CIVITAS
Sustainable and smart mobility for all
2030

CIVITAS indicators

Operators covered by trip planning applications (TRA_MM_FI3)

DOMAIN

Transport	Environment	Energy	Society	Economy

TOPIC	**Multimodality**	
IMPACT	**Functional integration of transport modes** *Increasing the number of transport operators covered by multimodal trip planning applications*	**TRA_MM**

Category

Key indicator	**Supplementary indicator**	State indicator

CONTEXT AND RELEVANCE

Functional integration of transport modes refers to the coordination of different transportation systems to into a cohesive network where various modes complement one another. This involves unifying ticketing, trip planning and booking platforms to enable seamless travel across all urban mobility modes. By functionally integrating transport modes, cities can significantly enhance the convenience and efficiency of their mobility systems. Coordination between services makes multi-modal journeys more intuitive and time-efficient for users, ultimately improving the accessibility and appeal of public and shared mobility modes.

A functionally integrated system supports as shift to sustainable mobility options, reducing car dependency and promoting environmental and social benefits such as lower emissions, safer streets, and more efficient land use.

This indicator provides a measure of the functional integration of transport modes. **This is a relevant indicator when the policy action is aimed at improving the functional integration between different modes of transport. A successful action is reflected in a HIGHER value of the indicator.**

DESCRIPTION

This indicator is the ratio between the number of transport operators whose services are covered by at least one multimodal trip planning application and the total number of transport operators active in the city. The indicator 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	
Estimation of the index based on information retrieved from trip planning applications	Significance: **0.25** 

INPUTS

The following information is needed to compute the indicator:

a) The number of transport operators whose services are covered by at least one multimodal trip planning application
b) The total number of transport operators active in the experiment city.

All multimodal trip planning applications active in the experiment area must be considered.

The experiment would result in an increase in the number of operators covered by multimodal trip planning applications.

METHOD OF CALCULATION

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

- **Retrieval of the number of transport operators whose services are included in at least one multimodal trip planning application** available in the experiment city. This datum can be obtained from the trip planning applications themselves.
- **Retrieval of the number of transport operators active in the experiment city**.
- **Estimation of the index** by computing the ratio between the number of transport operators whose services are included in the most comprehensive travel pass and the total number of transport operators.

EQUATIONS

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

$$\boldsymbol{AppOperatorsIndex} = \frac{\boldsymbol{AppOperators}}{\boldsymbol{TotOperators}}$$

Where:

$AppOperators$ = Number of transport operators whose services are included in multimodal trip planning applications

$TotOperators$ = Total number of transport operators in the experiment city

ALTERNATIVE INDICATORS

This indicator measures the share of transport operators whose services are covered by a chosen multimodal trip planning application. In this framework, there are 5 alternative indicators to assess functional integration of transport modes: TRA_MM_FI1, TRA_MM_FI2, and TRA_MM_FI6, relate to multimodal trip planning applications, while TRA_MM_FI4 and TRA_MM_FI5 evaluate fare integration.

TRA_MM_FI1 considers the number of modes covered by trip planning applications. **TRA_MM_FI2** measures the number of users downloading trip planning applications active in the experiment city. Lastly, **TRA_MM_FI6** evaluates the share of multimodal trips managed through trip planning applications. Except for TRA_MM_FI6, the indicators related to trip planning applications are relatively simple to calculate, as they rely on straightforward computations and data that can be easily obtained through observation or by requesting information from application developers. However, their significance is limited as **they measure app downloads and modal/operator coverage rather than actual usage.** In contrast, TRA_MM_FI6 has higher significance since it assesses the extent to which multimodal trip planning applications are used. However, its calculation requires conducting a sample survey, making data collection more costly and time-consuming.

Concerning fare integration, **TRA_MM_FI4** measures the share of transport modes accessible using a single travel pass, while **TRA_MM_FI5** consists of the share of transport operators whose services are accessible using a single pass. Both metrics are relatively simple to calculate and have similar significance.