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VILLE DE GRENOBLE

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écocité
engagée pour inventer
la ville de demain

ÉTUDE DE CAS N°3 :
PRESQU'ÎLE - GRENOBLE

ISO/AFNOR 37101

1. PROJECT PRESENTATION

The Presqu'Île (*peninsula* in English) is a 250-acre urban development project, occupying a central position at the Grenoble metropolitan scale (near the main station and the city center, at the gates of the Isère valley). The project area is composed by the GIANTS innovation campus on one hand, and by several future urban districts on the other.

Historically isolated from the city-center and almost exclusively dedicated to the CEA's activity (French Alternative Energies and Atomic Energy Commission), the confluence of the Isère and Drac rivers should become a real part of the urban fabric, since it represents more than a fifth of the municipal territory. This project should comme to an end by 2034.

KEY FIGURES

180 000 m² of tertiary real estate
230 000 m² of research facilities
50 000 m² of university buildings
2 400 familial accomodations
1 000 student accomodations
6 600 m² of shops and services
8 000 m² of public equipment
1,8 km of a new tramway line

The Presqu'Île project is designed to be innovative and exemplary on many aspects:

- Building efficiency: adaptable accommodations, neighborhood service centers, green blocks, social mix (50% housing for accession to ownership, 40% social housing, 10% housing for social acquisition and student housing)
- Energetic performance: application of the RT2012-30% exigency, implementation of a geothermic network for building heath and cooling.

- Mobility:
  - Pedestrian-friendly public spaces (pedestrian itineraries, detection lighting, limitation of the driveway and parking space to a third of the total public space)

  - Multimodal and adaptative approach (smart parking management, support to carpooling and electric vehicles, bike-sharing system, separated lane for buses and bicycles)

The whole project is divided into 6 sectors, with an either residential or scientific and industrial purpose, guaranteeing and diversity of usage and staggering of the land development program over time to make the housing, offices and services inaugurations coincide. Each sector has its own internal coherence in terms of program. In this case study, the ISO 37101 method was used at different scales on

the residential Cambridge sector. It is located at the heart of the Presqu'Île area (between the avenue des Martyrs and the Grenoble central station railways) and will be completed in 2021.

2. SITUATIONAL ANALYSIS

The 25-year land development convention was signed between the City of Grenoble and the InnoVia semi-public company in 2009. Today, the land development authority is being transferred from the municipality to the Grenoble Metropolitan authority. 2018 was therefore a pivotal year is terms of governance, and prepares a new contracting between the City, the metropolis, and InnoVia. Over the course of the political changes in power, InnoVia has already endorse the role of ensuring the continuity of the project and its encompassing dimension (regarding the areas of action for sustainable development, all of which are more or less mobilized). Also, about a third of the operations are now completed, which raises the question of operational feedback and capitalization on Innovia's work in terms of project management.

Therefore, InnoVia faces two challenges: holding the course of the project in the context of the authority transfer and improving the the project management system by evaluating its delivered projects and its dialogue with the program stakeholders (investors, public authority, etc.). In order to achieve those, InnoVia appointed a specific program assisting team and joined the ISO 37101 workshop in the framework of the ÉcoCité national program. The goal of both these initiatives is to help structure InnoVia's work for the years to come.

In the perspective of deploying the ISO 37101 method for its management system structuration, the objectives of the ISO 37101 workshop were as follows:

- **Integration of the program's identity and objectives**, in the context of the authority transfer from the municipal to the metropolitan administration;
- **Systematization of the program evaluation**, based on feedbacks on the completed projects and applied to the projects that are still in their design phase;
- **Structuration of the operational objectives**, with, for instance, the renewal of the program's prescriptive documents (which is the mission of the program assistance consulting team).

3. USE OF THE ISO 37101 METHOD

InnoVia's objective for the years 2018-2019 is to equip itself with a tool to structure is strategic and operation action for the second half of the Presqu'Île land development project. In order to do so, the ISO 37101 was experimented on two operational or programmatic projects:

- **Parc Cambridge** – selection of a landscaper for the park and structuration of its public consultation mission on the park's design;
- **Environmental Charter of the Cambridge sector** – hierarchization of the charter's objectives, cross-checking with other prescriptive documents, and possible enrichment of these objectives.

Besides, considering the scale of the global land development project and the different planning of each sector, the ISO 37101 5-steps review was limited to the analysis of the global project management (Innovia's management by the public authority). The definition of one step at which the ISO 37101 should be used is to be determined at the specific project level (i.e. Parc Cambridge or Environmental Charter).

3.1. PROJECT MANAGEMENT 5-STEPS REVIEW

AMBITION AND COMMIMENT

The will the restore the urban fabric between the Grenoble peninsula and the city-center is concretized in 2007 with the launch of the urban and environmental preliminary studies for the re-urbanization of the area. In 2009, InnoVia is granted a land development public convention to pilot the Presqu'Île project, in consultation with its public and private local stakeholders (and the GIANTS scientific and industrial consortium in particular). In the meantime, the successive changes in power and the transfer of the land development authority the metropolitan services led InnoVia to become the agent of the project's pursuit.

In addition, the importance of the dialogue culture in Grenoble (with inhabitants, investors, associations, etc.) and of the private landowners (especially the CEA) in the financing of the project made to overall governance rely on a collaborative spirit. If the commitment to the land development project is well and truly enacted, its program is often reoriented and question over the course of its implementation.

BASELINE REVIEW

Given the radical ongoing transformation of the peninsula area, the preliminary urban diagnostic focus on feasibility studies: flood risk management, geothermic energy and temperature regulation, traffic and mobility, etc. These studies impact the whole metropolitan area, since the Presqu'Île constitutes a substantial portion of Grenoble urban area, with its own distinct districts. They also served the definition of target for environmental performance of the projects (for instance, a level of ambition regarding the RT2012 norm, applicable to most new construction projects in France). Finally, the situational analysis relative to research cluster attractivity was conducted by the GIANTS consortium separately.

STRATEGY DEFINITION

Once again, the encompassing nature of the Presqu'Île project and its division into semi-independent sectors makes the definition of global priority objectives very complicated. In any case, all of the 12 areas of action for sustainable development mobilized, in particular:

- The preservation and enhancement of the geographic context, with an architecture designed to highlight the mountainous landscape, attention paid to the flood risk management, and the optimization of the site's geothermic potential;
- Health constitutes a strong focus of the experimental dimension of the project, InnoVia having appointed its program assistance team to work specifically on the maximization of its contribution to health and care (breathability, security, low-carbon emission, urban head island control);
- Mobility is a natural concern for this enclaved area (because of the surrounding riverbanks), so that soft mobility, public transportation and innovative use of the individual car occupy a central position in the conception of buildings and public space.

All the objectives of the Presqu'Île project are reported into different prescriptive documents that are applied to the project developers (investors, companies, universities, utility managers, etc.). One of InnoVia's objective in using the ISO 37101 is to structure this translation of project priorities into its land development regulation mission (like the Environmental Charter of the Cambridge sector). The goal is to check the coherence of the documents that are edited at different scales (local or national for instance) and their translation into figured performance targets in the local context. These objectives are then delivered to the concerned stakeholders and associated with indicators defined on the go by InnoVia and the municipal or metropolitan authority.

IMPLEMENTATION

The operational phase of the land development project is conventionally delegated to the usual actors (investors or project carriers, architects and engineering offices, construction firms, etc.). InnoVia defines the implementation agenda with the concerned stakeholders and endorse the role of delegated project management for most of the public space and some infrastructure development.

EVALUATION

InnoVia is also in charge of examining the projects' contribution to sustainable development (in accordance with the strategic objectives). This evaluation takes place from the projects design phase and implementation (through the environmental control for instance). This first projects were achieved in 2016, so that InnoVia and the local authority are now developing the life stage project evaluation methodology. This will assess a project's effective contribution to sustainable development, at the metropolitan scale when applicable, and could be structured by the ISO 37101 method.

These operational feedbacks help revising the project strategy and InnoVia's approach. Indeed, InnoVia will renew some of its prescriptive documents, as well as its contracting with the public authority (from the City to the Metropolis). Progressively, the ISO method could be a reference for the project pilots, at each step of the project management, and a tool to report the municipal or metropolitan authority.

3.2. USE OF THE ISO 37101 MATRIX

In 2018, InnoVia experimented the ISO 37101 method on two specific operations, with different levels of achievement: the update of the environmental prescriptions applicable to land developers of the Cambridge sector, and the appointment of landscaper for the Cambridge public park's design.

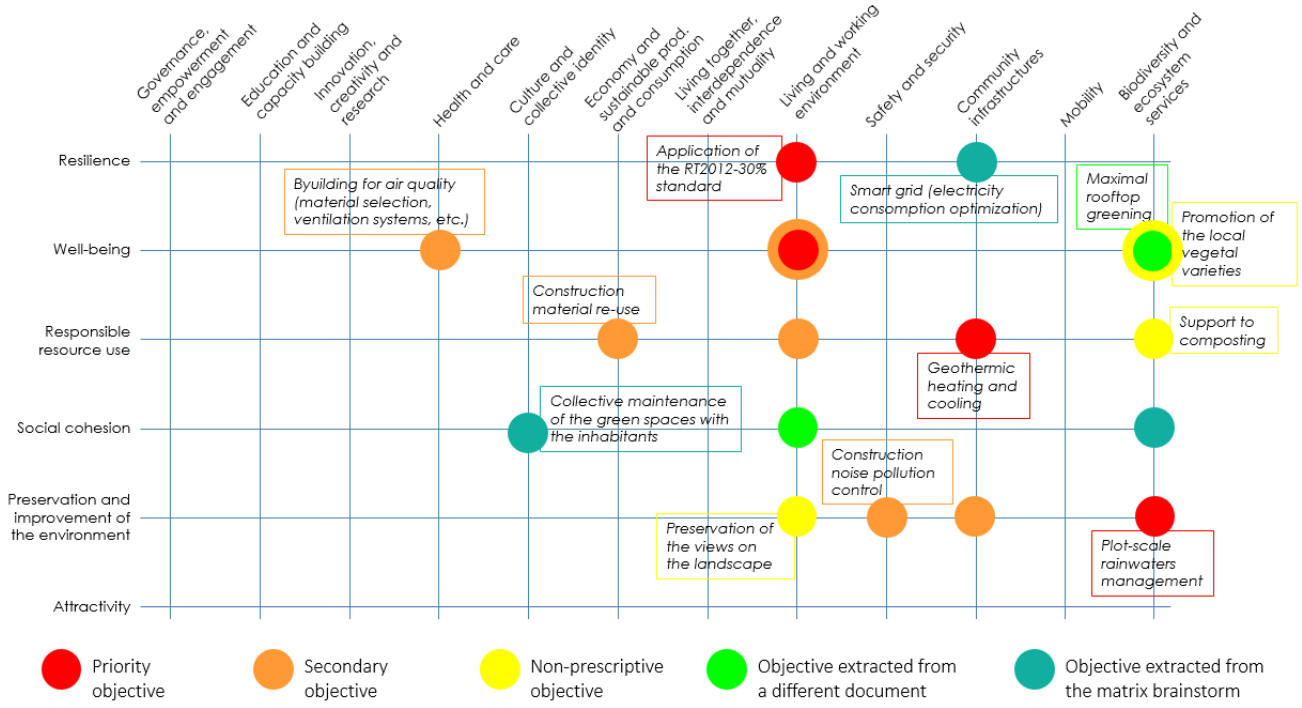
The Cambridge sector is emblematic of the Presqu'Île renewal: partly opened in 2016, it is mostly composed of housing along the main tramway artery, and now counts over 400 familial and 400 student accommodations.

RENEWAL OF THE CAMBRIDGE SECTOR ENVIRONMENTAL CHARTER

Conceived by InnoVia prior to the Cambridge sector development, the environmental charter inventories the main constraints applicable to the building design and construction processes. The objectives that specific to the Presqu'Île project, like the view on the mountainous landscape and the building contribution to air quality and heat island control, are detailed here. Other prescriptive documents, like the RT2012 standard or other national regulations on construction, are annexed to the charter. Between 2018 and 2019, this charter is being updated based on the feedbacks from the first completed operations, in order to better manage the next ones on the Cambridge sector or other sectors.

InnoVia's work on the ISO 37101 matrix was realized in 4 steps and led to the following grid, illustrating the hierarchization of the environmental objectives:

- Inventory of the recommendations of the environmental charter, depending on their areas of action and purposes of sustainable development;
- Balance of these recommendations depending on their explicit priority or their document by and target performance or an indicator;
- Brainstorm on the "empty boxes" of the matrix and addition of potential complementary recommendations for sustainable development;
- Cross-checking with other national or local prescriptive documents, in order to eliminate duplications and prepare a wider inventory of the environmental constraints.



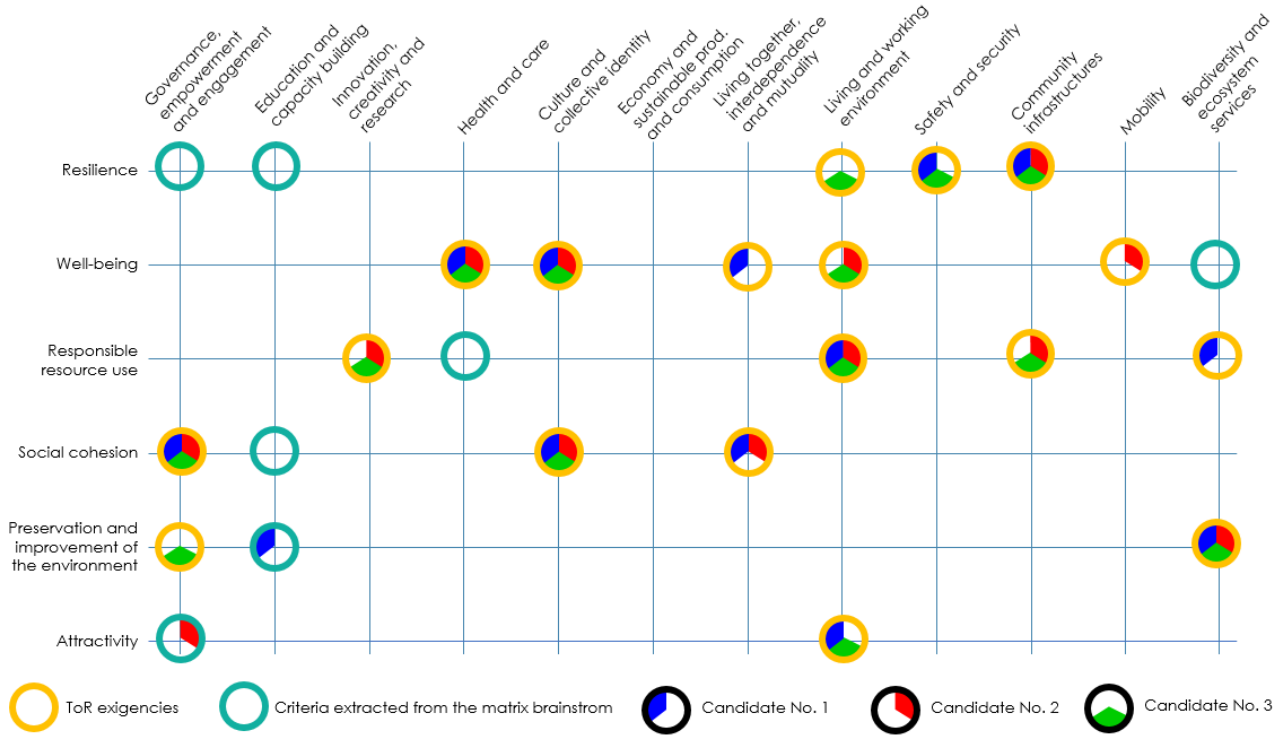
This exercise highlighted the objectives that are still to be documented by performance indicators, in order to reinforce their appropriation by the project carriers (yellow dots). It questions the coherence between the environmental charter and other prescriptive documents (green dots). Finally, it led InnoVia to work on the room for improvement of the charter as a leverage to boost the buildings' contribution to the overall sustainability of the Presqu'Île project. Naturally, some areas of action, like security, mobility or education, were not concerned at all by the environmental charter; same goes for the objectives that depends on the building use rather than its conception.

This prefigurates a wider work on the entirety of the objectives of the Presqu'Île and their translation into prescriptive documents, using the ISO 37101 method. One would have to consider all the outputs of the

land development project, from their design to their life phases. This inventory is being considered in 2019 in the framework of the mission of a "Sustainable City and Health" consulting team assisting InnoVia. It could allow the project to identify and reach a wider range of additional contributions to sustainable development.

SELECTION OF A LANDSCAPER FOR THE CAMBRIDGE PUBLIC PARK

Another experimentation of the ISO 37101 matrix's possibilities, as a synthesis and reporting tool, was conducted on the selection of a landscape and public consultation expert for the Cambridge public park. This process was initiated before the experimentation started, and InnoVia reviewed its already published Terms of References (ToR) to integrate its expressed exigencies into the matrix, without hierarchizing them. Then, the three most competitive bidders were analyzed by inscribing whether they addressed the expressed exigencies, without judging the quality of their propositions. The following grids reflects the comprehension of InnoVia's objectives by the candidates. In the meantime, a focus on the empty boxes of the matrix fed the reflection on additional objectives, absent of the ToR but corresponding to the ambition of the Presqu'Île project for this public park.



This exercise confirmed and justified the final park designer's selection, under a synthetic and easily transposable format. In the future, it could be used to ponder the quality of the commercial propositions depending of the given priorities and the quality of the answers.

Finally, the structuration of the park's program with help manage the public consultation that starts in 2019 with the current and future inhabitants, associations, etc. Indeed, the public call required only a landscape draft and intentions, plus a methodology for the consultation process. The segmented approach of the matrix, by area of action for instance, eases the organization of public workshops and communication with the stakeholders.

4. CONCLUSION AND PERSPECTIVES

These experimentations display the possibilities of the ISO 37101 method used for detailed projects in a grand land development project in its operational phase. The added values in terms of prescriptive documents coherence or synthetic reporting to elected representative for instance are very promising. They invite the ISO 37101 method users to consider the 6x12 matrix as a tool for micro- and macro-project organization and management.

In 2019, InnoVia's skill improvement (and the Grenoble metropolitan authority, who piloted this experimentation and will go further in the use of the method on another large-scale land development project – *Centralité Sud*) on the ISO 37101 method will provide more feedbacks on its contribution to urban projects management in Grenoble in the years to come.