ISO NP 37109
Practical guidance for project developers
Meeting ISO 37101 framework principles

How ISO NP 37109 can help to direct the development of future community pilot projects?
ISO 37101 and planned ISO 37109 guidance for project developers

HLS
Principles / requirements

ISO 37.101

Cities communities management system

Sustainable Development specific principles and requirements

HLS + 37.101 principles

PM stages and issues

Issues to be addressed in Project Developers guidance

List of tools to be presented in the guidance chapters
ISO High Level Structure (HLS)

Main HLS concepts:

- Common set of requirements, consistent with each others. ISO 9001, ISO 14001 etc,
- Requirement structured according to the principles of continuous improvement (PDCA).

Main HLS objectives:

- Integration of the management system into business processes to achieve desired results.
- Risk management approach.
- Performance approach enlarged to global context consideration, and identification of stakeholders’ expectations.
- Management of changes through a systematic approach.

ISO 37101 has considered these concepts, objectives and additional requirements for achieving cities and communities Sustainable Development.

The High Level Structure (HLS) is a standardized way of drafting ISO management system standards. It is defined in Appendix SL of the ISO/IEC Directives, Part 1.
ISO 37109 Framework

ISO 37101

How projects in a community support the community sustainability purposes

Project in a community Relevance analysis

Product Management

Project stakeholders alignment

Process Management

Community project Management

ISO 37109 TOOL BOX
Relevance analysis
(Territory profile upgrading)

Purposes

Indicators

Profile ex ante

Profile ex post

Project stakeholders alignment (efficiency)

1. Upstream alignment
2. Transfer alignment
3. External data
4. Internal quality plan
PM issues, to be considered by relevant tools supporting the management of projects, including for “future community”.

1. Collaborative decision making
2. Shared financial risks/rewards
3. Early involvement of key participants
4. Multi-party agreement
5. BIM or shared delivery models
6. Jointly developed goals
7. Mutual trust and respect
8. Liability waivers
9. Leadership
10. Intensified early planning
11. Early identification of risk
12. ......
ISO 37101  SD issues, to be considered by relevant tools supporting the management of projects including for “future community”

1. Global SD relevance
2. Coherent SD framework
3. Authority
4. Leadership
5. Holistic SD approach
6. Sustainability purposes
7. Smartness and resilience
8. Widespread applicability
9. Well-established SD requirements
10. SD Goal seeking
11. Interested party engagement
12. SD Transparency
13. Multi-SD governance
14. Continual SD improvement
### Basic stages of a construction project (source: EN 16310)

Usual stages and sub stages of a construction or infrastructure project are, whatever the project delivery system, potential overlaps, restructuration or wording, the followings: (source EN 16310)

<table>
<thead>
<tr>
<th>stages</th>
<th>Sub Stages</th>
</tr>
</thead>
<tbody>
<tr>
<td>0. Initiative</td>
<td>Market study, Business case</td>
</tr>
<tr>
<td>1. Initiation</td>
<td>Project initiation, Feasibility study, Project Definition</td>
</tr>
<tr>
<td>2. Design</td>
<td>Conceptual Design, Preliminary Design and Developed Design</td>
</tr>
<tr>
<td></td>
<td>2.3 Technical Design, 2.4 Detailed Engineering</td>
</tr>
<tr>
<td>3. Procurement</td>
<td>Procurement, Construction contracting</td>
</tr>
<tr>
<td>4. Construction</td>
<td>Preconstruction, Construction, Commissioning, Hand Over, Regulatory Approval</td>
</tr>
<tr>
<td>5. Use</td>
<td>Operation, Maintenance</td>
</tr>
<tr>
<td>6. End of life</td>
<td>Revamping, or Renovation, Dismantling</td>
</tr>
</tbody>
</table>
Project delivery systems

- There isn’t one single project delivery model fitting best sustainability challenges in all conditions.

- The “future community” should implement the land transfer mode of "plan, construction and operation". It’s one of the variety of project delivery system identified by UN environment (In Guidebook for Procuring Sustainable Buildings and construction) that will be considered in NP ISO 37109 (1).

- The traditional approach for managing Projects cost, performance and delay has already been improved for some years in considering new issues like risks, environment .... ISO 37109 intends to go far beyond, and to support project developers for managing urban projects from their early stage in a whole life cycle perspective, in line with ISO 37.101 principles. It’s consistent with “Zeheijian directive on future cities”

(1) Design-Bid-Build (DBB), Construction Management (CM), Design-Build (DB), Design-Build-Operate (DBO), Design-Build-Finance-Operate (DBFO), Alliance Contracting (AC), Project Partnering (PP), Integrated Project Delivery (IPD)
ISO 37109 type of tools to be considered in the Guidance toolbox

A. Mapping a community project players:
   ▪ expectations,
   ▪ competences,
   ▪ Contribution,
   ▪ potential interaction in the project or territory

B. Relevance analysis of a community project
   ▪ To assess, with the potential support of relevant indicators, a project performance to meet the project objectives and territory challenges.
   ▪ Relevance analysis must be shared with the territory stakeholders.

C. Method to align a community project, along its life cycles, with stakeholders’ considerations, and ISO 37101 principles
   ▪ adjustment of the project strategy,
   ▪ adjustment of the implementation plan,
   ▪ Adjustment of management processes
ISO 37109 type of tools to be considered in the Guidance toolbox

D. Community project governance manual detailing
   ▪ roles, responsibilities,
   ▪ decision making process ensuring the coherence of the project governance with the territories governance.

E. Ensuring that changing situations and their potential impact on the territory SD challenges, and on the project are being considered in the project development.

F. Updating relevance analysis with the value engineering
ISO 37109 type of tools to be considered in the Guidance toolbox

G. Transfer of the project from project developers to other entities: Commissioning process, supply and trading manual, reporting manual, virtual model ...

H. Performance assessment tools for commissioning and evaluation

Challenge will be to imagine a generic tool in order to avoid proliferation.
The planned ISO 37109 guidance toolbox supports implementing ISO 37101 principles, by project developers, in urban construction and infrastructure projects.

They should help to direct the development of Zhejiang’s future communities that seem to be mainstreamed by similar principles as ISO 37101.

Moreover, the development of Future Community pilot projects in Zhejiang, might give an opportunity to test and improve some relevant tools’ functional description, planned in ISO 37109.
Fostering cities partnering with urban stakeholders

- ISO 37.101 provides common principles, language and requirements.
- Additional referential (standards, guidance, indicators … ) have been, are or will be developed.
- Specific “partnering tools” should be developed for supporting structured exchanges, new types of dialogue, and creating an operational tool for mapping operation, and to learn from it.
- Strategic objective would be:
  - For cities and stakeholders partnering.
  - For related authorities.

Such “partnering tool”, based for example on ISO 37101 grid purposes / areas actions, would facilitated transfer of results and methodologies, and foster a dynamic of innovation, and leverage common benefits for ISSCC members and partners.
Thank you for your attention

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