CIVITAS indicators

Share of transport operators included in travel passes (TRA_MM_FI5)

DOMAIN

Transport	Environment	Energy	Society	Economy

TOPIC	**Multimodality**
IMPACT	**Functional integration of transport modes** *Increasing the share of transport operators whose services are included in travel passes*

		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 create unified ticketing and trip planning platforms. This concept aims to create a well-connected network where various modes complement each other rather. By functionally integrating transport modes, cities enhance the overall efficiency and convenience of their mobility systems, making multimodal travel seamless for users.

Ensuring coordination between transport services is essential for improving the accessibility and attractiveness of public and active transportation. Through strategies like integrated fare and information systems users can navigate the transport network with minimal effort. A functionally integrated system encourages more people to use sustainable transport options, reducing car dependency, alleviating congestion, 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 <u>HIGHER</u> value of the indicator.**

DESCRIPTION

This indicator is the ratio between the number of transport operators whose services are included in a chosen travel pass and the total number of transport operators active in the experiment 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		
Calculation of the index based on information retrieved from travel pass and/or transport providers	Significance: **0.50**	▌▌░░
INPUTS		

After choosing a travel pass to evaluate, **the following information is needed** to compute the indicator:
 	
    a) The number of transport operators whose services are included in the chosen travel pass
    b) The total number of transport operators active in the experiment city.
 	
 The experiment would result in an increase of transport operators whose services are included in the chosen travel pass.		

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 the chosen travel pass**. This datum can be obtained from the travel pass provider and/or from transport operators 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 chosen 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:

$$PassOperatorsIndex = \frac{PassOperators}{TotOperators}$$

Where:

$PassOperators$ = number of transport operators whose services are included in the travel pass

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

ALTERNATIVE INDICATORS

This indicator measures the share of transport operators in the experiment city whose services are accessible using a single pass. In this framework, there are 5 alternative indicators to assess functional integration of transport modes: TRA_MM_FI4 evaluates fare integration, while TRA_MM_FI1, TRA_MM_FI2, TRA_MM_FI3 and TRA_MM_FI6 relate to multimodal trip planning applications.

Concerning fare integration, alternative indicator **TRA_MM_FI5** measures the number of different transport modes in the experiment city accessible using a single travel pass. Both TRA_MM_FI4 and TRA_MM_FI5 are relatively simple to calculate, but the latter holds greater significance, as it expresses fare integration as a share of transport operators rather than a simple count of modes.

Regarding trip planning applications, **TRA_MM_FI1** considers the number of modes covered by a chosen trip planning application. **TRA_MM_FI2** measures the number of users downloading trip planning applications active in the experiment city. **TRA_MM_FI3** assesses the share of transport operators whose services are covered by a chosen multimodal trip planning application. 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.