URBACT

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Interreg

GreenPlace

INSPIRING PRACTICES on NATURE-BASED SOLUTIONS and GREEN INFRASTRUCTURE

January 2025

INTRODUCTION

The GreenPlace network

GreenPlace is an URBACT network consisting of ten partners who aim at developing a set of activities for 'recycling' unused urban areas, using social participation tools. The project takes into account not only the regional specificities and conditions of each of the partners but also introduces greenery as a key factor in limiting climate change in urban areas. It is running from July 2023 to December 2025.

It is led by the City of Wroclaw (Poland) and is composed of 9 project partners:

- Boulogne-sur-mer Développment Côte d'Opale - France
- Bucharest Metropolitan Area Intercommunity Development Association - Romania
- Cehegín - Spain
- Limerick - Ireland
- Löbau - Germany
- Nitra - Slovakia
- Onda - Spain
- Quarto d'Altino - Italy
- Vila Nova de Poiares - Portugal

More information and contacts : https://urbact.eu/networks/greenplace.

Overview of the Inspiring practices on Nature-Based Solutions and Green Infrastructure

The practices presented here were exchanged during the Core Network Meeting of the GreenPlace Network which took place on 15-16 October 2024 in Nitra, Slovakia.

Nature-Based Solutions and Green Infrastructure

COMBINING LAND AVAILABILITY OPPORTUNITIES IN THE CITY CENTRE

Identity

- Boulogne-sur-mer, France
- 40,900 inhabitants, 8.42 km2
- https://www.proludic.fr/inspirations/etudes-de-cas/une-aire-de-jeux-sur-le-theme-de-la-baleine-boulogne-sur-mer-france/

Initial challenge

- Heavy rains cause flooding of the sewage system and result in poor water quality
- A bus station in the city centre was located rather far from the train station
- There was a lack of playgrounds for children in the centre

Proposed solution

The city of Boulogne decided to 'kill several birds with one stone': solving the flooding problem, providing new services for families in the city centre and relocating the bus station. The proposed solution was to implement a big retention pond of 4,000 cubic metres at the lowest point of the city: the ideal place was the former location of the bus station, place de France.

The first step was to relocate the bus station : the bus station was moved closer to the train station. This appeared to be an opportunity to move it to a more convenient place.

The second step was to create a children playground on the top of the pond: it was a smart way to use available space in the town centre and an opportunity to create a missing service.

Changes it brought

The solution has solved the water management problem.

There is a new park in the city centre, used by many families, echoing the marine theme.

Transfer potential

It is necessary to have several services working together, in Boulogne-sur-mer's case:

- The technical service oversaw the retention pond and got specific funding for it (from the Agence de l'eau)
- The family and youth service got other funding for the children playground
- It was also necessary to work with Marineo (the local transport company)

Main takeaways

Use any available space in your city as an opportunity to create lacking service

Nature-Based Solutions and Green Infrastructure

BLUE INFRASTRUCTURE FOR BETTER CITY CONNEXION

Identity

- Boulogne-sur-mer, France
- 40,900 inhabitants, 8.42 km2
- https://www.agglo-boulonnais.fr/information/publications/agglorama-n13-1132
- https://www.agglo-boulonnais.fr/fileadmin/5-Medias-WEB/Publications/Agglorama_mag/Agglorama-21.pdf

Initial challenge

Boulogne sur mer Capecure industrial park (dedicated to fish transformation and conditioning) used to be connected to the motorway via a high-speed road passing close to the town centre. At the same time, there was a lack of cycle tracks in the city and very few people used to cycle. There was also a a lack of sport amenities.

Proposed solution

The high-speed road was relocated further away from the city centre. The previous road was into a one-way road.

The available space from the recovered lane was used to create a cycle track, a pedestrian path and various sports and leisure amenities along the river.

Changes it brought

- Good cycling/walking connexion between the centre and south of Boulogne : indeed, many more cyclists than before !
- Creation of new leisure opportunities: skate park/ sport ground/picnic areas…

Transfer potential

- Political commitment is important
- Important to secure a high budget

Main takeaways

- When a space is available in your city, think about slow connexion opportunities!

Nature-Based Solutions and Green Infrastructure

ABANDONING INSTEAD OF REVITALISING FOR NATURE OUTBURST

Identity

- Bucharest, Romania
- 1,883,425 inhabitants, 412 km^2
- https://www.apnv.ro/

Initial challenge

During the socialist era, this area was to become an artificial lake and watersports complex. The project was never completed. Abandoned for 30 years, the place was used for informal settlement and illegal waste dumping.

Proposed solution

In 2012, stunning wildlife photos of the abandoned Văcărești area were published by National Geographic in the Romanian edition. The images soon became a viral sensation and sparked widespread interest about the area. Motivated by this, a group of enthusiasts formed an NGO, aiming to transform the site into a wildlife sanctuary within Bucharest. The idea of preserving this vital urban oasis was embraced by Bucharest's citizens, who recognized its importance in a city with very limited green areas. In 2016, recognising the uniquenes of this place, the Romanian Government declared it a Nature Park, giving it protection status. Văcărești Natural Park became the first urban natural park in Romania as well as the largest contiguous green area in Bucharest, covering 183 ha. It is currently managed by an administrative body, under the the City Hall's authority. The mission of Văcărești Natural Park's Administration is to: protect the biological diversity, promote healthy recreation and ecotourism, develop and support educational activities for nature observation and conservation, support scientific research for landscape conservation.

Changes it brought

Văcărești Nature Park has transformed a long neglected territory into a vital urban oasis, benefiting both nature and the city's residents. It is significant both environmentally and socially. Environmentally, it manages a thriving ecosystem, promoting biodiversity and providing a sanctuary for wildlife in the heart of Bucharest. It also generated the cleaning up of large amounts of illegal waste, while safe-guarding this semicentral urban area as a green, unbuilt oasis. As the largest green area in the city, it is also a major contributor to air quality. Socially, it has become a source of pride and a symbol of urban renewal, drawing national and international attention. It is a popular destination for locals, offering a much-needed escape and a place for recreation, education, and environmental awareness.

Transfer potential

- The concept can be replicated for any large, abandoned urban area.
- It helps if the area is dificult to access or is relatively isolated by major infrastructure (e.g.: raildoad). Văcărești is surrounded by a large dike.

Main takeaways

- Whenever in doubt regarding the future development of a derelict area, you can trust nature to take over and make it better.
- Low-to-no human intervention can generate a spectacular transformative effect.

Nature-Based Solutions and Green Infrastructure

URBACT III HEALTH AND GREENSPACE, CONNECTING HEALTH & GREEN SPACES

Identity

- Limerick , Ireland
- 102,287 inhabitants, 61.3km2
- https://www.limerick.ie/council/services/business-and-economy/eu-programmes/healthgreenspace

HEALTH & GREENSPACE
Greener Cities, Healthier Communities

Initial challenge

There are a number of green infrastructure related challenges that co-exist across the city: while Limerick city has extensive areas of greenspaces, many are small, fragmented, and poorly linked with any health and environmental potential underdeveloped. Green infrastructure in the streetscapes is also underdeveloped. Green walls/roofs are virtually unknown and there are relatively few street trees. Cycling and walking infrastructure has progressed in recent years, however, greater development of and linkages between these routes throughout the city could bring added benefits.

Proposed solution

Within the URBACT Health and Greenspace, Limerick sought to support and enhance the provision of quality green infrastructure for its residents. Limerick City and County Council procured a Landscape Architect to work with the project management team, assisting in the co-creation process by translating the needs and ideas of stakeholders , the local residents, schools, community centres into indicative/concept designs for each of the greenspaces included in the project. The designs are drawings of the existing greenspace that include all consultation feedback, a visual of the grassy areas with potential enhancement features added, which the community can use to apply for funding to deliver the designs. Works were carried out to animate existing greenspaces through activities such as community interest walks, pop up food markets stalls and music, inclusive programmes and events, and culture related or place-based workshops. Three orienteering courses of different technical levels were developed for one of the project sites using the app Maprun6. This included facilitating an orienteering training workshop.

Changes it brought

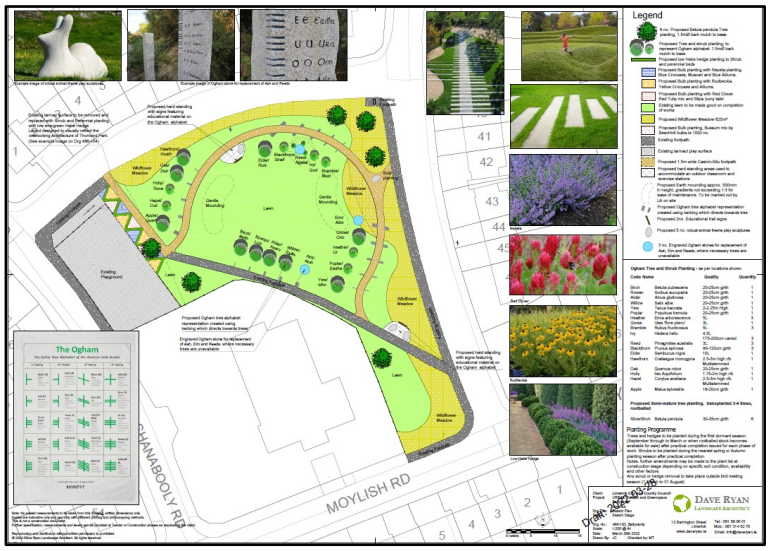
The Integrated Action Plan produced as part of the URBACT network produced a valuable strategic document that will inform future plans for greenspaces in the city so as to improve linkages between greenspaces, provide opportunities for social engagement and physical activity as well as enhancing biodiversity in (under)developed natural habitats. A number of the designs created by the landscape architect as part of the project have received funding and are currently being built out.

Transfer potential

It has the potential to be replicated for any green space/brownfield, used/unused site.. Consultation with as many people as possible in the community is essential , as change , even postive change is something people fear and they may not support the initiative.

Main takeaways

Not all activities, project timelines, funding calls, work commitments/constraints start or finish at the same time! This URBACT H&G Integrated Action Plan provides a framework through which Limerick city can plan, schedule and deliver on actions throughout a calendar year.



Nature-Based Solutions and Green Infrastructure

MOBILE TREE FOREST

Identity

- Limerick , Ireland
- 102,287 inhabitants, 61.3km2
- https://www.limerick.ie/council/newsroom/news/experience-limerick-city-centre-never-pop-mini-forests-appear

Initial challenge

There was a need for additional greening in the city centre and a challenge that was highlighted was the low level of tree cover in the city area. It was also required to improve the public realm and placemaking aspect in the city centre.

Proposed solution

A number of greening initiatives were considered with a mobile tree forest being selected as the preferred option as it had multiple benefits, easily transportable on wheels, provides a nursery for our young trees to establish , doubles as seating, visually attractive , can be used as part of road closures for events. The Council engaged with a local business to produce a prototype and had specific requirements to be tested in the prototype. The main requirement is that it would be of sufficient size to be able to be moved manually by two persons and to be constructed of a sustainable material both requirements for environmental reasons. The material selected was marine plywood which had a guarantee of 20 years if protected and maintained annually. It was also a requirement to have integrated seating that would encourage people to dwell in a particular area for a period of time and create some vibrancy in that area of the city. In order to ensure that the planters would not be stolen, each planter was fitted with wheels that were lockable, and the planter once planted with a tree weighed approximately one tonne. Seventy planters were manufactured, which allowed multiple configurations depending on the use of the mobile forest, whether for an event such as a street party or a performance.

Changes it brought

The overall streetscape of the urban area was improved with the addition of the planters, which had an immediate impact. The planters being moveable created a facility, where groups could request planters and use them as part of their event. They allowed for an element of pop-up usage and for temporary road closures to test streets for alternative uses. They helped to create a green environment and raised awareness with the public on the impact and importance of trees in the streetscape, allowing people to sit and enjoy some time in the space. The mobile tree forest also doubled as a mobile nursery, where young trees could become established before being planted out into the community or elsewhere in the city environment, increasing numbers of trees being planted annually.

Transfer potential

- The concept of mobile tree forest can be replicated in any city.
- Material selected can suit the specific city, steel is another option
- Pop Up Forest, playful concept

Main takeaways

- Can create immediate impact
- Can make it authentic to your city
- Can be used in multiple situations, festivals & events, road closures, test other uses on streets.

Nature-Based Solutions and Green Infrastructure

TRANSFORMING A BROWNFIELD SITE INTO A NATURAL PLAY SPACE AND BIODIVERSITY AREA

Identity

- Limerick , Ireland
- 102,287 inhabitants, 61.3km2
- https://gogreenroutes.eu/cities/limerick

Initial challenge

The route originally consisted of artificially raised and compacted ground as a result of construction works for an Active Travel shared walkway cycle lane. It also included a number of mature ash trees in serious decline. Active Travel is a Local Authority Department that aims to provide the infrastructure required to ensure people can begin using more sustainable modes of transport – such as walking and cycling – as part of their journeys. There was no assigned function/purpose for the additional brown space site outside of the Active Travel route developed on the Castletroy Greenway, which is located in a suburb of Limerick City connecting a number of schools and residential estates with local amenities.

Proposed solution

GoGreenRoutes (2020-2024) is a EUR 10.5 million international project funded by the European Union. Its aim is to enhance the physical and mental well-being of urban residents by increasing their connection to nature. The project provided the opportunity to create linkages between fragmented (sub)urban greenspaces and to implement nature-based solutions that focus on contributing to green infrastructure aligned with the principles of European Green Infrastructure Strategy and sustainable development goals related to the availability of greenspace for citizens. A series of public consultations and workshops took place during the project: many focused on discussing challenges, identifying goals, community knowledge and interest in developing a 'green' design. The project looked to enhance the existing Active Travel popular cycling route connecting two schools and a number of residential estates with sensory pathways encouraging active lifestyles and environmental awareness. A 'brown space' is now a sustainable co-created nature park that is underpinned by Nature Based Solutions (Sustainable Urban Drainage, swales), outdoor learning (sculptures, art, natural play), and enhanced biodiversity (native woodland). A space that now encourages users to take some time in nature , promoting enjoyment , well being and leisure activities.

Changes it brought

The project is sustainable, and plan led, with involved end users from start to finish, providing facilities for children of all ages and integrating communities living in the area.

There are many benefits of this project namely: the opportunity for recreation, physical activity and nature connection on the Castletroy greenway which did not exist prior to this project. People now have opportunities for physical exercise, benefit their health & wellbeing, increase social interaction, engage in cultural experiences and educational opportunities.

One innovative outcome of this project is the delivery of the first and largest co-created green space in Limerick that is truly a low carbon site focused on sustainable climate resilience.

Transfer potential

Can be replicated on any brownfield site.The play area incorporates repurposed and upcycled materials found onsite. Co-created from the onset in all aspects, engaging users from the inception of the project.

Main takeaways

GoGreenRoutes highlighted the importance of cross-sector collaboration, citizen empowerment, and evidence-based strategies for integrating urban greening and NbS into urban development.

FROM FACTORIES TO A BIG PARK FOR ALL

Identity

- Löbau, Germany
- 14,000 inhabitants, 78.9 km2
- www.loebau.de
- info@loebau.de
- https://www.messepark-loebau.de/

Initial challenge

Quite near to the city centre (approx. 500 m from the train station) existed two extensive brownfields deriving from an old sugar factory (VEB Zuckerkombinat 'Ernst Thälmann') and an old textile factory (VEB Stückfärberei Löbau). The area was a big challenge for the city due to its actual size of approximately 20 ha, its location so close to the city centre and the generally poor condition it was in.

Proposed solution

To revitalise the area, the city of Löbau applied to host the 'Landesgartenschau 2012' (Saxon State Horticultural Exhibition) and changed it into a big park for all. The park was supposed to host different sections with different plants and different landscapes on an area of 20 ha. Single buildings were kept and integrated as the 'Blumenhalle' which today hosts events of all sorts. Some remnants of the former production especially of the sugar factory were also integrated into the new concept (e.g. old basins). Playgrounds were built using shapes and forms that also remind of the area's past. After the Landesgartenschau the area was purposed to become a public park for everyone.

Changes it brought

The brownfield was successfully turned into a park with different areas, playgrounds, activities etc. The Blumenhalle and the new Messehalle are established as new event locations/venues for events and concerts of different sizes. All in all, it seems as the park is quite big for a small city like Löbau. Its maintenance is a big challenge and the city has to deal with vandalism from time to time.

Transfer potential

The idea of transforming an industrial brownfield into a park is not exactly new and has a high transfer potential. However, the financing as a « 'Landesgartenschau' probably cannot be easily transferred as it seems quite specific for Germany.

Main takeaways

The tool of the 'Landesgartenschau' was very helpful to finance a project this big for a small city. Today, it shows that the park is almost too big for the city, as maintenance is a big challenge. Not all of the special sections that were created for the Landesgartenschau could be kept and vanished after 2012. The park is still a very good example for the transformation process.

REMEMBERING THE PAST WITH GREEN SOLUTIONS

Identity

- Löbau, Germany
- 14,000 inhabitants, 78.9 km2
- www.loebau.de
- info@loebau.de
- https://www.messepark-loebau.de/

Initial challenge

The brownfields of Löbau's former sugar factory and textile factory were to be renovated quite close to the city centre. Therefore, it was no option to just remove the buildings and leave the area as it was. Through the area also flows a small river the "Löbauer Wasser". Therefore, the idea to turn the site into a natural habitat and a park was very convincing.

Proposed solution

For the transformation of the brownfields, it was planned to integrate several remains of the industrial past into the new park. In the planning process, different environment-friendly, sustainable and green solutions were implemented. For example, the old beetroot soaking pools were turned into fishponds with long piers to walk across the water (see picture above). Several playgrounds were designed using shapes and/or materials that connected to the industrial past such as 'sugar climbing hills' and 'sugar cubes' (see picture below). The different sections inside the park were named after their prior purposes such as 'Zuckerplateau' and 'Kalkwäldchen' after the former limestone oven used in sugar production. A high diversity of plants and flowers were chosen for the park to offer a very wide natural variety.

Changes it brought

To connect the industrial past with a natural habitat was challenging as well but was targeted with very creative ideas for that time.

The former brownfields were successfully changed into an interesting park with several sections and a lot of connections to the industrial past. Through the different sections and wide variety of plants there is an increased biodiversity to be expected. The park still exists but has a high maintenance level. Therefore, not all of the attractions of the Landesgartenschau in 2012 could be kept until today.

Transfer potential

Generally, the idea of integrating remnants of the industrial past into the transformed park has a high transfer potential. It needs, however, to be adjusted to the different context and therefore requires some creativity. If that is considered there are a lot of different ways of linking the industrial past to new green solutions.

Main takeaways

To create several themes and sections inside a park also means high maintenance and high following costs. The materials need to be resistable, as vandalism is always to be considered. Today, there are more new formats and tools to link to the industrial past and local history.

HOMAGE TO BIODIVERSITY

Identity

- Nitra, Slovakia
- 77,000 inhabitants, 100.48 km²
- Aktualizované: Nový park na Sihoti prechádza revitalizáciou

Initial challenge

In the process of restoring the central park of the city, the question of the possibilities of improving not only the biodiversity in the park, but also its aesthetic value was raised. The park was meant to be perceived not only as a piece of nature, but also as a kind of architectural work with artistic value.

Proposed solution

Along with the solution of planting new trees, establishing flower meadows and flower beds, several works of art were also proposed. Biodiversity and the integration of humans into a wider biological ecosystem were chosen as a suitable theme for the sculptures. Sculptures made of wood and metal with the names 'Homage to insects', 'Homage to trees', 'Homage to birds' and benches with the theme of animals were proposed. Works of art with such a theme seem to be suitable for the natural environment of parks.

Changes it brought

The installation of sculptures in the park and benches with nature motifs has mainly increased the attractiveness of the park for residents and increased its attendance. In addition, we have supported local artistic creation and pointed out the importance of art in public space. Promotion of the topic of biodiversity and its protection in the urban environment is also important.

Transfer potential

The measure is moderately difficult to implement, anyone can place nature-themed artworks in public spaces. However, you need political support and cooperation with experts in the field of architecture and art. However, the measure is very difficult in terms of finances.

Main takeaways

To reduce the cost of acquiring artwork, you can collaborate with the local art community and utilise external funding or workshops.

REDUCING HEAT WAVES IN STREETS

Identity

- Nitra, Slovakia
- 77,000 inhabitants, 100.48 km²
- Aktualizované: rekonštrukcia chodníka na Mostnej a Kmeťkovej ulici

Initial challenge

The city of Nitra faces the challenge of improving the environment and the quality of public space. An important topic is the need to reduce the heat island effect in the city as well as to improve the quality of sidewalks. Street repairs provide space not only for improving technical parameters, but also for the use of greenery.

Proposed solution

The greatest need for building streets for people is their shading. The ideal is to shade the street with tree crowns. A tree is the most effective vegetation element for reducing the impact of climate change.

However, the lifespan of trees in the streets is constantly decreasing, ranging from 8 to 30 years, and the number of tree species that can withstand extreme heat, drought and subsequently pests is also decreasing.

Therefore, we must also significantly improve the conditions for the growth of trees on the street using new technologies for the growth of tree roots. This is possible by building large spaces for roots. It is possible to use Pavement Support System - Soil cells or Structural soil with biochar.

In addition, it is also necessary to choose a suitable material for paving, permeable to water but also with a high-quality design and material.

Changes it brought

Planting trees in the streets and improving the quality of paving brought about the humanisation of public space, increasing its residential value and visitor appeal.

Transfer potential

This is a complex and comprehensive solution that requires time, money and expertise. You need political support.

Main takeaways

If you want trees to live long, you need to create good conditions for their roots. Therefore, demand comprehensive street renovation and work with experts in green solutions and public space.

Nature-Based Solutions and Green Infrastructure

A GRAVEL FOR ALL PEDESTRIAN PATHS IN MUNICIPAL PARKS

Identity

- Nitra, Slovakia
- 77,000 inhabitants, 100.48 km²
- Starý park v Nitre začali po rozsiahlej obnove otvárať - Nitra

Initial challenge

There is a city park in the city of Nitra, which is a popular place not only for the city's residents, but also for visitors. The park is very valuable for its trees, but the technical infrastructure of the park was outdated. Therefore, the city of Nitra began its comprehensive renovation. The goal was to improve the natural conditions for the growth of trees and retain as much water as possible in the area. Therefore, all old asphalt roads were replaced with new sidewalks made of permeable materials.

Proposed solution

The aim of the renovation was not only to improve the quality of the pavement surfaces, but also to improve the aesthetics of the park and the conditions for plant growth. The solution was to remove all the old asphalt pavements and use new compacted gravel roads. This type of road surface is able to retain water in the area. An important aspect in the selection was also that it is a natural recyclable material of local origin. Moreover, this pavement surface is a typical surface in historical parks from the period when this city park was founded.

Changes it brought

The solution brought about an improvement in the quality of public space, water retention, and an increase in the number of park visitors.

Transfer potential

The measure is moderately difficult to apply, it is particularly suitable for larger green areas with recreational use. This material requires regular professional maintenance.

Main takeaways

Look for alternative, nature-based solutions for urban surfaces. Don't forget to communicate with residents – there is a risk of negative reactions to change.

Nature-Based Solutions and Green Infrastructure

COCONUT NESTS AND GEOCELL ON THE CASTLE HILL

Identity

- Nitra, Slovakia
- 77,000 inhabitants, 100.48 km²
- Hradný kopec prejde výraznou obnovou – Nitra
- Aktualizované: Nitriansky hradný kopec prešiel revitalizáciou

Initial challenge

Nitra's Castle Hill is located in the city centre. Its slopes are covered with trees and there are footpaths leading from the city to the castle. In the past, it was a popular green area, serving as a shortcut to the castle complex, for walks, but also as a place for young people to meet. However, the area is difficult to maintain and due to the poor condition of the paths, this park has been closed for the last ten years.

Proposed solution

After the agreement of the owner of the territory - the Bishopric of Nitra - and the land user - the City of Nitra, a complete renovation of the park was started. The renovation of all paths from compacted gravel and the repair of stone retaining walls, bridges and stairs was proposed. New viewpoints, furniture and lighting were added. In steep places, the paths were replaced with metal stairs. Various solutions were proposed to solve soil erosion on steep rocky slopes. Geocells, coconut nets, wooden fences were used, and all this was supplemented with the planting of ground cover plants.

Changes it brought

The park's restoration brought stabilisation of the slopes and thus increased the safety of the area. The park was reopened to the public after decades, and the city of Nitra thus gained a new attractive place for recreation and tourism in the city centre.

Transfer potential

The measure is moderately difficult to apply, requiring cooperation with experts, finances, and political support.

Main takeaways

From the beginning, it is necessary to think about further maintenance of the area, which requires foresight and expertise, and therefore also finances. However, good solutions at the beginning mean less maintenance later.

A FOREST TO COMPENSATE THE OLYMPIC GAMES

Identity

- Onda (Spain)
- 25,547 inhabitants (2023), 108.42 km²
- proyectoseuropeos@onda.es

Initial challenge

The municipality has a tree canopy lower than what is required by law, limiting the opportunities to improve air quality and the community's well-being. Furthermore, the city is working to find effective ways to contribute to the fight against climate change while promoting sustainable local development. This requires innovative solutions that integrate nature into the urban environment.

Proposed solution

The municipality proposed the creation of an Olympic Forest composed of native species as an innovative measure to offset the carbon footprint generated by Spanish sport, particularly during the Tokyo Olympic Games. This forest will not only help mitigate environmental impact but also strengthen local biodiversity and improve air quality in the region. In addition, residents are invited to actively participate in this initiative by planting their own trees and marking them with a personalised plaque. This approach not only fosters a sense of belonging and responsibility toward the environment but also strengthens the bond between the community and nature, promoting a model of sustainable and inclusive development.

Changes it brought

The creation of the Olympic Forest has had a significant positive impact on the community. First, it has contributed to offsetting the carbon footprint, positioning the municipality as an active player in the fight against climate change. Additionally, the initiative has created new green spaces for residents, improving their quality of life and encouraging outdoor activities. Moreover, the project has boosted local biodiversity by planting native species, enriching the ecosystem and promoting the conservation of flora and fauna. Finally, the active participation of citizens in tree planting, along with the opportunity to personalise them with plaques, has strengthened the sense of community, fostering a closer connection between people and their natural environment.

Transfer potential

The project is easily transferable to any municipality, as its implementation does not present major complexities. However, it is important to note that the necessary resources are required to carry it out. In our case, the project is supported by a grant provided by the Spanish Olympic Committee.

Main takeaways

It is essential to encourage the involvement of citizens in order to get a good response from them.

"CATCH THE RAIN" TO MANAGE RAINWATER

Identity

- Wrocław, Poland
- 893 506 inhabitants, 292.81 km²
- Article about 2024 edition of the project
- contact

Initial challenge

Wrocław faces growing concerns about rainwater waste, inadequate retention systems, and urban air quality while addressing public demand for sustainable solutions. There was a need to act due to the lack of effective methods for managing rainwater during heavy rainfall resulting in floods and reduced quality of water.

Proposed solution

To address those issues 'Catch the Rain' ('Złap Deszcz') programme was launched in Wrocław in 2019. It provided a municipal funding for rainwater management systems such as above-ground gutter tanks, underground rainwater tanks, soakaways or rain gardens and integrating them into urban landscape. These are available both for residents, housing cooperatives and associations and public spaces. A notable example is Park Krzycki (pictured below), where residents and the city council successfully replaced plans for a concrete rainwater collector with natural retention systems integrated into the park's design. The programme was led by Wrocław's Department of Sustainable Development and directed to individual residents as well as housing cooperatives and associations.

Changes it brought

Since its inception, the programme has facilitated the completion of over 700 eco-friendly installations, combining practical water management with aesthetic improvements to urban spaces. Over the course of five years, more than EUR 500,000 have been allocated to support these initiatives, with annual expansions and improvements. In 2024, Wrocław's municipal budget allocated around EUR 140,000, covering up to 80% of installation costs. Individual residents could receive subsidies of up to EUR 1,165, while housing cooperatives and associations were eligible for twice as much. The programme also helped to educate the residents, equipping them with information and tools, such as an online rainwater management calculator, to help them select the best solutions for their needs. The residents who installed new water tanks in their gardens no longer need to rely on tap water for watering plants, resulting in significant financial savings.

Transfer potential

It's easy to implement in any city struggling with rainwater management. The city's involvement (subsidy) and political support is crucial.

Main takeaways

The city must support people's willingness to adopt ecological solutions through funding and accessible tools that show how sustainable practices can be practical and beneficial.

GREENING THE TRAM TRACKS TO COOL THE AIR

Identity

- Wrocław, Poland
- 893 506 inhabitants, 292.81 km²
- Article with more information
- contact

Initial challenge

The City of Wroclaw is increasingly facing urban heat island effects and poor water management leading to rising temperatures, poor air quality, high noise pollution. Yet, it also desires to improve urban aesthetics.

Proposed solution

The project involved the Wrocław City Municipality, MPK Wrocław (Municipal Transport Company), and contractors specialising in green infrastructure. During the renovation of the tracks on Legnicka Street and the construction of a new tram line through Popowice Street, sections of the tracks were planted with groundcover plants such as sedum. The project also incorporated other nature-based solutions into the design of new tram line. By 2024, the programme had laid 11,200 m² of drought-tolerant plants, with funding primarily from the Wrocław municipal budget, supplemented by EU grants and financial support for green infrastructure projects.

Changes it brought

The expansion of green tram tracks in Wrocław has brought significant environmental and aesthetic benefits. With 9 kilometres of green infrastructure in place, the tracks have reduced urban heat, improved water retention, lowered noise pollution, and enhanced air quality. The track vegetation absorbs carbon dioxide, retains water, and enriches the urban greenery. Additionally, 236 new trees and 28,000 shrubs were planted along the new tram line, further enhancing the city's landscape and creating more pleasant spaces for residents and visitors.

Transfer potential

It's fairly difficult to implement. The existing tram infrastructure in the city is required. Specific conditions must meet, including specific plant types and conductive climate.

Main takeaways

Implementing and maintaining green tracks is more challenging and costly than simple stone paths. Cities should begin with pilot projects, involving urban planners, local governments, and green infrastructure contractors to assess effectiveness. Nevertheless, implementing green solutions through tram infrastructure is worth the effort it requires.

SMALL-SCALE BLUE AND GREEN INFRASTRUCTURE FOR CITIZENS THROUGHOUT THE CITY

Identity

- Wrocław, Poland
- 893 506 inhabitants, 292.81 km²
- More details

Initial challenge

The Ołbin district was a densely developed inner-city district with limited green spaces, at the same time as facing the impacts of increasingly frequent heatwaves and droughts exacerbated by the urban heat island effect.

Proposed solution

The 'Green System' included a network of green oases, six blue-green courtyards, a green tram stop, and a green street. Designed through participatory planning, locations were selected based on residents' input, climate data, spatial constraints, and ownership. Key features like rain gardens, swales, and community gardens addressed local needs while promoting ecological benefits. From 2017 to 2022, workshops engaged residents in co-designing, implementing, and learning to maintain these green spaces, fostering community ownership and ensuring sustainability.

The solution was funded fully by the Horizon 2020 Grow Green project.

Changes it brought

Once parking lots, the courtyards now serve as vibrant community hubs, enabling social interaction and managing over 90% of rainwater onsite through Nature-Based Solutions. The Grow Green project has influenced Wrocław's urban planning, inspiring further NBS initiatives and integrating green infrastructure into long-term strategies. Residents' active involvement has enabled designed solutions based on their needs, has strengthened public acceptance and encouraged ongoing care for these green spaces.

Transfer potential

The practice is easily transferrable to any city which grapples with urban heat effect lacks green spaces. Community involvement is crucial to determine the adequate placement.

Main takeaways

Engaging citizens in the design process is crucial for ensuring their commitment to maintaining similar projects in the future.

Such projects not only influence strategic thinking on green infrastructure but also serve as a catalyst for the development of other nature-based solutions (NBS) projects within the city.

PERMACULTURE IN A FORMER TRAM DEPOT

Identity

- Wrocław, Poland
- 893 506 inhabitants, 292.81 km²
- More details
- contact

Initial challenge

The former Dąbie tram depot in Wrocław, a post-industrial site with limited greenery, faced challenges typical of urban industrial areas: polluted soil and a lack of community engagement.

Proposed solution

The goal was to transform the space into a vibrant, ecological hub using raised garden beds to address soil contamination. The project also aims to address a broader need for accessible urban green spaces and nature-based education, particularly in densely populated urban environments.

The permaculture garden in the former tram depot was initiated by a local NGO in collaboration with residents and volunteers: the project emphasises community involvement at every stage, from planning and building the garden to ongoing maintenance. It also incorporates educational and integrative activities, such as gardening workshops and permaculture training, providing urban residents with opportunities to connect with nature while learning sustainable practices. Over time, the garden has become a vibrant community hub, demonstrating the power of grassroots initiatives in urban greening.

Changes it brought

The permaculture garden has become a well-used space for urban gardening lessons, enabling residents to develop their gardening skills while fostering a stronger sense of community. Regular activities integrate diverse groups of users and visitors, creating opportunities for social interaction and cooperation.

The garden also contributes to a small-scale circular economy by promoting composting, seed sharing, and the use of local resources. It has transformed the depot into a green, inclusive space where both community and ecology thrive.

The garden enables residents to grow healthy food and connect with nature in a revitalised urban space, offering beginners hands-on gardening experience and fostering community engagement.

Transfer potential

This practice is easy to transfer and suits post-industrial sites where nearby residents lack their own gardens. It requires a strong community that will maintain the garden.

Strong partnerships and local involvement are essential for replication.

Main takeaways

This project shows how community-led permaculture can reclaim urban spaces, using solutions like raised beds for polluted soil and fostering engagement through education.