ROAD SAFETY OBSERVATORY

FRENCH

Road user behaviour observatory (France mainland)

Results for the year 2021

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Observatoire national interministériel de la sécurité routière

ONISR

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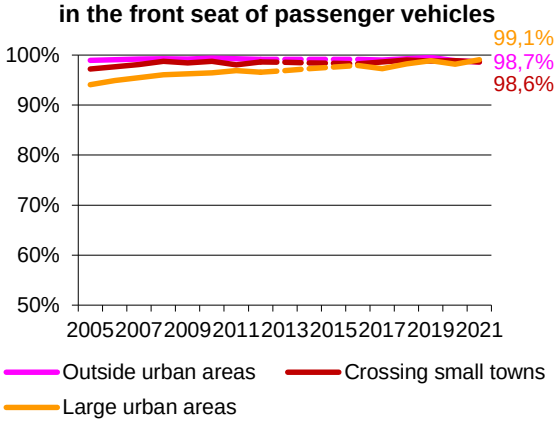
Summary

Since 2016, the observatory's methodology has included new categories of road users (seatbelt observations in the front for light goods vehicles, safety helmets observations for cyclists in urban areas). In 2020, the renewal of the contract led to the addition of observations on the use of distractors by pedestrians while crossing. The Covid-19 pandemic and related measures led to a slight shift in the first wave of the survey so that the results would be comparable to previous years. The key findings for the 2021 year are as follows.

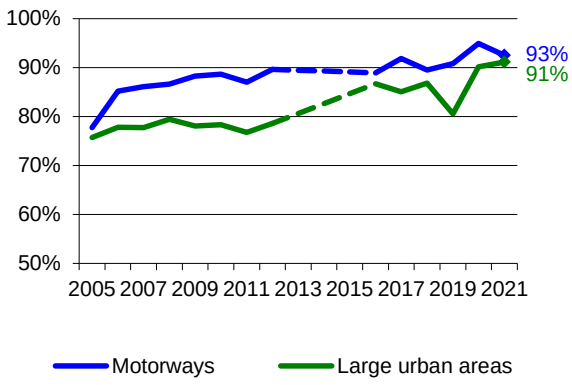
The rate of seatbelt use by passenger vehicle occupants remains stable in the front seat compared to the previous year, with a marginal non-wearing rate, around 1 % regardless of the network. Wearing a seatbelt in the rear seat is also stable with a narrowing gap between motorways (93 %) and large cities (91 %) for which the estimated rate is the highest since the start of observations in 2005. The comparison between working days and weekends does not highlight any significant difference.

For users of light goods vehicles, the seatbelt wearing rate observed in the front is 97 % outside urban areas and 96 % in large urban areas where it is stabilizing after 4 consecutive years of increase.

Evolution of the wearing of safety belts in the front seat of passenger vehicles



Evolution of the wearing of safety belts in the rear seat of passenger vehicles



In 2021, and despite figures that remain high, **the wearing of safety helmets by powered two-wheeler users** has experienced its lowest rate in 10 years outside urban areas and in large urban areas (respectively 96.5 % and 97.9 %).

The use of safety helmets by cyclists in large cities continues to increase and is now 11 points above its 2016 level (32 % compared to 21 %). It remains worn more at weekends (36 %) than on working days (27 %).

Observations of the **use of distractors** while driving show an increase in their use for all drivers, regardless of the mode of travel, from +0.9 points among passenger vehicle drivers (4.2 %) to + 5.0 points among UV drivers (13.4 %). These rates are higher on working days than at weekends and higher in large urban areas than outside urban areas. For cyclists in urban areas, the rate explodes in 2021 (14.2 %, +7.8 points), in particular linked to a high rate of wearing earphones corresponding to 10.1% of cyclists observed. The use of distractors at pedestrian crossings increases during crossings compared to 2020. 28 % of pedestrians use them at some point during the crossing (+ 7.5 points) including 23 points (+ 6.8 points) with the distractor in hand, especially in younger age groups.

The observations also count the occupants of the vehicles, thus making it possible to estimate an **average occupancy rate**. For passenger vehicles, it is around 1.35 to 1.55 depending on the road network (higher on motorways). It is higher on weekends than on working days regardless of the network.

Key indicators of good traffic behaviour 2021

Key Performance Indicators (KPI) – Definition European Commission

Seatbelt use rate, daytime

Network	Passenger vehicles			UV (front)
	Front	Rear		
		Adults	Children	
Rural networks	98.2%	91.8%	96.6%	94.1%
2 or 3 lane roads outside urban areas	98.4%			96.9%
Large urban areas	99.1%	89.7%	95.6%	95.6%

Safety helmet use rate, daytime

Network	PTW	Cyclist
2 or 3 lane roads outside urban areas	98.5%	
Large urban areas	97.9%	31.8%

Rate of non-use of a distractor by drivers and pedestrians, daytime

Network	Pedestrian	Cyclist	PV	UV	HGV
2 or 3 lane roads outside urban areas			96.3%	86.9%	*93.9%**
Large urban areas	72.3%	85.8%	94.1%	78.7%	*92.0%**

*Low figures

1. Introduction

Since the 1980s, the ONISR has had a service provider carry out speed measurements and observations of road user behaviour at a number of observation points on the metropolitan road network. For technical reasons, this system was interrupted between 2013 and 2015. A replacement system was implemented during this period for speed measurements, but no observations of behaviour could be made. Behavioural observations were resumed in 2016 after a change in the panel of observation points and minor changes in the methodology. The terms of reference were completed in 2020 to include pedestrian observations.

This summary of the results of the 2020 observations discusses safety belt use, helmet use by two-wheeler users, driver and pedestrian distractor use, and vehicle occupancy rate.

Appendix 1 summarizes the number of vehicles observed in each category by network type.

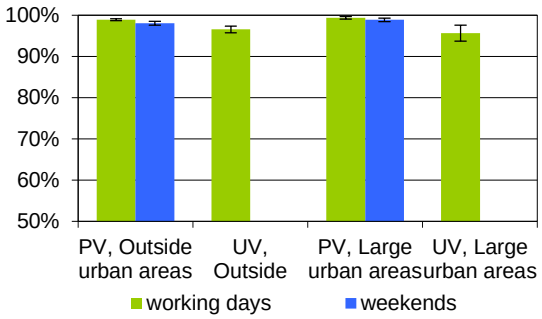
Appendix 2 details the methodology used for the behavioural observations and notes the changes from the system in place until 2012.

2. Wearing a seatbelt

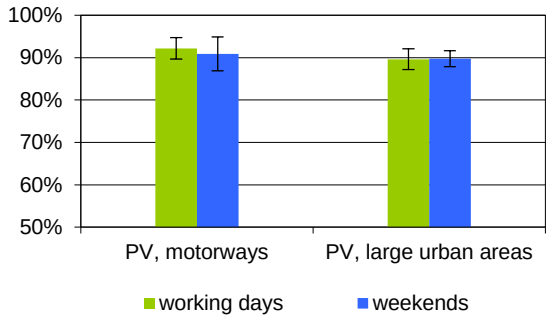
Things to remember

- **Front** seatbelt use is **almost universal** for passenger vehicles.
- Whatever the type of network, the rate of wearing a seatbelt is **higher at the front than at the rear.**
- The rate of wearing a seatbelt in the front is **lower among occupants of utility vehicles** than among occupants of passenger vehicles.

Front safety belt use rate of passenger vehicles and UV, by type of network



Rear safety belt use rate of passenger vehicles (adults), by type of network



Methodology

Observations of front seatbelt use are made on all types of road networks (see details in Appendix 2). They concern passenger vehicles (PV) and, since 2016, utility vehicles (UV). The results are very similar for the different types of networks outside urban areas[1]. Consequently, the observations were aggregated into three groups: networks outside urban areas, small town crossings, and large cities.

For practical reasons (need to observe vehicles at very low speeds), observations of rear safety belt use are only made on two types of networks: motorway toll gates and large cities. They only concern passenger cars, and distinguish between adults and children among rear passengers.

All observations, both front and rear, were made during the day.

The results are presented below by type of network according to the grouping made for the results concerning the use of safety belts in the front:
- networks outside urban areas (motorways only for rear safety belt use)
- small town crossings (only for front safety belt use),
- large cities.

For each type of network, we present successively:
- the evolution of the seatbelt wearing rate over the period 2005-2020, for passenger car occupants ;
- a comparison of the wearing rate observed on weekdays and weekends in 2020, for passenger vehicle occupants;
- for UV occupants, the observed front seatbelt wearing rate since 2016 (the first year that these vehicles were included).

The number of UV observed on weekends is too low to allow a comparison between working days and weekends.

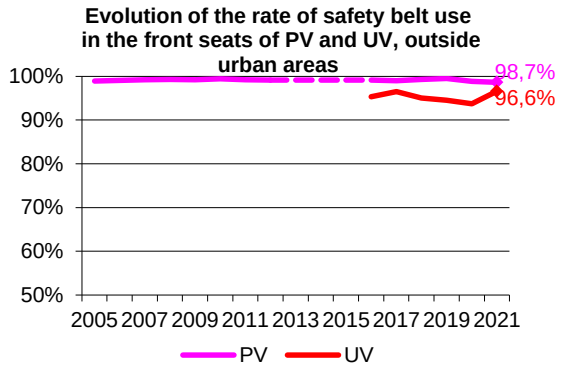
Each of the rates listed is accompanied by the associated 2020 confidence interval value.

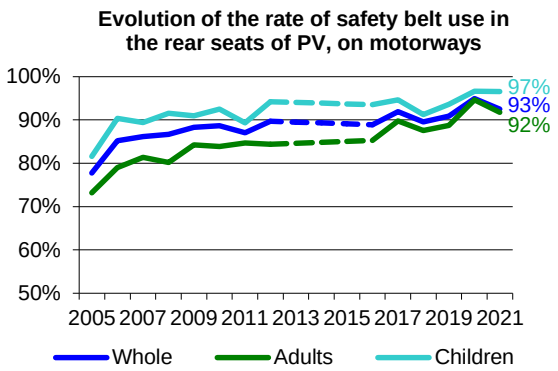
[1] Observations outside urban areas are made (unless otherwise stated) on rural motorways, urban motorways, dual carriageways outside urban areas, and 2 or 3 lane roads.

2.1. Networks outside urban areas

Observations outside of urban areas include rural motorways, arterial roads, dual carriageways, and 2 or 3 lane roads.

PV and UV occupants (front seat belt since 2016), evolution 2005-2021





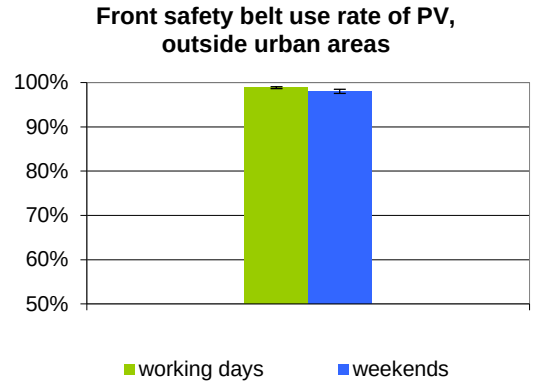
The 95 % confidence interval associated with the seatbelt wearing rates calculated for the year 2021 is of:
± 0.20 point for wearing a seatbelt at the front of passenger vehicles and ± 0.8 point for UV, ± 1.9 points for wearing seatbelts in the rear of **passenger vehicles** on motorways (± 2.1 points for adults, ± 3.3 points for children).

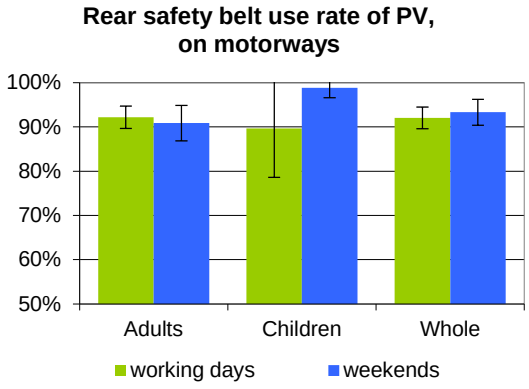
The rate of seatbelt wearing in the **front of passenger vehicles outside urban areas** is the lowest recorded since 2005. Taking into account the confidence intervals, wearing is still almost universal.

For the wearing of seatbelts in the back on the motorway, the rate experienced a drop of two points, which is insignificant with regard to the confidence intervals. The rate remains higher for children than for adults.

Concerning the occupants of UV, the rate for seatbelts wearing in the front rose after three consecutive years of decline to reach its highest rate since the beginning of the observations (96.6 %, + 2.9% compared to 2020).

Comparison working days - weekends (PV occupants, 2021)



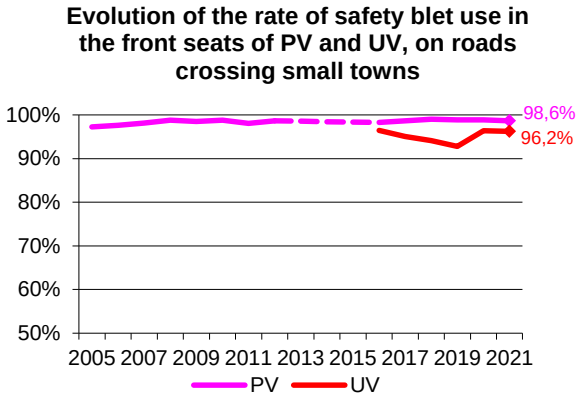


The lines at the top of each bar represent the 95 % confidence intervals.

The seatbelt wearing rate is slightly higher on working days than on weekends before. It is similar on working days and on weekends at the back with regard to the confidence intervals displayed.

2.2. Small town crossings

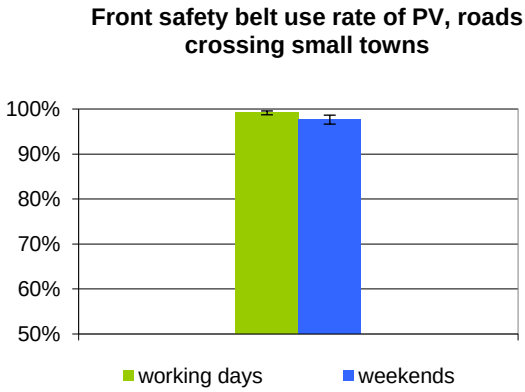
PV and UV occupants (since 2016), evolution 2005-2021



The 95 % confidence interval associated with the rate of seatbelt wearing in front of passenger vehicles calculated for the year 2021 is ± 0.6 points. Given this interval, the change in this rate since 2012 is not statistically significant.

The front seatbelt wearing rate for UV occupants is 96.2% ± 2.7 points. Given the confidence interval, it has remained stable since 2016.

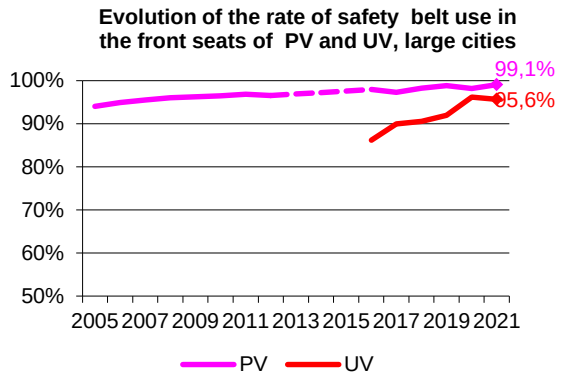
Comparison working days - weekends (PV occupants, 2021)

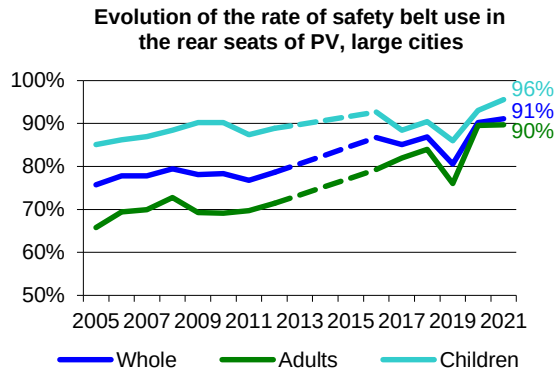


As on networks outside urban areas, the rate of wearing a front seatbelt observed when crossing small towns is slightly higher on working days than on weekends.

2.3. Large cities

PV and UV occupants (front seatbelt since 2016), evolution 2005-2021





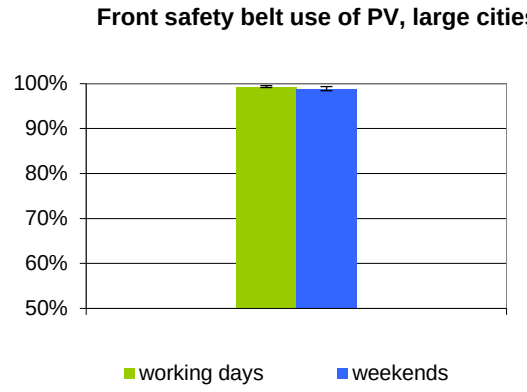
The 95 % confidence interval associated with the seat belt wearing rates calculated for the year 2021 is of:
± 0.3 points for wearing a seatbelt at the front of passenger vehicles and ± 1.9 points for UV
± 1.2 points for wearing seatbelts in the rear of passenger vehicles (± 1.5 points for adults, ± 1.7 points for children).

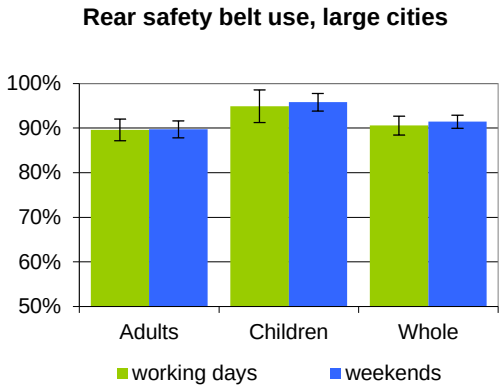
In large cities, the rate of wearing a seatbelt **in front of passenger vehicles** is almost universal, with the highest figure since the start of observations in 2005 (99.1 %). It now slightly exceeds the rates posted outside urban areas.

At the rear, the seatbelt wearing rate is also historically high with an increase of +4.4 points since 2016 (91.1 %). The children wearing rate remains significantly higher than in adults. The rates remain lower than those observed on motorways.

The front seatbelt wearing rate for UV occupants in large cities has decreased for the first year since 2016 (95.6 %, -0.6 points), a decrease which remains relative in view of the confidence interval. In 5 years, the increase remains +9.4 points.

Comparison working days - weekends (PV occupants, 2021)





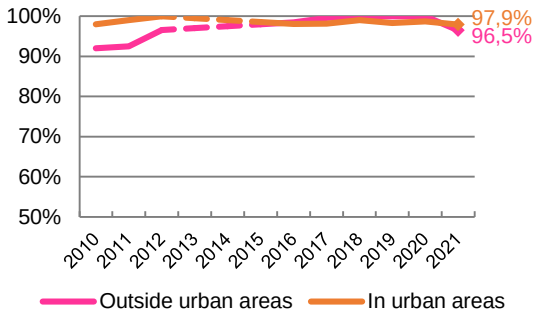
The seatbelt wearing rate in the front of passenger vehicles is slightly lower at weekends and on working days. In the rear, the confidence intervals do not make it possible to estimate a difference between weekends/working days. However, the wearing rate is higher for children.

3. Wearing a safety helmet

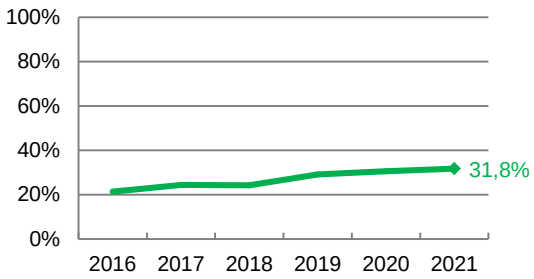
Things to remember

- Despite a drop in 2021, the wearing of safety helmets by PTW users is **almost universal**.
- Among cyclists, the wearing of safety helmets **tends to develop**.

Evolution of the PTW helmet wearing rate by network



Evolution of the bicycle helmet wearing in large cities



The 95 % confidence interval associated with the safety helmet wearing rate is:
1.6 points for PTWs outside urban areas;
1.4 points for PTWs in large cities;
4.1 points for cyclists in large cities.

Methodology

Observations of safety helmet use by powered two wheelers were made on all types of road networks (see details in Appendix 2), and were aggregated into two groups: networks outside urban areas, and large cities.

Observations of safety helmet use by cyclists are made in urban areas only.

All observations were made during the day.

Since the number of users observed was relatively small (184 PTWs outside urban areas, 388 PTWs and 491 cyclists in large cities), the safety helmet wearing rates calculated are primarily indicative.

3.1. P2W users outside urban areas

Safety helmet wearing rate by PTW users - Outside urban areas

Number of PTW users wearing a helmet out of the total number of PTW users observed			
	Working days	Weekends	Whole
2010	205 out of 215 (95 %)	185 out of 209 (89 %)	390 out of 424 (92 %)
2011	180 out of 189 (95 %)	139 out of 156 (89 %)	319 out of 345 (92 %)
2012	160 out of 161 (99 %)	122 out of 131 (93 %)	282 out of 292 (97 %)
2016	120 out of 122 (98 %)	73 out of 74 (99 %)	193 out of 196 (98 %)
2017	167 out of 168 (99 %)	64 out of 64 (100 %)	231 out of 232 (100 %)
2018	132 out of 132 (100 %)	117 out of 117 (100 %)	249 out of 249 (100 %)
2019	93 out of 93 (100 %)	73 out of 73 (100 %)	166 out of 166 (100 %)
2020	143 out of 143 (100 %)	41 out of 41 (100 %)	184 out of 184 (100 %)
2021	310 out of 324 (96 %)	159 out of 162 (98 %)	469 out of 486 (97 %)

Outside urban areas, wearing a helmet is down for all PTWs observed, despite rates that remain high.

3.2. P2W users in urban areas

In large urban areas, observations from 2016 have been rebalanced between working days and weekends.

Safety helmet wearing rate by PTW users - Large urban areas

Number of PTW users wearing a helmet out of the total number of PTW users observed			
	Working days	Weekends	Whole
2010	500 out of 508 (98 %)	Undefined	500 out of 508 (98 %)
2011	547 out of 552 (99 %)	Undefined	547 out of 552 (99 %)
2012	535 out of 537 (100 %)	Undefined	535 out of 537 (100 %)
2016	240 out of 246 (98 %)	158 out of 160 (99 %)	398 out of 406 (98 %)
2017	242 out of 248 (98 %)	177 out of 179 (99 %)	419 out of 427 (98 %)
2018	347 out of 349 (99 %)	151 out of 154 (98 %)	498 out of 503 (99 %)
2019	233 out of 238 (98 %)	121 out of 122 (99 %)	354 out of 360 (98 %)
2020	225 out of 229 (98 %)	158 out of 159 (99 %)	383 out of 388 (99 %)
2021	168 out of 172 (98 %)	210 out of 214 (98 %)	378 out of 386 (98 %)

In large cities, the safety helmet wearing rate is stable compared to previous years. This rate has not changed since 2010 (beginning of observations), not wearing a helmet remains rare.

3.3. Cyclists in urban areas

Observation of safety helmet use by cyclists was added to the surveys from 2016, in large cities only.

Rate of wearing of helmets by cyclists - Large urban areas

Number of cyclists wearing a helmet out of the total number of cyclists observed			
	Working days	Weekends	Whole
2016	35 out of 202 (17 %)	35 out of 126 (28 %)	70 out of 328 (21 %)
2017	36 out of 187 (19 %)	60 out of 207 (29 %)	96 out of 394 (24 %)
2018	58 out of 263 (22 %)	62 out of 232 (27 %)	120 out of 495 (24 %)
2019	60 out of 227 (26 %)	34 out of 95 (36 %)	94 out of 322 (29 %)
2020	87 out of 320 (27 %)	63 out of 171 (37 %)	150 out of 491 (31 %)
2021	57 out of 215 (27 %)	98 out of 273 (36 %)	155 out of 488 (32 %)

Despite high confidence intervals, the increase in the wearing of safety helmets by cyclists in large cities is significant in the medium term. We can indeed note **an increase of + 10.5 points** since 2016.

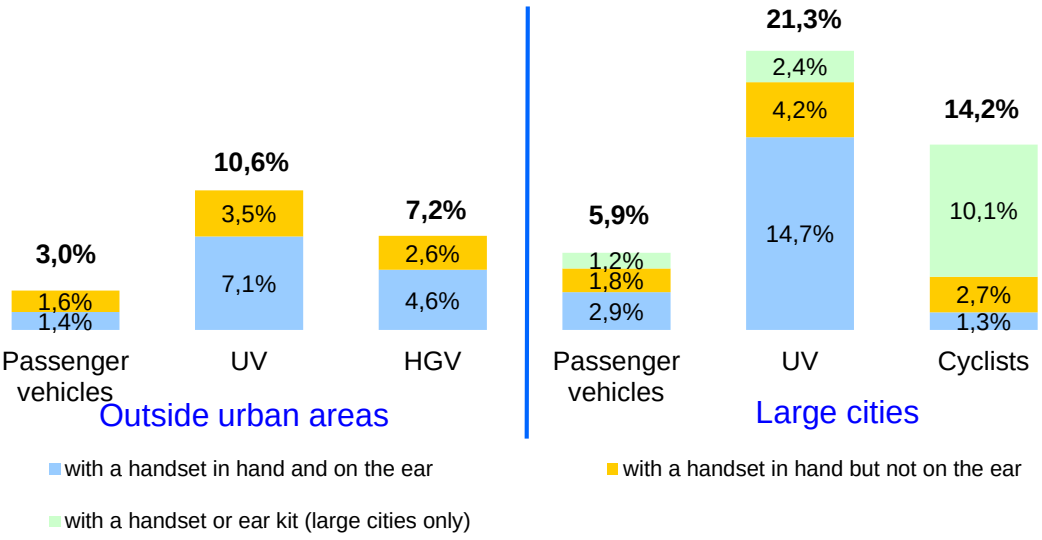
The delivery rate remains **higher on weekends than on working days** by nearly 10 points, a stable difference since 2016.

4. The use of a distractor

Things to remember

- The rate of use of a distractor is **increasing** for all road users.
- The rate of use of the telephone in hand or headsets **is higher for UVs and HGVs than for passenger vehicles.**
- Phone use is higher **in large urban areas** than outside cities for UVs and passenger vehicles.
- **Wearing earphones is very high among cyclists.**
- The use of distractors during pedestrian crossings is **more important in younger age groups**.

Use of hand-held phones or headsets by type of network and users (2021)



The 95 % confidence interval associated with the overall phone usage rate is:
- outside urban areas, of ± 0.4 point for passenger vehicles, ± 1.9 point for UV, and ± 2.0 points for HGV;
- in large urban areas, of ± 0.8 point for passenger vehicles, ± 4.4 points for UV, ± 3.2 points for cyclists.

Methodology

Observation of telephone use by drivers on road networks was introduced in 2009 as part of the specifications for the surveys that feed the Road user behaviour Observatory. The surveyors placed at the edge of the roadways classify vehicles into four categories according to whether the driver:
- has a phone in hand and on their ear,
- has a phone in hand but not on the ear,
- wears an earpiece, an ear kit or a headset (in major cities only),
- has none of these.

Telephone use rates are detailed for four categories of users: drivers of passenger vehicles, light HGVs, HGVs (except in large cities, where the number of drivers is too small to be statistically significant) and cyclists (the latter are only observed in large cities). Observations outside urban areas include rural motorways, urban motorways, dual carriageways, and 2 or 3-lane roads.

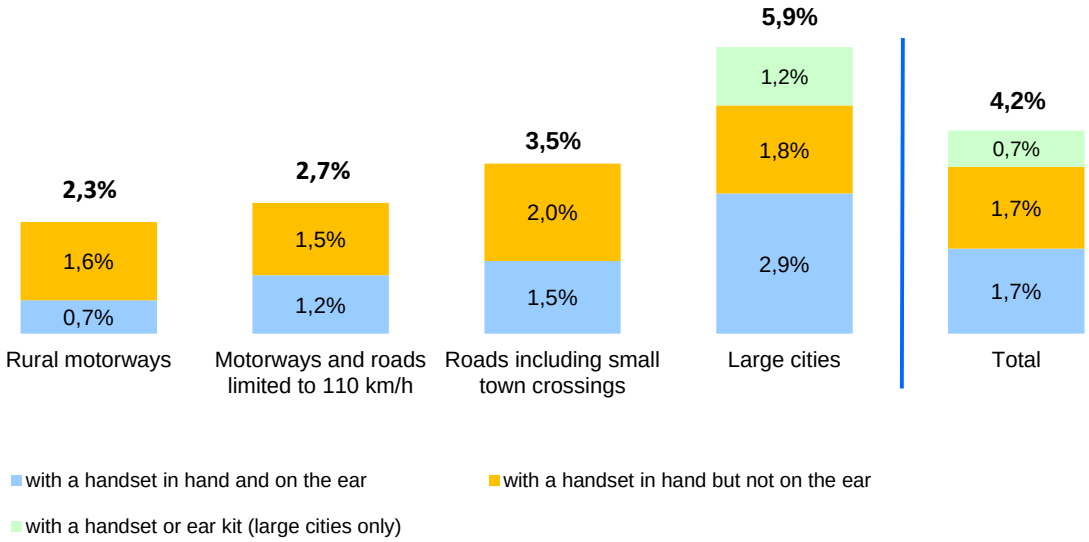
The number of vehicles observed is shown in Appendix 1, and the methodology of the observations is detailed in Appendix 2.

4.1. Distractor use by passenger vehicle drivers by network type

The use of the telephone in hand or headsets by motorists according to the type of network is detailed in the following figure.

These observations show rates of use of the telephone in hand or headsets that increase when the speed limit decreases. Overall, compared to 2020, the rate of use of distractors is up +0.9 points (3.3 % in 2020 compared to 4.2 % in 2021).

Use of du hand-held phones or headsets by passenger vehicles by type of network (2021)



The 95 % confidence interval associated with the overall phone usage rate is:
± 0.8 point for rural motorways,
± 0.6 point for urban motorways and roads limited to 110 km/h,
± 0.5 point for roads,
± 0.8 point for large cities,
± 0.4 point for the rate calculated on all networks.

4.2. Distractor use by pedestrians

Methodology

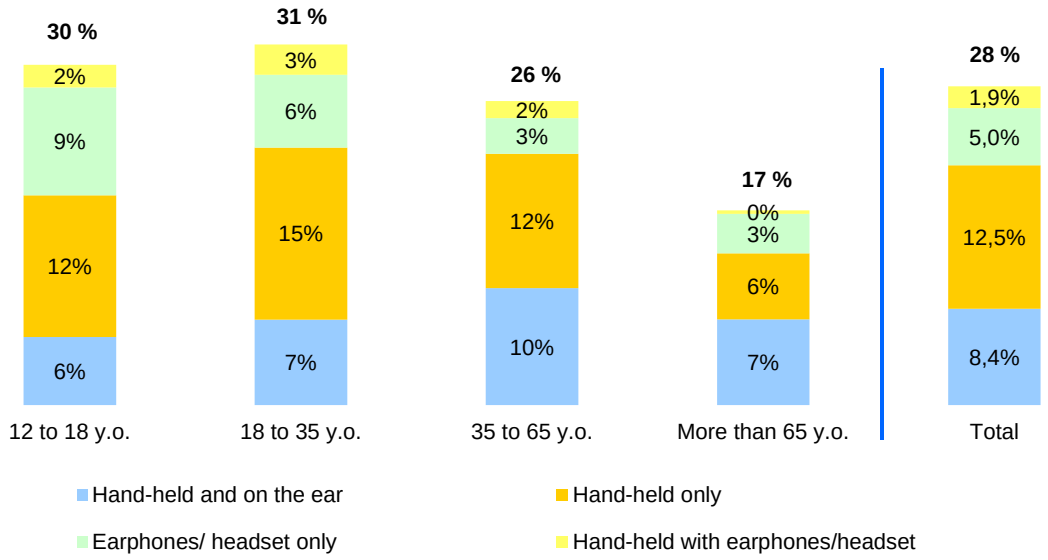
Observations of distractor use by pedestrians are made in large cities. Roadside surveyors record the users of pedestrian crossings and, for each, the following information:

- gender,
- age group,
- use of hand-held, ear-held, both, and use of headphones.

The number of pedestrians observed is shown in Appendix 1, and the methodology of the observations is detailed in Appendix 2.

All observations are made during the day, including 58 % of pedestrians observed on working days and 42 % on weekends.

Rate of distractors use by type at pedestrian crossings by age (2021)



The 95 % confidence interval associated with the overall rate of use of a distractor by pedestrians is:
± 6.3 points for 12-18 years old;
± 2.5 points for 18-35 years old;
± 2.6 points for 35-65 years old;
± 3.9 points for those over 65;
± 1.6 points for the rate calculated on all users.

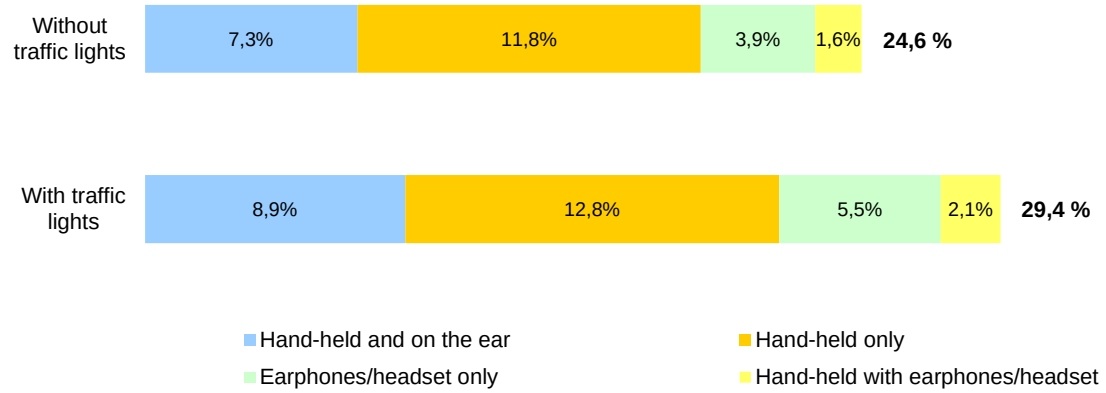
The use of distractors by pedestrians during crossings **is up sharply** compared to observations in 2020 (27.7 %, +7.5 points). This increase is mainly attributable to the age groups 35-65 (+15 points), and over 65 (+13 points).

However, the phenomenon remains **much more present among younger age groups**. The total rate of use is quite similar for the 12-18 and 18-35 age groups (30 % and 31 % respectively), the difference being mainly in the rate of use of earphones and headsets only, 3 points higher among 12-18 years old.

Whatever the age group, the type of use most observed is **the phone in the hand** only, then earphones/headsets for the under 18s and the telephone in the hand and on the ear for the over 18 years old.

Differences by gender are insignificant, as are the differences between **working days and weekends.**

Rate of distractor use by type at pedestrian crossings by type of crossings (2021)



The 95 % confidence interval associated with the overall rate of use of a distractor by pedestrians is:
± 2.6 points without traffic light;
± 2.0 points with traffic light.

Distractors are used **more during pedestrian crossings with traffic lights** (5.9 points more).

4.3. Evolution 2009-2020 by type of network and user

The modification of the panel between 2012 and 2016, and in particular the strengthening of observation points in large cities, may have led to an artificial increase in the rate of telephone use calculated on all networks. In addition, the calculated overall rate now includes the wearing of a headset in large urban areas. The cumulative effect induced by these two changes was estimated at an increase of +0.2 point for motorists and +0.3 point for drivers of light commercial vehicles, and a decrease of 0.2 point for truck drivers.

In 2021, **the overall rate of use of a distractor increases** compared to 2020 **for all road users.**

The largest increases are for **cyclists**[2] (+ 7.8 points) and **UV drivers** (+5.0 points). For the latter, the increase is linked to the use of a handset in hand and on the ear, while for cyclists it is the wearing of the headset which has increased significantly.

Whatever the mode, the rate of use of a distractor is **higher in large urban areas than outside urban areas**. The gap is highest for UV drivers, rising from 10.6 % to 21.3 %.

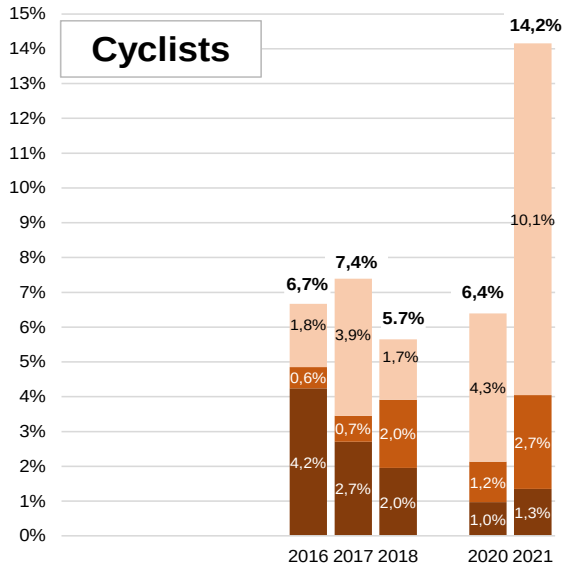
The use of the telephone in hand or earphones is much more frequent for "professional" drivers than for drivers of passenger vehicles. The gap widened further in 2020 with an increase of 0.9 points for passenger vehicles, 5.0 points for UV and 3.2 points for UV.

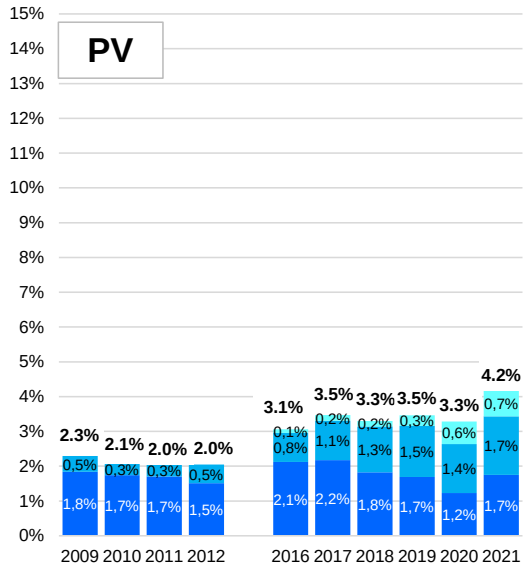
Over the longer term, the trend is upwards for all users, with **the highest rates recorded** (since 2009, 2016, or 2020) for all modes.

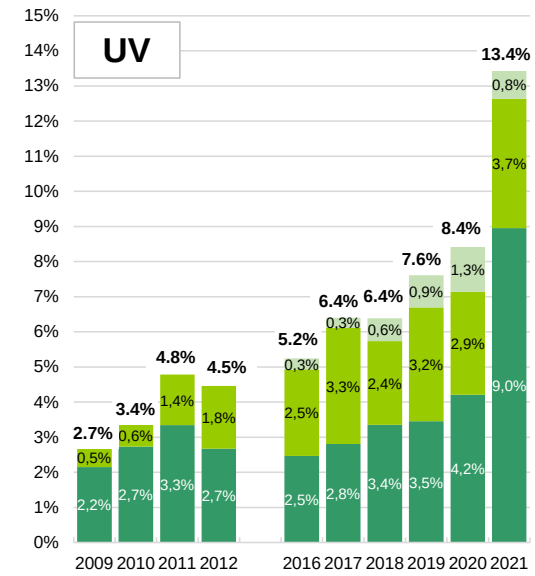
[2] The 2019 data were not kept in the long series, the results appearing aberrant compared to other years.

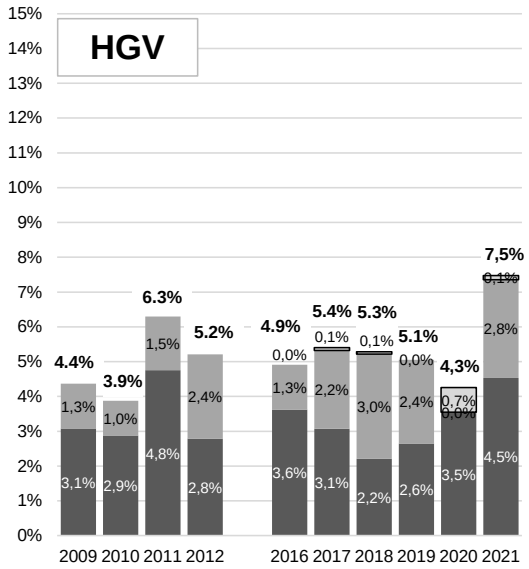
Evolution of phone in hand or earpiece use by type of user

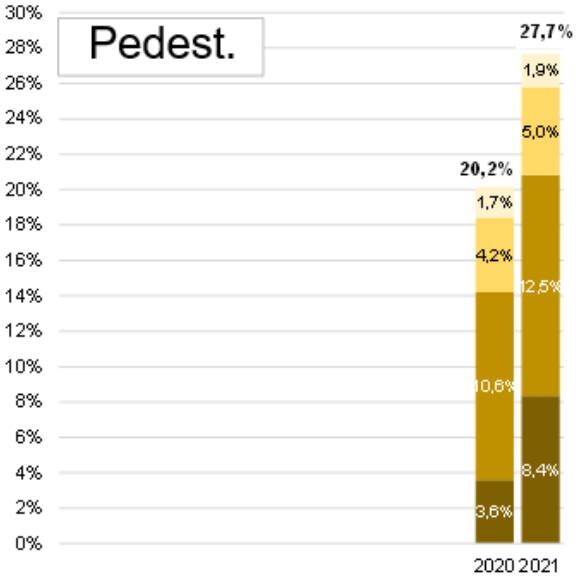
Light colors represent the share of drivers with an **earpiece** or kit in their ear (observed as of 2016, only in large cities),
intermediate colors represent the share of drivers with handsets **in hand but not on the ear**,
dark colors, the share of drivers with handsets **in hand and on the ear**.







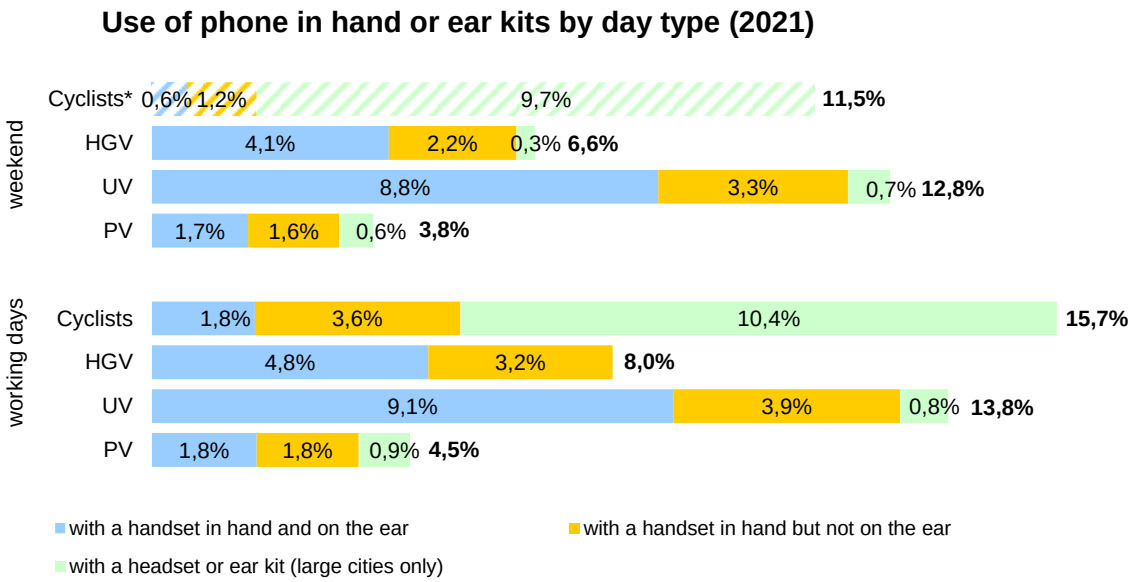




For pedestrians only, from lightest to darkest color:

- share of pedestrians with phone in hand and headphones or earphones,
- share of pedestrians with headphones or earphones only,
- share of pedestrians with phone in hand only,
- share of pedestrians with phone in hand and worn on ear.

4.4. Use of hand-held phones or headsets by type of user and day



**Low numbers*

The 95 % confidence interval associated with the overall phone usage rate is:
- during the weekend, of ± 0.5 point for passenger vehicles, ± 2.8 points for UV, ± 2.7 points for HGV and ± 4.9 points for cyclists ;
- during working days, of ± 0.5 point for passenger vehicles, ± 2.3 points for UV, ± 2.4 points for HGV and ± 4.3 points for cyclists.

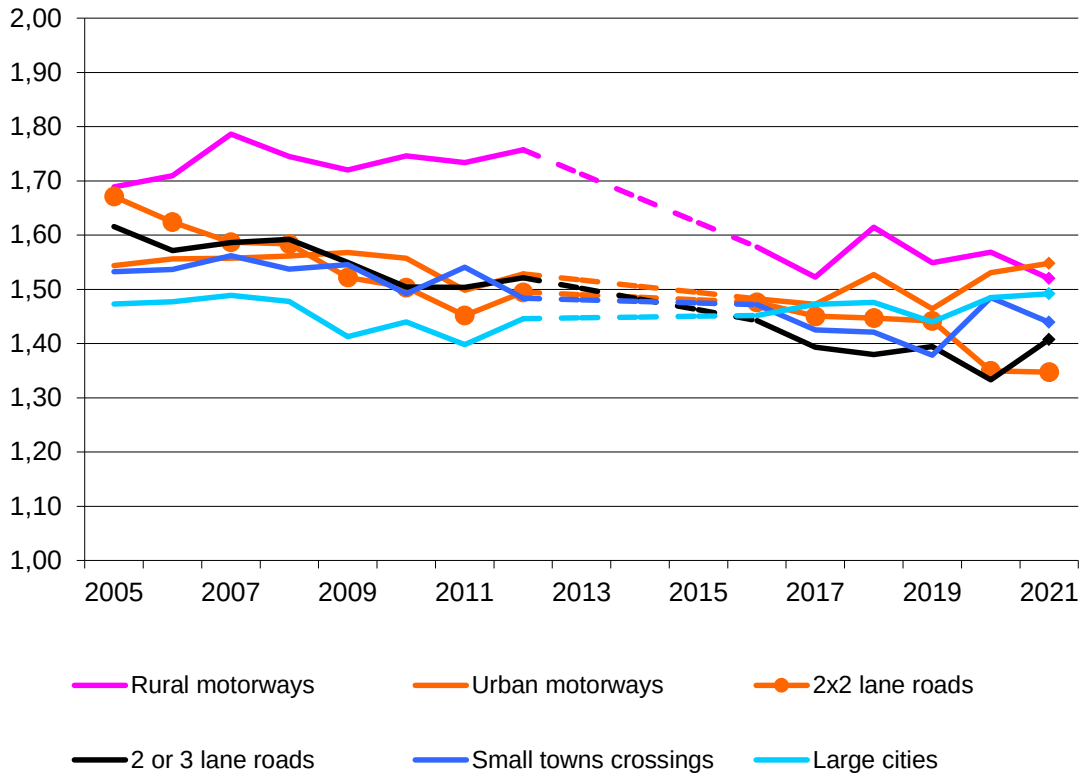
The use of the telephone in hand or headsets by drivers is more frequent on working days than during the weekend, and this for all the travel modes observed. However, this observation should be qualified with regard to the confidence intervals.

5. Vehicle occupancy rate

Things to remember

- **The occupancy rate of passenger vehicles** is between 1.35 and 1.55 depending on the network, **higher on motorway networks.**
- The occupancy rate of passenger vehicles **is systematically higher on weekends than on working days**.
- Except in large urban areas**, the occupancy rate of UV** (at the front) **is down** on all networks in 2021.
- In general, occupancy rates of passenger vehicles **have been falling since 2007** on all networks.

Evolution of the occupancy rate by passenger vehicles



For the 2021 observations, the 95 % confidence interval associated with the occupancy rate varies from ± 0.024 to ± 0.045 depending on the type of network.

Methodology

Observations of vehicle occupancy rates are carried out on all types of road networks (see details in Appendix 2), and are conducted on passenger vehicles and utility vehicles.

These observations are carried out simultaneously with the observations of safety belt and helmet use for PTWs.

All observations are made during the day.

5.1. Occupancy rates of passenger vehicles

The occupancy rates observed on the various networks are between 1.35 and 1.55, down overall compared to 2007. These rates are higher on motorways, then in large cities.

	Rural motorways	Urban motorways	Dual carriageways outside urban areas	2 or 3 lane roads	Roads crossing small towns	Large cities
2005	1.69	1.54	1.67	1.62	1.53	1.47
2006	1.71	1.56	1.62	1.57	1.54	1.48
2007	1.79	1.56	1.59	1.59	1.56	1.49
2008	1.74	1.56	1.58	1.59	1.54	1.48
2009	1.72	1.57	1.52	1.55	1.55	1.41
2010	1.75	1.56	1.50	1.50	1.49	1.44
2011	1.73	1.50	1.45	1.50	1.54	1.40
2012	1.76	1.53	1.49	1.52	1.48	1.45
2016	1.58	1.48	1.48	1.44	1.47	1.45
2017	1.52	1.47	1.45	1.39	1.43	1.47
2018	1.61	1.53	1.45	1.38	1.42	1.48
2019	1.55	1.46	1.44	1.39	1.38	1.44
2020	1.57	1.53	1.35	1.33	1.48	1.48
2021	1.52	1.55	1.35	1.41	1.44	1.49

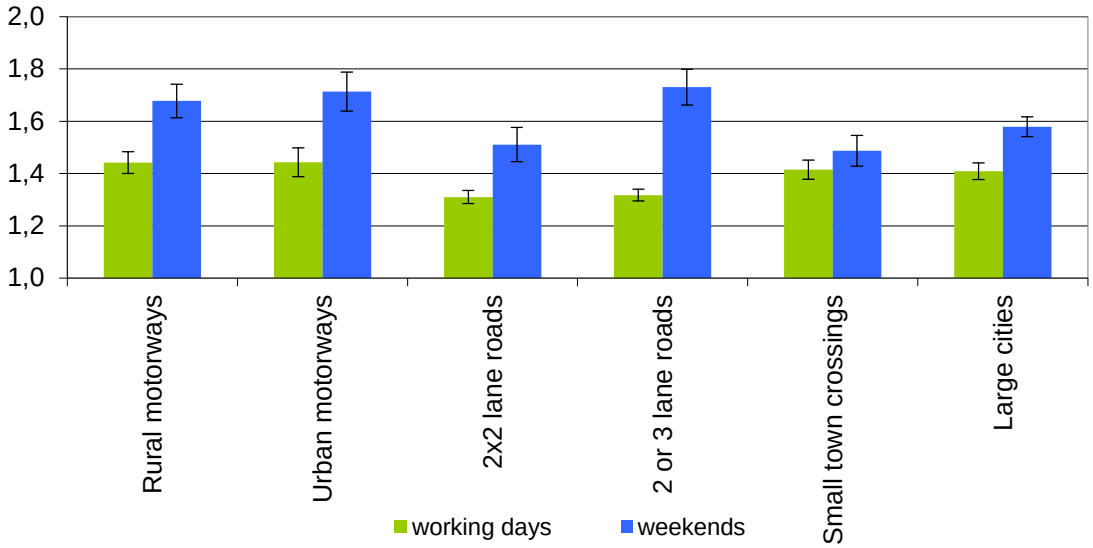
No observations conducted between 2013 and 2015

	Rural motorways		Urban motorways		Dual carriageways outside urban areas		2 or 3 lane roads		Roads crossing small towns		Large cities	
	WD	WE	WD	WE	WD	WE	WD	WE	WD	WE	WD	WE
2005	1.63	1.78	1.46	1.76	1.52	1.91	1.50	1.89	1.46	1.70	1.47	
2006	1.61	1.83	1.48	1.70	1.41	1.93	1.47	1.83	1.46	1.71	1.48	
2007	1.64	1.96	1.50	1.69	1.39	1.88	1.47	1.87	1.47	1.73	1.49	
2008	1.64	1.89	1.48	1.74	1.38	1.89	1.50	1.84	1.47	1.68	1.48	
2009	1.54	1.89	1.50	1.75	1.40	1.73	1.46	1.81	1.45	1.79	1.41	
2010	1.56	1.96	1.47	1.86	1.32	1.78	1.41	1.77	1.40	1.71	1.44	
2011	1.59	1.94	1.41	1.87	1.35	1.63	1.42	1.75	1.48	1.69	1.40	
2012	1.62	1.95	1.43	1.88	1.37	1.69	1.44	1.76	1.42	1.64	1.45	
2016	1.47	1.86	1.41	1.66	1.33	1.77	1.37	1.63	1.41	1.59	1.31	1.59
2017	1.46	1.75	1.40	1.73	1.33	1.69	1.33	1.54	1.37	1.56	1.34	1.63
2018	1.50	1.85	1.33	1.86	1.32	1.70	1.33	1.52	1.37	1.56	1.33	1.63
2019	1.45	1.75	1.34	1.70	1.33	1.66	1.34	1.52	1.32	1.50	1.32	1.56
2020	1.49	1.73	1.46	1.76	1.28	1.59	1.28	1.75	1.40	1.82	1.37	1.65
2021	1.44	1.68	1.44	1.71	1.31	1.51	1.32	1.73	1.42	1.49	1.41	1.58

WD = Working days, WE = Weekends

The following figure compares, for each type of network, the passenger vehicle occupancy rate observed on working days (Monday to Friday) and on weekends. The lines at the top of each bar represent the 95 % confidence intervals.

Occupancy rate of passenger vehicles by day type (2021)



The occupancy rate observed on weekends is systematically higher than that observed on working days, 0.07 when crossing small towns, and up to 0.41 for 2 or 3 lane roads outside urban areas. Across all network types, this difference is statistically significant.

5.2. Occupancy rates of light good vehicles

Since 2016, the observation of the occupancy rate, coupled with that of the wearing of seat belts in the front, also includes light commercial vehicles. As the number of UV observed on weekends is very low, we only publish the results relating to working days here.

Front occupancy rates of UV - Weekdays

	Rural motorways	Urban motorways	Dual carriageways outside urban areas	2 or 3 lane roads	Roads crossing small towns	Large cities
2016	1.39	1.50	1.35	1.35	1.37	1.31
2017	1.36	1.42	1.39	1.38	1.36	1.30
2018	1.41	1.27	1.27	1.37	1.40	1.35
2019	1.50	1.54	1.37	1.39	1.41	1.35
2020	1.42	1.40	1.31	1..26	1.29	1.27
2021	1.31	1.33	1.31	1.21	1.29	1.39

The width of the 95 % confidence interval associated with the occupancy rate is from ± 0.04 to ± 0.08 depending on the type of network. The differences are therefore not significant between the different types of networks, nor is the change between 2016 and 2021.

Appendix 1: Number of vehicles and pedestrians observed

Front seat belt use, helmet use and occupancy rate (number of vehicles):

Type of networks	Passenger vehicles	UV	PTW	Cyclists
Outside urban areas	10 043	1 658	462	
Roads including small town crossing	1 939	232		---
Large urban areas	3 928	370	372	485
Total	**15 910**	**2 260**	**834**	**485**

Seat belt use in the back (number of vehicles):

Type of networks	Passenger vehicles
Motorways	560
Large urban areas	1 482
Total	**2 042**

Use of a distractor while moving (number of drivers and pedestrians):

Type of networks	Passenger vehicles	UV	HGV	Cyclists	Pedestrians
Rural motorways	1 309	*139*	*54*	---	---
Urban motorways and roads limited to 110 km/h	4 501	489	394	---	---
Roads including small town crossing	3 219	424	206	---	---
Large urban areas	3 155	333	*162*	445	3 016
Total	**12 184**	**1 385**	**816**	**445**	**3 016**

*In italics: insufficient numbers for statistical analysis

Appendix 2: Methodology of the road user behaviour observatory

Observations of user behaviour are carried out by a service provider under a contract that also includes measurements for the speed observatory. For technical reasons, this system was interrupted between 2013 and 2015. During this period, speed measurements were carried out by Cerema (Centre for studies and expertise on risks, environment, mobility and planning) on a sample of points representative of the observatory panel; however, no observations could be made regarding behaviour.

This appendix presents the current system and points out the changes made in relation to the system in force until 2012.

a) Common modalities and observation points panel

All observations are made during the day from locations at the level of traffic lanes.

The following table presents the number of observation points according to the type of network and the type of behaviour observed. It also gives in italics and in brackets the number of points in force in the previous system when it was different.

Type of networks	Front safety belt and helmet use	Rear safety belt use	Phone	Pedestrian distractors
Rural motorways	21	---	4	---
Urban motorways	12	---	4 *(3)*	---
Dual carriageways outside urban areas	36 *(25)*	---	4 *(3)*	---
2 or 3 lane roads outside urban areas	50 *(98)*	---	12 *(25)*	---
Roads crossing small towns	25 *(49)*	---	5	---
Large cities*	44	44	14 *(6)*	18
Toll gates on motorways	---	11	---	---
TOTAL	**188 *(249)***	**55**	**43 *(46)***	**18**

* The observations are conducted in seven large cities: Paris, Lille, Metz, Nantes, Lyon, Toulouse, Avignon.

For the observations of front safety belt use, the panel has been reduced on 2 or 3 lane roads outside urban areas as well as on small town crossings, these two types of networks being previously based on a very large number of points. This modification is linked to the evolution of the panel of measurement points of the speed observatory (the points are identical except for the motorway networks and the large cities).

For the observations of telephone use while driving, the panel has been rebalanced in order to reinforce the observations in the major urban areas.

In addition, some observation points were moved, for reasons of safety of the investigators or because of the requirements of speed measurements, which are often carried out at the same locations.

Unlike speed measurements, where the characteristics of each observation point can influence the value measured, it is reasonable to consider that the behaviour observed (wearing of safety belts, helmets, use of telephones) does not depend, on a given type of road network, on the characteristics of each observation point. The only factors likely to influence the results of the observations are the type of road network, the category of vehicle, the time of day and the type of day (weekday, weekend). Consequently, the results of the behavioural observations can be considered as absolutely representative as long as these factors are taken into account, and as long as this representativeness is not modified by a change in the observation panel.

The results of the observations carried out from 2016 onwards are therefore directly comparable to those obtained up to 2012, and there is no need, as in the case of speed measurements, to implement an approach aimed at correcting a possible effect of the modification of the observation point panel.

b) Safety belt use in the front seats of vehicles, helmet use for PTW users and vehicle occupancy rates

Current system (since 2016)

Each of the points in the panel is observed once a year; the duration of each observation is 10 minutes per lane on motorways and divided roads, and 30 minutes per point on other networks.

In large cities, half of the observations are made on weekdays (Monday to Friday), a quarter on Saturdays and a quarter on Sundays, to allow for a robust comparison between behaviour on weekdays and on weekends. On the other networks, observations are spread evenly over the 7 days of the week.

Observations are made of passenger vehicles (PV), utility vehicles (UV), and powered two wheelers (PTW); bicycles are also observed in large cities.

For safety belt use, each of the front seat occupants is entered in three possible ways:
- wearing a safety belt,
- not wearing a safety belt,
- undetermined.

The safety belt wearing rate is calculated by excluding occupants whose wearing status is undetermined.

The results are very similar for the different types of networks outside built-up areas. Consequently, the observations are aggregated into three groups: non-township networks, small town crossings, and large town crossings. The belt wearing rate associated with each group is calculated in proportion to the number of observations without weighting between types of networks. It is accompanied by a confidence interval which makes it possible to assess whether the changes observed are statistically significant.

Previous system (until 2012)

In the system in force until 2012, the following arrangements were different:

- the periodicity of observations was once a year in the major cities (unchanged) and three times a year in the other networks;

- the distribution of observations between weekdays and weekends was unbalanced in the major cities: in practice, their planning led to almost all observations being carried out on weekdays; no observations were carried out on Saturdays, and observations on Sundays were concentrated in a single city. As a result, the front safety belt wearing rate observed in the major cities was only representative of weekdays;

- the observation of utility vehicles, as well as bicycles in large cities, was added in 2016.

The other observation methods were not changed.

In previous practice, the rate of safety belt use outside built-up areas was calculated as a weighted average of the rates observed on each of the types of network concerned, with the weighting adopted to reflect their relative weight in terms of kilometres travelled. This principle has been abandoned and the 2005-2012 results have been recalculated according to the principles now in force. This may result in slight deviations from the previously published values for these years.

c) Safety belt use in the rear seats of vehicles

Current system (since 2016)

For practical reasons (need to observe vehicles at very low speeds), only two types of network are concerned: large conurbations and motorway toll gates. Each of the points in the panel is observed once a year, for a period of one hour in the major cities and two hours at the toll gates.

Half of the observations are made on weekdays (Monday to Friday), a quarter on Saturdays and a quarter on Sundays.

Only passenger vehicles are observed.

The characterization of the rear seat occupants and the calculation of the safety belt wearing rate follow the same principles as for the front seat observations. In addition, a specific distinction is made between children under 10 years of age (by visual assessment of the interviewers).

Previous system (until 2012)

Rear safety belt use has been observed since 2005. In the scheme in effect until 2012, the arrangements listed below were different:

- the periodicity of observations was three times a year ;

- the duration of each observation was 30 minutes in large cities (unchanged for toll gates);

- the planning of the observations in the major cities was subject to the same biases as for the observations of front safety belt use (see above). For the same reasons, the rear safety belt wearing rate observed in large cities was therefore only representative of weekdays.

d) Driver use of distractors

Current system (since 2016)

Each of the panel points is observed twice a year, once on business days (Monday through Friday) and once on weekends; within each network type, weekend observations are split approximately equally between Saturdays and Sundays. Each observation lasts 30 minutes.

Observations are made of drivers of passenger cars, light HGVs, heavy HGVs, and cyclists in large cities.

Each of the drivers observed is entered in four possible ways:

- they have a handset in their hand and on their ear,

- he has a handset in his hand but not on his ear

- they wear an earpiece, an ear kit or a headset (in large cities only),

- he has none of these.

The exploitations lead to very similar results for some types of networks. Consequently, the observations are aggregated into four groups: rural motorways, urban motorways and roads limited to 110 km/h, roads including those crossing small towns, large towns. The telephone use rate associated with each group is calculated in proportion to the number of observations without weighting between types of networks. It is accompanied by a confidence interval which makes it possible to assess whether the changes observed are statistically significant.

Previous system (until 2012)

Phone use while driving has been observed since 2009. The device in force until 2012 was very close, were simply added in 2016:

- the observation of cyclists in large cities,

- observation of the use of an earpiece, an ear kit or a headset (in large cities only).

In previous practice, the types of networks were grouped differently when the results were used. The 2009-2012 results have been recalculated according to the principles now in force. This may result in slight deviations from the previously published values for these years.

The modification of the panel between 2012 and 2016, and in particular the reinforcement of the observation points in the major urban areas, may have led to an artificial increase in the telephone use rate calculated for all networks. The effect of this reinforcement was estimated at an increase of +0.1 points for passenger vehicles and +0.2 points for light vehicles, and a decrease of -0.2 points for heavy goods vehicles.

a) Use of distractors at pedestrian crossings

Current system (since 2020)

Each of the panel points is observed twice a year, once on workdays (Monday through Friday) and once on weekends; weekend observations are split approximately equally between Saturdays and Sundays. Each observation lasts 30 minutes with a minimum of 30 pedestrians observed.

Observations are made of pedestrians arriving at a crosswalk. Each pedestrian observed is filled in with the following information:

- Type of user
- Gender
- Age range (visual estimation)
- Phone use
- Wearing headphones/headset/headset
- User alone or accompanied

The type of pedestrian crossing (no lights/with lights) is also provided by the interviewers.