DESIGNING HEALTHY AND LIVEABLE CITIES
CREATING SUSTAINABLE URBAN REGENERATION

Marichela Sepe
In the last ten years, concepts such as urban health and liveability have become ever more present in urban planning studies. Many companies rank the most liveable city in the world or in a nation, and many indicators are used to try to measure factors which can report the health of a place by investigating it in different ways. While it is possible to understand why a place is liveable – due to the liveability and health concepts that are being more and more explored in urban studies, and the strong influence coming from other disciplines – it is difficult to design a place that is certain to be healthy and liveable.

Accordingly, aim of this book is, after the definition of the field of investigation concerning sustainable regeneration through topics such as resilience, adaptation, health, and mixed connections, to illustrate the present-day approaches to the analysis and design of healthy places, and in particular the original Healthy Pl@ce Design method, flexible and repeatable in different contexts. The method aims to identify sustainable urban liveability and healthiness and the factors which make places liveable and healthy from users’ points of view and identifying design interventions that can enhance or create both urban liveability and health. Emblematic case studies carried out in Europe, Canada and China – Bordeaux, Copenhagen, Hamburg, Madrid, Newcastle–Gateshead, Nice, Dublin, Vancouver and Wuhan – constitute the empirical part of the book, detailed with surveys, questionnaires, images and maps.

The theoretical framework – built on contemporary issues – and international case studies make this book both attractive and scientific, adding a new stone on the sustainable city construction and opening it to a particularly wide readership, including scholars, students, administrators and professionals.

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Designing Healthy and Liveable Cities
Creating Sustainable Urban Regeneration

Marichela Sepe
To my family
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Introduction

This book deals with the health of places and how to make them healthier, more liveable and sustainable from the point of view of the people who use them.

The urban conditions that prompted me to work on urban health topics (Sepe, 2020a) were not only deepening themes, such as climate change, different environmental issues and pandemics that are changing the world we live in (Sepe, 2021), but also understanding how to create places where the people who live there feel good, perceiving their healthiness and liveability.

In fact, it is not difficult to feel good in a place, but it is difficult to really identify the factors that make people feel good in that place, and it is even more difficult to understand how to design a place that is healthy and liveable.

Since the 19th century – in the period of the hygienists (Otgaar et al., 2011) – attention was paid to the influences of basic structures on public health. This topic then returned, after a pause, to the agenda of scholars, politicians and public administrators for various related issues such as the improvement of green spaces, public spaces and cycle and pedestrian networks as they are able to promote healthy behaviours in people towards themselves and the surrounding environment.

The health determinants (Otgaar et al., 2011) that can be identified include human biology, namely the factors internally related to the human body itself; the environment, namely the elements external to the human body and on which people have limited control, such as the social, natural and built environment; lifestyle, namely the healthy or unhealthy behaviour of people; and the health care facilities, namely the health care facilities and their quality and accessibility.

Since health is a concept studied in many disciplines, to illustrate it, I have limited the field of investigation to the observation of the factors and elements that make a place liveable and that can promote healthy behaviours in people, which, in turn, can contribute to the sustainable maintenance and improvement of spaces according to a virtuous circle (McHarg, 1969; Musterd and Kovács, 2013; Ruijsbroek et al., 2017; Sudjic, 2016; Whyte, 1980).

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The book is divided into four parts. The first part is devoted to the definition of sustainable urban regeneration through a holistic approach that includes factors and elements such as resilience and adaptation (De Roo et al., 2020), mixed connections (Ratti, 2014), healthy urban places (Carmona, 2019a, b; Capolongo et al., 2018) and indicators, all introduced by the principles of the 2016 New Urban Agenda and the 17 Sustainable Development Goals. In this framework, urban health is considered a fundamental element for sustainable regeneration to be taken into consideration in not only all phases of transforming a place but also, and above all, afterwards. Indeed, the components that determine urban health are many; in this book, those concerning public spaces (Carmona et al., 2010) – which are also treated in the case studies – are especially considered. The healthiness issues are connected in different ways to place identity as well (Lynch, 1960; Cullen, 1961; Pendlebury and Porfiriou, 2017; Sepe, 2009a, 2013a, 2013b).

The second part is dedicated to emblematic contemporary methodological approaches to the analysis and design of healthy and liveable places and, in particular, 15-Minute (Moreno, 2020), flexible (Bergevoet and Van Tuijl, 2016), soft (Sim, 2019) and smart (Sassen and Kourtit, 2021) ones.

While the 15-Minute City is a city able to offer all its inhabitants everything they need to live, work and have fun to be reached on foot in no more than 15 minutes, the flexible one is based on tools for architectural and urban planning and design, which are able to allow changes in the course of implementation of those projects. The soft city is based on the idea that from the union of density and diversity a more liveable and healthier city can be obtained as the proximity of an environment can be translated into time. Finally, in the smart city, the whole range of technologies are at the service of the place both to improve its liveability and healthy and ensure its sustainability. These approaches to the study of places, albeit different, have several factors in common, including attention to integration, inclusion and diversity.

The third part is dedicated to the illustration of the original Healthy Pl@ce Design method (Sepe, 2020a) which aims to provide a repeatable investigation protocol to analyze and design healthy and liveable places. The protocol is made up of eight phases, five of analysis – in which the characteristics, equipment, organization and quality of the places and the way in which people experience and perceive them are obtained through surveys, analyses and questionnaires – and three of project, in which, after identifying factors and elements that can be improved, administering an on-site questionnaire and the realizing an analysis on social networks to understand people’s opinions on project proposals, interventions are identified to obtain healthier and more liveable places.

To support the method, the characteristics and functions of a software program were created to visualize the analysis and project maps of healthy and liveable places in a faster and smarter way. Indicators have also been created to give numerical values to the healthiness of the analysed locations.

The fourth part presents the case studies in which Bordeaux, Hamburg, Madrid, Nice, Dublin, Vancouver and Wuhan are analysed with the Healthy
Place Design method and Copenhagen and Newcastle–Gateshead with secondary data. All the cases are emblematic of the cities in terms of liveability, urban health and sustainability.

The study area in Bordeaux is the left part of the Garonna waterfront which starts at Pont Saint Jean and ends at Pont Jacques Chaban Delmas. The case study was carried out in the Bordeaux area of urban regeneration that is based on the articulated planning of urban interventions and financial resources aimed at redefining the identity of the places, which has long been linked only to wine production, and revitalizing the economy of the city.

The Copenhagen case study concerns Superkilen park, created as part of Prequalified Competition launched by the Municipality of Copenhagen and the Realdania association, a Danish foundation which aims to finance or support projects that improve the aesthetics and liveability of the urban environment.

In Dublin, the area that is analysed is the Liffey waterfront between Grattan Bridge and Samuel Beckett Bridge and the area between Samuel Beckett Bridge and Grand Canal Quai–Grand Canal Bridge. The process of urban regeneration of this area started in the 1990s with the redesign of the pedestrian street along the River Liffey, the Samuel Beckett Bridge, the Bord Gáis Energy Theatre and its square.

The case study in Hamburg concerns the public spaces of HafenCity, a 155-hectare area involved in a wide urban regeneration operation which is started in 1998 after an idea competition. The aim of the regeneration operation was to allow the city centre to expand re-creating the maritime identity and, at the same time, integrate it with the port beyond the Elbe, which for decades has been increasingly relegated to the southern-most part of the town.

The Madrid case study is Madrid Rio, a 10-kilometre linear park completed in 2011 which is situated along the Manzanares River in the area that was before covered by the M30 highway. An important part of the area is the river, in course of renaturalization, and its ecological corridor. The objective of the regeneration includes the connection of all the river sections of the city enhancing both the beauty of the landscape – and its flora and fauna – and its social value in the urban context.

The Newcastle–Gateshead case study concerns the quayside, interested in a regeneration process aimed at urban change strongly linked to the local identity, paying attention to the participation and involvement of the population, the liveability of places, the long-term sustainability interventions and the creative economy. The general strategy and urban core plan which were adopted in March 2015 form a strategic planning framework for development in Newcastle and Gateshead up to 2030.

The Promenade du Paillon case study in Nice is related to an area which was realized in the framework of the operative programme PNRQAD (Programme National de Requalification des Quartiers Anciens Dégradés). The local administration decided to realize a regeneration of the Nice old area with an improvement of housing, public spaces and mobility with
interventions which regard Place Massena (created in 1849 and renovated in 2007), Promenade du Paillon (inaugurated in 2013) and the Gare du Sud (inaugurated in 2019).

The Vancouver case study concern two new areas, namely Coal Harbour and False Creek. The regeneration process of these areas started in the 1990s in the framework of the Vancouver “Living First Strategy”, focused on the improvement of the quality of life, walkability, public transport, local services and quality public spaces.

Finally, the new Hankou riverfront of Wuhan, whose development started after the last flood, in 1999, with both the functions to create flood control and a quality urban design. The waterfront area of analysis is about 4 kilometres and has a linear plan to be constituted for both green and built areas. The greater particularity is that it borders five concession areas that create a variety of architectural styles.

The last part of the book is devoted to the conclusion, that concerns the Principles of Urban Healthy and Liveability Design, derived from the case studies carried out with the Healthy Pl@ce Design method. These principles are a sort of checklist to take into account both to analyse and design places which have health and liveability as their main factors to achieve sustainability.
Part I

Sustainable urban regeneration
1 Holistic approach

Urban regeneration consists of an integrated approach between vision and action for the resolution of various problems related to disadvantaged urban areas in order to improve their socio-economic, physical and environmental conditions with actions such as the requalification, recovery and conservation of heritage (Zheng et al., 2017).

To the term regeneration must be added the term sustainable (Nijkamp and Perrels, 1994) understood in its triple meaning (Sepe, 2009b, 2013b, 2014a, 2018; Sepe et al., 2016), although as Evans and Jones (2008) affirm, it can create ambiguity on what weight to give to the environmental, social and economic component, determining that greater emphasis can be placed in the regeneration processes on one element instead of another depending on the developers’ goals (Astleithner et al., 2004; Davies, 2002).

Indeed, in the most recent studies for this purpose, additional key elements of sustainability in relation to the planning system have been identified, namely cohesion and social inclusion, protection and enhancement of the natural environment, the prudent use of natural resources, sustainable economic growth and integration of sustainable development into development plans (ODPM, 2004). This highlights the importance of integrating the components and not just ensuring their presence (Forrester and Snell, 2007).

In the chapters of Part I, some elements and factors considered to be important for determining sustainable urban regeneration are illustrated, including resilience and adaptation to crises and changes, the healthiness of places and new connections and indicators, all following the holistic approach detailed here that frames the general points of view that led to the identification of these elements and how these were treated in the book.

Each transformation operation may have to undergo changes due to sudden crises of different types; it is important to be able to guarantee the resilience of places and their adaptation which require all the involved components to be flexible at all levels.

Urban health is a fundamental element for sustainable regeneration and must be taken into consideration in not only all phases of transforming a
place but also, and above all, afterwards. The components that determine urban health are many; in this book, those concerning public spaces – also treated in the case studies – are especially considered.

The kinds of connections between people and place are increasingly growing. The social infrastructure in urban regeneration areas is an important element in sustainable development and must have equal access for residents. It is also important to remember that stakeholders do not have equal rights and powers in the transformation process. Stakeholders in urban regeneration projects must include not only public administrators at different levels and stakeholders in the private sector but also citizens and, in particular, those who live close to urban renewal projects.

A dynamic relationship must be created between different actors who share objectives agreed together and which must be pursued through the understanding of mutual needs and benefits (Brinkerhoff, 2002). Similarly, the creation of green and blue infrastructure is fundamental to guarantee ecological sustainability and economic regeneration and create a suitable balance with the grey ones. Cultural networks are another important element in sustainable regeneration as they have the potential to improve social cohesion and the city’s brand. Accordingly, planning attentive to perceptions of one’s heritage can improve interaction with this and the surrounding urban environment, with a positive effect on the health and liveability of the place. Consequently, the integration of all the infrastructures will be the key factor to ensure more sustainable connections.

The monitoring of the regeneration process throughout its path is also important to obtain more sustainable results and improve existing programs by modifying the proposed solutions with others that are more adequate than the actual needs. The evaluation of sustainable urban renewal is useful for making stakeholders understand which are the most suitable strategies to effectively obtain sustainable regeneration. In this regard, the indicators can be a useful reference for assessing the usefulness of regeneration programs and their effects on urban health and liveability.

Indeed, the holistic approach to the design of places is an approach that considers all the components that determine their implementation in terms of sustainability, healthiness and liveability, as well as all those involved in a logic of integration and equity. The holistic approach (Lehmann, 2010; Xu, 2011) can be read in various Charters, agendas, principles and international reports which in recent decades have formed the framework within which local agendas have been built. Some principles of the New Urban Agenda and of the 17 Sustainable Development Goals (SDGs) which constitute an important reference for the contents of this book are reiterated in the following.

Many principles that are contained in the New Urban Agenda concern topics related to public spaces, liveability, healthiness and accessibility. It was adopted during the UN-Habitat III Conference which was held in Quito, Ecuador, in October 2016. It represents “a shared vision for a better and more sustainable future” (UN-Habitat, 2016).
36. We commit ourselves to promoting appropriate measures in cities and human settlements that facilitate access for persons with disabilities, on an equal basis with others, to the physical environment of cities, in particular to public spaces, public transport, housing, education and health facilities, public information and communication (including information and communications technologies and systems) and other facilities and services open or provided to the public, in both urban and rural areas.

This principle sets out a very important element for the health of places, that is facilitating access for people with disabilities in public spaces and built structures but also in the sphere of communication and information, allowing inclusive access to tangible and intangible resources of a territory.

37. We commit ourselves to promoting safe, inclusive, accessible, green and quality public spaces, including streets, sidewalks and cycling lanes, squares, waterfront areas, gardens and parks, that are multifunctional areas for social interaction and inclusion, human health and well-being, economic exchange and cultural expression and dialogue among a wide diversity of people and cultures, and that are designed and managed to ensure human development and build peaceful, inclusive and participatory societies, as well as to promote living together, connectivity and social inclusion.

The important points that are expressed in this principle concern the promotion of public spaces of all types that have different functions – an important aspect even in times of pandemics in which it is important to have different uses to be carried out outdoors – and that are designed and, above all, managed to promote a dialogue between all. Public space, if it is of quality, is also able to promote not only health and well-being in those who live it but also economic and cultural exchange.

50. We commit ourselves to encouraging urban-rural interactions and connectivity by strengthening sustainable transport and mobility, and technology and communications networks and infrastructure, underpinned by planning instruments based on an integrated urban and territorial approach, in order to maximize the potential of these sectors for enhanced productivity, social, economic and territorial cohesion, as well as safety and environmental sustainability. This should include connectivity between cities and their surroundings, peri-urban and rural areas, as well as greater land-sea connections, where appropriate.

Both physical and virtual infrastructures, as illustrated in one section of this book, are important elements for connecting places, especially if they are
Sustainable urban regeneration understood in terms of sustainability and if they relate to all urban, rural and marine areas.

67. We commit ourselves to promoting the creation and maintenance of well-connected and well-distributed networks of open, multipurpose, safe, inclusive, accessible, green and quality public spaces, to improving the resilience of cities to disasters and climate change, including floods, drought risks and heat waves, to improving food security and nutrition, physical and mental health, and household and ambient air quality, to reducing noise and promoting attractive and liveable cities, human settlements and urban landscapes and to prioritizing the conservation of endemic species.

In this principle, the issue of resilience to environmental disasters is associated with that of creating networks of public spaces, understood as places that can help improve resilience along with other aspects such as air quality and the liveability of urban landscapes.

97. We will promote planned urban extensions and infill, prioritizing renewal, regeneration and retrofitting of urban areas, as appropriate, including the upgrading of slums and informal settlements, providing high-quality buildings and public spaces, promoting integrated and participatory approaches involving all relevant stakeholders and inhabitants and avoiding spatial and socioeconomic segregation and gentrification, while preserving cultural heritage and preventing and containing urban sprawl.

In this principle, the theme of sustainable regeneration includes, in addition to quality public spaces, the promotion of integrated participation operations and the safeguarding of cultural heritage. The important aspect that can be seen in this, as well as in the other principles, is that each topic treated is linked with several others precisely from the perspective of the holistic approach mentioned earlier.

118. We will encourage national, subnational and local governments to develop and expand financing instruments, enabling them to improve their transport and mobility infrastructure and systems, such as mass rapid-transit systems, integrated transport systems, air and rail systems, and safe, sufficient and adequate pedestrian and cycling infrastructure and technology-based innovations in transport and transit systems to reduce congestion and pollution while improving efficiency, connectivity, accessibility, health and quality of life.

This principle highlights the improvement of all transport and mobility infrastructures in the logic of integration on the one hand but also of safety
and healthiness on the other. Reducing air pollution due to transport systems also has a positive effect on slow mobility systems and therefore on the quality of life.

Before the III Un-Habitat Conference, in 2015 the General Assembly of United Nations Member States adopted the 2030 Agenda for Sustainable Development and 17 SDGs it provides (UN, 2015). The Goals contain strategies to improve health and education, reduce inequality and incentivize economic growth. These include (1) ending poverty in all its forms everywhere; (2) ending hunger, achieving food security and improved nutrition and promoting sustainable agriculture; (3) ensuring healthy lives and promoting well-being for all, at all ages; (4) ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all; (5) achieving gender equality and empowering all women and girls; (6) ensuring the availability and sustainable management of water and sanitation for all; (7) ensuring access to affordable, reliable, sustainable and modern energy for all; (8) promoting sustained, inclusive and sustainable economic growth, as well as full and productive employment and decent work for all; (9) building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation; (10) reducing inequality within and among countries; (11) making cities and human settlements inclusive, safe, resilient and sustainable; (12) ensuring sustainable consumption and production patterns; (13) taking urgent action to combat climate change and its impacts; (14) conserving and sustainably use the oceans, seas and marine resources for sustainable development; (15) protecting, restoring and promoting sustainable use of terrestrial ecosystems, managing forests, combating desertification and biodiversity loss and halting and reversing land degradation; (16) promoting peaceful and inclusive societies for sustainable development, as well as providing access to justice for all and building effective, accountable and inclusive institutions; and (17) strengthening the means of implementation and revitalizing the global partnership for sustainable development.

These 2030 Agenda goals present a holistic approach as the principles concerning the 2016 New Urban Agenda. Topics such as resilience, equity, health, safety, sustainable economic growth, resilient infrastructures and nutrition improvement are some of those in common between the two Agendas and constitute, as mentioned before, the wider framework of the topic of this book as well.
2 Resilience and adaptation

Resilience and adaptation are two closely related and interconnected terms and have several points in common, as deduced in the following, so these are illustrated here together.

The term resilience has ancient origins, dating back to at least the first century B.C. and its first use was found in Lucretius’s “On the Nature of Things” in reference to Nature’s action comparable to the “bounce” of an image in a mirror (Pizzo, 2015). Since then, the term has been used in a variety of contexts, but it is in the context of Holling’s (1973) studies in relation to ecological systems that the concept of resilience changes and refers to the ability of systems to absorb change and maintain the same relationships between populations or state variables.

In subsequent years, the term has been used in many other disciplines in part because of its adaptability to complexity theories, including economics, ecology, political science, cognitive science, new technologies and land-use planning. Accordingly, Zolli and Healey’s (2012) definition of resilience understood as “the ability of a system, firm, or person to maintain its core purpose and integrity in the face of dramatically changed circumstances” integrates ecology and sociology and gives an insight into the multidisciplinary nature of the issue.

Resilience often considers events that cause a crisis in a system to be the same, even though these have different characteristics, and does not differentiate sudden events from undesirable ones, leading to some ambiguities. Among them, for example, since there is no definition of how to pursue it, the degree of resilience of communities after a sudden event may not be the same, and even within the same community, different behaviours may occur.

Considering an evolutionary approach (Bohland et al., 2019; Davoudi et al., 2012; Russo, 2018), there is no single equilibrium in ecology, but there are multiple equilibria; however, the issue to focus on is the type of equilibrium to refer to rather than the causes that could alter it.

A crisis of social or cultural type must be faced with different approaches than one due to a catastrophe of environmental type, and moreover, even the same type of crisis can have different durations of effects and variable response times. The characteristic of multidimensionality of resilience makes
the concept of resilience flexible, on one hand, and elusive in its entirety and complexity, on the other, requiring continuous updates and insights. The current studies are focusing on environmental risks and, more recently, on those due to epidemics as in the case of COVID-19, allowing to highlight more clearly the inherent problems (Vale and Campanella, 2005).

It is also true, as Vale (2014) writes, that resilience is used in different fields in similar ways. Management analysts use resilience to measure a company’s ability to recover from a disruption of a key element and recover as usual, just as economists measure it in relation to a place’s ability to recover after the loss of a particular industry, ecologists are concerned with how a system can be restored to its previous equilibrium after a sudden environmental event (Banica et al., 2020; Borsekova and Nijkamp, 2019), psychologists use resilience to describe an individual’s ability to withstand trauma and continue to function well. Information technology (IT) professionals measure the resilience of a communication network by relating how effectively a communication network copes with an outage exemplified or a massive power outage.

Within this framework, ecologists differ on the idea that there is a limit, that is once systems exceed the limit they collapse into a new state where there has been an extinction of species and a different set of processes are created. The concept of resilience in this direction becomes closer to that of non-equilibrium and can also be applied to interpretations of cities (Pickett et al., 2004).

Applying the concept of resilience to socio-environmental systems such as cities means anticipating crises and strengthening cities with proactive solutions that can at the same time enhance both public and private places.

However, preventive resilience requires choices that require upfront spending and investment and decisions about which people and places are at risk and which should be protected, regardless of whether the hazards are human-made, natural or a combination of them. A holistic view of preventive resilience should include consideration of the needs of all stakeholders and the different types of places potentially affected.

Resilience is also a concept that in addition to environmental quality is combined with the definition of safety in which a resilient place is a place where people live safely within improved places.

Indeed, cities are not uniform landscapes of people that are randomly distributed but organized places that produce socio-economic differences; therefore, it is not easy to describe a city as resilient in its entirety. For example, the COVID-19 pandemic brought problems of safety, fragility and differences in resilience not only between the cities affected but also between areas within them.

Certain factors and their components are important in determining resilience, including vulnerability analysis, which has uncertainty, informality, demographics and urban distribution of vulnerability as components; uncertainty-oriented planning, which has adaptation, planning and sustainable form as components; urban governance, which has equity, integration and
ecological economics as components; and prevention, which has mitigation, restructuring and alternative energy application as components.

Demographic variables influence the ability of individuals to cope with environmental risks and uncertainty; socio-economically weak communities are, in fact, more prone to suffer negative effects both in terms of material and immaterial damages (Ojerio et al., 2011).

Informal urban spaces are more vulnerable because in many cases, there is a lack of infrastructures and services and the presence of a large population with socioeconomic hardship, which can result in a wide variety of risks and less resilience.

Uncertainty is another important component in the study of resilience because a lack of knowledge about future crises of an environmental nature and beyond makes people and places particularly vulnerable. To mitigate the impacts due to uncertainty of future events, policy and urban risk planning and management must be taken into account in advance.

Integrating uncertainties within the planning process and improving collaboration between different institutions and organizations, both public and private at all levels, are key components of resilience. Similarly, social diversity must be considered in order to reduce it through a more balanced distribution of resilience resources.

A green economy can play an important role in achieving urban resilience that can be translated into investments directed toward energy efficiency and markets that stimulate eco-friendly consumption (David, 2006). Prevention is assuming an increasingly important role in urban resilience especially if thought in terms of risk mitigation – which can be translated into a reduction of not only greenhouse gas emissions but also social inequalities and imbalances in terms of urban decay – and restructuring – that is capacity and flexibility to concretely face ecological, cultural, economic challenges with specific strategies and policies for transformations in cities.

Resilient planning should therefore be oriented towards uncertainty and go beyond traditional approaches, preparing cities for possible changes. Adaptation in this sense is key to limiting damage from climate change and, more broadly, from economic, social and health crises. Planning should include a wider range of conditions and, in particular, develop ex-ante and ex-post analyses to adapt appropriately to sudden situations.

Another component of uncertainty is the sustainable urban form, which relates to many aspects of resilience: liveability, urban health, change, climate and multiculturalism are just some of the elements that influence contemporary public policy and must be taken into account for a good city form (Lynch, 1984). Urban compactness and contiguity, high-density planning, sustainable transportation and equitable access, mixed land uses, diversity of housing and built form, passive solar design, greening in particular cities and renewal and use with the rehabilitation and refunctionalization of brownfield sites constitute key criteria for assessing the sustainability of urban form (Jabareen, 2006, 2013).
In this regard, as Desouza and Flanery (2013) observe, the social sphere is composed of three types of elements, namely people, institutions - understood as the set of individuals converging towards common goals -, and activities - meant as the tasks that people and institutions design, carry out and use. In this framework, people play the most important role because it is around them that the other two components are built. Moreover, the physical and social spheres often overlap, and many activities within a city occur while encountering these two spheres. In public spaces for example, interactions between different people, activities (walking) institutions (services), processes (permits of various kinds) and resources (artwork and artefacts of various kinds) can be observed. Each of these components interacts in intentional and unintentional ways that are important for identifying the creation of resilient and adaptive places (Desouza and Flanery, 2013).

Spaces with a good degree of resilience are spaces that are able to adapt to change. It is also true that adaptivity, like resilience, is a term that lacks an unambiguous interpretation (De Roo and Porter, 2007). Adaptive planning, adaptive governance, adaptive management, adapting institutions and adapting the city, its public spaces and its buildings are some meanings used to define this concept, giving different meanings to the concept of adaptivity.

To clarify its limits in the planning domain, it is possible to refer to this domain (De Roo et al., 2020) as including the material dimension and both the organizational and institutional dimensions. The material dimension is about people, the environment and the land, while the organizational and institutional dimensions are about the domains in which planning and activities act to link institutions with the material dimension. Adaptive planning can thus involve that the people, places or situations that are the objects of planning have dynamic behaviour and can exhibit that behaviour in the future or that the processes of designing and implementing interventions are capable of being adaptive.

Traditional approaches to planning do not consider adaptive behaviour as an initial point in the planning phase. These are situations that require interventions that are decided on later through planning action, such as for example building a road to improve deteriorating traffic conditions or building a residential neighbourhood in response to an increase in population.

These cases could have been resolved even early in the planning process; instead, traditional planning deals with planning based on current realities not on unforeseen changes.

The uncertainty and unpredictability of an event and its subsequent, often unknown, development are difficult elements to manage. In fact, the system as a whole cannot be understood only by observing the parts that compose it, which must instead be analysed together with their context, noting the reciprocal relationships and the ways in which the system reaches the best possible configuration.

Indeed, traditional approaches to spatial planning often do not take adaptive behaviour as a starting point, believing that urban interventions can be decided on the basis of facts and estimates that are available at the time of
decision-making. If reality did not change by remaining similar to that considered during the decision-making process or otherwise predictable, there would be no reason not to continue with this form of planning. This form of planning is based on a static perspective, which assumes a transformation according to predictable patterns, whose starting points are: “actual, eliminating the anomaly responsible for the disturbed order in the here and now”; desired, that is ideal and evidence of context; and potential, that is the tools to achieve a predefined end on which there is consensus.

This static perspective is also used in contemporary planning, where deliberate actions will lead to the results of the decision intended. However, the assumption of a static world can lead to strategies that may be obsolete at the time of the decision, resulting in much divergence between expected and actual effects.

Resilience and adaptation are to be considered fundamental in dynamic planning, where the uncertain and the sudden become components of the planning process with the same weight as the others and where urban planning tools are renewed or modified in order to contribute to the management of any crisis in an appropriate way. While it is true that unforeseen events – by definition – occur suddenly, it is also true that adaptive and dynamic planning can better support the creation of a new equilibrium.
3 Healthy urban places

The relationship between health and urban design is complex because of the multiple elements which play different roles in the city system.

Urban places are generally made up of buildings, roads, open spaces and landscapes and the people who live in them, and can therefore be defined as socio-physical constructs (Carmona, 2019a).

As several international studies on places (Speck, 2012) report, places influence the opportunities available to people, happiness (Montgomery, 2013) and sense of belonging and are important for cultural and social activities (Barton, 2016; Bulkley & Henig, 2010; Corburn, 2009; Cushing and Miller, 2020; Dannenberg et al., 2011; Hall, 2014; London, 2020; Madanipour, 2011).

Furthermore, the location influences housing conditions and the real estate market, as well as physical and mental well-being and health (Adams and Tiesdell, 2013; Montgomery, 1998).

To explain the value of a place from a health, social, economic and environmental point of view, Carmona (2014, 2019a, 2019b) uses the term positional value, defined as “a measure of the value of something”. In particular, England identifies six different types of values (CABE, 2006), which include the exchange value of parts of the built environment; the use value relating to the impact of the built environment on the activities that are carried out; the image value, which concerns the identity of the built environment projects; the social value and how much the built environment supports or is a threat to social relations; the environmental value and its resources; and the cultural value of the built environment.

In this way, the value of the place expands and refers to a complex and interconnected system of positive aspects to be connected to the interventions in the built environment and to all those who have different interests in the place and in its quality.

The definitions of the quality of the place indicated in the scientific literature are often related to terms such as liveability, quality of the built environment, sustainability and urban design, according to the different practical and political traditions. Several other terms can be connected to the concept