

# E-scooters in France

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2018: **Shared e-scooters** make their appearance in mainland France

2018: Personal mobility devices (PMDs) **implemented in the French road safety database**

25 october 2019 : **A new category of vehicles in the highway code** for PMDs

With rules set on:

- **Maximum speed limits:** 25 km/h, 6km/h in pedestrian areas or pavements when riding is authorised by local authorities
- **Location for riding:** bicycle lanes, bicycle paths or roads up to 50 km/h, pedestrian zones up to 6 km/h when permitted. On roads up to 80 km/h when permitted
- **Helmet use:** recommended, mandatory on roads up to 80 km/h
- **Lighting:** mandatory white or yellow light at the front and red light at the rear (in the dark or in poor visibility conditions, or all the time on rural roads where riding is allowed). Mandatory reflectors front, and on the sides.
- **Reflective vest:** mandatory when low visibility conditions (by night or by day) or all the time on rural roads where riding is allowed
- **Alcohol limit:** 0.5 g/l
- **Legal liability insurance:** mandatory



# 2023 e-scooter's new regulatory plan

- An **increase of the minimum age** required to ride an e-scooter: from 12 to 14 years old
- **Fines** for riding the devices with another person on board and for riding on forbidden roads (motorway and pavement when a bicycle path does exist) **increased** from €35 to €135
- The set of a **national micromobility observatory** with knowledge published about: use of e-scooter (first e-scooters French national survey), road safety, environmental impact

<https://www.francemobilites.fr/observatoire-micro-mobilite>



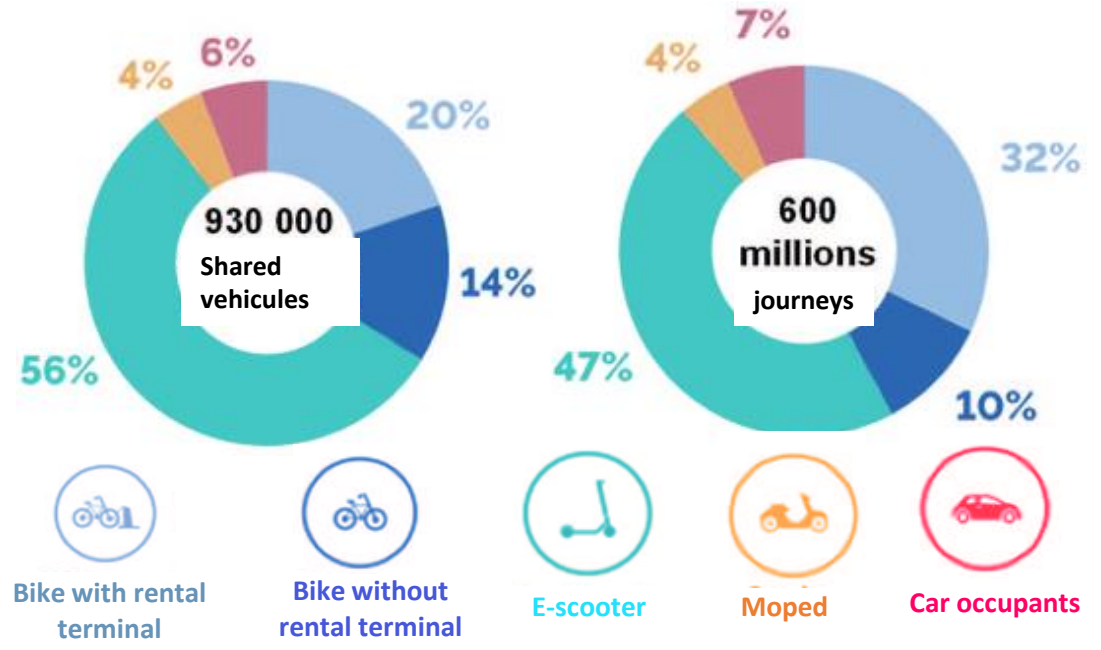
# E-scooter riders in France

# The growth of shared e-scooters market in Europe

## In Europe, in 2023

- E-scooter: **56% of shared vehicles fleet**
- **Use of shared e-scooters is going down sharply compared with 2022** while shared bicycles is going up (42% of journeys)...
  - Between 2020 and 2023, 22 % increase in the number of shared bicycles vs 1% increase in the number of shared e-scooters
- ... but shared e-scooters remains the **leading self-service mode** (47% of journeys)

Use of shared vehicles in Europe in 2023

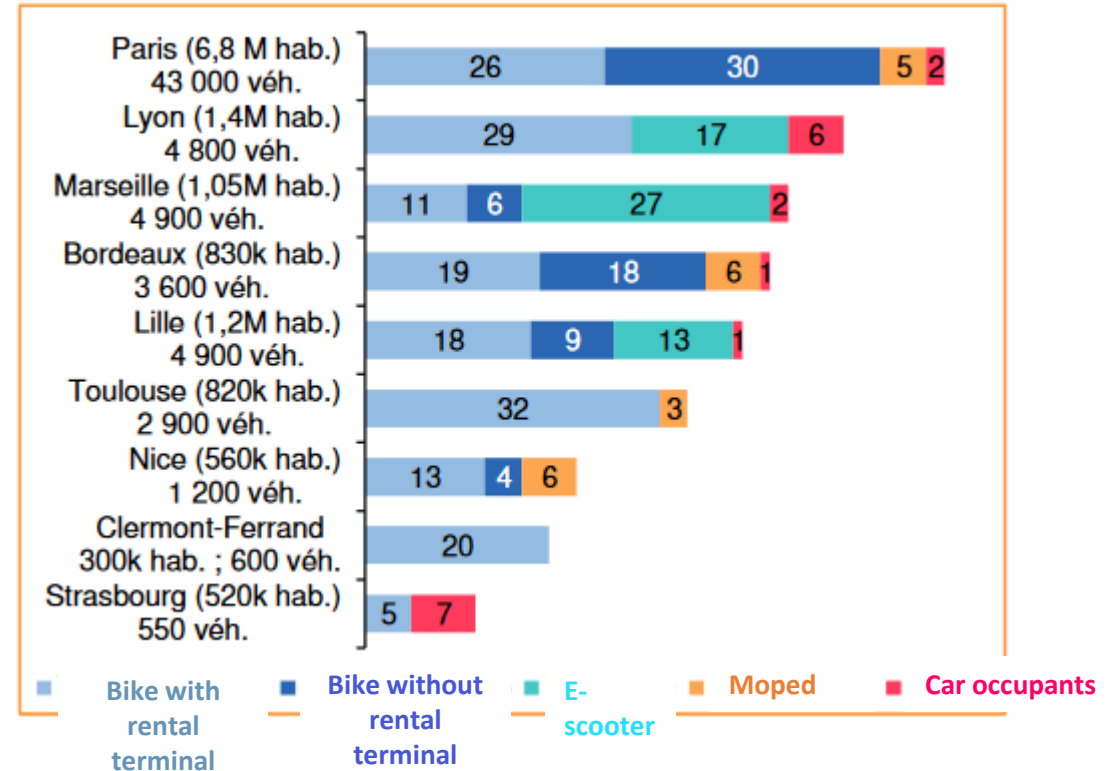


Source: 2023 annual shared mobility barometer, Fluctuo

## In France

- Early 2024, over **22,000 shared e-scooters** in France, shared by **11 operators** – Source: E-scooters French national survey - 6T-Research department, 2024
- **In Lyon**, in 2021, most of trips:
  - Are less than 2 km long (59%)
  - Last less than 10 minutes (60%)

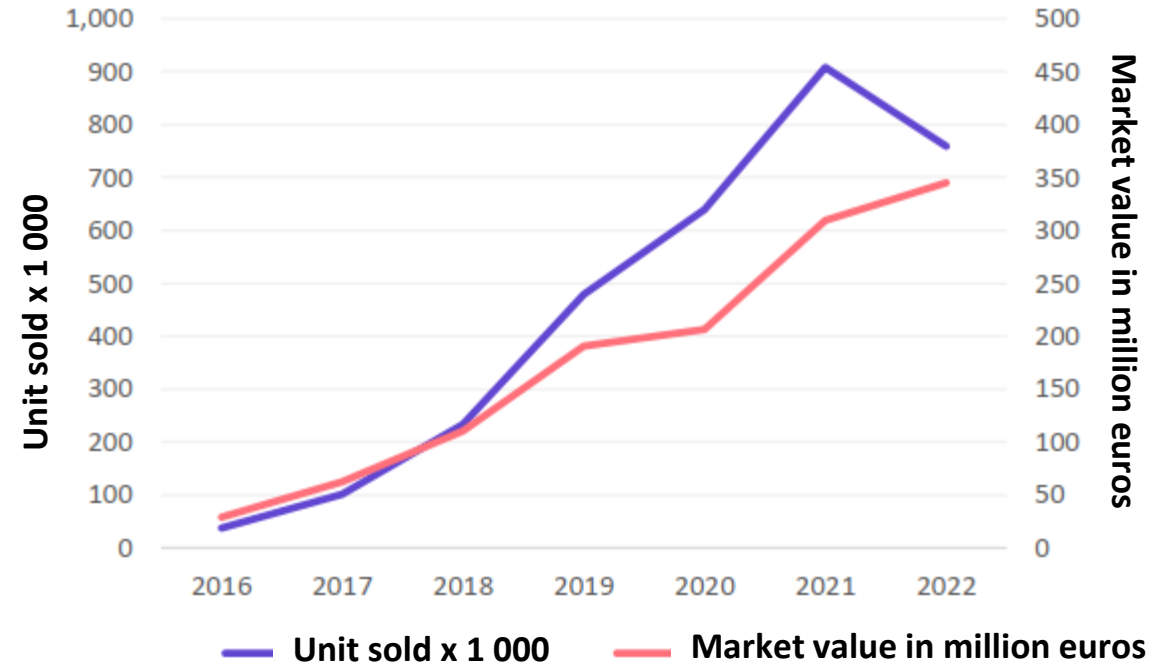
Number of shared vehicles per 10 000 inhabitants in 9 French cities in 2023



Source: 2023 annual shared mobility barometer, Fluctuo

- From **2016 to 2021**: a **sharp increase** in the number of privately owned e-scooters (101,700 e-scooters privately owned in 2016 vs 908,000 en 2021).
- **In 2022**: **16% decrease** in the number of privately owned e-scooters compared with 2021
  - but for an increasing in the market value

**Trends in the number of units sold and the market value of personal electric e-scooters in France between 2016 and 2022**



Sources: French Federation of Micro-Mobility Professionals



Compared with shared riders, **privately owned riders are more likely to:**

- Be **older** (median 41 vs 27 years old)
- Live in the **outskirts** of cities
- Live in a **household with a motorized vehicle**
- No significant effect of other variables (wage, matrimonial status, ..)

Source: e-scooters French national survey, 6T-research department, 2024

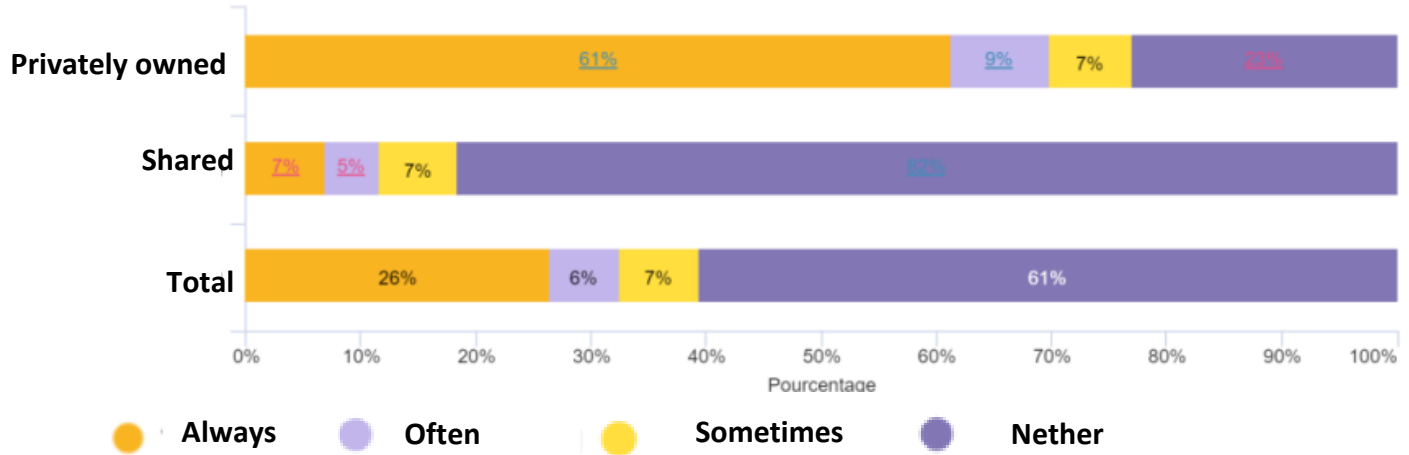
## 3 homogeneous groups:

- **Shared e-scooter riders are more likely to be:** younger, women, living in the city center, less wealthy, and using the e-scooter less frequently and for a shorter period of time
- **Privately owned e-scooter riders for commuting**
- **Privately owned e-scooter riders for leisure**
  - **Older** (mean: 45 years old) than those using e-scooters for commuting (mean: 39 years old)
  - **More educated** than those using e-scooters for commuting
  - Users of shared e-scooters as a whole are less educated than privately owned e-scooter riders for leisure

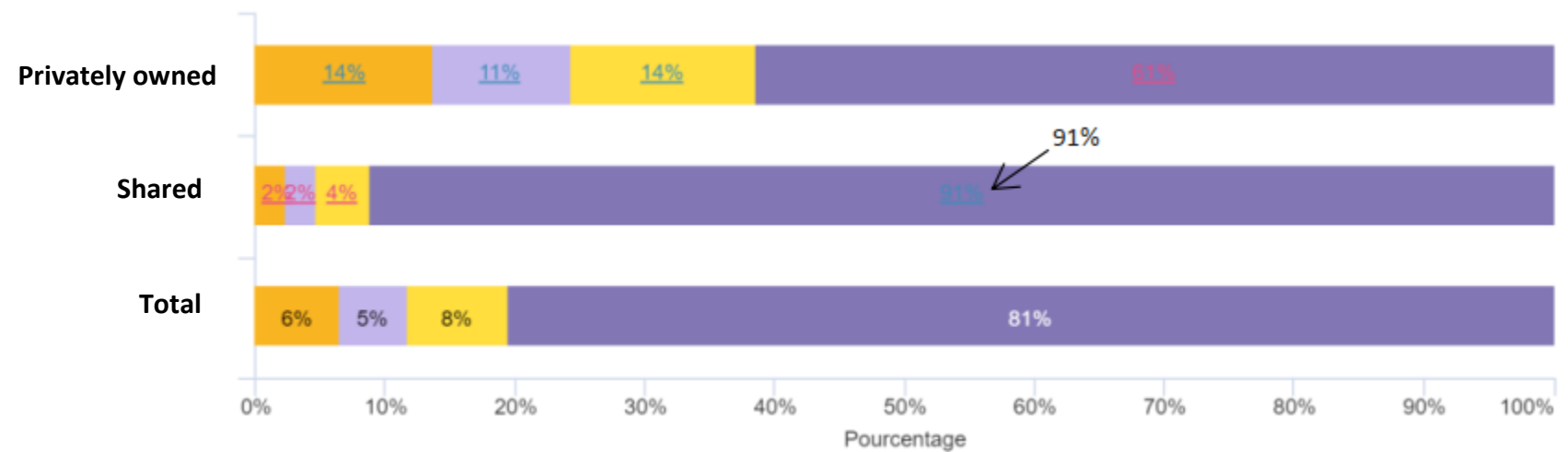
Source: E-scooters French national survey, 6T-research department, 2024

- Privately owned e-scooter riders are **more likely to wear safety equipments and comply with traffic rules** than users of shared e-scooters

## How often do you wear a helmet when riding an e-scooter?

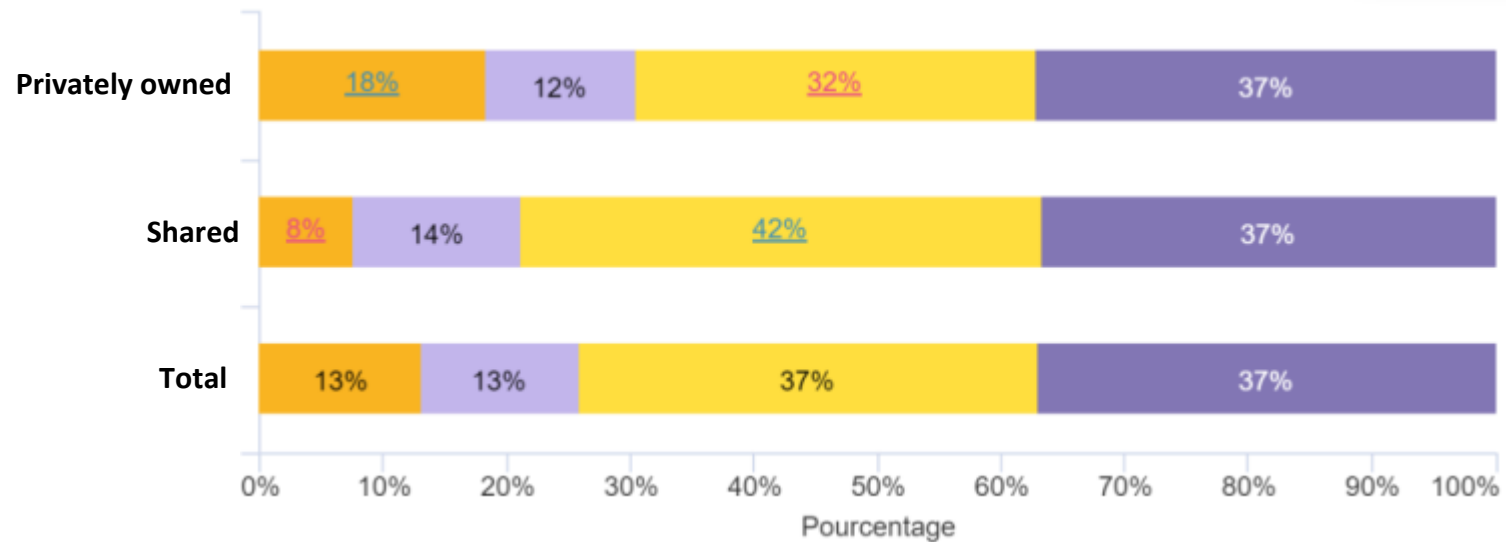


## How often do you wear a reflective vest when riding an e-scooter?



## Road accidents are more serious when riding a privately owned e-scooter

Have you been injured during your last road accident when riding an e-scooter?





● Yes, and i went to hospital  
 ● yes, and I went for a medical check-up  
 ● yes, but I didn't consult anyone  
 ● No

Source: e-scooters French national survey, 6T-research department, 2024



# E-scooter riders safety

- French road safety database: data reported by the police
- The Rhône registry: data of injured from hospitals in the Rhône county 
- National estimates of injured based on data from the Rhône registry 
- Study carried out by the French Observatory for Major Trauma: Comparison of Injuries Associated With Electric Scooters, Motorbikes, and Bicycles in France, 2019-2022 :

Arthur James, MD, PhD; Anatole Harrois, MD, PhD; Paer-Selim Abback, MD; Jean Denis Moyer, MD; Caroline Jeantrelle, MD; Jean-Luc Hanouz, MD, PhD; Mathieu Boutonnet, MD; Thomas Geeraerts, MD, PhD; Anne Godier, MD, PhD; Julien Pottecher, MD, PhD; Delphine Garrigue-Huet, MD; Jean Cotte, MD; Jean Pasqueron, MD; Arnaud Foucier, MD; Tobias Gauss, MD; Mathieu Raux, MD, PhD; for the French Observatory for Major Trauma (TraumaBase)

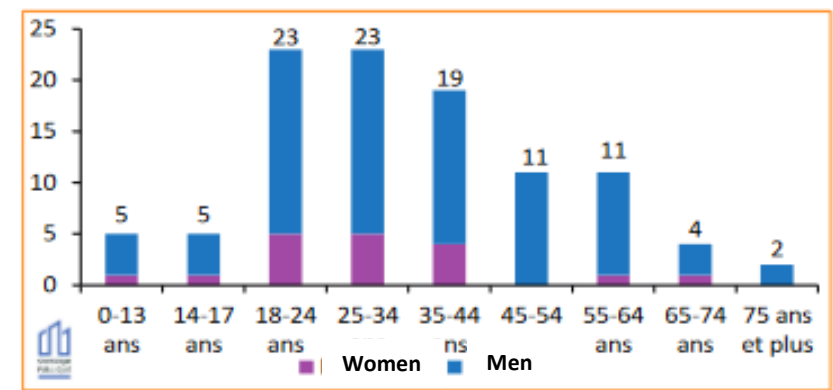
# The keys figures in mainland France

- In 2023, **44 PMDs users reported to be killed**: 1.4% of road users killed
  - Between 2021 and 2023, **83% are male**
  - 45% are aged between **18 and 34 years old**
- 17,500 PMDs users estimated injured, **650 seriously injured** (4% of road users injured)
  - 5% increase compared with 2022
  - Number of **patients treated in major trauma center following e-scooter road accident increased by 2.8-fold in 4 years**, while the number of cyclist increased by 1.2-fold and motorbike users decreased by 0.9-fold
- **10% PMDs users estimate injured with handicap** following a road accident (after 1 year)

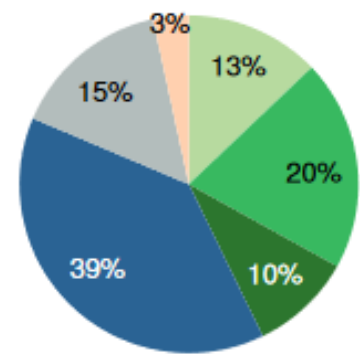
Trends of e-scooter riders killed or injured since 2019

	2023	2022	2019	évolution 2019-2023
Killed	44	35	10	+ 34
Injured estimated	17 500	16 000	4 500	+ 13 000

Number of e-scooter riders killed per age and gender between 2021 and 2023

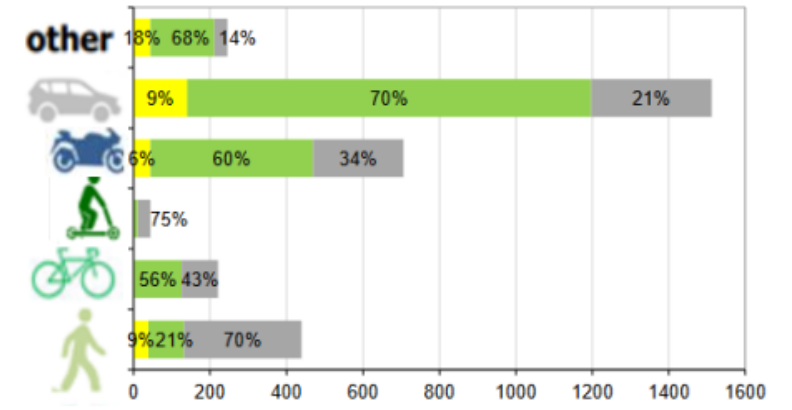


Share of injured estimated with handicap in 2023

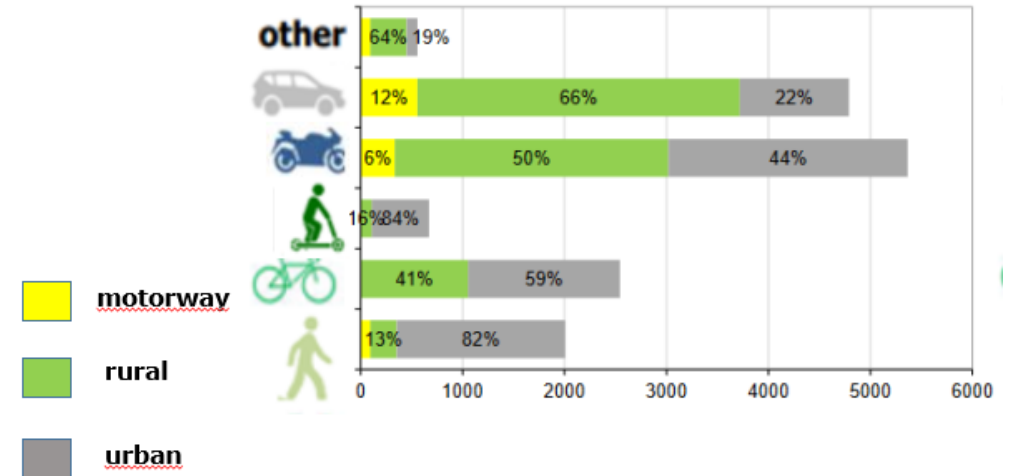


- Among accidents involving PMDs and reported by the police, **the injured or killed are mostly the PMDs users (86%)**
- PMDs users are mainly killed in road accidents involving car occupants, and then **without antagonist users**
- E-scooter riders are mostly killed **in built-up areas** (75% of those killed) as traffic in rural areas is restricted

## 3 167 fatalities in 2023 per road network



## 16 000 seriously injured, per road network



Source : ONISR, 2023 data



- Unlike cyclists, most of the killed are involved in road accidents during the **night time** (57% between 2021 and 2023)
- At admission in major trauma center, **37 % of e-scooter riders had a blood alcohol content higher than the legal threshold and 22.5% wore a protective helmet** (vs 9,8 and 49.3% for cyclist )

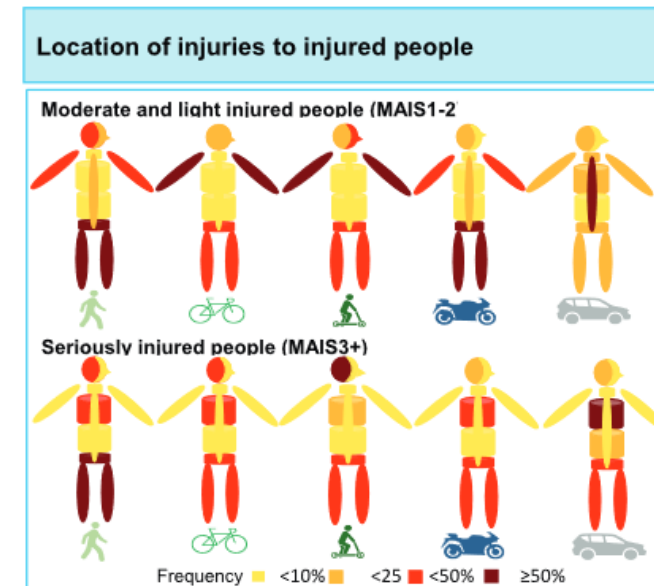
# Injuries and handicaps

- E-scooter victims are **more likely to have:**
  - multiple injuries** than cyclist victims (64% vs 58%)
  - a higher average number of injuries per victim** (2.2 vs. 2.0).
- In the Rhône county, **scooter users are more affected by cephalic extremity injuries** (head or face): 37% of injuries vs 27% for cyclists
  - 6% of injured scooter riders wore a helmet vs 30% of injured cyclists

Comparison of body regions affected between bicycle and scooter injuries

Body region affected	Bicycle	Scooter
Head	11%	15%
Face	15%	21%
Neck	2%	2%
Thorax	5%	3%
Abdomen	2%	2%
Spine	4%	3%
Upper members	33%	29%
Lower limbs and pelvis	23%	23%
Skin only	4%	2%

Source : Rhône registry 2019



Source: Rhône Registry 2016-2020 (45 133 not-dead victims). A victim can be affected in several areas.

# On-going studies and research

## Main themes:

- **Body regions affected** when falling, depending on the infrastructure concerned
- **Importance of helmets** in mitigating head injuries
- **Roadside observations of helmet use**
- **Risk perceived** by e-scooter drivers

<https://www.onisr.securite-routiere.gouv.fr/en>

