

Statistics on motor vehicles

Sami Lahtinen

UNECE Working Party on Transport Statistics, 75th WP.6

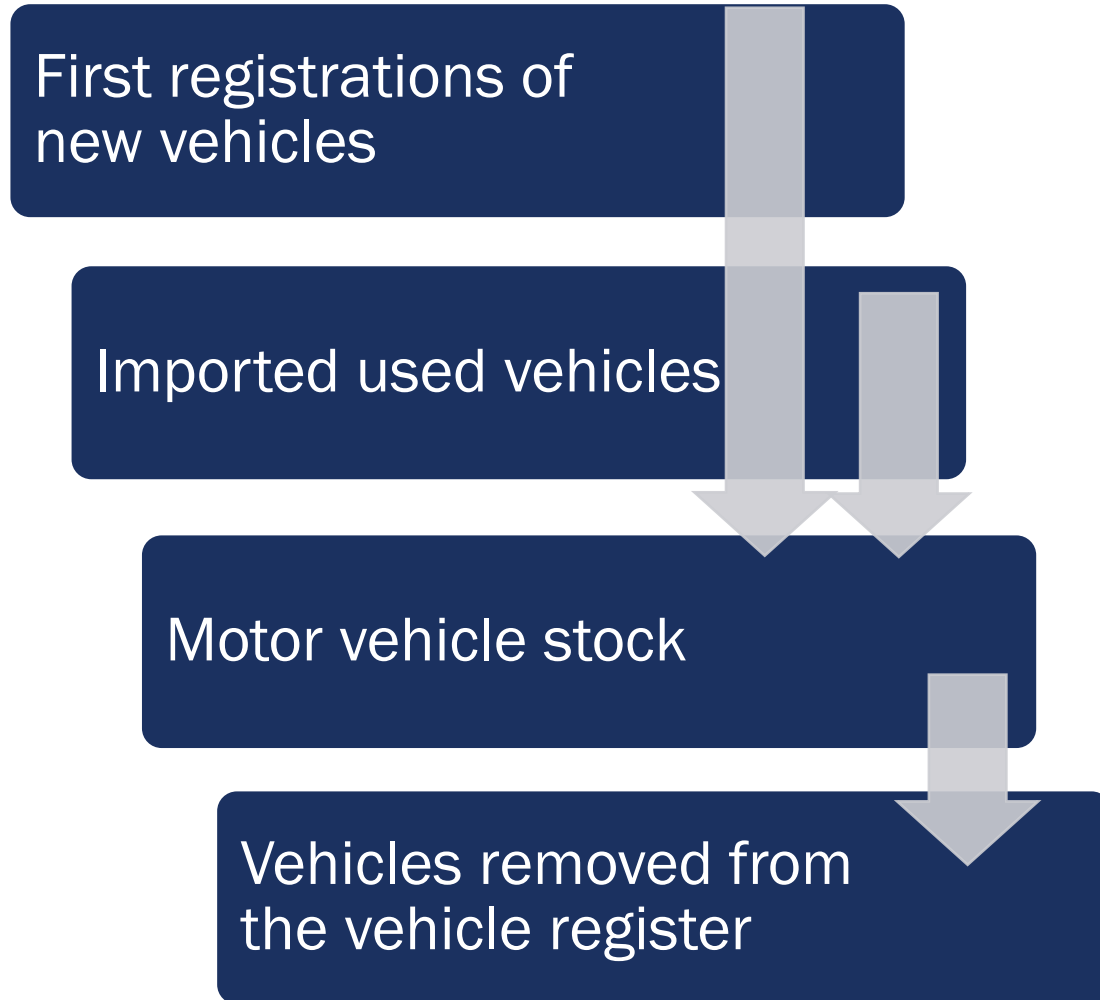
24.4.2024, Geneva

Statistics on motor vehicles

Content of the presentation

1. Type of statistics
2. Data quality of vehicle register
3. Statistical processing
4. Example Statistics
5. Monitoring CO₂-emissions from new passenger cars
6. Road Traffic Performance monitoring
7. Data challenges for vehicle kilometres
8. Conclusions

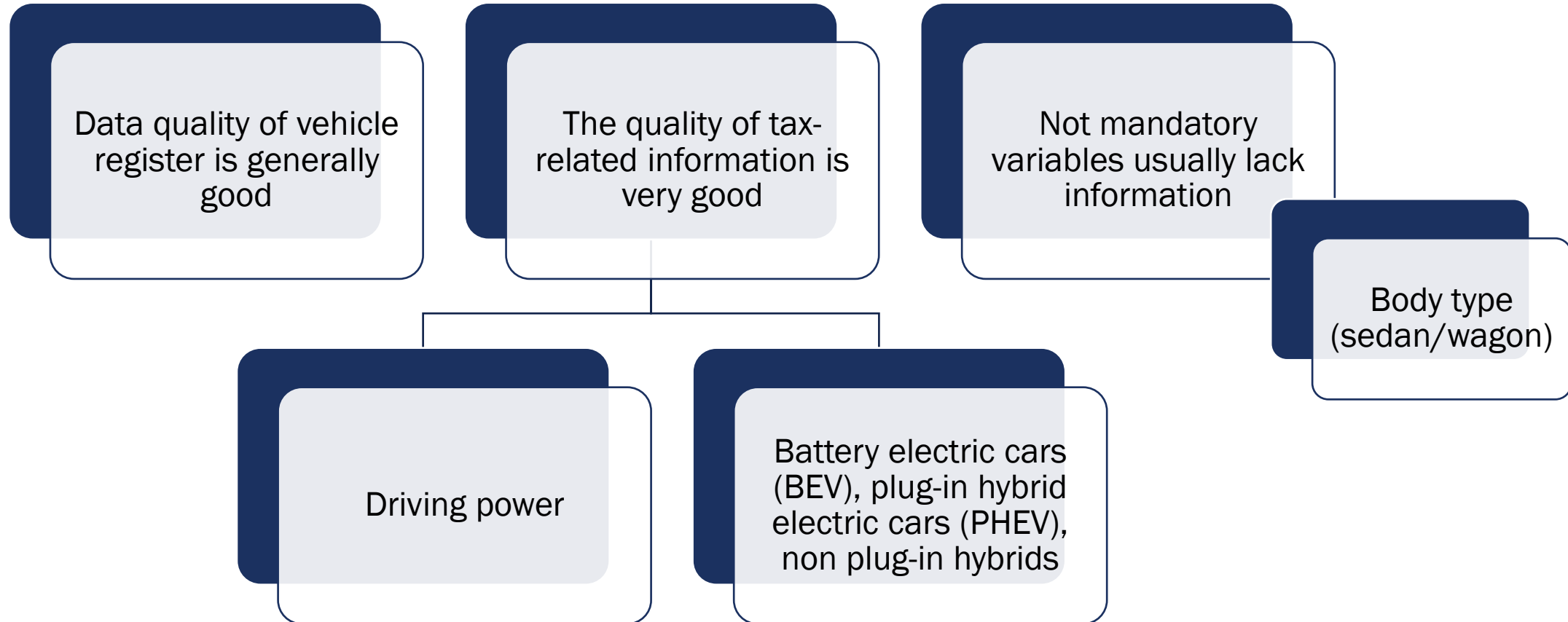
Statistics on motor vehicles



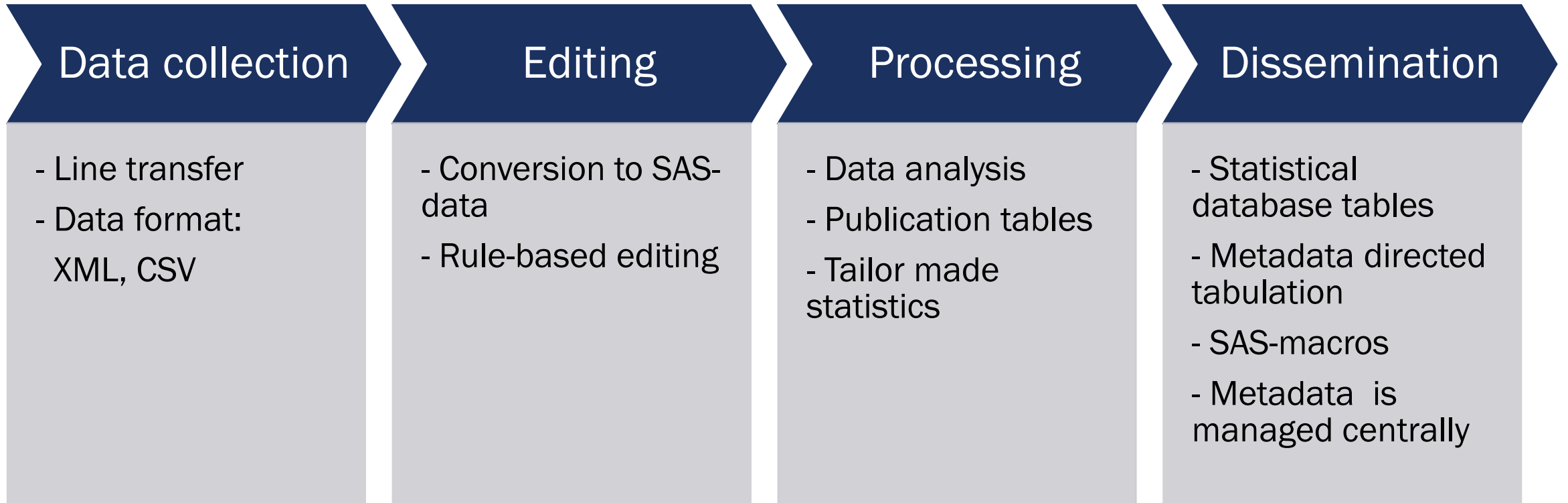
Data source: Finnish Transport and Communications Agency Traficom

- **Electronic transport register**
- Information on road **vehicles: obligation to register**
- **Vehicle class:** passenger cars, LCV, trucks, buses and coaches, tractors, snow mobiles, motor-driven working machines, mopeds, motorcycles, four-wheelers, trailers
- **Statistical unit:** number of vehicles
 - By technical feature of the vehicle
 - Information on owner/possessor of the vehicle
 - Odometer readings included in motor vehicle stock
- ~ 130 variables

Data quality of vehicle register



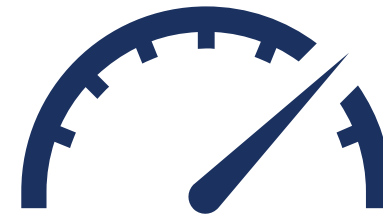
Statistical processing



Example Statistics



1) Monitoring CO₂-emissions
from new passenger cars



2) Road Traffic Performance
monitoring

1) Monitoring CO₂-emissions from new passenger cars

Main data set

- First registrations of new cars

Data provider

- The Finnish Transport and Communications Agency Traficom

Additional administrative data sets

- Supplementary datasets from Traficom to improve data quality and coverage (type approval information)

Monitoring CO₂-emissions from new passenger cars



- Regulation (EU) 2019/631 sets CO₂-targets for new passenger cars registered in European Union
 - Average CO₂-emission limit for each car manufacturer
 - Every EU-member state sends CO₂-monitoring detailed data yearly to European Environment Agency (EEA)
 - Average CO₂-emissions for each car manufacturer
- Exceeding the target will be expensive for car manufacturer
- Local CO₂-emissions of battery electric vehicle are zero
- Car manufacturers favor battery electric cars (BEV/FEV) at this moment to achieve the targets
- Last year 1-12/2023 every third new passenger car registered was battery electric car in Finland!
 - 30 000 new battery electric passenger cars registered in 2023, double the number of year 2022
- ❖ The Finnish Transport and Communications Agency Traficom is responsible to report monitor-data
 - Statistics Finland and Traficom carrying out monitor-data in co-operation

2) Road Traffic Performance monitoring

Main data set

- Motor Vehicle Stock
- Point of time 31.12.

Data provider

- The Finnish Transport and Communications Agency Traficom

Additional administrative data sets

- Traffic performance on highways by Finnish Transport Infrastructure Agency

Road Traffic Performance monitoring



The data is based on odometer readings saved in the transport register



At the time of regular (yearly) inspection



Odometer readings are included in motor vehicle stock data



The odometer data is further processed to performance data for cars by Statistics Finland

Road Traffic Performance data

Mileage pairs → difference → average daily driving kilometres

There is missing values → results must be grossed up to car stock

Stratification by car class, year of first registration, driving power (petrol, diesel, other)

Vehicle kilometres by car class and by every strata for statistical year

Source data for **Greenhouse Gas** emissions calculation in Energy sector

Road Traffic Performance year 2021

Million car-kilometres

Car class	Highway*	Street and private road	Total
Passenger cars	28,986	9,785	38,771
Vans	4,335	1,442	5,777
Lorries, > 3,5 t	2,958	338	3,296
Buses and coaches	315	146	461
All cars total	36,594	11,711	48,305

*Source: Finnish Transport Infrastructure Agency

The average passenger car travelled 14,000 kilometres in 2021 in Finland

Data challenges for vehicle kilometres

- Total vehicle kilometres driven during year is based on regular vehicle inspections
- Legislation on passenger car and van inspections changed in 2018: first inspection after four years since first registration, after that biennial inspection at 6 to 10 years
 - Less information on the newer passenger cars and vans
 - which are driven relatively lot
 - Less information on vehicle kilometres of electric cars
 - Regional traffic performance?
 - Traffic performance on highways by Finnish Transport Infrastructure Agency

Conclusions

- ✓ Statistics on motor vehicles is based on administrative data
- ✓ With regular delivery (registrations monthly, stock quarterly)
- ✓ Basic statistics by vehicle class and fuel type (numbers) are in good quality
- ✓ There are some data challenges in vehicle kilometres by detailed classifications (fuel type,...)
 - ❖ Statistics Finland will try to fill these gaps
 - ❖ e.g. Data concerning car sales includes odometer readings for newer cars

Thank you!