

URBAN SUSTAINABILITY MANAGEMENT PROJECT GUIDE

The present note summarises the need for an ISO 37101 project guide for use by developers of essentially urban projects, both new build and renovations. It was prepared by the FIDIC Sustainable Development Committee. The note is followed by a draft of the proposal that will be submitted to ISO in October 2018 for a new work item

The proposed guide builds upon the *ISO 37104 Sustainable cities and communities - Guidance for practical implementation in cities* which aims to support political authorities or a community's senior management in implementing the ISO 37101 standard as a formal or informal management system (publication is planned for early-2019).

The guide would also recognise that the ISO 37101 approach is becoming increasingly important in the financing of urban development, especially in developing countries. For example, multilateral development banks are moving increasingly towards the direct financing of urban development through city administrations provided adequate frameworks are in place. The World Bank has therefore published guidance on ways to support the enabling environment for an ISO 37101 approach.

Background

Global requirements for sustainable development are increasingly used by, or imposed on, all actors in the marketplace, at all levels and in all areas of economic activity. For example:

- High-level agreements: the 17 Sustainable Development Goals (UN High Level Forum on SDG, July 2018); National Determined Contributions (on the agenda for COP24 in Katowice, Poland, December 2018); the World Urban Agenda implementation follow-up (see the proceedings of the 9th World Urban Forum held in Kuala Lumpur in February 2018).
- International, regional, national and sectorial initiatives, standards and reference frameworks: the World Bank's Urban Sustainability Framework launched in February 2018 (see Annex 1) which complements the ISO 37101; the UN Environment *Guide to Procuring Sustainable Buildings and Construction* including FIDIC contribution that will be published in late-2018; the European Union Urban Agenda, and directives such as the construction products directive; private sector initiatives such as the *SuRe* and *Envision* standards for sustainable infrastructure; national legislation and regulations.

Investment in buildings and infrastructure that make up the built environment must grow, and is growing, very rapidly. It is also a key sector for implementing the new sustainability requirements. These will have major impacts, both short-term and long-term, on the world's sustainable development. Many initiatives driven by the built environment sector's stakeholders therefore aim to promote sustainable buildings and infrastructure and to help shape a new global framework for building and construction.

Numerous macroeconomic indicators demonstrate the scale of the challenge over the short- and long-terms.

The ISO 37101 standard

ISO 37101: *Sustainable development in communities - Management system for sustainable development* is the first standard for an holistic approach to the built urban environment. The standard aims to support mainstreaming the actions and interactions of a multitude of independent decision makers to enhance the global impact on sustainable urban development that results from a wide variety of urban strategies, plans and programmes.

Many useful reference frameworks have been developed worldwide that tackle sustainability issues at different scales. The ISO 37101 standard differs from these reference frameworks in important ways. It:

- provides both a management system and precise guidelines for addressing the purposes of sustainability. The standard defines six cross-cutting sustainability purposes that correspond to the UN Habitat *World Urban Campaign's* six thematic clusters for cities.
- introduces an holistic and original perspective, unseen in existing initiatives, by defining a minimum of 12 issues (and their derived actions and activities) which are to be considered in urban policies, programmes and projects in order to achieve the six cross-cutting purposes. These purposes deal with economic, social and environmental aspects under cross-cutting issues including attractiveness, protection of the environment, resilience, resource use, and social well-being.

ISO 37101 proposes a multi-actor, multi-disciplinary framework whereby all actors are encouraged to contribute in order to improve the compatibility and consistency of urban planning, programmes and projects in the light of the global sustainability purposes and issues of a city or community:-

ISI 37101 project guide

In developing the ISO 37101 project guide it is recognised that developers may face three basic types of situation with regard ISO 37101 in the local or regional context:

- Some communities, notably major cities, have adopted, or are adopting, an ISO 37101 management system framework with accompanying procedures which will be imposed on all urban projects stakeholders. Some of these cities are members of the international association that promotes and supports implementation of ISO 37101 (the association is currently organised by Hangzhou in China).
- Other communities have not yet adopted an ISO 37101 framework but intend to align some if not all projects with the standard's holistic approach for ensuring that action in different areas contributes to the purposes of sustainable development.
- Most communities however at present do not have an authority charged with implementing an ISO urban management system. In this case, urban projects may be planned and initiated by private, public or mixed entities without formal reference to ISO 37101 management system framework. However, some project developers have already indicated that they would be willing to add value by aligning implementation with the ISO 37101 requirements and region's sustainability strategies and objectives, which may or may not have been established.

Whatever the local situation, in view of the increasing global concern for urban development and specifically for smart and sustainable urban strategies consistent with smart and sustainable urban planning, projects or programmes, there is a growing need for a practical guide dedicated to private

urban projects developers and other built environment sectors. Its aim would be to propose a framework that supports the alignment of a project with the ISO 37101 requirements and a region's sustainability strategies and objectives.

Benefits

Guidance for the use of a common reference framework for urban development by all urban built environment sector stakeholders, whether they be urban developers, contractors, architects, consulting engineering firms or planners, would be expected to bring major technical, economic, social, and environmental benefits.

The proposed ISO 37101 project guide would:

- encourage the alignment of all stakeholders in solutions for urban projects that clearly and transparently address identified sustainability purposes for the community, city and region based on the ISO 37101 sustainability purposes for economic, social and environmental issues;
- confirm the overall relevance of a specific type of solution for an urban project and its compatibility with different areas of activity, with different groups of stakeholders and with the project's value chain;
- promote cooperation between urban project stakeholders, reduce conflicts and reduce the risk of inadequate sustainability performance.

Proposal

Sustainable Cities and Communities - Transforming our cities: Guidance for the practical implementation of ISO 37101 by project developers

This proposal has been prepared by a FNTP Sustainable Development Committee working group comprising:

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Introduction

The proposed guide for implementing the ISO 3701 management system is intended for project developers wishing to contribute to community projects that meet the requirements of the ISO 37101 standard where a local authority has or has itself not implemented the standard.

The context within which an ISO 37101 approach is implemented is as follows:

- the engagement by society for sustainable development is the object of an international consensus that is articulated in terms of the Sustainable Development Goals (SDG);
- engagement at the community level for sustainable development represents an essential aspect for the sustainable development of society as a whole since aligning action addressing issues such as climate change, biodiversity, job creation, and health is often the most effective at the local level;
- local authorities face a wide variety of issues (economic, social, cultural and environmental) together with a significant number of interested parties who seek to participate and who expect accountability for the issues arising and the actions undertaken;
- with regional issues and service supply in areas such as planning, housing, education, transport being addressed over the long term, and at least for several years, their applicability and context can change considerably, notwithstanding that after several years' service suppliers may transfer the responsibility for operation to local authorities;
- actions contributing either explicitly or implicitly to sustainable development along the lines of ISO 37101 are being undertaken already by communities;
- there exists several reference frameworks, both national and international and to a greater or lesser extent stable and tested, that respond to regulations and to voluntary undertakings such as certifications and ratings prescribed by project owners where the overall coherence is not always assured;

Given the context, the implementation guide aims to define a framework that allows a project developer to:

- clarify the scope (for example, a neighbourhood, a community, or a region) impacted by a project;
- take fully into account features of the main phases of a project's life-cycle namely:
 - consideration of the project's context with the formulation and ownership of a global strategy and project objectives that are relevant to the context, to the strategy for regional development, to regional and global sustainable development goals and to other projects in the region, thereby acting as a means to put forward proposals and advice with regard to a community;
 - possible implementation by an operator;
 - possible transfer of the responsibility for operation to a community accompanied by the transfer of ownership and the taking over of long-term responsibility by local or regional authorities and their partners for the various phases of the life cycle of a project beyond the initial implementation.
- promote a systems approach when considering the complexity and overall relevance of a project;
- encourage consultation, cooperation and the sharing of information with, and accountability to, interested parties;
- facilitate the integration of ISO 37101 requirements (for example, sustainability purposes, action areas and a systems approach) within a management system which stresses continual improvement during a project's implementation and operational phases;
- ensure implementation over the long term that uses a life-cycle approach which accounts for the overall cost in terms of both positive and negative impacts, from the definition of the project's context until a possible transfer of responsibility to a community and ownership by users;
- implement monitoring that allows for the measurement of contributions to development objectives and to sustainable development in terms of the SDGs.

To meet these aims and to encourage adoption of ISO 37101 by project owners, the guide would adopt ISO's generic High Level Structure (HLS) for management systems, a choice which helps implementation by organisations familiar with management systems based on the so-called PDCA approach, and in particular with the ISO management system standards such as ISO 9001 and ISO 14001 which specify the requirements for quality management and environment management systems, respectively. Furthermore, the guide aims to cover systematically within each chapter the three life-cycle stages of a project.

Finally, with the same objectives in mind, each of the guide's 10 chapters suggests various methods and tools.

Given these considerations, the guide is structured according to the HLS as indicated in the table. It is noted that while each of the 10 HLS topics is addressed at each of the three phases of a project, certain phases, indicated by crosses (“x”), receive greater attention as regards methods and tools.

HLS		Project phase		
Scope	Chapter	Inception	Implementation	Operation and follow-up
A. General	1. Scope			
	2. Normative references			
	3. Terms and definitions			
B. Context	4. Context of the organisation	x	x	x
	5. Leadership			
C. Implementation	6. Planning		x	x
	7. Support	x	x	x
	8. Operations		x	x
D. Operation	9. Performance and evaluation		x	x
	10. Improvement			x

The next section summaries the contents of each chapter.

Chapter contents

Part A: General

1. Scope

The envisaged scope is:

- all contributors: organisations, both private and public, aiming to implement or support a project’s coherence with the ISO 37101 standard and the incorporation of the standard’s integrated and holistic approach to sustainable development;
- community context: to promote the interaction between project developers and all other interested parties regardless of the status of a community’s approach to ISO 37101, whether it be:
 - a formal undertaking by the community to adopt ISO 37101 (Scenario 1 in the tables below);
 - an undertaking that suppliers of services, products and labour conform to ISO 37101 requirements;
 - an absence of a specific undertaking with regard to ISO 37101 where suppliers aim to anticipate and implement a project according to ISO 37101 (Scenario 2 in the tables below);.

2. Normative references

- ISO 37101, ISO 37104 and standards relating to the management of smart and resilient cities.
- 37120 and other indicators covering urban services and smart and resilient cities.
- ISO 26000, ISO 14001, ISO 9001.
- Sustainable procurement
- Sustainable Development Goals
- New Urban Agenda; National Urban Policies
- Rating systems (HQE, LEED ND, BREEAM C, CASBEE, etc)
- Specific standards relating to operational requirements

Part B: Context

3. Terms and definitions

To be completed.

4. Context of the organisation

Sections

4.1. Inception (initial definition of the project scope)

4.2. Situation (Baseline Review)

- 4.2.1. Regional mapping in terms of sustainable development (current; envisaged):
- level of performance for each of the ISO 37101 purposes of sustainable development.
 - analysis of the contributions of each action area and other projects to a community's ISO 37101 purposes.

- 4.2.2. Analysis of applicable requirements, regulations and standards, the needs and expectations of interested parties and the identification of other organisations and governing bodies that are active:
- during the planning and implementation phases;
 - over the long term after the start of operation.

- 4.2.3. Analysis of project risk during the three project phases (baseline review; implementation; long-term operation).
- impact assessment and potential contributions.

4.3. Adjustment of the scope of application of the management system (following a review).

4.4. Definition of the project's operational management system within the region.

- 4.4.1 Definition of the management system:
- recognition of the system dimension, the multi-actor approach and the multi-project/multi-action context;
 - ensuring coherence with existing management systems and reference frameworks.
- 4.4.2 Definition of the management system beyond project implementation.

Tools

- Mapping of interested parties

Tool	Scenario 1 ISO 37101 present	Scenario 2 ISO 37101 absent
Definition of interested parties		
Project inventory		
Neighbourhood survey		

- Project relevance analysis

Tool	Scenario 1	Scenario 2
Collection of data on existing projects		
Descriptions of alternatives		
Review of the claimed relevance		

- Risk analysis

Tool	Scenario 1	Scenario 2
List of material risks		
List of project risks		
Critical risk analysis		

5. Leadership, within the project context

Sections

5.1. Leadership and engagement

5.1.1 Awareness of sustainable development objectives

5.2.2 Awareness of the principles of good governance and engagement with interested parties

5.2. Political

5.3. Roles and responsibilities within the project and their coherence with those for of relevant regional organisation.

Tools

- Mapping

Tool	Scenario 1	Scenario 2
Available skills		
Regional responsibilities		
Probably project boundary		

Part C: Implementation

6 Planning, during the project’s three life-cycle phases

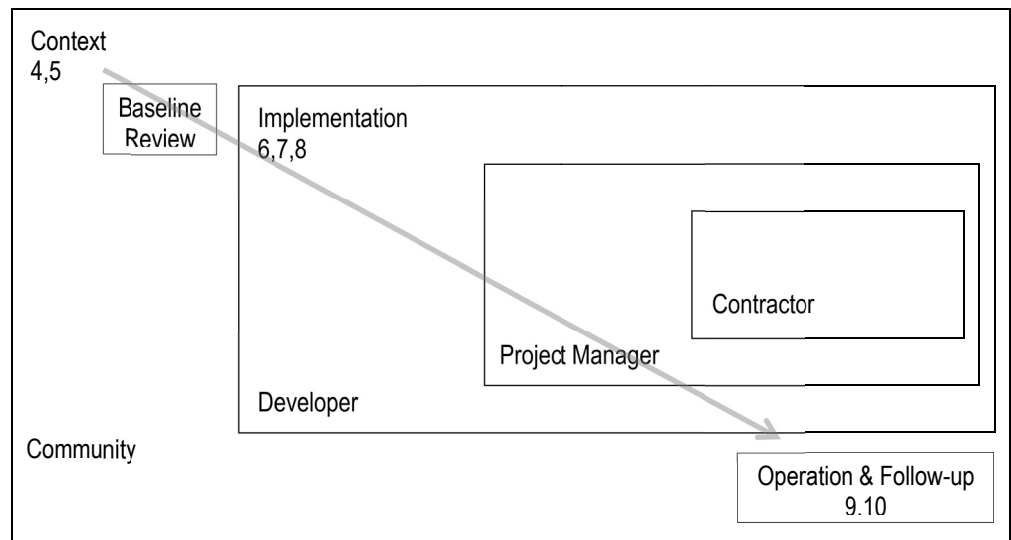
Sections

- 6.1. Involvement of interested parties and other projects.
- 6.2. Definition of operational objectives, plans to meet objectives and conformity with community expectations.
 - 6.2.1. Objectives for contributions and the results expected for each ISO 37101 purpose.
 - 6.2.2. Evaluation criteria; performance monitoring.
 - 6.2.3. Establishing action plans incorporating interaction with the community’s other projects and areas of action; ensuring conformance with planned objectives (integration of requirements).
 - 6.2.4. Analysis of conformance with regulations.
- 6.3. Risk mitigation actions
- 6.4. Defining action plans for the transfer to the community and ownership over the long term by regional authorities

Approach

Use the nesting of actions with an alignment defined by the context and interested parties.

General
1,2,3



Tools

- Mapping interactions across the agreed project boundary

Tool	Scenario 1	Scenario 2
Survey of relevant projects that are underway		
Interaction matrix		
Cross fertilisation		

- Action plan objectives

Tool	Scenario 1	Scenario 2
Action list by purpose		
List of indicators for objectives (phases 2 and 3)		

- Action plan risks

Tool	Scenario 1	Scenario 2
Survey of competing and on-going projects		
Interaction matrix		
Cross-fertilisation matrix		

- Action plan objectives

Tool	Scenario 1	Scenario 2
Organisation red alerts		
Technical integration red alerts		
Commissioning programme		

- Management system (for each, internal and external mobilisation, task conformity and transfer)

Tool	Scenario 1	Scenario 2
Owner's Strengths and Difficulties Questionnaire		
Employer's Strengths and Difficulties Questionnaire		
Contractor's Strengths and Difficulties Questionnaire		

7. Support, during the project's three life-cycle phases

Sections

- 7.1. Resources mobilised
- 7.2. Necessary skills
- 7.3. Envisaged awareness raising
- 7.4. Communication
- 7.5. Documentation; traceability

Tools

- Diagnostic charts

Tool	Scenario 1	Scenario 2
Programme		
Flow charts, including commissioning		

8. Operations (operational activities; transfer)

Sections

- 8.1. Involvement of interested parties and other projects.
- 8.2. Planning and the control of operations.
- 8.3. Overseeing the coherence of strategies, projects, plans, and services.
- 8.4. Transfer to the community: support for the taking over.

Tools

- Empowerment

Topic	Scenario 1	Scenario 2
Awareness raising and training		
Group dynamics		
Visibility		

Part D: Operation

9. Performance and evaluation

Sections

- 9.1. Monitoring, measurement, analysis, assessment
- 9.2. Internal audit
- 9.3. Management review

Tools

- Dashboard (target indicators)

Tool	Scenario 1	Scenario 2
Implementation phase		
Operation and end-of-life phases		

- Monitoring matrix (monitoring indicators)

Tool	Scenario 1	Scenario 2
Implementation phase		
Operation and end of life phases		

- Overview

Tool	Scenario 1	Scenario 2
Project characteristics (implementation phase)		
Updating (operation and transfer phase)		

10. Improvement

Sections

- 10.1 Non-conformance and corrective action
- 10.2. Feedback
- 10.3. Continual improvement

Tools

- Operations dashboard

Tool	Scenario 1	Scenario 2
List of proposals (content and source)		
Implementation procedures		

- Follow-up matrix

Topic	Scenario 1	Scenario 2
Summary (status tracking)		

Part E: References

Relating to various types of advanced projects:

- charting principles
- methods
- project management