

A photograph of a city street scene featuring a tram and a cyclist. The tram is white and blue, with the number '9' and the destination 'L'Arc de Triomphe' visible. A cyclist in a brown coat is riding a white bicycle in the foreground. The background shows a tram stop with a red traffic light. The entire scene is overlaid with a green point cloud visualization, representing a 3D scan of the environment. The right side of the image transitions into a blue background with a white rounded rectangle containing text.

The Urban Road Safety Index

The road safety perception in 16 European capitals.

cyclomedia
Geo Data Driven Insights

Introduction

Local governments worldwide aim to achieve Vision Zero: zero traffic fatalities per year by 2050.

With new forms of transportation such as shared mobility and electric vehicles, residents in European capitals feel less safe on the road. What are the main problems, and what more can local authorities, governments and companies involved in road safety do to improve road safety in cities all over Europe?

Cyclomedia set up an unique survey – called the Urban Road Safety Index - conducted this year for the first time among 3,890 road users in Europe. The survey was conducted in 16 European capitals and addressed the perception of road safety. The respondents were questioned about road safety, whether they avoid traffic situations in their city, and what they believe their local government could do to improve traffic safety. The survey results show a clear difference between road safety in the assessed capitals.

Who is Cyclomedia?

Cyclomedia is worldwide leader in digital visualization of outdoor spaces, delivering insights through the most accurate 360° street-level visualizations for over thirty years. Using AI-driven analytics, we deliver insights to build a better world in the future. We develop, build, and operate the world's most advanced 'mobile mapping' systems that visualize highly populated urban areas in Europe and North America. The up-to-date and accurate data that we collect each year, is deployed by professional users, supporting governments and businesses in making cities greener, more accessible, smarter, and safer.

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1. The Urban Road Safety Index

How safe do you feel in traffic in the city where you live?

There is a big difference between the European capitals regarding road safety. Vienna is leading the chart for these reasons: Vienna scores best in many areas that contribute to road safety, such as good road quality (86%) and safe bike paths (72%). Rome, in comparison, still has a lot to gain in terms of road safety, with a general road safety score of 26%. There is particular demand for better quality roads and safer cycle paths. The following chapters elaborate on all capitals and their road safety.



- Road safety
- Road quality
- Safe bicycle paths







2. Road safety



Shared mobility has increased the feeling of unsafety in traffic in cities across Europe.

Traffic rarely stands still completely. Newer and faster forms of transportation are constantly emerging, and residents across Europe are noticing this. Transportation, such as electric vehicles and shared mobility, is causing an increase in the feeling of unsafety on the road (58%). When residents venture onto the road, many actively take detours to avoid dangerous traffic situations. On top of that, there is not sufficient streetlight to journey safely in every country, and residents do not know where to report such issues and dangerous traffic situations - only half of the respondents (52%) do.



-  Feels that there are more accidents in the city since the arrival of shared mobility
-  Avoids cycling in the dark
-  Sometimes feels unsafe cycling in the dark (because there are not enough streetlights)
-  Sometimes takes a diversion to avoid dangerous intersections in their city

Cyclomedia's vision

The fact that shared mobility increased the perception of unsafety in traffic in cities across Europe is, obviously, not the intention. Shared mobility and electric vehicles offer great opportunities for making cities more sustainable and should therefore not be seen as a problem but rather as a benefit. We should be investing in them and ensure that traffic policies are adapted to this reality more rapidly. By implementing a risk-based road safety policy, such as our Road Safety Scan, the surroundings can be clearly and easily identified. This data allows policy makers to detect potential problems and generate even better-founded reports on traffic safety to apply for budgets and subsidies.

This is also the case with street lighting. With the knowledge that we do not have enough lighting to walk the streets properly and safely in many cities in Europe, local municipalities can look at how roads and highways can be better lit. And, with today's street lighting technology, this can also be achieved sustainably. By mapping all the streetlights in a city, policy makers gain insight where there is insufficient lighting and draw up an informed plan for better street lighting.

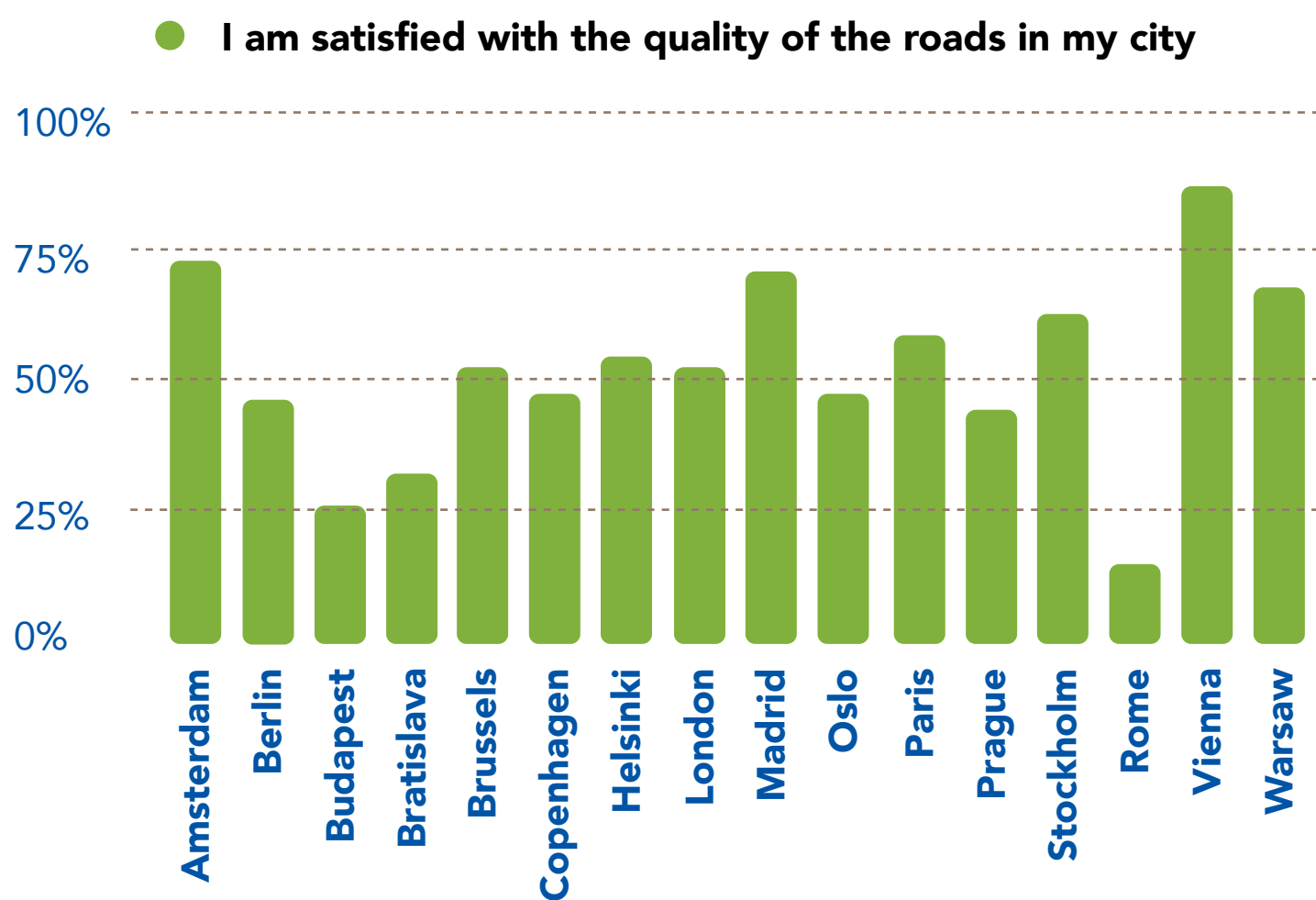
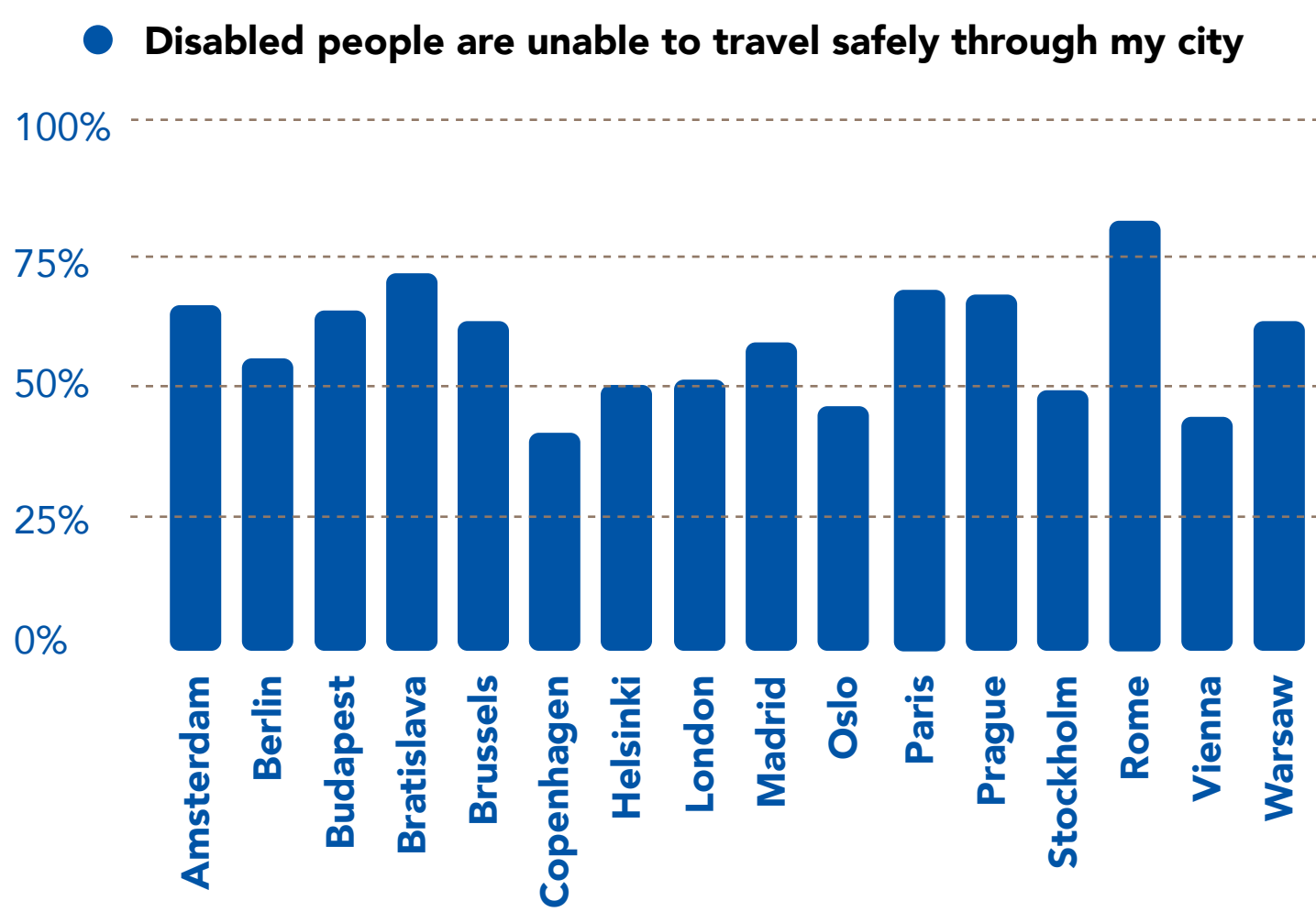


3. Road quality and accessibility

There is a lot to improve regarding road travel safety for people with disabilities.

When assessing the quality of roads in European cities, it is suggested that more than half of the respondents (52%) are satisfied with the quality. Quality is a significant factor in using roads safely. However, high-quality roads cannot be taken for granted. Not all cities are designed in a way that ensure that all roads are of good quality and accessible for everyone. For example, disabled people cannot always travel quickly or safely on their own through their city because of the way roads and pavements are arranged and maintained.

- **Road layouts** are not designed for disabled residents – 60% of respondents believe that disabled people are incapable of safe traveling on their own in Europe.
- **Road quality:** according to respondents, Vienna is most happy with road quality (86%) Rome lowest (15%).



Cyclomedia's vision

In 2022, people in wheelchairs, mobility scooters, or crutches, for example, should be able to navigate smoothly on a city's streets. By using data, it is possible to map out all pavements. Analysis tools show whether these pavements are accessible for disabled residents and visitors. For example, for the City of New York, Cyclomedia extracted the assets of curbs, pavements, billboards, and sidewalks to create an inventory of their compliance with the regulations.

But also, for assessing road quality, Cyclomedia developed a product for the automatic detection of road surface damage using imagery and point clouds. With this tool, local governments no longer need to send inspectors out on the road to observe road defects. The road surface analysis uses high resolution photos and LiDAR data that determine the severity, extent, and classification of the problems. This has a significant impact on the efficiency of road improvements and ensures greater safety on the roads.

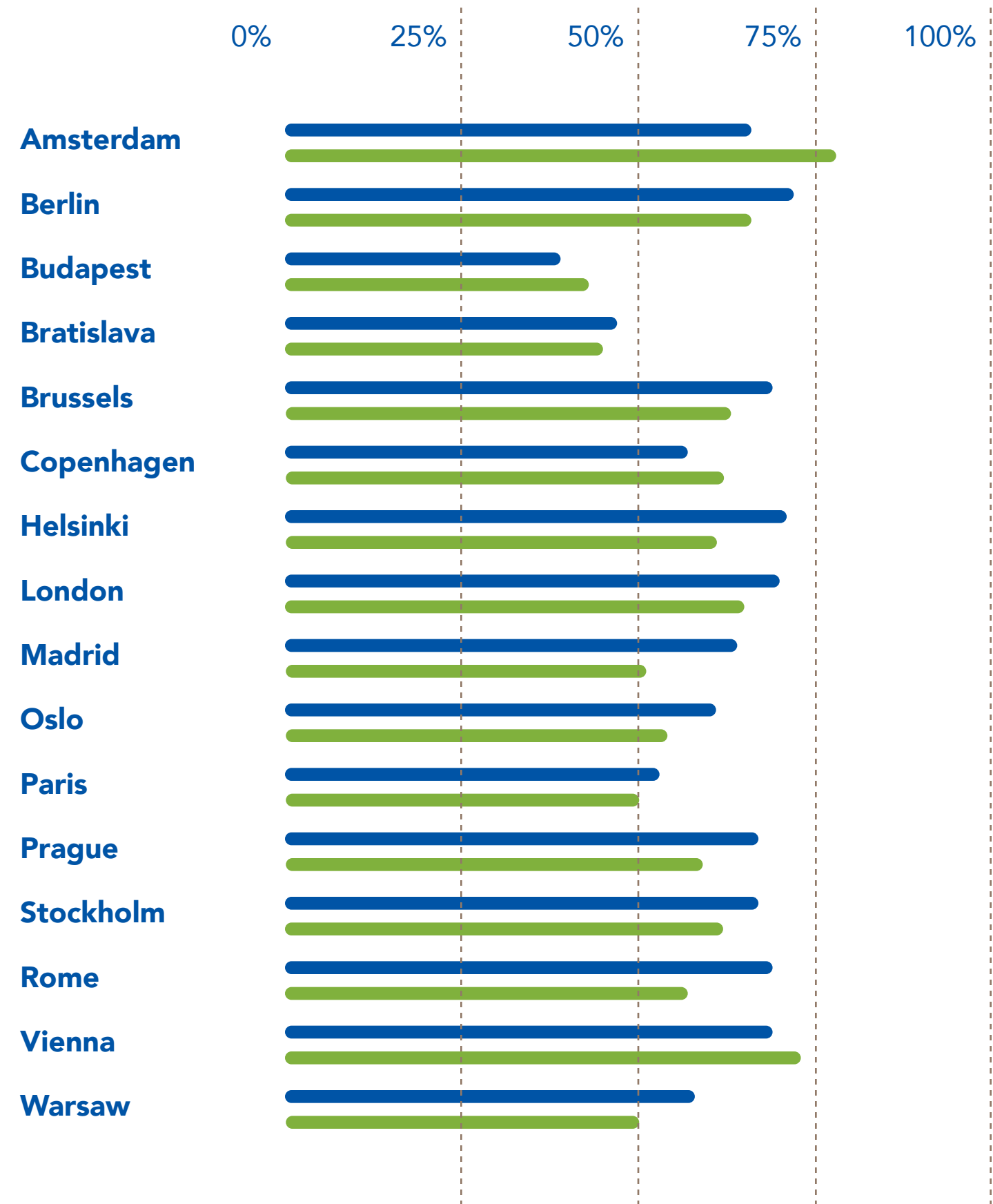
4. City livability



Enough (green) parks and dog-friendly places

In the survey, respondents were asked about their opinion of (traffic) safety in the city where they live, but also about the livability in their city; the number of parking spaces, dog walking areas, parks, and charging stations for cars. The results show that respondents are generally happy with the amount of open space (63%) and dog walking areas (58%). But when it comes to parking spaces and charging stations, there is a shortage.

- **63%** believe that there are enough parks in their city – however, respondents from Bratislava (47%) and Budapest (39%) are at the bottom of this list and are least happy with the number of parks.
- **58%** believe that there are enough places to take your dog for a walk in the city (Amsterdam is the most dog-friendly, with 78% satisfaction regarding the number of spaces for dog walking)



Cyclomedia's vision

The problem of parking also existed for many years, with people having (several) cars parked in front of their doorsteps. Cities that are visited by many tourists, this is likely always going to be the case. With the developments of shared mobility and increased bicycle-safe paths, the problem might fade. However, the shortage of charging points will become even more significant in the future, mainly if widespread adoption of hybrid or all-electric vehicles occurs.

With the right data, it is possible to map out a city's charging station infrastructure and plan for the future. This allows local governments to identify where there is a shortage of charging points and determine how they can better organize it.



63%
Enough public parks



31%
Enough public parking spaces



28%
Enough charging points for electric cars



51%
Bicycle paths are safe

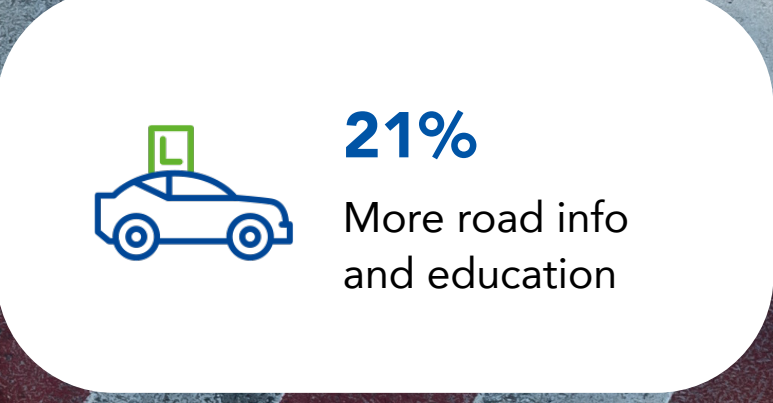
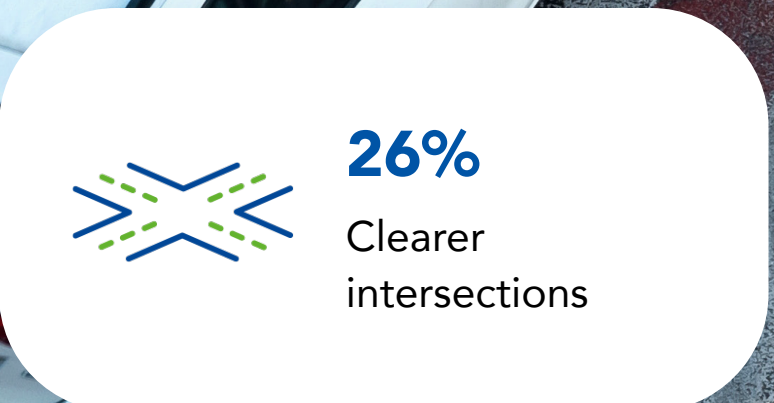
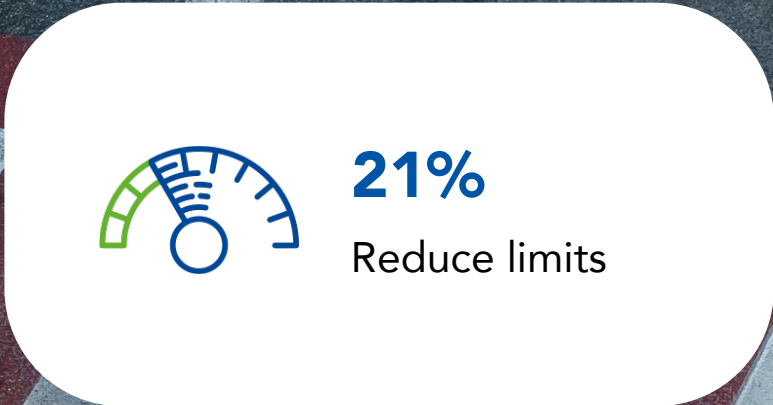
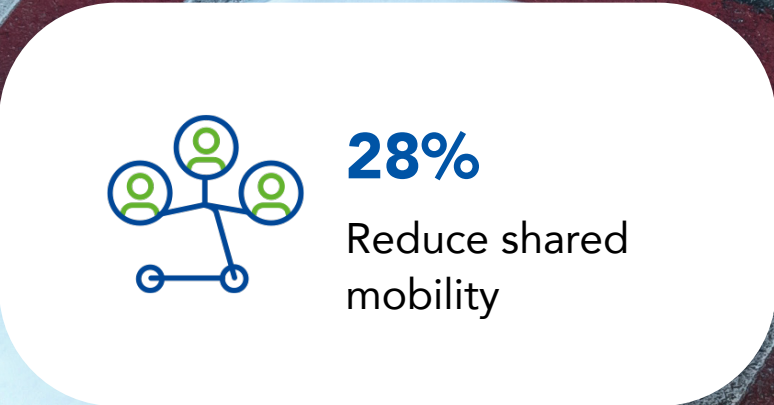
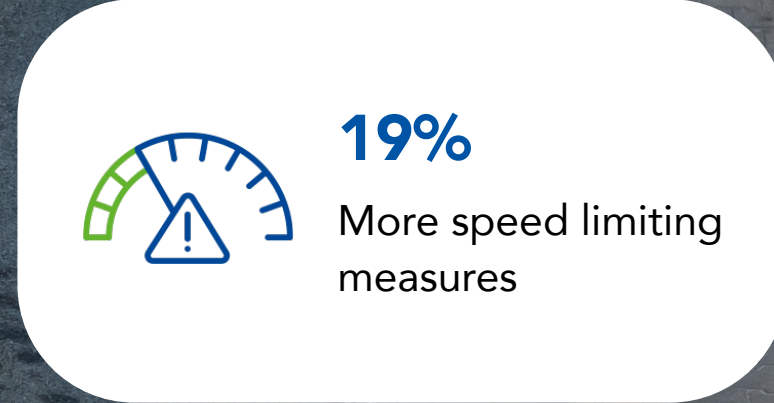
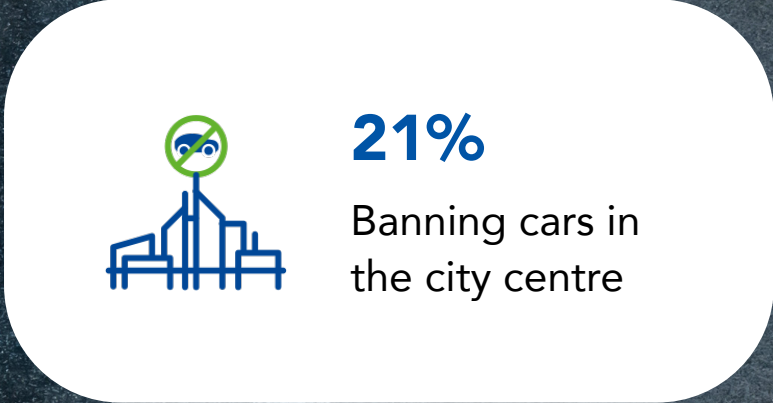
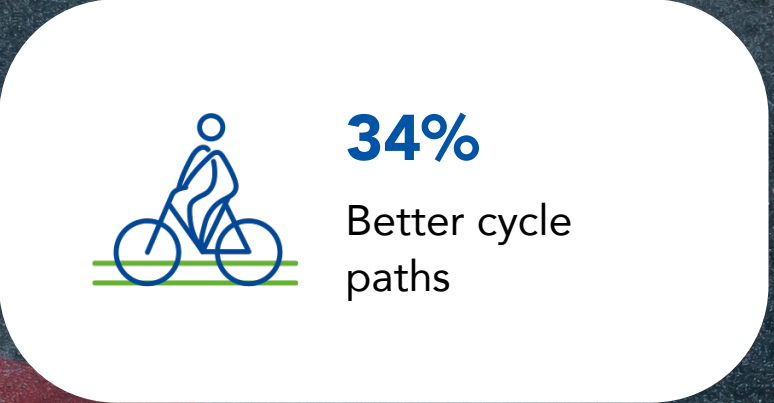
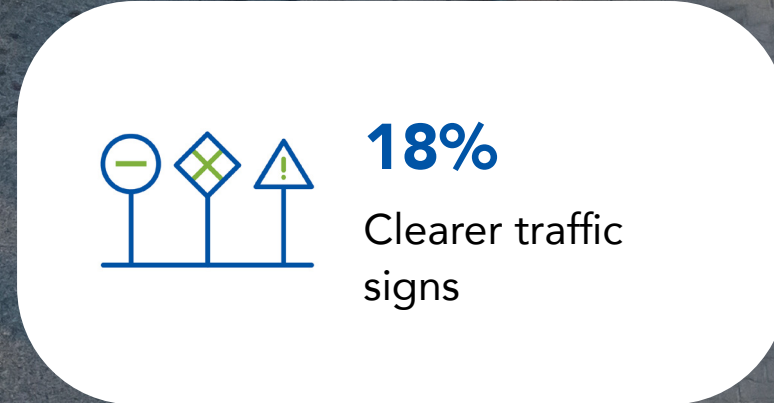
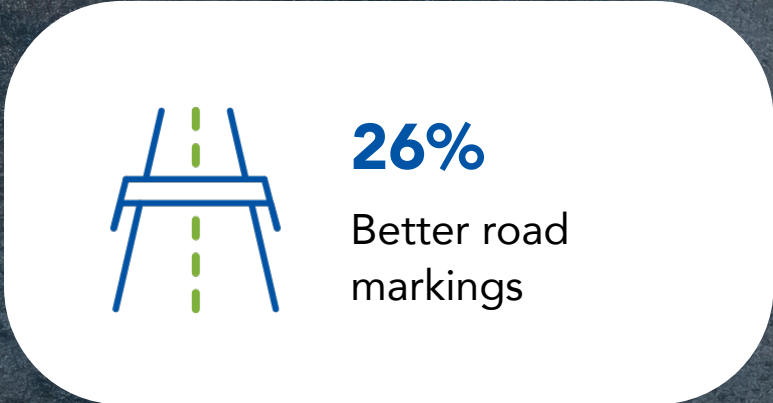
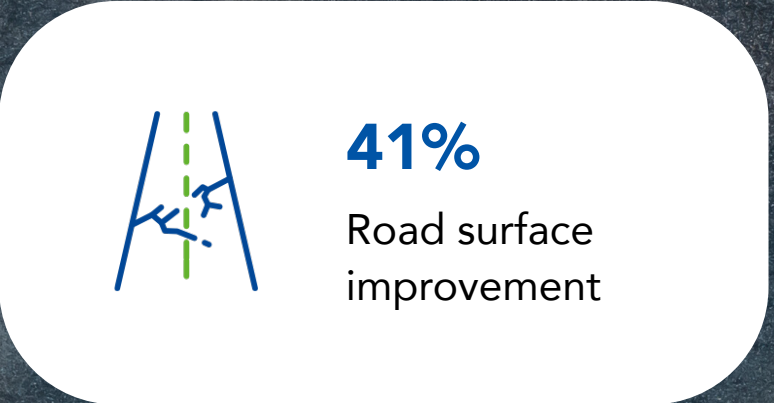


58%
Enough places to walk your dog

What to do to improve urban road safety?

Cities will always be in motion. Improved perception or increased road safety will not just be achieved through restrictions, such as safety helmet rules or traffic solutions. Local governments need to actively adjust cities and roads to meet developments such as faster traffic, electric vehicles and ensure we no longer avoid traffic issues and chokepoints but rather deal with them.

To increase the perception of safety on the street, it is essential that we listen to road users: what do they prefer, what do they need and want, and what situations do they avoid? If we support this with relevant data, we can design cities and roads in much more user-friendly and efficient ways. By designing mobility systems according to the wishes of its users and the safety implications, we can create a safer environment in which we strive for Vision Zero in the coming decades.



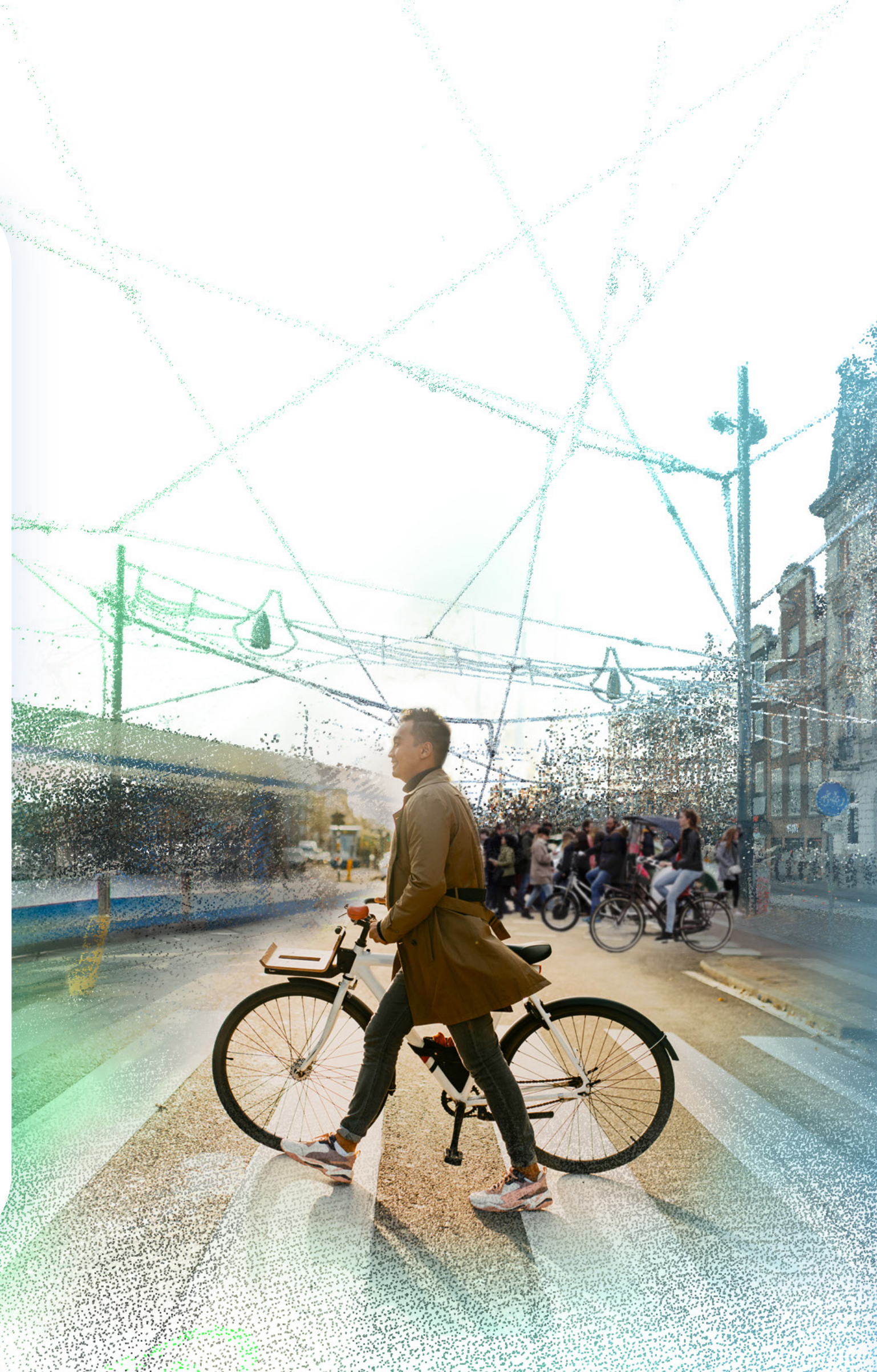
Contact



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To find out more about the results and how Cyclomedia's visual data can help with improving road safety, contact **Bas Brouwer** at bbrouwer@cyclomedia.com or visit [our webpage](#).

 [Check our LinkedIn page](#)



Local governments already working together with Cyclomedia on mobility challenges:

