



# UNECE Transport Statistics: Standards, Methodologies and Classifications

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**United Nations Economic Commission for Europe**

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# Overview

- What is UNECE?
- Transport Statistics Collection Programme
- Standards and Harmonisation with Statistical Examples

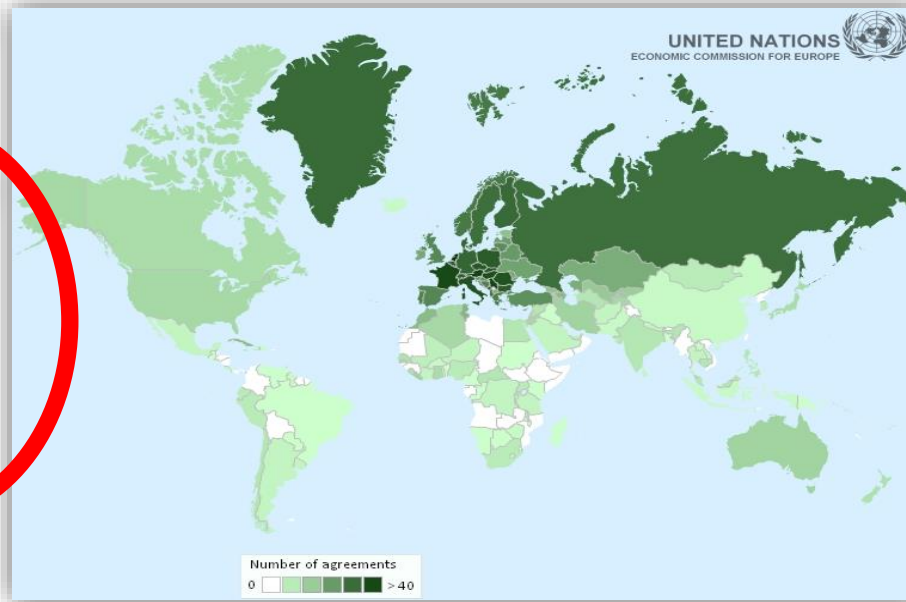


# 59 conventions, 1760 Contracting Parties

## Transport and UNECE



Visible signs of UNECE Transport activities



Contract for the International Carriage of Goods by Road



Harmonization of Frontier Controls of Goods

Infrastructure Agreements for roads (AGR), Rail (AGC), Inland Water Transport (AGN), Intermodal Transport (AGTC)

Many signatories in the ESCWA region, e.g. Lebanon 7, Tunisia 17.

TRANSPORT



## Transport policy Issues

## Questions that transport statistics can answer

Global heating emissions  
(Transport is 25% of CO<sub>2</sub> from fuel combustion and rising)

- How many cars are >5 years old?
- T-km and P-km levels per ton of CO<sub>2</sub>?
- What are the fuel sources of all/new vehicles?



Local air quality (transport is 50% of particulate matter emissions in OECD)

- How many passenger cars are powered by diesel?



Transport Logistics

- How are goods transported in my country?
- What is the containerization rate for each mode?
- Where are the intermodal terminals?



## Transport policy Issues

## Questions that transport statistics can answer

Road safety



- 1.3 million day on the roads each year. How does my country compare?
- Who are the victims? Pedestrians or car drivers?
- Age/gender breakdown?

Public transport access



- How many people live within 500m of a bus stop?
- How many passenger numbers are there on the bus/train/tram network?
- Urban or intercity journeys?
- How does it split by gender? Do women feel safe?
- How many jobs can be reached within 45 minutes?

Rural transport options

- How many people within 2km of an all-season road?
- What is the modal split of rural regions?

# Bad Transport Statistics

**BuzzFeed**

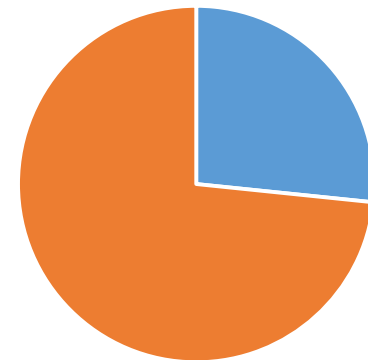
“ 9 Delightfully Geeky Stats About NYC Bridges And Tunnels ”

## 1. It's almost all cars.

Automobile traffic consistently makes up around 91% of the total vehicles going over and through the bridges and tunnels in a month. Trucks make up between 6 and 7 percent, and buses account for the final 2 to 3 percent.

Lincoln Tunnel

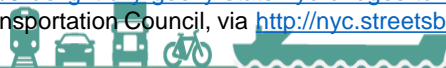
**Comparing passengers versus vehicles tells a very different story**



■ Total Persons by Auto, Van or Truck  
■ Total Persons by Bus

1. BuzzFeed article: [https://www.buzzfeed.com/johntemplon/9-delightfully-geeky-stats-nyc-bridges-tunnels?utm\\_term=.rc3RAVxyxy#.xrxjBRqz66z](https://www.buzzfeed.com/johntemplon/9-delightfully-geeky-stats-nyc-bridges-tunnels?utm_term=.rc3RAVxyxy#.xrxjBRqz66z)

2. Pie chart based on data from New York Metropolitan Transportation Council, via <http://nyc.streetsblog.org/2014/07/25/what-buzzfeed-missed-about-how-people-get-around-new-york/>



# Transport Statistics Collected by UNECE

- Statistics cover all inland modes (road, rail, IWW, pipeline).
- Infrastructure, vehicles, traffic (Vkm), transport measurement (Pkm and Tkm), and safety.
- Majority of data comes through **Common Questionnaire** with Eurostat and ITF. This reduces the reporting burden, improves harmonization and comparability.

All freely available to download, use and disseminate <https://w3.unece.org/PXWeb/en>.



# Road Traffic: E-Road Census

- Conducted every 5 years on E-Road network, defined in European Agreement on Main Traffic Arteries (AGR)
- Collects basic E-Road infrastructure data, and detailed mapped traffic numbers



[unece.org/trans/areas-of-work/transport-statistics/statistics-and-data-online/e-roads/traffic-census-map.html](http://unece.org/trans/areas-of-work/transport-statistics/statistics-and-data-online/e-roads/traffic-census-map.html)



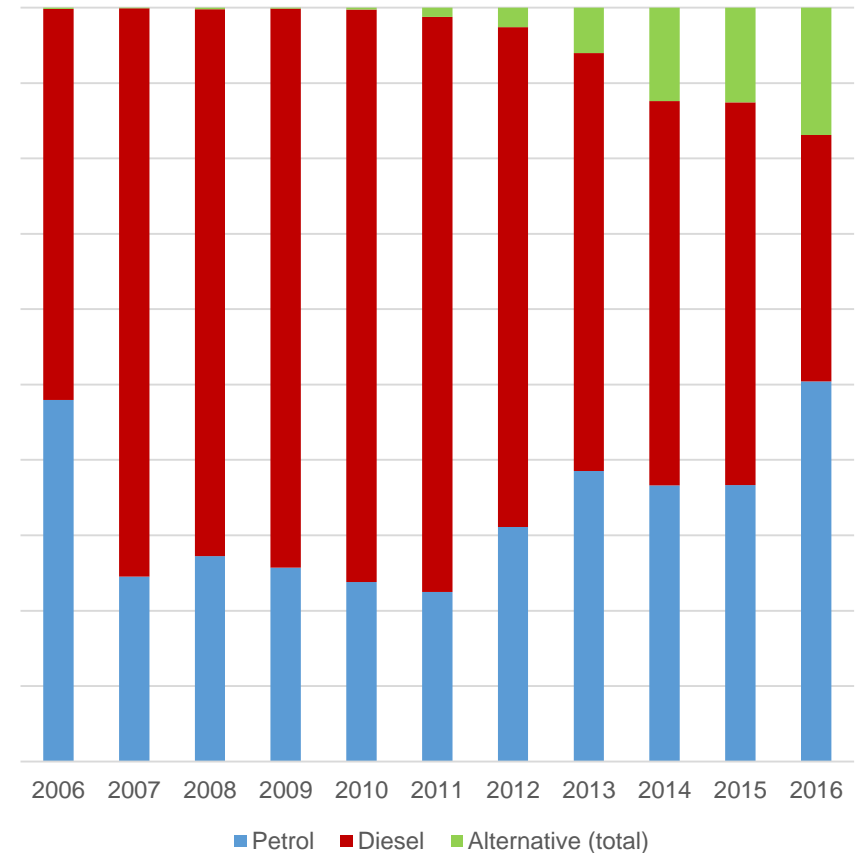
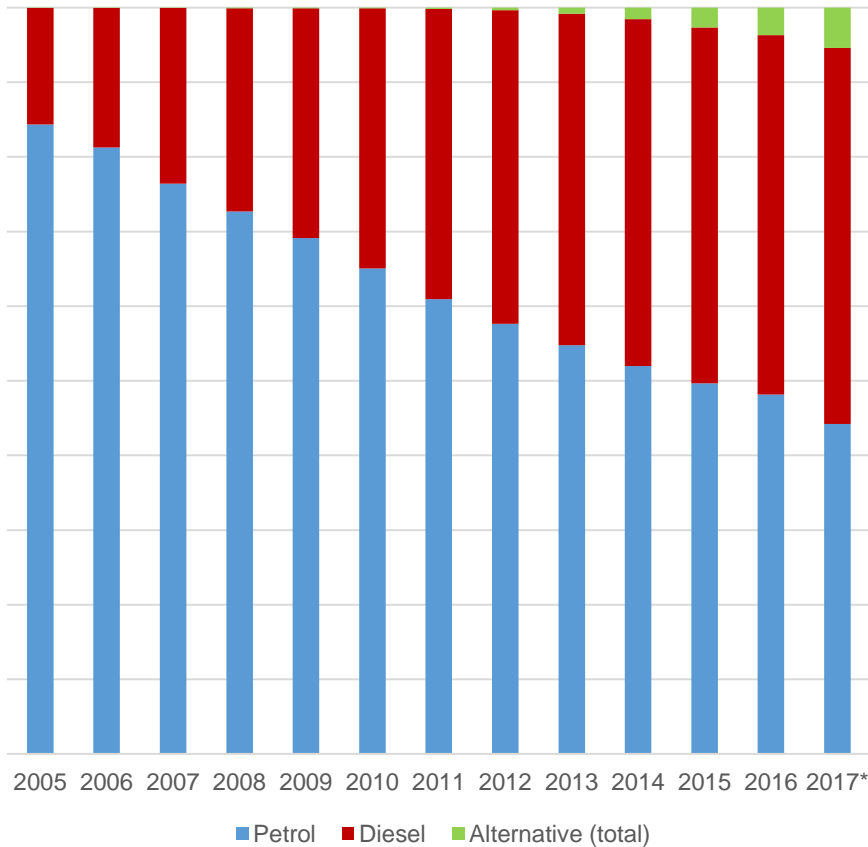


# Examples from UNECE data: Passenger cars in Norway

Total Fleet

Vs.

New registrations



**Total Fleet figures allow an assessment of current situation, new registrations better show the direction of travel. N.B. hybrids included under petrol/diesel**

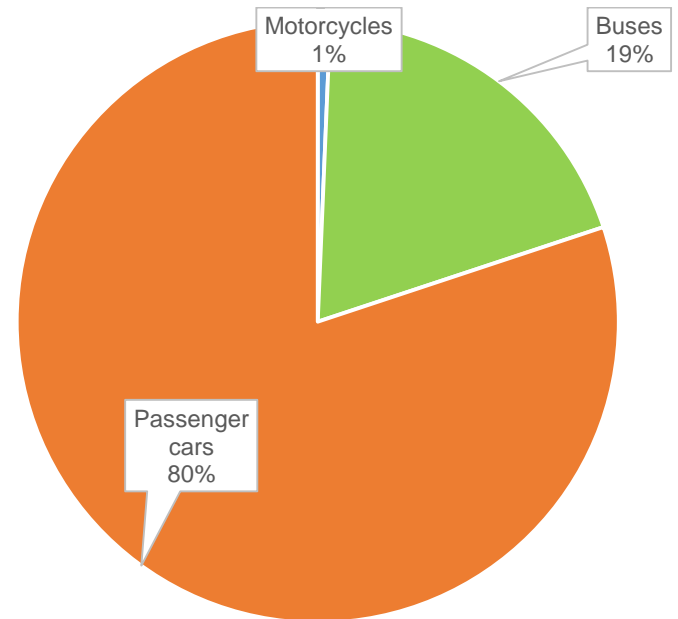
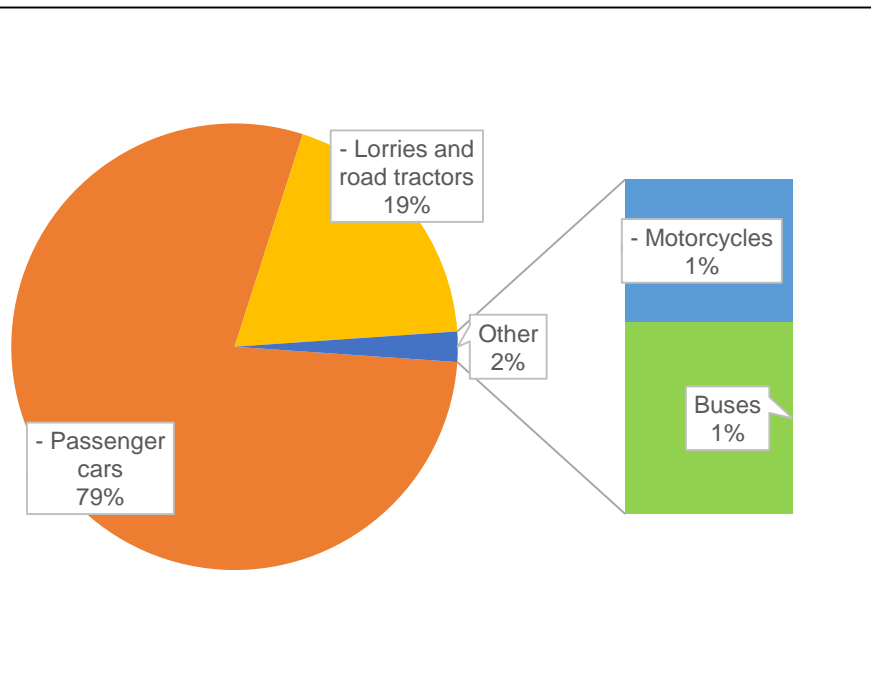


# Examples from UNECE Data: Denmark

Vehicle-km

Vs.

Passenger-km



**Bus transport less than 1% of vehicle-km, but 19% of passenger-km.**



# Transport Common Questionnaire

- Data are submitted by countries through an online questionnaire. Data can be entered manually (time consuming) or uploaded as a bulk file.
- Very detailed, +900 indicators for some countries.
- Purely a **voluntary** collection.
- 2017 data requested in September 2018, checked and published by January 2019.
- Some countries have one focal point in NSO or MoT. Some have multiple contacts for each transport mode, in highway agencies, rail companies, NSO, MoT, Infrastructure agencies etc.



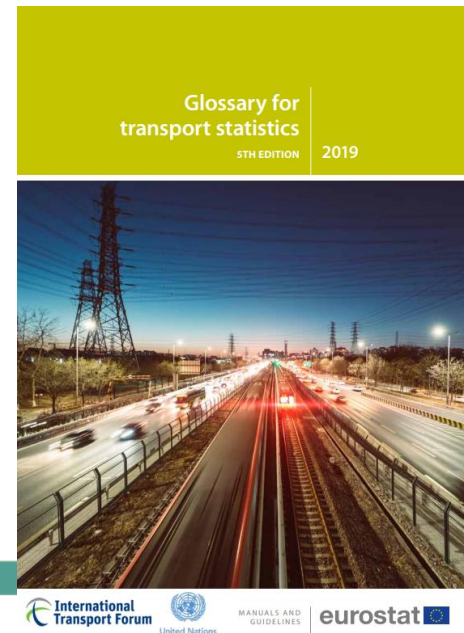
# In the European Union Context

- Most E.U. transport data are collected based on several pieces of legislation, placing a legal obligation on countries to submit data. Thus coverage is typically high/complete.
- Example: [\(EU\) 2018/643](#) concerns all data for rail statistics.
- There is some overlap with common questionnaire and the legally required data.
- Legal acts are not exhaustive: do not cover road passenger-km, passenger car numbers.



# Transport Statistics Glossary

- Existed as joint UNECE/Eurostat/ITF statistical framework since early 1990s.
- Covers ALL transport modes. Infrastructure, vehicles, traffic, transport measurement, safety.
- Allows transport statistics to be produced consistently across countries and modes.
- Fifth edition released in July 2019. New additions on passenger mobility, environmental impact of transport, maritime accidents, and separated chapters on energy consumption and intermodal transport.



# Vehicle Fleet – Passenger Car

## B.II-11

### PASSENGER CAR

Road motor vehicle, other than a moped or a motor cycle intended for the carriage of passengers and designed to seat no more than nine persons (including the driver). Refers to category M<sub>1</sub> of the UN Consolidated Resolution on the Construction of Vehicles (R.E.3).

*Included are:*

- a) *Passenger cars;*
- b) *Vans designed and used primarily for transport of passengers;*
- c) *Taxis;*
- d) *Hire cars;*
- e) *Ambulances;*
- f) *Motor homes;*
- g) *Special passenger cars (police cars, firefighter's cars).*

*Excluded are light goods road vehicles, cf. definition B.II-21, as well as motor-coaches and buses, cf. definitions B.II-14 and B.II-15, and mini-buses/mini-coaches, cf. definitions B.II-16.*

*"Passenger car" includes microcars (needing no permit or having the same requirements as mopeds to be driven), taxis and passenger hire cars, provided that they have fewer than ten seats.*



# Road safety Glossary definitions

- Road injury accident: Any accident involving at least **one road vehicle in motion on a public road** or private road to which the public has right of access, resulting in at least one injured or killed person.
- Person killed: Any person killed immediately **or dying within 30 days** as a result of an injury accident, **excluding suicides**.
- Person injured based on medical treatment. **Seriously** injured typically more useful, but still very unharmonized across countries.





# Harmonisation is always an ongoing process

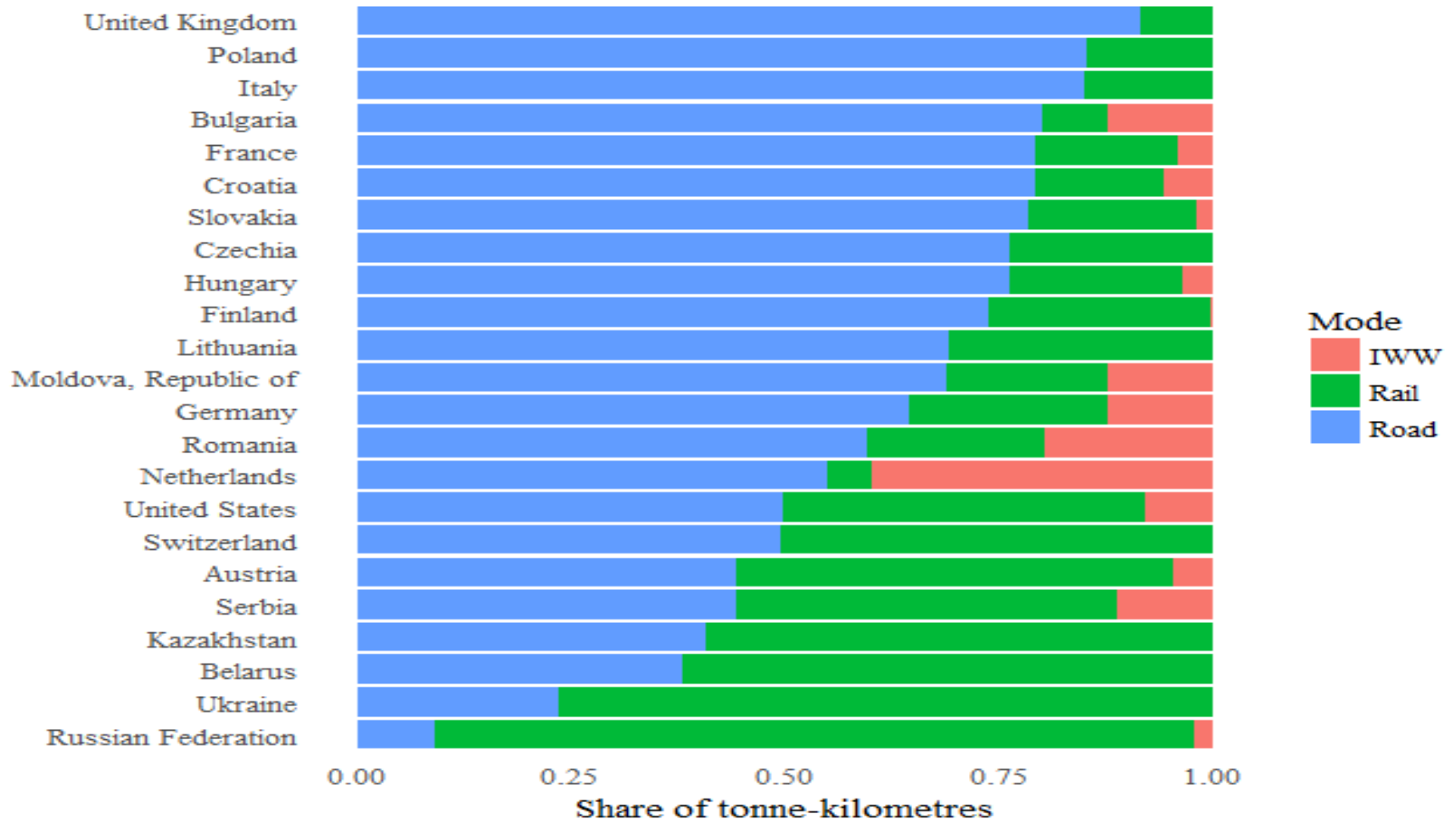
**From the WP.29 1998 agreement on vehicle categories  
ECE/TRANS/WP.29/1045**

Categories	Japan	Europe	United States of America
Passenger Car	Passengers of 10 or less	Passengers of 9 or less (M1)	Passengers of 10 or less (Passenger Car) (MPV: truck chassis or off-road use)
Bus	Passengers of 11 or more	Passengers of 10 or more M2:GVM≤5t M3:GVM>5t	Passengers of 11 or more
Truck	Quantitative Definition Floor area (Passenger < Cargo) Weight (Passenger < Payload) Loading/Unloading openings (dimension / area)	Qualitative Definition ("designed and constructed for the carriage of goods")  N1:GVM≤3.5t N2:GVM≤3.5t–12t N3:GVM>12t *Each country has different criteria.	Qualitative Definition ("carrying load or commercial goods")





# Harmonisation is always an ongoing process



**Road is residency but IWW+Rail are territory basis.  
Road vehicles >3.5t, rail enterprises >500,000t.**

# Summary

- Transport Statistics are necessary to analyse road safety, infrastructure planning and maintenance, environmental performance, employment, accessibility, gender etc.
- Producing them following **international standards** allows meaningful comparisons and analysis across countries.
- The Transport Statistics Glossary provides harmonized definitions, but regional variations or clarifications are inevitable, and to be welcomed.
- Legal acts can achieve high response rates. Voluntary collections can work well too. Important to consider international standards and response burden when designing questionnaires.



**Suggestions? Comments?**

**We are here to help!**

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# Annex: Data Collection Examples

- UK Vehicle count methodology  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/611304/annual-road-traffic-estimates-2016.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/611304/annual-road-traffic-estimates-2016.pdf)
- UK National travel survey  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/633077/national-travel-survey-2016.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/633077/national-travel-survey-2016.pdf)
- Denmark travel survey  
<http://www.modelcenter.transport.dtu.dk/english/TU>
- Finland traffic volumes mapped  
<http://www.liikennevirasto.fi/web/en/maps-charts/traffic-volumes#.WddBz6iCyUk>
- USA National household travel survey <http://nhts.ornl.gov/>
- Travel Survey of Residents of Canada  
<http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3810>