

BERLIN 2015-2021

TRAFFIC ACCIDENT ANALYSIS

WITH FOCUS ON BIKE TRAFFIC

Authors:

Roman Kaltschew & Selena Eberwein



DATA

TRAFFIC ACCIDENT STATISTICS

OpenData Berlin:

Road accidents in Berlin from 2018-2020
with 22 features like the type of accident,
lighting conditions, road conditions & location

Statistical data Berlin Brandenburg:

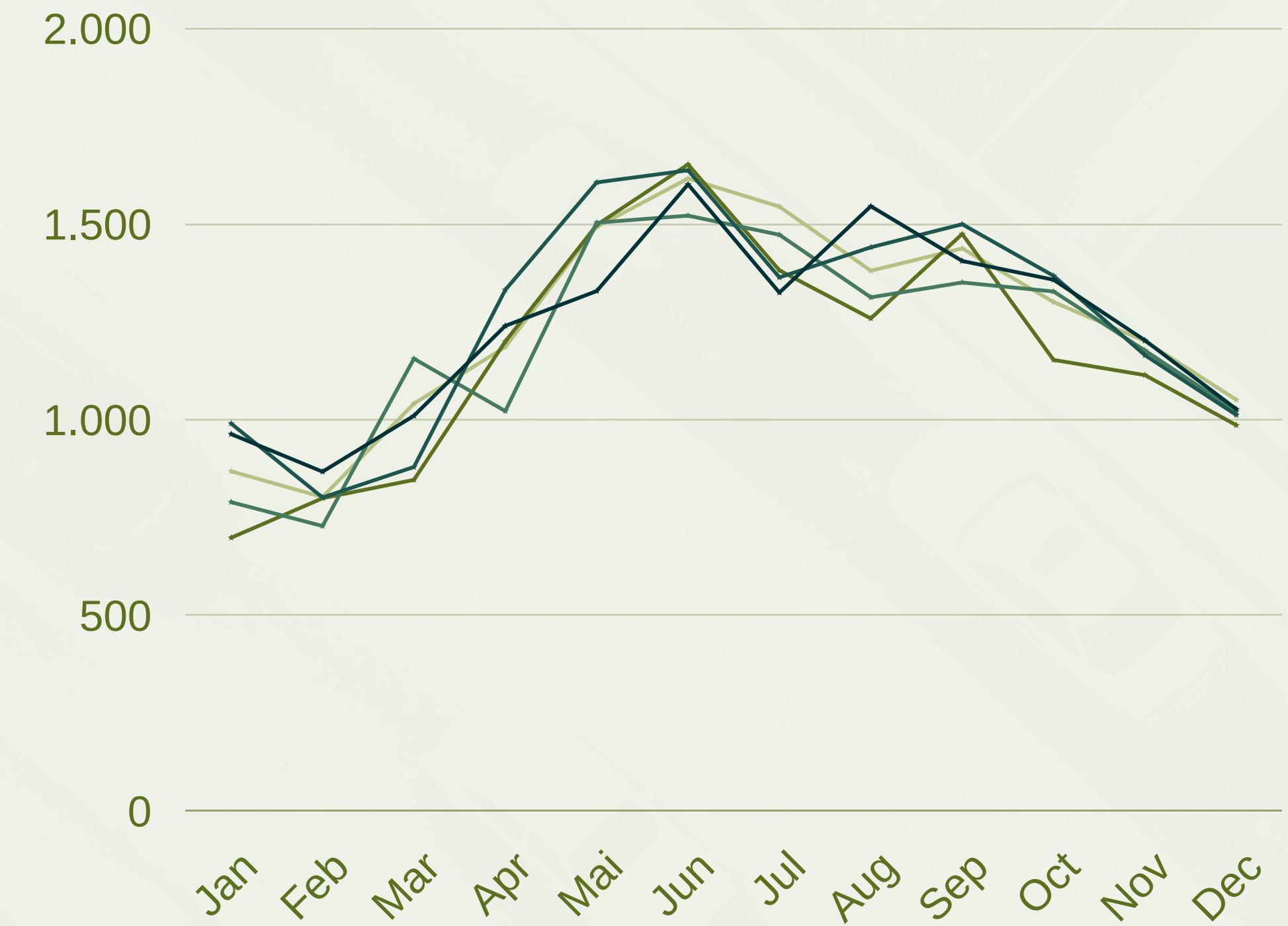
Road accidents in Berlin from 2015-2021
given 7 features about accidents and their
severeness but without location data



ACCIDENTS WITH INJURED PEOPLE 2015-2019

The graph shows the number of accidents per month, in which people got injured.

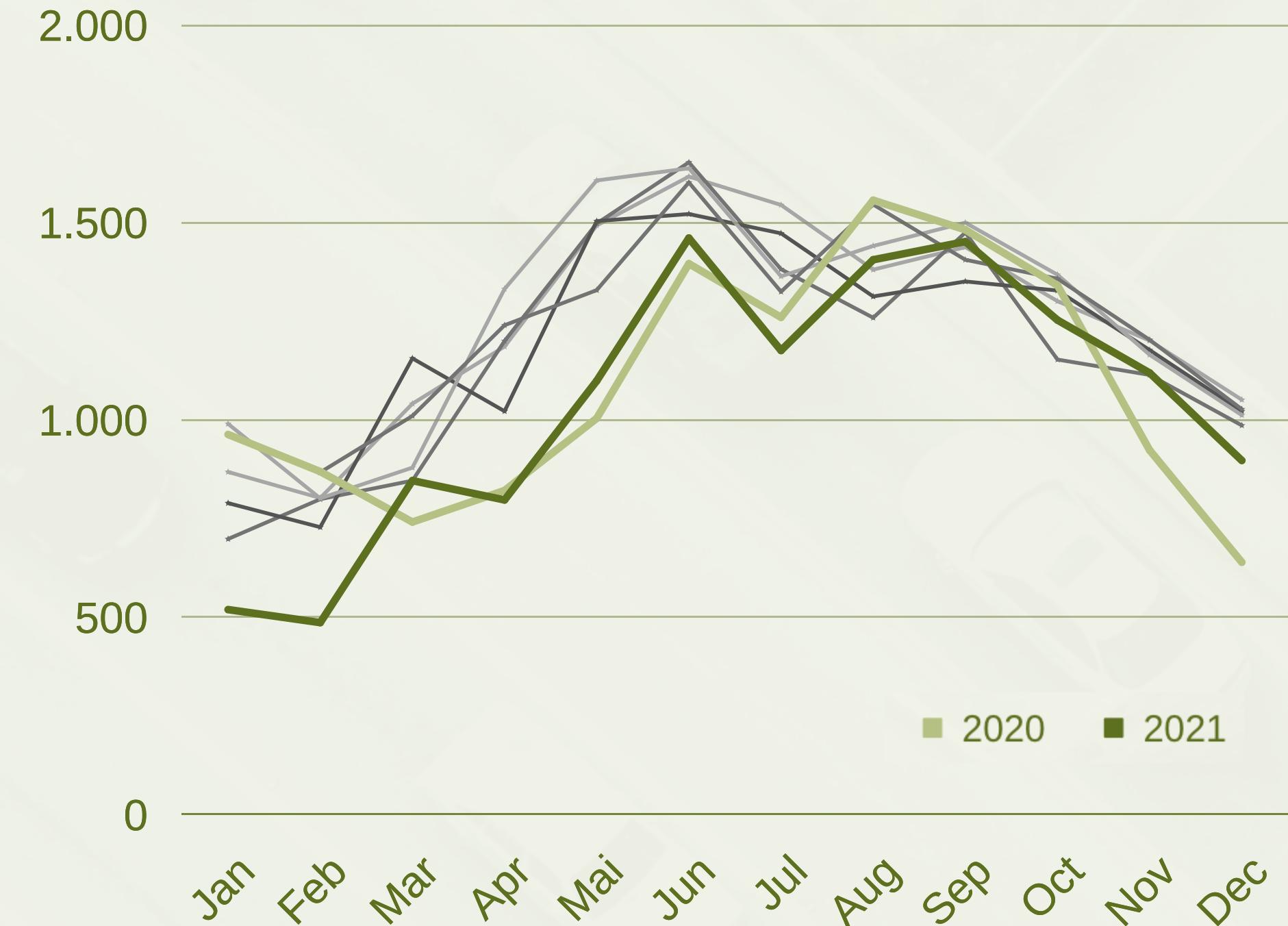
Average number of total accidents per year: **142.722**



ACCIDENTS WITH INJURED PEOPLE 2015-2021

In the years 2020 & 2021, the total number of accidents decreased by around **11.2%**.

There was less traffic due to Covid19 restrictions and lockdown.



BIKE ACCIDENTS

INCREASE IN ACCIDENTS
INVOLVING BIKES

22.75 %

2018

22.55 %

2019

26.11 %

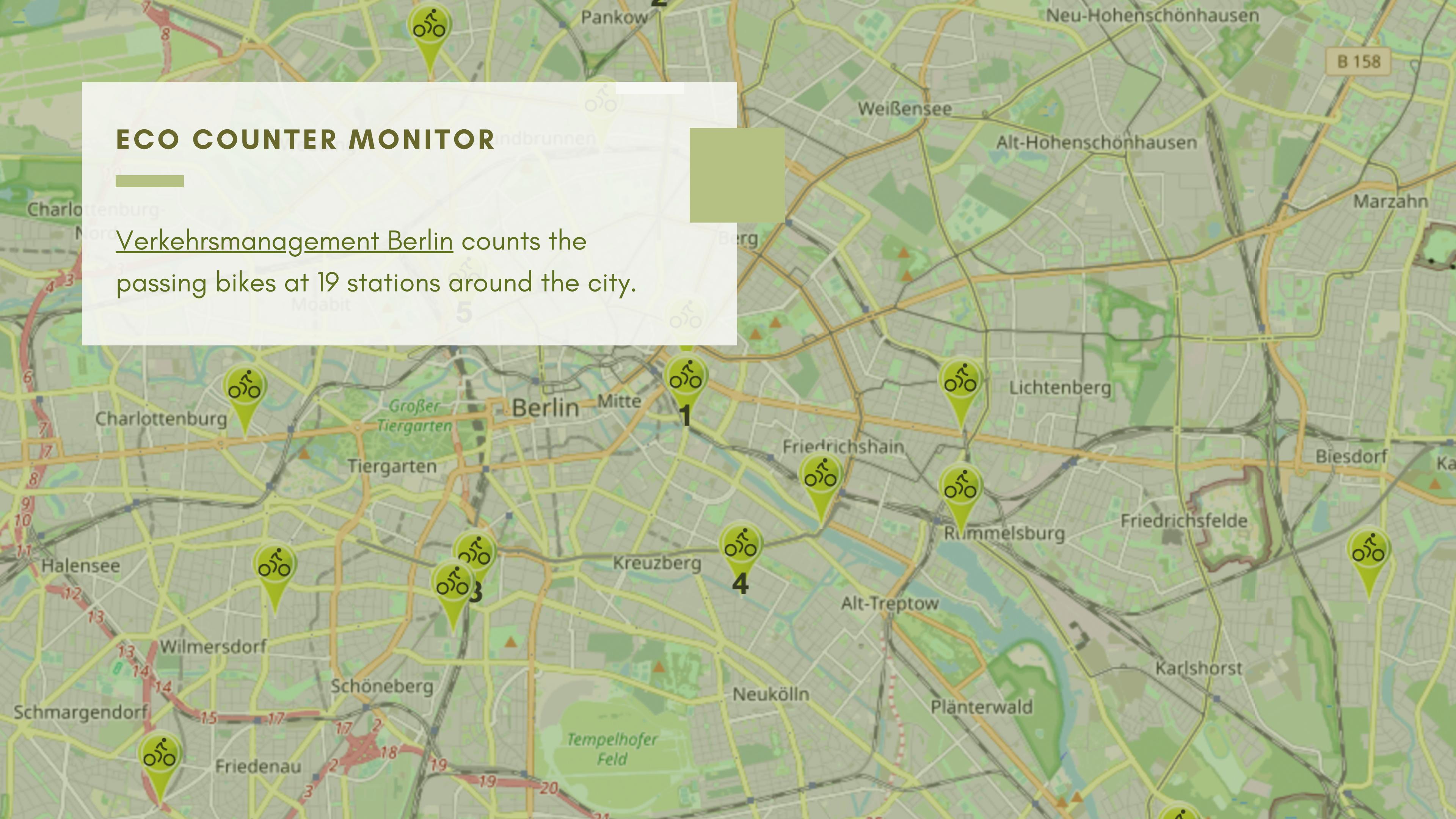
2020

Proportion of accidents in which a cyclist was involved.



ECO COUNTER MONITOR

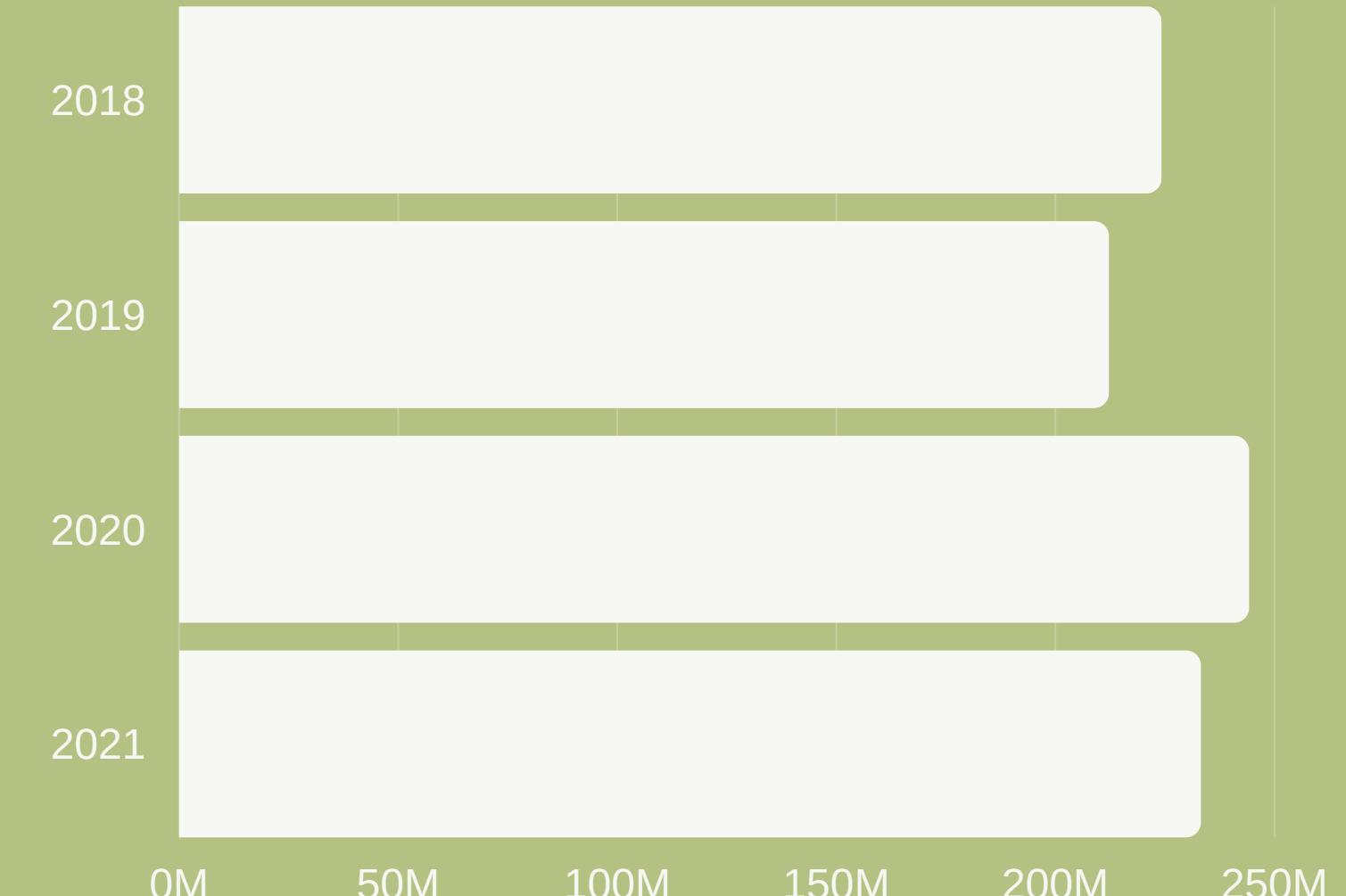
Verkehrsmanagement Berlin counts the passing bikes at 19 stations around the city.



MORE PEOPLE RODE BIKE DURING COVID

—
ECO COUNTER MONITOR

The number of monitored bikes increased by around **15%** from 2019 to 2020.

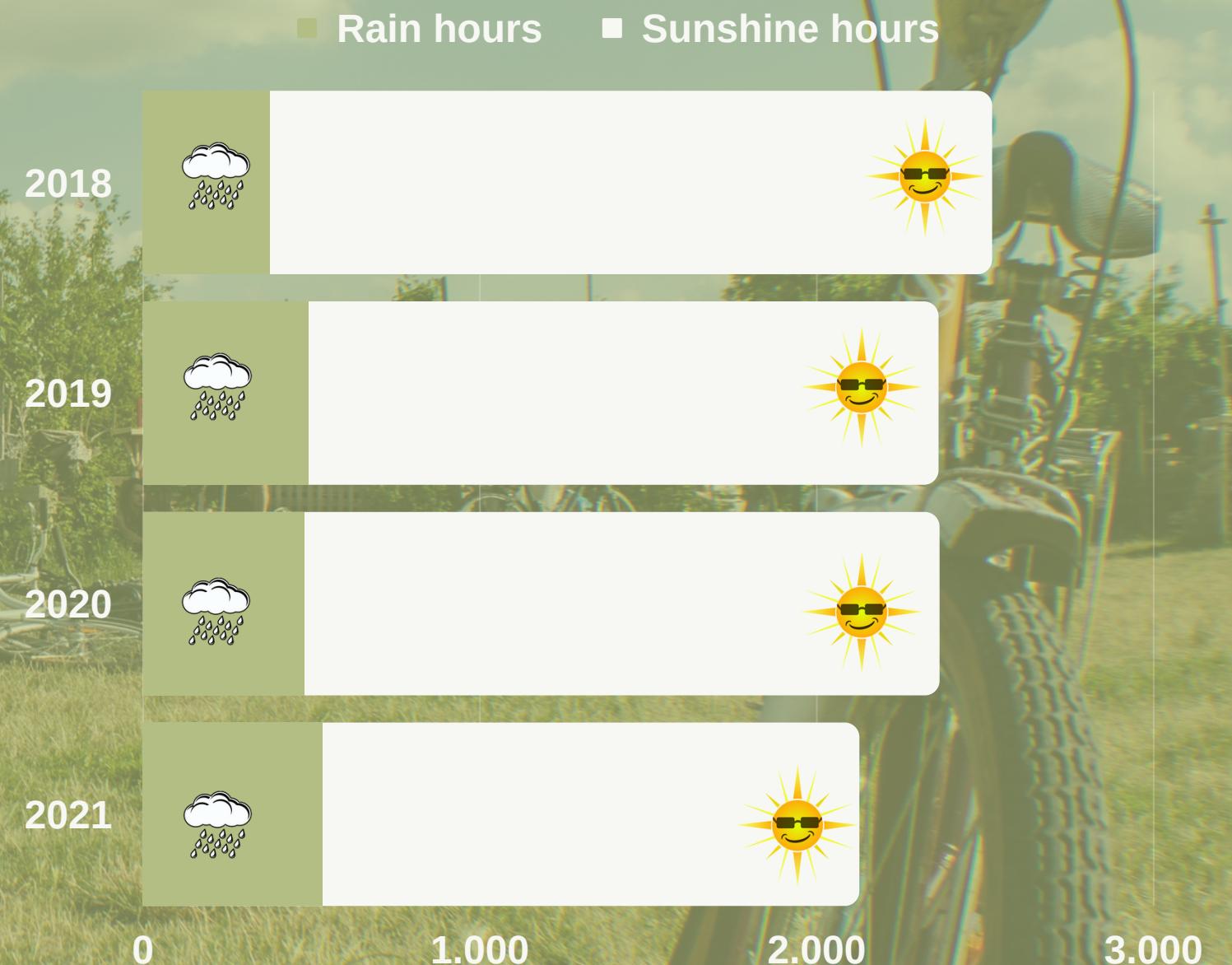


*DATA PROJECTION DUE TO CLOSURE OF DISTINCT
COUNTING STATIONS

TRANSPORT FOR SUNNY DAYS

WEATHER DATA

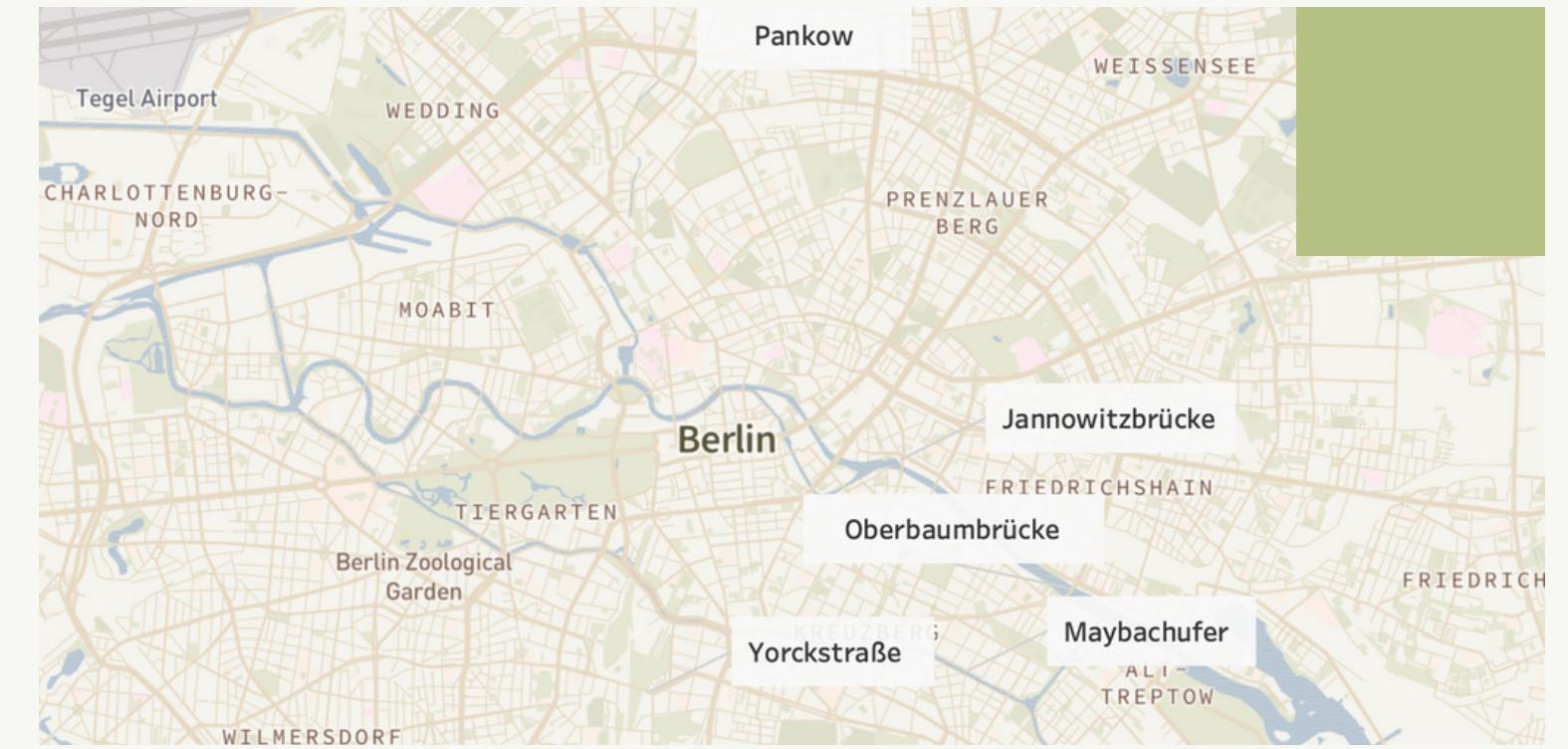
Despite more rain and less sunshine in Berlin,
more people rode their bikes in the past year.



*DATA FROM [WETTERKONTOR](#)

BIKE TRAFFIC HOTSPOTS

Recorded by the Eco counter from
Jan 2016 - Mar 2022.



BIKE ACCIDENT HOTSPOTS

Calculated on the basis of the available traffic data from 2018-2020 using feature engineering.

MOST BIKE ACCIDENTS HAPPEN AT MORITZPLATZ

The police count 16 accidents involving cyclists in 2014. ([News article](#))

After that, the bike lane was marked red.

Bike accidents in the following years:

16

2018

7

2019

12

2020

*no location data for the years 2015-2017 found



POP-UP BICYCLE LANES

Built in Q2 - 2020



Kantstraße



Frankfurter Allee



Hallesches Ufer



Danziger Straße



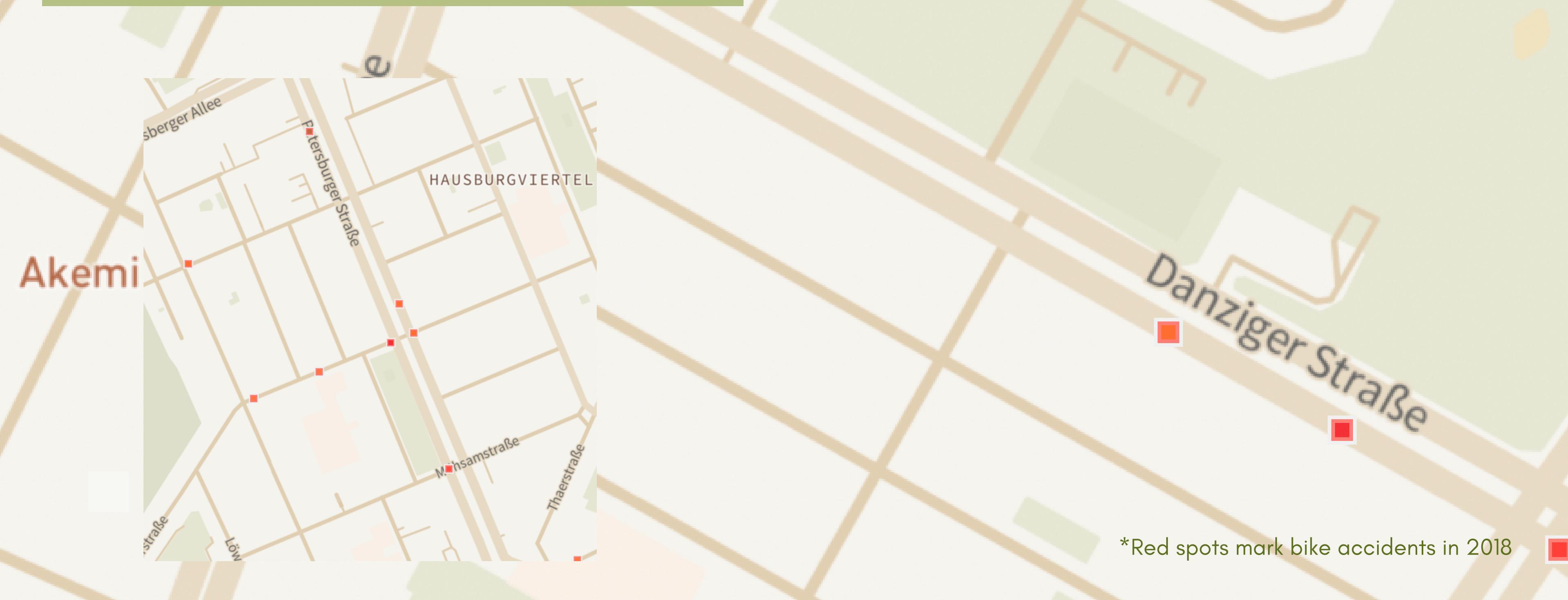
Petersburger Str.

for Children

DO POP-UP BIKE LANES AVOID ACCIDENTS?

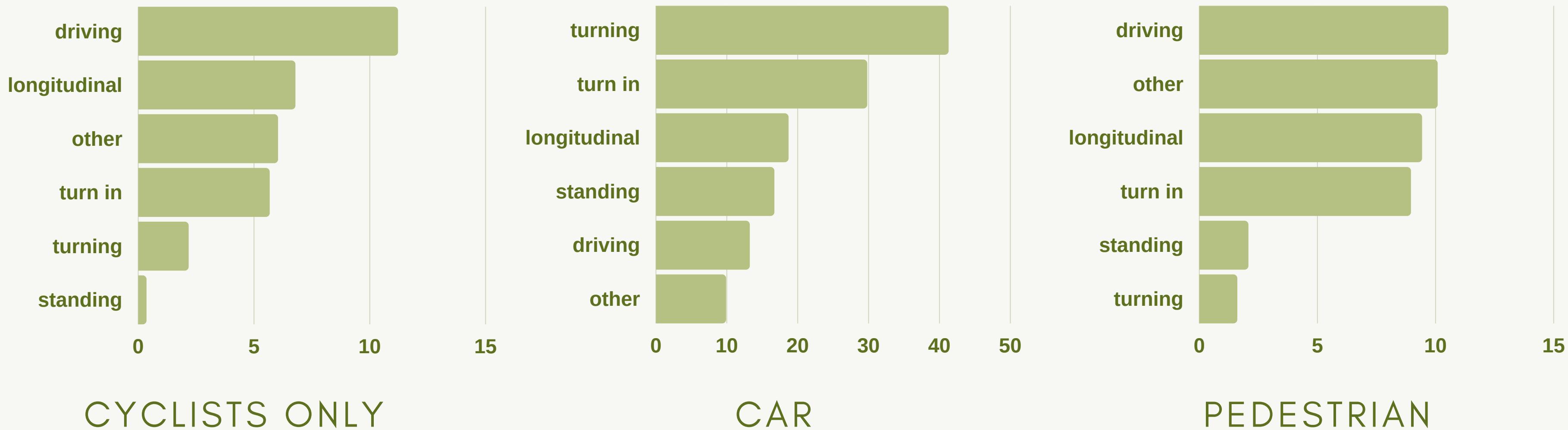
Many of the pop-up bike lanes were not placed at critical locations, but on streets with a low accident rate.

PRENZLAUER
BERG



ACCIDENT CAUSES

WITH BIKES INVOLVED



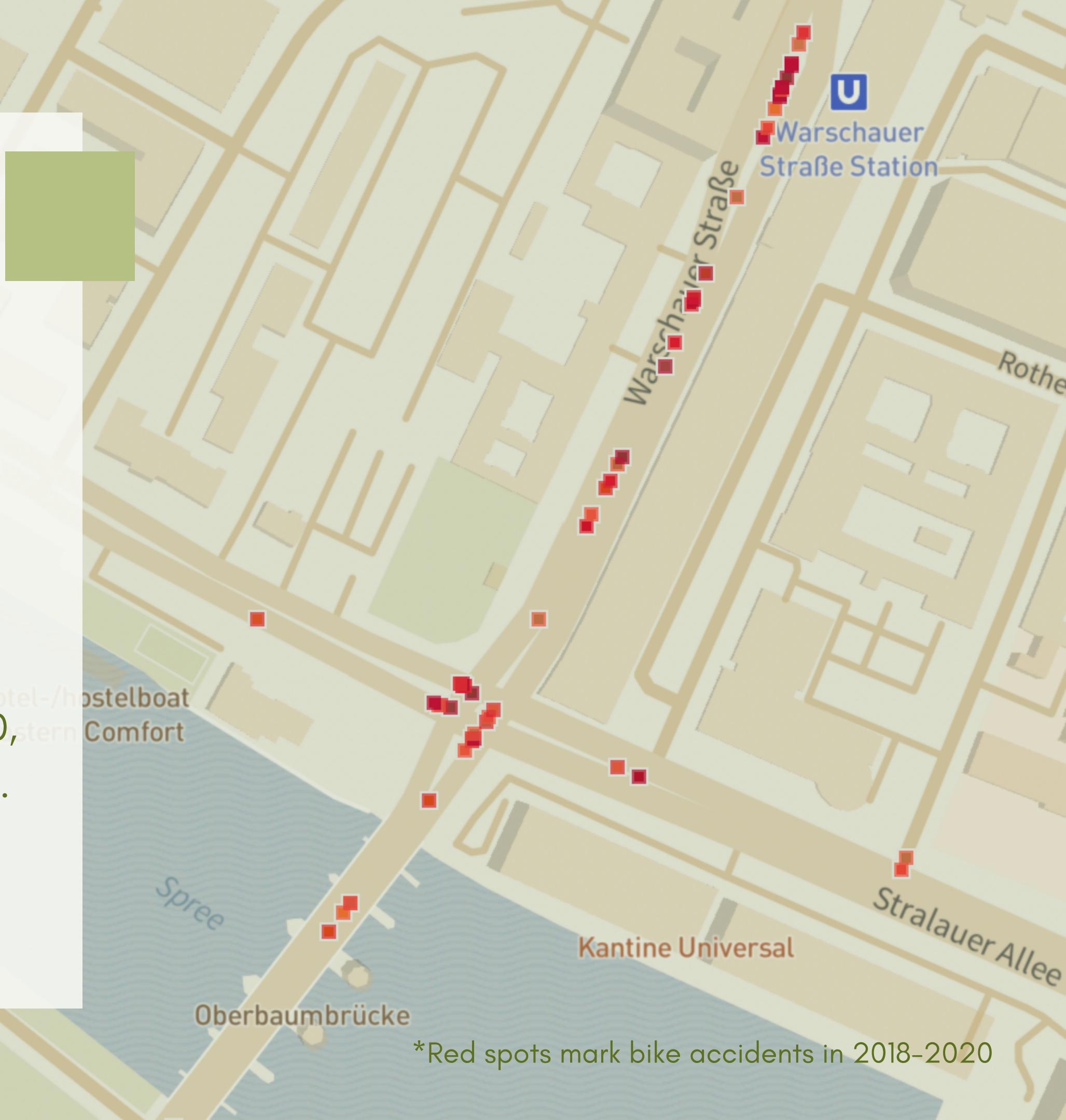
East Side Gallery

WARSCHAUER STRASSE

DANGEROUS FOR CYCLISTS AND PEDESTRIANS

This section of the road has no separation between bike lanes and pedestrian paths.

Out of 25 total bike accidents from 2018-2020, 15 happened between a bike and a pedestrian.



*Red spots mark bike accidents in 2018-2020

CONCLUSION FOR SAFER BIKE TRAFFIC



PEDESTRIAN PROTECTION

Clear separation of bikes and pedestrians.

WIDER BIKE LANES

Most accidents under cyclist happen in longitudinal traffic.

FOCUS ON HOTSPOTS

Traffic should be better regulated at spots with a high number of accidents.

TRAFFIC LIGHTS

Most accidents with cars and cyclists happen while turning, so traffic lights should be more delayed.



DRIVE SAFE

GITHUB

https://github.com/Romes-Kalt/Berlin_traffic_accidents_2018-2020

AUTHORS

Roman Kaltschew & Selena Eberwein

CONTACT

romes.kalts@gmail.com

selena.eberwein@gmail.com

