








## CIVITAS indicators

Perceived accessibility by citizens with disabilities (SOC\_IN\_PA1)

### DOMAIN

				
Transport	Environment	Energy	<b>Society</b>	Economy

### TOPIC

**Inclusion**

### IMPACT

**Accessibility of stops, stations and intersections for citizens with disabilities**  
*Increasing transport accessibility*

**SOC\_SC**

### Category

<b>Key indicator</b>	Supplementary indicator	State indicator
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## CONTEXT AND RELEVANCE

Perceived accessibility refers to how easily people with disabilities feel they can use transport services and move through the urban environment. It reflects users' subjective assessment of how accessible, comfortable, and safe the system feels to them, based on factors such as the presence and usability of step-free routes, tactile paving, audible information systems, clear signage, lighting, and the overall condition of facilities. High perceived accessibility indicates that users experience the environment as supportive of independent and barrier-free movement, contributing to social inclusion and fostering trust in sustainable, equitable transport systems.


This indicator measures how users perceive the accessibility of the urban environment and of urban transport systems, including their views on how well accessibility measures function in practice. **It is a relevant indicator when the policy aims to improve accessibility for persons with disabilities. A successful action is reflected in a HIGHER value of the indicator.**

## DESCRIPTION

The indicator is a **score** summarising the level of accessibility of the urban environment and mobility system in the pilot area as reported by a sample of persons with disabilities. The indicator is **dimensionless**.

## METHOD OF CALCULATION AND INPUTS

The indicator is calculated as the average score assigned by a sample of citizens with disabilities in response to a question assessing the perceived accessibility of the urban environment and transport system in the pilot area. **The indicator should be calculated exogenously** based on the specified inputs and its value should be coded in the supporting tool.

Method	
Calculation of the indicator based on responses collected by means of a sample survey	Significance: <b>0.50</b> 
<b>INPUTS</b> <b>The following information is needed</b> to compute the indicator: <ul style="list-style-type: none"><li>• <b>Responses of a sample of individuals to a question regarding the perceived accessibility of the urban environment and mobility system for citizens with disabilities in the pilot area.</b> Eligible respondents to be included in the sample are: 1) persons with disabilities, and 2) members of their household or close acquaintances who are familiar with the mobility needs of persons with disabilities.</li></ul> <p>A suggested formulation of a question regarding perceived accessibility for individuals with disabilities is provided in the document “Guidelines for surveys“, part of the MUSE Evaluation Framework. The same document also recommends two screening questions to identify respondents suitable for inclusion in the sample.</p>	

## METHOD OF CALCULATION

Assuming that the formulation of the questions suggested in the Guidelines for surveys is used, the indicator should be computed **exogenously** according to the following steps:

- **Identification of survey respondents suitable for inclusion in the sample**, namely individuals with disabilities or reduced mobility, as well as those familiar with their needs, such as family members or close acquaintances. The Guidelines for Surveys propose the following two questions to determine whether a respondent should be included in the data collection for this indicator:

*Question 1: Are you physically impaired (in such a way that hinders you in making trips)?*

*Available responses:*

- a) Yes*
- b) No*
- c) Prefer not to answer*

*Question 2: Is some member of your household or some close acquaintance physically impaired (in such a way that hinders them in making trips)?*

*Available responses:*

- a) Yes*
- b) No*
- c) Prefer not to answer*

If a survey respondent answers 'Yes' to either or both questions, they are suitable for inclusion in the sample for the estimation of this indicator.

- **Association of a numeric level to each option of response proposed in the survey question.** The suggested formulation of the question includes five different options of response; the associated numeric levels to these options would be as follows:

*Question: According to your experience, how easy is moving in [the experiment area] for a physically impaired person?*

*Available responses:*

- a) It is very easy as there are many helpful and always accessible facilities (e.g., ramps, lifts, guided paths)*
- b) It is reasonably easy as there are helpful facilities (e.g., ramps, lifts, guided paths) usually working*
- c) It is only partially easy as helpful facilities (e.g., ramps, lifts, guided paths) are available only in some places and sometimes are not working*
- d) It is not easy as there are few helpful facilities (e.g., ramps, lifts, guided paths) often not working*
- e) It is very difficult as there are basically no helpful facilities (e.g., ramps, lifts, guided paths) and the few existing are often not working*

*Numeric levels associated:*

- a) It is very easy as there are many helpful and always accessible facilities (e.g., ramps, lifts, guided paths) → 5*

- b) It is reasonably easy as there are helpful facilities (e.g., ramps, lifts, guided paths) usually working → 3.75*
- c) It is only partially easy as helpful facilities (e.g., ramps, lifts, guided paths) are available only in some places and sometimes are not working → 2.5*
- d) It is not easy as there are few helpful facilities (e.g., ramps, lifts, guided paths) often not working → 1.25*
- e) It is very difficult as there are basically no helpful facilities (e.g., ramps, lifts, guided paths) and the few existing are often not working → 0*

- **Calculation of the share of individuals reporting a certain level of accessibility** (see equation below)
- **Calculation of the average perceived accessibility indicator** (see equation below).

## EQUATIONS

The share of individuals reporting a certain level of accessibility should be computed as:

$${}^nAccSh = \frac{\sum_i {}^mAcc_i \text{ where } m = n}{I}$$

Where:

${}^mAcc_i$  = Level of accessibility  $m$  reported by individual  $i$ .

$I$  = Total number of responses collected.

For example, if a sample of 300 individuals was surveyed and 130 of them reported that the pilot area is very easily accessible for persons with disabilities,  $\sum_i {}^mAcc_i$  where  $m =$  "very easy" would be 130 and the share of those reporting this level of accessibility would be  $130 / 300 = 43\%$

**The average perceived accessibility indicator should be computed as:**

$$AvPercAcc = \sum_n ({}^nAccSh * {}^nAccScore)$$

Where:

${}^nAccScore$  = Numeric score associated to the level of accessibility  $n$ .

For example, as mentioned above, the suggested numeric level associated to very easy accessibility for persons with disabilities is 5.

## ALTERNATIVE INDICATORS

This indicator measures the perceived accessibility as reported by persons with disabilities. As regard of this impact, there are no alternative indicators in the MUSE framework.

Alternative indicators refer to the measurement of objective levels of accessibility for mobility impaired individuals. These include **SOC\_IN\_IA1** and **SOC\_IN\_IA2**, which differ in the type of data used for their computation. SOC\_IN\_IA1 assesses accessibility of the urban environment and

transport system by measuring the availability of three accessibility features in the pilot area, namely step-free access, tactile paving, and audible information systems, at public transport stops, stations, and at intersections. SOC\_IN\_IA2, in contrast, also considers the functionality of these features, counting only those that are fully operational. This makes it a more significant indicator, but it also requires more detailed data. Should such data be unavailable or too resource-intensive to collect, SOC\_IN\_IA1 may be preferred instead.