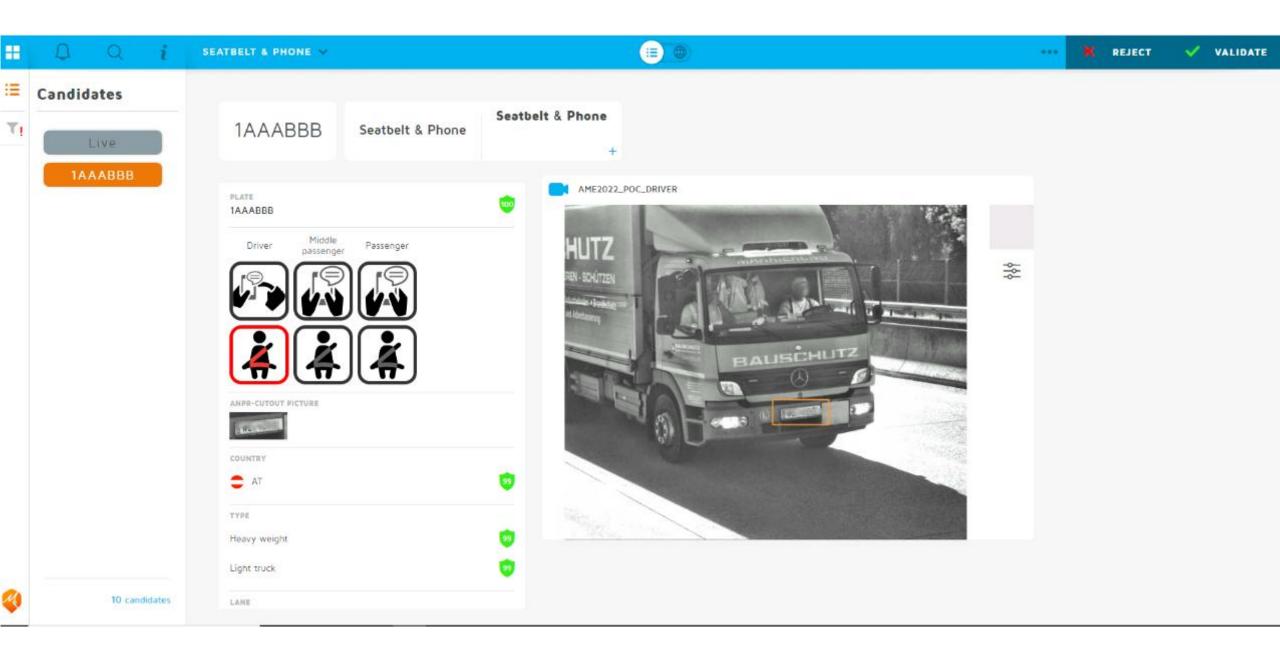
Billingen G

Ut tell less mer siche dus das habitette er vom veremelle tell vertichten i benach blei leite tell er voorzelle blei negotiede verd bekonnt bij de Dieset Merkelig is.

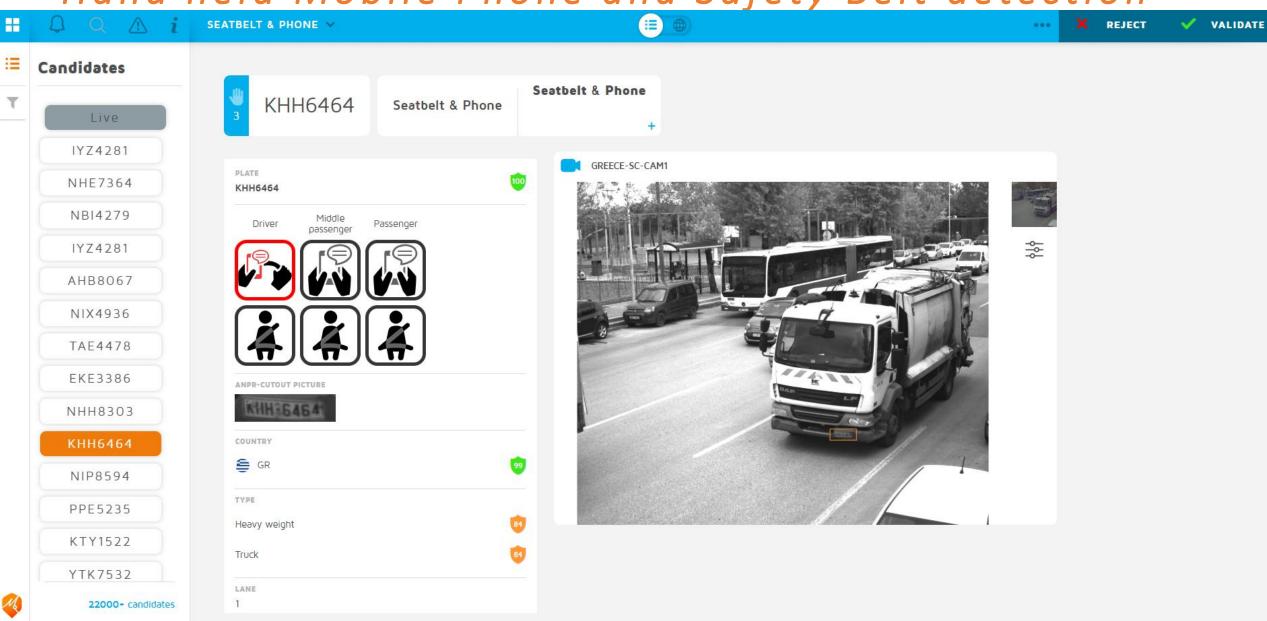
Direct Read matricle rates dan involvation comments production words, conditioned in telligial admittatives accordingly improductive and information of the milk-enologie.



Hand held Mobile Phone and Safety Belt detection

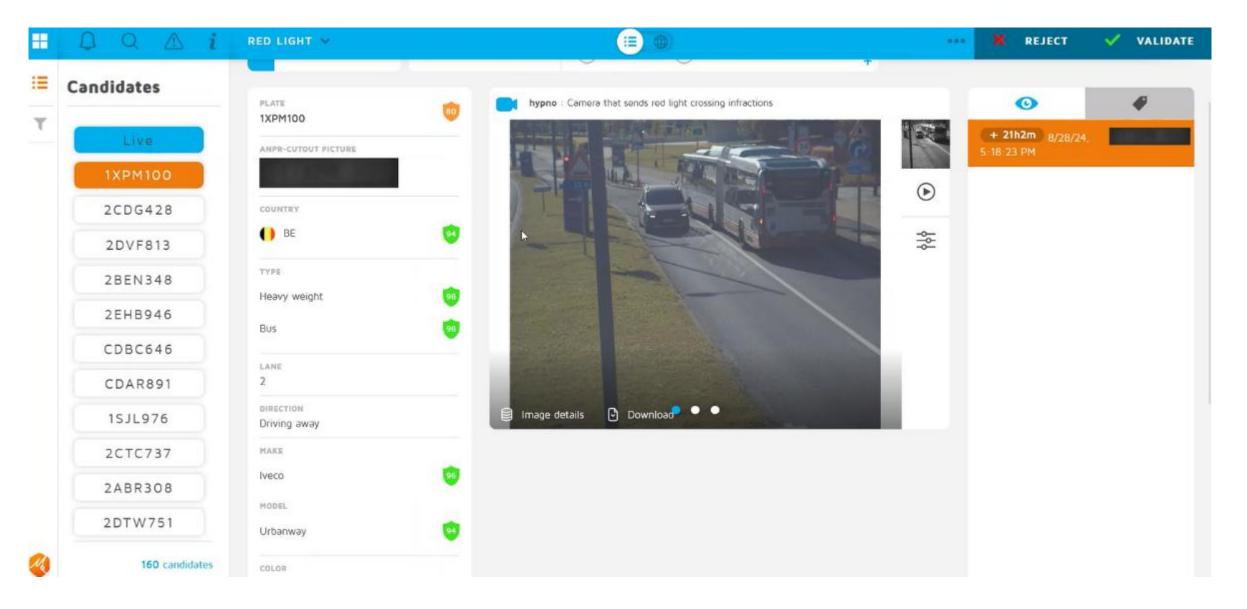


Hand held Mobile Phone and Safety Belt detection



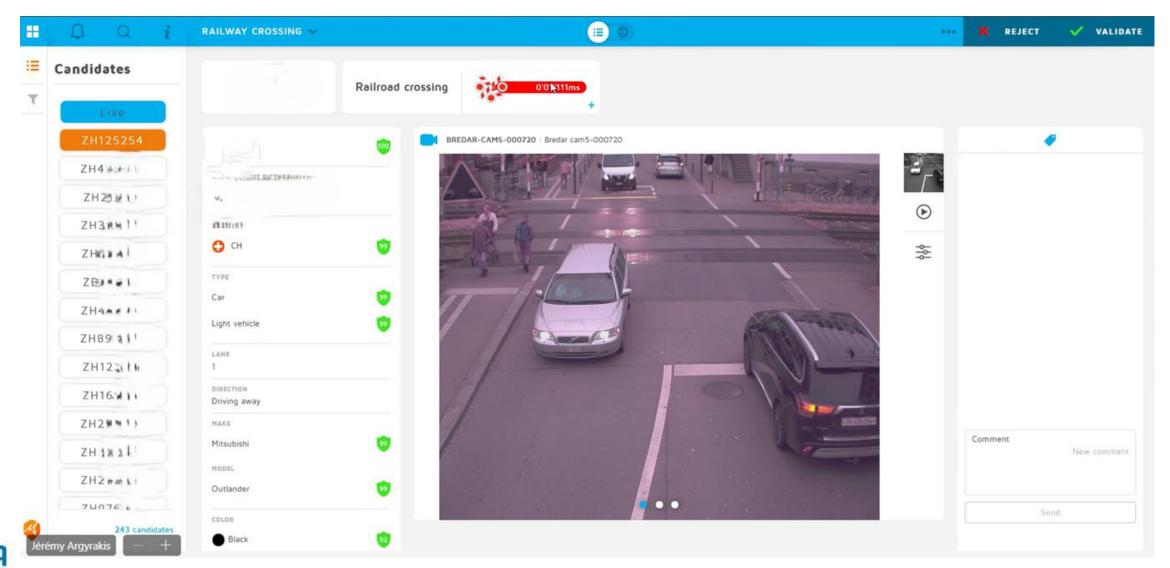
RED Light Running



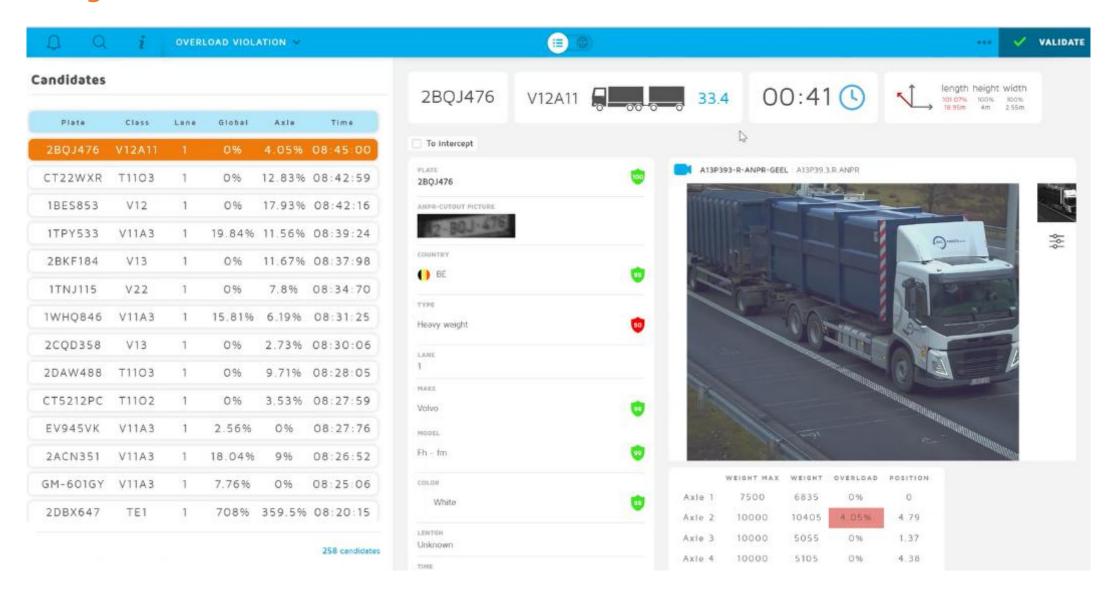


Railway crossings

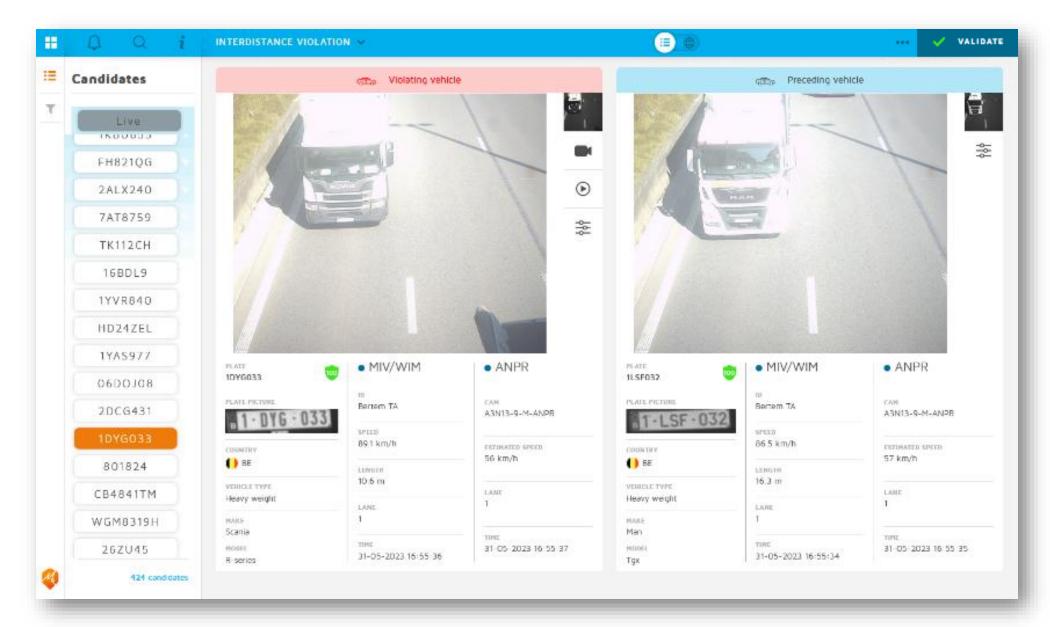




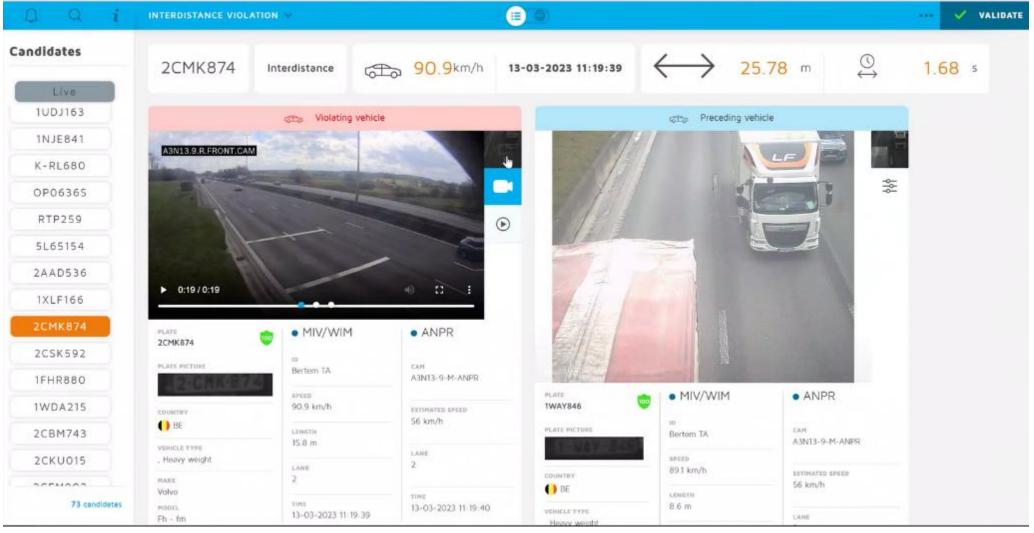
Weight in Motion in M³



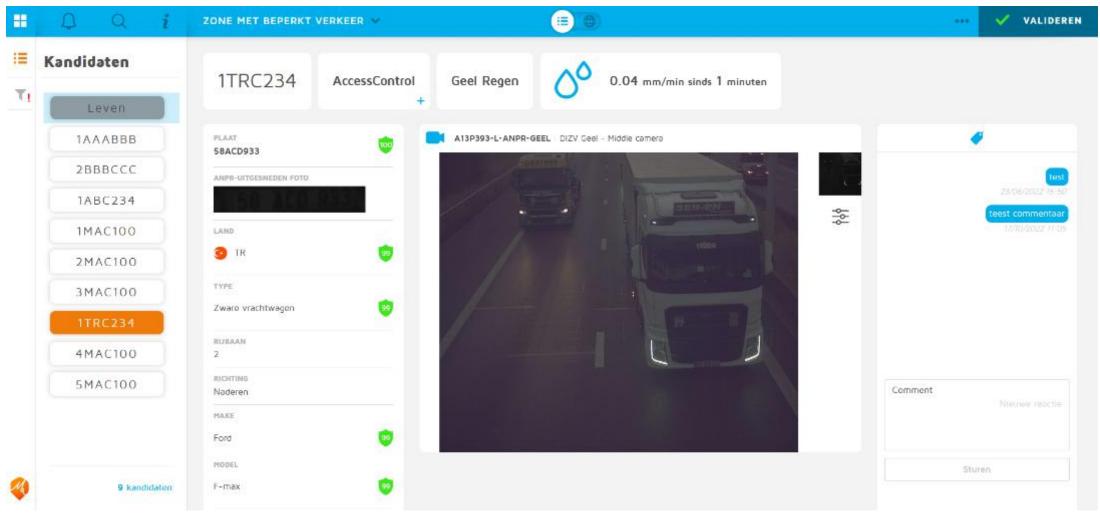
Interdistance enforcement in M³



Interdistance enforcement in M3



Overtaking in rainy conditions violation



Real time data available in camera toolbox QCAM5





OL59BX

C NL

TRUCK



Make

80 / 3265

WHITE

52

Going away

Lane 1

Exposure: 300 µs

Gain: O cb

Illum. power: 40 % Illum, duration: 300 µs

15:34:21 13/05/2024 CEST

← Back to live

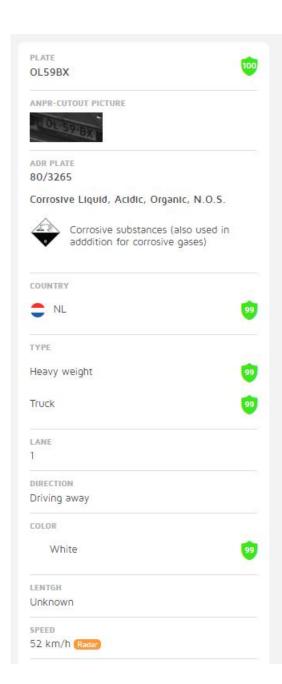








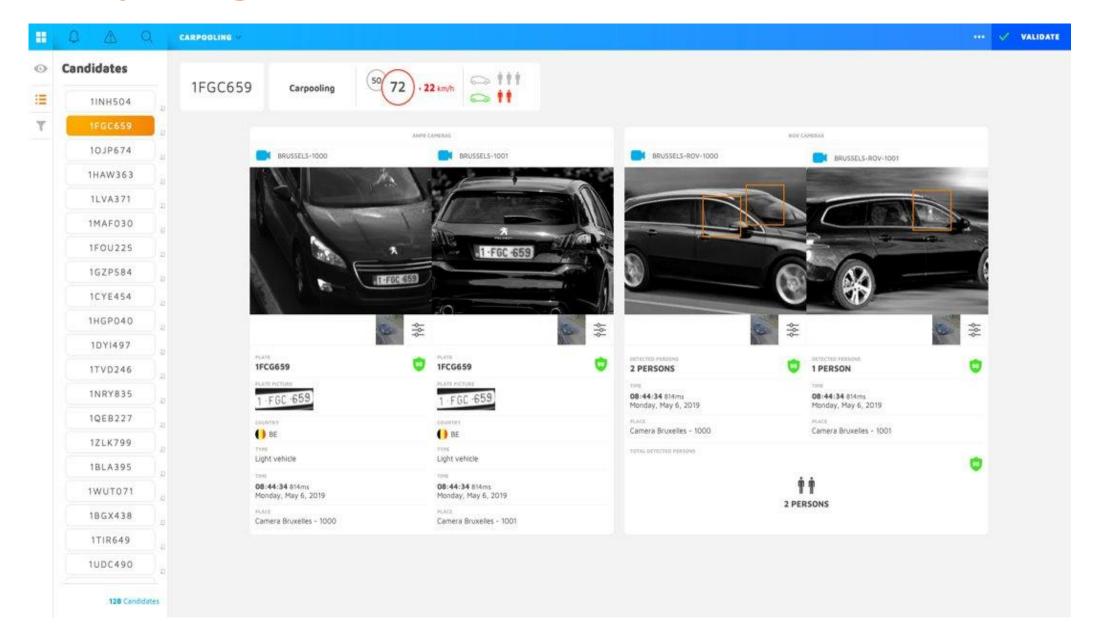




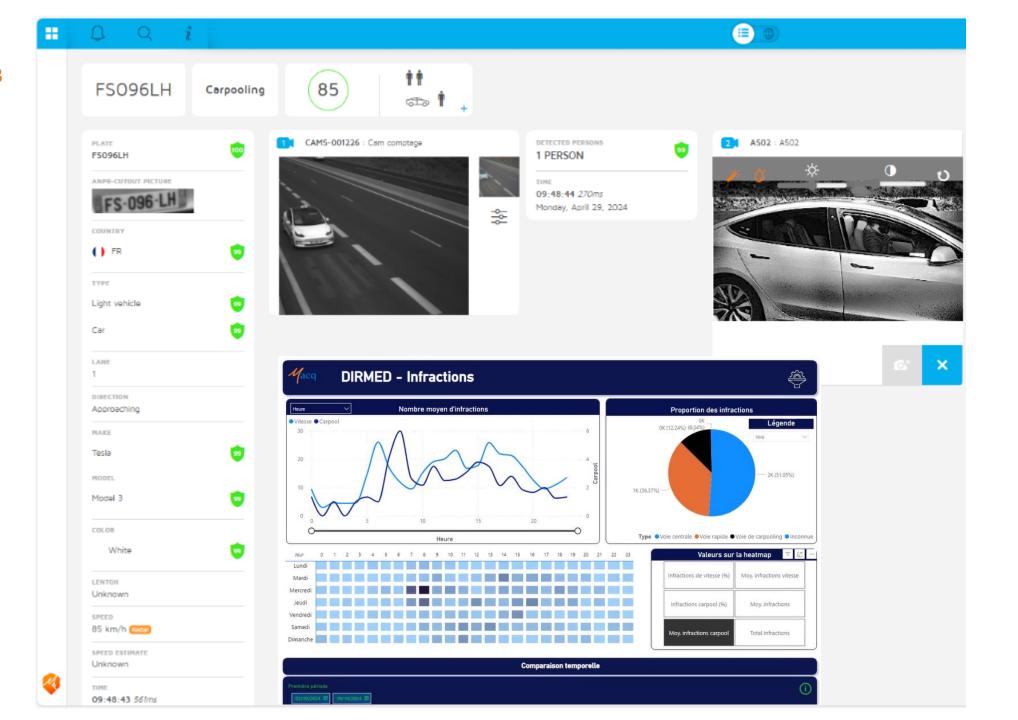




Carpooling M³ Module

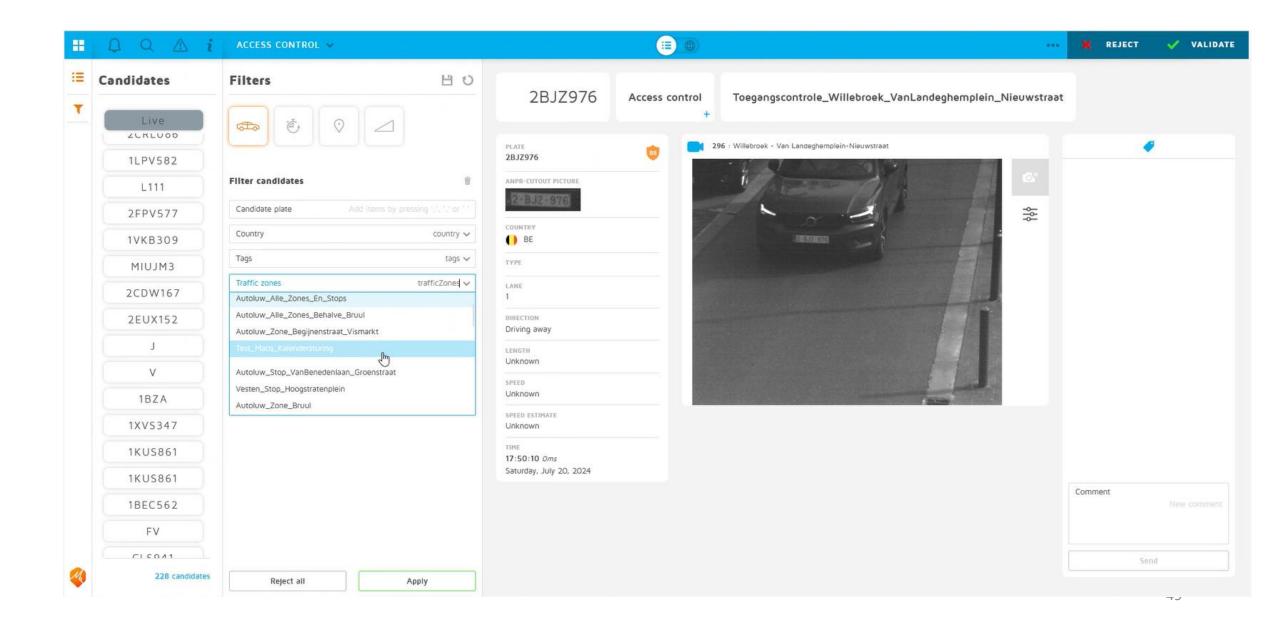


Carpooling M³ Module





Access Control – Restricted Area



Illicit Traffic



- Avoid non-local traffic
- Based on travel time and/or vehicle type
- Truck in transit
- Cause: GPS, Google Maps or Waze



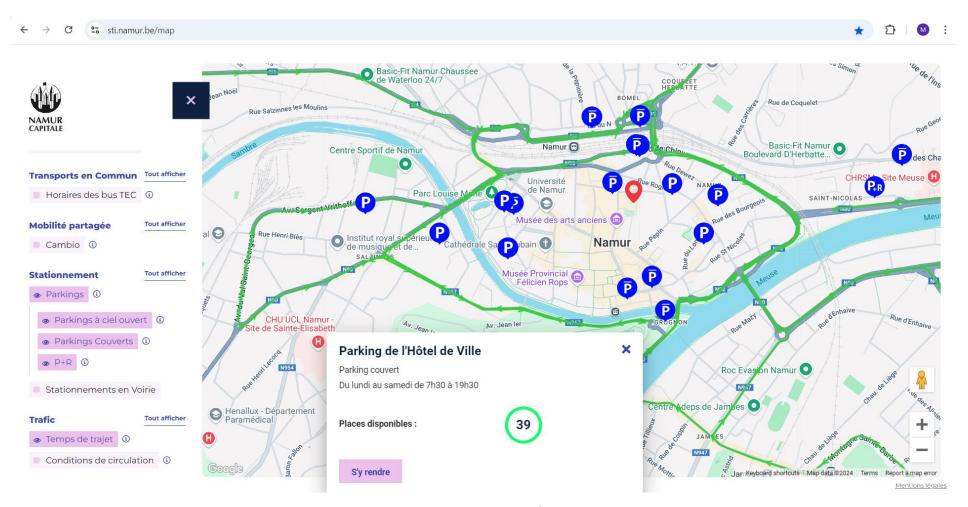


Vulnerable road users & Helmet detection



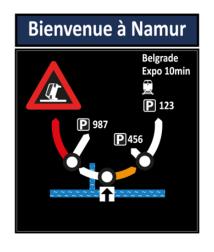


Real-time Traffic Management





Bus stop displays



Public Web platform

VMS

confidential 52

Applications

Parking Monitoring



- Different sensing technologies
- Different parking types
- Real-time parking monitoring



Smart cameras



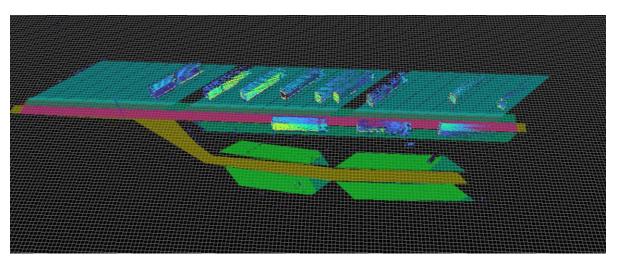
Lidar

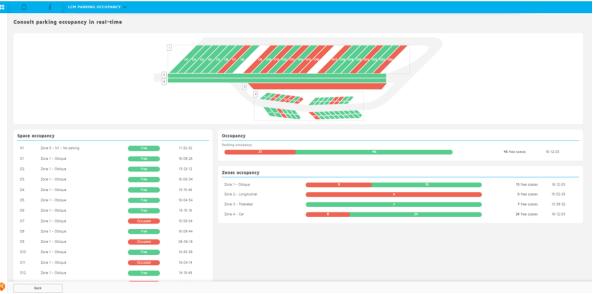


Ground sensors



Scan car/parking meters

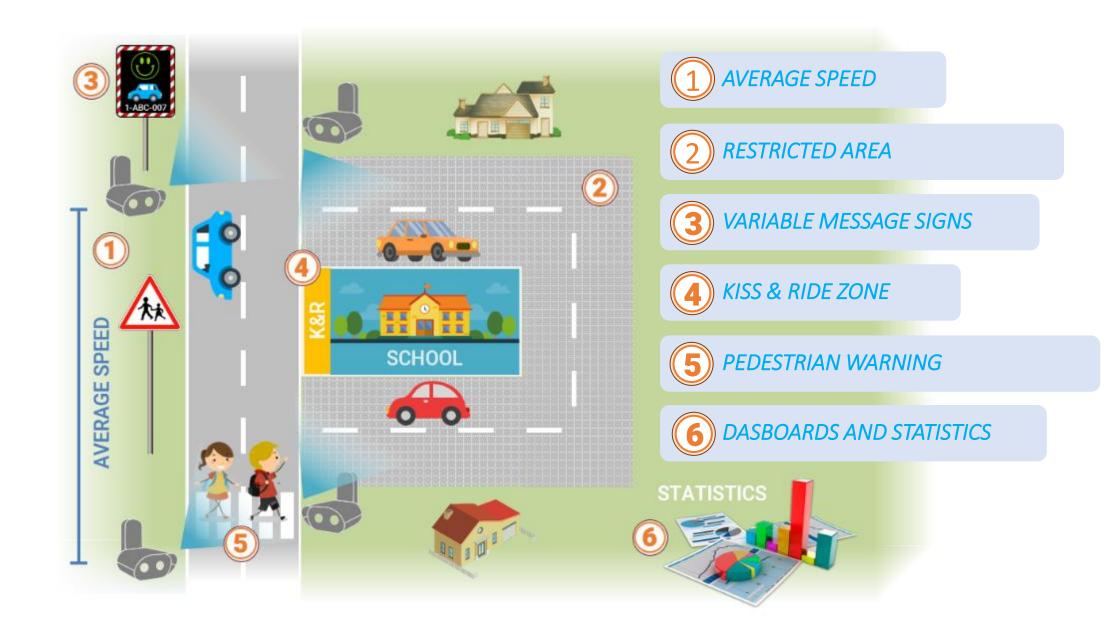




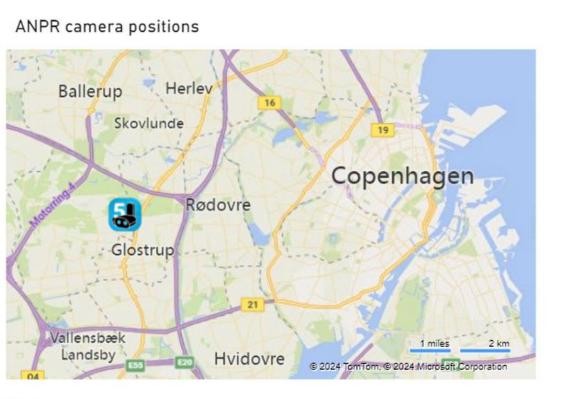
Lidar representation of a parking lot

confidential 53

Safe School System



Dashboard demonstration



Category counts

Car

Truck

Bicyle

Person

Plate country occurences

577

316

258

115

94

77

62

52

14

Danemark Sweden

Poland

Lithuania

Norway

Bulgaria

Germany

Romania

Hungary

Czech Rep...



External IR Light for 24/7 vehicle and driver detection

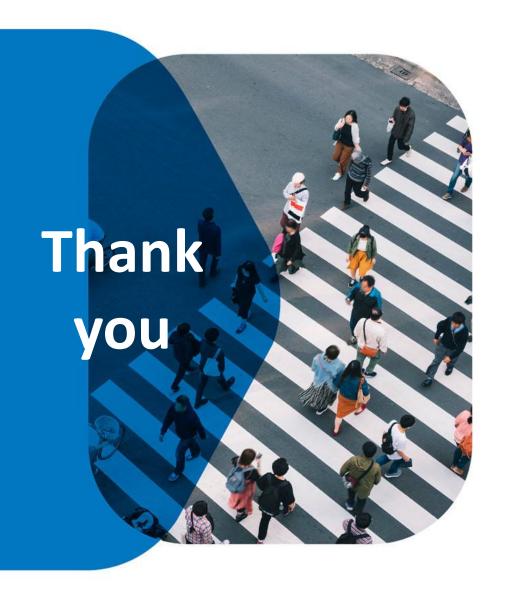


Business Model Enforcement as a Service



- No costs at all, not at investment nor maintenance
- No know-how required
- Hardly any follow up on the project
- No 2-year recalibration costs
- Very short implementation period: operational 6 months after signing
- Higher quality guarantee, pro-active monitoring
- Fast ROI, no investment but income for the municipality

"The new, more sustainable business model"









Contact us



Jean-François Coppieters

Account Manager



