



EUROPEAN CYCLISTS' FEDERATION

# European Cyclists' Federation

Is the bicycle finished? Are electric scooters and power-assisted bikes the new urban mobility kings?

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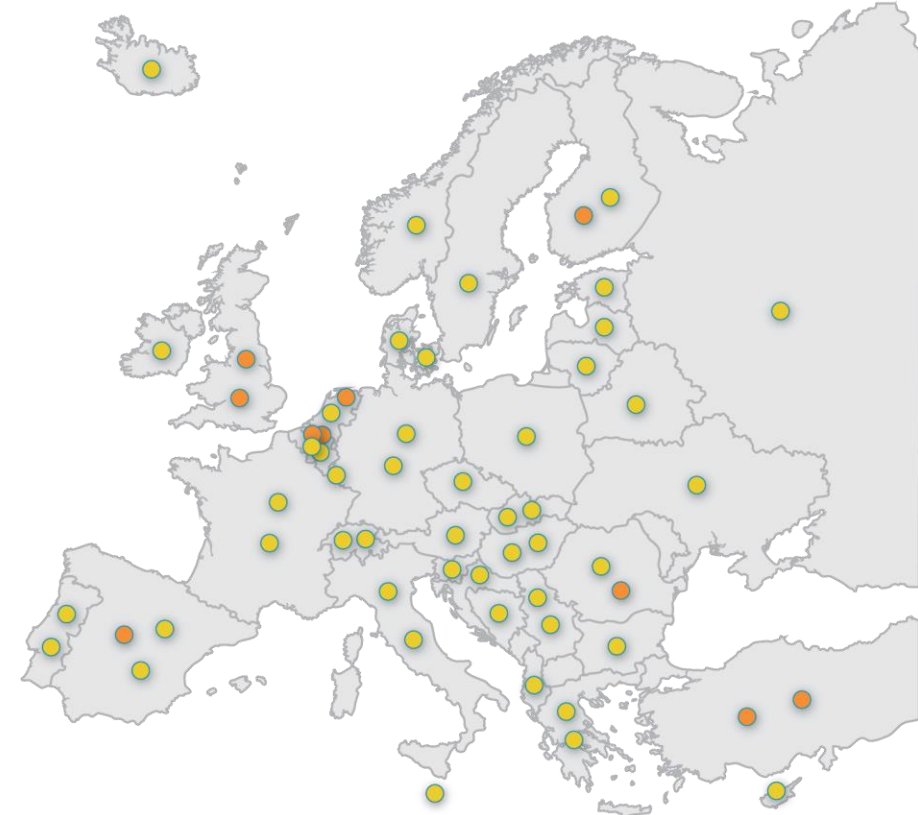


Cycling  
Industries  
Europe

ECF gratefully acknowledges financial support from the cycling industry via Cycling Industries Europe

[www.ecf.com](http://www.ecf.com)

- ECF is the European umbrella federation of member-based **civil society organisations** advocating and working for more and better cycling.
- We promote cycling as a **sustainable** and **healthy** means of transport and leisure.
- With more than 60 member organisations from over 40 countries, we **harness the power** of the European cycling movements.
- We are based in Brussels and our roots are in Europe, but the challenges we face are **global**.



- Assistance up to 25km/h and max. 250W continuous rated power – no pedal/no power – active mobility
- Bicycle standards apply and they have a specific CEN EN 15194 standard created
- Are legally a “bicycle” in national rules



## Keep cycling benefits:

- Healthy
- Reliable
- Safe
- Congestion busting
- Cost
- Storage
- Environment
- Combined mobility
- No licence
- Use cycle infrastructure
- Bike sharing infrastructure

## Also reduce some other barriers:

- Range - Now 8-20km as standard
- Hills and Heat
- Strength concerns - Age, gender, disability
- Perception of Safety - Safe start
- faster - 25km/h – 45km/h
- Loads/goods / passengers Link with new technologies

## Possible problems

- Worse health outcomes?
- Crashes with pedestrians/cyclists? - Too fast for cyclists?



- **Physical activity gains from active travel are similar for pedelec users and cyclists**
- Physical activity levels were similar among cyclists and pedelec riders (4463 vs. 4085) MET/min/week
- Pedelec riders take longer trips by pedelec compared to cyclists 8.0 vs. 5.3 km per person
- With modal shift to pedelec; less likely abandoned
- Pedelec riders tend to have higher BMI/less fit, therefore higher gains in health

Castro, A., Gaupp-Berghausen, M., Dons, E., Standaert, A., Laeremans, M., Clark, A., ... Götschi, T. (2019). Physical activity of electric bicycle users compared to conventional bicycle users and non-cyclists: Insights based on health and transport data from an online survey in seven European cities. *Transportation Research Interdisciplinary Perspectives*, 1, 100017. doi: 10.1016/j.trip.2019.100017



## Fatalities/injuries to user;

- “The number of fatalities among EPAC riders similar to the number on regular bicycles.” (SWOV, 2015)
- But older age groups injured in single vehicle crashes in EPAC users compared to cyclists

## Crashes frequency;

- Netherlands - no significant difference in crashes of bicycles and EPACs (exposure taken into account) (2018 Schepers et al.)
- But Germany – crashes with EPAC more severe and hospitalisation rates a little higher – speed or age?

## 3<sup>rd</sup> Parties crashes;

Pedestrian fatalities and serious injuries in crashes with EPAC and motor vehicle

| Accidents involving two parties in Germany 2016, of which: |                 |                   |                        |                              |                             |
|--|-----------------|-------------------|------------------------|------------------------------|-----------------------------|
| Crash partner 1  | Crash partner 2 | Pedestrian Killed | Pedestrian Sev Injured | Estimated vehicle population | Pedestrian risk per vehicle |
| EPAC   | Pedestrian      | 0                 | 11                     | 3.000.000                    | 1/272.727                   |
| Motor car  | Pedestrian      | 483               | 7.163                  | 44.000.000                   | 1/5.754                     |

Remember-  
 99% of pedestrians killed by  
 MVs  
 83% of cyclists killed my MVs

- Safety under the age of 55-60 very similar to bicycle (still ongoing research/data though)
- Some safety handling problems for elderly people, more single bicycle crashes – but average speed the same
  - Need for more and better cycling infrastructure
  - Do we need changes to the bike itself?
- Health benefits are same, but different! Elderly people tend to get more benefits (stay cycling, enable older knees to go further)
- Pedelecs remove barriers to cycling
- We bring pedelec/EPACs under our “active pedalled” mobility family

# Electric Kick Scooters





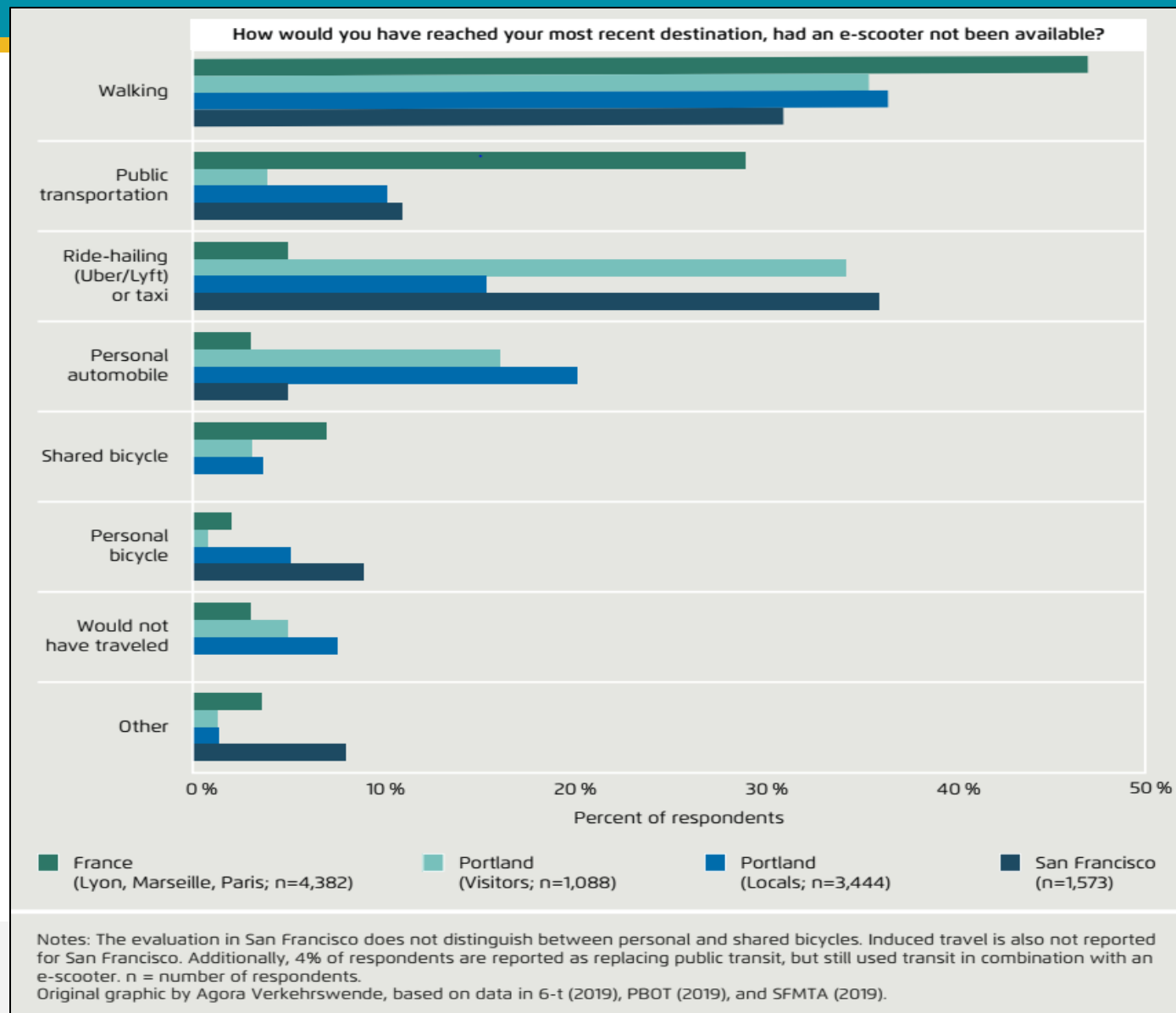
# What do we know? - Safety

- 3<sup>rd</sup> Party risk seems similar to cyclists – but pedestrians bearing the brunt
- Risk to scooter users is mixed –
  - some research shows similar risk as cyclists
  - Others (Norway for example) show risk 10 times higher than cyclists!
  - As always more data needed- under-reporting!
- Crash situations similar to cyclists
  - Fatalities = mainly with vehicles
  - Injuries = mainly single vehicle crashes (higher than cyclists)
  - Similar problems with surface, tram tracks, small kerbs, obstacles, handling issues
  - Age is different, Scooter users (and injured) are younger
- More pavement use than cyclists – but scooter riders prefer to use cycling infra when possible. Pavement use = perception of risk
- Nuisance problems can become safety problems
- UK has some worrying figures
- ***More and better infrastructure is needed to take on extra loads***



- Modal shift – less threat to cycling numbers (perhaps when private scooters become more popular this may change)
- But could be threat to walking and public transport
- Potential advantage by linking public transport and walking trips
- More research on modal shift and strategies to maximise scooters

Source ITF Report



- In countries with higher cycling levels they are seen as a nuisance
- In countries with low cycling levels seen as ally for cycling infrastructure
- Age is a worry for future safety
- Please do not mix cycling/EPAC/Scooter data, or conflate their opportunities/challenges
- Please don't equate 'micromobility' as cycling/EPAC use
- Remember cyclists use the cycling infrastructure as well!
- **More and better infrastructure is needed to take on extra loads**

# Thank you

[www.ecf.com](http://www.ecf.com)

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