ISO NP 37109
Practical guidance for project developers
Meeting ISO 37101 framework principles
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
          - Issues to be addressed in Project Developers guidance
            - PM stages and issues
            - 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 other. 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.*
The management of SD in a city/community according to classic management methods

- To set out purposes
- Definition of strategic measurable objectives
- Definition of an action plan
- Definition of an impact assessment system
ISO 37.109 Framework

ISO 37101

Principles: each territory action must support the sustainability purposes

Relevance analysis

Project stakeholders alignment

Product Management

Process Management

Project Management

ISO NP 37109, Wuhan meetings, 2019-10-14 to 18
Relevance analysis
(Territory profile upgraging)

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

ISO NP 37109, Wuhan meetings, 2019–10–14 to 18
Example of PM issues, for selecting SPM issues that correspond to HLS/ISO 37101 requirements.

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 principles

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)

<table>
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<tr>
<th>Stages</th>
<th>Sub Stages</th>
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<tr>
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<td>0.1 Market Study</td>
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<td>1. Initiation</td>
<td>1.1 Project Initiation</td>
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<td>1.3 Project Definition</td>
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<td>2. Design</td>
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<td></td>
<td>2.2 Preliminary Design and Developed Design (B&amp;I)</td>
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<td></td>
<td>2.3 Technical Design or FEED</td>
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<td></td>
<td>2.4 Detailed Engineering</td>
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<td>3. Procurement (IF)</td>
<td>3.1 Procurement</td>
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<tr>
<td></td>
<td>3.2 Construction Contracting</td>
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<td>4. Construction</td>
<td>4.1 Pre-construction</td>
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<tr>
<td></td>
<td>4.2 Construction</td>
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<td>4.3 Commissioning</td>
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<td>4.4 Hand Over</td>
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<td>4.5 Regulatory Approval</td>
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<tr>
<td>5. Use</td>
<td>5.1 Operation</td>
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<tr>
<td></td>
<td>5.2 Maintenance</td>
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<td>6. End of Life</td>
<td>6.1 Revamping</td>
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<td></td>
<td>6.2 Dismantling</td>
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Client approval per Sub Stage

Tendering (possible procurement moments B&I)

Application

Statutory Approval
Project delivery systems

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

- A variety of project delivery system or variations of these systems (source: UN environment Guidebook for Procuring Sustainable Buildings and construction)
  - 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)
  - .......

- 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.
### Guidance chapters

<table>
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<th>Tools’ definition / objectives (possibly new tools are in bold)</th>
<th>Guidance chapters</th>
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<td>A - Mapping of the territory players</td>
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<td>B - Relevance analysis tool</td>
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<tr>
<td>C - Method to align a project along three life cycles:</td>
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<tr>
<td>stakeholder considerations, adjustment of the project strategy, adjustment of the implementation plan and management process</td>
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<tr>
<td>D - Project governance manual detailing roles, responsibilities, decision making process ensuring the coherence of the project governance with the regional governance.</td>
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<tr>
<td>E - Usual Project Management tools</td>
<td>x</td>
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<tr>
<td>F - Usual resources / project management tools (procedures manual, flow chart, budget management, training manuals)</td>
<td>x</td>
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</table>
## Draft list of tools and Guidance’s chapters (2/2)

<table>
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<th>Tools’ definition / objectives (possibly new tools are in bold)</th>
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<td>Context</td>
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<td>G - Usual resource / project management tools</td>
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<td>H - Tools for ensuring that changing situations have been considered in the project development.</td>
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<td>I - Updated relevance analysis with the value engineering.</td>
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<tr>
<td>J - Transfer: Commissioning process, supply and trading manual, reporting manual, virtual model.</td>
<td>x</td>
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<tr>
<td>K - Performance assessment tool for commissioning and evaluation</td>
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ISO NP 37109, Wuhan meetings, 2019–10–14 to 18
Guidance chapter 4,
Context – Type of tools

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

A. Relevance analysis
   - 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.

B. Method to align a project along its three life cycles with stakeholders’ considerations, and ISO 37101 principles
   - adjustment of the project strategy,
   - adjustment of the implementation plan,
   - Adjustment of management processes.
D. Project governance manual detailing

- roles, responsibilities,
- decision making process ensuring the coherence of the project governance with the territories governance.
- ...
Guidance chapter 6, Planning – Type of tools

**E – Usual resource / project management tools ensuring**
- involvement of the interested parties on the project,
- planning of the control operation and other tasks of Chapter 6 (Planning).

Usual existing project management tools, consequently the guidance recommendations might be limited to specific requirements, as for example for risk and opportunities analysis, instead of specific tools for chapter 6.
Guidance chapter 7, Support – Type of tools

- F. Procedures manual, flow chart, budget management, training manuals, ...

Usual resources / project management tools meet the needs, consequently the guidance recommendations might be limited to specific urban sustainability requirements.
Guidance chapter 8, Operation – Type of tools

G – Resource / project management
Usual existing project management tools, like planning of the control operation for example, meet the needs for most of this chapter requirements, consequently this chapter tools presentation might be limited to the following specific urban sustainability requirements for:

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

I – Updating relevance analysis with the value engineering.

J – Transfer of the project from project developers to other entities: Commissioning process, supply and trading manual, reporting manual, virtual model ...
Guidance chapter 9, performance and evaluation – Type of tools

K – Performance assessment tools for commissioning and evaluation

Challenge will be to imagine a generic tool in order to avoid proliferation.
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 ISSC members and partners.
Thank you for your attention

Jean FELIX, FIDIC SD Com chair
ISO TC 268 WG1 NP ISO 37109 Project leader