FINDINGS OF ITF TASK FORCE ON COLLECTING DATA ON EMERGING MOBIITY PATTERN

Rachele Poggi

10th ITF Transport Statistics Meeting

11-12 April 2024, Paris

International Transport Forum

Background

➢ In early 2021, the ITF started a reflection to identify the current and future data needs and the variables that will be critical to measure.

➢ In June 2021, ITF launched an explorative survey to identify possible data sources for new transport variables.

- ITF identified some key variables of interest covering different aspects of transport (e.g. infrastructure, cost, mode shares, traffic, etc.).

- Data are available mainly for transport equipment and emission-related indicators.

- Gaps exist for transport infrastructure and costs, active mobility, and new mobility services.
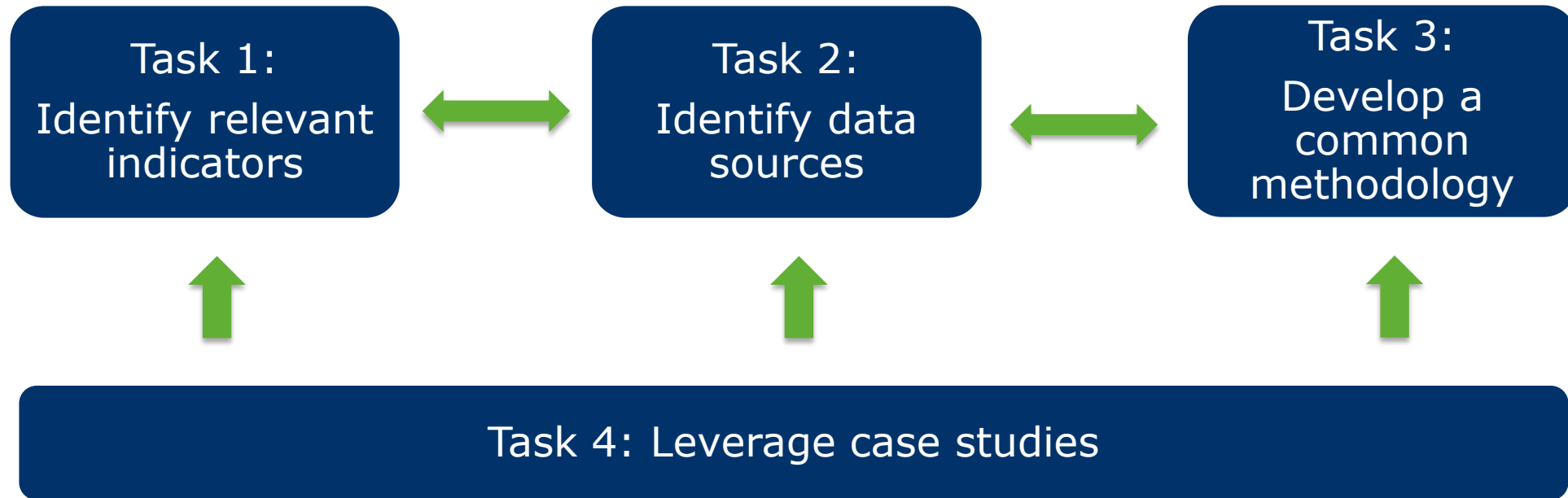
Issues with data on emerging mobility patterns

➢ Data not often collected by statistical offices at the national level

➢ Lack of compatible data collection methods

➢ Lack of coherence in collecting, documentation and reporting methods

TF Task Organisation

Participants

- France
- Israel
- Latvia
- Netherlands
- Portugal
- Slovenia
- Sweden
- Türkiye

- Eurostat
- UNECE
- DG MOVE

Definitions - Vehicles

BICYCLE

A road vehicle that has two or more wheels and is generally propelled by the muscular energy of the persons on that vehicle, in particular by means of a pedal system, lever or handle (e.g. bicycles tricycles, quadricycles and carriages).

ELECTRIC BICYCLE

An electrically assisted or electrically propelled bicycle-like vehicle. Regulatory distinctions regarding different classes of e-bikes are typically based on speed and whether the rider must be pedalling for the electric motor to engage.

Definitions - Vehicles

PEDELEC

A type of pedal-assisted bicycle where the electric assistance cuts off when the vehicle reaches approximately 25 km/h (exact limit depends on local regulations). A pedelec only provides assistance when the user is pedalling.

SPEED-PEDELEC

A type of pedal-assisted bicycle where the electric assistance cuts off when the vehicle reaches approximately 45 km/h (exact limit depends on local regulations). A speed-pedelec only provides assistance when the user is pedalling.

International Transport Forum

Definitions - Vehicles

STANDING SCOOTER

A human-powered street vehicle with a handlebar, deck and wheels propelled by a rider pushing off the ground. Models exist with two, three or four wheels. Standing scooters are distinguished from skateboards by the presence of a central control column and a set of handlebars.

E-SCOOTER

A stand-up or seated scooter propelled by an electric motor, irrespective of the user kicking.

Definitions - Measures
(Eurostat Guidelines on Transport Statistics)

TRIP

A trip is the movement from an origin (stay) to the next stay, the destination. The origin and destination may have the same location or purpose, where the trip is the movement in between. A trip could be made in one or a series of stages.

Professional transport trips are excluded from the indicators.

Trips taking place fully on foreign territory may be excluded.

Loop trips may be surveyed in two parts, divided by an artificial destination. In this case, the trip count should be corrected such that the entire trip is counted as one.

The "return to home" trip should not been forgotten.

Definitions - Measures
(Eurostat Guidelines on Transport Statistics)

STAGE

A stage is a movement making use of one transport mode, including any waiting time directly before or during the movement. A stage is defined by one single mode of transport.

It is recommended to collect information on lengths and durations at the stage level.

Recommendation is for diaries to be collected for each stage of a trip.

Definitions - Measures
(Eurostat Guidelines on Transport Statistics)

DISTANCE

Distance is defined as the length of the travelled track. Only distances on public areas, roads, paths, rails and seaways are included.

TRAVEL TIME

Travel time for a trip is the duration from the moment of departure from one activity to the moment of arrival at the next activity.

Travel time for a stage is the duration from "being waiting for" until "alighting from" the mode.

Definitions - Indicators

TRAVEL DISTANCE PER PERSON PER DAY

Weighted travel distance in kilometres divided by the weighted number of respondents on the actual day.

NUMBER OF TRIPS PER PERSON PER DAY

Weighted number of trips divided by the weighted number of respondents on the actual day.

Trips per person per day are calculated similar to the distance by replacing kilometres by 1.

International Transport Forum

Definitions - Indicators

TRAVEL TIME PER PERSON PER DAY

Weighted travel time in minutes including waiting time divided by the weighted number of respondents on the actual day.

Travel time per person per day is calculated similar to the distance by replacing kilometres by minutes for each trip.

PASSENGER KILOMETRES FOR ALL REFERENCE POPULATION PER YEAR

Passenger kilometres are calculated as the total weighted travel distance in kilometres made by all persons within the reference population in a reference year.

Walking and Cycling

➢ The best source for data on walking and cycling remains the National Household Travel Survey.

➢ There are different approaches to administer the survey:

  ▪ Online survey - e.g. the Netherlands

  ▪ Computer Assisted Web Interviewing (CAWI) combined with Computer Assisted Telephonic Interviewing (CATI) – e.g. EU, Slovenia

  ▪ Push-To-Telephone approach combined with a Knock-To-Nudge approach – e.g. UK

➢ The survey can have several frequencies:

  ▪ Continuous survey – e.g. the Netherlands

  ▪ Every year – e.g. UK, Switzerland

  ▪ Every X years – e.g. France

International Transport Forum

Recommendations

➢ If possible, link register information. For example, in the Netherlands, age, gender, driving licence ownership, motor vehicle ownership, household composition, are no longer asked.

➢ Reduce the amount of information required to the minimum.

  ▪ Background variables: age, gender, vehicle ownership.

  ▪ Trip variables: starting/ending points of the stages, starting/ending time of the stages, distance, mode of transport

➢ Inform the respondents about why the collected data are important and how they will be used to take better decisions about mobility.

➢ Integrate the National Travel Survey with other sources. For example, the automatic counts can be used during periods without a survey to monitor the evolution. Some indicators can be estimated using these data.

Alternative sources – Mobile Phone Data

➢ Collecting data through mobile phones is less costly than traditional National Travel Surveys.

➢ It provides continuous data.

➢ It poses issues regarding the protection of personal data. Data need to be anonymized and compliant with national regulations on data protection.

➢ There is no background information (e.g. gender, age, vehicle ownership).

➢ Data can be biased. Some segments of the population are underrepresented (e.g. elderly and young population, disadvantaged people).

➢ It is more difficult to obtain the trust of the public when asking the access to the data of the personal mobile phone.

International Transport Forum

Alternative sources – Automatic counts of bicycles

➢ It consists in installing sensors for automatic counts of bicycles in different points of the country.

➢ It provides continuous data.

➢ There is no information on the distance and the time of the trips.

➢ There is no background information (e.g. gender, age, vehicle ownership).

➢ The location of the sensors is essential and can bias the results. Sensors should be installed in cities of different sizes, but also in rural areas.

➢ This source can be used together with the National Travel Survey to estimate data during periods when the survey is not carried out.

➢ Examples are the "Cycling Traffic Index" in England and the "Platforme nationale des fréquentations (PNF)" in France.

Shared vehicles (bikes and e-scooters)

➢ The National Travel Surveys often underestimate the trips done with shared vehicles. It is difficult to distinguish between privately owned vehicles and shared vehicles.

➢ Shared vehicles are available mainly in the main cities.

➢ Some cities collect these data. However, it is very rare to have national data on shared vehicles.

➢ There are several service providers that operate in the same country.

➢ Requiring and analysing raw data from the service providers can be costly, need dedicated workforce and pose issues concerning data protection.

➢ The analysis of these data is becoming more and more important to inform the public about the phenomenon of new mobility.

Recommendations

➢ National public authorities (statistical offices or Ministry of Transport) should sign agreements with the service providers to report data.

➢ A minimum set of indicators should be set in advance. This should contain:

  ➢ Number of trips

  ➢ Distance and travel time

  ➢ Vehicle fleet

➢ Data should be asked at the aggregate level. This will reduce the burden of public authorities to manipulate the data to have meaningful results.

➢ National public authorities can co-operate with third-party aggregators, that already have the necessary skills and resources to carry out such analysis at the national level.

Questions?
Suggestions?
Remarks?

Thank you