CIVITAS indicators

Downloads of multimodal trip planning applications (TRA_MM_FI2)

DOMAIN

Transport	Environment	Energy	Society	Economy

TOPIC	**Multimodality**
IMPACT	**Functional integration of transport modes** *Increasing the number of downloads of 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 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

The indicator measures the number of downloads of trip planning applications active in the experiment city. The unit of measurement is **number of downloads**.

METHOD OF CALCULATION AND INPUTS

The indicator should be calculated exogenously based on information retrieved from application developers, **and then coded in the supporting tool.**

Method		
Estimation of the index based on information retrieved from application developers	Significance: **0.25**	
INPUTS		
The following information is needed to compute the indicator: a) The number of downloads per multimodal trip planning application active in the city. If an application covers multiple cities, **only the number of downloads from users in the city under study should be counted**. Should this be impossible to determine, this indicator may not be applied to the experiment city. The experiment would increase the number of downloads of trip planning applications.		
METHOD OF CALCULATION		

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

- **Retrieval of the number of downloads per multimodal trip planning application active in the city**. This information can be obtained from the application developers themselves. If in the 'before' scenario there are no multimodal trip planning applications covering the city, this value equals zero.

- **Estimation of the index** by computing the total of the number of downloads of all trip planning applications retrieved in the first step.

EQUATIONS

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

$$AppDownloadsIndex = \sum_a Downloads_a$$

Where:

$Downloads_a$ = Number of downloads of multimodal trip planning app *a*

ALTERNATIVE INDICATORS

This indicator measures the number of users downloading trip planning applications active in the experiment city. In this framework, there are 5 alternative indicators to assess functional integration of transport modes: TRA_MM_FI1, TRA_MM_FI3, 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 a chosen trip planning application. **TRA_MM_FI3** measures 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 the offering of applications, rather than their use. 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** counts the number of different 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, but TRA_MM_FI5 holds greater significance due to its representation as a share.