CIVITAS
Sustainable and smart mobility for all
2030

CIVITAS indicators

Share of deliveries made by non-motorised vehicles (TRA_FR_MA2)

DOMAIN

Transport	Environment	Energy	Society	Economy

TOPIC	**Freight**	
IMPACT	**Non-motorised freight transport** *Increasing the share of deliveries made by non-motorised vehicles*	**TRA_FR**

Category

Key indicator	Supplementary indicator	State indicator

CONTEXT AND RELEVANCE

Urban logistics is essential for delivering goods to businesses and consumers in urban areas, supporting local commerce and daily life. However, motorised freight vehicles contribute disproportionately to energy consumption, emissions, air pollution, noise, space occupancy, and congestion. These factors negatively impact quality of life and environmental sustainability in cities. Strategies to reduce or optimise freight traffic, such as shifting deliveries to smaller, non-motorised cargo vehicles like cargo bikes, help creating healthier and safer urban environments.

This indicator provides a measure of the share of deliveries made by non-motorised vehicles in the experiment area. **It is a relevant indicator when the policy action is aimed at reducing the use of motorized vehicles in urban logistics. A successful action is reflected in a HIGHER value of the indicator.**

DESCRIPTION

The indicator is a measure of the share of deliveries made by non-motorised vehicles in the experiment area. Non-motorised modes for urban deliveries include cargo bikes, handcarts, and walking couriers.

The indicator is expressed in **percentage,** therefore is **dimensionless**.

METHOD OF CALCULATION AND INPUTS

The indicator should be computed exogenously, by applying the method described and then coded in the supporting tool.

Method 1

Share of deliveries by non-motorised vehicles non-estimated on data collected from surveying logistics operators

Significance: **0.50**

INPUTS

The following information is needed to compute the indicator:

- The **number of deliveries made by non-motorised vehicles** by each logistics operator involved in the pilot and/or each logistics operator active in the experiment area which performs at least some deliveries using non-motorised modes. This data can be collected through surveys of the relevant logistics operators.
- The **total number of deliveries** made by the logistics operators surveyed, including both motorised and non-motorised modes.
- The **market share** of each surveyed logistics operator, which can also be obtained directly from the operators.

The experiment would result in a modification of either the share of deliveries conducted using non-motorised modes or the market share of operators providing non-motorised deliveries.

METHOD OF CALCULATION

The indicator should be computed **exogenously** according to the following steps:

- **Data collection through surveys with logistics operators**. Data collection should focus on the logistics operators that offer non-motorised deliveries, including those that participated in the pilot action aimed at increasing the number of deliveries by non-motorised modes.

- **Estimation of the share of deliveries in the experiment area made by non-motorised vehicles** (indicator).

EQUATIONS

The share of deliveries in the experiment area made by non-motorised vehicles should be computed according to the following equation:

$$NMDelShare = \sum_i \frac{NMDel_i}{Del_i} * MrkSh_i$$

Where:

$NMDel_i$ = Number of deliveries made by non-motorised vehicles by logistics operator i over some reference period

Del_i = Number of total deliveries (i.e., both motorised and non-motorised) made by logistics operator i over the same reference period

$MrkSh_i$ = Market share of logistics operator i for deliveries in the experiment area

ALTERNATIVE INDICATORS

This indicator measures of the share of deliveries made by non-motorised vehicles in the experiment area.

Alternative indicators to assess experiments aimed at reducing motorised freight traffic include **TRA_FR_MA1** and **TRA_FR_MA3**. The former measures the contribution of motorised freight vehicles to the road transport activity within the experiment area by counting freight vehicles on a sample of roads, while the latter estimates vehicle-kilometres travelled by road freight vehicles in the experiment area using traffic simulation models. These two indicators are better suited to directly evaluate whether a policy measure resulted in a reduction of freight vehicle movements, while the indicator described in this factsheet (**TRA_FR_MA2**) focuses on tracking the uptake of non-motorised vehicles for deliveries in the experiment area by logistics operators. An increase in deliveries made by non-motorised vehicles is assumed to imply a reduction in motorised freight traffic.