

JOURNAL

PROJECT

PUJ - Prato Urban
Jungle

📍 Prato, Italy

TOPIC

Sustainable use of land
and nature based
solutions

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Prato Urban Jungle - Journal #3

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The PUJ project has continued experimenting and testing nature-based solution to create urban jungles and forests in Prato!

This journal will explore the development of the project both at local level, through workshops and citizens initiatives in the local sites, as well as the impacts on a broader European scale.

After four years of implementation, Prato Urban Jungle has made a positive impact on the city of Prato and has garnered recognition on the European stage.

On the one hand, within the Prato Urbact Jungle project, Legambiente developed the ["Create Your Own Jungle"](#) course, where during the classes, participants learnt how to create their own urban jungle, thus contributing to the development of increasingly green, healthy and resilient cities. They learnt about fundamental themes for growing their own jungle in the best possible way: from the theoretical fundamentals governing urban forestry interventions to the design of various types of gardens, as well as small, useful and ecological tips for green care and the analysis of some case studies. The courses also allowed students to follow not only a theoretical but also a practical path, designed to provide useful insights and suggestions to the observation, understanding and care of our green spaces.

At the same time, the City of Prato was recognised under the [EU Mission for Climate-Neutral and Smart Cities](#) which offers a great potential towards the upscaling of the PUJ experience. In fact, as the Municipality of Prato has been selected by the European Commission amongst the cities that will participate in the mission "100 smart and climate-neutral cities by 2030", the so-called "Cities Mission", is a highly relevant upscaling experiences for the Prato Urban Jungle (PUJ) project.

In the two-year period 2022-23, the mission will be able to count on approximately 360 million euros of funding from the Horizon Europe program, to launch innovation paths to achieve climate neutrality by 2030, based on these key sectors, such as energy efficiency and production, transportation, waste management, industrial processes, agriculture, forestry and other land uses.

We have interviewed Valerio Barberis, Deputy Mayor for Urban Planning and Environment of the City of Prato to know more about the work being carried out towards making Prato a climate neutral and smart city in Europe.

Finally, the PUJ project in Prato has been selected as one of the twelve good practice cities within the [study on Integrated Territorial Development](#) (ITD) as part of the analysis of all Urban Innovative Actions projects. The research has been carried out through the analysis of the available documentation as well as through interviews with the municipality and local stakeholders in order to assess how the project has managed to be implemented through an ITD approach.

Read through the report to discover more about the PUJ project!

Partnership

Prato Urban Jungle mobilises a great amount of knowledge and resources within the city of Prato. The partnership consists of the **Municipality of Prato**, as leader partner, and other seven partners involved in the completion of the activities of the project: **PNAT, Boeri Architects, CNR IBE, ESTRA, Legambiente Toscana, greenApes and Treedom**.

The Municipality of Prato is responsible for defining the management strategies to ensure sustainable use of the city's territory. In addition to the new urban forestry plan, the Municipality of Prato in recent years has developed and adopted various tools and policy plans with a view to ensuring the sustainable use of the territory. **PNAT** and **Boeri Architects** have taken care of the design phase. PNAT is an academic spin-off of the University of Florence, and particularly, is composed by designers and plant scientists that use the comprehension of plant patterns and behaviours to inspire innovative design concepts and products. Their goal is to build and promote synergistic relationships between the natural and artificial environment.

Cities must no longer be places separate from nature, but must become a continuation of the nature

Stefano Mancuso, Co-founder and coordinator of PNAT

Boeri Architects operates in the fields of architecture, urban design and urban planning all around the world with a focus on the use of green in architecture.

Urban forestry is not only a way to change urban spaces, but also to change living spaces

Stefano Boeri, architect and urban planner

The Institute for BioEconomy of the National Research Council (CNR IBE), that works in the definition of strategies and in the development of technologies and operational solutions that contribute to the resilience and sustainability of territorial and productive systems, will collect and monitor a series of environmental indicators on the site of the pilots, and in other strategic position of the municipality. The big amount of environmental data that will be collected are managed and stored by ESTRA, a leader in the distribution and sale of natural gas and gpl, in the sale of electricity, as well as in telecommunications, in the design and management of energy services and in the production of energy from renewable sources.

The intervention on Consiag - Estra headquarter will make it possible to recover living spaces and to give a new concept to corporate welfare

Paolo Abati, general director Estra SpA

Education and awareness of sustainability and greening and their related benefits are two other main concepts of PUJ. In this regard, Legambiente, which is one of the main Italian environmental associations, will engage with citizens and schools throughout courses, and other awareness campaigns. While, greenApes, a certified Benefit Corporation, through a digital platform will involve citizens and reward their sustainable actions and lifestyles. Lastly, Treedom, the only web platform in the world that allows you to plant a tree remotely and follow it online, will develop a new strategic approach to urban planning which, by involving stakeholders through an innovative digital platform and governance model, will be able to support a more inclusive urban green development in cities.



Partnership of Prato Urban Jungle © author's elaboration

Local activities

The Prato Urban Jungle has developed a number of activities over the past months, through a number of workshops and citizens' initiatives, digital engagement and platforms.

3.1. Local workshops

In order to involve citizens of all ages, a number of workshops have been carried out targeting children, allowing to reach out also to the parents and grandparents. Out of these activities a very relevant one has been "Draw your own idea of City", getting children to explore through imagination the future of the city of Prato. The workshops took place in a number of schools, getting elementary school children to make proposals that will be adopted in the Strategic Plan of the City of Prato.





www.pratourbanjungle.it
www.pratoforestcity.it

Disegna la tua idea di città flyer and drawings. Images by City of Prato

3.2. Create your own Jungle

"Create Your Jungle" course was composed of a series of five free meetings, of a duration of two hours each, where participants can learn how to create their own urban jungle.

The first module of the course focused on the theoretical foundations behind urban ecosystems and natural ecosystems, where topics about ecosystem services, biodiversity, climate mitigation and adaptation were discussed in relation to how to reconcile city and nature. Based on the analysis of some specific data starting with the case study of Prato, participants discussed what nature-based solutions are, what is meant by urban forestation and renaturation.

The second module of the course addressed how to design a green space, analysing some types of green spaces, from historical gardens to natural gardens, utilitarian gardens, not forgetting green walls, green roofs, indoor environments. Participants delved into some parameters that can be tools with which to evaluate the effectiveness of a green design.

The third meeting looked at the key elements of green design: from species choice, to soil, to exposure. Here participants discussed water needs and water management, as well as how to consider the various types of vegetation: tall trees, shrubs, and herbaceous plants, analysing issues related to alien species, particularly invasives. The plant multiplication and the possible benefits of self-multiplication of plant material in our green spaces was also addressed.

The fourth module, in which there was also a hands-on activity, addressed the fundamental topic of green space maintenance. Green space, being alive, must be followed over time with proper maintenance. Here the topics of pruning and management of waste material, mowing, irrigation, soil tillage, fertilisation, pathogen control were discussed.



Create your own Jungle course. Photo by City of Prato

The fifth and final meeting, was also partly devoted to a practical activity, looking at some examples of green realisations, particularly those envisaged in the Prato Urban Jungle project, but also some realisations of both small and large scale taken from other cities. Participants spoke about cities that are considered virtuous with regard to the choices made in the area of urban green and what actions our cities can choose today to improve the quality and increase the presence of green in the city.

3.3. Digital engagement

Through the greenApes app it is possible to [reward citizens' sustainable actions](#): users accumulate reward points through their sustainable actions, exchanging ideas and completing challenges.

Thanks to the app's success among users, the programme of initiatives and reward mechanisms underwent important changes.

Organisations that join as partners gain visibility in project communications and on the app, rewarding their customers and users and in fact allowing them to contribute to the financing of social and environmental projects through their own eco-sustainable actions (thus not requiring a financial contribution, which is taken over by a sponsor or foundation).

Members can:

- collect credits through their own actions that can be donated to support active social and environmental initiatives on the greenApes app.
- Donations of one's credits allow users to unlock more and more attractive rewards. Furthermore, within the greenApes community, participants can exchange and share their experiences and good practices.
- Membership is free of charge and guarantees visibility in the initiative. Simply choose an offer, a facilitation or a small prize to be made available to virtuous citizens. Some examples: thanks to donated TWIN points, users can redeem prizes that are conveniently divided into categories such as leisure, food, family, personal care, eco-friendly clothing and courses. A way of thanking those who are committed to a more sustainable future.

Associations in the area can also participate by reporting events and voluntary and participatory actions that involve the active involvement of citizens.

In the coming months, companies and organisations in the area will also be able to contribute directly to planting and urban forestation actions.

3.4. Urban forestation app

[Prato Forest City](#) (PFC) is the new strategic approach to urban planning, developed by the Municipality of Prato. At the Pecci Center for Contemporary Art on the 2nd of December was presented the [Prato Forest City](#) (PFC), a digital platform, developed by Treedom which allows citizens to actively participate in the creation of green areas together with the Municipality as well as to monitor the environment and promote urban well-being. This digital platform is part of Prato Urban Jungle (PUJ) project, with the aim to renovate districts of the city by developing areas with a high-density of green - the so-called urban jungles.

The promoters of the initiative are the Municipality of Prato in partnership with the AMI Foundation and the Azienda USL Toscana Centro, which will undertake to collaborate to design and implement specific interventions to spread healthy lifestyles among citizens and enhance green areas as an ecosystem service for public health.

Prato Forest City is a platform for:

- citizens, who will be able to carry out various actions, all important to promote sustainability in the city thanks to the voluntary and crowdfunding initiatives planned.
- businesses, who can play an important role and have a positive impact on the territory by supporting the promotion of green initiatives envisaged by the project.
- associations, who will be able to enhance their activities in the field of environmental protection and environmental education.
- schools, who will be able to enhance their activities in the field of environmental education, creating specific actions for teachers and students.

PFC intends to eliminate fine dust, offer green areas for relaxation in contact with nature, integrate existing trees with others around fitness equipment and new portions of gardens. Creating wooded areas means improving the lives of all citizens. For this reason, in addition to the planned interventions with companies, citizens are now called to become protagonists to make Prato a modern and environmentally friendly city.

International impact

4.1 Climate-neutral and Smart Cities Mission

The big framework is the European Green Deal - a vision for Europe where Europe will be the first continent to become carbon neutral by 2050. Starting from the fact that urban areas are the most responsible for the climate emergency we are facing, and of course urban areas and cities impact more than 70% of CO2 emissions. The EU Commission developed the [climate-neutral and smart cities mission](#), asking European cities with more than 50000 inhabitants to show the strategies they developed in the last years for climate neutrality and urban resilience, and to show their future plans for a climate neutral action. These [100 cities](#) - and Prato is within that list - are the avant garde at the EU level in terms of building strategies, action-, and governance models to develop a climate neutral plan in order to become climate neutral by 2030.

Since 2018 the city of Prato is one of the first EU cities to have an [urban forestry general action plan](#), that is the document providing all the strategies, all the actions on urban resilience and forestry.

At the same time, from an environmental point of view, the city has been working on several aspects, such as how do we provide energy to public and private buildings, how do we provide energy efficiency programs and renovation of existing public and private buildings. Creating a governance model to put together all the stakeholders involved, energy, societies, that stakeholders of the building sector, banks, finance and so on.

Also in connection to urban mobility, there is a plan that works in the direction of reducing CO2 emissions. Somehow the vision for the city is to put together all these strategies that are now part of several programs - [Prato Forest City](#) is the program for urban forestry, [Prato Urban Jungle](#) is developing nature-based solutions in the city, [Prato Circular City](#), an accelerator for the transition to circular economy in the city, and [Prato Digital City](#) - digitalization and the use of data in order to give data a scientific approach to political decisions. All these documents are now part of the document for the carbon neutrality of the [city](#). All this experience was built upon the Prato Urban Jungle project, which is now considered as part of the bigger strategies of the city.

The City of Prato is now asked by the EU Commission to have an overall strategy at city level, and what is relevant for the city of Prato is that along with Florence it is one of the nine Italian cities that have been selected, so we can now work in one of the densest areas of Tuscany, also at metropolitan level. The first task is to define a governance model where the programmes that can be developed directly by the public administration and those that can be developed directly by the stakeholders of the city should, and must, be within the same framework. Just like the other 99 cities, the City of Prato has the mission to develop a plan and a programme where both the actions and the funds that are necessary to develop this action plan, but at the same time it's also very important to develop governance models in terms of urban regulations, how can climate neutrality and carbon neutrality be a strategy for the industrial sectors of the city.

4.2. PUJ as a case study for Integrated Territorial Development

The concept of Integrated Territorial Development (ITD) is widely recognised and has been at the core of EU urban policies for several decades. The [New Leipzig Charter](#) has proposed 4 key principles that are commonly used as good urban working principles:

1. Place-based approach: focusing urban strategies at a coherent scale, beyond administrative boundaries, in order to foster endogenous urban transformation and reduce socioeconomic inequalities.
2. Integrated approach (multi-sectoral): coordinating all areas of urban policy in particular the environmental, social and economic dimensions. It aims to overcome the political silos that do not take into account co-dependencies or interdependencies with other sectors.
3. Participation and co-creation: involving all urban actors to strengthen local democracy and letting citizens having a say in processes that affect their daily lives. It includes new forms of co-creation and co-design practices that can help cities in managing conflicts, share responsibilities, find innovative solutions.
4. Multi-level governance: tackling challenges jointly across all levels of urban and spatial policy. It requires the cooperation of all societal actors, including the civil society and the private sector. Vertical and horizontal multi-level and multi-stakeholder cooperation, both bottom-up and top-down, are key to good urban governance.

The Prato Urban Jungle project has been evaluated, amongst the 86 project funded in the first round of UIA projects, as [a good practice for Integrated Territorial Development](#) as it demonstrated in practice how the different elements of the ITD approach could be combined from idea conception to evaluation of the project results throughout the entire implementation of the project activities. The PUJ project demonstrated how it could combine being place-based, participatory, multi-sectoral and have a multi-level governance approach combined in a successful impact on the municipality.

In fact, the goal of the Prato Urban Jungle – PUJ – project was to renew its city districts with greater social, productive and environmental dimensions turning itself into an urban jungle through the added value of nature based solutions (NBS) and the plans developed by the city of Prato to use plants in the improvement of the local urban conditions ([more information here](#)).

What does place-based mean in the PUJ project?

In the Prato case, being place-based implies the purpose of having such different places is to test the urban jungle concept in different environments, so that the city's ambition to become a forested city can be achieved. This was explained during the hearings by a representative from the city:

Of course, we decided to test these innovative solutions on three different pilots, from various eras, and, one of those was on social housing for the buildings, and the other one was on their own private enterprise. So we pretty much involved [ESTRA](#) as a partner in this step, because we also wanted to work on the benefits for employees and SMEs. And then Macrolotto zero, was in a very problematic area of the city that is characterised as an industrial area with a lot of big buildings that are not used anymore. And where we don't have a lot of green areas, and also with social problems in the area, we also have the settlement of the big Chinese community. And so we also had to work on integration and besides on the greening of the Area.

Combining citizen engagement and innovation tools into the Prato was essential through the [Junglathons](#) were a very important part of the PUJ project. These Junglathons were three days of intensive co-design with stakeholders, citizens, residents and creatives. Prato Urban Jungle deployed a number of participative approaches such as placemaking activities and events, combining them with longer-lasting actions such as the development of digital monitoring platforms and awareness toolkits to ensure long term durability and lasting impacts on the ground. Through an innovative approach applied to a design thinking process, project partners involved the citizens of the Soccorso (St. Giusto) and Macrolotto zero neighbourhoods, through anthropological walks and discussions as a preparatory phase to the co-creation workshops. The aim of the Junglathon was that the ideas that emerged would be taken into consideration in the completion phase of the PUJ interventions. The Junglathon has seen intergenerational and heterogenic participation, where young students, the elderly and designers confronted each other. At the end of three participatory days, four of the project concepts from among several conceived during the workshops were presented with respect to the two areas of St. Giusto and Macrolotto zero.

Prato Urban Jungle in Italy, aiming at creating urban forests in three different urban areas, relied on a partnership including architecture studios, a research institute, a public utility provider, as well as environmental SMEs and an NGO. In order to coordinate cooperation between partners, the consortium used participatory and collaborative design approaches, shifting from plenary meetings to working groups involving a smaller number of participants and therefore allowing for more operational work. A key element in the project's multi-stakeholder cooperation was the platform [Prato Forest City](#) facilitating the cooperation between public bodies and citizens, associations or private businesses, helping bottom-up initiatives to promote urban forestry projects. The platform acted as an "organisational interface between municipality, civil society and private partners" helping the city "manage conflicting interests, share responsibilities and find innovative solutions while also reshaping and maintaining urban spaces and forming new alliances to create integrated city spaces."

Greening of parts of cities can make them more attractive but could also lead to gentrification to the detriment of long-standing residents. This is a potential risk in PUJ Prato, though one that the city is aware of. National regulation can affect how innovative financial instruments are used and may cause residents issues with taxes and benefits.

The PUJ project has made great efforts to link with investments made under ERDF operational programmes, as Integrated Sustainable Urban Development adds value in both directions and may help ensure financial sustainability.

In Prato Urban Jungle the cross-sectoral approach aimed at overcoming the political silos that fail to take into account co-dependencies or interdependencies with other sectors. The Prato Urban Jungle project brought together different professional disciplines, including among others social scientists, architects, urban planners, designers, environmental researchers and botanists, in a multi-stakeholder partnership in order to use urban forestry as a means for the environmental, social and economic regeneration of a former industrial city. The city was able to cluster around its cross-sectoral approach a number of European funds, starting from structural funds of the Toscana Region as well as other direct funds of Horizon Europe and other programmes.

Mapping the PUJ project against UIA challenges

Challenge	Level	Observations
1. Leadership for implementation	High	The City of Prato has a very solid leadership of the project both at political level, with the city councillor for urban planning and environment as well as the one for economic affairs being highly committed and the Mayor being very well informed about the project activities, as well as at the administrative level, with the EU funds, urban planning and environment depts being involved.
2. Public procurement	High	Currently the public procurement within the project appears to be in time with the expected plans. At the same time the project is having some readjustments due to the increase of energy and material costs in construction.
3. Integrated cross-departmental working	High	The most relevant departments for the implementation of the project are highly committed, these being the EU funds, urban planning and environment departments.
4. Adopting a participative approach	Medium	The project partnership has invested a great effort in reaching out a wide range of stakeholders of all ages and interests. The various pilot sites are receiving a high level of local attention, the only one which managed to do so less is the Macrolotto Zero, which only marginally managed to engage with the local Chinese community.
5. Monitoring and evaluation	High	The monitoring of activities is being well carried out, its evaluation is adequate, at least given the initial stage of the project.

6. Financial Sustainability	High	Currently the project pilots are developing a plan for their long-term sustainability after the project ending. As previously mentioned the only point of attention is posed on the increasing energy and construction material costs, which is not dependant on the City of Prato but rather on the international economic context.
7. Communicating with target beneficiaries	High	The communication team hired for the project is highly integrated within the partnership and committed in narrating the project developments through different media.
8. Upscaling	High	The City of Prato and the PUJ partnership are greatly investing on the possibility of further developing the project learnings. Aside of conferences and reports, the project's main upscaling achievement has been to take part to the Climate Neutral and Smart Cities Mission of the EU.

Takeaways

The Prato Urban Jungle is heading towards its end, for this reason it is essential to focus on sustaining and scaling up, which are ways in which cities can leave a legacy from their project. In fact, generally cities participating in EU funded projects should be able to find ways to continue their activities after developing good practices. It is also important to ensure that practitioners and decision makers at all levels have access to the knowledge and know-how that was created during an innovative project to improve the design and implementation of integrated territorial development strategies and action plans in the new programme period.

Based on the PUJ experience carried out until now, some of the main key learnings can be identified as:

1. Dedicate specific resources and work towards sustaining and scaling up the project from the outset;
2. Plan for its financial sustainability for the medium term after the UIA financing ends;
3. Replication starts as a local level, so it is important to understand from the outset what it entails, in organisational terms, to replicate the actions of a project previously implemented elsewhere;
4. Engage in transnational exchange and transfer activities;
5. Mainstream the approach developed for future strategies at local and national level.

Climate adaptation

See on UIA website

