

 <i>Liberté • Égalité • Fraternité</i> RÉPUBLIQUE FRANÇAISE
MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE ET SOLIDAIRE
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LES  
PARISCULTEURS

MAIRIE DE PARIS 



ISO/AFNOR 37101

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# 1. PROJECT PRESENTATION

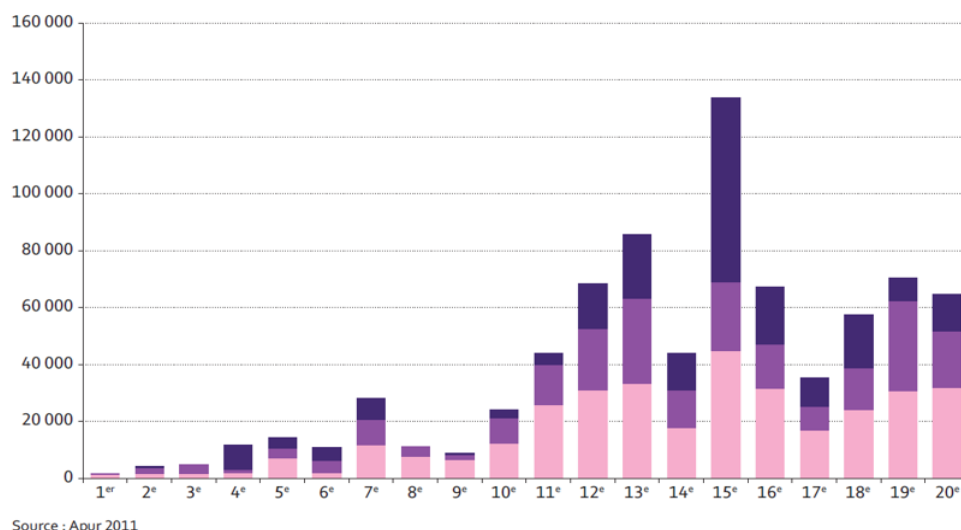
"Les Parisculteurs" is an ambitious urban agriculture development program, launched in 2016 by the City of Paris. It is based on a **series of calls for projects**, a **wide partnership with cultivable surfaces owners**, and an **expertise and communication network** piloted by the Municipality. This network includes, for instance, the regional Chamber of Agriculture, the Scientific and Technical Center for Building (CSTB), the French Historic Monuments office, two agronomics schools (Ecole du Breuil and AgroParisTech), the "Green Rooftops" association, the Technical Institute for Horticulture, and Young Farmers federation.

This program addresses a commitment made by the City Hall in 2014 to green 100 acres of Parisian walls or rooftops and to develop 30 acres of urban agriculture by 2020. These target figures were determined in coherence with a preliminary study conducted by the Paris Urban Planning Agency (APUR) in 2013<sup>1</sup>, according to which 80 acres of Parisian rooftops held a strong potential for vegetal cover. This study also presents the historical techniques of urban agriculture, the innovations implemented in other cities, and the economic potential of urban agriculture in Paris.

## Repartition of high-potential flat rooftops, by district and by surface (sqm)

- 200-500 m<sup>2</sup>
- 500-1000 m<sup>2</sup>
- Over 1000 m<sup>2</sup>

**Total: 80 acres of high-potential rooftops in Paris** (78% are located in the outer districts, out of which 16% are in the 15th district).



The "100 acres Charter" was signed in 2016 between 33 private and public or parapublic high-potential surface owners. They committed to ease the development of urban agriculture projects on their walls, rooftops, or underground surfaces, to share their operational feedback and to promote the Parisculteurs

<sup>1</sup> <https://www.apur.org/fr/nos-travaux/etude-potentiel-vegetalisation-toitures-terrasses-paris>

program. Today, the 100 acres Charter is signed by 74 major Parisian surface owners (2/3 of which are private companies), including: Enedis, RATP, Paris Habitat, the City of Saint-Denis, Carrefour group, the National Museum of Natural History, or the Galeries Lafayette Haussmann<sup>2</sup>.

Since the beginning of the Parisculteurs program, 7 calls for projects have been launched:

Calls for projects	Proposed sites	Attributed sites	Installed projects (by Dec. 2018)
Parisculteurs season 1	46 sites	33 sites	15 projects
Chapelle International	1 site – 7000 m <sup>2</sup>		
Parisculteurs season 2	42 sites	33 sites	1 project
Houblon season 1	8 sites	8 sites	8 projects
Houblon season 2	21 sites	7 sites	
Barbès – Chapelle – Stalingrad Promenade	1 site	1 site	
Parisculteurs season 3	32 sites	Ongoing	

Active projects include, for instance: 4 market gardening rooftops and a facade on Bastille Opera, an underground urban farm producing vegetables (100.000 kg/year) and mushrooms (30.000 kg/year), a 700m<sup>2</sup> saffron farm that regularly hosts pedagogical visits and culinary workshops...

Finally, the Parisculteurs program recently took a metropolitan scale, with suburban sites that were proposed on the calls for projects in 8 municipalities of Seine-Saint-Denis and Val-de-Marne departments.

## 2. SITUATIONAL ANALYSIS

The management of the Parisculteurs program was assigned to the "Greening and Urban Agriculture Division" (Pôle Végétalisation et Agriculture Urbaine), created within the Green Space and Environment Office of the City Hall. This team conducts the calls for projects (with the assistance of an expertise and management consulting pool), the public and political reporting, and the mobilization of the "100 acres Charter" network. The political reporting, directed toward the Deputy Mayor for Green Space and Environment, focuses on public communication and the evaluation of the project team's action base on **4 key-objectives**, defined at the beginning of the program:

- ▶ Number of cultivated acres (goal: 30 of urban agriculture by 2020, including non-Parisculteurs projects)
- ▶ Number of signatories of the "100 acres Charter"
- ▶ Number of direct FTE jobs created
- ▶ Promotion of innovative modes of production and network capitalization

In addition of this key-objectives review, les Parisculteurs was going through 3 program evaluation processes in 2018:

- ▶ A mandatory auto-evaluation in the context of the "ÉcoCité/Ville de Demain" investment plan (financing the engineering of the program);
- ▶ An output and environmental evaluation of the launched projects;
- ▶ A yearly operational report on the program management.

These evaluation processes address different issues (respectively: impact and efficiency of the investment plan, performance of the projects regarding the initial objectives of the program, and internal

<sup>2</sup> <http://www.parisculteurs.paris/fr/charte-100-hectares/>

organization and management). Also, the "ÉcoCité/Ville de Demain", piloted by the Caisse des Dépôts (a national financing institution) is structured by the ISO 37101 method.

In this context, the use of the ISO 37101 method by the Greening and Urban Agriculture Division has for main initial goal **to structure and optimize the general evaluation of the Parisculteurs program**. For this case study, it consists in a synthesis of the ongoing evaluation works, a review of the program and its management system, and an inventory and enrichment of the evaluation indicators using the ISO 37101 matrix.

## 3. USE OF THE ISO 37101 METHOD

The examination of the program through the 5 steps of project management prescribed by the ISO 37101 confirmed the overall direction of Les Parisculteurs: strong political commitment, solid management tools, and large mobilization of the stakeholders.

Then, the systematic analysis of the ISO 37101 matrix allowed the identification of additional positive outcomes of the program, as well as indicators to ensure their implementation, if the municipal authority chooses to integrate them in its strategy.

### 3.1. PROJECT MANAGEMENT 5-STEPS REVIEW

#### ■ AMBITION AND COMMITMENT

The Parisculteurs program offers the advantage of a straightforward, quantitative and politically supported by the City Hall: develop 30 acres of urban agriculture in Paris between 2014 and 2020. From this ambition are decided the orientations of the program and is measured most of its performance. Through the "100 acres Charter", public and private cultivable rooftop owners are associated to this objective.

#### ■ BASELINE REVIEW

The diagnosis of the potential for urban agriculture in Paris was conducted by APUR between 2011 and 2013 and resulted in an in-depth study. A specificity of the Parisculteurs program was to have this **strong baseline review before the actual political commitment**. This allowed the elected representative to set figured objectives that now rule the whole program management.

#### ■ STRATEGY DEFINITION

Les Parisculteurs program management is based on three principles: stakeholders' mobilization (rooftops surface owners in particular), programmatic "freedom" granted by the call for projects tool, and strong focus of the project team on capitalization and communication.

The partnership-based dimension of the program gives it a strong capacity to gather cultivable land on the city's rooftops, which is one of the biggest obstacles to urban agriculture development. In return, the surface owners are guaranteed a valorization of their usually unused land (rooftops, walls, underground). **This win-win equilibrium is orchestrated by the Parisculteurs project-team** (and the Deputy Mayor's office) which oversees the identification and feasibility study on the proposed sites, the contracting with the urban farmers, and the technical and communication assistance.

The choice of a call for projects program comes naturally considering this partnership-based approach and the need for flexibility induced by the diversity of the cultivable surfaces. It also allows the municipality to launch public calls on private real estate. However, it loosens the control on the content of the projects (since there are not defined by strict terms of reference), which implies a **continual adaptation of the global strategy**. Indeed, the program also has secondary objectives that can be amended, enriched or rebalanced depending on the projects. For instance, a constrained site might redirect the projects toward technology-intensive or rare varieties agriculture rather than public accessibility. Good ideas found in the farmers' candidacies are sometimes integrated in the municipal expectations from the program.

Finally, the vitality of the program relies on the double network weaved by the project team: between the 100 acres Charter signatories on one hand, and between project carriers on the other hand. In order to ensure it, workshops are organized before the calls for projects to sensitize the surface owners and to train the candidates, and both are promoted in the program's official communication platform (the Parisculteurs website: <http://www.parisculteurs.paris/>). A LinkedIn group has been created by the project team to fluidify the sharing of experience, it is now the largest social network dedicated to urban agriculture in Europe: <https://www.linkedin.com/groups/8465078/>. This network is now being extended to the suburban partners of the Parisculteurs program.

## IMPLEMENTATION

The action plan is structured in a very regular way for the application of the strategy: the program's governance combines bi-monthly technical meeting, and monthly strategic orientation meetings; a sophisticated information system, partly shared with the program assistants and stakeholders, supports the information flow, task monitoring, and decision-making process.

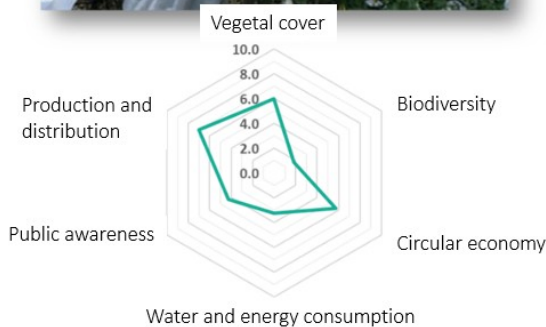
This system facilitated to the process of massive data: almost 300 rooftop structure and load capacity were inspected by the project team, 130 sites were submitted to the successive calls, 2000 candidates visited the sites, and 60 laureates are now being assisted in their installation.

## EVALUATION

In addition to the annual program management feedback, Les Parisculteurs underwent two external evaluation processes in 2018:

- ▶ On one hand, the environmental performance evaluation, on all launched sites, measuring indicators that addressed urban agriculture specifically, presented below as a qualitative report;

### Lachambeaudie (12°)



**Vegetal cover:** This site is equipped at its maximal surface with gutter, but there is not cover in winter.

**Biodiversity:** Various types of plants are grown, including rares varieties, but none of them are natural biodiversity enhancers (melliferous or indigenous plants).

**Circular economy:** Most of the equipment is second-hand, but made of plastic. Green waste is composted, but non-green wasted is not systematically recycled. Only organic inputs are used on this site.

**Water and energy consumption:** This project is efficient in terms of water consumption but consumes more power than the average. It does not contribute to the thermic isolation or rainwater management of the building.

**Public awareness:** Occasional public visits are organized by the staff.

**Production and distribution:** Most of the distribution is made on site and consumed locally. However, the site surface hinders the production capacity.

- ▶ On the other hand, the mandatory auto-evaluation related to the “ÉcoCité/Ville de Demain” investment plan is designed for a wide variety of sustainable urban development initiatives. It categorizes a project among within a series of action for sustainability and gives it indicators in common with similar actions financed by the plan. It also offers a standard to measure the level of innovation (national premiere, incremental innovation, adaptation of existing innovation), its replicability and factors of success.

Both these evaluation processes could be deepened, and most importantly incorporated in a continual improvement approach. In this perspective, the following suggestions were made:

- ▶ Analyzing the results of the active sites could allow a re-prioritization of some objectives, especially for the future call for projects;
- ▶ Encouraging the collaboration between the project carriers and surface owners on the evaluation process could reinforce their mobilization and networking;
- ▶ Going further than the local promotion of the projects, and using the evaluation results to communicate on the program at the national or international level;
- ▶ Using the ISO 37101 method to benchmark the site projects with each other, or the Parisculteurs program with other local initiatives to develop urban agriculture (in order to identify best practices)<sup>3</sup>.

These ambitions are difficult to reach for the Parisculteurs project team in 2019, considering the operational preoccupation of the Parisculteurs season 3 call for projects. However, they might be integrated in a potential renewal of the program in the next municipal term (2020-2026).

## SYNTHESIS

The project management 5-steps review shows a solid program that matches the recommendations of the ISO 37101 method, with some room for improvement:

<sup>3</sup> For instance, with the framework of the ISO 37101 workshop organized in 2018 by the ÉcoCité national program for green cities, the Parisculteurs project team dialogued with the manager of the Montévrain agro-urban core (a land development project including 20 acres of the market farming in the East of Paris region). It was an occasion to share experiences and optimize the positive outcomes of their respective projects.

- ▶ **The commitment**, explicit and shared with all the stakeholders, for 30 acres of urban agriculture by 2020, is a strength of the program.
- ▶ **The baseline review** is densely documented by the preoperational APUR report, and thus ensures realistic ambitions, even though the program goes beyond the “rooftops only” approach of the initial diagnosis.
- ▶ **The strategy** ensues from the initial objectives in terms of outputs (30 acres) and outcomes (food production, employment, etc.), but could be more instrumented, by mobilizing more distant areas of action (education, health) or by quantifying the outcomes results (number of FTE jobs created).
- ▶ **The implementation** is in the hands of a well-equipped project team and benefits from the close monitoring of the Deputy Mayor.
- ▶ **The evaluation** of the program now has to address the issue of its continual improvement, by optimizing its positives outcomes, in the perspective of its renewal in 2020.

## 3.2. USE OF THE ISO 37101 MATRIX

### ■ CONTEXT: EVALUATION(S) OF THE PROGRAM

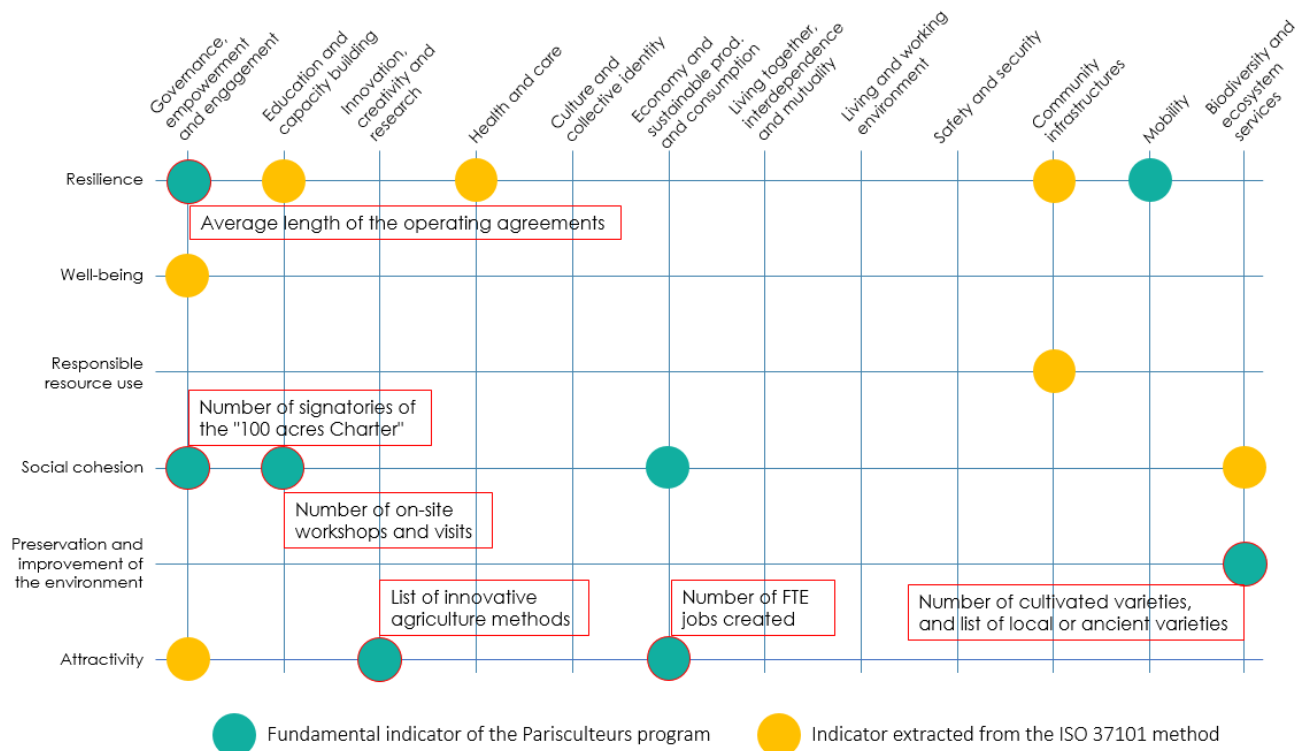
As presented in the situational analysis, and in addition to the review of the initial objective (toward the 30 acres of urban agriculture), the Parisculteurs program underwent a triple evaluation: ÉcoCité/Ville de Demain, environmental performance evaluation, and feedback on the program management. Besides, the program will soon be review on its side contribution to other municipal program, like the Biodiversity Plan.

Finally, the scale taken by the program (with the 3<sup>rd</sup> wave of call for projects and the implication of suburban municipalities) invites the public authority to study its replicability and its international comparison. This ISO 37101 method constitutes an appropriate tool to do so.

### ■ INTEGRATION OF THE FUNDAMENTAL OBJECTIVES

The first step of the use of the ISO 37101 matrix for the Parisculteurs program evaluation is the integration of its existing objectives and/or indicators. These are the fundamental goals of the program (number of cultivated acres, number of jobs created, number of the 100 acres Charter signatories) and its secondary objectives, linked to urban agriculture or formulated in the later call for projects.

These initial objectives are integrated in the corresponding boxes of the following 12 areas of action and 6 purposes grid, and translated into indicators when relevant. Only the fundamental goal of the 30 acres is not reported here.



All these objectives are validated, and reviewed, by the elected representatives, even though they are not systematically translated into measurable indicators.

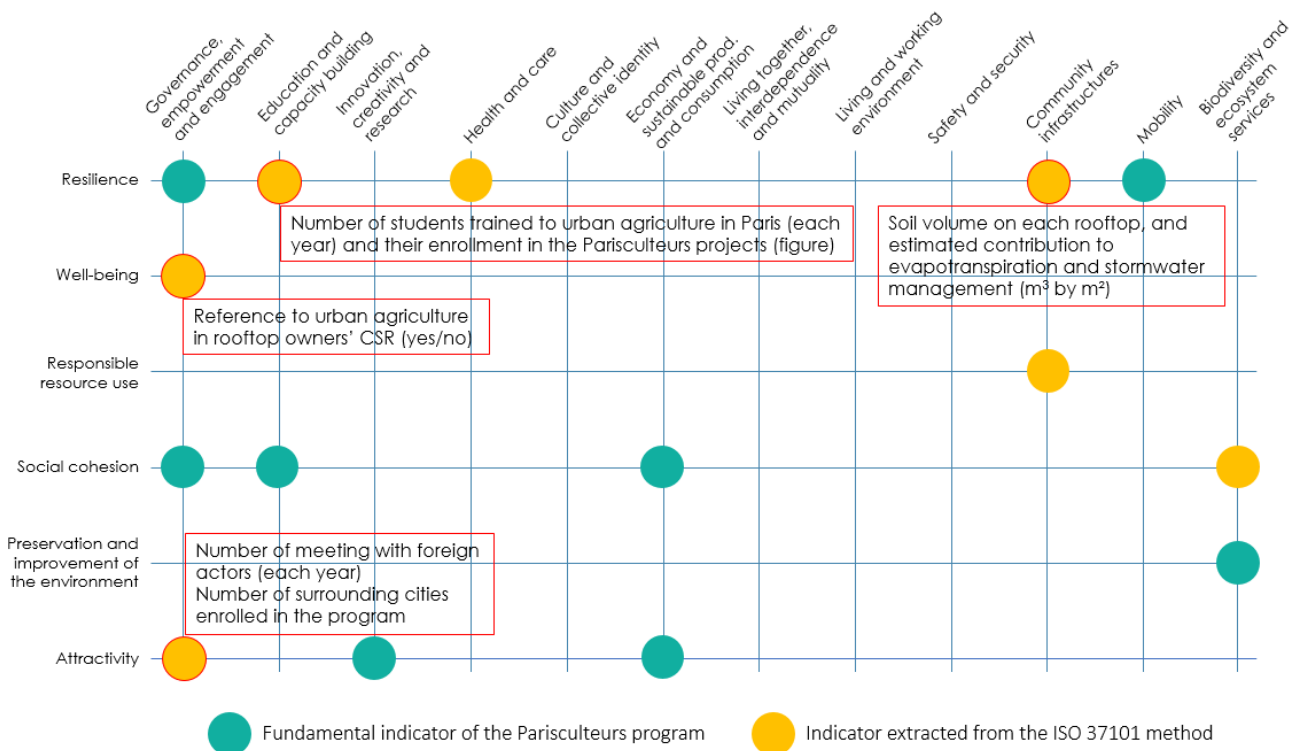
Regarding these elementary objectives, the matrix facilitated to the confirmation of the project team's propositions to the Deputy Mayor and structured its work (highlighting the objectives that were not documented by indicators). The next step, as we will see, is the enrichment of these evaluation with complementary objectives, extracted from an examination of the of the potential positive outcomes of urban agriculture and using the ISO 371P1 matrix.

**DEFINITION OF ADDITIONAL OBJECTIVES**

Once the fundamental indicators are mapped, the project team used the ISO 37101 method to brainstorm on the "empty boxes" of the matrix. The principle is, for each area of action for sustainable development, to identify the potential positive outcomes of the Parisculteurs program, to assign them priorities, and to document those that are easily achievable with an action plan (usually, a recommendation in the next calls for projects) and an indicator.

About 15 additional indicators were identified, covering almost all the areas of action. They were then selected based on their operational and conceptual measurability, to isolated 4 indicators that will be integrated in the next instance of environmental performance evaluation, in 2019. They are presented in the following grid:





Other objectives that are less measurable will possibly be reported into the next calls for projects, depending on the political priority they are assigned. The proposition of a series of additional indicators reinforced the political commitment to the program evaluation, and the collaboration between the technical and political levels.

## 4. CONCLUSION AND PERSPECTIVES

In the end, the ISO 37101 method comforted the management system of the Parisculteurs program and objectivized its strengths (the partnership-based approach and the preliminary diagnosis, documenting the political commitment). It also offered leads to structure the evaluation processes ongoing in 2018. It mostly helped structure a fragmented evaluation process and enrich the program with easily achievable complementary objectives.

The project team's skill improvement on the ISO 37101 method will nourish the pursuit of the Parisculteurs program, both in terms of local renewal and international promotion. The future calls for projects will take a wider range of objectives into account, in order to reinforce the selected projects.

Beyond the City of Paris' action, French local authorities will benefit from this complete sharing of experience on urban agriculture development at the municipal level, made replicable by the ISO 37101 method.