CIVITAS
Sustainable and smart mobility for all
2030

CIVITAS indicators

Shared mobility availability index – Version 1 (TRA_SH_AV1)

DOMAIN

Transport	Environment	Energy	Society	Economy

TOPIC	**Shared mobility**	
IMPACT	**Availability of shared mobility** *Improving the availability of shared mobility vehicles*	**TRA_SH**

Category

Key indicator	Supplementary indicator	**State indicator**

CONTEXT AND RELEVANCE

Shared mobility services, including bike-sharing, e-scooter sharing, car-sharing, and ride-hailing, play an important role in sustainable urban transportation. They provide flexible alternatives to car ownership, encouraging a shift toward more sustainable travel modes. Shared bikes and e-scooters provide low- or zero-emission transport options, while car-sharing optimizes vehicle usage and reduces parking demand, freeing up valuable urban space for other purposes. Additionally, shared mobility services improve accessibility by bridging first- and last-mile gaps in public transport. However, for these services to be effective and widely adopted, it is crucial to ensure a sufficient supply of shared vehicles across the urban area. To encourage a modal shift, users must be confident that a vehicle will be available when needed.

This indicator provides a measure of the availability of shared mobility vehicles. **It is a relevant indicator when the policy action is aimed at increasing the number shared mobility vehicles available in the city. A successful action is reflected in a HIGHER value of the indicator.**

DESCRIPTION

This indicator is an index obtained as ratio between the **number of shared mobility vehicles in the city** and the population in the city. The unit of measurement of the indicator is **shared mobility vehicle per inhabitant**.

METHOD OF CALCULATION AND INPUTS

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

Method	
Calculation of the index based on data from shared mobility service providers and census data	Significance: **0.25** 

INPUTS

The following information is needed to compute the indicator:

a) The number of shared mobility vehicles per service provider in the experiment area
b) The population in the experiment area according to census data

The experiment would add shared vehicles or set up new sharing schemes, resulting in a higher availability of shared mobility options in the experiment area.

METHOD OF CALCULATION

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

- **Retrieval of the number of shared mobility vehicles per provider within the experiment area**. This information can be obtained from the providers themselves. If

in the ‘before’ scenario there are no sharing schemes in operation in the city, this value equals zero.

- **Retrieval of the number of inhabitants within the experiment area.** This information can be obtained from census data.

- **Estimation of the index** by computing the ratio between the total number of vehicles calculated in the first step and the number of inhabitants obtained in the second step.

EQUATIONS

The equation computing the index (last step of the method of calculation) is the following:

$$\boldsymbol{ShAvailIndex} = \frac{\sum_p \boldsymbol{SharedVeh_p}}{\boldsymbol{Pop}}$$

Where:

$SharedVeh_p$ = Number of shared mobility vehicles from provider *p* in the city

Pop = Population in the city

ALTERNATIVE INDICATORS

This indicator evaluates the **availability** of shared vehicles (bikes, cars, e-scooters, and ride-hailing) per inhabitant. In contrast, **TRA_SH_US1** and **TRA_SH_US2** focus on the actual **usage** of shared mobility services, measuring the number of subscriptions per inhabitant and the number of shared vehicle trips per inhabitant, respectively. These alternative indicators have higher significance, as they capture the outcomes of mobility policies rather than just their inputs. While the number of available shared vehicles is determined by local authorities (policy input), the success of these services depends on their adoption (policy outcome). Simply increasing availability does not contribute to sustainability goals—adoption does.