Guide to planning
Healthy Cities

Written by:

> José Fariña Tojo
> Ester Higueras García
> Emilia Román López
> Elisa Pozo Menéndez

Department of Urban and Regional Planning, ETS Arquitectura, Universidad Politécnica de Madrid, Spain

Revised by:

Spanish Ministry of Health:

> Jara Cubillo Llanes
> Roxana Tuesta Reina
> Ana Gil Luciano

FEMP:

> Gema Rodríguez López
> Luis E. Mecati Granado
> Fco. Javier Ruiz Martínez

Institutional coordination:

Health Promotion and Equity Area, General Subdirectorate for Health Promotion and Prevention, Ministry of Health
Spanish Healthy Cities Network, Spanish Federation of Municipalities and Provinces (FEMP)

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CONTENTS

Foreword

Encouraging people to adopt healthier lifestyles is a complex task. Although these may seem like individual decisions, many external factors influence people to choose one way of behaving or another, meaning that focusing solely on individual changes is ineffective. It is important to have an adequate social and environmental environment where it is easy to make healthy choices, so that "the healthiest choices are the easiest" (WHO)[1]. Indeed, among other factors, healthy environments must be a combination of sustainable urban development, and encouraging healthy lifestyles by providing attractive outdoor areas, green spaces, etc. a suitable network for active mobility and access to essential public services.

Two thirds of the European population now live in cities and, it is estimated that by 2030 more than 80% of the European population will reside in urban areas1. We know that the environments where people live affects their health and opportunities.

It is essential to work towards a healthy environment within a framework of social factors of health and equity. Cities are in a relevant position to provide leadership for people's health and well-being and local governments can influence the determining factors like health and inequality, therefore the local area is particularly important for promoting health.

The Strategy for the Promotion of Health and Prevention in the National Health System (EPSP) and the Spanish Healthy Cities Network (RECS) both highlight the local environment as a key area of action for intersectoral work to create healthier environments.

This Guide has been created by a team of experts from the Higher Technical School of Architecture of the Polytechnic University of Madrid in collaboration with the Ministry of Health and the Spanish Federation of Municipalities and Provinces (FEMP). It has been produced within the framework of the Convention for the empowerment of the Spanish Healthy Cities Network and the local implementation of the EPSP, signed by the Ministry of Health and the FEMP.

This document is intended as a tool to help people involved in planning urban environments at the local level. It contains simple guidelines that can be adapted to different situations to reduce health inequities.

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[1] WHO Regional Office for Europe, United Nations Economic Commission for Europe (UNECE), *European environment and health process. Environmental and health for European cities in the 21st century: making a difference.* Copenhagen: WHO; 2017.

> **The Guide follows on from the Technical Document of general criteria on urban design parameters to achieve the objectives of a healthy city, contributing practical information for working on three main lines of action:**
>
> » **Line of action 1:**
>   Walkable cities.
>
> » **Line of action 2:**
>   Introducing nature in the city.
>
> » **Line of action 3:**
>   Designing places for meeting and socialising.

This document is also intended to support the implementation of the 2030 Agenda for sustainable development, promoting healthy environments by addressing planning criteria. Likewise, it is intended to provide technical, professional and users with a suitable tool to help achieve the objectives of the Recovery, Transformation and Resilience Plan to combat and attempt to reduce the burden attributed to associated diseases and to address challenges in health, environment, and climate change.

Spanish Healthy Cities Network, Spanish Federation of Municipalities and Provinces Area of Health Promotion and Equity, Ministry of Health

I. Presentation
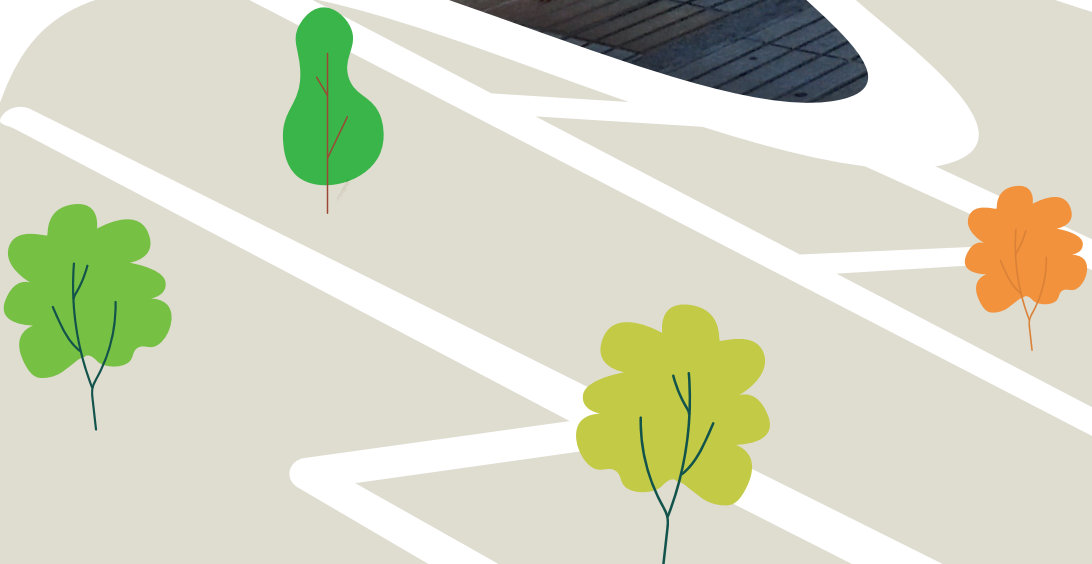
1. Purpose and scope of the Guide

The purpose of this guide

The purpose of this Guide is to make progress in area of health and disease prevention based on urban criteria that encourage the creation of healthy local environments and help professionals, technicians, and local corporations to design healthier cities for everyone.

The intention is to help the people who build our cities in the decision-making process. It is not intended to be a city planning manual, but simply to highlight some critical aspects that should be considered from a health point of view when drafting a plan, project, or urban ordinance. It is particularly focused on large and medium-sized cities. Small cities, towns and rural areas are all affected by different issues. They are likely to require different techniques and instruments because the objectives are also different. That said, some of the critical issues dealt with in this guide for small and medium-sized cities are also useful in this cases, such as the importance of spaces for socialising, green spaces, public transport and designing bike and pedestrian routes.

Sustainable development

In the Sustainable development Goals (SDG, 2016) to the Spanish Urban Agenda, action guidelines are based on the international framework and should now be framed in local environments. Likewise, both the Strategic Plan for Health and Environment and the National Strategy for Green Infrastructure and Ecological Connectivity and Restoration at the national level and the Municipal Green Infrastructure Management Guide (FEMP-ASEJA) are key reference documents.

Health is more than the absence of disease

Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (WHO, 1948). Moreover, health must be understood from a positive or salutogenic[2], vision, focusing on aspects that generate health and wellbeing rather than on needs and risks, harnessing opportunities, skills, capacities and resources of people and communities to create health. In this framework, health is looked upon as something holistic and integral which goes beyond even sustainability objectives.

Diseases and pandemics

Health and well-being are concepts that must be adapted to the needs of each moment. In the 19th century, infectious diseases were the main challenge, and in the 20th century they were joined by lifestyle issues (sedentary lifestyle, smoking, poor diet, etc). Now, in the 21st century, the COVID-19 pandemic has directed the spotlight back on infectious diseases, but also on people's living conditions.

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[2] The concept of salutogenesis is associated with a model focused on factors that support human health and well-being, as opposed to factors that cause disease (pathogenesis). The term was coined by Antonovsky (1923-1994) and is related to the factors that allow a person to care for and improve their health and well-being.

Urban planning must seek to improve health in each period

Indeed, since the first Sanitary Laws, the relationship between urban planning discipline and the improvement of people's health conditions has been a close one. Because of this, a Guide is proposed to be used as a tool for planning healthy cities, to help address and solve current health problems.

The importance of the local environment to health

Health depends, among other aspects, on the circumstances in which people are born, live, grow, work, and interact which are the so-called "social determinants". Environments are places and contexts where people live and develop, and these have a direct or indirect influence on health. The scope of this Guide is the local environment, cities, and their neighbourhoods, since, in an increasingly urban planet, they condition and directly affect people's well-being, quality of life and longevity.

The city as a healthy environment

Achieving a safe, pollution-free urban environment that facilitates walking and cycling, with balanced, suitable green spaces, both in quantity and quality, distributing daily activities in proximity networks, many of the main health problems would be seen considerably reduced, such as a sedentary lifestyle, obesity, or cardiovascular, respiratory, and mental health diseases.

Healthy urban planning is important throughout the people's life cycles

From birth to death, healthy environmental conditions improve the quality of life of people of all ages.

Health involves everyone

This Guide is intended to be the basis for making diagnoses and drawing up healthy urban planning plans by the local administration, with multiple actors, synergies between departments and a broad base of citizen participation, so that the city becomes a source of health for all people.

2. Justification and previous work

Preliminary work

In Spain, the project to design urban environments that improve health and well-being and encourage greater participation of the population (focused on people and sustainability), appeared with the formation of the Spanish Healthy Cities Network (RECS), which was created in 1988 and currently has almost 300 local entities, covering around 50% of the Spanish population. The RECS is a section of the Spanish Federation of Municipalities and Provinces (FEMP) and works in coordination with the Ministry of Health. In turn, in 2013, the Ministry of Health approved the "Health Promotion and Prevention Strategy of the National Health System (SNS)" within the framework of the approach to chronic diseases. This Strategy is an opportunity to integrate and coordinate efforts to promote health and prevention among all levels, sectors and actors involved. Among the areas prioritised for action is the local environment, for which a local implementation of the Strategy has been established. This specifically addresses different actions, among which are political commitment, intersectoral work to improve health and to enable the identification, visibility and empowerment of community resources that exist in the municipality that can help citizens improve their health and well-being.

Multidisciplinary team of experts

This Guide has been prepared by a team of experts and expert researchers in urban planning and health from the Department of Urban Planning and Territorial Planning of the Higher Technical School of Architecture of the Polytechnic University of Madrid, within the framework of the Agreement for the empowerment of the Spanish Healthy Cities Network (RECS) and the local implementation of the Health Promotion and Prevention Strategy, signed by the Ministry of Health and the Spanish Federation of Municipalities and Provinces (FEMP). It summarises earlier work carried out since 2018, published in an initial technical document published in 2019[3] and presented at the Conference on Planning and Health, Strategies for designing Healthy Cities held on 25 November 2019. The problem of health in urban environments was also addressed at the Meeting of the 29th Edition of the School of Public Health of Menorca, held on 20 and 21 September 2018, which led to some thorough research from the perspective of prevention and health promotion, safety, and equity as lines of action, which is the main driving force of this Guide.

Rationale for the Guide

The need to specify the international SDGs in the local context, as well as the major strategies of the New Urban Agenda 2030 and the Spanish Urban Agenda, adding the challenges of non-communicable diseases, pollution and climate change, and new health situations like the COVID-19 pandemic, justify the need for strategies to rethink the built environment based on the health of the people who inhabit it, and to create healthier environments.

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[3] *City, planning and health.* Available at: https://www.sanidad.gob.es/areas/promocionPrevencion/entornosSaludables/local/estrategia/herramientas/docs/Ciudad_urbanismo_y_salud.pdf

II. Introduction
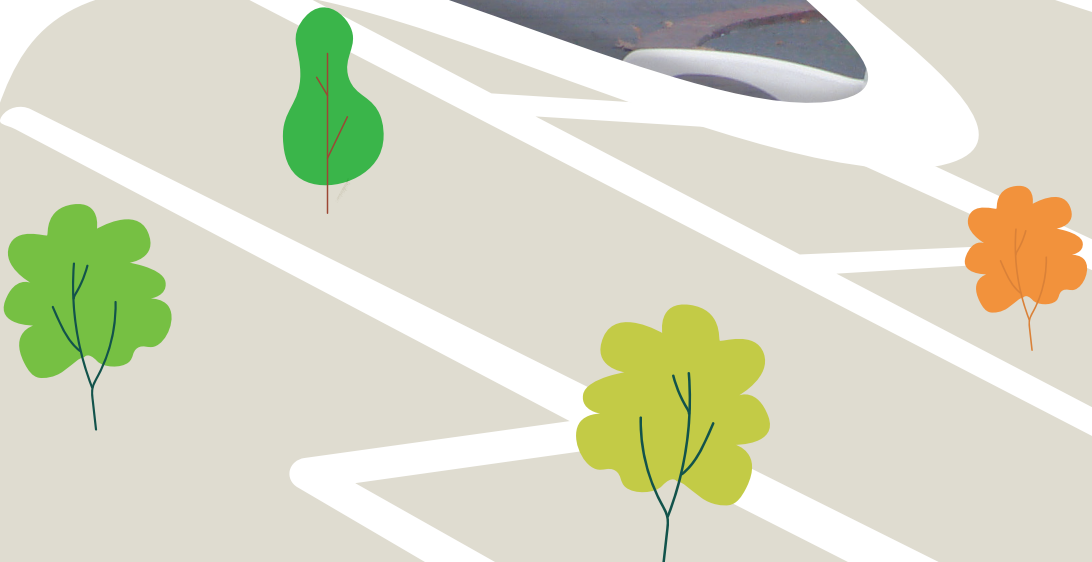
1. Health and planning

Health depends on a series of factors known as the social determinants of health (culture, economy, work, gender, education, housing, or health services, among others). One of the most important is the urban environment, which is the place where you live and where most of your social relationships take place. Housing, the city and the countryside have a decisive influence on health (physical, social, and mental), contributing to the well-being of people, understanding health not only as the absence of disease but also the integral development of the person. This means that, in order to address the different social determinants of health, intersectoral work and a coordinated approach of many disciplines are necessary. This was which has given rise to the concept of "health in all policies", a collaborative approach that seeks to improve health by incorporating it into decision-making across all sectors and policy areas.

The environments where people live have an influence on health, and some are more important than others. All the authors agree that the local environment has a determining influence: housing, mobility, participation, green spaces, social relations, shops, or facilities, contribute to building more or less healthy places. However, the fact that these places have implicit inequalities, to a greater or lesser extent, makes it necessary to incorporate an equity approach into the planning and construction of the environment, in such a way that all people can achieve the highest state of health and well-being, regardless of their age, socioeconomic position, place of residence, gender identity, country of origin, etc.

Overcoming inequalities should be a priority. This is so to the extent that authors such as Benévolo, Morris or Gravagnuolo, point to the emergence of current planning precisely when the English Sanitary Laws were approved. The fact is that the situation had become unsustainable as a consequence of the Industrial Revolution in the 19th century. For example, in the case of inequality, the Report on the Condition of Large Towns in England (Report of Commission of Inquiry into the State of large Towns and Populous Districts[4]), classified streets into three main groups and found that mortality among the residents of third category streets was four times higher than that of residents of first category streets. Likewise, in a well-known report by Engels entitled "The situation of the working class in England", it is stated that in the city of Liverpool the average life span of the wealthy class in the year 1840 was 35 years, while that of the day laborers was below 15, probably due to the high infant mortality. This led to the enactment of the Sanitary Laws. On 31 August 1848, the first English Health Law was approved and, from that time on, planning was endowed with sufficient legal support to be able to address the necessary reforms to overcome the situation and improve the living conditions of thousands of people.

Little by little, urban planning has moved away from its origins and, consequently, from health-related, focusing more on purely economic or even aesthetic and social issues. The causes for this are many, but one of the main ones has probably been that the main health problems produced by the Industrial Revolution had been resolved by urban planning. However, since then, the situation has changed radically. The population boom, partly due to better sanitary conditions and life expectancy, together with a massive increase in consumption fostered by an economic model based on growth, have given rise to new environmental dysfunctions, both planetary and local. From the planetary point of view, ecological thresholds have been reached, and from the local point of view, new ways of life have appeared that cause unhealthy habits. On the one hand, all demographic studies confirm that the population is ageing, particularly in highly developed countries. On the other, there is a shift in disease patterns from communicable to non-communicable and of chronic evolution, many derived from the sedentary lifestyle of the urban lifestyle.

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[4] Holland, P.H. (1884) *Report of Commission of Inquiry into the State of large Towns and Populous Districts,* first report

From this perspective, it is important to improve the urban environment to provide people with healthier options, making urban environments a source of health and disease prevention. Some necessary changes have been established. Among these are increased physical activity and a less sedentary lifestyle achieved through plans that promote (and, above all, enable) active mobility. Commuting on foot or by bicycle, with the consequent reduction in road traffic, is important, not only from the point of view of health, but also for the sustainability of the planet. Places for physical exercise or active leisure, both outdoors and indoors, must be provided. This includes facilitating meeting and coexistence facilities to prevent unwanted loneliness. All of these approaches are clearly addressable in plans, projects, policies, and ordinances. But there are others -apparently further removed from urban planning- such as the availability of local food and the promotion of smoke-free spaces to control tobacco consumption, which can be effective strategies that improve the health of the population.

The problems caused by a sedentary way of life and the prioritisation of private motor vehicles are many, from accidents to danger, not to mention pollution. They include the dynamics and changes to natural phenomena in the city, such as the effect of the urban heat island, excessive winds and also shade cast by buildings, and the reduction of relative humidity of the air, which are among the drawbacks of the current situation. Likewise, from the point of view of mental health, the stress produced by excessive urban stimulation and the absence of green spaces, and the isolation of a society based on individualism and competitiveness, show the need to change the model.

Despite the fact that it was previously thought that the problem of pollution in the city caused by the Industrial Revolution had ended, but the fact is that new ones have appeared, and some old ones have reemerged, such as the noise, visual and atmospheric contamination by particles and gases from, among others, motor vehicles. But we must also consider a series of collateral factors that have a decisive influence on the current system. From an educational point of view, they could be divided into four large blocks:

» Pollution

The air in today's main cities is polluted, basically due to fossil fuels combustion. The WHO Guidelines are usually used to measure air quality. They set different values according to objectives for both particulate matter (PM10 and PM2.5) and for ozone, sulphur dioxide and carbon monoxide. If possible, methane, toluene, benzene, and nitrogen oxides, among others, should be considered. Noise pollution is also important. Noise can come from both natural and man-made sources. Among the latter, cars, motorcycles, planes, construction sites, trains, terraces and, also, bars can be culprits in cities. The effects on health are well documented and range from discomfort and poor sleep to hypertension and certain heart diseases. Recently, the Law on Climate Change and Energy Transition included in its article 14.3 the obligation of public administrations of more than 50,000 inhabitants to implement Low Emission Zones before 2023. The document Guidelines for the creation of low emission zones (ZBE) (FEMP-MITECO, 2021) contains the thresholds for air and noise pollution published by the WHO, as well as the methodology and recommendations for the effective implementation of this type of measures. But pollution affects not only air and noise, but also water and soil. Despite the fact that sewage processing and drinking water have contributed to the increase in life expectancy, the problem has not yet been fully resolved. Finally, we should mention visual pollution and exposure to electromagnetic fields. Many studies have been carried out on the former, including regulations on advertising in public spaces. And although there is some controversy about the second and no adverse effects on human health have yet been shown with the current exposure, the precautionary principle should be considered.

» Ageing population

It is a proven fact that in most developed countries the population pyramid has changed significantly, widening at the top and decreasing at the middle and bottom. This is because of the ageing population, whose requirements are quite different from those of a mature or young population. Furthermore, the increase in life expectancy does not exactly correspond to an increase in the quality of life or well-being. In Spain, according to data from 2017, the years of life expectancy at birth were 83.25 while the years of healthy life remained at 63.87. This difference is significant between men and women. Women live longer but suffer from chronic diseases in their old age. One of the objectives, therefore, should be to increase years of life in good health, in the sense of ageing being able to carry out those activities that are valued for as long as possible. This approach has given rise to the so-called "active ageing" concept, which must begin to be considered from childhood and throughout the life of any person. This affects many aspects that influence the design and construction of cities, from the reconsideration of slopes and distances between activities, new support and care services, to the creation of meeting places with other population groups, such as example, childhood, which should be considered.

» Climate change

Climate change is already causing severe problems from the point of view of citizen health. This is not only due to rising temperatures, which is the first of the verified facts, but also major changes in the rainfall patterns, the increase in extreme weather events, + a greater frequency and intensity of atmospheric blocks that increase pollution in our cities, and biodiversity loss, among others. We must consider the risks that these pose to people and adapt urban spaces and the way that cities function. Climate change is bringing changes and disruption in different areas. For example, the emergence of disease and pest transmitting vectors that were once restricted to other geographical or temporal situations. The time has come to think about adapting our urban areas to different temperatures and rainfall patterns, and to ensure that these events do not increase critically and irreversibly, actions included among the so-called mitigation measures. And this must be done without losing sight of health, since, otherwise, we may make everything worse. It is an objective where many areas of knowledge should intervene, depending on multiple factors, to avoid making mistakes.

» Equity and participation

These should be tackled together. Planning makes it possible to address policies and plans aimed at reducing social inequality, considering the different facets of inequality (age, gender, country of origin, socioeconomic position, etc.) and their intersections. The importance of making cities for all people and leaving no one behind must be a priority (Methodological Guide to integrate Equity in Health Strategies, Programmes and Activities[5]). In addition to equity, any lifestyles changes should be made with the participation and consensus of the majority of the population. What is proposed in this Guide is a change in this direction. Therefore, it is essential to also consider other forms of participation since the current ones do not seem to respond to the needs of change. Although the subject requires a more in-depth analysis, given its importance some pointers can already be given based on the work carried out so far. The first is the need to have permanent participation mechanisms and structures which should be, if possible, in recognisable physical locations, to enable citizens to participate in the different phases of the projects, from the definition of objectives to evaluation, as well as prioritisation and implementation of actions. In addition, there must be channels of communication for the public to provide people with information and listen to their needs and proposals. In addition to these two basic objectives, there is a third goal, also of the utmost importance: the need for places to share lessons learned on issues related to health and urban planning. Finally, there is a need to have a physical headquarters where people can go well as virtual structures (social networks, web pages, blogs) that complement the face-to-face ones.

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[5] Available at: https://www.sanidad.gob.es/areas/promocionPrevencion/promoSaludEquidad/equidadYDesigualdad/estrategia/actividadDeDesarrollo/docs/Guia_metodologica_Equidad_EPAs.pdf

III. Method
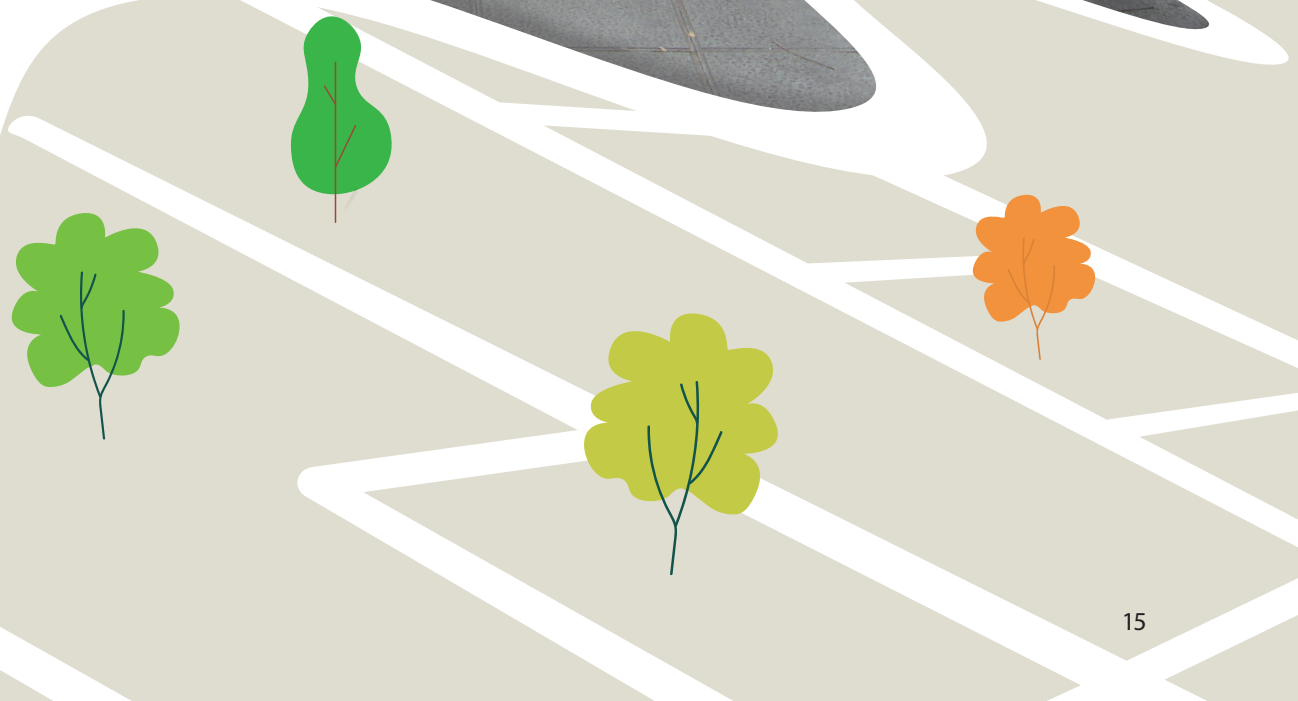
1. Lines of action for health planning

The aim of this Guide is to provide some simple guidelines for achieving healthier environments. To do this, it is divided up in two ways:

» **Promoting healthier lifestyles**, with the aim of establishing optimal conditions in urban areas so that older people improve their habits with a focus on health.

» **Disease prevention**, by creating healthy, pollution free spaces that help reduce the greatest health risks, such as obesity, cardiovascular disease, stress, accidents, collisions, falls, etc. and reduce respiratory diseases; with suitable microclimates that minimise the risks of extreme heat and cold and that have oxygen supplies thanks to the presence of trees and green spaces for the physical and psychological well-being.

How can these objectives be achieved with urban design and city planning? To answer this question, a thorough documentary search has been carried out, the first finding of which has been to verify that there are numerous, hugely different strategies, proposals, and actions, mainly in the European context, including Spain and North America. To organise the information clearly for those responsible for local policies and actions as well as for technicians and citizens, the Guide has been divided into three main complementary areas, which are:

» **Line of action 1:**
A walkable city, where you can get about easily on foot, since it is an essential activity to improve our physical and mental health, apart from making the planet more sustainable, together with the promotion of the bicycle as well as mobility active, and a reorganisation of the layout of public spaces to the detriment of private motorised vehicles.

» **Line of action 2:**
Introduce nature into the city's neighbourhoods, since there are enormous benefits for physical and mental health of nearby green spaces have been proven, not to mention its important role in reducing pollution and improving the urban microclimate.

» **Line of action 3:**
Provide **meeting and social spaces** to achieve more supportive and less unequal cities, attempting to stop the formation of bubbles of loneliness and isolation by bringing citizens together.

CIUDADES SALUDABLES

① **Ciudades pensadas para caminar**
Densidad adecuada
Complejidad
Contigüidad
Confort y comodidad
Accesibilidad universal
Seguridad
Sentido de pertenencia e identidad
Equipamientos
Comunicaciones

② **Introducción de la naturaleza en la ciudad**
Zonas verdes de proximidad
Pavimentos y áreas sin uso
Infraestructura verde y azul
Azoteas y terrazas

③ **Lugares de encuentro y convivencia**
Gobernanza y participación
Sedes físicas en edificios
Lugares convivenciales
Espacios virtuales

Image 01: Methodological scheme proposed for planning healthy neighbourhoods. Source: In-house, 2021.

It should be noted that the urban phenomenon is a complex one, all of whose aspects are interrelated. Therefore, the objective of creating walkable cities is implicit in the construction of spaces for coexistence and, of course, when introducing nature in the city and the need to create networks for socialisation.

2. Improve health and prevent disease through healthier lifestyles and urban environments

Promoting health in urban environments means providing people with the best possible conditions to shift from sedentary, individualistic lifestyle model for a more dynamic and inclusive one.

Preventing disease by providing healthier urban environments means reducing all the negative impacts of the city on the air, soil, and water in our cities. The main objective is to reduce the common diseases that occur in these environments, such as cardiovascular disease, respiratory disease, type II diabetes, chronic respiratory diseases, injuries, falls and accidents, asthma or childhood obesity, disorders sleep, anxiety, and depression.

2.1. Walkable cities

Walking is the antidote to sedentary lifestyle, reducing obesity and cardiovascular disease.

To make it possible for people to walk in their neighbourhoods, streets must be safe from traffic accidents, the temperature must be comfortable (both in winter and in summer), dynamic (there are things to see and do), and attractive, among the most prominent requirements. This Guide provides a list of determining factors to assess the current situation and propose corrective actions with these objectives.

On the other hand, actions are needed in accordance with the priorities of the urban mobility pyramid[6], encouraging, in order of priority, mobility on foot, mobility by bicycle and public transport. For this, it is necessary to reconsider how public spaces are organised according to these priorities.

Likewise, it is necessary to reduce the risk of traffic accidents, falls, and other mishaps that can occur in our public urban spaces.

For do this, it is necessary to consider people's different capabilities, which may be because of their age, or due to the temporary or progressive loss of their cognitive, orientation or security capacities, in public spaces. In a society with a high percentage of older people, we need to rethink our streets from the point of view of active ageing, so that everyone can walk and interact independently without real or subjective risks. In turn, it is necessary to design cities with the needs of children in mind, making them suitable for more active mobility (walking and cycling) and providing more spaces for social interaction for these age groups.

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[6] Urban mobility pyramid. https://esmovilidad.mitma.es/noticias/la-piramide-de-la-movilidad-urbana

2.2. Bringing nature into the city

Green spaces improve human health and have proven physical and psychological benefits for the well-being of people of all ages and conditions.

That is why it is essential to have "green streets", with trees and shrubs that cast shade over pavements. There must be natural areas within a few minutes from residential areas that can be reached quickly. The introduction of water cycle management solutions in the city is also advisable and is one of the so-called "nature-based solutions". Objectives and examples of these aspects are featured in this Guide as health improvements that must be included in all projects, programmes, and policies at the local scale, not only because of the health benefits, but also as a basic strategy for protecting from the effects of climate change and pollution.

Having more green spaces improves the urban microclimate and air quality. Green spaces provide oxygen, capture CO_2 and suspended particles from the urban atmosphere, reducing respiratory diseases and creating a microclimate that protects from extreme heat and cold shocks, especially for more vulnerable groups, such as children and the elderly.

It is also important to remember the physical and mental benefits of an adequate number of accessible, properly positioned green spaces, which can help reduce drug use and enable people to recover more quickly from stress peaks caused by living in urban environments (traffic, noise, etc.). The importance of these accessible (nearby) green spaces must be linked by green infrastructures, not only from an ecological point of view but also for pedestrians and bicycles so that routes and circuits can be provided that increase the possibilities of physical activity, active mobility, and active leisure in natural environments. This gives the connecting corridors between green spaces a connectivity function in addition to the purely ecological one.

2.3. Designing new spaces for meeting and coexistence

Creating new places for meeting and coexistence helps to prevent isolation, individualism, and unwelcome solitude, all of which harm people's health. They must be suitable spaces for activities that do not segment groups if the population and should encourage and facilitate intergenerational meetings and interaction.

From an urban planning and design standpoint, creating places to meet and socialise means the design of a network of public spaces with activities for all, considering diversity (age, gender, functional diversity, country of origin, etc.). The facilities must be close to people's homes, and can be newly created or refurbished, providing flexibility to channel social, cultural, sports, educational or leisure activities on a local scale. It is crucial to rely on citizen participation when designing these spaces.

In this regard, public spaces with varied, intergenerational activities support the creation of networks of active people, combining face-to-face activities with virtual ones, all based on people's real, shared interests. These can be identified by means of citizen participation initiatives. To do this, the desirable structure is one with large and small squares, with flexible equipment strategically positioned about the city, which are easy to access, as well as the existence of local green zones.

3. The unit of analysis for planning Healthy Cities

Promoting health and preventing disease in urban environments requires a unit of analysis. The variety and heterogeneity of Spanish cities makes it impossible to establish a standard unit of analysis for all of them in this Guide, but the following parameters should be considered when determining them:

» Is the project an upgrade to an existing neighbourhood or is this a newly created neighbourhood.

» Work with homogeneous urban units based on vulnerability or sustainability indicators, or basic health areas, or socio-economic homogeneity, or a customised selection of areas subject to external risks (environmental, for example, proximity to industrial areas with high emissions, airports, floods, or areas vulnerable to climate change, among considerations).

» The ease with which the data can be obtained for analysis, processing, and management. This can be obtained from the National Statistics Institute (INE), the Spatial Data Infrastructures (IDEs), urban information from the General, Strategic or Special Plans of the locality, or from specific sources (environmental, risk, mortality, etc.). It will be necessary to consider which economic and human resources are available to manage the data. It is preferable to take small, firm, and safe steps rather than setting goals that are impossible to achieve.

IV. Identifying elements for healthy city planning
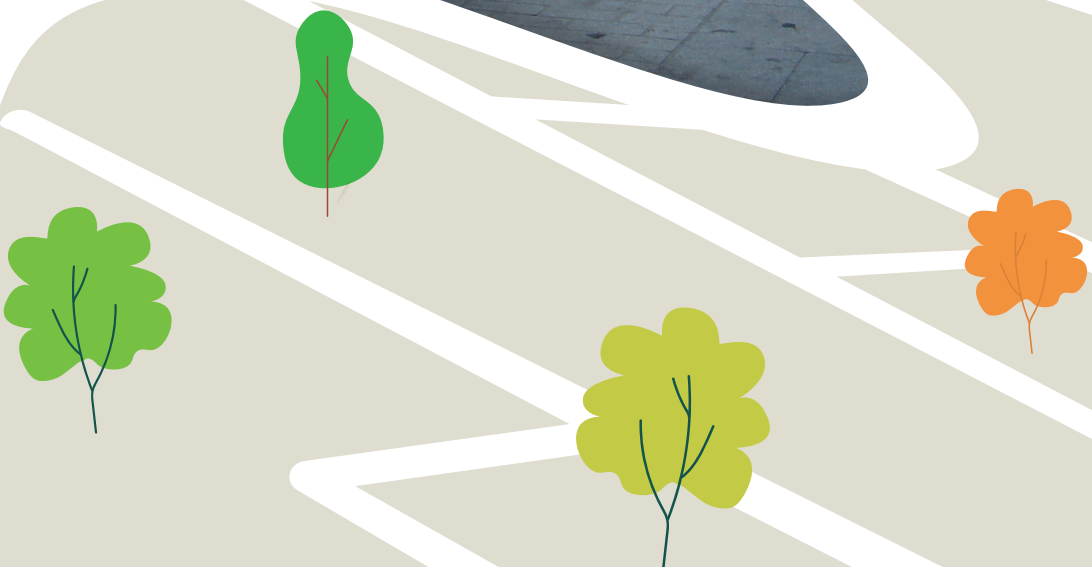
Once the priority objectives are in place, the next step is to analyse them. The following is a set of detailed objectives for each, together with key factors for their analysis. The result of this analytical process will be a better understanding of the stage reached with each priority objective, making it possible to answer some pertinent questions for drafting a Health Action Plan. It is also the time to define the progress made with the aspects analysed to be able to analyse the effectiveness of the Health Action Plan and monitor its performance over time.

Both the suggestions regarding the analytical process to follow and the sample questions are simply noted down to simplify the work of the team responsible for drafting the action plan. Also, those who want to take part in the process will benefit from some simple guidelines to help with the task. For this purpose, as far as possible, it is important to use processes that everyone can understand. In any event, in some cases, given that it is difficult to achieve, there must be ways for technicians to interact with residents, particularly in the case of urban areas that have already been built.

Once the diagnosis is complete, the final step consists of drafting the action plan and including it in the appropriate planning instrument or project. It is impossible to provide instructions on how to do this, since the scopes of these plans are so different. They may be new build plans or plans to renovate existing areas that require upgrading or renovation. Therefore, the plan can be anything from a mere ordinance to a general or territorial plan. Sometimes it may be a specific action plan to create a healthier street, neighbourhood, or city. This guide, as mentioned in the introduction, is intended to assist with including health issues when designing and building cities.

The following is a list of aspects for consideration when making the diagnosis, and a proposal analysing each of them. It is not intended to be a methodology for each aspect or a procedure to follow. It merely contains possible ways of tackling each one. That's why there is a potential process to follow and a set of questions for guidance purposes. Neither have we drawn any distinctions, other than in some very obvious cases, between actions to be taken or which have already been taken (renovations and improvements) when considering some processes in a specific section. We have not set out to analyse all epigraphs and all cases, rather those which are evidently more pertinent, or which have a greater impact on the population. The following pages contain suggestions and, in some cases seek to be useful by mentioning some usual methods and procedures.

1. Walkable cities

Walking is healthy, and it is good for preventing some of the most common chronic diseases affecting the population. But to encourage people to walk around their neighbourhoods, their surroundings must meet a set of minimum, essential standards, which are set out below to assist in the creation of projects, policies, and local programmes to achieve this objective.

1.1. Adequate population density

When there are not enough people, it is impossible to have a city of proximity. That's why it is so important to calculate the density of the area in question. Although in Spanish law it is almost a tradition to have 75 people per hectare, in many cases population density is probably insufficient to have a healthy city in some cases, and in others it is too high. What's more, the classic density calculation needs to be recalculated to make this estimation, considering the number of people needed in a specific environment to permit pedestrian access (and in special cases, by cyclists) and basic equipment and services.

The procedure followed will probably be different depending on whether it is an area for improvement or a new urban area subject to a plan or project. The steps may be as follows:

1. In both cases, planners must decide which everyday services and equipment should be available locally. Traditionally, schools have been considered the bedrock of any social unit, but it seems increasingly necessary to consider primary health care services, pharmacies, certain food shops and meeting places for groups with special needs such as the elderly, as well as cultural and sports facilities.

2. Then it is time to analyse the demographic, social and economic structure: the current situation in case of an action on an existing part of the city, or that foreseen. It is important to consider the possibilities for development, both in terms of time and the modifications required based on considerations such as complexity.

3. Thirdly, you must consider different scenarios according to population density, adapted to the structures analysed.
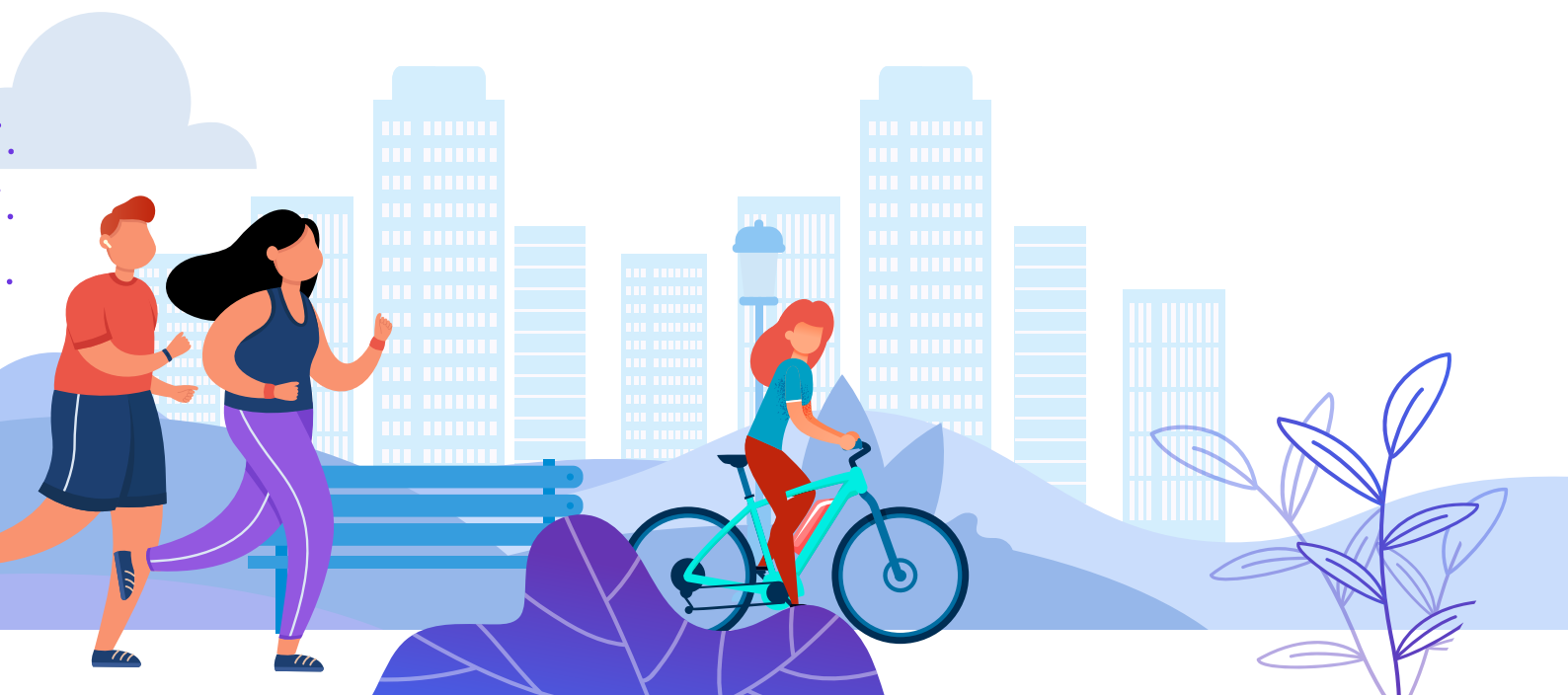
Once the process described above or a similar process is complete, you should have the answers to some questions that will allow you to design your action project. Some examples are:

» **Are all households within 1.5 km of a school, primary health care, pharmacy, or sports facilities?**

> Some commonly used facilities are mentioned, but many others could be considered. In addition, it could be useful to think about commercial activities by encouraging local trade, particularly food retailers and, if possible, linking them to local agriculture.

» **Are all households within a maximum distance of 1 km from a meeting place or for multiple activities?**

> It is important to have places where people can get together (in addition to public spaces) and that not only young or elderly people can socialise in separate groups, encouraging intergenerational relationships.

» **Are all households within 0.5 km of a green space?**

> Although the issue of green spaces will be raised later, it should be noted in this section that the basis for the organisation of urban green spaces would be these areas, related and linked together and to other, larger natural areas.

1.2. Complexity

Three basic types of complexity merit some consideration: demographic, social and economic. Having studied and analysed them, it is necessary to consider land use and the types of homes. If there are not different types of homes of different sizes, the area will lack complexity. The same goes for property prices and physical conditions. Therefore, it is a good idea to have a mix of homes at higher prices and social housing. What's more, land use should provide for both homes and offices, small industries, social facilities, small businesses... It should be possible to walk, cycle or use public transport to get to work. To make this complexity possible, complex land use is essential.

Calculating complexity is complicated because it requires the analysis of two different factors: the diversity of elements and their relationships. Given the difficulty analysing their relationships, almost all calculations are based on the possibility of diversity. Without different demographic, social and economic elements it is impossible to establish relationships. Initially, uses can be estimated as percentages. Based on this pattern, demographic diversity and economic complexity can be established by means of property and rental prices. There are other methods, almost all of which are based on calculations made of biodiversity in the natural world.

Once this data has been obtained, it must be decided if they are sufficient to consider that there is enough complexity in terms of use, demographics, and economics, the three questions to answer.

1.3. Continuity

Cities should be planned to ensure that large areas of land are not left undeveloped. Developments located several kilometres from central areas that can only be reached by car should be ruled out. In these cases, public transport is not economically viable, since there are not enough people to make it viable and they are too far away to be able to travel to them on foot or by bicycle.

Determining this is easy. Just look at a plan is to see whether or not the city is continuous. There is no problem if the area studied is continuous with the rest of the city, this being not only the built surface but also local parks, gardens, and green spaces. Otherwise, distances greater than one kilometre can pose mobility problems, particularly when travelling on foot. For journeys like these, distances of up to 1.5 km may be acceptable in certain circumstances, depending on the services and facilities on the edge of the area and the urban area in question.

Having made these and similar checks, you should be in a position to answer certain questions, which are important when drafting your action project. Examples of these are:

» **Is the area studied adjacent to the rest of the urban area of the city?**

All you need to do to answer this is to check the plan. As mentioned in the previous paragraph, the only difficulty is the consideration of intermediate green spaces. The criterion of the maximum walking distance should serve as a guideline in this regard.

» **If not, how far away is it?**

All you need to do to answer this is to check the plan. As mentioned in the previous paragraph, the only difficulty is the consideration of intermediate green spaces. The criterion of the maximum walking distance should serve as a guideline in this regard.

» **Are there any bordering parks or gardens suitable for integration into the new area to be created?**

This should not usually cause any difficulties as it can be assumed that the land studied has its own proximity conditions, independent to the adjacent one of which the green space is a part.

1.4. Reorganisation of the layout of public space to prioritise mobility

Some streets can be designed to deal with some aspects already dealt with in the guide to encourage active mobility. The order of priority, according to the urban mobility pyramid[7]: is pedestrians, bicycles, public transport. Some aspects to consider in the road hierarchy, according to these priorities, are:

• Designing roads and recreation areas according to active mobility priorities (walking and cycling) and public transport, in exactly that order.

• Reorganising the layout of public spaces, widening pavements, providing safe, high-quality, interconnected cycling infrastructures and areas assigned exclusively to public transport.

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[7] Urban mobility pyramid. https://esmovilidad.mitma.es/noticias/la-piramide-de-la-movilidad-urbana

• Reorganising the layout of public space allocated to private motor vehicle parking:

    - Reducing the number of street-level private vehicle parking spaces and reallocating the land to active mobility (wider pavements, cycling infrastructures, public parking spaces).

    - Prohibiting pavement parking.

    - Increasing and improving cycle parking.

• Pedestrianisation measures and traffic reduction measures, both with signage and through road design and tactical urban planning.

1.5. Comfort and convenience (climate, topographic, visual, and acoustic)

It is especially important that walking and cycling should be pleasurable and not dangerous. That is why it is essential that walking and cycling must be comfortable and convenient. The following minimum requirements should be addressed when designing or upgrading an urban area:

» ***Bioclimate comfort conditions.** Temperature, relative humidity, solar radiation, and wind. These should be considered in public spaces to propose and adopt measures in case of suboptimal conditions. These factors can prompt improvements to landscaping, the pavement, and the buildings themselves.

» ***Acoustic and visual comfort.** When it comes to noise, this must be considered both outdoors and in homes. When noise levels are excessive, corrective measures are required, such as prohibiting certain activities (related to complexity and land use), sound barriers (built or plant-based) and the use of special materials on pavements and building façades. As regards visual contamination, this has an impact on comfort as well as security.

» ***Topographic comfort.** Slopes should be gentle enough so as to allow pedestrians and cyclists of any age to walk or cycle conveniently.

We recommend you ask the following basic questions to obtain this information.

» **Are there enough trees to provide shade in recreational areas and in streets?**

> When it is extremely hot, particularly during the summer, shade is needed to create comfortable public areas. Recreational areas merit special attention in this regard since these are public areas where people spend long periods of time. It is also interesting to ensure a degree of continuity in shady parts of the streets to allow citizens to walk in more comfortable conditions. In addition, if the climate is cold throughout the year, tall, deciduous trees are a good choice because they allow sunlight to filter through.

» **What is the albedo coefficient of existing surfaces or those to be incorporated in the area? Are they exposed to the sun when the weather is extremely hot?**

The albedo coefficient is a parameter that measures the fraction of global incident irradiation of sunlight reflected by the ground in front of a tilted plane. There are numerous tables that provide values for this parameter depending on the type of surface. These tables are found in several of the publications mentioned in the bibliography. Generally speaking, dark surfaces have extremely high values (such as asphalt or, to a lesser extent, concrete) compared to lighter surfaces. This characteristic of materials is related to the urban heat island effect typical of large cities and present in the hottest months of the year, when, for example, paved streets act as energy accumulators during the day, return heat to the outside environment at night.

» **Are there any water features, vegetation or permeable surfaces that increase relative humidity in the environment? What is the proportion of these with respect to waterproof surfaces?**

To improve relative humidity, a basic strategy during the hottest, driest months of the year is to ensure that water stays in the outdoor spaces of urban areas. To do this, land waterproofing and artificialisation must be avoided, improving drainage, permeable pavements, more natural soils, etc. Another essential aspect for improving relative humidity is ensuring there is plenty of vegetation to encourage evapotranspiration (the amount of water returned to the atmosphere due to evaporation and transpiration of plants.

» **When the weather is hot, are squares, streets, and public spaces in general laid out to encourage adequate natural ventilation? When the weather is cold, are these spaces protected from the main winds?**

Natural ventilation in public areas is complex to determine and control, since any change in surfaces, building volumes and elements in the urban canyon can interfere with air movements. It is important to know wind patterns in the local area by studying wind roses, which offer relevant data, such as wind direction, speed, and frequency. It is also important to know the wind temperature, because, for example, in summer overheated air can have the opposite effect. When you have this data and compare it with predominant wind directions in streets, squares, etc., you can discover which areas are most and least exposed to the wind throughout the year.

» **Is the street designed to optimise the linearity of pedestrian routes?**

To encourage people to walk, is important to ensure that routes are as linear and direct as possible. This is done by prioritising pedestrians in the road design.

It is therefore pertinent to consider the following aspects, among others:

• Improve the design of intersections and crossings, prioritising pedestrians to make the route as direct and convenient as possible, for example, by assigning road level changes to vehicles rather than pedestrians. Roundabouts should be given particular attention.

• Traffic-light cycles must be designed to prioritise pedestrians, especially in large avenues, both with respect to the timing of traffic lights to allow for different mobility needs and for push-button traffic lights.

• Pedestrian crossings should continue a linear path without the need to change pavements.

» **Are there any streets and outdoor public spaces where the maximum noise levels exceed the thresholds determined by the WHO, or state or regional regulations? Are there any ordinances that restrict the activities in this regard?**

> Many cities have their own ordinances and maps that set limits and include a map of daytime and nighttime noise levels. In the absence of these, it is important to use appropriate measures to determine the main sources of noise in inhabited areas, which usually come from airports, railways, road traffic, industrial and recreational activities, facilities, etc. Nighttime activities, which can cause serious sleep disturbances, causing numerous associated diseases merit particular attention.

» **Are there regulatory ordinances governing telephone antennas, outdoor advertising on façades of buildings and streets, signage, etc.?**

> In this regard, the General Telecommunications Law applies, as well as any municipal ordinances governing the installation of mobile telephone antennas. Visual pollution is defined as everything that disturbs and alters a place, in this case the urban landscape, which affects its aesthetics and visual quality and has a negative effect on the environment and people (bad mood, stress, nervous system disorders, disorientation, etc.). To avoid this problem, it is advisable to prevent overloading the streets and façades of buildings with elements (which are used, to a large extent, for advertising and different types of installations), and to ensure the proper maintenance, cleaning, and organisation of public outdoor areas.

1.6. Universal accessibility (compliance with legal standards)

Beyond compliance with laws and regulations on accessibility (state, regional and local) that set out mandatory measures to eliminate architectural barriers, streets and squares should be designed in collaboration of organisations and associations that represent groups with functional diversity who require certain conditions to be independent. It is also important to consider groups like children, which are not represented by many associations. In this regard, firstly, and in parallel with reducing the proportion of the public space allocated to private motor vehicles, it is necessary to ensure an obstacle-free and level route, without steep slopes, and with pavements measuring at least 1.8 m at all times, a width that allows mobility in pedestrians' many circumstances: wheelchairs, canes, companions, shopping carts, baby strollers, supporting equipment, etc.

It is a good idea to create channels to allow citizens and specific groups to participate, identifying hazards and problems in public spaces and making proposals. This makes it possible to hear the opinions of groups that are not always considered and can also be an opportunity to resolve conflicts of uses, improve quality of life, citizenship education and make the best use of the available budget. Therefore, at least the following questions should be considered, when gradually working to create an inclusive city, with spaces adapted to the entire population.

» **In addition to accessibility inside buildings and public facilities, is there an adapted route in the public space as an alternative to steps and flights of stairs, which allows everyone to move around the city safely and conveniently?**

> Depending on each case and gradient to address, it is necessary to study the viability of a ramp (of sufficient widths, regulatory gradients, and handrails), of disabled lift platforms, escalators, and elevators. In any case, it is advisable to provide better-than-mandatory facilities and a generous turning radius to create spacious, convenient pedestrian walkways.

» **Does the street design ensure an obstacle-free and well-maintained route?**

There are numerous obstacles in streets, sometimes due to a poorly planned or executed design (lampposts, bollards, bins, signs, fences, recurrent puddles due to a dip in the surface…); others due to a lack of maintenance (trees with unpruned tops, roots protruding on sidewalks, sewer grilles and holes due to broken paving stones…); or by the use of public space by other agents (posters and advertisements for shops, bars and cafés, rubbish bins of neighbouring communities, containers, awnings and protruding elements at an insufficient height of less than 2.1 m). It is necessary to ensure a continuous route of at least 1.8 metres wide free of obstacles, with a suitable, non-slip pavement in good condition to allow people to move about safely, regardless of whether there are residential and other areas on the street containing urban furniture, infrastructure, and private property. The city council may be sued due to an accident or injury in the public space, so it is more than a question of accessibility and inclusion issues and includes accident prevention.

» **Is the street furniture ergonomic, i.e., it is comfortable and can be used by multiple users?**

Benches and supporting elements are not always well designed or functional. The height of the seat, their position on the route, whether they have backrests and armrests, and the materials with which they are manufactured are factors that can make a public space inaccessible to people who need support and places to rest from time to time to be independent. Likewise, bus and tram stops, drinking water fountains, bins, containers, signs with instructions, access doors and other elements must be designed according to the recommendations of the universal accessibility design guides.

1.7. Safety and Security

There are many studies, particularly ones related to older people and women, which focus on safety considerations in public spaces. Safety is important, but so is the feeling of being safe. Therefore, safety, both objective and subjective, is one of the first elements to consider. And safety is not just about traffic accidents or broken hips due to poorly maintained pavements. It also includes problems created by pollution and crime. In this case, we have decided to include some key questions for each section in the interests of clarity. We have started with a description and then provided some questions. These are not summarised at the end because the comments are in the introduction.

» Accident prevention

Traffic accidents are probably the main mishaps that occur in the public space. This is particularly true regarding children, but also affects other groups. Pedestrian lanes were separated from vehicle traffic many years ago, but mixed traffic is also possible provided there are strict rules regarding priorities: pedestrians, bicycles, public transport, then private motor vehicles. Accidents and injuries are also caused by poorly maintained pavements, trees, and buildings.

Your project should start with an on-site survey of the condition and state of repair of the area in question, including pavements, gardens, wooded areas, and façades of buildings. This is the case if yours is a rehabilitation or improvement project. It is then necessary to analyse the condition of the roads, pavements, and intersections, focusing carefully on how they are shared. This will also help pinpoint any traffic black spots.

After making these and similar checks, you should be in a position to answer certain questions, which are important to the action project. Some examples are:

» **Are pedestrians prioritised at the points where there is a conflict between road traffic and pedestrian traffic and is there a clear physical separation between bicycles and scooters and pedestrian traffic on pavements?**

» **Are bus and tram stops and their entrances located in safe places with sufficient visibility?**

» **Are pavements, trees and buildings properly maintained?**

» **Are there signs on public roads for everyone?**

» Crime prevention

It is also particularly important to address both so-called subjective security (perception of safety and security) and objective safety and security. There are different methods, almost all of which are derived from Crime Prevention through Design (CPTED), which improve subjective security very significantly through urban design and contribute to reducing some types of crimes, such as so-called opportunistic crimes. There are different guidelines for applying the CPTED method, including an international body[8] (https://cpted.net/), but almost all these procedures are based on the steps below.

Firstly, check whether the design or the existing location responds to the principle of so-called "natural surveillance". In short, see and be seen. There should be a survey of places that are deficient in this regard, such as concealed spots, poorly lit areas, transparent lobbies at the entrances of buildings, etc. Then access control should be considered so that they are clearly identifiable. Citizen collaboration (related to the "sense of belonging" that will be discussed later) is one way to contribute to this subjective security. Regarding objective security, a list of the places where the greatest number of police incidents occur is required.

Once the process described above or a similar operation has been carried out, it should be possible to answer certain key questions for your action project. Some examples are:

» **Is there a plan to deal with areas which, according to the CPTED method or other analogous and derivatives, may represent a security risk against crime?**

» **Have the places with the highest number of police incidents been identified?**

» **Has a gender-sensitive subjective safety survey been conducted to determine where people feel most unsafe?**

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[8] https://cpted.net/

» Pollution prevention

Air pollution and noise are particularly harmful to health, as is visual pollution (closely related to comfort and convenience). Visual pollution, partly due to advertising, is considered to be increasingly significant due to the information overload that human brains are unable to process, leading to stress. In both cases, when they reach certain levels, they are no longer just annoying and become a health problem. Visual overstimulation caused by the excess of objects, colours, buildings, etc., can be harmful to health, causing bad moods, stress, headaches, and nervous system disorders. At night, bright cold light can disrupt people's melatonin production, worsening sleep quality, so selecting lamps with warmer colour temperatures may be a solution. This pollution also has an impact on traffic and work accidents due to the effects and distractions it causes.

In built-up areas, implementing legislation from European directives provides for the measurement and mapping of both air and noise pollution. The visual load is determined according to the square metres of advertising with respect to the façade and the type of lamps are mainly governed by municipal advertising ordinances.

Sufficient data is necessary to be able to analyse this section. In some cases, it will be sufficient if there are meters nearby, but in others, meters need to be installed in specific spots. Once you have this data, you can answer critical questions that will help with the design or rehabilitation process. Questions such as the following:

» **Do air or noise pollution levels exceed the thresholds defined by WHO or European directives?**

» **Do the specific noise pollution levels exceed the thresholds set by WHO or European directives?**

» **Is there an advertising policy that prevents visual pollution?**

1.8. Sense of belonging and identity

There are several strategies that can be implemented in towns and cities to cause inhabitants to identify with a specific place. The most basic is to make the site identifiable. Certain symbols, statues, including buildings, special trees, or artistic paintings, among others, help to give a particular place an identity, even for those who are not local inhabitants. There are many examples of this, some of which are negative. This was the case of the Carabanchel prison, a strong symbol of identity in this Madrid neighbourhood. When it was demolished, the local population wanted to build a small copy and to gather around it. What's more, these signs of identity are crucial to make local people feel that they are part of a group and that the public space where they do their activities belong to them. In some countries, appropriation strategies, such as the citizens of the site collaborating in the design, construction, and maintenance of green spaces or even the same identity elements already mentioned are used are used.

Participatory processes for the design of the urban environment are also a tool to ensure that people can influence their environment and consider public space their own. In addition, meeting and coexistence spaces are also key elements when it comes to facilitating a sense of belonging and identity of a community.

In the case of existing areas, it is essential to use social research tools to determine the identifying elements. Surveys are among these tools, and there are different types that can be used, for example: question-based and image-based. If both are to be used, the latter must be used first. For example, asking participants to mark emblematic places and others that stand out from others on a map. Question-based surveys should always have an open-ended question that allows citizens to express their different opinions.

Once the surveys have been analysed, certain key questions can be answered, such as the following:

» **Have any symbolic physical elements been highlighted for conservation or enhancement?**

> It is likely that a survey of residents will be required. If it is a project, it may be necessary to propose some type of symbol identifying the area that will allow it to be read with ease.

» **Have any lost and recoverable symbolic elements been identified?**

> In this case, it may be worth thinking about recovering them.

» **Are there any strategies that involve the community in the design, construction, and maintenance of public space?**

> For example, in the case of the maintenance of gardens and green spaces it is relatively easy to get the residents themselves to take care of them, if only partly so. There have been some experiences in Germany and Austria supporting the feasibility of this solution both from the point of view of caring for these areas and from a health perspective by encouraging physical activity and socialisation among the inhabitants of the area.

1.9. Facilities (school, health, sports, living together...)

Everyday facilities are essential to create a proximity city. They must be close enough to reach on foot. Probably the most important of these are schools. All psychological studies agree that walking to school is especially important in a person's development. People should mainly walk or cycle to school. But there are other, equally important facilities for health, socialisation, and sports. In particular, those that serve as meeting places for the elderly. In this regard, the importance of avoiding "ghettos" should be highlighted, encouraging intergenerational spaces where the elderly, the young and the children can meet. This ensure the necessary interaction between different groups. In particular, there needs to be a place for education and training in the functioning of the city so that participation in its design, construction and maintenance is based on facts.

» **Is the population density sufficient to stimulate the use of equipment (school, health, sports, cohabitation, etc.)?**

> Without sufficient population density it is difficult to have a proximity city since it is difficult to stimulate activity if there are not enough people in the local environment. This is therefore something to consider when organising facilities for activities and different uses. It is necessary to check the size of the urban area that facilities will serve, which can be anything from a local neighbourhood to a district, right up to a city. For more information see point 7.1. *Adequate density.*

» **Are everyday facilities at suitable distances from residential areas (school, health, sports, social activities, etc.)?**

Aspects related to the distance, accessibility and type of each facility and service are determined by the size and type of area they serve. Because of this, each urban hierarchy corresponds to a certain level of facilities, which must guarantee functionality and quality and provide citizens with adequate services to cover the demands and needs. Active mobility (walking, cycling, etc.) by citizens should be encouraged, and a network of infrastructures and services must be established to provide adequate support to the population.

For more information see point 7.1. *Adequate density*.

» **Is there a complex society around the facilities (school, health, sports, social activities, etc.)?**

The complexity of the social fabric is another fundamental issue affecting the uses and activity taking place in these spaces. It is important not to create neighbourhoods made up of urban typologies associated exclusively with certain socioeconomic classes, which prevent exchanges and interactions between different groups. It is also important to consider that these places must be intergenerational in nature, promoting active ageing and interaction between different age groups of the population. That is why another aspect to consider is over specialisation of facilities and services, which can lead to monofunctionally and lack of complexity, which is detrimental to urban vitality and causes low social performance. It is important to evaluate the integration and promotion of mixed services, infrastructures, and facilities to encourage diversity of functions and users, promoting physical activity and healthy lifestyles.

» **Do the facilities comply with the minimum accessibility criteria (universal design) and inclusion?**

It is necessary to promote well-designed access to facilities and easy access in safe, convenient conditions, facilitating daily life of all people, regardless of age, social condition, or functional diversity, and in the most autonomous and natural way possible. Some of the parameters to consider for this are: equality of use, flexibility, simplicity, easy-to-understand information, little physical effort, appropriate dimensions, etc.

For more information see point 7.5. *Universal accessibility*.

» **Are the facilities clean and properly maintained?**

> In many cases, poor maintenance can make them unsuitable for the purpose for which they were designed, leading to accidents, or making the activities impossible, leaving spaces abandoned and unsupervised, which usually create a sense of insecurity in the population. Some aspects to consider are pavements and urban furniture of different types, such as benches, fountains, bins, lighting, signage, children's games, equipment for outdoor physical exercise, etc.

» **Are there adequate and sufficient spaces to encourage physical activity?**

> Although there may be facilities intended exclusively for this purpose but may well be others that can also be put to this use. These spaces should be adjusted to the appropriate urban scale, allowing for both citywide and smaller-scale physical activity services for neighbourhoods and districts. It is important that they be distributed evenly throughout the urban fabric and that they are accessible to the entire population.

1.10. Communication (neighbourhood, with other neighbourhoods, city, with other cities…)

Cities do not only have relationships with their local inhabitants alone. They also interact with strangers. There is also a need for access to non-daily services and equipment (for more sporadic use). This means that there must be communication systems with more distant parts of the city. Although this can also be done on foot (running paths, for example), bicycles and public transport are ideal for intermediate situations. The aim is to reduce the need for cars to an almost irrelevant level and for specific situations. It is also necessary to analyse communication systems with other parts of the city based on active transport (walking and cycling) and public transport.

Bikes have an essential role when promoting active mobility. At the same time, they can be used to travel longer distances, and using them is good for the environment, so it is important to include actions that encourage cycling and its intermodality with public transport.

» **Can you get to the university using active transport (walking or cycling) or public transport from all neighbourhoods?**

» **Is there public transport available to travel to the hospital from all neighbourhoods?**

» **Is there public transport available to travel to protected natural areas from all neighbourhoods?**

» **Is there public transport available to travel to the railway station from all neighbourhoods?**

» **Is there public transport available to travel to the port or airport from all neighbourhoods?**

» **Is there a network of trains, buses or other public transport systems connecting to other cities in the region?**

» **Is there intramodality between the bicycle and public transport?**

All the above questions are asked for the same purpose: to establish a system of priorities that starts with the pedestrian and ends up in a private car. There are certain unusual activities that are impossible to do on foot. For example, training in an Olympic swimming pool or making certain types of highly specialised purchases. In this case, bicycles and public transport are essential.

2. Introducing nature in the city

The importance of green spaces in urban spaces is highlighted, both to promote health and to prevent disease. In general, urban green spaces facilitate physical activity, reduce stress, provide shelter from noise, and provide spaces for social interaction and recreational use. At the same time, it is also important to reduce pollution and control temperatures. The importance of local green spaces has already been highlighted, but in urban areas there should be green spaces of different types used with different frequencies. As has also been explained, these should be woven into a green infrastructure both from an ecological and use point of view.

Four possible, complementary actions are defined below to introduce and enhance nature in urban environments, depending on the specific case of each area of action.

2.1. Proximity to green spaces

Local green spaces are key assets that should be responsible for organising the fabric of the healthy city. There is much scientific evidence from authors regarding the need for contact with nature, such as Louvcon, Shanahanque or Wilson. However, this contact with nature must be local, and many surveys deal with the relationship between the distance from a green space to home and how well used these are. The shorter the distance, the busier they are. Cities should, therefore, be dotted with green spaces (even small ones) that bring nature closer to its inhabitants.

The fact that accessibility differs greatly from one person to another must also be considered; for example, an elderly person needs places within ten minutes on a safe road with no steep slopes or architectural barriers. These areas should also be suitable neighbourhood meeting places for social interaction between the elderly, children, young people… However, these local green spaces of proximity must meet some specific conditions. There must be benches to sit on, games for children and exercise equipment for elderly people, as well as utilities, fountains and drinking water and even the odd table.

Depending on whether it is an area for improvement or a new urban area subject to a plan or project, the procedure followed will probably be different. The sequence may be as follows:

» Firstly plot, classify, and quantify the network of urban green spaces, with their hierarchy, such as neighbourhood parks, urban parks, ornamental gardens, boulevards, tree alignment in streets, etc. And also, if there are private garden areas of interest (because of their magnitude or by the size of the vegetation).

» Secondly, plot, classify and quantify the peri-urban green system, with protected areas of territorial scale if any, main and secondary water courses (rivers, streams, and riverbeds), reforested areas, humidity, vegetable gardens, trails, livestock roads, etc., and all spaces of environmental or landscape potential of the environment.

» Thirdly, this structure will be analysed from the point of view of quantity and quality of the green system, so that it can become a green infrastructure, capable of generating a physically and mentally healthy environment for the entire population. To do this, the following questions are useful, and have been divided into four blocks.

These questions that can help diagnose the quantity and quality of the green spaces of the local environment.

» **Can I walk to the park? Can a young adult reach a green space from home in 10 minutes?**

> Green spaces must be close to people's homes, within a walkable radius whatever their age and physical condition. A proximity city with active mobility is one of the main pillars to promote health and reduce cardiovascular diseases, diabetes, and obesity in adults. If the green zone is not close by, it will not be used on a daily and regular basis.

» **Can a person with reduced mobility or an adult over the age of 65 reach a green space from home by means of a safe road without hills?**

> It is a known fact that green zones benefit older people, but there is also evidence that people with reduced mobility find it tiring to walk for more than ten minutes and they find the streets dangerous and unsafe. A safe road should have a bench every 100 metres, pedestrian crossing need to allow plenty of time to cross. They should not have steep slopes (less than 8%) and there should be shady trees along the streets.

» **Is there a variety of green spaces within easy reach of homes?**

> Many authors point to the need to have a variety of types of green spaces: ornamental gardens, playgrounds, neighbourhood parks, tree-lined boulevards, green pockets, micro-parks, orchards and vegetable gardens, linear riverside spaces next to waterways, etc. The recovery of the interblock spaces of the open block areas, and courtyards, or changing the of direction of some street to make a boulevard, can be ways to create this variety.

» **Is there a variety of activities available in the green spaces?**

> Green spaces are suitable places for housing multiple activities. Some of these are more active (such as sports) and others less so (such as walking, reading, listening, and talking). The best-case scenario is to have diversified areas of activity, with different trees, types of flooring, with spaces for pergolas that give shade in summer, semi-covered spaces to shelter from the rain, orchards, playgrounds (petanque, ball, children's games) and sports areas (squash, basketball, handball, badminton, football).

» **Are there public services (toilets) in the green spaces?**

> The availability of enough public toilets, which are clean and well maintained, is an essential requirement for many people (particularly children and the elderly). There is also the possibility of linking them to catering businesses within the park, but always with access to all/public and without stairs.

» **Are the green spaces safe at night?**

> It is important that the parks are safe at night. Sometimes, parks are closed at night to protect them from vandalism. In any case, adequate lighting is needed to allow people to use roads without feeling unsafe. This must allow them to see the surface of the pavement and any level changes and obstacles.

2.2. Pavements and unused areas

Some authors also point out the need to leave parts of the city undeveloped and unpaved to introduce some much-needed natural entropy into the urban environment. During the 2020 pandemic, some urban spaces seemed more "isolated", simply because there were no people and little maintenance was done. These areas can be used to carry out activities that had not been foreseen and, in addition, in which nature could arise without control. There would be few places like these, and residents would need an explanation for their existence and their agreement should be sought. That aside, since they are not paved, they would increase evapotranspiration, and could also be used as ad hoc meeting places. To decide on their location the site should be analysed for relevant natural elements to conserve (outcropping rocks, unique trees, small wetlands …).

» **Are there any pieces of land in the city that can be used as sites for temporary use?**

> Depending on their position and size, pieces of land can be assigned for temporary use by the local authority, which will provide a profitable activity for citizens. There are examples of urban gardens, recreational areas, sports areas, leisure areas with cinema, or recreational activities in numerous Spanish and European cities. The need for neighbourhood collaboration and associations and organisations to use and maintain them (especially cleaning), must be a condition for use.

» **Is there at least 10% of unpaved ground in the neighbourhood?**

> Cities have a high level of runoff and waterproof surfaces. Due to a lack of foresight, we often opt for overly impermeable pavements. Trying to keep a small percentage of unpaved areas in each neighbourhood, linked to green spaces, playgrounds, and sports facilities, seems a good solution to reversing this trend.

» **Are there light-coloured pavements in the neighbourhood?**

> They can be pavement slabs, light-coloured cement, and even non-black coloured asphalt (a material that exists). Light colours improve two important aspects in the city: they reflect light from the ground, reducing the heat stored by day and radiated at night (the so-called urban heat island). There are also technological solutions, with sustainable drainage soils that combine a light colour with an increase in the permeability index which is doubly positive. The placement of these solutions in low areas of the relief must be evaluated to ensure the presence of surface water from rain runoff.

» **Are there permeable pavements in the neighbourhood?**

> There are numerous types of permeable pavements: slabs with open joints, separate slabs (for parks), gravel areas, mulch areas, sandy areas, areas with plants in soil, etc., and even technological pavements known as Sustainable Urban Drainage Systems (SUDS), which allow water to pass through. The opportunity to place SUDS in areas planted with trees is interesting, since it allows walkable, well-drained areas which are better for trees. There are many different types, whose shapes and colours adapt to a great possibility of solutions.

2.3. Green and blue infrastructure

But to the green spaces of proximity, which are generally small, it would be necessary to add larger parks and to have areas of nature on the outskirts of the city that complement them. They are all connected by ecological connectors to weave a real urban green infrastructure. These ecological connectors could be used as pedestrian and bicycle paths for sport and exercise outside the green spaces closest to homes. Long-distance circuits (two hours) could be created for running or for bicycles or even for pleasant walks. This would make it possible to have green spaces of different sizes that would be frequented by different people in different ways. The possibility of walking out of the city to more distant and less anthropized natural areas (almost impossible in many cities with high-speed ring roads, roads, or railways) is worth considering.

It is also important to consider the opportunities that rivers and streams offer when made part of this green infrastructure and thus increase the variety of possibilities.

» **Is there an itinerary for active mobility (walking-cycling) that connects central neighbourhoods with the outskirts of the city?**

> The need to connect green structures, boulevards, and central gardens with those outside the city is important from the environmental, sustainable and well-being point of view of the population. It brings physical and mental benefits to all people. A Green Infrastructure Plan can be drawn up in the medium term, which can be implemented gradually, with small transformations of streets, pavements, or spaces of opportunity.

» **Are there any streets used for different purposes at weekends?**

> In very dense areas with few green spaces, closing the street to traffic at weekends so that new activities can take place is an excellent idea. Firstly, it is inexpensive. Secondly, it is reversible. And thirdly, it can lead to organised activities (marathons, fairs, recreational and cultural activities, markets, etc.) and ad hoc activities for the population.

» **Are surface water channels in good condition?**

> Rivers and streams must be clean, free of pollution, with adequate vegetation and with the possibility for local fauna to thrive (mainly insects, birds, and fish). All wastewater must be treated in phytosanitary purification systems.

» **Is at least 50% of runoff water recovered for reuse?**

> The rainwater that falls on the city can be put to different uses that require non-potable water, such as washing streets, firefighting, the control of the microclimate in ponds and fountains and the irrigation of vegetation, among the most relevant and useful. In addition, removing a significant fraction of this water considerably reduces the energy expended purifying all the water in the city.

» **Is runoff water collected in streets known as La Rambla (watercourses)?**

> In many towns there are streets known as Ramblas. A rambla is a channel of runoff water, which must be dealt with properly, so that it does not cause flooding in certain periods and can be put to good use.

» **Are there run-off valleys that could be recovered as green-streets?**

> In cities with slopes toward surface water courses, run-off valleys are sometimes found. In these streets there is a great opportunity to increase vegetation since these places always have more moisture factor than the rest. They can be converted into green streets, helping to ensure green continuity under the concept of green infrastructure.

» **What are the peri-urban areas of the city like?**

> » If they are agricultural, they can be converted into agro-urban parks that help to provide the community with local produce.

> » If they are horticultural, they can be converted into urban gardens, which have environmental and physical and mental health benefits for residents. The urban gardens of the territorial plan of Mallorca, are a good example[9].

> » If they are river corridors, they can be converted into recreational, cultural and sports areas for citizens.

> » If they are not, they can be planted with trees to become the lungs of the city, renew the air, increase oxygen levels, reduce the urban heat island and act as a carbon sink.

» **Are the protected spaces in the city outskirts connected?**

> Due to policies to conserve valuable natural spaces, there are numerous independent protected spaces that are not connected to each other. The idea is to connect these spaces with new green corridors, using pedestrian paths, livestock trains, farm roads, surface water courses and forest paths, among others.

2.4. Rooftops and terraces

Not only can these be greened, but they can also be used as meeting and gathering places. Because the most beneficial uses for each spot depend on their specific location and, therefore, are not eligible a priori without a detailed study, the actions would focus on informing, raising awareness and collaborating with owners to achieve this, with help if necessary. Such important areas in terms of size should be put to good use. The best options must be determined in each case, such as green terraces, terraces to be used to install solar panels or terraces for shared use.

» **Are there green roofs in central urban areas on buildings belonging to or operated by the local administration?**

> It is highly recommended that major public facilities such as schools, institutes, sports facilities, cultural, social centres, artistic, etc. have green roofs, for two main reasons. Firstly, because they improve air quality and citizen well-being and reduce the urban heat island. Secondly, to set an example for buildings and constructions with other uses.

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[9] https://www.ultimahora.es/noticias/local/2022/03/02/1705519/espacios-publicos-tendran-incorporar-zona-huertos.html

» **Are any large commercial areas covered with photovoltaic production plants?**

> On extensive commercial areas, (tertiary office parks, business parks, private university complexes, etc.) there are some great opportunities to install roofs for green roofs and clean energy generation. Ideally, each use can be allocated 50%, but the advantage of each solution should be analysed. In central areas, green roofs should be prioritised to reduce the levels of pollution in dense parts of the city.

» **Are there green roofs or renewable energy installations in industrial areas?**

> Industrial areas of the cities, with large units that have flat or sawtooth roofs can be used to produce clean air or clean energy as a second activity within their business. The energy generated can be used to cover the typical needs of industrial estates (electricity for equipment and engines, street lighting, etc.) and the surplus can even be put to other uses in the city.

» **Are there plants and potted plants on terraces?**

> In many cities, terraces have become extensions of the living room, or they are used to store different objects. Filling terraces with plants and flowers improves air quality of the city, makes streets more beautiful, improves the local microclimate, and reduces the temperature of air entering homes. Regarding the colours of the flowers, aromatic or unique plants, they can give a sense of identity and variety that is highly recommended for urban spaces.

» **Can the roofs of properties be put to community uses?**

> Building roofs belong to the property owners' associations. In some cases, the location, and the space available make them attractive spaces for leisure and recreational activities (especially on summer nights). Equipment to create shade and plants and light flooring should be used to improve thermal comfort.

» **Is the roof a light colour?**

> Roofs should be light coloured, (white, ochre, etc.) or reflective (cold roofs). Roofs clad with black asphalt become extremely hot in the summer, which makes it difficult to control the temperature in the home.

3. Places for meeting and socialising

Another basic strategy for achieving healthy cities and neighbourhoods is to create and encourage the use of recreational spaces, creating more supportive and less unequal cities and neighbourhoods with the possibility of socialising and trying to break bubbles of loneliness and isolation, and encourage social relations, reversing a trend that has become common in today's cities, particularly large ones.

Town planning makes it possible to design places that encourage interaction between people and intergenerational socialisation. But it is also necessary to energise and activate these spaces by enabling different activities, such as children's play areas, exercise equipment, running trails and, in general, places and activities that encourage people to get together.

3.1. Governance and participation

A streamlined relationship between administrations, civil society, professional and technical resources, and the economy is essential when undertaking any type of change of model. In urban matters, we are talking about local government and in some cases, regional government. In any case, the citizens who are governed, those who govern them, the technicians and the economic and social powers must form a relationship. There are different ways to make this happen. Everyone builds cities, and for everyone to participate, it is essential that everyone speaks the same language and is well informed. To achieve this, continuous training in citizenship seems the most appropriate course of action.

» **Are there regulations and/or local regulatory frameworks in place to ensure the proper functioning of citizen participation?**

> It is advisable to have tools to govern and guarantee effective, adequate application in citizen participation rights, to be flexible to new emerging demands and in according to the real situation of the municipalities and the diversity of their inhabitants. Participation requires planning and adaptation by institutions and considering this a cross-cutting policy (Hernández, E.).

» **Are there platforms and participatory instruments (physical and/or digital) promoted by local administrations in place to make decisions about the local urban environment (mobility, urbanism, public services, environment, etc.)?**

> Citizen participation in the management and depiction of local environments is of great value, since it can achieve a high level of response and the contributions gathered are useful for analysis, diagnosis, proposals, and subsequent evaluations. The results obtained by these tools complement the technical and political vision of public servants and improves the knowledge available to these entities.

» **Are there active citizen participation bodies (city, district or neighbourhood councils, public hearings, pacts, and agreements, etc.)?**

> These instruments are essential for an appropriate dialogue between citizens and local governments.

> They are opportunities to meet, debate, gather opinions and formulate proposals together, with the objective of influencing municipal policies. They allow collective participation of different institutional and social agents and may be related to the territorial entity to which they refer (territorial bodies: city, district, or neighbourhood) or a specific theme (sectoral bodies).

3.2. Physical headquarters in buildings

For participation to be possible, there must be places where this common language can be acquired. These are also places to share the necessary knowledge and experiences and where active participation can be exercised. It matters little what they are called, but it is important that they become reference points where local people can go not only to complain about their problems, but also to celebrate improvements, congratulate themselves on their achievements or to propose projects or ideas. These places should always be the same, easily recognisable and they must operate independently of the political groups that govern municipalities, councils, and regions.

The same building can also house places for specific groups to meet, discuss things and express their opinions, with access to supporting equipment such as projectors and materials for workshops and activities. This is therefore a place for citizen education, to actively exercise citizenship, collaborating in projects and initiatives in the city, considering different positions and giving access to technical reports and the opinions of specialists in certain fields.

» **Are there premises, buildings or offices adapted for management by neighbourhood associations, groups, and other non-profit organisations (NGO, association, foundation, cooperative…)?**

> These venues must be accessible, connected, and comfortable to allow people meet in a pleasant and safe place and where they can do their activities easily. These must contain the necessary basic equipment such as tables, chairs, whiteboards, screens, projectors… which are essential for the vast majority of group activities. Different rooms and functions allow more diverse activities proposed by citizens, from cultural activities, to workshops, conferences, and applied research. These spaces can also be used by other institutions, such as universities, institutes and private organisations that also work with citizens on projects and applied research, for which participation is essential.

» **Are there collaborative projects and citizen initiatives that make use of public space?**

> Urban gardens, second-hand and craft markets, fun runs, concerts, cultural activities, shared meals… are among the activities and initiatives that can be promoted and fostered at the municipal level. The great cultural diversity of our country means that similar activities take place in quite different ways to differing degrees of success in a town or city. However, municipal support is essential to be able to operate these facilities, either by providing a temporary space, or by providing basic or material services for activities such as urban gardens, gardens, etc. They can also help with dissemination and promotion through municipal channels and media so that people know about the activities for greater social impact, especially those related to the SDG.

» **Do public service departments work with associations and local entities in an active way?**

> Effective communication between citizens and public administrations must not only provide information, but also bidirectional dialogue, where different stakeholders feel that their interests are considered when proposing certain actions, projects, and activities. It is also important to debate issues that are often controversial, in order to educate and resolve conflicts arising from the use and the need to remodel cities toward more sustainable models. Creating committees, groups and working or focal groups to address different issues involving cities with the participation of the city's agents is important to have different opinions and visions and reach a consensus accepted by the majority. These groups should also seek participation by minors, through schools and colleges, youth associations, etc.

3.3. Public places for socialising

Although the most obvious are green spaces, squares and parks, sports areas and venues activities for different age groups are also a part of the public realm. These open, public spaces are equally necessary and must be designed to allow some to rest, others to attract attention and others to encourage conversation. For example, small stages for outdoor performances with places the audience can sit; spaces for young people to practice sports, such as skateboarding or skating; squares with fountains where children can play when the weather is warm; squares with sculptures or temporary exhibitions; even streets with areas set aside for graffiti contests. It is not a question of replacing physical headquarters in buildings, rather of providing additional venues with more of an emphasis on social relationships, perhaps more spontaneous, than purely spaces of participation.

Some of the questions to ask could be:

» **Are there spaces and facilities that are used for different things at different times or days of the week?**

> Some open spaces, such as school playgrounds or surface parking, can host different activities during at different times of day and become, for example, a setting for leisure, sport, or culture.

» **Are there spaces in the city where people can get together? What kind of activities take place there?**

> The greater the variety of activities that take place in the public sphere, the better designed the space. The activities can be diverse, depending on the schedules and profiles of the people who visit, the day of the week or the time of year, or even special dates.

» **Are the spaces suitable for diverse profiles (intergenerational, intercultural, etc.)?**

Sometimes public spaces focus on specific sectors of the population or activities, such as economic activity, catering, or tourism; and there are also places exclusively for a certain age range. It is important that there are conditions that allow different users to interact and participate in the same space, such as comfortable public benches, good lighting, and other complementary elements of interest. Thus, for example, a skate park can also host classes for other ages at compatible times. Likewise, squares should have shady areas or semi-covered spots to protect users from the rain and comfortable benches, in addition to possible terraces and commercial activities.

3.4. Virtual Spaces

Today's society has been defined as the digital society. It is impossible to ignore this fact, since a major part of current social relations are virtual relationships that develop in the space that has been called "2.0." That's why it is necessary to establish channels, not only of social relations in horizontal but also in a vertical plane. There should be virtual channels, some facilitated by the administration itself and by associations, and residents, suitable for citizen interaction and participation. These channels, such as blogs, apps, social networks, websites, and different platforms should appear both in the neighbourhood and the city.

» **Are there websites, blogs, social networks, etc. promoted by the City Council, neighbourhood associations, etc. suitable for citizen interaction and participation?**

> It is particularly important to promote these virtual spaces for citizen participation, which have become even more important in recent months due to the global pandemic. They are tools that protect people from isolation by providing ways for acquaintances to interact and to reach other people, groups, companies, administrations, etc. that were previously difficult to contact. These platforms are a way to find out about, address and resolve local problems can be known with a global approach.

» **Do municipal WIFI networks cover public spaces, parks, squares, etc.?**

> A good internet connection is increasingly considered a basic, essential right. In fact, the European Commission has endorsed this approach by launching a programme called WIFI4EU[10], which "aims to promote WIFI connectivity for citizens and passers-by in public spaces such as parks, squares, official buildings, libraries, health centres and museums throughout Europe". Having Wi-Fi points in facilities and infrastructures encourages people to use these spaces for physical activity with the help of apps that encourage sport and monitoring of physical activity itself.

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[10] More information: https://wifi4eu.ec.europa.eu/#/home

V. Suggested questions for diagnosing the health of local environments
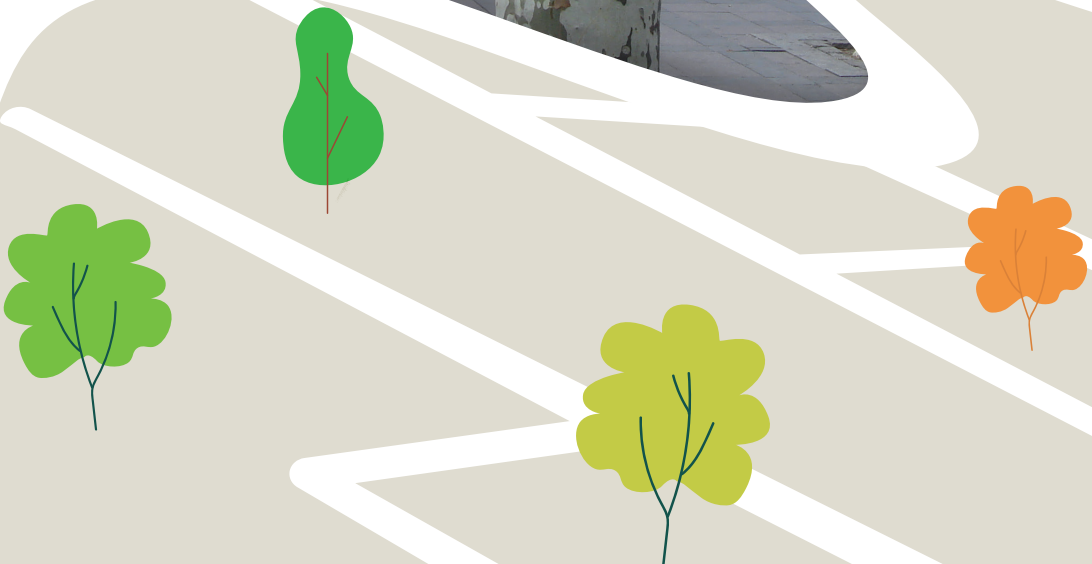
Walkable cities

The appropriate density

☐ Are all households within 1.5 km of a school, primary health care, pharmacy, or sports facilities?

☐ Are all households within a maximum distance of 1 km from a meeting place or for multiple activities?

☐ Are all households within 0.5 km of a green zone?

Contiguity

☐ Is the area studied adjacent to the rest of the urban area of the city?

☐ If not, how far away is it?

☐ Are there any bordering parks or gardens suitable for integration into the new area to be created?

Comfort and convenience (climate, topographic, visual, and acoustic)

☐ Are there enough trees to provide shade in recreational areas and in streets?

☐ What is the albedo coefficient of existing surfaces or those to be incorporated in the area? Are they exposed to the sun when the weather is extremely hot?

☐ Are there any water features, vegetation or permeable surfaces that increase relative humidity in the environment? What is proportion of these with respect to waterproof surfaces?

☐ When the weather is hot, are squares, streets, and public spaces in general laid out to encourage adequate natural ventilation? When the weather is cold, are these spaces protected from the main winds?

☐ Are there any streets and outdoor public spaces where the maximum noise levels exceed the thresholds determined by the WHO, or state or regional regulations? Are there any ordinances that restrict the activities in this regard?

☐ Are there regulatory ordinances governing telephone antennas, outdoor advertising on façades of buildings and streets, signage, etc.?

Universal accessibility (compliance with legal standards)

☐ In addition to accessibility inside buildings and public facilities, is there an adapted route in the public space as an alternative to steps and flights of stairs, which allows everyone to move around the city safely and conveniently?

☐ Does the design of the street ensure an obstacle-free and well-maintained route?

☐ Is the street furniture ergonomic, i.e., it is comfortable and can be used by multiple users?

Accident prevention

☐ Are pedestrians prioritised at the points of conflict between road traffic and pedestrian traffic and is there a clear physical separation between bicycles and scooters and pedestrian traffic on pavements?

☐ Are bus and tram stops and their entrances located in safe places with sufficient visibility? Are bus and tram stops and their entrances located in safe places with sufficient visibility?

☐ Are pavements, trees and buildings properly maintained?

Crime prevention

☐ Is there a plan to deal with areas which, according to the CPTED* method or other analogous and derivatives, may represent a security risk against crime?

☐ Have the places with the highest number of police incidents been identified?

☐ Has a gender-sensitive subjective safety survey been conducted to determine where people feel most unsafe?

Pollution prevention

☐ Do air or noise pollution levels exceed the thresholds defined by WHO or European directives?

☐ Do specific noise pollution levels exceed the thresholds set by WHO or European directives?

☐ Is there an advertising policy that prevents visual pollution?

Sense of belonging and identity

☐ Have any symbolic physical elements been highlighted for conservation or enhancement?

☐ Have any lost and recoverable symbolic elements been identified?

☐ Are there any strategies that involve the community in the design, construction, and maintenance of public space?

* CPTED: Crime Prevention Through Environmental Design (Crime Prevention Through Environmental Design)

Facilities (school, health, sports, living together...)

- ☐ Is population density sufficient to stimulate the use of equipment (school, health, sports, cohabitation, etc.)?
- ☐ Are everyday facilities at suitable distances from residential areas (school, health, sports, social activities, etc.)?
- ☐ Is there a complex society around the facilities (school, health, sports, social activities, etc.)?
- ☐ Do the facilities comply with the minimum criteria of accessibility (universal design) and inclusion?
- ☐ Are the facilities clean and properly maintained?
- ☐ Are there adequate and sufficient spaces to encourage physical activity?

Communication (neighbourhood, with other neighbourhoods, city, with other cities…)

- ☐ Is there public transport available to travel to the port or airport from all neighbourhoods?
- ☐ Is there public transport available to travel to the hospital from all neighbourhoods?
- ☐ Is there public transport available to travel to protected natural areas from all neighbourhoods?
- ☐ Is there public transport available to travel to the railway station from all neighbourhoods?
- ☐ Is there public transport available to travel to the port or airport from all neighbourhoods?
- ☐ Is there a network of trains, buses or other public transport systems connecting to other cities in the region?

Introducing nature in the city

Local green areas

- ☐ Can I walk to the park? Can a young adult reach a green area from home in 10 minutes?
- ☐ Can a person with reduced mobility or an adult over the age of 65 reach a green area from home by means of a safe road without hills?
- ☐ Is there a variety of green areas within easy reach of peoples' homes?
- ☐ Is there a variety of activities available in the green area?
- ☐ Are there public services (toilets) in the green areas?
- ☐ Are the green areas safe at night?

Pavements and unused areas

- ☐ Are there any pieces of land in the city that can be used as sites for temporary use?
- ☐ Is there at least 10% of unpaved ground in the neighbourhood?
- ☐ Are there light-coloured pavements in the neighbourhood?
- ☐ Are there permeable pavements in the neighbourhood?

Green and blue infrastructure

- ☐ Is there an itinerary for active mobility (walking-cycling) that connects central neighbourhoods with the outskirts of the city?
- ☐ Are there any streets used for different purposes at weekends?
- ☐ Are surface water channels in good condition?
- ☐ Is at least 50% of runoff water recovered for reuse?
- ☐ Is runoff water collected in streets known as La Rambla (watercourses)?
- ☐ Are there run-off valleys that could be recovered as green-streets?
- ☐ Are there any areas in the city outskirts with green, agricultural, or protected spaces for their environmental value?
- ☐ Are the protected spaces in the city outskirts connected?

Rooftops and terraces

- ☐ Are there green roofs in central urban areas on buildings belonging to or operated by the local administration?
- ☐ Do large commercial areas have green roofs or solar thermal or photovoltaic installations?
- ☐ Are there green roofs or renewable energy installations in industrial areas?
- ☐ Are there plants and potted plants on terraces?
- ☐ Can the roofs of properties be put to community uses?
- ☐ Is the roof a light colour?

Places for meeting and socialising

Governance and participation

☐ Are there regulations and/or local regulatory frameworks in place to ensure the proper functioning of citizen participation?

☐ Are there platforms and participatory instruments (physical and/or digital) promoted by local administrations in place to make decisions about the local urban environment (mobility, urbanism, public services, environment, etc.)?

☐ Are there active citizen participation bodies (city, district or neighbourhood councils, public hearings, pacts, and agreements, etc.)?

Physical headquarters in buildings

☐ Are there premises, buildings or offices adapted for management by neighbourhood associations, groups, and other non-profit organisations (NGO, association, foundation, cooperative…)?

☐ Are there collaborative projects and citizen initiatives that make use of public space?

☐ Do public service departments work with associations and local entities in an active way?

Public places for socialising

☐ Are there spaces and facilities that are used for different things at different times or days of the week?

☐ Are there spaces in the city where people can get together? What kind of activities take place there?

☐ Are the spaces suitable for diverse profiles (intergenerational, intercultural, etc.)?

Virtual Spaces

☐ Are there websites, blogs, social networks, etc. promoted by the City Council, neighbourhood associations, etc. suitable for citizen interaction and participation?

☐ Do municipal WIFI networks cover public spaces, parks, squares, etc.?

VI. References and good practices
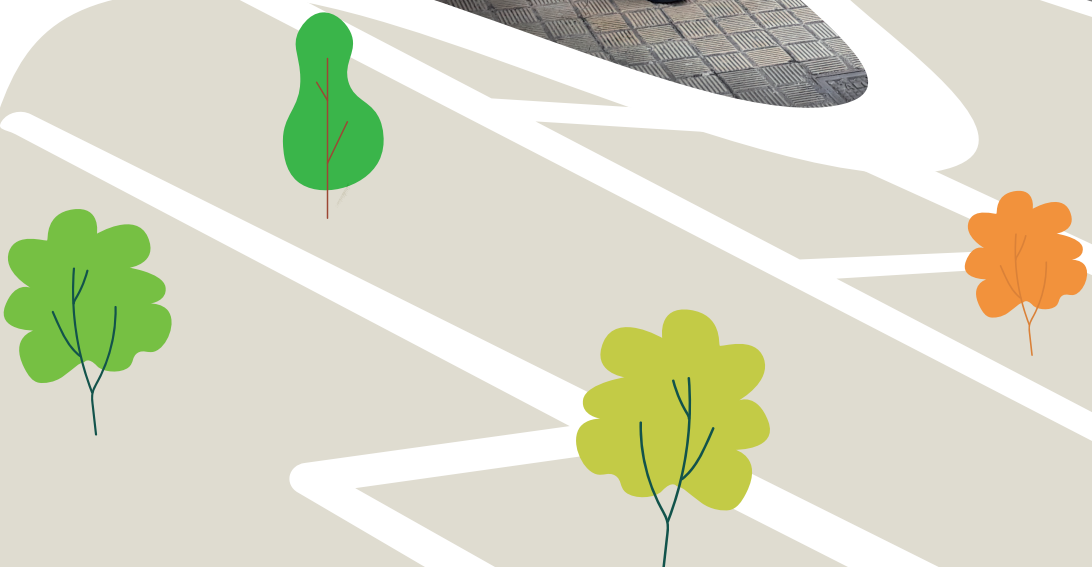
1. Good practices in Spain

To better understand the strategies discussed above, a selection of good practices have been chosen to illustrate many of the actions, projects and initiatives that can be carried out in a city to promote health. The different scales of the projects and their location shows the project promoters' capacity for action in the local context.

These projects have been selected based on merit and recognition of the project or initiative, their usefulness vis-a-vis the three previously mentioned strategies: walkable cities, nature in the city and spaces of meeting and socialising. The following map shows the general list of the selected projects:

ESTRATEGIA PRINCIPAL

● Ciudad de proximidad (o para caminar)
● Introducción de la naturaleza en la ciudad
● Creación de lugares de encuentro y convivencia

LISTADO DE CIUDADES

1. Pontevedra	6. Coslada	11. Cuenca
2. Málaga	7. Córdoba	12. Valladolid
3. Logroño	8. Vitoria-Gasteiz	13. Arbúcies
4. Barcelona	9. Benicàssim	14. Murcia
5. Soria	10. Zaragoza	15. Alicante
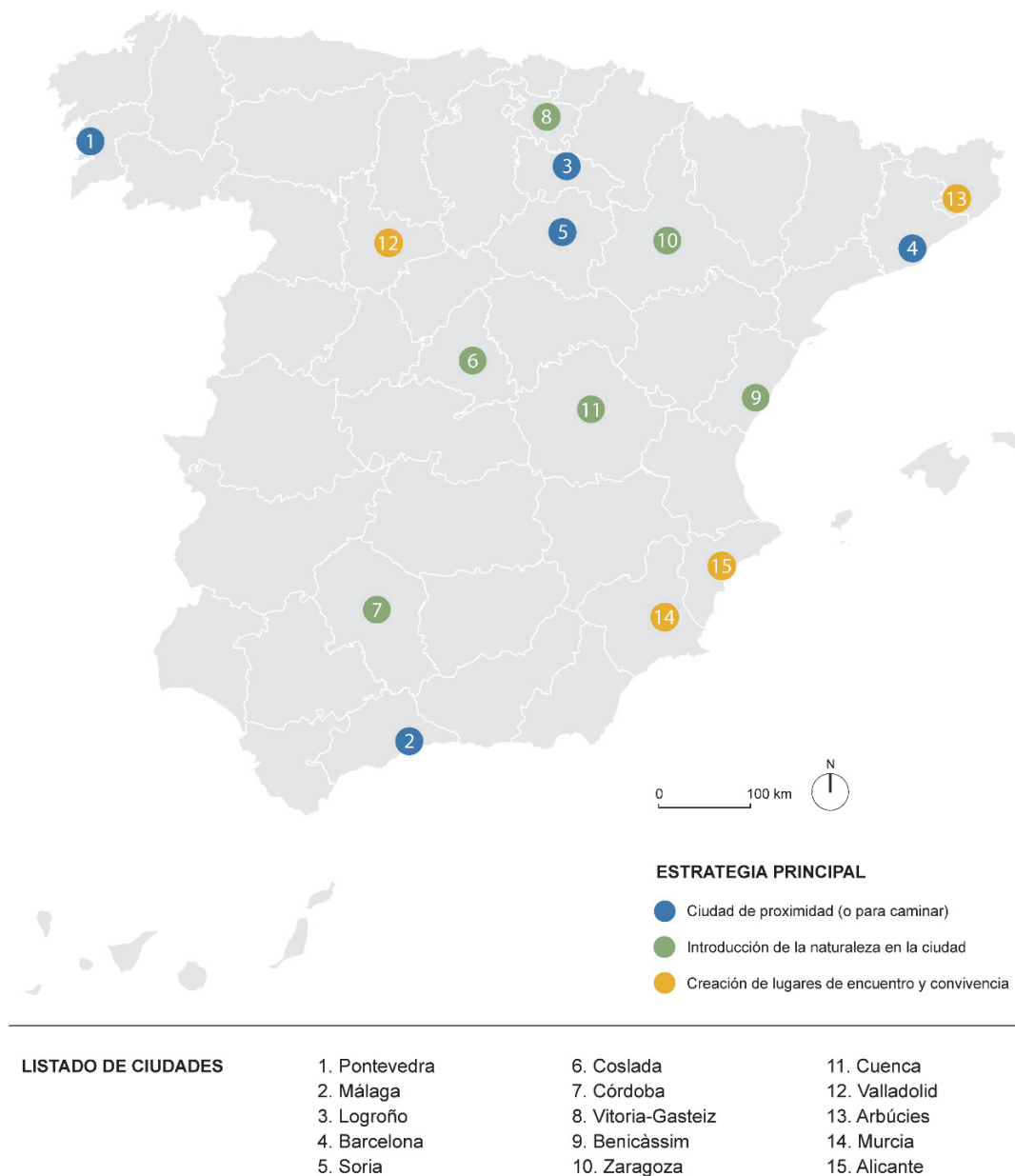
Image 02: Map showing the location of the projects selected as good practices. Source: In-house, 2021.

The specification sheets contain the following information:

Image 03: Structure of the good practice specification sheets contained in the Guide. Source: In-house, 2021.

A. Title of the initiative and location

B. Representative strategy of the selected project

C. Basic information about the location

D. Description of the proposal and budget (where available)

E. Good practices and results of the project, and the main recognitions obtained

The icons represent the most significant element or strategy when developing the project in the city:

Walkable cities.
The examples are outstanding measures for remodelling public areas. Accessibility and the removal of architectural barriers are considered, and walking is encouraged.

Introducing nature in the city.
Projects include different measures to integrate plants and nature in the city, and environmental awareness strategies.

Places for meeting and socialising.
Initiatives and projects that affect the creation of open spaces for citizens.

Citizen participation processes.
Projects carried out as a strategy for citizen participation have been specifically identified. In many cases, this aspect is one of the main reasons for the success of the initiative.

Equity perspective.
This highlights good practices that include the equity perspective – gender, intercultural, intergenerational, etc. – when carrying out the project.

TRANSVERSALS

1.1. Good practices for walkable cities

1.1.1. Walkable cities: Five examples

Pontevedra • Málaga • Logroño • Barcelona • Soria

Soria

Logroño

Pontevedra

Barcelona

Málaga
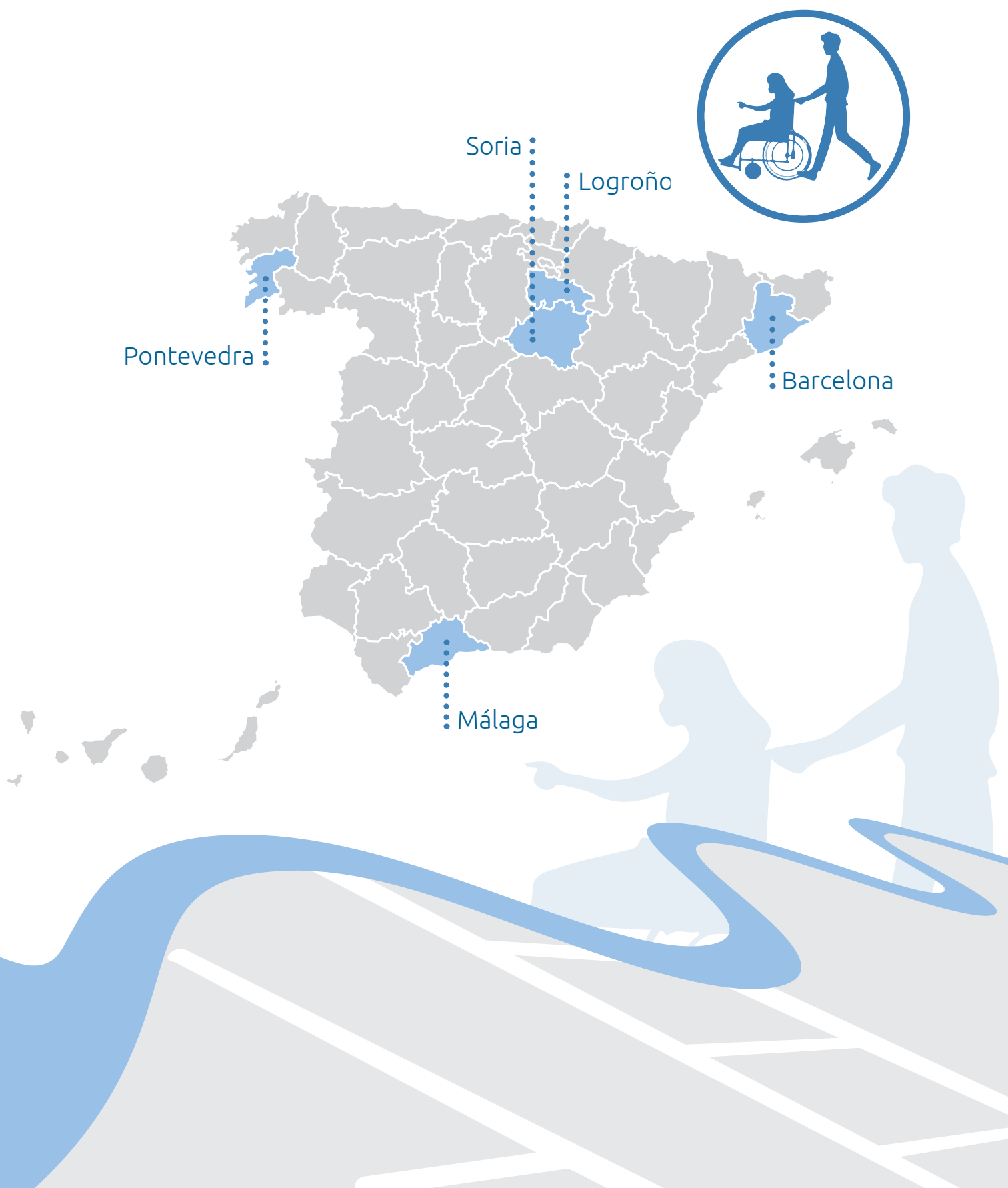
Pontevedra, Walking is the answer

Province, autonomous region	Pontevedra, Galicia
Project term	2001-2015 Major renovation of a public space
Population	83,260 inhabitants, the region has 121,000 inhabitants
Density	699.3 inhab./km²
Scale	Project carried out in the city, with the aim of gradually extending the model out throughout the municipality, through the councils of the 15 parishes
Website	Project: https://ok.pontevedra.gal/ City council: https://www.pontevedra.gal/ Promotional video: https://youtu.be/8roZ3qdSB5w
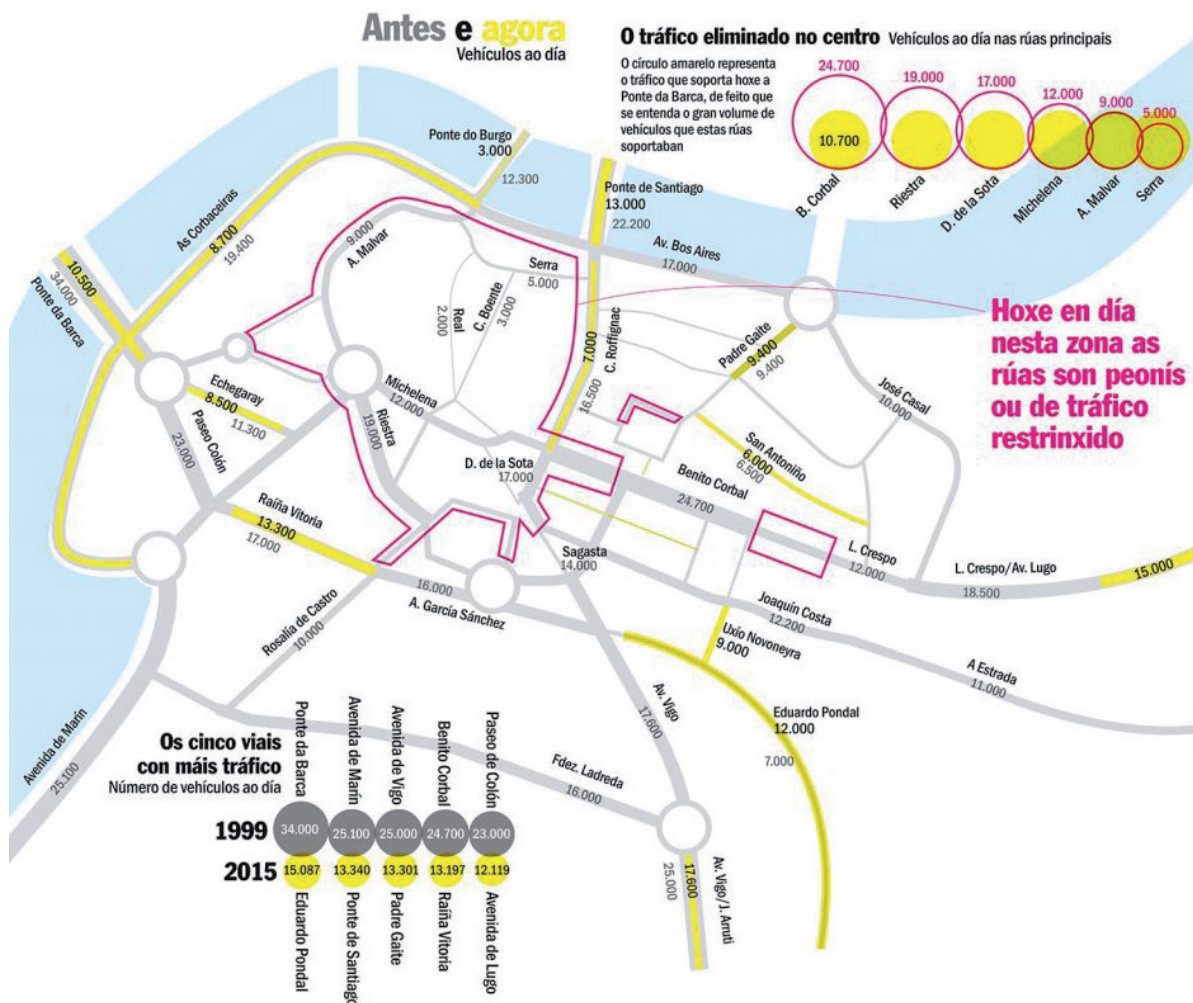
Image source: ok.pontevedra.gal

Description

General context	Pontevedra has become a benchmark in sustainable mobility, thanks to a multiple strategy that ensures that walking is the main means of mobility.

Key strategies	Comprehensive mobility project to create a people-centred city. The project combined several strategies:

- Pedestrianisation of the old town and calming of traffic in other streets (designed with this objective: wider pavements, life-saving speed bumps…)
- Restricted traffic in the city centre and dissuasive parking on the city outskirts.
- The work to upgrade the public space was an opportunity to integrate new services and update urban facilities.
- Promotion of citizen participation and educational campaigns with schools (school roads)

Budget	Municipal budget 2015-2020: Mobility and urban accessibility category: 15 million euros for different urban renewal projects (in this period: rúa Loureiro Crespo, Camiño Portugués, access to Monte Porreiro and other actions).

Good practices and results

Calles peatonales, antes y ahora
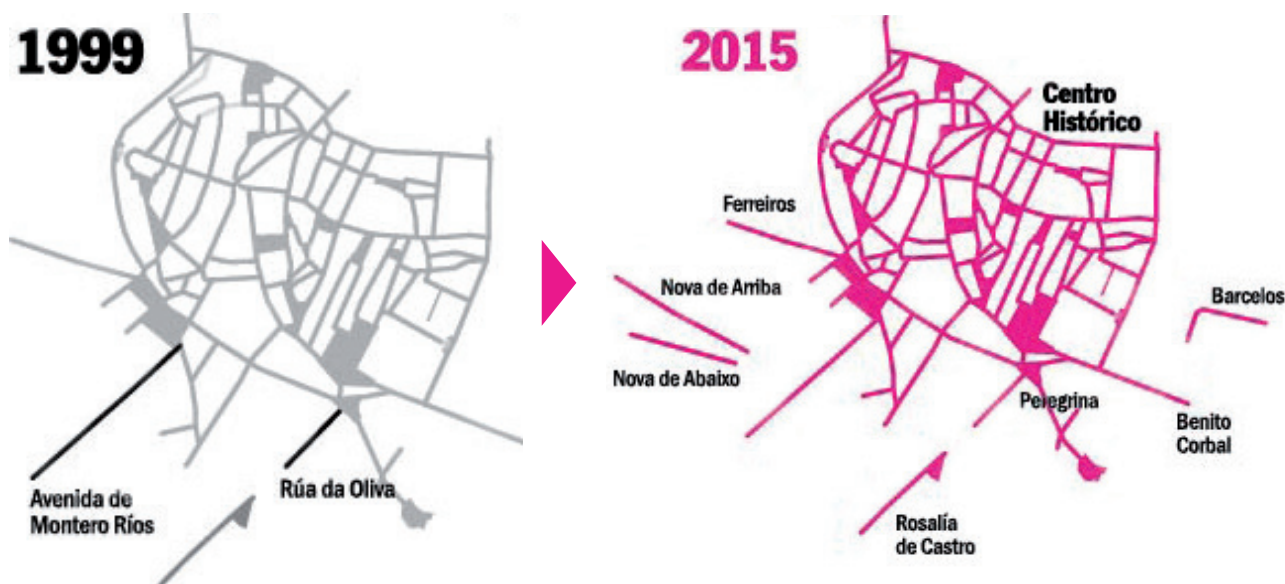
, The presence of cars has been reduced by 92% in the historic and commercial centre, by 77% in the inner ring of the city and 53% in the city as a whole.

Good practices and results

Image source: ok.pontevedra.gal

- A total of 52,000 journeys were recorded in 1997, a number that has reduced to 17,000 (data published in 2015). One of the initiatives to promote walking has been the "Metrominuto" communication campaign consisting of a map showing travel distances and times in the city to raise public awareness. The Network of Walking Cities disseminated it.

- The street design is standardised throughout the city, with criteria adapted to each type of street, ensuring that spaces are people-centric, including services and urban furniture such as lighting, benches, trees, and waste bins.

- All non-pedestrianised streets have been upgraded, applying a traffic calming design. More than 90% of urban public spaces are accessible.

- Cycling becomes a safe way to get about thanks to traffic calming (city 30), so there is no need for a segregated bike path and a route separated from pedestrian areas is ensured.

- The parking issue has been resolved by providing free parking areas on the outskirts and paid rotating car parks throughout the city.

- More retail, catering, tourism, and leisure activities have appeared on the streets. The economy of the tertiary sector grew 7.1% between 2001 and 2015, the period during which most urban reforms were implemented.

- Urban planning is used to improve physical and mental health: reducing noise and air pollution; providing itineraries and routes through natural areas near the city; programming cultural, sports and educational activities.

Awards and Acknowledgements Pontevedra has been recognised for best practices in pedestrian mobility since it launched its plan to design a city for pedestrians. Among the merits obtained are UN Habitat (2014), Centre for Active Design (2015), Intermodes (2013), Walking Cities (2015), Stone City (2006), Intelligent Mobility (2015 and 2016), Road Safety (2011), CERMI (2007), National Galician Culture (2008) and FESVIAL (2010).

Málaga, MOVIMA

Province, autonomous region	Málaga, Andalusia
Project term	2009 Project "Historical and Monumental Centre: Protected Interest Environment" and initial PMUS approval 2011 Málaga PGOU approval 2016 Municipal Health Plan *Málaga Healthy City (2016-2020)*
Population	578,460 inhabitants
Density	1,428.76 inhab./km^2
Scale	Pedestrianisation project included in the regeneration of the Historic Quarter Coordinated with the sustainable mobility strategy on a metropolitan scale
Website	Mobility Area: https://movilidad.malaga.eu/ City Council: https://www.malaga.eu/ Málaga SmartCity: https://malagasmart.malaga.eu/

LEYENDA

● CONTROL DE ACCESO
■ ZONA CARGA Y DESCARGA PERMITIDA
■ ZONA CARGA Y DESCARGA PERMITIDA, PUNTO DESAHOGO
— ITINERARIOS
⋯ PERIMETRO ENTORNO PROTEGIDO

ZONAS RESTRINGIDAS AL TRAFICO RODADO
ENTORNOS DE INTERES PROTEGIDO

Ayuntamiento de Málaga
Área de Movilidad

Octubre 2017
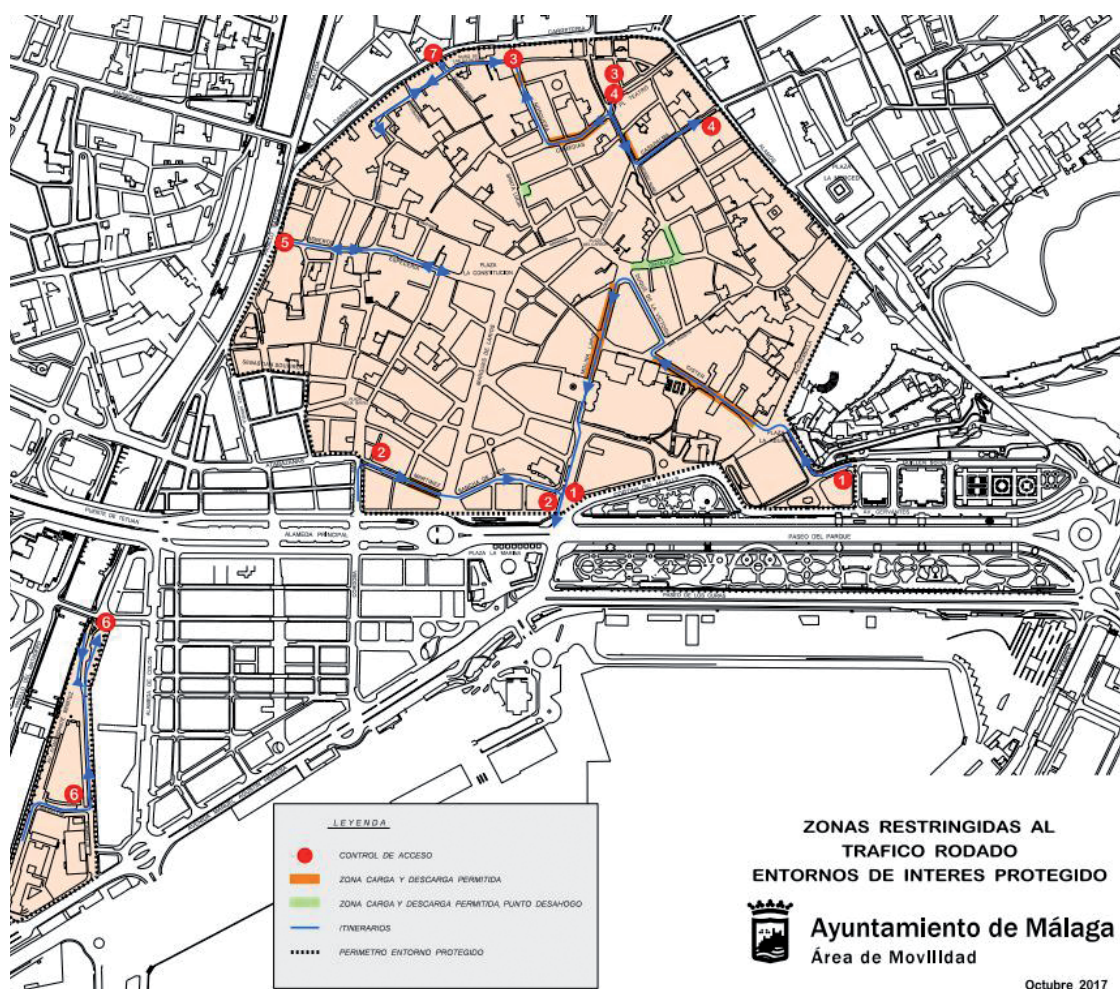
Image source: movilidad.malaga.eu

Description

General context	Málaga has gradually integrated a Sustainable Urban Mobility Plan to protect its Historic Centre which is strategically linked to the General Urban Planning Plan (PGOU).

Key strategies	Comprehensive project to improve the Historic centre, coordinated with the Sustainable, Safe Urban Mobility Plan and consistent with the objectives of the PGOU:

- Since 1994, the Historic Centre has been improved with support from several financing programmes such as Urban, POMAL, POL and Interreg.
- Creation of the Málaga Road Mobility Observatory in 2007 to encourage active modes of transport (pedestrian and bicycle) and public transport, improving road safety and quality of life in the city.
- Approval of the PGOU including the promotion of sustainable mobility with new bus lanes, creation of intermodal terminals, construction of dissuasive parking and a Bicycle Master Plan.

Budget	Over the years several municipal budgets have been approved for plans and improvements and implementation of different projects. In the current context (2021), it is worth mentioning the eight projects submitted to the Next Generation EU funds to promote sustainable mobility and public transport, framed under the global project "Healthy Málaga", with a budget of 39.7 million euros.

Good practices and results
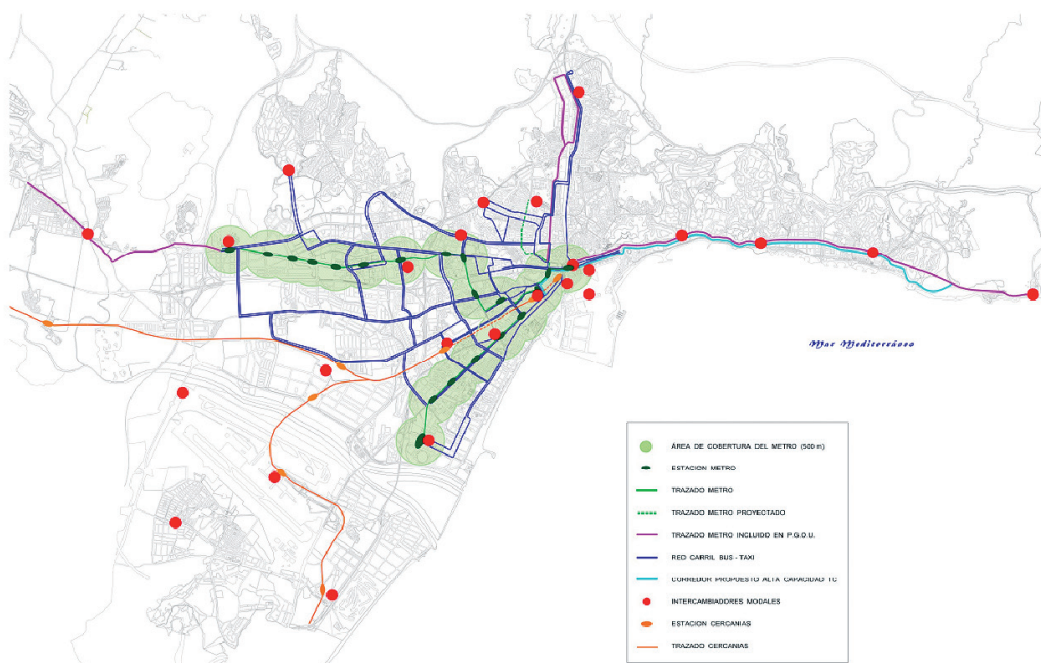
› The "inverted priority" traffic calming ordinance has prioritised pedestrians in all the streets in the Historic centre, establishing a control system at different access points and distinguishing between two types of streets: pedestrianised streets exclusively for pedestrians and bicycles (with the obligation to slow down at pedestrian crossings) and those for joint use, exclusively for authorised vehicles and loading and unloading activities.

Good practices and results
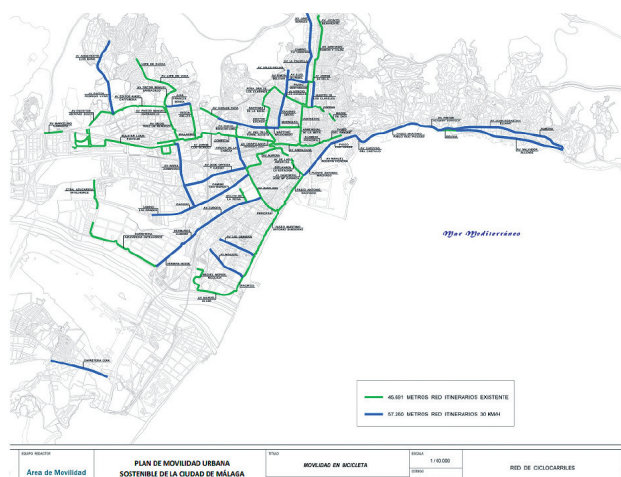
Image source: PMUS Málaga

Image source: movilidad.malaga.eu

- The Plan has an integral approach to intermodality, combining different means of public transport, enlarging the bus fleet, encompassing different electric mobility projects, using public parking, and integrating technology to manage public transport.

- In 2004, a pioneering "last mile" system was implemented in Spain for the transport of goods in the historic centre, through an Urban Ecological Distribution centre (CUDE), a fleet of electric vehicles and several charging points in different car parks in the city centre.

- Work is gradually being carried out to increase pedestrian areas and socialisation areas, remove physical and architectural barriers and upgrade public spaces to ensure universal accessibility and offer more spaces and living areas, such as parks and squares.

- The results obtained during the first years of the implementation of the protected environment of the Historic Centre showed a reduction of the number of trips in private vehicles from 62,300 (2004) to 9,800 (2009), a reduction of carbon dioxide emissions from 9.34 tons to 1.47 tons (89.3%) and an improvement in noise levels, comfort, safety and quality of life, in addition to the remarkable increase in the number of tourists.

- At the same time, the Social Rights Area implemented the first Municipal Health Plan 2016-2020 to develop policies for local and community action in health matters

Awards and Acknowledgements

The Mobility Area of the City of Málaga was awarded the first national prize from IDAE for Sustainable Mobility (2008) for its actions to reduce the presence of private vehicles in the historic centre of the city. In subsequent years, it continued to receive multiple awards, such as the CIVITAS Award for Technical Innovation (2014), the CIVITAS City of the Year Award (2016), the Silver Medal for Sustainable Mobility Week (2016) and the Gold Medal for Sustainable Mobility Week (2017).

Logroño, Open Streets

Autonomous Community	La Rioja
Project term	2020 Open Streets project, based on tactical planning actions
Population	152,485 inhabitants, metropolitan area 200,000 inhabitants
Density	1,897.91 inhab./km^2
Scale	Strategy at local level
Website	Logroño Open Streets: logronocallesabiertas.es City Council: www.logrono.es Logroño Andando (pedestrian forum): logronoandando.es
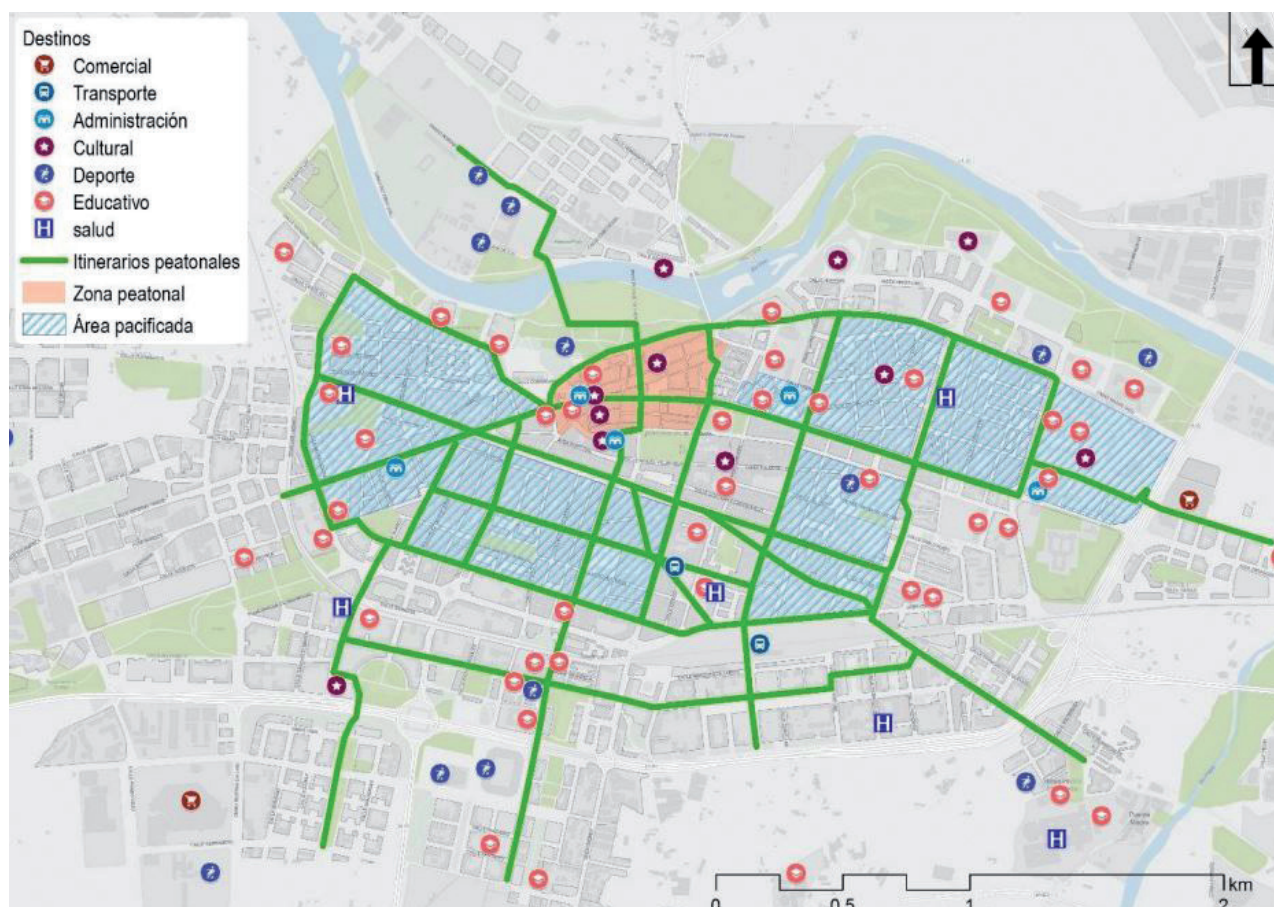
Image source: logronocallesabiertas.es

Description

General context	In response to the COVID-19 crisis, the Department of Sustainable Urban Development in Logroño implemented an urban strategy to transform the streets of the city with a more balanced distribution of public space to improve citizen quality of life and promote active mobility.

Key strategies

The Logroño Open Streets project is divided into six intervention programmes to work through different actions to achieve more active mobility:

- The healthy pedestrian network establishes a series of pedestrian itineraries that are safe and accessible.
- To ensure safe cycling itineraries, the healthy cycling network establishes priority and secondary axes through traffic calming and segregated cycling routes.
- Specific improvement interventions in 20 school environments, as well as in other daily facilities; calmed areas in neighbourhoods, through zones 30.

Budget

The Open Streets programme worked with an investment of around €850,000 allocated to different provisional actions. These actions are expected to become established and the report on the budget published by Logroño estimates about 7 million euros to carry out the activities linked to the city's urban transformation.

Good practices and results
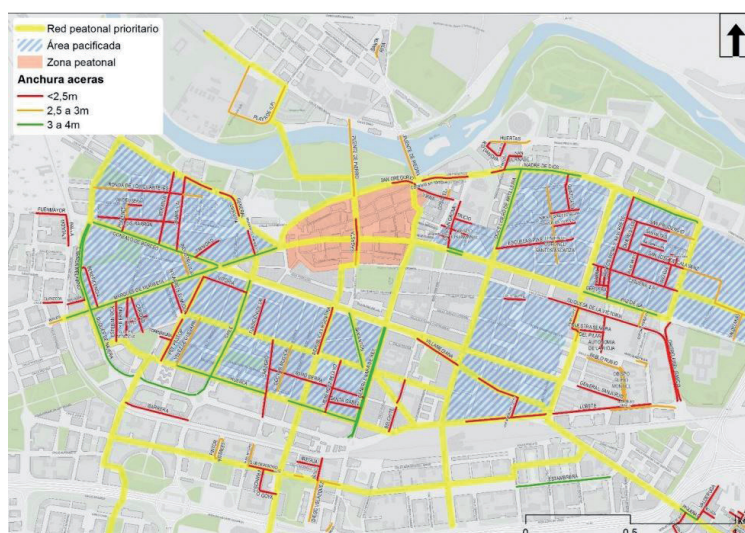
- Logroño has been a national reference in the implementation of tactical planning measures in the process of de-escalation of the pandemic (2020) through the "Open Streets" programme, accelerating the roll-out of projects that were included in the Sustainable Urban Mobility Plan of 2013, but that have not yet been developed.

- New spaces to socialise have been created for pedestrians and cyclists. Pavements have been extended and areas assigned to motor vehicles have been reduced through temporary actions and visual transformations in the road and new urban furniture has been installed to increase pedestrian comfort in several streets.

Good practices and results
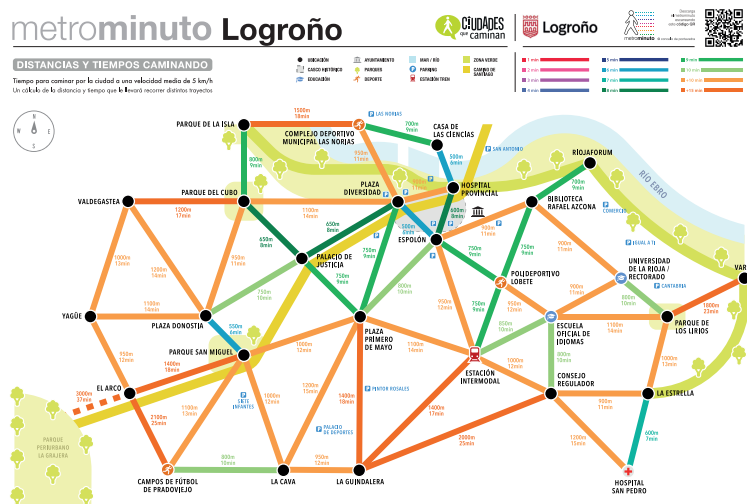
Image source: logronocallesabiertas.es

- A new soft traffic zone has been created in a neighbourhood of the city, with new pedestrian itineraries that improve accessibility and connectivity between neighbourhoods and the city centre. The transformation of this area has been secured through cost-effective, low impact actions, while the project will continue over a longer period of time. Priority has been given to spaces where people socialise, such the surroundings of libraries, schools, health centres and shops.

- In schools, different areas are being fitted out in the surrounding area to reduce the presence of cars and facilitate access for schoolchildren on foot or by bicycle, mainly by transforming parking strips into additional pedestrian spaces. In specific cases, traffic has been cut off temporarily in adjacent streets at the request of the schools.

- A communication strategy has been developed with its own website, which explains and provides a framework for the entire set of actions that are being carried out in favour of active mobility.

- A campaign to promote active mobility through metrominuto maps has been launched to illustrate the distances and times taken walking between the various points of the city.

Awards and Acknowledgements	National "Cities that Walk" Award (2021) in the Large Cities (>100,000 inhabitants) category for its promotion of sustainable mobility and the adaptation of public space.
	First National Mobility Award (2021) from the Ministry of Transport, Mobility and Urban Agenda, the CONAMA Foundation and the Royal Academy of Engineering.

Barcelona, Super-blocks

Province, autonomous region	Barcelona, Catalonia
Project term	2013-2018 Barcelona Urban Mobility Plan 2016 The super-block, a new urban cell for a new functional and urban model of Barcelona 2020 "Nous Eixos Verds" International Ideas Competition 2021-2023 Project implementation
Population	1,664,182 inhabitants, metropolitan area 3,755,512 inhabitants
Density	15 992.2 inhab./km^2
Scale	Public spaces throughout the city
Website	Super-blocks Project: ajuntament.barcelona.cat/superilles Barcelona Urban Ecology Agency: bcnecologia.net Promotional video: https://youtu.be/RaCrp2DwGog
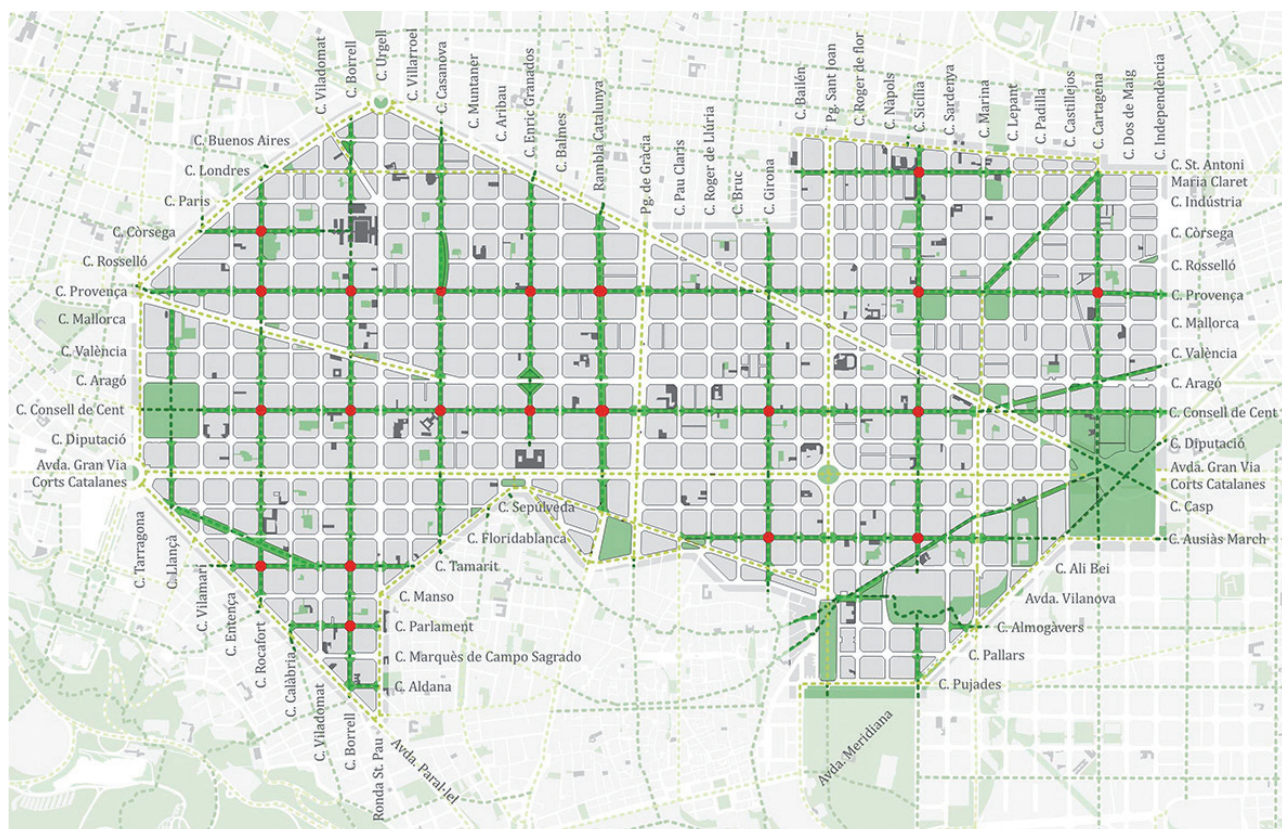
Image source: ajuntament.barcelona.cat/superilles

Description

General context

Barcelona has been working on the idea of the BCNecología team Super-block for years. After testing several pilot projects in different neighbourhoods, it is now proposing the integration of the model throughout the city, also creating a network of green areas and squares with pedestrian priority. The objective is to have a square or a green area within 200 metres maximum in the Cerdà stretch.

Key strategies

The Super-block is a comprehensive project for urban mobility and reorganisation of the city's public space with the following objectives:

- Create 21 green areas throughout the Eixample, a total of 33 km and 21 new squares. A total of 33.4 hectares of pedestrian priority spaces are planned. Currently, the priority is being given to the Cerdà and Eixample stretches, creating new green areas and large public spaces of more than 2,000 m2.
- Recently, two public tenders have been called to select the architectural and engineering teams to define the pacified street model and the squares that will be created at the crossings.

Budget

The budget for the first four green zone projects is 37.8 million euros and it is expected to be implemented at the beginning of 2023.

Good practices and results
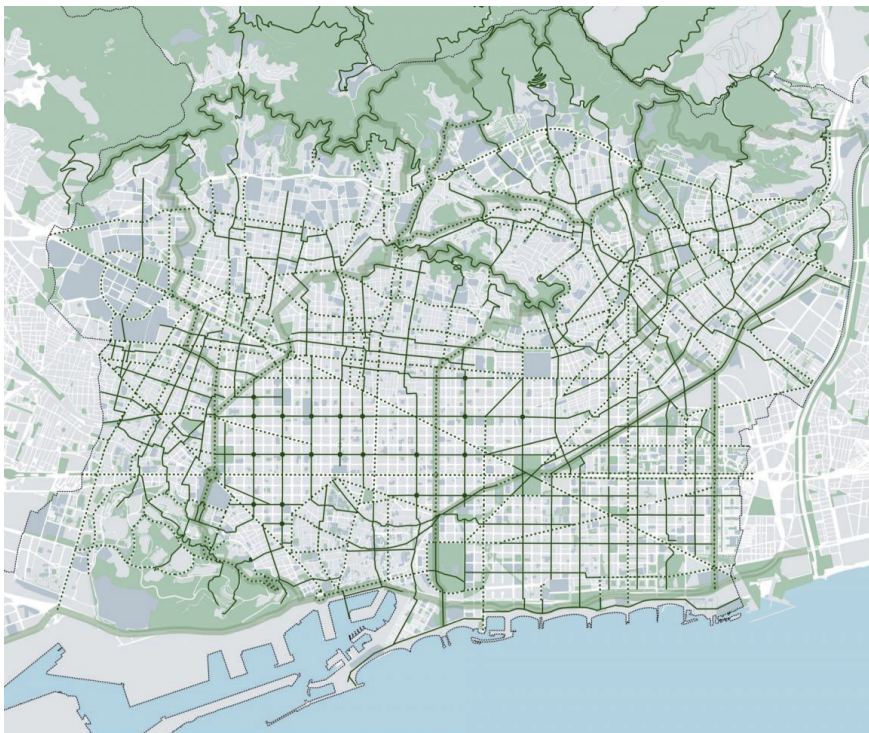
- The new public space project for the Super-blocks is a unique platform solution, with a permeable flooring, more vegetation and rest zones in the streets, promoting active mobility and creating an environmental infrastructure for sustainable water management and increasing biodiversity. This public space design will create pacified streets where users can walk conveniently, comfortably, and safely.

Good practices and results
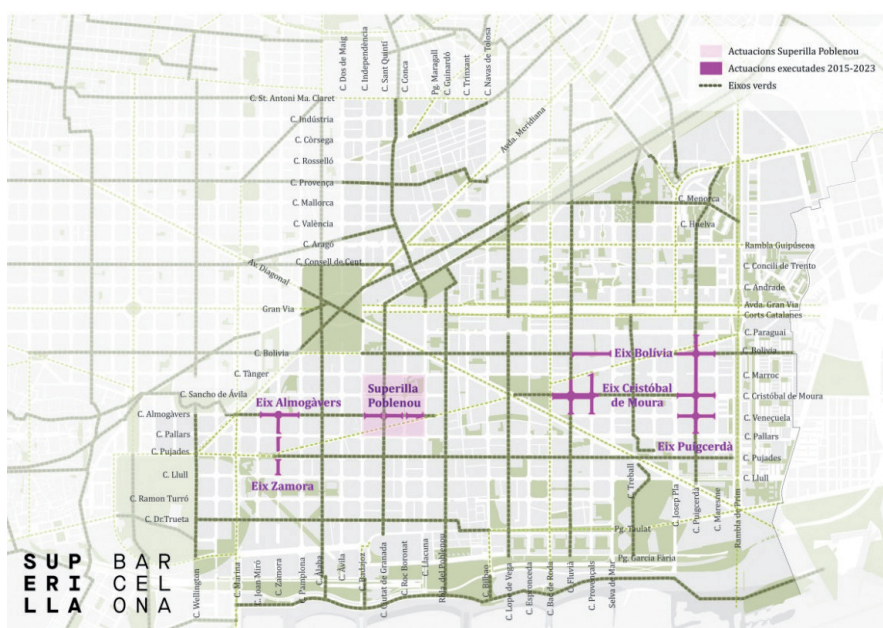
• It is also expected to activate local trade. This attracts a greater flow of people in the public space thanks to the disappearance of vehicle traffic lanes. In 2019, the Sant Antoni Market and Super-block were opened, where the influx of visitors increased by 16% to 64 million visitors per year.

Image source:
ajuntament.barcelona.cat/superilles

• The Supermanzanas (Super-blocks) programme is being carried out with citizen participation. Different activities, information sessions and workshops are organised in neighbourhoods and citywide to involve neighbourhoods and different entities and groups. There is a driving group in each area of the city made up of representatives of entities and the City Council, which acts permanently through all processes.

• A Super-block project head office and an advisory board have been created to monitor the projects and their progressive implementation. The projects will be worked on with different local agents – professional associations, the neighbourhood, entities, the economic actors, etc. – to secure agreement regarding the proposals as much as possible.

• Several health impact studies of the implementation of the Super-blocks have been carried out by the Barcelona Public Health Agency to demonstrate the positive effects on health and well-being on citizens. Among other benefits, improved well-being, sleep quality, noise reduction, pollution reduction and improved air quality, social interaction and mobility have been identified.

Awards and Acknowledgements

2010: Super-blocks are recognised as Good Practice by UN-Habitat. This model has been a pioneer in designing a new compact and complex city model. It has been applied in different types of Spanish cities such as A Coruña, Ferrol, Viladecans and Vitoria-Gasteiz.
2011: BMW Initiative Award for the Super-blocks of Gràcia.
2021: Global Green Cities Award from the Global Forum on Human Settlements.
2022: Candidate for the European Commission "Accessible City" award.

Soria, Soria 2030

Province, autonomous region	Soria, Castile and León
Project term	2009 Urban Mobility Plan 2011-2013 LIFE+ Programme: Soria Urban Corridor CO2Zero 2019-News New Sustainable Urban Mobility Plan
Population	39,821 inhabitants
Density	143.1 inhab./km^2
Scale	Citywide and regional project
Website	Soria 2030: https://www.soria2030.es/ Municipal blog: https://elige.soria.es/ City Council: https://www.soria.es/

Image source: www.soria.es/es/ciudad/ nuevo-plan-de-movilidad-urbana-sostenible-de-soria-sep-2021

Description

General context

The main results of the implementation of the Urban Mobility Plan of 2009 in Soria were the pedestrianisation of several areas of the city, the creation of cycle lanes and the pacification of central streets to turn them into multipurpose roads. Soria 2030 is an initiative of the City Council in collaboration with other entities to reduce carbon emissions in the city and speed up the transition to the circular economy and the bioeconomy in the region.

Key strategies

Soria 2030 is a comprehensive project to reduce carbon emissions, improve the quality of life of the city and preserve biodiversity. The following strategies are interesting In terms of active mobility:

- Implementation of a pilot sustainable mobility project in school environments for children to go to school by bicycle or scooter.
- Recovery of streets and squares as spaces to socialise, reducing the presence of the private vehicle in the public space.
- Complete remodelling of the east-west urban area defined in the LIFE+ project to generate a network of continuous pedestrian and cycling routes that connect the Duero River and Mount Valonsadero.

Budget

The budget in the current Sustainable Urban Mobility Plan comes to 73 million euros, allocated primarily to the reform of the road and public space.

Good practices and results

- Update of the Sustainable Urban Mobility Plan from September 2021 to 2030, which estimates a reduction of 3,000 daily private vehicle trips through several actions to improve universal accessibility and designing a public space to make it more pleasant for pedestrians, adding more green spaces.

- Recovery of the space occupied by one of the city's busiest roads: el Espolón. 18,000 m2 of preferential pedestrian area have been recovered.

- Conversion of the road around the municipal market and the building itself, adapted with a multifunctional programme of retail outlets, a supermarket, underground parking, and cinemas.

- We would like to highlight interventions on three roads (N234 and N111) south of which is the historic centre, the recovery of the Plaza de las Concepciones and the surroundings of the Numantino Museum.

- Promotion of the idea of the "city of proximity" or "15-minute city" through a participatory governance initiative with the aim of activating the "proximity economy" in neighbourhoods and reducing the need to travel to meet needs (work, food, culture, leisure, sport). The 2030 platform also has a website where participants can share suggestions and ideas for the future of the city, which is also a repository of good practices to inspire citizens, entities, and companies.

- A comprehensive accessibility plan has also been implemented in the city to promote inclusive tourism.

- Promotion of culture, heritage, local identity, and tourism with a sustainable, ecological approach.

- The blog eligesoria.es is a portal to promote the city, disseminate culture, and activate municipal or citizen initiatives. It was launched in 2015 on the occasion of the candidacy of the municipality to a Biosphere Reserve.
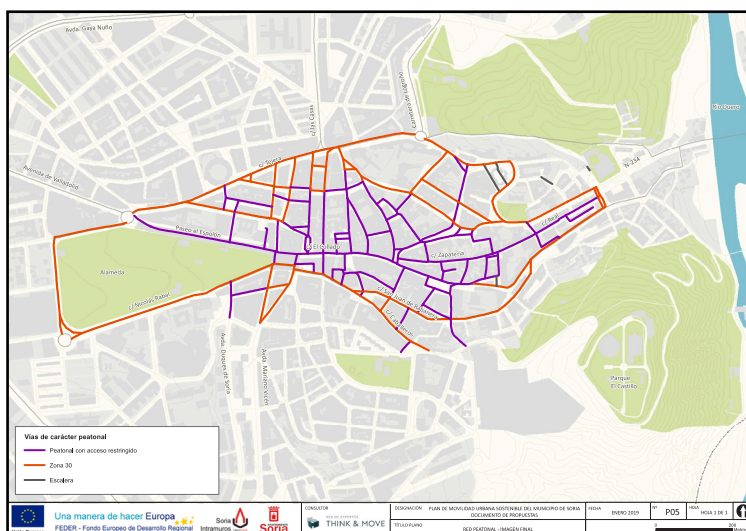
Image source: www.soria.es

| Awards and Acknowledgements | National "Walking Cities" Award (2021) in the Medium Municipalities category (20,000-100,000 inhab.) for the comprehensive scope of the proposal to transform the city. Accessible Tourist Destination Award from Thyssenkrupp (2017). |

WALKABLE CITIES. Other projects, guides, and initiatives:

1.1.2 Other interesting projects

Almería 2030: WALK	WALK is an Urban Innovative Action supported by the European Union that seeks to build a new, more attractive, inclusive cultural narrative for the city that contributes to eliminating existing urban and social barriers. http://almeriacamina.es/
Salamanca: Urban Gallery	Urban art gallery in the West Neighbourhood, a measure against graffiti. An art contest was held in the city to paint garage doors and walls of the West Neighbourhood. The initiative has also been implemented by shops and residents' associations who have decided to hire artists to paint murals. These murals are now a tourist attraction in this area of the city outside the historic centre. Available at: https://galeriaurbanasalamanca.es/ http://app.galeriaurbanasalamanca.es/

1.1.3. Other initiatives and resources

Network of Walkable cities
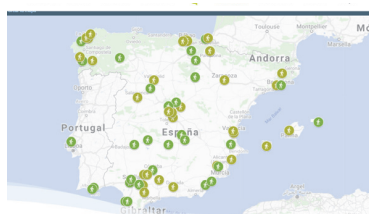
The Network of Walkable cities is an international non-profit association, open to public administrations, mainly municipalities, which undertakes to prioritise pedestrians in urban mobility and public spaces. Joining the Network requires participants to commit to improving the public space with specific projects and initiatives. Some of the tools that can be found in this link are training workshops in schools (City4Kids), the Metrominuto, publications, dissemination of initiatives, and information for joining the network. Available at: https://ciudadesquecaminan.org/

Guide for the design, implementation, and evaluation of a Healthy Routes Plan

This Guide was developed by the Ministry of Health and the FEMP in 2018 to provide a methodology and information for the design and implementation of a healthy route plan(s). The Guide includes practical information to support local entities committed to promoting physical activity and health at the local level. Available at:

http://recs.es/wp-content/uploads/2020/04/Guia_Rutas_Saludables.pdf

Safe road to school (DGT)

The Safe Road to School is a project promoted by the Directorate General of Traffic (DGT) aimed at schools and colleges, as well as municipalities to create a network of safe itineraries and to encourage travel on foot or by bicycle. One of its main objectives is to encourage children to claim the streets and develop their independence by walking to school alone or with their friends. The page contains materials to assist in the implementation and monitoring of activities, as well as information and documents to work on active displacements between these younger age groups. Available at: https://www.dgt.es/conoce-la-dgt/que-hacemos/educacion-vial/camino-escolar/

Stars Project (DGT)

The STARS project is coordinated by the DGT for the Accreditation and Recognition of Sustainable Travel to Schools. The main objective is to promote active, safe travel for young people aged between six and 19 years, through active participation of young people and educational community at schools and colleges. Available at: https://www.dgt.es/conoce-la-dgt/que-hacemos/educacion-vial/programa-stars/index.html

Guidelines for creating low emission zones (ZBEs)

This document was published by the Ministry for the Ecological Transition and the Demographic Challenge (MITECO) to help town councils and municipalities to create low-emission areas as a measure for implementing sustainable urban mobility plans. Law 7/2021 of 20 May, on Climate Change and Energy Transition establishes that Spanish municipalities with more than 50,000 inhabitants, island territories and municipalities with more than 20,000 inhabitants, when the threshold of pollutants regulated in Royal Decree 102/2011 are exceeded, of 28 January, on the improvement of air quality. The document sets out the content and recommended methodology for carrying out such projects. Available at:

http://www.femp.es/comunicacion/noticias/zbe-una-estrategia-para-conseguir-ciudades-limpias-y-saludables

1.2. Good practices for introducing nature in the city

1.2.1. Nature in the city: Six examples

Coslada • Córdoba • Vitoria-Gasteiz • Benicàssim • Zaragoza • Cuenca

Vitoria-Gasteiz

Zaragoza

Coslada

Benicàssim

Cuenca

Córdoba
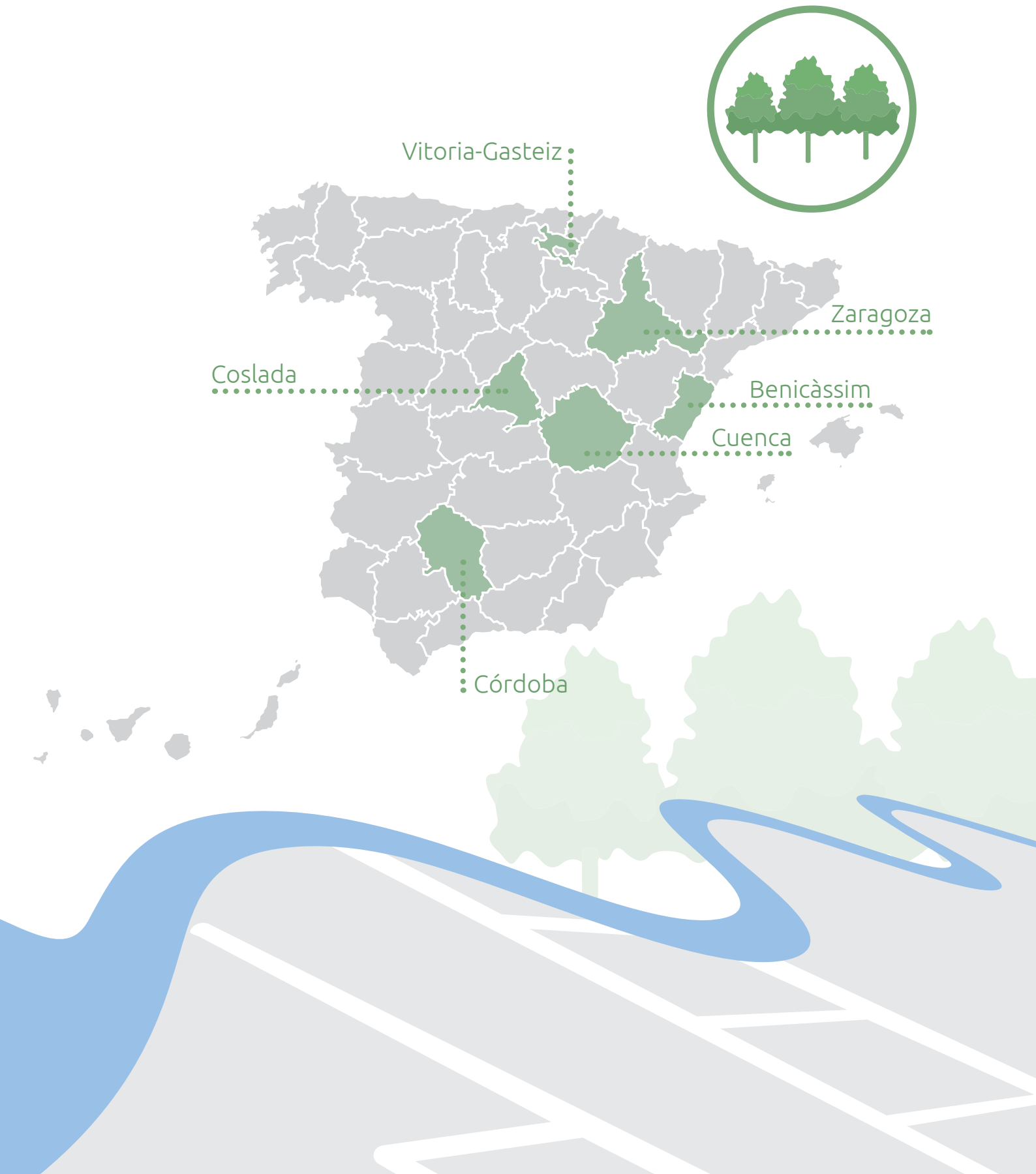
Coslada, Therapeutic Garden

Autonomous region	Community of Madrid
Project term	2018
Population	81,391 inhabitants
Density	6,900.3 inhab./km^2
Scale	Public space project
Website	Local authority: http://coslada.es/ Garden Project: www.jardinesterapeuticos.com

Image source: lalunadelhenares.com

Description

General context

For several years, all the technical areas of the City Council have been working in a cross-cutting way on proposing different initiatives to address the issue of ageing and its impact on the structure of the city. Through the Department of Social Services, the Elderly and Equality, the City Council has promoted the creation of the first therapeutic garden in Spain in a public space.

Key strategies

Comprehensive mobility project to create a people-centred city. The project combined several strategies:

- Pedestrianisation of the historic centre and calming traffic in other streets (with a design in line with this objective: wider pavements, life-saving speed bumps…)
- Traffic restrictions in the city centre and dissuasive parking in the outskirts.
- Making use of renovation works in the public space to incorporate new services and upgrade urban facilities.
- Promotion of citizen participation and educational campaigns with schools (school roads).

Budget

€85,000 through public tender.

Good practices and results

- It consists of an innovation project in the urban landscape and designing green spaces with alternative uses to improve physical and mental health.

- Coslada also joined the Global Network for Age-friendly Cities and Communities (GNAFCC) -established by the World Health Organisation- in 2018.

- The design includes more than 80 species of plants, to increase biodiversity in the city.

Good practices and results

- The project is divided into four modules, each aimed at specific activities: cognitive-reminiscence, horticulture, sensory and physical. Each module has different elements that promote different types of activities. The cognitive-reminiscences module works on smells and flavours, the horticulture module focuses on traditional horticultural activities also related to the memory of the place, in the sensory module sensory stimuli are worked to generate well-being and in the physical module, work is done on improving the mobility of people and sports exercises in the natural environment.

- The construction of this Urban Garden included upgrading the street to widen pavements to make them more accessible and convenient to access and integrate into the urban fabric.

- It is an intervention in the public space whose primary objective is to avoid dependence and delay and prevent the need for social health care for older people and people with functional diversity. It has become a setting for numerous occupational therapy programmes and intergenerational workshops.

- Garden maintenance is managed as a Special Centre, contributing to the labour integration of people with functional diversity.

Image source: henareshoytv.com

| Awards and Acknowledgements | Spain's First Therapeutic Garden. |

The Courtyards Festival of Córdoba

Province, autonomous region	Córdoba, Andalusia
Project term	1921 Origin of the Courtyards Festival of Córdoba 1997 Foundation of the Management Committee of the Courtyards of Córdoba Association 2012 Declared Heritage by UNESCO 2021 Celebration of the Centenary of the Courtyards
Population	326,039 inhabitants
Density	260.11 inhab./km^2
Scale	Private open spaces for public use, historic city centre
Website	Association of Córdoba Courtyards: https://patios.cordoba.es Association of Friends of Córdoba Courtyards: www.amigosdelospatioscordobeses.es

Image Source: Ramón Azañón 2021

Description

General context

The festival of the courtyards of Córdoba is a unique event in which the patios and balconies of the city are embellished with flowers and decorative elements. This festival takes place in early May and is part of the identity and tradition of the city.

Key strategies

The festival of the courtyards mainly comprises two events:

- The traditional courtyards of Córdoba competition, created in 1921 to institutionalise the popular tradition of decorating courtyards for the celebration of spring by residents.
- The festival itself, which consists of traditional Cordovan folk singing and dancing and gastronomic events.
- In 1996, a management committee was established between different owners of the courtyards, creating a group of associations and people committed to maintaining this tradition and its dissemination, which years later would culminate with the declaration of Intangible Cultural Heritage of Humanity by UNESCO.

Budget

The budget for the contest is about €183,400, which helps to offset the owners' investment in water for irrigation, repairs, and upkeep of the courtyards, replacing and caring for plants and other necessary maintenance work. The City Council now applies a 95% rates reduction for homeowners. The municipal water company also supports the initiative by discounting water bills.

Good practices and results

- The activity of the committee (whose members are the owners of the patios) has been key to maintaining this tradition. These associations have helped to solve the problems facing the competition and are responsible for maintaining the courtyards and finding financing and resource to ensure the sustainability of this tradition. They also have an inventory of the patios accessible on their website, identifying patios adapted for people with reduced mobility to promote inclusive tourism.

- The associations carry out educational projects to learn how to care for local plants, pest prevention and courtyard management, combining tradition and popular knowledge. They are also responsible for maintaining the courtyards, disseminating the project, and educating new generations about culture, heritage, and identity.

Good practices and results

- During the festival, a contest of bars and balconies is also organised in the historic centre where the best decorated with flowers receive a reward. There are also other competitions related to patios and promoting arts and crafts. Since 1999, an educational project was launched with the help of the Córdoba Education Department to teach children about the origin of the courtyards, how they are maintained and cared for and the importance of this cultural tradition in Córdoba.

- Numerous campaigns have taken place to publicise the festivity and the tradition of the patios, creating a website to publish all the information, holding a biannual conference on the courtyards of Córdoba, exhibitions, an annual magazine and launching different initiatives to recover the original traditions and customs of the courtyards as a place to meet and socialise.

- The citizen associations of the courtyards applied for the Córdoba Courtyards to be listed by UNESCO as Intangible Heritage. An example of citizen participation and a sense of pride and identity.

Image source: ich.unesco.org

Awards and Acknowledgements	1994: The Historic centre of Córdoba has been declared World Heritage Site (extension of the listing of the Mosque of Córdoba in 1984).

1994: The Historic centre of Córdoba has been declared World Heritage Site (extension of the listing of the Mosque of Córdoba in 1984).

2012: The Festival of the Courtyards is now registered on the UNESCO Intangible Heritage List.

2007: The Association of Friends of the Patios Cordobeses received the distinction of Gold Medal of the City.

Vitoria-Gasteiz, Green City

Province, autonomous region	Álava, Basque Country
Project term	1982 Approval of the building of a basic network of cycling routes 1992 Work began on the first park in the Green Ring 1995 Signing of the Aalborg Charter and launch of the Local 21 Agenda 2003 PGOU approval and protection of natural spaces 2007 Advance of the Sustainable Mobility and Public Space Plan
Population	253,996 inhabitants
Density	894.6 inhab./km^2
Scale	City, natural areas in the outskirts of the city
Website	City Council: www.vitoria-gasteiz.org Basque Network of Sustainable Municipalities: https://www.udalsarea2030.eus/home

Image source: www.vitoria-gasteiz.org

Description

General context	The Green Ring project (1993) consists of a continuous belt of six parks that surround the city and includes spaces of great environmental importance for the enjoyment and quality of life of the population.

|	
Key strategies	Vitoria-Gasteiz has been a pioneer city in consolidating the Local 21 Agenda and implementing a sustainable urban planning strategy:

- The project to recover the spaces in the outskirts of the city known as the Green Ring consisted of several works for ecological-landscape improvement, restoration, and recovery of natural spaces of high environmental value.
- The sustainability commitment was designed in a process of public participation, linking all sectors of the town. In 2000, the Environmental Sector Council was created, formed by community associations, ecological organisations and others involved in environmental matters that have defined the municipal environmental policy throughout the process.

Budget	The initial investment in the first phase (1992-1999) of the Green Ring project was 1,305,666,591 pesetas (currently about 7.8 million euros) which were co-financed by different entities. The second phase (2000-2003) consisted of about 4 million euros.

Good practices and results
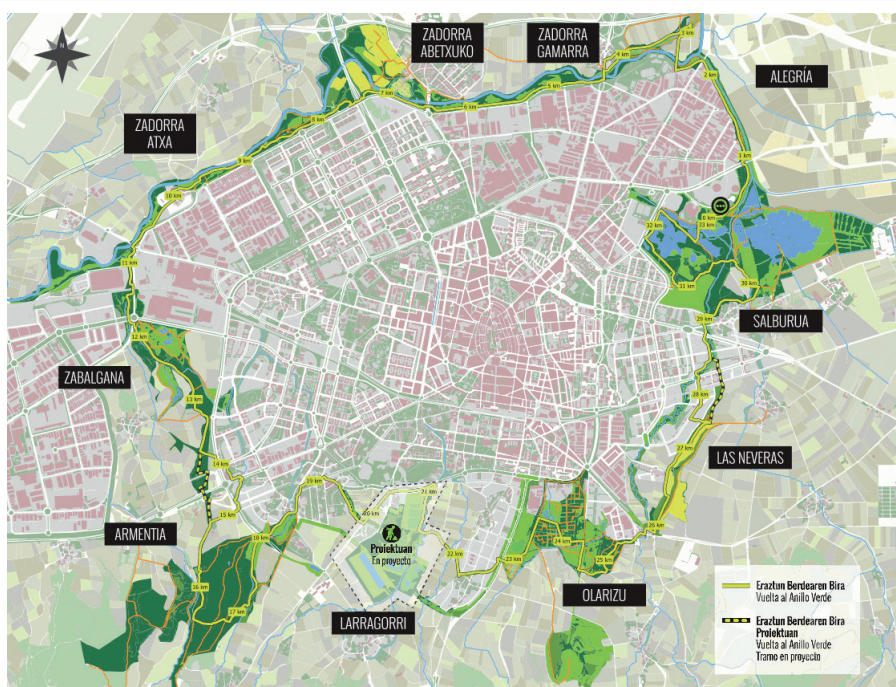
- Vitoria has 42 m2 of green spaces per inhabitant, at a distance of less than 2.5 minutes on foot. It also has more than 150 km of bike paths and is planted with 115,000 trees of 285 different species.

- These days, the Green Ring has an area of 833 ha and a total of 917 ha is expected. The Salburua wetlands have been declared a "Wetland of International Importance by the Ramsar Convention" (2002). In 2015, Salburua and the Zadorra River were included as a "Special Conservation Area" (ZEC) within the Natura 2000 network and Salburua was also declared as a Special Protection Area for Birds (ZEPA) (2015).

Good practices and results

- The landscape and ecological quality of several marginal and deteriorated spaces of the city has been improved, achieving a green and blue infrastructure that is continuous and consistent with the urban regulations of the city. Innovative climate change management strategies have also been incorporated, such as enabling 100 ha as water rolling surfaces to solve flood problems in a way that respects the conservation of the natural environment and safety.

- It has managed to contain the expansion of land occupation and the growth of the city within the ring as a protected and incorporated space in the PGOU.

- One of the basic pillars has been the commitment to education and environmental awareness developed in these spaces, with a programme of activities for schools and secondary education, but also associations and entities and the general public.

- The dismantling of the existing disorderly family gardens in the periphery were transformed into a project of municipal gardens adapted and regulated by the Municipal Ordinance of Use of Municipal Urban Gardens of Vitoria-Gasteiz. Citizens, collectives, and non-profit organisations can access the plots through a public invitation.

Image source: www.vitoria-gasteiz.org

Awards and Acknowledgements	2000: The Green Ring project was selected in the Best Practices Competition sponsored by Dubai and listed as BEST
	2012: European Green Capital by the UN
	2014: "The roots of tomorrow, 250,000 trees and citizens" Project qualified as BEST at the Dubai International Awards (10th edition)
	2016: Biosphere Responsible Tourism certification
	2019: Global Green City by the Global Forum on Human Settlements

83

Benicàssim, LIFE CerSuds

Province, autonomous region	Castellón, Valencian Community
Project term	2018-2019
Population	18,364 inhabitants
Density	497.6 inhab./km²
Scale	Street, redevelopment of an urban itinerary
Website	Life CerSuds: www.lifecersuds.eu Construction details of the project: www.ceramicarchitectures.com/es/obras/ demostrador-life-cersuds-benicassim

SUPERFICIE DRENANTE
que recoge el agua de lluvia para su infiltración en el terreno.

SUPERFICIE IMPERMEABLE
cuya función es conducir la escorrentía hacia las zonas permeables.

SUPERFICIE DRENANTE Y CAPTACIÓN
que permiten la infiltración del agua al terreno, conduciendo el exceso a un canal formado por cajas de polipropileno situado bajo el carril bici.

SUPERFICIE AJARDINADA
que proporciona sombra a la calle además de hacerla más natural. El aljibe ha sido calculado para poder almacenar agua de lluvia para el riego de diferentes especies vegetales que la forman, reduciendo el consumo de agua de la red.

Acera con Pavimento cerámico permeable

Gravas drenantes

Calzada bituminosa

Carril bici con pavimento cerámico permeable

Gravas drenantes

Acera con pavimento cerámico permeable

Zona de paso con pavimento cerámico

INFILTRACIÓN

INFILTRACIÓN

Lámina impermeable

Cajas

INFILTRACIÓN

Celdas

INFILTRACIÓN

Red de riego

ALJIBE
para almacenar el agua de lluvia y reutilizarla para el riego de las zonas verdes.

Image source: www.ceramicarchitectures.com/es/ obras/demostrador-life-cersuds-benicassim/

Description

General context

The LIFE CerSuds project has been developed by a consortium of international actors within the framework of the European Union's LIFE programme, addressing the challenge of sustainable development and climate change mitigation. It consists of a construction solution of permeable urban flooring reusing tiles with little commercial value. The problems to which it provides solutions are the need for sustainable rainwater management and the reuse of a stock of tiles generated by the tile industry, giving it a new use with an additional added value (upcycling).

Key strategies

The project has developed an Urban Sustainable Drainage System (SUS), reusing low value ceramic tiles as recycled material to create a permeable pavement:

- One of the historical itineraries that connect Benicàssim city centre, and the beach has been redeveloped and reclassified, creating a pedestrian area that foresees its inclusion in a future urban green infrastructure.
- Water is recovered for watering plants in public areas, reducing discharge to the network and the consumption of water for irrigation. Urban Sustainable Drainage Systems help to reduce runoff volumes and peak flows that are channelled to the network of collectors, causing a greater need for water processing in the plant.

Budget

A total investment of 4.9 million euros has been invested in the project, with a co-financing of 80% by the European Regional Development Fund.

Good practices and results
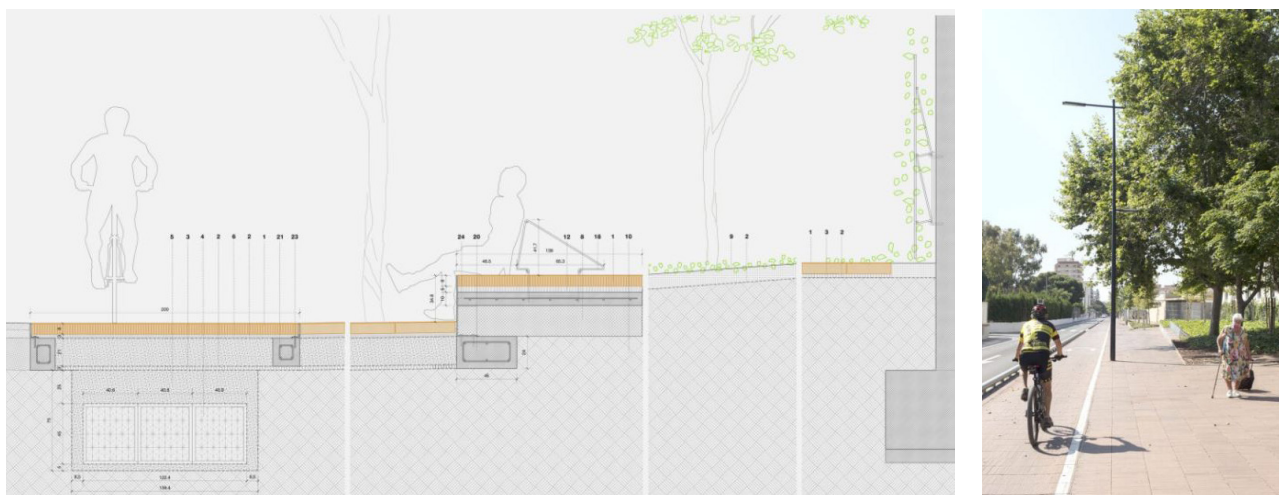
- The development of the project began with an analysis of the scope of intervention, a total of 3,209 m2. The main objectives were to reduce the proportion of sealed soil (from 90% to 30%), to solve the rainwater management issue (by reusing rainwater for irrigation and reducing 86% of discharges to the network), ensure universal accessibility in the design of the new public space and create a street for active mobility – walking and cycling – with quality spaces for everyday life. In addition, green areas were increased by 75% compared to the current situation, incorporating wooded recreational areas.

Good practices and results

Image source:
www.ceramicarchitectures.com/es/obras/
demostrador-life-cersuds-benicassim/

- Ground permeability and the use of ceramic material improve the comfort of the public space, by installing breathable flooring. Water managed by the system can be filtered and returned to the hydrological cycle by recovering water from aquifers or through evapotranspiration.

- The use of the bike lane infrastructure to install runoff and stormwater catchment systems solves the problem of puddles forming in this type of infrastructure (causing danger to cyclists due to slipping, as well as discomfort from splashes) and it protects the drainage system itself, since the applied load of bicycle traffic does not pose any risk for installing the system.

- An analysis of the environmental impact of installing this type of ground has been carried out and an area of 1,950 m2 has meant a reduction of 11.7 tonnes of CO_2 emissions equivalent with respect to the creation of a permeable pavement using concrete slabs.

- The project is replicable and scalable. The specific requirements of the ceramic system have been defined so that its implementation is possible in other European cities. There is a repository of manuals and technical guides on the website with the formal possibilities of the project. These documents are also useful for the drafting public tenders for developing urban spaces with sustainability criteria and water management.

Awards and
Acknowledgements

Zaragoza, LIFE Zaragoza Natural

|	
Province, autonomous region	Zaragoza, Aragón
Project term	2013 Start LIFE project Zaragoza Natural 2013 Project Huerta LIFE Km 0 2017 Completion of the project
Population	681,877 inhabitants
Density	682.84 inhab./km^2
Scale	The municipal area also includes other municipalities and their natural areas
Website	LIFE Zaragoza Natural: www.zaragoza.es/ciudad/medioambiente/natural Agroecological Garden of Zaragoza: www.zaragoza.es/ciudad/medioambiente/huertas/
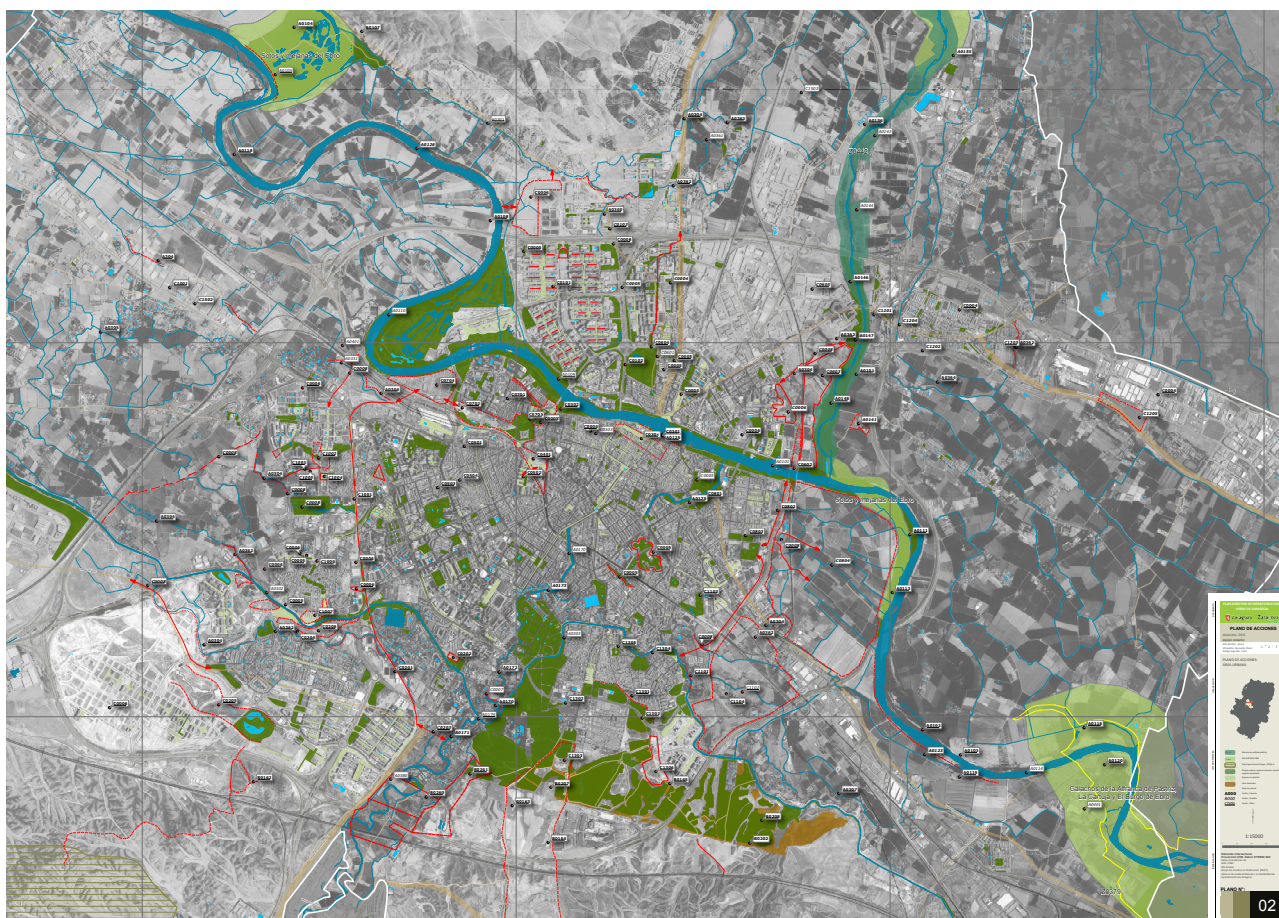
Image source:
www.zaragoza.es/ciudad/medioambiente/natural

Description

General context

Zaragoza Life Project: Creation, Management and Promotion of Green Infrastructure of Zaragoza was selected in the European call of the LIFE programme (2012), in the Policy and Environmental Governance line. The general objective of the project was the creation, management, protection, and promotion of the Green Infrastructure in Zaragoza, organising the different natural spaces of the municipality: the orchard landscapes, the green areas of the urban centre and their connections. To do this, a programme of actions supported by three pillars was defined: ecology, social and economy. On the other hand, the same year, the Huertas LIFE KM 0 project was another project selected in the same call for the environmental recovery of the peri-urban spaces through the intervention in the ecosystem and ecological agriculture.

Key strategies

The operational objectives and actions raised within the Green Infrastructure project were:
- Provide legal protection to the Green Infrastructure of Zaragoza through legal and administrative measures.
- Improve the connectivity of the green infrastructure, giving continuity to the different spaces, and improve the water cycle.
- Improve the perception of the natural spaces in the city environment by citizens, increase appreciation of the landscape of the steppe and conserve and maintain the orchard area.
- Coordinate the Green Infrastructure Plan with the Sustainable Urban Mobility Plan (school roads).

Budget

A total of 2.2 million euros has been invested in the LIFE Zaragoza Natural project with a co-financing of 815,875 euros by the European Union. The Huertas LIFE KM 0 project has had a budget of 1.8 million euros, co-financed to 729,955 euros by the European Union.

Good practices and results
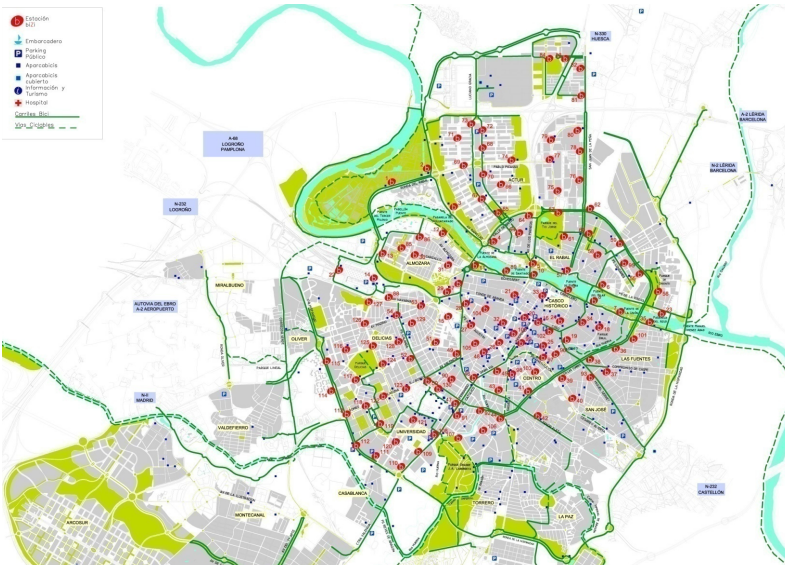
Definition of common design criteria for any green area of the city, with the aim of promoting ecological processes and natural cycles; preserving biodiversity, plan and ensure the continuity and connectivity of urban green spaces to peripheral areas and natural areas, as well as the connection with water courses, rational and efficient use of resources both in the design phase, in the execution of the works and in their maintenance, increase the area of green areas of the city and reduce the risks derived from climate change.

Good practices and results
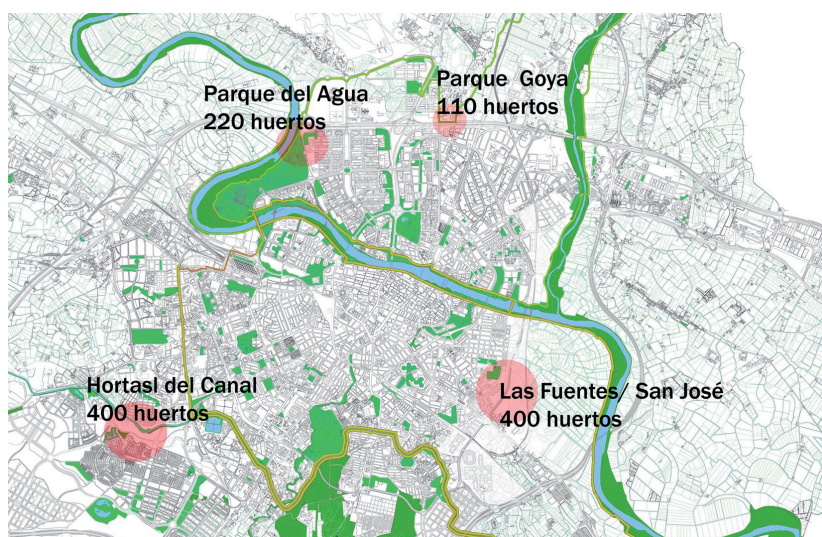
- Centralisation of information and support services for the dissemination of the project to citizens in the Water and Environment Documentation centre (CDAMAZ), a public centre whose objective is research, knowledge, education, dissemination of environmental issues and citizen participation.

- The environmental education programme regarding green infrastructure to raise awareness of the project. Promoting citizen participation is essential to raise awareness among the population about the benefits that green infrastructure brings to the quality of life of people, their health, and social security as well as the preservation of biodiversity and the adaptation and mitigation of climate change in the city.

- The Huerta de Zaragoza project was launched the same year, receiving exclusive funding for its implementation. Thanks to this project, a Network of Agroecological Gardens has been created, a group of farmers who grow fruits and vegetables using organic methods, offering the citizens healthy seasonal proximity products. In total, 1,200 municipal urban gardens have been created in three years.

- Guided tours of the different natural spaces adapted for different groups of the population have been organised, with informative talks, designs of emotional maps, a programme of ecological school gardens to give greater visibility to the orchards and environmental volunteer programmes, among other activities.

Image source: www.zaragoza.es/ciudad/medioambiente/natural

Awards and Acknowledgements
2012: Project within the LIFE call, "Creation, Management and promotion of the Green Infrastructure of Zaragoza" (LIFE12 ENV/ES/000567).

2013: Huertas LIFE KM 0 project (LIFE 12 ENV/ES/000919).

2017: European Urban Green Infrastructure Award, European Green Infrastructure Congress Award.

2021: Second Prize for Good Local Practices for Biodiversity of the FEMP, in the Citizen Awareness category.

Cuenca,
Urban Forest Innovation Lab

Province, autonomous region	Cuenca, Castilla-La Mancha
Project term	2018-2021
Population	54,621 inhabitants
Density	60.23 inhab/km^2
Scale	City, natural areas in the municipality
Website	Urban Innovative Action – UFIL: uiacuenca.es Urban Innovative Action (general): www.uia-initiative.eu

Image source: www.uia-initiative.eu

Description

General context

The Urban Forest Innovation Lab (UFIL) is located in the Institute of Technology, Construction and Telecommunications of the University of Castilla-La Mancha in Cuenca, the European city with the largest forested area in its municipality. This project has been selected within the Urban Innovative Actions to develop an innovative project to curb depopulation and develop the forestry sector with a sustainable approach, as an opportunity to generate business activity related to the forest bioeconomy.

Key strategies

The UFIL programme has been developed to promote entrepreneurship around forestry bioeconomy in Cuenca. The objective is to establish an ecosystem of collaborative, cooperative and quality entrepreneurs that can help to attract and establish people in unpopulated areas such as Cuenca. The main strategies are structured in three areas:

- Training: since forestry entrepreneurship requires specific programmes and training and to this day there is still no up-to-date training in entrepreneurship and forestry bioeconomy.
- Incubation: to launch business ideas, generate synergies with other initiatives and help existing companies and initiatives to grow.
- Acceleration: programmes to search for financing companies that are already established.

Budget

A total amount of 4.9 million euros has been invested in the project, with a co-financing of 80% by the European Regional Development Fund.

Good practices and results

- The projects selected in the Urban Innovative Actions procedures go through an evaluation process where a basic criteria is the existence of a multidisciplinary, local, and international network to foster innovation in line with the published calls. The application must be presented by a public entity, in this case, the City of Cuenca, which has established a collaborative network with other regional, national, and international entities, which can be academia, companies, foundations and training centres.

Good practices and results

- The project addresses the challenge of underuse of forest and natural resources as an opportunity to reverse high unemployment and progressive population loss, combining attracting talent and entrepreneurship and sustainable management of natural resources. All this is based on a view of the city as a space for revitalisation and innovation in the rural medium, generating a vision of common territorial management to develop synergies between both.

- Some opportunities identified have been the enhancement of activities linked to mycological exploitation, the agroecological transition and CO_2 offsetting policies, support for the inclusion of young people in rural areas and involvement of competent administrations to facilitate the implementation of companies in Cuenca.

- The training programme provides participants with the tools, knowledge and new skills needed for sustainable entrepreneurship in the forest bioeconomy.

Image source: uiacuenca.es

Awards and Acknowledgements

2018-2021: Urban Innovative Action (UIA03-103-UIA-EU).
2021: Project recognised by the High Commissioner for Spain Entrepreneurial Nation.

NATURE IN THE CITY. Other projects, guides, and initiatives:

1.2.2. Other important projects

Madrid + Natural	Madrid + Natural is a basic design guide for sustainable rainwater management systems in green spaces and other public spaces, including a repository of typologies of nature-based solutions. Available at: https://www.madrid.es/portales/munimadrid/es/Inicio/Medio-ambiente/Madrid-Natural-Soluciones-Naturales/?vgnextfmt=default&vgnextoid=ae3fe42ad5b12510VgnVCM1000000b205a0aRCRD&vgnextchannel=3edd31d3b28fe410VgnVCM1000000b205a0aRCRD
San Sebastián–Donostia: Plan Klima 2015	Plan Klima DSS 2050. Report for establishing actions to reduce greenhouse gas emissions and review municipal measures in relation to the four areas addressed by the Klima Plan 2050: Mobility, Energy, Territory and Economy. Available at: https://www.donostia.eus/ataria/documents/8023875/8050813/KLIMA_Informe_2020.pdf/e8d67d01-7f3f-e22a-411b-5d9795364cb5?t=1624437917020
Cañete de las Torres: Streets in Bloom	"Streets in Bloom" is a project by the Villa Botánica Cañete de las Torres. Since 2018, and coinciding with the traditional festivals in spring, gardening and landscaping competitions are held to draw attention to urban green spaces. Available at: https://aytocanetedelastorres.es/

1.2.3. Other initiatives and resources

Edible Forest Network. Collaboration with companies and corporate social responsibility (CSR)

The Iberian Network of Forests and Edible Gardens has several projects for forest conservation, giving people and companies the opportunity to have their own Private and Corporate Food Forests. The objective is to implement them progressively thanks to the different tools, activities, and products available on the platform. Available at: https://bosquescomestibles.es/

Spanish Network of Cities for Climate

Sixth report on local policies to combat climate change: nature-based solutions and green infrastructure of special interest to local entities. This document defines the concept of nature-based solutions (SbN) and includes a catalogue of technical solutions and projects applied at different scales, such as buildings and community or private spaces, public spaces, natural spaces and rural land management and coastal scale. It also includes an evaluation of the state of implementation of this type of solutions in the municipalities of the Spanish Network of Cities for the Climate. Available at: https://redciudadesclima.es/sites/default/files/2020-08/Triptico.pdf

Network of Local Governments + Biodiversity

The Municipal Green Infrastructure Disclosure Guide sets out the basic information for learning about green infrastructure and its associated benefits for health and the environment, including practical information for its implementation.

This Guide has been developed by the Association of Green Infrastructure Management Companies (ASEJA) and the FEMP, in collaboration with the Spanish Association of Public Parks and Gardens (AEPJP), based on the Municipal Green Infrastructure Guide, carried out by the three organisations mentioned above with the technical assistance of Pedro Calaza Martínez. Available at: http://redbiodiversidad.es/sites/default/files/2021-11/GUIA%20DIVULGATIVA%20DEFINITIVA.pdf

Belloch Forestal

The Catalogue Raisonné of Urban Trees is a guide that includes a repository of trees, shrubs and plant species classified according to various parameters to help them to select these plants when designing streets and public spaces. Some of the parameters they collect are water consumption, the density of the treetops and the shade they throw, allergenic species and the risk of pests. Available at: https://www.bellochforestal.com/es/productos/arbolado-urbano/

1.3. Good practices for living spaces

1.3.1. Spaces for coexistence: Four examples

Valladolid • Arbúcies • Murcia • Alicante

Valladolid

Arbúcies

Alicante

Murcia
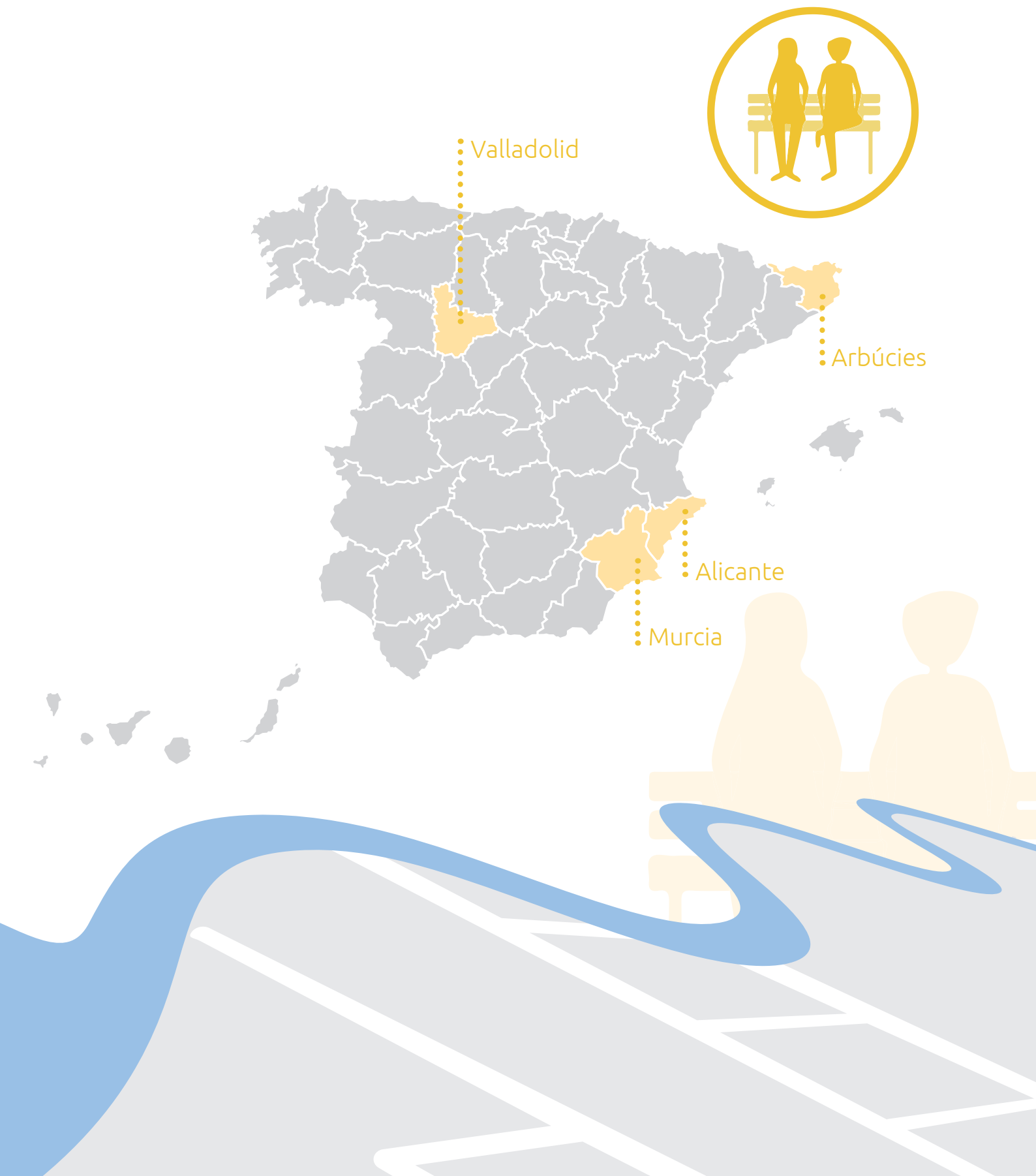
Valladolid, ACTUVA

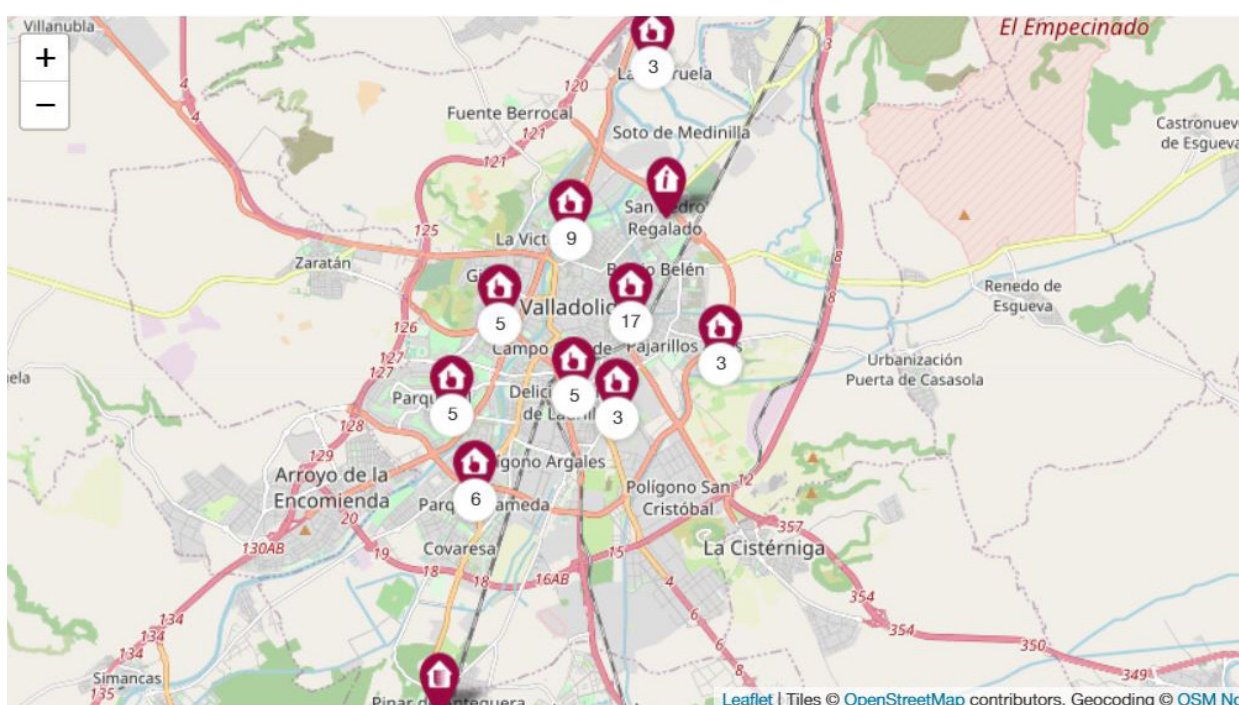|	
Province, autonomous region	Valladolid, Castile and León
Project term	2021 start of the new ACTUVA programme
Population	299,265 inhabitants
Density	1,514.4 inhab/km
Scale	City, facilities, and spaces for local associations
Website	Participation portal: www.valladolid.es/participa/es Citizen participation school: escueladeparticipacionciudadana.com

Espacios amigos de Participación

-- Todos --

OVERUELA (LA) (VALLADOLID)
CENTROS DE INICIATIVAS MUNICIPALES
Centro de Iniciativas Ciudadanas
La Overuela (C/ Calveras)

CENTROS MUNICIPALES
Centro Municipal La Overuela
c/ La 41 nº 12

PUENTE DUERO-ESPARRAGAL (VALLADOLID)
CENTROS MUNICIPALES
Centro Municipal Puente Duero
c/ Real nº 105

Image source: www.valladolid.es

Description

General context

The Department of Citizen Participation and Sports promotes associative activity and sport, understanding both as a fundamental pillar of a healthy and cohesive citizenship. The team at the Department has detected a great interest among citizens to boosting the associationism of different local entities, as well as promoting collaboration and synergies between different associations and entities. The associations have expressed a desire to have more support and municipal help to have resources and knowledge to energize the associative movement with more tools. Thus, the emergence of ACTUVA, in continuity with the strategies established by the Citizen Participation Service.

Key strategies

The following programmes are important in the Citizen Participation Service:
- Friendly spaces: this consists of a network of centres available to the public in the different neighbourhoods with the aim of promoting social cohesion, avoiding loneliness and the promotion of varied activities and workshops, as well as the promotion of the activities of different entities and local associations.
- The promotion of neighbourhood associationism in all neighbourhoods of the city, through advice and training, provision of spaces and economic support for their activities.
- Participatory budgets for decision making and presentation of projects for the investment of part of the municipal budget with the aim of improving neighbourhoods.

Budget

The ACTUVA project has received an investment of 66,000 euros to carry out several activities, such as courses, conferences, studies, or technical advice.

Good practices and results
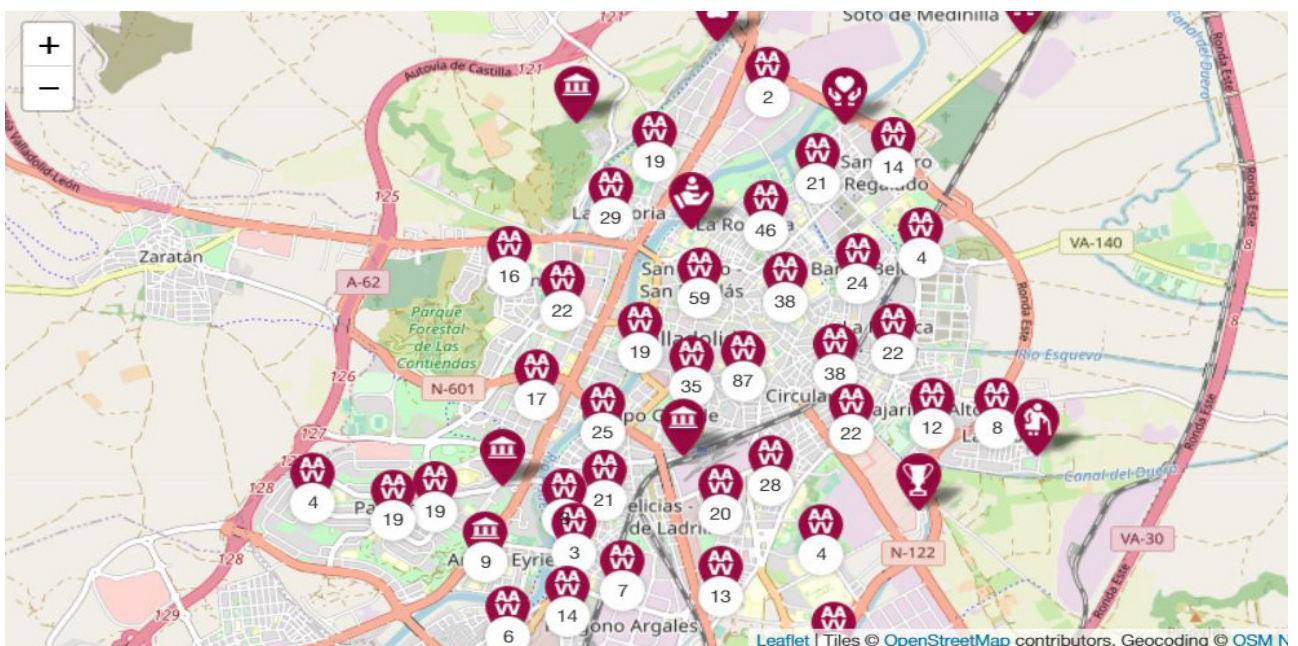
Good practices and results

Una red de locales que les puede servir de sede

El Ayuntamiento de Valladolid se ha comprometido a facilitar el acceso a un local adecuado que sirva de sede a las distintas asociaciones vecinales de nuestra ciudad y a sus dos federaciones de asociaciones.

El Ayuntamiento financia los gastos de suministros básicos de luz, calefacción y agua y, cuando es necesario, los del alquiler de estos locales.

Conoce nuestros locales y otros Espacios Amigos

Convenio con la Federación de Asociaciones Vecinales "Antonio Machado"

Dentro de los ámbitos de su competencia, el Ayuntamiento de Valladolid y esta Federación tienen la voluntad procurar el bienestar social de los/as vecinos/as y el desarrollo armónico de la ciudad.

Están interesados en colaborar en la tarea de fortalecer y mejorar el tejido asociativo del municipio de Valladolid y, en particular, el funcionamiento y la actividad de las asociaciones vecinales, defendiendo los intereses generales de los ciudadanos y ciudadanas de Valladolid.

Image source: www.valladolid.es

- A new "ACTUVA" initiative has been created to provide associations, groups, and other stakeholders with all kinds of tools and resources to promote participation projects and activities in the city. This initiative seeks active participation from citizens and encourages innovation in neighbourhoods, in addition to working with the administration with the different local entities.

- Resources and informative materials have been opened to advise and qualify in a practical way in contents related to associationism and citizen participation.

- A space will be provided to propose pilot projects that are presented by the different local groups, and technical support will be offered to neighbourhood associations and entities that demand it.

Arbúcies, skatepark sk8+U

Province, autonomous region	Girona, Catalonia
Project term	2012 Opening of the skatepark
Population	6,608 inhabitants
Density	74.54 inhab/km^2
Scale	Municipal facilities, public space
Website	Project: straddle3.net/es/proyectos/sk8u Video summary: https://vimeo.com/54721650

Image source: www.publicspace.org

Description

General context	In 2011, a group of young people aged eleven and eighteen from the municipality promoted a project to create a space for skateboarding and skating, as well as other modes of transport such as scooters and BMX (bicycles). Given the absence of an adapted space for skateboarding in the municipality, young people wanted a suitable place for this sport and started communicating with the local council, some residents, and a team of architects in Barcelona (Straddle3). The project was carried out by means of a participatory process combining the recycling of materials with different collaborative dynamics.
Key strategies	The sk8+U project involved its future users from the outset: • The project worked with young people on several aspects such as collaborative design, shared management, social communication, maintenance of spaces and self-construction. • Young skaters were recognised as the main promoters of the project, and it was agreed to provide them with official support in an innovative process to analyse the possibilities of collaborative design, self-construction from recycled materials and shared self-management of the resulting space.
Budget	The project cost €41,500 and was mainly funded by the municipality. It is also important to highlight the contribution of the Higher Sports Council, as well as the non-profit artistic platform, Idensitat, which also collaborated with the project. Labour was provided mainly by young volunteers who worked throughout the project phases.

Good practices and results

- Once the "sk8+U" skatepark was inaugurated in 2012 it was quickly adopted by the young people of Arbúcies who identified with it.

- The project served as a lesson in teamwork and working for a common cause. At present the space is self-managed by young people and is shared by different users and age groups and activities.

Good practices and results

- The project was built with concrete, despite the small budget. Carpentry courses were organised to build the formwork, workshops to learn how to prepare the concrete, pour it and assemble it with recycled materials. The track was built by its future users.

- Regarding the design, all the pre-existing trees were conserved, and the terrain adapted to the original topography of the environment by means of grass slopes. Recycled elements were also included as benches and lighting was installed with a donation from the Picasso Museum in Barcelona, so that the space has good lighting until night. During the work, a goods container was used as a warehouse, which was later converted into a meeting place and for storing maintenance materials.

Image source: www.publicspace.org

Awards and Acknowledgements	2014: Finalist for the European Prize for Urban Public Space.

Murcia, succulent museum, and urban DNA

Autonomous region	Region of Murcia
Project term	2019
Population	459,403 inhabitants
Density	513.98 inhab./km^2
Scale	Public space of the city, square; is part of an urban strategy in neighbourhoods
Website	Project: https://magicarch.es/2020/01/14/museo-de-suculentas/ City Council – Urban DNA: https://adnmurcia.es/ City Council – Murcia 2020 Strategy: https://www.estrategiamurcia.es

MAP OF ACTIONS
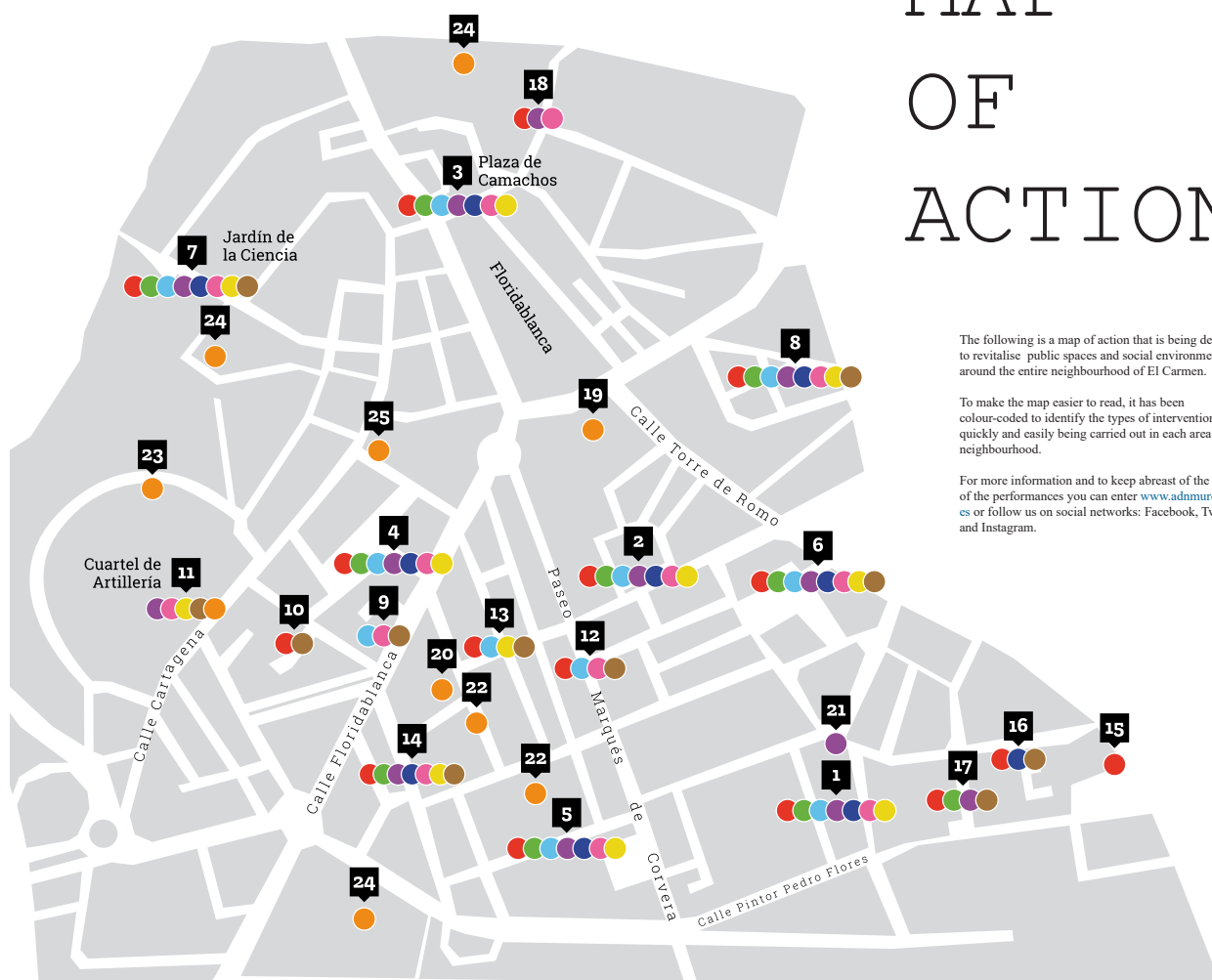
The following is a map of action that is being developed to revitalise public spaces and social environments around the entire neighbourhood of El Carmen.

To make the map easier to read, it has been colour-coded to identify the types of interventions quickly and easily being carried out in each area of the neighbourhood.

For more information and to keep abreast of the status of the performances you can enter www.adnmurcia.es or follow us on social networks: Facebook, Twitter, and Instagram.

Image source: adnmurcia.es

Description

General context

The concept of "urban acupuncture" is based on the strategy of carrying out minor interventions in a small space in the city, usually in public space, to revitalise degraded areas and improve the quality of life in the surroundings.

The cactus and succulent museum is part of a strategy of the City of Murcia called Urban DNA. This City Council initiative is aimed at the renewal and socio-economic activation of the city neighbourhoods.

Key strategies

The cactus and succulent museum is a new urban space in the Barrio del Carmen that achieved the following with a small urban intervention:

- An outdoor educational space with succulents and cacti is an educational facility for learning about the different types of succulents around the world.
- It raises awareness about air quality and pollution. In addition, the choice of succulent plants and cacti is vegetation that requires low maintenance and consumes little water.

Budget

A total of 80% of the Urban DNA project was funded by the European Regional Development Fund (ERDF) of the European Union, within the framework of the Operational Programme for Sustainable Growth 2014-2020 and provided for in the Murcia project: Innovation and Tradition / DUSI Strategy. The specific strategy of Urban DNA was included in the "physical, economic, and social regeneration" category of the total budget. In 2019, the total investment in this programme was 1.6 million euros. More detail can be found in the final document of the Murcia 2020 Strategy.

Good practices and results

- The Urban DNA strategy was based on a participatory process to identify spaces and elements for improvement in each of the neighbourhoods and the proposal of improvements.

- Introducing nature in the city with an educational purpose to promote knowledge and learning about botany.
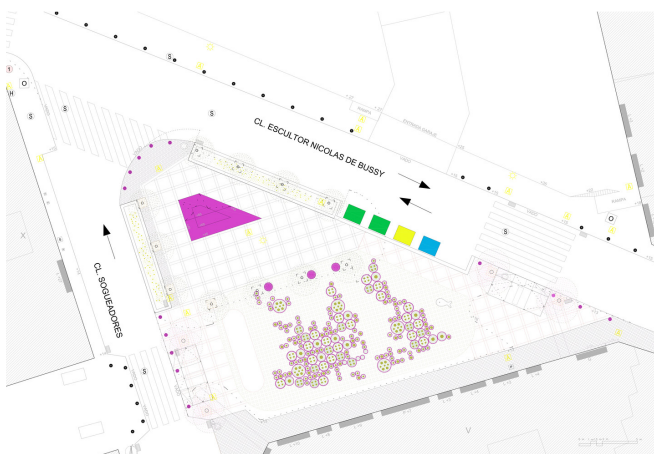
Good practices and results

Image source: magicarch.es/2020/01/14/museo-de-suculentas

- Reducing the space occupied by cars and waterproof surfaces. A residual space in the city of Murcia was recovered. It was previously occupied by parking spaces and a residual island and has been transformed into a square, as a result of a municipal participatory process. To mitigate the inconvenience of cars driving around the garden, two flower beds have been built on the perimeter to absorb noise, also improving the comfort of the square.

- Other projects developed in the neighbourhoods have been improvements in accessibility and road safety, improvements in lighting, trees and gardening, cleaning, and maintenance to eliminate graffiti, artistic murals, cultural projects, urban furniture, and improvement of children's areas. Specifically, in the Carmen neighbourhood, more than 80 groups and entities participated, and a total of 3,000 contributions and ideas were carried out by citizens.

- Participation has been maintained throughout the process through four different phases. First, contact with neighbourhood associations and groups to analyse and gather information in the different neighbourhoods. This phase has been carried out through working groups of experts and local agents to work on three main aspects: trade and economic activation, culture, and education. The next phase, defined as "activation", consisted of the technical definition of the different selected projects. The third phase -"agitation"- included the set of works and actions developed and, finally, the projection phase concluded the projects including the monitoring process.

| Awards and Acknowledgements | Work Listed in the 7th Edition Arquia/Próxima Awards. |

Alicante, intergenerational building
Plaza América

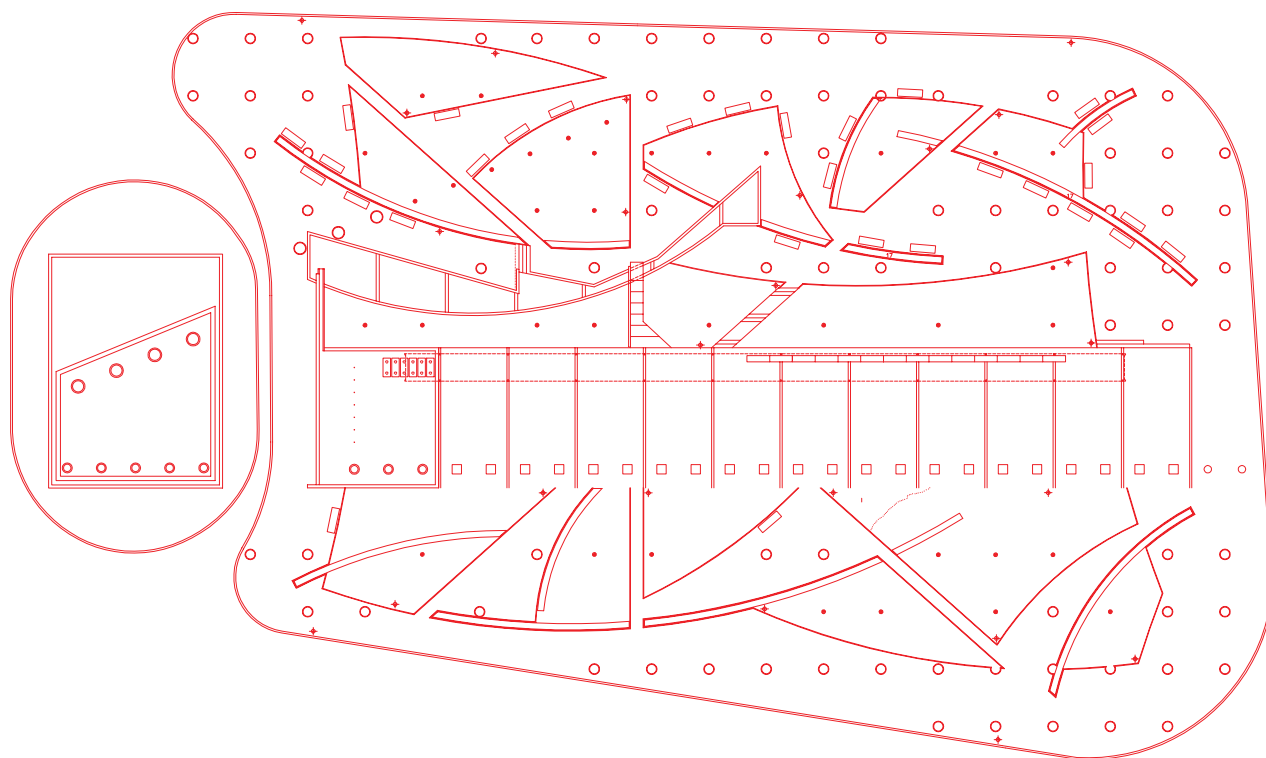|	
Province, autonomous region	Alicante, Valencian Community
Project term	2009
Population	337,482 inhabitants
Density	1,639.5 inhab/km^2
Scale	Multifunctional municipal building
Website	Intergenerational spaces: https://www.espaciosintergeneracionales.com/edificio-intergeneracional-plaza-america-alicante/

Image Source: García S. and Martí P. (2014)
Intergenerational architecture and public space. ARQ

Description

General context

The Plaza América building is a multifunctional and intergenerational housing project in a building promoted by the social programme of the Municipal Housing Board of Alicante (PMVA). They are homes for rent for independent seniors, where 20% of the homes are reserved for young people, who enter as residents acquiring the commitment to provide services to the community. This project is the first building in the Municipal Programme of Intergenerational Housing and Services Citizens of Proximity of the City of Alicante.

Key strategies

The main objectives of the Plaza América building project are:
- To promote alternatives and formulas for decent and independent living for the elderly.
- The establishment of proximity services for citizens and linked to the most pressing demands of the neighbourhood.
- Obtain the maximum use of the urban land used for municipal facilities.
- Enhance the urban classification of the area where it is located, improving the quality of the public space and accessibility to the neighbourhood.

Good practices and results

- The Plaza América building is a multifunctional programme in the city centre with a total area of 16,285 m2. On the ground floor, the programme is mainly socio-sanitary: a day centre, a health centre, and a 250-story rotational public car park. On the upper floors, the 72 intergenerational homes also have shared common spaces such as library, computer room, orchard, and laundry. The public space has also been renovated with a garden square and pleasant meeting places.

- Workshops and activities are planned consensually with residents. Older and young people live independently in apartments equipped with a small living-dining room, bedroom, living area and bathroom. Outside the apartments there are several common spaces for socialising.

Good practices and results

First level floor, where the Health Centre is located. Intergenerational "Plaza de América" building/First floor plan, location of the health centre. "Plaza de América" intergenerational building. E./ Sc. 1: 750. Fuente/Source: Alicante municipal housing board.
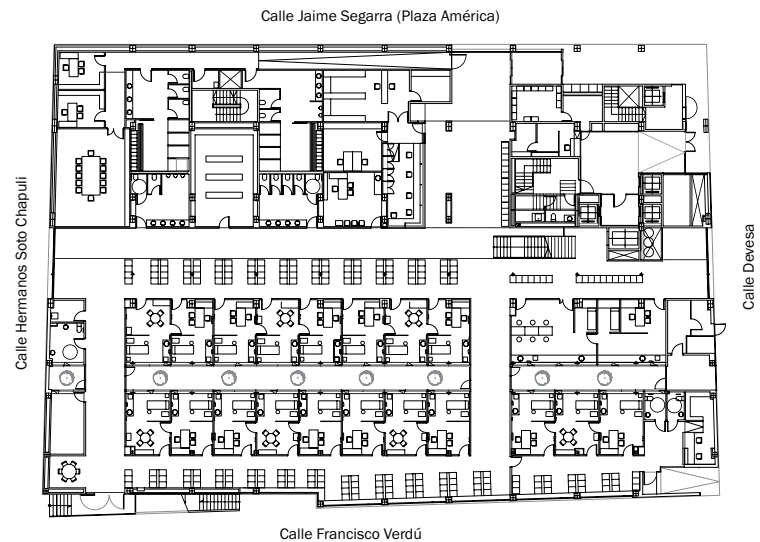

Image Source: García S. and Martí P. (2014) Intergenerational architecture and public space. ARQ

- The experience of the Plaza América building meant the inclusion of intergenerational housing in the urban renewal plan of several neighbourhoods with a markedly ageing population.

- This type of intergenerational housing has fulfilled the objective of protecting older people from loneliness and the feeling of isolation, while at the same time promoting the advantages associated with intergenerational coexistence, such as the transfer of knowledge and skills of each age.

Awards and Acknowledgements	2010: Better action of socio-community intervention of the Association of Public Promoters of Housing and Land.

ESOCIALISATION SPACES. Other projects, guides, and initiatives:

1.3.2. Other important projects

Barcelona: Sant Antoni Super-block	The Sant Antoni Super-block has been developed in recent years by testing solutions with temporary elements of tactical urbanism. The spaces recovered for pedestrians were used by private vehicles and now include multiple elements and diverse furniture to encourage and facilitate socialisation. Available at: https://ajuntament.barcelona.cat/superilles/ca/content/sant-antoni
Valencia: Urban gardens and La Huerta	The Huerta de Valencia is one of six peri-urban gardens remaining in Europe. The institution that controls irrigation, the Tribunal de las Aguas, has been declared intangible heritage of humanity. At the urban level, the Valencia Saludable 2030 strategy includes activities for promoting urban gardens and intergenerational meeting and leisure spaces, linked to healthy eating and routines. Available at: http://valenciasaludable2030.es/11/1092/2019
Madrid Salud: Unwanted loneliness	The Madrid Salud initiative to prevent unwanted loneliness consists of a wide range of diverse group and community activities to promote healthy meeting and leisure alternatives, as well as relationships with other people. Available at: https://soledadnodeseada.es/

1.3.3. Other initiatives and resources

Community participation

The Community Engagement Guide is an adaptation of the NICE NG44 guide *"Community engagement: Improving health and wellbeing and reducing health inequalities"*. Its implementation will provide scientific evidence on which to support a comparative analysis of the projects and activities that are underway, facilitating decision making for the activation of new actions and promoting the updating or redesign of programmes or interventions that are already working. Available at: https://portal.guiasalud.es/wp-content/uploads/2019/01/GPC_579_Guia_Adapta_Participacion_-Comunitaria.pdf

Spanish Healthy Cities Network

The Participate to Gain Health Guide is the public version of the Community Engagement Guide: Improving health and well-being and reducing health inequalities, 2019.

This version has an attractive format and uses accessible language to facilitate meetings between levels, technicians, citizens, and executives.

https://www.sanidad.gob.es/en/areas/promocionPrevencion/entornosSaludables/local/estrategia/herramientas/docs/Guia_Participar_ganar_salud.pdf

IMSERSO: Cities and Communities Friendly to Older People

The WHO Global Network for Age-Friendly Cities and Communities is part of the UN Decade of Healthy Ageing (2021-2030), within the framework of the 2030 Agenda and the Sustainable Development Goals. It is a commitment by a municipality to listen to the specific needs of the older adult population, evaluating the programmes and improvements implemented and monitoring their friendliness with respect to the starting situation. The goal is to work with older people in all areas that affect the creation of age-friendly physical and social environments. Membership of the WHO network also requires a commitment to sharing experiences, learnings and logos between cities, towns, and communities. Available at: https://ciudadesamigables.imserso.es/ciudades-amigables/que-es-red-mundial-ciudades-amigables-personas-mayores

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