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Sustainable cities and communities – Urban settlements – Guidance for a flexible approach to phased implementation of ISO 37101

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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 different types of ISO documents 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).

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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.

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Introduction

ISO 37101 establishes a management system for the sustainable development of cities and communities. It aims to be applicable to all urban settlements of any size and characteristics. However, it is considered that the context, size and characteristics of certain urban settlements is sufficiently different for there to be a need for additional guidance to facilitate a more flexible and appropriate implementation of ISO 37101. This document provides relevant guidance, tools and methodologies to allow for these specific circumstances and, more generally, to also facilitate the initial stages of sustainable development, or a planned phased implementation, of ISO 37101, where this is needed.

The definition of “urban settlements” is not simple, as it depends on many interdependent factors. Some of them relate, for example, to the size of the settlement’s population in relation to a region’s wider geography, or how the administrative units are organised in a local or national context. The term also has varying designations in different languages, that are not always equivalent. For the purposes of this document, we will mainly be referring to urban settlements that are relatively small in size compared to big cities or metropolitan areas. We will also include subdivisions of a city, such as neighbourhoods, boroughs or urban districts. Specialised urban settlements can, for example, include urban settlements based around ports or harbours, railway junctions, market towns, a single specialised industry such as mining or steel-making, tourism centres, administrative, ecclesiastical or educational (e.g. university) centres. These often do not have the full range of functions and services normally associated with a large city.

The specialised or smaller urban settlements we are considering will typically still have a certain level of administrative autonomy in decision-making. This includes the ability to independently manage resources, such as having control over a budget.

In spite of the diversity of characteristics of urban settlements, the range of problems in relation to sustainability can be similar to those affecting large urban developments. However, the scale and intensity of those problems might be less or be more focused, while the administrative or organisational unit will often have access to proportionately less resource.

Given the complexity of sustainable development, the technical knowledge required to understand the wide array of subjects involved should not always be available in smaller or more specialised urban settlements, including in public administration. This can be one of the most significant challenges faced by specialised or smaller urban settlements when engaging in the promotion of sustainable development and the implementation of a full management system.

This document gives guidance for different types of urban settlements, some with specific functions, others at different stages of sustainable development, to implement ISO 37101 flexibly and manageably. Different histories, demographics, local industries, geographic locations, innovation skills and other distinctive characteristics can be considered on a case-by-case basis, recognising that each type of urban settlement needs to develop in a way that reflects and enhances their unique characteristics and experiences. Their distinguishing features, which underpin their attractiveness, quality of life, and social cohesion, will also generate specific cross-cutting issues and encourage diversity.

In a specialised or smaller urban settlement, solutions and initiatives that promote sustainable development need to be more focused and they eventually demand smaller but carefully targeted investment. These smaller or specialised urban settlements can make a start and take small steps in sustainable development through being creative, and using simple but accessible solutions, making more use of SMART processes and methods (software) and relying on local people's knowledge and education (rather than more expensive infrastructure and hardware).

This document is a flexible approach, giving guidance to urban settlements that have limited resources and could only meet the full ISO 37101 requirements through small, phased steps and gradual improvements that eventually build maturity (see the maturity model provided in Annex D). The tools and methods included allow administrative units or organizations to monitor and measure the progress of improving sustainable development outcomes at successively higher levels of maturity, and as they develop to dynamically adjust their results and expectations to remain aligned with the UN Sustainable Development Goals (SDGs).

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There are some characteristics that foster successful sustainable development for smaller or more specialised urban settlements, including:

— Creativity: Being creative can contribute significantly to the sustainable growth of smaller or more specialised urban settlements. As an example, new technologies can be pioneered at a smaller scale, because it is easier to pilot smaller or niche sustainable schemes (e.g. local currencies for tourist towns or car-sharing in more ruralised, dispersed communities) due to lower operational costs locally. These conveniences and advantages can improve quality of life locally and so help to attract more residents, visitors, and investors.

— Local context: The unique distinction that a local context has can be utilized to avoid homogenized solutions. Therefore, it is critical to identify potential opportunities and risks for local improvement. For example, it can be relevant to consider intergenerational inequity issues such as providing facilities or infrastructure that serves a range of ages especially children and aging people.

— Cooperation: Active collaboration in various forms, such as intercity, inter-regional, and international collaboration, assists urban settlements to make the best use of resources at the lowest possible cost, to counteract risks together, and become more resilient, e.g. collective energy purchase. Furthermore, issues such as lowering carbon emissions rely heavily on the cross-sectoral synergy of the energy supply, mobility, buildings and materials, and behaviour. Therefore cooperation between administrative units or local organisations at different levels is important, so that joint efforts can be made to achieve the overall goal.

— Connection: Accessibility is vital for sustainable development. Urban settlements are interconnected with adjacent regions and cities, and better connections within megacities can improve public services and transportation conditions, while investment in improving infrastructure (particularly large infrastructure) is typically unaffordable for smaller urban settlements on their own. Moreover, ecological corridors can greatly improve the environmental impact of the entire region.

— Competition: It is important to maintain a good business environment, i.e. simplifying the start-up process, protecting minority investors, and providing good-quality public services. Meanwhile, opportunities for mutuality should be explored in new emerging areas such as e-business, smart cities, cyber technologies, artificial intelligence, the Metaverse and the digital economy in order to increase sustainability and competition.

— Competence: Smaller urban settlements increasingly attract and retain talent due to a relatively superior quality of life. They can also promote the formation of industry clusters that bring together businesses from similar sectors, fostering collaboration and knowledge sharing among businesses. For example, by focusing on knowledge-based industries, smaller urban settlements can attract a diverse range of businesses and entrepreneurs, which create a culture of continuous learning and professional development.

This document contains a Scope (Clause 1), normative references (Clause 2), terms and definitions (Clause 3), and aspects and characteristics of urban settlements (Clause 4). Clause 5 elaborates on the context of the organization. Clause 6 provides ten tools and methods. Figure 1 illustrates an overview of the main components in this document.

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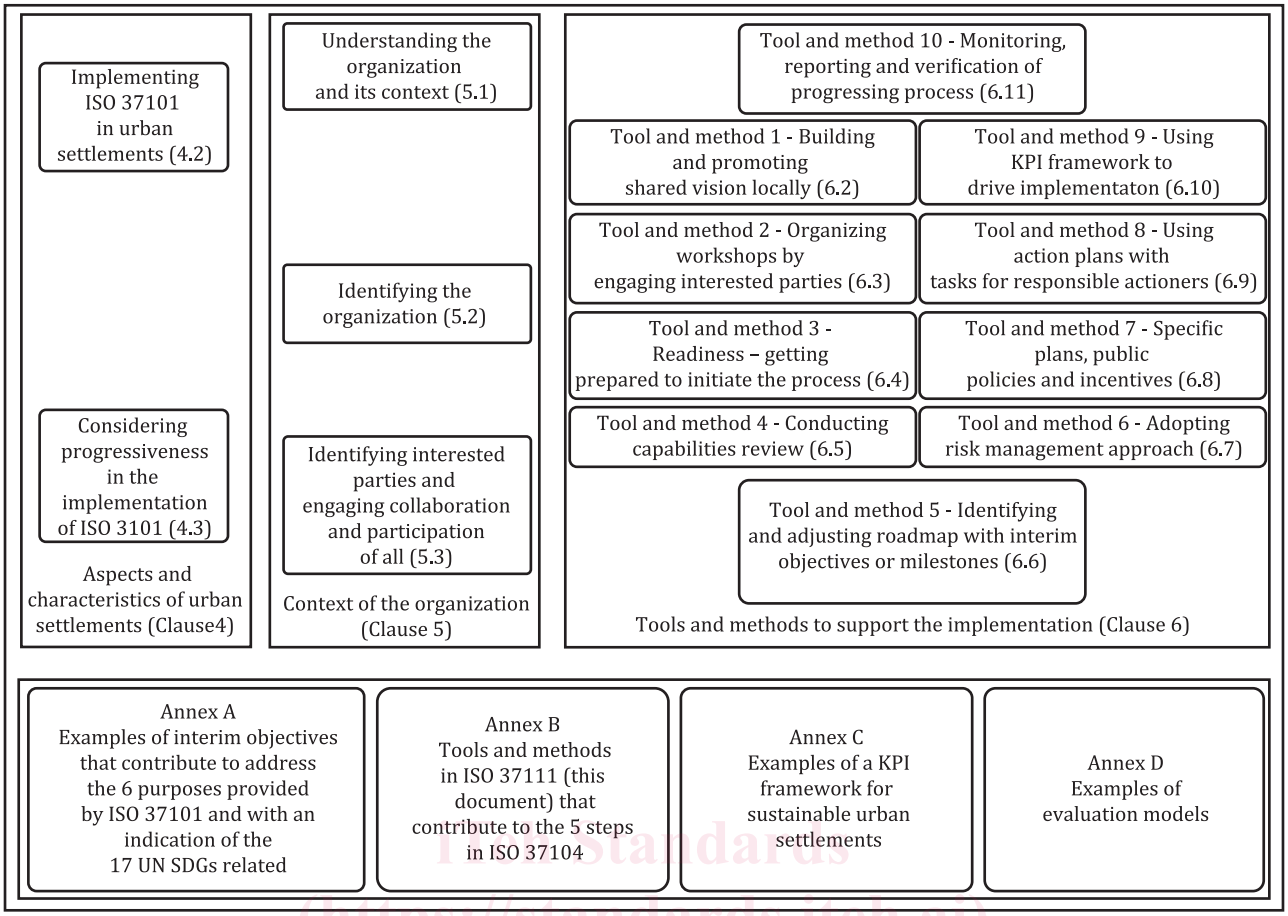

Figure 1 — Overview of the main components in ISO 37111 (this document)

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Sustainable cities and communities – Urban settlements – Guidance for a flexible approach to phased implementation of ISO 37101

1 Scope

This document provides guidance for a more flexible implementation of ISO 37101. This can be appropriate for smaller urban settlements or those dominated by a specialised function. Others can be starting on their journey of maturing sustainability from a very low-level base, or aim to explore sustainable development in a gradual, phased way due to limited resources. Some will want to rapidly initiate action that will have an immediate impact to demonstrate value and stimulate wider support. It provides practical toolkits to achieve implementation (e.g. policies and economic incentives, technical tools, and self-assessment checklists).

This document applies to urban settlements of any composition and type.

2 Normative references

The documents listed below are referred to in the text in such a way that some or all of their content meets the requirements of this document. Only the edition cited applies to dated references. In the case of undated references, the most recent edition of the referenced document (including any amendments) is used.

ISO 37100, *Sustainable cities and communities — Vocabulary*

ISO 37101, *Sustainable development in communities — Management system for sustainable development — Requirements with guidance for use*

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3 Terms and definitions

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For the purposes of this document, the terms and definitions given in ISO 37100, ISO 37101 and the following 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/

3.1
urban settlement
built-up area with a residential population and infrastructure for the built environment that encompasses various functions within a community, including administrative, cultural, economic, residential, and religious aspects

Note 1 to entry: In this document, an urban settlement can include cities and their surroundings, rural-urban fringes or areas separate from a large city or distinctive areas within a large city, such as urban districts, boroughs, towns, counties, zones and parts of a city, such as neighbourhoods.

Note 2 to entry: There is no universally recognised definition of population scale classification for urban settlements, and different regions and countries have their own standards; therefore, this document takes the approach of describing the features of urban settlements rather than offering a definition based on scale.

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3.2
capability
ability to perform or support a function

Note 1 to entry: In the context of an urban settlement, several aspects relate to capability, such as carbon emissions, energy, water resources, natural environment, culture, public facilities, and economic development.

[SOURCE: ISO 6707-1:2020, 3.7.1.9, modified — Note 1 to entry has been added.]

3.3
intergenerational equity
fairness in the differences (e.g. in terms of living standards, quality of life, financial opportunities) between one generation and the next

3.4
readiness
state of having the knowledge, skills, processes and technologies needed to address a particular issue or challenge

Note 1 to entry: Considerations of readiness can include diagnosis of the local status quo in order to understand the level of major sustainability considerations, e.g. maturity, digitalization, citizen's understanding, competency and skills of experts.

Note 2 to entry: Adapted from ISO/IEC 27050-4:2021, 3.2.

3.5
statistical system
comprehensive processes across organizations to connect producers of statistics with other producers and users in a consistent way that ensures transparency, openness, clarity and ready accessibility in the release and use of data, statistics and wider analysis

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3.6
indicator
quantitative, qualitative or descriptive measure

[SOURCE: ISO 15392:2019, 3.18]

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3.7
KPI framework
key performance indicator framework
essential management tool that comprises a selection of KPIs, identified as critical to assess progress towards an intended result, providing a focus for strategic and operational improvement, allowing for effective value demonstration and resource management

Note 1 to entry: The KPIs are typically quantifiable and time-bound and can be used by an organization or individual.

3.8
cross-sectoral cooperation
planning (combined with monitoring and evaluation) at a strategic-level, within an organisation, between similar organisations, or across entire or different linked sectors, to maximize the benefits in a cost-efficient way, and to avoid siloed decision-making

4 Aspects and characteristics of urban settlements

4.1 General

Urban settlements usually have some degree of autonomy, they have their own identity and can be described as small cities, urban districts or communities. This description includes the concept of neighbourhoods, which are part of a city.

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In general terms, they have many of the characteristics of a city, but compared with major cities, their scale and size are smaller, which frequently implies that the challenges and the issues referred to in ISO 37101 as sustainability issues are relatively and comparatively of a smaller scale (although in some circumstances still complex).

Another characteristic of urban settlements is that they have fewer resources, in particular in relation to the knowledge and expertise on sustainability issues and the major challenges of sustainable development.

In contrast, due to the size and scale, it is possible that the measures and solutions to deal with these challenges can be simpler and do not require extremely sophisticated measures.

Nonetheless, the goals of sustainable development are achievable through the management system for sustainable development established in ISO 37101 when it is used flexibly in and applicable to cities and communities of all sizes and types.

4.2 Implementing ISO 37101 in urban settlements

The implementation of ISO 37101 in an urban settlement should be conceived in a way that takes into account the context of that area and it should adopt solutions that are as simple as possible as it attempts to tackle the main challenges (in accordance with the requirements of ISO 37101) in a pragmatic, effective and efficient way.

By doing this, the following benefits can be achieved:

— meeting various interested parties' practical needs and periodical expectations, including demonstrating legal compliance and improving relations with small-scale, intimate, inter-dependent local communities;

— delivering cost savings (e.g. lowering the cost of research and development on tools and methods or experiential learning);

— improving the recognition of the commitment to sustainable development by an organization, by demonstrating clear and pre-defined interim achievements;

— enabling all interested parties to engage in a management system for sustainable development;

— improving coordination and facility sharing with other nearby cities or communities that are also outside stakeholders;

— raising awareness about sustainability in various maturity levels and phases;

— focusing more on software and human resources instead of hardware only.

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4.3 Considering progressive implementation of ISO 37101

When planning the implementation of a management system for sustainable development of an urban settlement, it can be useful to consider a progressive phased implementation as described in 5.1. The adoption of considering a progressive implementation of ISO 37101 offers several additional benefits for urban settlements, particularly for those with limited available resources, by allowing an organization to:

— develop a management system at its own pace;

— define the scope when implementing ISO 37101 and tailor this to fit the local resources available;

— decide how many phases it wishes to go through and what level of maturity it envisions its management system to reach in each phase;

— decide on issues or other aspects to be considered, such as a distinctive local culture, or emerging industry that distinguishes them from the competition or surrounding urban areas;

— start with the area's greatest potential for long-term improvement and achieve optimum benefits;

— mobilize quickly to implement ISO 37101, and ultimately achieving the UN SDGs;

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— identify interim objectives and suitable indicators, select toolkits, perform task decomposition, and assign tasks to entities in charge;

— dynamically adjust implementation for performance improvement, e.g. interim objectives, indicators and tasks;

— stimulate a positive culture and attitude towards sustainable management.

5 Context of the organization

5.1 Understanding the organization and its context

Urban settlements can be of any size. Therefore, they can include "small" human communities or neighbourhoods within a city, or part of a multi-nuclear city, or autonomous communities within the urban-rural fringe or separate from a large city. In order to define urban settlements when applying this document, some of the following aspects should be considered:

— They are areas with relatively independent and stable communities and populations, with physical, political or historical-cultural boundaries that can be distinguished from other human settlements; they have a relatively small or medium population and built-up area compared to other cities in the same country and region, as defined by each country's criteria.

— Locally, there are usually a plethora of normal daily office duties. Staff can lack sustainability expertise and find it difficult to secure financing and to manage complex projects such as lower-carbon emissions schemes, however, the proximity to other citizens with some knowledge or sustainability experience, due to the smaller scale, can engage more active participation.

— They are typically not centres of authority or economic hubs of first-level administrative divisions, because a small or medium proportion of the economy is in larger urban regions. For example, some are called a “satellite city”, a district of a megacity, or a part of an urban agglomeration located near the most important economic activity hubs. Most of them are located far from centres of economic activity. They also include subdivisions of cities, such as neighbourhoods, usually the provision of public services is made by the parent city and many times they don’t have a formal autonomous administration. When compared to large cities, their economy is less diverse and resilient.

— As local infrastructure and services are provided at a smaller scale, most of them are not sufficient or complete when compared to large cities. Meanwhile, some urban settlements can share important infrastructure and services (e.g. airports, harbours, etc.) with other cities and settlements.

When planning the implementation of a management system for sustainable development of an urban settlement, periodical adjustments are essential for organizations seeking to manage it. Regular reviews and adaptations responding to new trends and changes are necessary to ensure success. Organizations should regularly reassess external and internal factors related to the development of the urban settlement and update or modify them to keep pace with the implementation of ISO 37101.

5.2 Identifying the organization

As a starting point, the administrative unit or organization can be informal and recognized or endorsed by relevant stakeholders. This means that it can be any of the urban settlement stakeholders as listed in a) to d) below.

In the case of a smaller urban settlement which does not have a formal autonomous public administration (e.g. a neighbourhood), the organization in charge of the management system can find it useful to secure some form of formal endorsement from the local government. The organization should meet the requirements provided by ISO 37101:2016, 4.2 and 4.3.

a) Authorities: Local authorities play a critical role in taking the lead in long-term management of urban settlements. Local governments are usually in place, and they can initiate a vision which includes a clear description of the purposes and interim objectives. They can provide public services and involve the coordination of relevant interested parties in forming and maintaining a long-term strategy.

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