



# ROAD SAFETY AND SUSTAINABLE TRANSPORT CONCEPTS AROUND SCHOOLS IN GERMANY



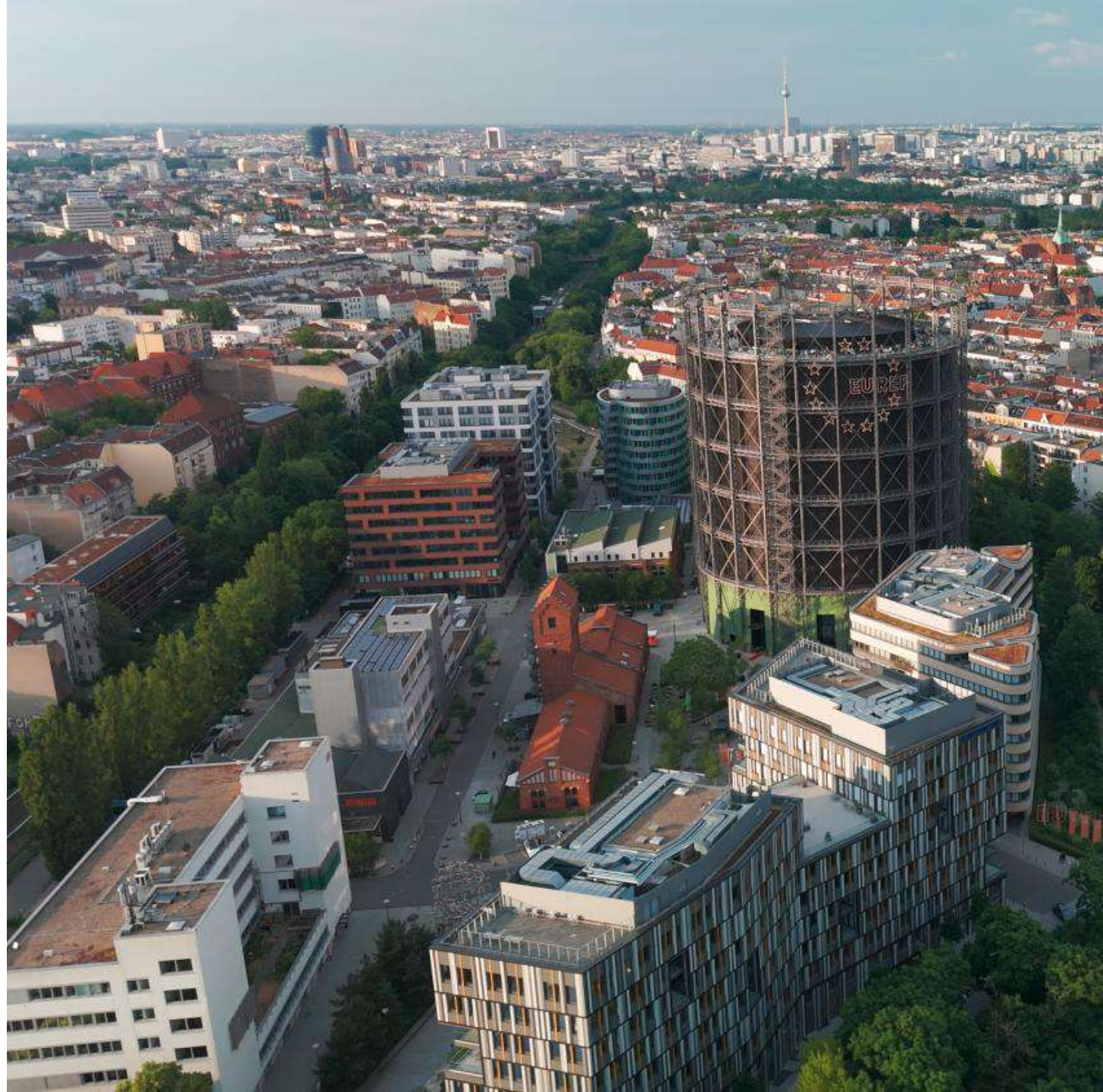
**Jonas Fahlbusch**

Deputy Managing Director

Research Campus Mpbility2Grid

# Research Campus Mobility2Grid (M2G)

Mobility2Grid is an initiative between science and industry partners in Berlin focusing on solutions for a sustainable future city. We explore how to integrate electric vehicles with renewable energy sources to create a clean and efficient transportation and energy system.



# RESEARCH CAMPUS MOBILITY2GRID (M2G)



- 36 partners from science and industry working on integrated solutions for mobility and energy solutions in urban areas
- launched in 2011 based on the Federal Government's High-Tech Strategy

36 association members (Mobility2Grid e.V.)

24 cooperation partners

10 applicants funding initiative BMBF



5 transfer area partners



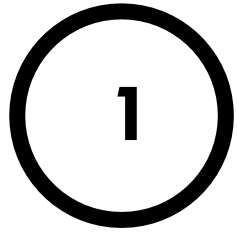
12 association members



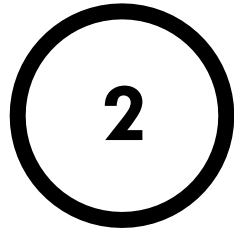
3 network partners



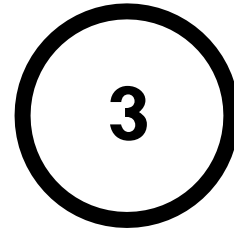
# OUTLINE



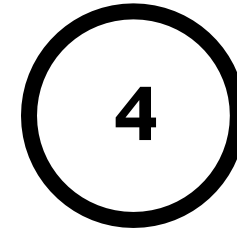
Introduction  
& road  
safety visions



Road safety  
measurement  
around schools



Mobility  
education  
in schools



Take-aways and  
discussion

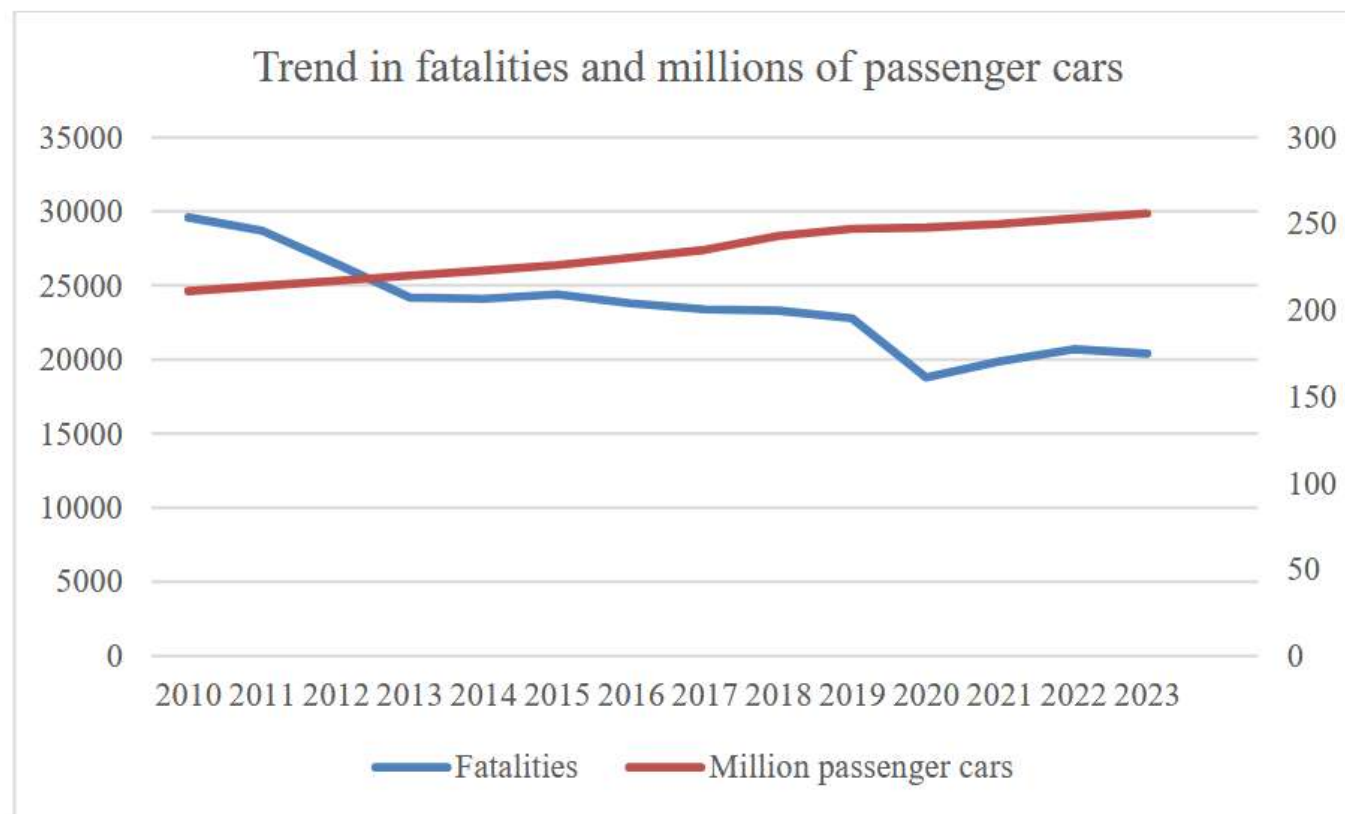
# **INTRODUCTION & ROAD SAFETY VISIONS**

# “VISION 0” IN EU AND GERMANY 2050: CURRENT STATE

Latest EU report on road safety (13th Feb. 2026)

Nearly **20,000 people** died and around 100,000 were seriously injured on EU roads in 2024.

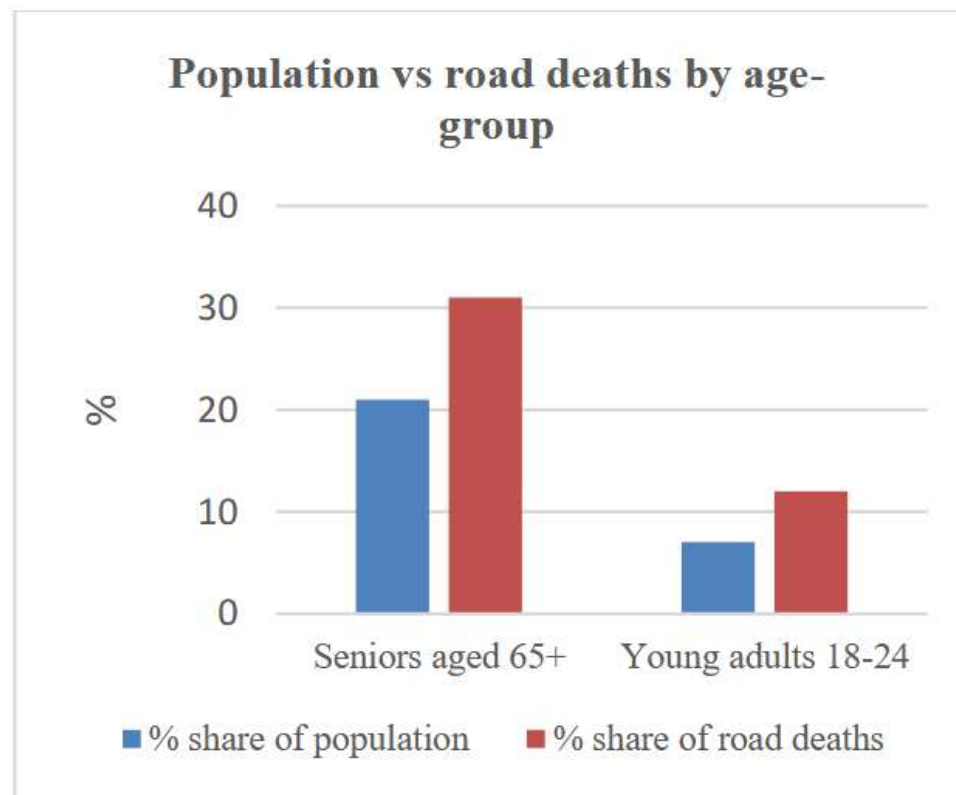
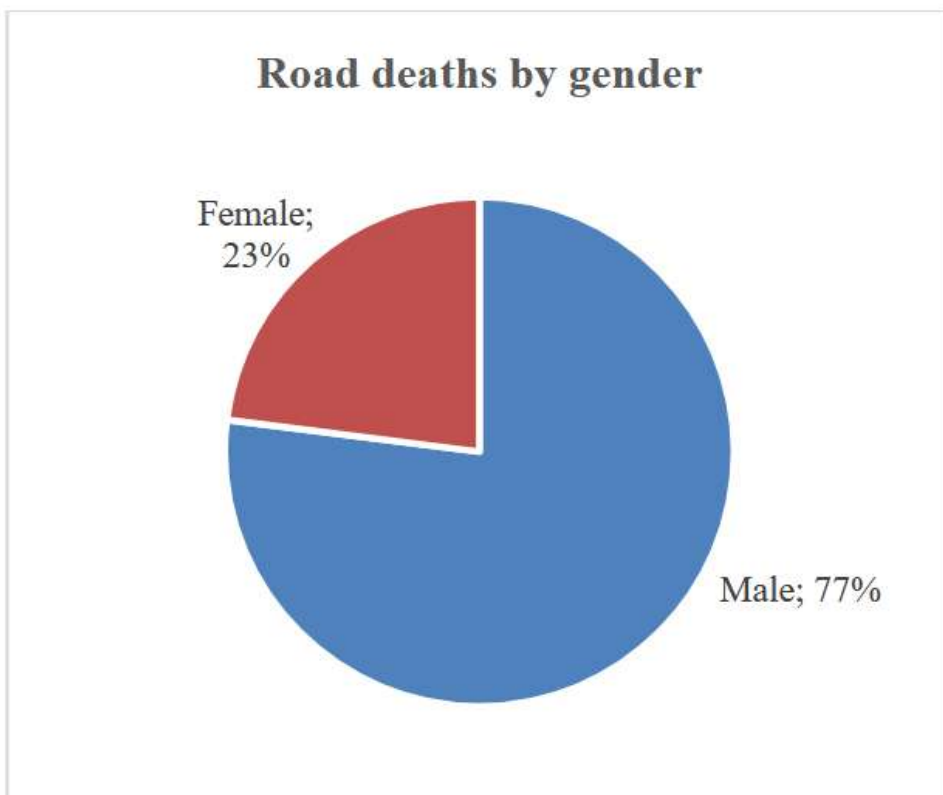
Beyond this human tragedy, road crashes cost the EU an estimated **2% of GDP annually**



Source data: EU CARE database on road crashes

Source graph: Report on the Implementation of the EU Road Safety Policy Framework at the Mid-Point (2026)

# GENDER AND AGE OF FATALITIES IN EU



Source data: EU CARE database on road crashes

Source graph: Report on the Implementation of the EU Road Safety Policy Framework at the Mid-Point (2026)

# KEY BEHAVIOURAL RISK FACTORS

**Speeding:** ~30% of fatal crashes linked to speed (50% compliance)

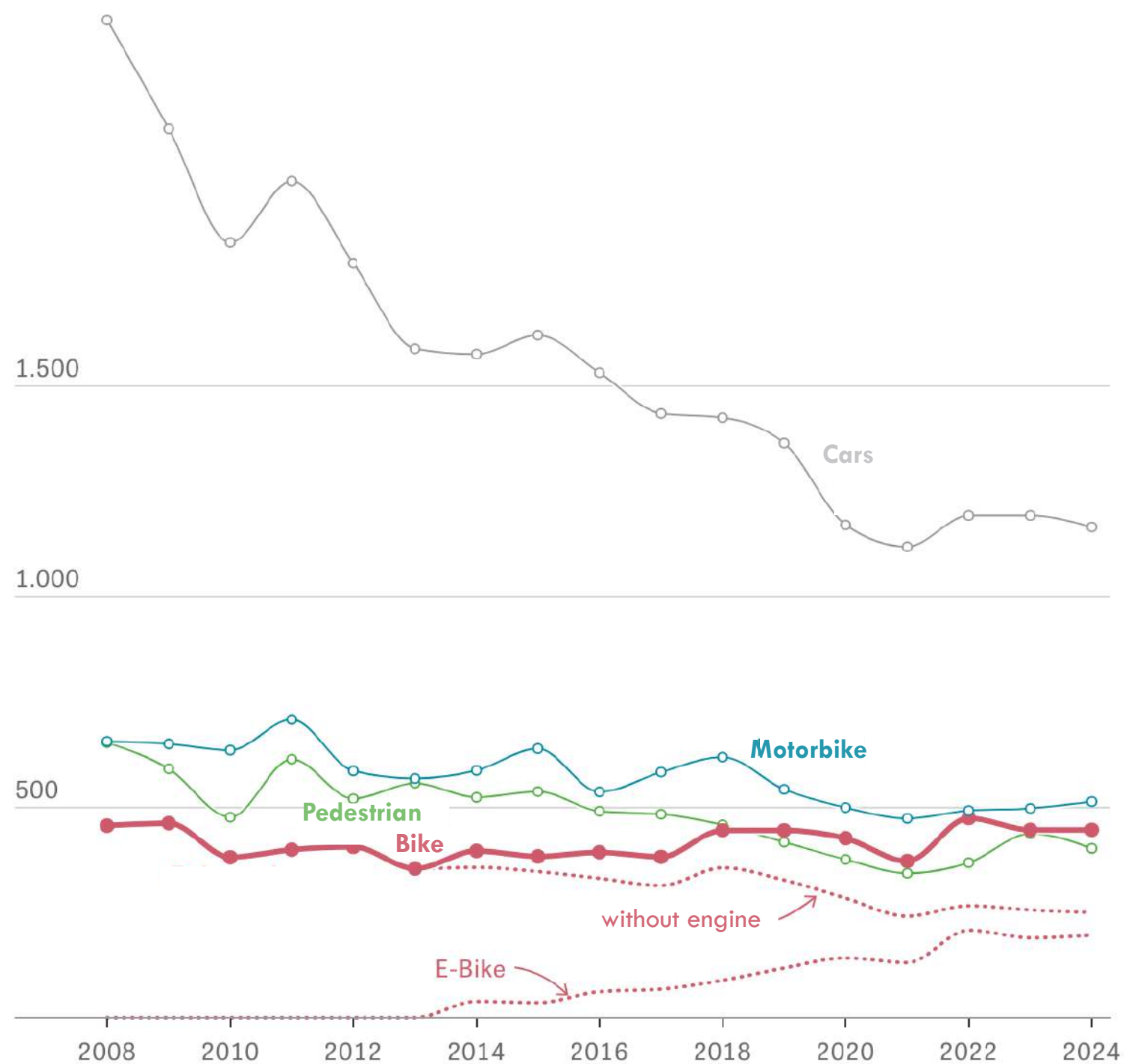
**Drink-Driving:** ~25% of EU road deaths alcohol-related (98% compliance)

**Distraction:** Factor in 10–30% of fatal crashes (but hard to measure)

## ROAD TRAFFIC FATALITIES IN GERMANY (2008-2024)

- **1970 peak:** ~21,000 fatalities
- **2023/2024:** ~2,800–3,000 fatalities
- **Reduction since peak:** approx. **–85%**
- **446 cyclists died in 2024** on German roads
- **Fatal bike crashes increased** despite overall decline in traffic deaths
- Most fatalities occurred **within urban areas**, but also on rural roads and paths.

Source: <https://www.zeit.de/mobilitaet/2025-10/toedliche-fahrradunfaelle-2024-radfahrer-unfallbilanz-verkehrssicherheit>



# TRAFFIC FATALITIES 2024 – BERLIN (N = 56)

## WHO passed away?

Total fatalities	<b>56</b>
Male	<b>63%</b>
Female	<b>36%</b>
Average age	<b>62 years</b>
60+ years	<b>54%</b>
80+ years	<b>23%</b>
<b>Children (under 18)</b>	<b>2 cases</b> ( <i>incl. 4-year-old</i> )
Youngest victim	<b>4 years</b>

## IN WHICH ROLE?

Pedestrians	<b>46% (26)</b>
Cyclists	<b>20% (11)</b>
Motorcycles	<b>11% (6)</b>
Car occupants	<b>13% (7)</b>
E-Scooter	<b>5% (3)</b>
Wheelchair	<b>1 case</b>
Passenger car involved	<b>≈54%</b>
Vulnerable road users	<b>82%</b>



Radfahrer  
68 Jahre  
22.04.2024

#VisionZero  
adfc

# HELSINKI: ONE YEAR WITHOUT TRAFFIC DEATHS - A MILESTONE IN EUROPE

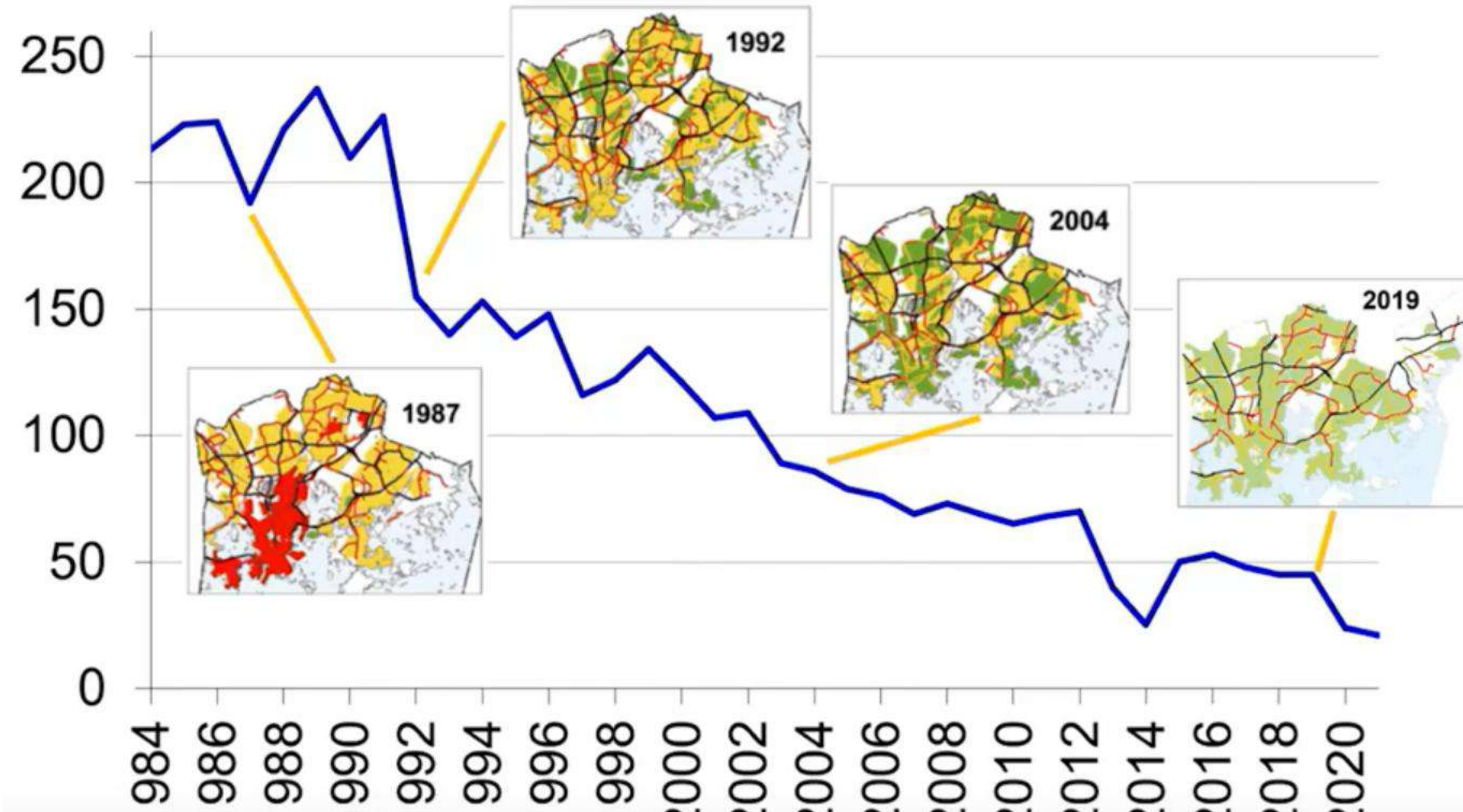
Helsinki recorded zero road traffic fatalities over 12 consecutive months (last recorded fatality was July 2024)

## Key Measures Behind the Success:

- **Extensive 30 km/h speed limits** applied to >50 % of streets, especially residential & school zones
- **Street redesign & safer infrastructure:** elevated crossings, safer intersections, better lighting, narrow streets
- **Active mobility & reliable public transport** expanded, reducing car dependency
- **Enhanced enforcement:** more speed cameras



# FATAL AND INJURY CRASHES OF PEDESTRIANS IN THE INNER CITY OF HELSINKI



**Speed limit changes  
in 2004 & 2019:**

**On streets with  
decreased speed limit,  
8-9 % less personal  
injury crashes** have  
occurred compared to  
streets without changes  
in speed limits.

## A physically separated cycle path & raised pedestrian crossing on main street

Crossing arrangements have been developed to be safer **not only based on hotspot areas for crashes but also on a crash risk assessment.**



Helsinki

## Modal filter to prevent cyclist crashes

**11** crashes between cyclists and drivers in 2013-2022



**0** crashes between cyclists and drivers starting from Autumn 2023



# MEASURE: SUMMER STREETS

- Seasonal pedestrianisation (May–September)
- Tactical urbanism: planters, seating, parklets, art
- Reduced motorized access (delivery windows maintained)
- Integration with cycling corridors & public transport
- Temporary pilots to test long-term spatial transformation
- In some corridors: increased pedestrian flows correlate with higher retail sales



Helsinki

Urban Environment Publications 2023:25

# Helsinki Traffic Safety Development Programme 2022–2026



<b>Social Services and Health Care Division</b>	<p>Information to promote traffic safety for children and youths will be provided, for example on the family support website <a href="https://www.hel.fi/sote/perheentuki-fi">https://www.hel.fi/sote/perheentuki-fi</a>. Communications and materials will be agreed upon with other actors to ensure they are timely and effective. For elderly people, traffic safety issues will be addressed as part of mobility contracts.</p>
<b>Early childhood education and care / Education Division</b>	<p>Integrating traffic education into the Fox model, which focuses on pedagogy for a sustainable future. Developing a child-centred approach to traffic education.</p> <p>Sharing more information on traffic safety to caretakers. Encouraging independent active mobility on journeys between kindergarten and home as well as during leisure time.</p>
<b>Basic education, upper secondary schools/ Education Division</b>	<p>Implementing traffic safety education into the Fox and Circle models. Encouraging principals and teachers in primary and secondary schools to use a variety of materials related to traffic safety education.</p> <p>Carrying out neighbourhood safety walks for school classes with the regional traffic planner.</p>

# MOBILITY EDUCATION

Outdoor Fox and Inventor Fox are two of the seven foxes in the Fox model used in basic education and early child-hood education and care. Outdoor Fox and Inventor Fox are the foxes most focused on traffic safety.



# ROAD SAFETY MEASUREMENT AROUND SCHOOLS

# ROAD SAFETY AROUND SCHOOLS

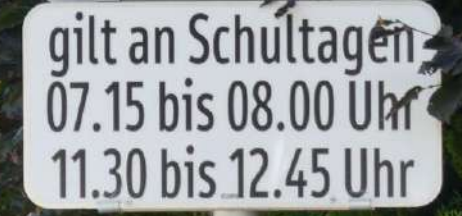
**30 km/h Zones (Speed Reduction), StVO §45**

**Safe pedestrian crossings**

**School streets** (designated street segment directly adjacent to a school)

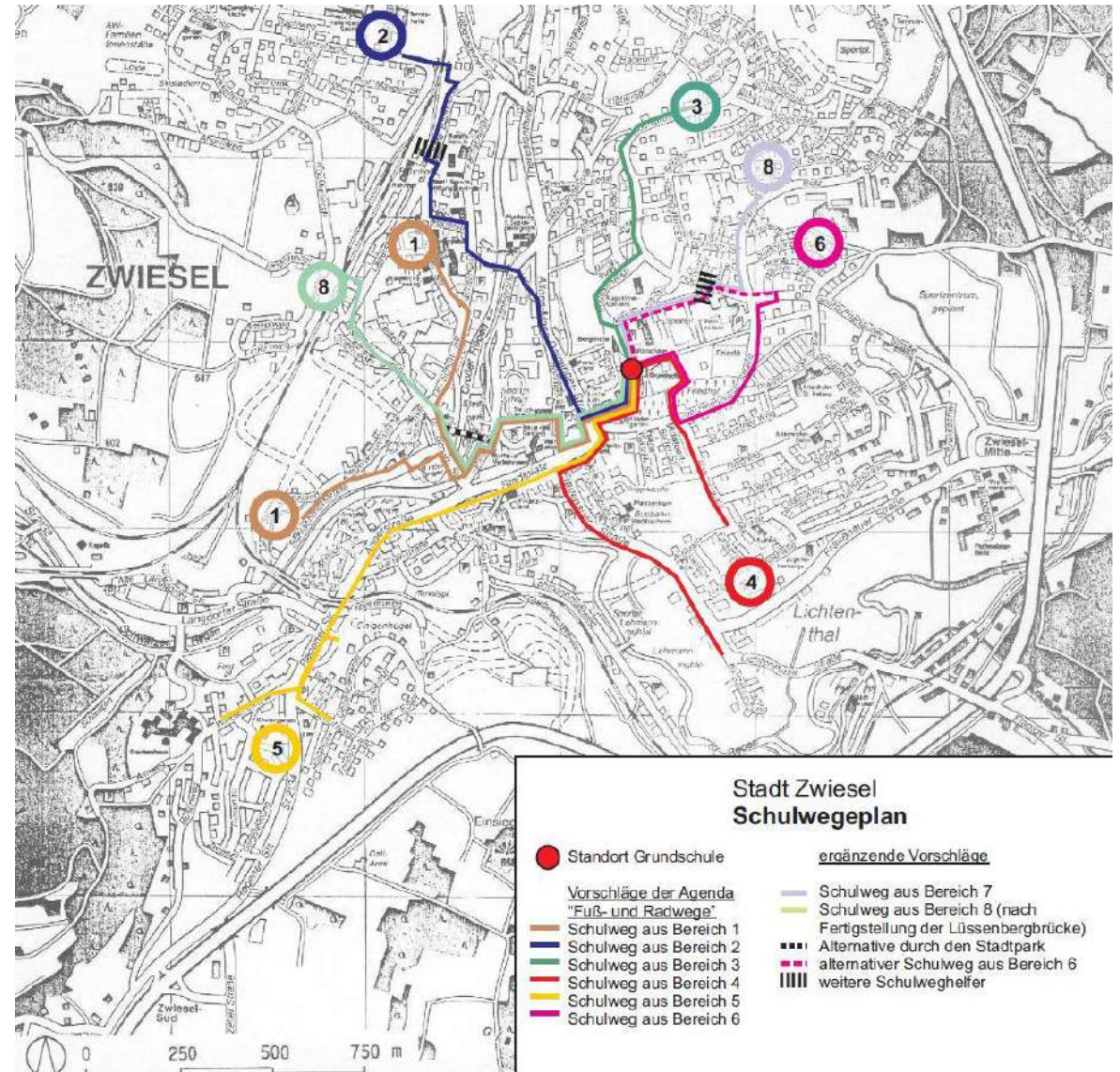
- Temporarily or permanently closed to motorised traffic
- Entire street space (incl. carriageway) accessible to non-motorised users





# SCHOOL ROUTE PLAN

- A systematic mapping and safety assessment of recommended routes between home and school
- Identifies safe crossings, risk points, and priority measures
- Not mandatory under federal law
- Enabled through §45 StVO (special protective measures near schools)
- Implementation depends on municipal initiative and state-level recommendations





# PAY A FINE OR BITE SOUR



FROM **TRAFFIC** EDUCATION TO  
**MOBILITY** EDUCATION IN GERMAN SCHOOLS

# TRAFFIC EDUCATION IN PRUSSIAN GERMANY IN THE 1920S

**In the 1920s:**

## **Implementation Measures**

- Police-led instruction in schools (“Verkehrsunterricht”)
- Classroom lessons on road rules and right-of-way
- Public safety campaigns
- Introduction of standardized traffic signs (in line with 1909 Paris Convention)

## **Pedagogical Logic**

- Moral discipline + Obedience to authority as safety principle
- Child as “future road user” in modern motorized society



# TRAFFIC EDUCATION IN WEST GERMANY (1950S–1970S)

## Implementation Measures

- Structured curriculum elements in primary education
- Practical training in “Verkehrsgärten” (traffic training parks)
- Bicycle exams (“Fahrradprüfung”) with police certification

## Pedagogical Logic

- From authority-based instruction → behavioral safety science
- Focus on risk awareness, visibility, defensive cycling



# FROM TRAFFIC EDUCATION TO MOBILITY EDUCATION

- Traffic transition (Verkehrswende) needs **more than rule-learning**: education must enable self-determined mobility decisions (not only safe behavior)
- **New childhood mobility realities**: more “institutionalized” daily routines, parental chauffeuring, reduced independent exploration → less everyday mobility competence
- Reduced fatalities can also reflect **reduced independent child mobility** (parents don’t let children out alone), so education must address broader mobility culture and structures.

OLIVER SCHWEDES / DETLEF PECH  
JULIA BECKER / STEPHAN DAUBITZ  
VERENA RÖLL / DIANA STAGE / JURIK STILLER

## Von der Verkehrserziehung zur Mobilitätsbildung

DISCUSSION PAPER

24. März 2021



# KEY TAKEAWAYS

- Road safety around schools is not primarily an educational problem, but a system design challenge / that needs (as we saw from Helsinki) a package of policies and measurements
- Speed management (30 km/h), school streets and safe crossings are structural measures
- Mobility education must move beyond rule-learning toward empowerment, reflection on sustainable and independent mobility
- Reducing fatalities is not enough. We must also restore children's freedom of movement
- Vision Zero starts where children move independently



# THANKS



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