



SDG 9.1 Infrastructure and mobility; Indicators and operationalisations

WP on Transport Statistics

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SDG 9.1

Mobility and infrastructure enable people to move around, for example to and from work, to transport goods, keep in touch with each other and pursue activities in their leisure time.

However, negative effects are: people get stuck in traffic jams, road safety decreases and pressure on the environment increases.



Renewal Dutch indicators

- Expand information on:
 - Accessibility
 - Emissions
- Goals:
 - Monitor energy transition in personal mobility and commercial transport
 - Improve information on emissions
 - Monitor possibilities to travel

Visualisation current indicators

Resources and opportunities

2.3% of gross domestic product in 2021 ↓

Gross fixed capital formation in infrastructure

4.20 km of roads per km² land area in 2020 ↑

Density of public road network

Use

90.5 volume relative to GDP, index (2010=100) in 2019 ↓

Passenger transport



96.4 volume relative to GDP, index (2010=100) in 2019 ↓

Freight transport



89.1% of total passenger kilometres in cars or public transport in 2020

Travelling by car



10.9% of total passenger kilometres in cars or public transport in 2020

Travelling by public transport



961.7 km per capita in 2020

Travelling by bicycle

8.1% of the total number of cars in 2021 ↑

Electric cars

Base for selection new indicators

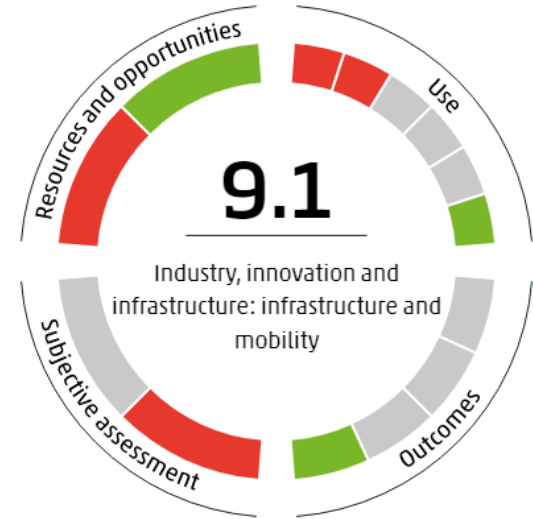
- Accessibility
- Affordability
- Safety
- Health
- Livability (incl. sustainability)

Data sources

- Dutch National Travel survey (ODiN)
 - Daily mobility of Dutch population aged 6 years and over, by place of origin and destination, time of transport, modes of transport used and travel purposes
- Register data
- Safety monitor
 - Biennial national survey on crime victimization for Dutch population aged 15 and over. Topics include: quality of living environment, experienced nuisances in neighbourhood, safety perceptions, crime victimisation, level of satisfaction with police and prevention.

Subjects

- Resources and opportunities
- Use
- Outcomes
- Subjective assessment
- Trend monitoring using medium time frame (2015-2022)
- Comparison to other EU member states



Resources and opportunities

- Gross fixed capital formation in infrastructure (road, railways, bridges and tunnels construction)
- Affordability of transport (expenditure on transport by households)
- Car availability (household car ownership combined with individual driver's license)
- Electric passenger cars

Use

- Travelling by car
- Travelling by public transport
- Travelling by bicycle
- Recreational trips
- Zero emission traffic by passenger cars (based on engine emissions; full electric/hydrogen)

Outcomes

- Time lost due to traffic congestion and delays
- Traffic deaths
- CO₂ emissions vehicles for persons traffic
 - Cars, buses, motorcycles, mopeds
- CO₂ emissions commercial vehicles
 - Vans, lorries, special purpose vehicles
- Particulate matter emissions mobile sources (PM10)
- CO₂ emissions by national air carriers

Subjective assessment

- Perceived traffic nuisance (parking problems, speeding, aggressive behavior)
- Perceived accessibility (from 2024 onwards)

Operationalisations

- Travelling by car, public transport, bicycle: average distance travelled per person per year (changed).
 - Car: driver and passenger
- Recreational trips: percentage of total (visiting friends/family, sport, hobby, restaurant/bar/hotel, going out, religious/cultural activities, touring, walking)
- CO₂ emissions vehicles: on Dutch territory (incl. foreign vehicles), kg per inhabitant

Operationalisations

- Perceived traffic nuisance: percentage experiencing high nuisance of one or more forms
 - Parking problems, speeding, aggressive behavior
- Perceived accessibility: percentage that can seldomly or never reach one or more places they want to go to
 - Work, education, supermarket, hospital, GP, trainstation, bus-/tram-/metrostop, family and friends, sport/hobby location

Limitations

- Limited comparability of Netherlands with other EU members on these indicators.
- Indicators for quality, physical accessibility and availability of public transport are missing.
- No indicator on social safety during travel available
- Only limited information on commercial transport is included.

Questions?

Link to 2022 English publication:

<https://longreads.cbs.nl/monitor-of-well-being-and-sdgs-2022/sustainable-development-goals-sdgs-in-the-dutch-context/>