

Flemish Roads and Traffic Agency

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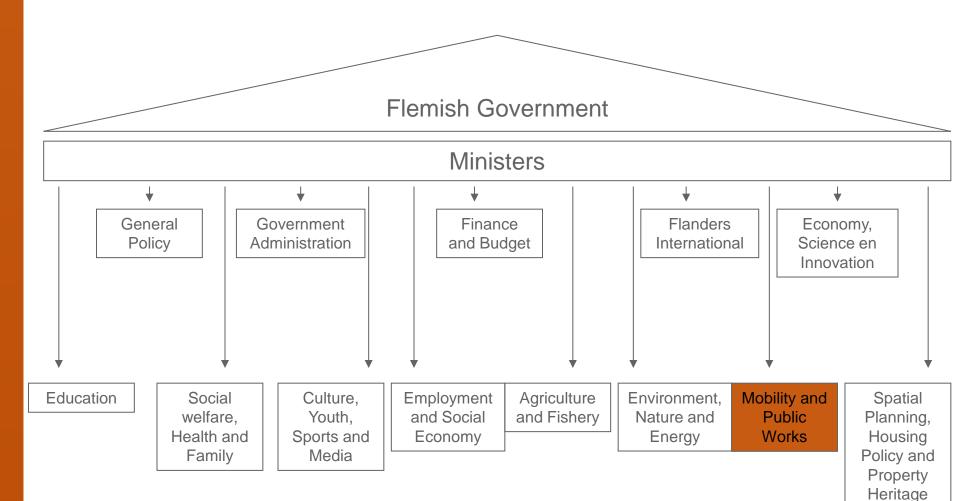
Overview

- 1) Organisation
 - 1. Flemish Government
 - 2. Department of Mobility and Public Works
 - 3. Agency for Roads and Traffic
- 2) Freight transport
 - 1. Traffic
 - 2. Measures
 - 3. Road Inspection



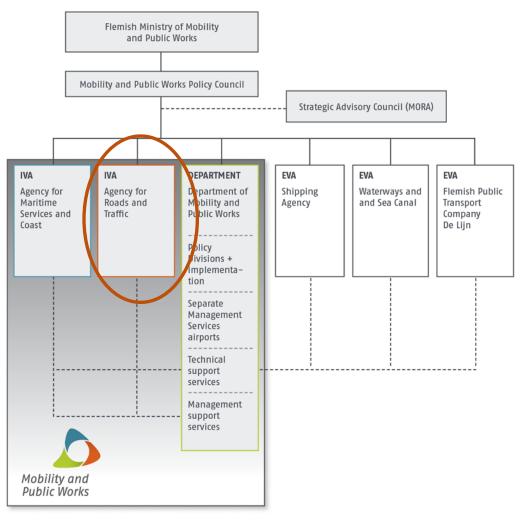
1. Flemish Government13 Policy Areas





2. Mobility and Public Works Policy Area – Organisation Chart





3. Agency for Roads and Traffic

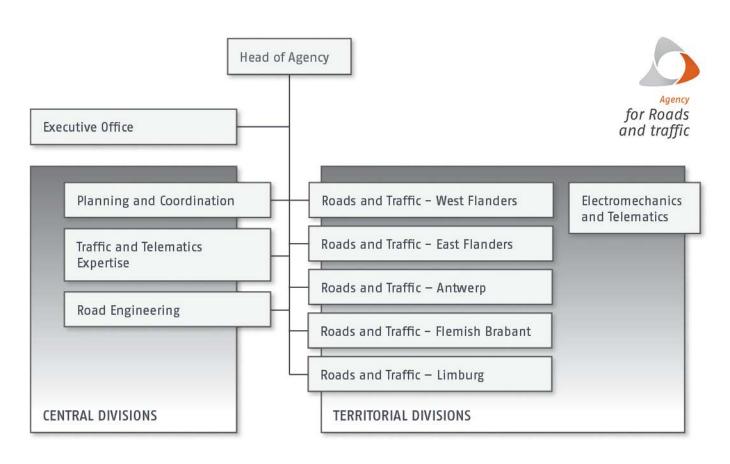


- a) Structure
- b) Tasks
- c) Road network
- d) Staff and budget

3. Agency for Roads and Traffic a) Organisation chart



wegen en Verkeer



3. Agency for Roads and Traffic b) Tasks



- Managing, maintaining and optimising the roads entrusted to it
- Organising smooth and safe road traffic
- Providing information and ensuring communication
- Supporting policy and decision making

3. Agency for Roads and Traffic

c) Road network

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Numbers of kilometres of roads managed by the Agency

Motorways	895 km
Exit roads	418 km
Region roads	5381 km
Ring roads	246 km
Total	6.940 km
Cycle paths	7.575 km



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3. Agency for Roads and Trafficd) Staff and Budget

Budget

Maintenance 2014	€169,661,600			
Roads	€118,968,000			
Electrical and Elektromechanical Equipment	€50,693,000			
Investments 2014	€ 415,201,030.40			
Roads and engineering structures	€392,255,653.56			
Subsidies to local authorities (school areas, cycle paths)	€3,102,376.84			
Improvement of public transport flow	€17,729,000			
Cargovil Fund	€2,114,000			
Total 2014	€584,862,630.4			



2. The impact of freight transport



Belgium 30.528 km² 11,2milj. habitants

Lot of traffic and traffic jam





- 2. The impact of freight transport Wegen en Verkeer
 - 1) Traffic
 - a) General numbers
 - b) Accidents
 - c) Truck vs. cars
 - 2) Measures:
 - a) Infrastructure
 - b) Technology
 - c) Kilometre-based charge/toll for freight transport
 - 3) Road inspection
 - a) Axle load decree
 - b) ADR
 - c) Supertrucks

2.1 Traffica) General numbers



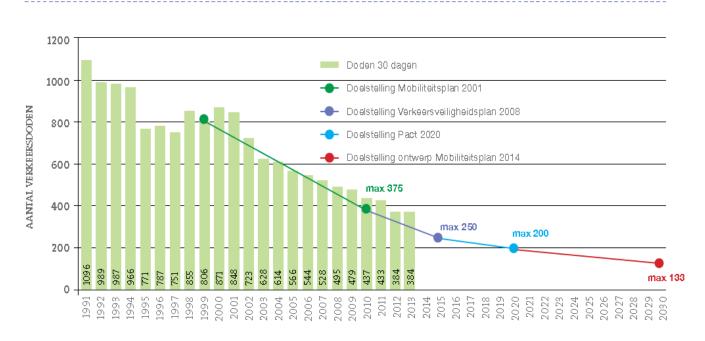






Evolution of accidents with deadly consequences in the Flemish Region (1991-2013)

Evolutie van het aantal verkeersdoden (Vlaams Gewest, 1991-2013)

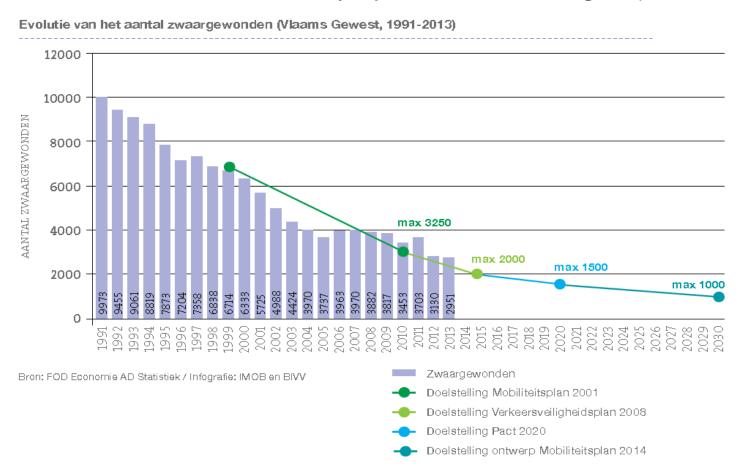


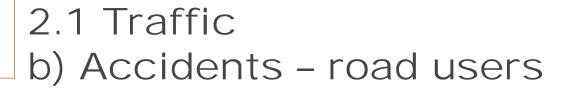
Bron: FOD Economie AD Statistiek / Infografie: IMOB en BIVV





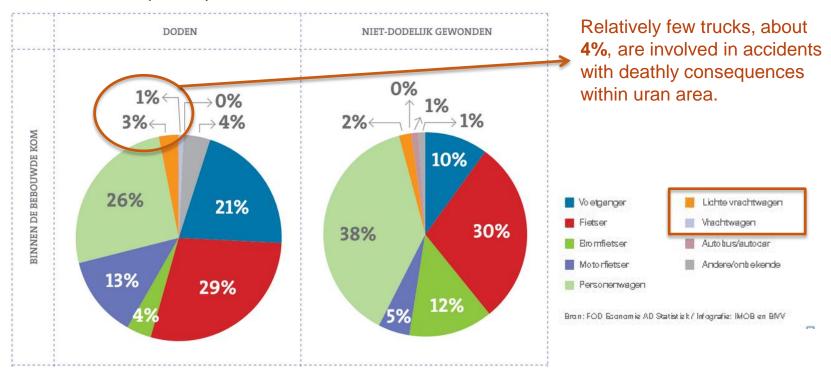
Evolution of accidents with heavily injured in Flemish Region (1991-2013)







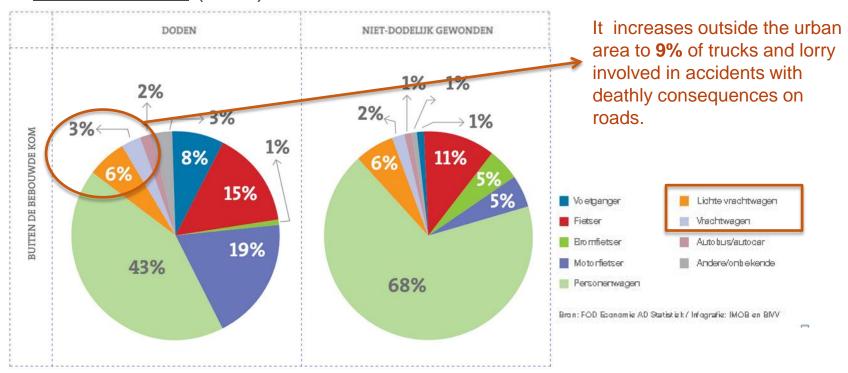
Partition of deadly and non-deadly injured per type of road user within the urban area (2013)







Partition of deadly and non-deadly injured per type of road user <u>outside of</u> the <u>urban area</u> (2013)



2.1. Trafficc) Truck vs. Cars

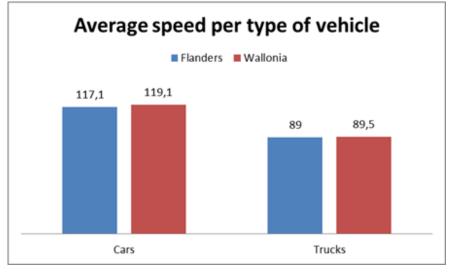


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Type of road us	Pedestrian 🔼	Bicycle <u></u>	Moped 🔼	Motorcycle <u> </u>	Car 🔼	Lorry (light) 🔼	Truck 🔼	Bus/Coac <mark>™</mark> (Other/Unknov🔼 T	otal 🔼
Bicycle	194	388								582
Moped	96	176	24							296
Motorcycle	21	70	16	21						128
Car	1109	3493	1570	913	5478					12563
Lorry (light)	94	334	148	75	996	85				1732
Truck	31	141	44	26	699	109	94			1144
Bus/Coach	49	48	11	2	134	18	11	4		277
Other/Unknown	60	67	21	18	278	26	13	4	18	505
Obstacle	0	258	127	140	2588	208	89	4	33	3447
Total	1654	4975	1961	1195	10173	446	207	12	51	

1/ Fewer trucks are involved in accidents

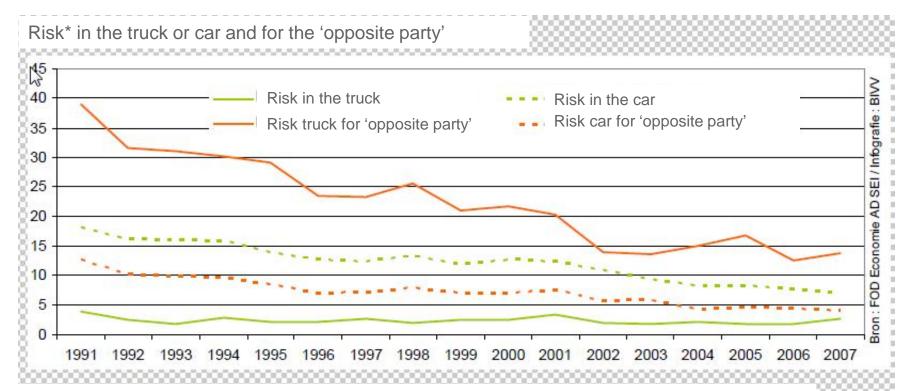
2/ Their average speed is lower than cars



Risk that collision will have deathly consequences is 3 times as high for the 'opposite party'





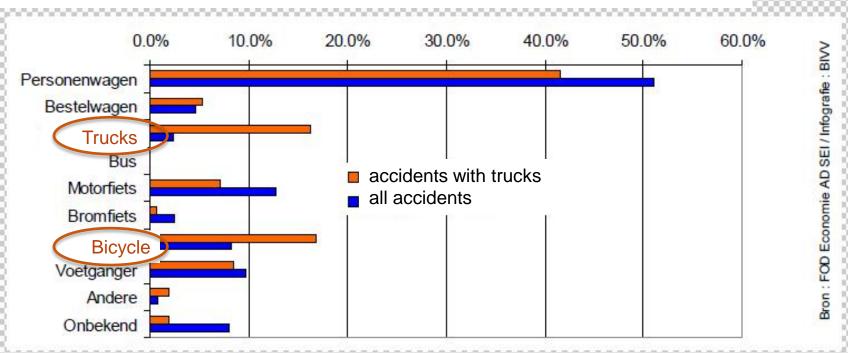


^{*} Risk accidents with deathly consequences within 30 days for a miljard vehical km











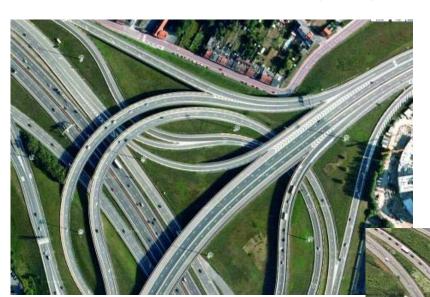
2.2 Measures

- a) Infrastructure
- b) Technology
- c) Kilometre-based charge

agentschap Wegen en Verkeer

Some specific measures

Separation of on-going and local traffic e.g. R0



- To avoid sudden change-overs
- Divide the available lanes as efficient as possible when it comes to both capacity and safety

Belgium = dense country

→ a lot of entrances and exits on the high ways=> dangerous



Structural maintenance of the infrastructure





Optimizing traffic safety:

Elimination of 809 Accident Black Spots – save design

Overview

- 809 spots in total
- 71 spots: design complete
- 37 spots: under construction
- 689 spots: executed!!!

Budget

Until now: €1.012M





Save speed limits: school environment and other roads
 Dynamic speed signs



Speed high ways





 Road works: adapted work 'space' for the road worker to ensure safety of our employees

Depending on disposable lane width





Dynamic Traffic Management





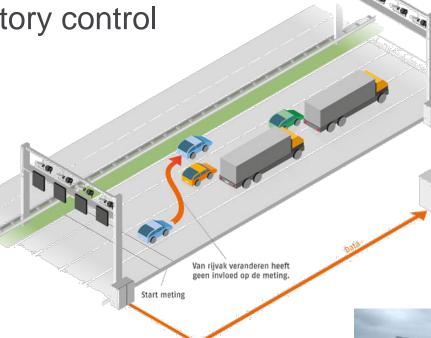
• Vulnerable road users: special attention for constructions of pedestrian - cycle - equestrian paths (separate location - shields -...)

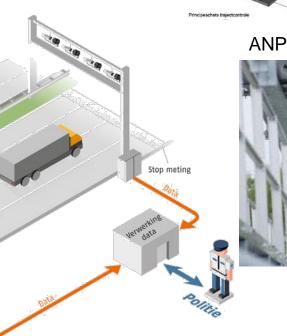




Trajectory control

















- Traffic jam detection and security measures
 - Fixed locations

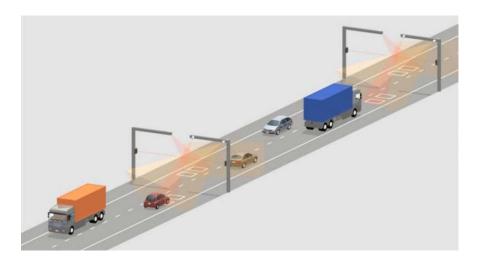




Structural research of approriate use for large road projects

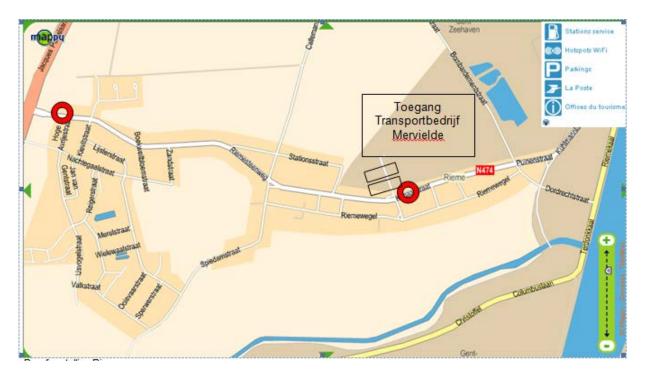


- Pilot project: Electronic Truck Lock/Sluice Rieme digital truck lock installation
 - Goal: to fend off freight transport in traffic flow of village cores without compromising the accessibility of the harbour area





 Pilot project: Electronic Truck Lock/Sluice Rieme – digital truck lock installation



Results:

Decrease of violations since using the system:

- Before lock: more than 700 each day
- During test period:average of 15 /day
- Repression period: average of 8 / day



- Cooperation agreement between Flemish, Walloon and Brussels government: interregional entity Viapass
- Introduction in April 2016
- For freight transport with maximum permissible weight of more than 3.5 tons
- Based on satellite technology, allowing registry and charging by the kilometre



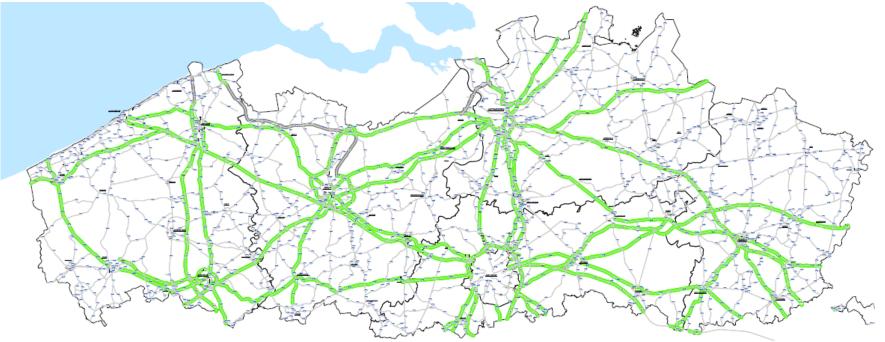
- EETS standards of EU
- On-Board Unit (OBU)

Charging of toll



- Tolls collected reinvested in improvements to the road infrastructure and Belgium's mobility in general.
- Goal = better flow of freight transport





Legende

Eurovignet

Wegen Eurovignet (KB 1997) en kilometerheffing (Tarief >0)

Wegen Eurovignet vrijgesteld van kilometerheffing





Rates km charges for trucks in Belgium from 1/04/2016

	3,5-12ton	12-32ton	>32 ton
Euronorm 0	0,146€	0,196€	0,20 €
Euronorm 1	0,146€	0,196€	0,20 €
Euronorm 2	0,146€	0,196€	0,20€
Euronorm 3	0,126€	0,176€	0,18 €
Euronorm 4	0,095€	0,145€	0,14,9€
Euronorm 5	0,074€	0,124€	0,128€
Euronorm 6	0,074€	0,124€	0,128€

KILOMETERHEFFING













Traffic jam

→ cost
manhours
truck driver



Why?

Overcharged truck cause damage!

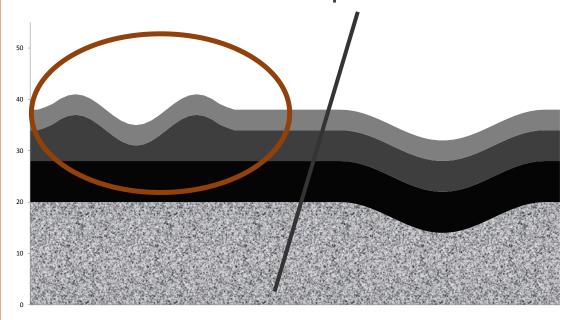


















 Preventive policy to tackle damage of road infrastructure (rutting, pits,...):

Road inspection:

- Implementation of the Axle Load Decree
- Implementation of Decree for protecting the road infrastructure in case of exceptional transport (May 2013)
- Transport of chemicals and other hazardous substances:

ADR – Accord européen relatif au transports international des marchandises Dangereuses par Route)

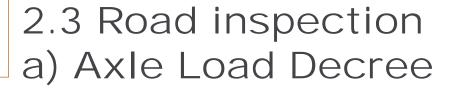


- a) Axle Road decree
 - Legal basis
 - Implementation
 - Weigh in Motion
 - Measures
 - Results
 - Raising awareness
- b) ADR
 - Legal basis
 - Implementation
 - Registration
 - Measures
- c) Technical check-up
 - Exceptional transportation
 - Supertrucks











Legal basis:

Decree, december 1998 determining supervision of the budget 1999: chapter XIV (art. 55bis - 64)

Art. 56: "It is prohibited to deteriorate the pavement by entering (public) roads with a vehicle of which the weight on the surface below one of the axles exceeds the maximum determined weight by more than 5%

Decree, May 2013 protecting the road infrastructure in case of exceptional transport: maximum total weight and measurements of vehicles



a) Axle Load Decree - Implementation

- Cooperation with Federal Police
- Static weigh bridges: 40 axle bridges in 5 Flemish provinces near motorways and regional roads

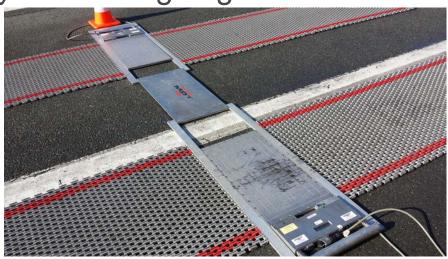






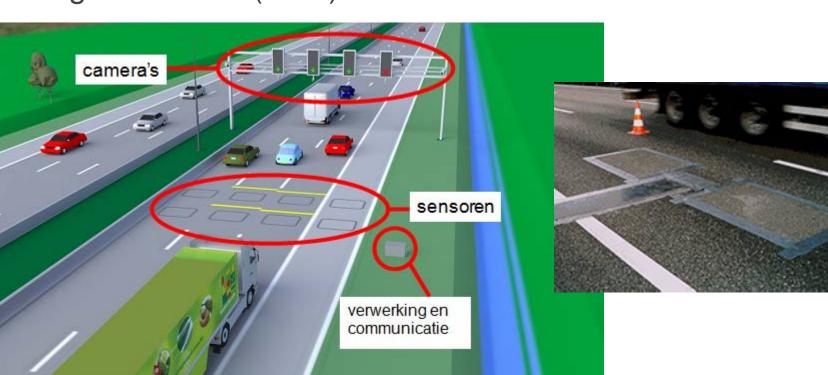
- 2.3 Road inspection
- a) Axle Load Decree implementation

Dynamic weighing





- 2.3 Road inspection
- a) Axle Load Decree implementation
 - Weigh in Motion (WIM): 9 location in Flanders



a) Axle Load Decree - Weigh in Motion

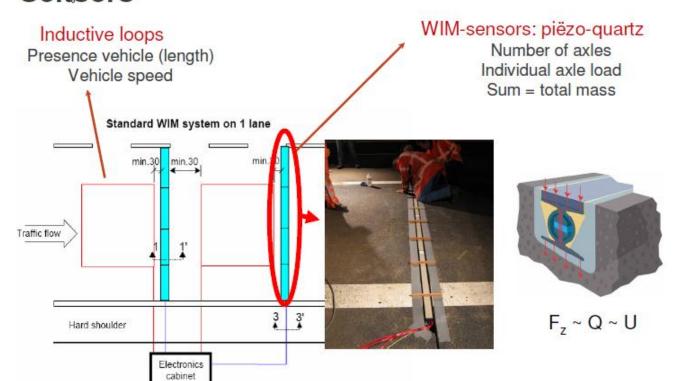


- 4-8 km before existing static weighing station
 - Presence of bridge or gantry
 - Road surface quality
 - Goal: site class B10 (COST323)
- Calibration: use of reference vehicles
 - Initial (+/- 1 week)
 - periodical (+/- every 6 months)
 - Vehicle data originating from enforcement actions
- New development: creation of a link between the WIM data and the data from the static weighing stations



a) Axle Load Decree - Weigh in Motion

Sensors

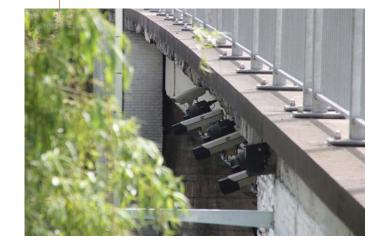


Vertical forces on this material are converted in tensions corresponding to the actual forces.

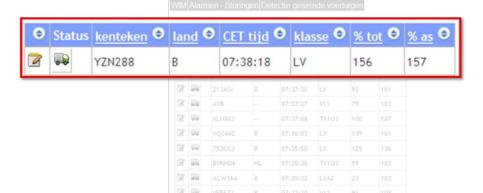
a) Axle Load Decree - Weigh in Motion















- 2.3 Road inspection
- a) Axle Load Decree Weigh in Motion
- Accuracy (10% for total weight) strongly dependent on:
 - Road infrastructure (levelness road surface, rutting, bends, slopes)
 - Traffic dynamics (accelerating/breaking, manoeuvres)
 - Sensor installation quality
 - Influence of pavement temperature
- Vehicle classification

2.3 Road inspectiona) Axle Load Decree - Measures



Axle overload	Penalty
<499 kg	€300
500 kg – 999 kg	€600
1000 kg – 1499 kg	€1050
1500 kg – 1999 kg	€1500
2000 kg – 2499 kg	€2100
2500 kg – 2999 kg	€3000
3000 kg en meer	€4500





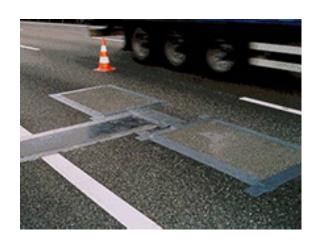
Year	Check-ups	Charges	Fines
2009	5709	1004	€1.724.251,60
2010	5603	1390	€1.802.277,74
2011	5297	1563	€2.252.207,68
2012	5374	1498	€2.603.580,01
2013	4497	1623	€3.098.320,00
2014	4149		€3.940.090,00
Total	30629	8604	€15.420.727,03

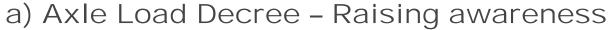


2.3 Road inspectiona) Axle Load Decree - Results



- Relative numbers:
 - Visual inspection: 18 % efficiency
 - Weigh in Motion: 83% efficiency







Communication through transport federations

Preventive actions:

Test weighing:

2011:49

2012:71

2013:207



 Education: project with presentation for technical schools e.g. MOBI Ghent

2.3 Road Inspectionb) ADR



- Legal basis
 - European Agreement concerning the international carriage of dangerous goods by road
- Primarily international transport, but also implemented on a national level (except explosive and radioactive substances – separate regulation)
- Competence of Flanders since January 2015 (6th State Reform)

2.3 Road Inspectionb) ADR - Implementation



- Relevant safety levels (including testing and inspection where required)
- Classification in 13 types of substances
- Interception check of:
 - Necessary documents
 - The exterior of the vehicle (signs)
 - Safety equipment (e.g. fire extinguisher, ...)
 - Cargo (substances // documents)
 - Amount (// documents)
 - Packaging (intact and compliant with regulations)

2.3 Road Inspectionb) ADR – Registration

31.

ROYAUME DE BELGIQUE / KONINKRIJK BELGIE Contrôle ADR / ADR Controle

	Contrôle ADR / ADR Con	itrole			
1.	Plaats van controle / Lieu de contrôle:				
2.	UN-nr./n° ONU: VG/GE:				
3.	Datum / Date:				
4.	Begin / Début Einde / Fin				
5.	Nationaliteit en inschrijvingsnr. voertuig /Nationalité et nr. d'immatriculation véhicule				
6.	National inschrijvingsnr. aanhanger-oplegger / National. nr. d'immatriculation remo	rque-semi-remorque:			
7.	Vervoerder en adres / Transporteur et adresse:				
8.	Chauffeur - bijrijder / Conducteur - convoyeur:				
9.	Afzender , adres / Expéditeur , adresse:				
10.	Plaats van laden / Lieu de chargement:				
11.					
12.	Maximale hoeveelheid van ADR 1.1.3.6 overschreden? / Limite de quantité ADR 1.1.3.6	ó dépassé? 🗆 Ja/	Oui Nee / Non		
13.	,,				
	□ bulk / vrac □ collo / colli □ tank / citerne	☐ batterijvoertuig / véhicule-batterie			
		Contrôlé Gecontroleerd	Infraction relevée Vastgestelde inbreuk	Sans obje	
14.	Vervoersdocument / Documen de transport / Container package certificate:				
15.	Schriftelijke instructies / Consignes écrites:				
16.	Bilaterale-multilaterale overeenkomst / Nationale afwijking / Accord bilatéral- mulitlatéral/ Dérogation nationale:				
17.	Certificaat van goedkeuring van de voertuigen/Certificat d'agrément des véhicules:				
18.	Opleidingscertificaat van de chauffeur / Certificat de formation du conducteur:				
19.	Goederen mogen niet vervoerd worden/Marchandise non autorisée pour le transport:				
20.	Collo-tank-voertuig niet toegelaten voor de vervoerde goederen / Colis-citerne				
	véhicules non autorisés pour le marchandises transportées:				
21.	Samenlading verboden / Interdiction de chargement en commun:				
22.	Beladen en vastzetten van de vracht en behandeling¹/Chargement , arrimage de la				
23	charge et manutention ¹ : Lekkage van goederen of beschadiging van collo ¹ / Fuite de marchandises ou				
23.	endommagement de colis ¹ :	Ц			
24.	UN-kenmerk verpakking-tank ¹ / Emballage testé UN - citerne ¹ :				
25.	Kenmerking (bv. UN-nr.) en etikettering collo / Marquage (ex. n° ONU) et				
	étiquetage des colis:				
26.	Grote etiketten op tank-op voertuig / Plancardage des citernes-des véhicules:				
27.	Kenmerking voertuig-vervoerseenheid (oranje bord, verwarmde stoffen) / Marquage				
	véhicule-unité de transport (panneau orange, température élevée):				
28.	Veiligheidsuitrusting / Equipemen de sécurité (8.1.5 a):				
29.	Persoonlijke uitrusting / Equipement personnel (8.1.5 b en/et c):				
30.	Brandblusser(s) / Extincteur(s) d'incendie:				



2.3 Road Inspectionb) ADR – Measures



Fines:

Immediate collection:

When total amount is below €2750 (foreigners must pay immediate, inhabitants can use bank transfer)

Registration of an administrative finding

When total amount exceeds €2750 or the violation is too severe for immediate collection

2.3 Road Inspectionc) Technical Check-up



Inspection of

- Certificates and permits
- Measurements and total mass
- Itinary
- Escort of exceptional traffic

Nummer van de vergunning:	VERGUNNING van uitzonderlijk vervoer wordt verleend aan:		
	België		

VOOR VOERTUIG(EN):

	Aantal aslijnen	Chassisnummer referentievoertuig	Chassisnummers vervangende voertuigen	
Enkelvoudig voertuig zonder lading: Genre : AUTOKRAAN	5			

2.3 Road Inspectionc) Technical Check-up



Legal basis

Decree, June 2., 2010 concerning traffic and exceptional vehicles

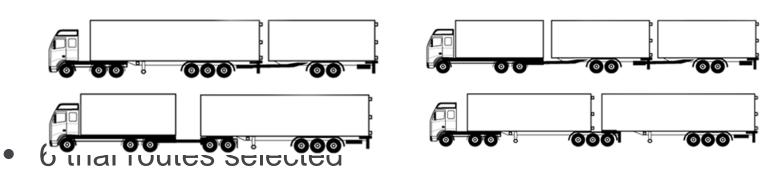
- Traffic safety policy
 - More thorough inspection of permits for exceptional vehicles
 - Cargo security







- Pilot project: 'Supertrucks' LZV longer and heavier vehicles
 - Length: 25m25 vs. regular truck 18m75
 - Maximum weight: 60 tons vs. 44 tons
 - 2 pivot/hinge points vs. 1





Thank you for your attention

