



**International  
Standard**

**ISO 37124**

**Sustainable cities and  
communities — Guidance on the  
use of ISO 37120, ISO 37122 and  
ISO 37123**

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at [www.iso.org/patents](http://www.iso.org/patents). ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 268, *Sustainable cities and communities*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

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## Introduction

Cities need indicators to measure their performance in the delivery of services, to monitor quality of life, and in order to create policies for sustainable futures. Existing indicators at the local level are often not standardized, consistent, or comparable over time or across cities. This is due to different definitions and methodologies in what is measured. ISO/TC 268 has developed a series of standards for standardizing city indicators, including ISO 37120 (indicators for sustainable cities), ISO 37122 (indicators for smart cities), and ISO 37123 (indicators for resilient cities). ISO 37120, ISO 37122 and ISO 37123 focus on city services and quality of life, smart city development and resilience planning as a contribution to a city's overall sustainability. This document provides guidance for users to implement ISO 37120, ISO 37122 and ISO 37123.

ISO 37120 has quickly become the international reference for sustainable cities. With increased use of ISO 37120, ISO/TC 268 has identified the need for additional indicators for smart cities and resilient cities. This demand for additional indicators led to the development of ISO 37122 on indicators for smart cities and ISO 37123 on indicators for resilient cities.

Both ISO 37122 and ISO 37123 are intended to be used in conjunction with ISO 37120. This guidance document is intended to support cities in implementing ISO 37120, ISO 37122 and ISO 37123. ISO 37120 is the core standard for sustainable cities. Cities conforming to ISO 37122 or ISO 37123 are intended to conform to ISO 37120 first. ISO 37122 and ISO 37123 were developed to support cities in their sustainability efforts by including the critical agendas of the smart and resilient city as essential for holistic city sustainability.

ISO 37120, ISO 37122 and ISO 37123 provide a holistic and integrated approach to sustainable development, including a set of standardized indicators for a uniform approach to the collection and standardization of city data, focussing on what is measured, and how that measurement is to be undertaken. The indicators contained within ISO 37120, ISO 37122 or ISO 37123 do not provide a value judgement, threshold or numerical target value.

The definition of cities as “[an] urban community falling under a specific administrative boundary” used in ISO 37120, ISO 37122 and ISO 37123 and this document, refers to the city administrative area. Using the city's administrative boundary, comparative values worldwide are more easily standardized. Moreover, cities report indicators in accordance with service delivery boundaries. This creates an opportunity to gather a better understanding of the city services provided and a clearer measure of residents' quality of life within a city's administrative boundary.

ISO 37120, ISO 37122 and ISO 37123 have been developed with cities of all sizes in mind. The standards can be used by small and medium-sized cities, as well as large cities. ISO 37120, ISO 37122 and ISO 37123 are applicable to any city, municipality or local government that undertakes to measure its performance in a comparable and verifiable manner, irrespective of size and location.

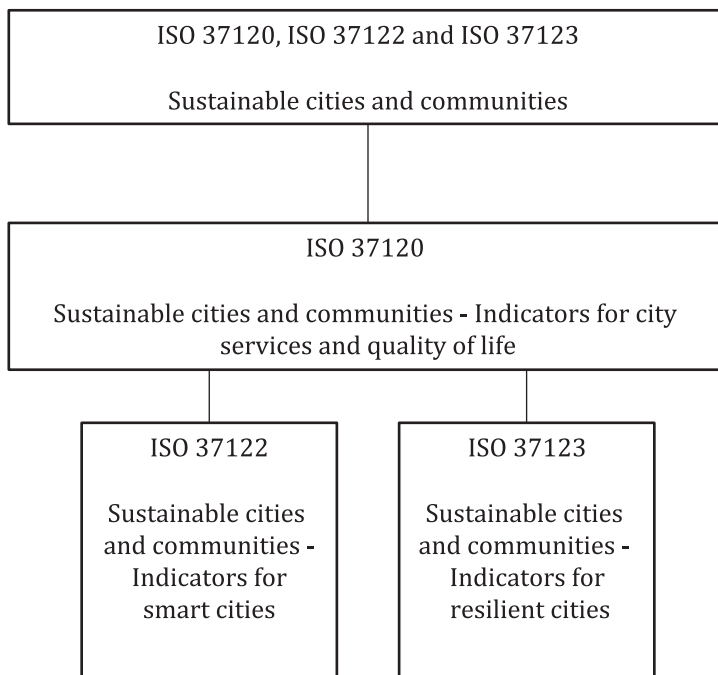
In particular, ISO 37120, ISO 37122 and ISO 37123 and their indicators can be used for the implementation of the following standards: ISO 37101, ISO 37104, ISO 37106, ISO/TS 37107, ISO/TS 37151, ISO 37153, and, ISO 37156.

This guidance document will support users in implementing ISO 37120, ISO 37122 and ISO 37123 on city data by:

- providing an overview of the ISO 37120, ISO 37122 and ISO 37123 standards;
- helping cities understand the importance of city indicators in supporting their sustainability efforts;
- providing guidance on how to use ISO 37120, ISO 37122 and ISO 37123 together for city indicators;
- showcasing international efforts and examples of how cities have implemented ISO 37120, ISO 37122 and ISO 37123.

The structure of ISO 37120, ISO 37122 and ISO 37123 reflects the relationship between sustainable, resilient, and smart development (see [Figure 1](#)).

# ISO 37124:2024(en)



**Figure 1 — Relationship between ISO 37120, ISO 37122 and ISO 37123 — Indicators for sustainable development of cities**

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# Sustainable cities and communities — Guidance on the use of ISO 37120, ISO 37122 and ISO 37123

## 1 Scope

This document provides guidance on how to use and implement ISO 37120, ISO 37122 and ISO 37123.

ISO 37120, ISO 37122 and ISO 37123 specify definitions and methodologies for a set of indicators to steer and measure the performance of city services as well as quality of life, smart city development and resilience planning. ISO 37120, ISO 37122 and ISO 37123 supports cities in achieving their goals towards sustainable development and includes indicators for measuring smart city development and risk assessments for building smart, resilient and sustainable cities.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 37120:2018, *Sustainable cities and communities — Indicators for city services and quality of life*

ISO 37122:2019, *Sustainable cities and communities — Indicators for smart cities*

ISO 37123:2019, *Sustainable cities and communities — Indicators for resilient cities*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 37120, ISO 37122 and ISO 37123 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

## 4 Guidance for implementing ISO 37120, ISO 37122 and ISO 37123

### 4.1 General

ISO 37120 can be used on its own, while ISO 37122 and ISO 37123 are intended to be used together and in conjunction with ISO 37120 to provide the most comprehensive overview of city services and quality of life. In order to implement ISO 37122 or ISO 37123, ISO 37120 must be implemented.

ISO 37120 divides indicators into core and supporting indicators. Reporting core indicators is required by ISO 37120, while reporting supporting indicators is recommended. ISO 37122 and ISO 37123 do not contain core and supporting indicators. Users may select the indicators in ISO 37122 and ISO 37123 that are relevant and appropriate to their needs.

ISO 37120, ISO 37122 and ISO 37123 applies to cities of all sizes. Much of the data generated through the key performance indicators are normalized by 1/100 000th of the population. This approach enables cities of different sizes to benchmark and share lessons globally. In certain instances where countries have adopted ISO 37120, ISO 37122 and ISO 37123, information representing 1/1 000th of the population is collected.

In those cases, a mathematical adjustment is necessary to reflect this difference in the resulting data. In certain cases, using the 1/1 000th methodology can be more applicable for small cities.

### 4.2 Sources of data for indicators in ISO 37120, ISO 37122 and ISO 37123

Data for the indicators in ISO 37120, ISO 37122 and ISO 37123 can be sourced from:

- city departments responsible for the specific services;
- national statistics bodies;
- sub-national or national ministries and departments;
- utilities and energy providers;
- NGOs and international organizations working on related measures;
- citizens;
- universities;
- other research bodies.

Indicators should be reported for the administrative boundary of the city, in order to ensure comparability globally. If data are not available for the administrative boundary of the city, the next available level should be reported (for example, from a county or regional level of government). This alternative boundary should be documented. However, efforts should be made to disaggregate this data to the city's administrative boundary and report this data accordingly in future years. A selection of indicators in ISO 37120, ISO 37122 and ISO 37123 can potentially be disaggregated for use in communities, business improvement areas and other specially designated areas. However, most of the indicators are concerned with service delivery across the city as a whole, and performance management by city administrations in that service delivery.

Some indicators, especially in ISO 37122, can require data from third-party technology and infrastructure providers. Often, this data is not shared with cities; therefore, it is important for cities to establish partnerships and open data protocols with third-party suppliers.

Data for many of the indicators in ISO 37123 can be sourced from international organizations with a specific focus on city resilience. Some data can be available from sub-national or national emergency response agencies, as well as international organizations that work on emergency response, such as the Red Cross.

[Clauses 5](#), [6](#) and [7](#) provide guidance on the implementation of ISO 37120, ISO 37122 and ISO 37123 respectively.

## 5 Guidance for implementing ISO 37120

### 5.1 General

ISO 37120 is the first international standard published for cities (the first edition was published in 2014). It specifies indicators to track and monitor the progress of city performance. When considering sustainable development through the lens of a city, the entire urban ecosystem needs to be considered. Planning for future needs should consider the current use and efficiency of resources to better plan for tomorrow.

The indicators and associated definitions and methodologies in ISO 37120 have been developed in order to help cities:

- a) measure the performance management of city services and quality of life over time;
- b) build high caliber city-level data sets across cities and city departments;
- c) exchange knowledge and best practices with peers globally through comparison across a wide range of performance measures;



- d) support data-informed policy development, economic development planning, and priority setting;
- e) respond to global climate challenges, health events and demographic change.

### 5.2 Indicators for performance management

Indicators in ISO 37120 have been selected to assist cities in measuring the performance of city services and quality of life. The indicators have been carefully selected based on the 19 city service themes outlined in ISO 37120, as prioritized by cities. The indicators provide a baseline and can help cities to assess and evaluate performance.

### 5.3 Indicators for benchmarking and comparison

Indicators in ISO 37120 can be used for benchmarking and comparison for learning and sharing across cities. The standardized methodologies set out in ISO 37120 enable city-to-city comparison and city-to-city exchange.

### 5.4 Indicators for building high caliber data sets

City data is often fragmented across city departments and embedded in different entities. Reporting indicators that conform to ISO 37120, ISO 37122 and ISO 37123 support cities in building high caliber data sets across different city departments and administrative entities.

### 5.5 Indicators for policy development, economic development planning, and priority setting

The indicators in ISO 37120 can be used for policy development, economic development planning, and priority setting. The indicators can be grouped and used to provide information on a particular topic, or they can be used to support, for example, a strategic set of planning priorities established by a city's leadership. The data can be used to inform decision makers on pertinent issues and to help with future planning. The indicators can be used in the city's strategic plans to track progress on priorities and goals set by the city council. Cities are able to cluster ISO 37120 indicators to build investment attractiveness and inform economic development planning into the future.

### 5.6 Indicators for responding to global climate challenges, health events, and demographic change.

The indicators in ISO 37120 can be used to respond to global climate challenges and help cities set targets and measure progress on global climate goals. To enable better planning, a number of the indicators in ISO 37120 support the measurement and tracking of environmental challenges and enable cities to monitor changes in, for example:

- air quality;
- GHG emissions;
- energy consumption;
- automobile usage;
- spatial development patterns.

The indicators in ISO 37120 can be used for responding to global health events, such as pandemics. When analysed together, the indicators can provide an overview of a city's services and infrastructure in the event of a local, national, or global health event. The indicators enable decision-makers to better understand the state of infrastructure and services in order to better plan for local, national, or global health events.

For example, it is important for cities to identify the number of hospital beds per 100,000 population and to know the number of hospital beds available in neighbouring cities. The number of hospital beds, the number of physicians and nurses, as well as other health indicators and population and social condition indicators provide an overview of the available services and infrastructure, as well as the needs and requirements of

the city population. Knowing city demographics (for example, the number and the percentage of the ageing population) is especially important in planning for a sustainable response to a local, national, or global health crisis. The indicators can also be used to assist cities with their recovery process from global health events, for example, drawing on economic indicators for post-crisis recovery.

The indicators in ISO 37120 also enable cities to track demographic changes, for example with age cohorts for young and ageing populations, to build data sets on growth, new immigrants and language diversity and create data-informed responses to closely related changes in demand for housing and education.

### 5.7 Criteria for selecting indicators

Users should select the indicators that are most relevant to their needs. Indicators can be selected based on the following:

- thematic groups:
  - economy;
  - education;
  - energy;
  - environment and climate change;
  - finance;
  - governance;
  - health;
  - housing;
  - population and social conditions;
  - recreation;
  - safety;
  - solid waste;
  - sport and culture;
  - telecommunication;
  - transportation;
  - urban/local agriculture and food security;
  - urban planning;
  - wastewater;
  - water;
- priority policy areas for a city:
  - health;
  - economic development;
  - infrastructure investment;
  - smart systems;
  - resilience;

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- safety;
- sustainable development;
- attractiveness;
- preservation and improvement of environment;
- responsible resource use;
- social cohesion;
- well-being;
- peer groups:
  - demographics;
  - population;
  - population density;
  - city land area;
  - country;
  - region;
  - climate type;
  - country GDP per capita;
  - gross operating budget;
  - gross capital budget.

## 5.8 Data interpretation

Cities can analyse the indicators by themes, as defined in ISO 37120, or by specific policy areas based on the needs of the cities:

- strategic planning;
- ageing cities;
- child-friendly cities;
- sustainable finance;
- economic development;
- investment attraction;
- planning for new infrastructure investments;
- sustainable cities;
- green cities;
- resilient cities;
- smart cities;
- national and global health planning;
- climate resiliency.