

INCIDENT DATA INVOLVING SHARED E-SCOOTERS

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About MMfE

Micro-Mobility for Europe (MMfE) is an association of shared micro-mobility providers such as e-bikes and e-scooters. Our members aim to transform urban mobility by creating a sustainable and safe transport ecosystem together with the cities in which they operate. Shared micro-mobility plays an important role in solving cities' most persisting challenges: traffic congestion, air and noise pollution, by reducing car use and filling gaps in public transit networks.

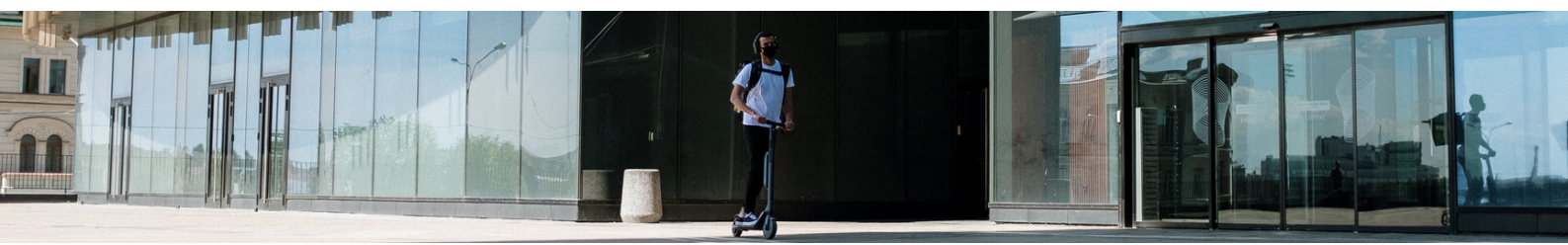
MMfE takes road safety very seriously. Any incident is one of too many and all operators are committed to ensuring the highest level of safety, from vehicle conception to rider education and safety solutions. All members monitor safety incidents, broken down into different damage categories, severity levels and root causes. This allows each operator to take the most impactful actions to mitigate incidents as our industry is working towards Vision Zero.

Background

With shared electric scooters being a recent mode of transport, there is little public data on incidents in which they are involved. Public data sources often collude shared e-scooters incident data with private e-scooters data and/or other new modes of transportation (such as monowheels, electric skateboards, etc.). This factsheet provides the first-of-its-kind, industry-aggregated incident data involving shared e-scooters. It relies on data from MMfE's six founding members (Bird, Bolt, Dott, Lime, Tier, Voi).

Our goal is to shed light on the debate around shared e-scooters safety by providing data in a transparent manner on the volume, severity of incidents, and their implications on the safety of road users. Ultimately, we hope these insights will help inform conversations and road safety policies in the EU that reduce incident risks for vulnerable road users, such as shared micro-mobility riders, and we are committed to continuing working closely with authorities to do so.

For any questions, contact info@micromobilityforeurope.eu.



Injuries on shared e-scooters in Europe in 2021

- ▶ **Aggregated injury data on shared e-scooters is now available:** The data relies on 240.1 Mio trips with 461.0 Mio km ridden in 2021 on shared e-scooters provided by 6 MMfE members across 29 European countries, where these services are available.
- ▶ **The risk of injuries was 5.1 per 1 million km ridden:** in 2021, 5.1 injuries requiring medical treatment with shared e-scooters per million km were registered, with a variation between 1.2 and 13.4 injuries/1 million km ridden between different European countries.
- ▶ **This is a -60% downward trend in incidents compared to 2019 data:** Compared to the only available comparable data about relative incident levels of shared e-scooters based on data from 2019 [1] we see a 60% lower incident risk in Europe in 2021.
- ▶ **Fatality risk was 0.015 per 1 million km ridden:** In 2021, we registered 7 fatal incidents on shared e-scooters in Europe. The risk level of a fatal incident on a shared e-scooter is 0.015 per Mio km in 2021.
- ▶ **Shared e-scooters show twice lower fatality risk than private e-scooters:** The estimated risk of fatal incidents on private e-scooters in Germany is 0.030 fatal incidents per million km [2]. In France, only 1 out of 24 fatal micro-mobility incidents were recorded on a shared e-scooter, 23 on private e-scooters or other micro-mobility devices [3]. In the UK, private e-scooters are reported to be involved in 82% of all e-scooter casualty collisions [4].
- ▶ **Fatality risk of shared e-scooters is comparable to bicycles:** In Germany, where the total amount of km cycled can be deduced from an available ministerial report [5], we observe a similar risk of a fatal incident on a shared e-scooter (0.014 Mio km) as on bicycles (0.011/ Mio km)[6].
- ▶ **Fatality risk of shared e-scooters is 20x lower than mopeds.** According to aggregated data from AXA on shared e-scooters in Europe between 2019 and 2022, the risk of accidents is 20 times lower for shared e-scooters than for mopeds.

[1] OECD/ITF (2019): Safe Micromobility: https://www.itf-oecd.org/sites/default/files/docs/safe-micromobility_1.pdf

[2] We calculated this by subtracting shared e-scooter incidents from the total amount of registered e-scooter incidents according to DESTATIS (https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Verkehrsunfaelle/_inhalt.html) and estimating total trip volume based on the number of registered vehicles according to German Kraftfahrzeugbundesamt (KBA).

[3] ONISR (2022): https://www.onisr.securite-routiere.gouv.fr/sites/default/files/2022-09/ONISR_Bilan_incidentaliteC3%A9_2021_0.pdf

[4] The Safety of Private E-Scooters in the UK. Parliamentary Advisory Council for Transport Safety, 2022: <https://www.pacts.org.uk/wp-content/uploads/PACTS-The-safety-of-private-e-scooters-in-the-UK-Final-Report.pdf>

[5] BMVI: Mobilität in Deutschland MiD (2017), online under https://www.mobilitaet-in-deutschland.de/pdf/MiD2017_Ergebnisbericht.pdf

[6] STATISTA: <https://de.statista.com/statistik/daten/studie/1041872/umfrage/getoetete-fahrradfahrer-im-strassenverkehr-in-deutschland/>

2021: Incidents with personal damage on shared e-scooters in Europe

Total trips	240,141,747
Total km	461,019,769
All incidents with personal damage reported	8,775
Injuries requiring medical treatment	1,591
Fatal injuries	7
Injuries requiring medical treatment/ Mio km	5.1
Fatal injuries/ Mio km	0.015

In a study of all police-reported road incidents across 93 European cities, the introduction of shared e-scooters increased incidents by 8.2% in cities with below-median cycling infrastructure but did not increase incidents in cities with above-median infrastructure [7].

Outlook and recommendations

- ▶ **Invest in safe infrastructure:** Research demonstrated that protected bike lanes are key to mitigating incident risks and severe injuries, as well as to increasing micro-mobility adoption and preventing riders from riding on the sidewalk.
- ▶ **Harmonise incident reporting standards across Europe:** Different Member States have different definitions of injury severity levels, as reflected in the different taxonomy of MMfE members. This directly impacts the granularity of the data aggregated. Similarly, local authorities across Europe do not have a standardised way of collecting and reporting shared e-scooters incident data and often collude this data with private ones. MMfE recommends a standardised incident reporting framework, including clearer distinctions between private and shared e-scooters during the incident reporting process by police forces to inform appropriate measures.
- ▶ **Acknowledge e-scooter users as vulnerable road users:** Like pedestrians and cyclists, e-scooter users are at risk of collisions with faster and heavier modes of transport. Clearly segregated infrastructure and more allocated space for walking, cycling and scooting are needed to deliver on cities' Vision Zero goals.
- ▶ **Enforcement:** Consistent and intuitive road safety rules are fundamental to ensuring that users know how to ride safely. While MMfE members are deploying all their means to educate riders to comply with the rules of the road, enforcement is necessary to increase compliance. Hence we call on authorities to encourage enforcement.

[7] Cloud, Heß & Kasinger (2022): Do shared e-scooter services cause traffic accidents? Evidence from six European countries, online under <https://arxiv.org/pdf/2209.06870v2.pdf>