

# Diversity, community and participation: how Covid-19 has boosted the main issues of public space design

C. Peraboni<sup>1</sup>, S. Campioli<sup>2\*</sup>

<sup>1</sup>Associate professor full time - Department of Architecture and urban studies (DASStU) of Politecnico di Milano, Via Bonardi n.3, 20133, Milano, Italy

<sup>2</sup> PhD Student - Department of Architecture, Built environment and Construction engineering (dABC) of Politecnico di Milano, Via G. Ponzio n.31, 20133, Milano, Italy

\*Corresponding author: E-mail: [stefania.campioli@polimi.it](mailto:stefania.campioli@polimi.it), Tel: +393497142191

## Abstract

In our earlier research on urban regeneration process and the specific role played by public spaces, we have focused on three key-concepts that represent our interpretation of multiple dynamics that occur in public space design: they are *diversity*, *community* and *participation*. In this paper we propose a reinterpretation of those topics because we believe that the Covid-19 pandemic takes a role as an accelerator in the development of urban projects. In addition, due to a collaboration with the municipality of the city of Mantua, we conducted research on how Covid-19 has boosted the main issues related on designing of public space. So, in conclusion, we propose a new set of keywords such as: care as reciprocal responsibility; interplay as interactions of different factors; adaptability as the ability to take action in evolving scenarios; integration as the way to manage urban complexity; proximity, considering both the social and urban field; and finally, planning time as the necessity to plan both short term and long-term actions.

*Keywords: pandemic impacts; care as responsibility; proximity in public space; implementations of design strategies; regeneration scenarios*

## 1. THE NEED TO INVESTIGATE THE POST PANDEMIC CITY

Cities are complex systems with synergic integrations and their transformation are largely unpredictable. Nowadays, reshaping cities in an urban age is one of the most important challenge because urban transformations have to cope with social, financial, environmental and then pandemic impacts and they concern both the social and the physical sphere.

In 2020 the outbreak of the Coronavirus completely reshaped our urban lives because of the need to limit the spread of the disease and ensure essential services to the most vulnerable city users. Urban design and public space design were widely impacted by the pandemic. Think, for instance, at the usage of public spaces during the lockdown and the re-activation of them with various activities (personal and collective) and the setting of dehors (for bars and cafes). Think about our sense of safety in public spaces that has been strictly related to the use of medical masks and keeping physical distance. Think about the many tactical projects that have delivered short term solutions to mobility and walkability. So, despite this unexpected event, we believe that the Covid-19 pandemic takes a role as an accelerator in the development of urban projects, therefore, we look at Covid-19 pandemic not only as a crisis, but also as an opportunity to rethink the most important issues related to public space design. In our earlier research on urban regeneration process and the specific role that public spaces play in intervention strategies, we have focused on three key-concepts which urban design can be based on. These concepts are *diversity*, *community* and *participation*. They represent our interpretation of multiple dynamics that occur in public space design [1]. *Diversity*: it is the most determining feature that describes an urban context because it embraces the complexity of urban spaces and the variety of communities that inhabit them. It refers to both the physical and functional characteristics of place and it incorporates several aspects of diversity, such as form,

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activity, culture, language, habits, etc. It is the aspect that strongly recall the topic of inclusion. *Community*: it is the actor that plays a fundamental role in public space; it refers to a wide group of people with a common background who shares urban places, ethic values and projects. In acting together, those people create many heterogeneous groups with a common identity. In each urban context we can find different type of communities due to the different purposes they share. *Participation*: it is both a process and an experience linked to public space. It is a process because it opens up the discussion on new perspectives and strategies about urban projects among citizens and between citizens and the public administration. It is also an experience and a feeling that promotes the sense of belonging among citydwellers.

Therefore, starting from these considerations and collaborating with the municipality of the city of Mantua, we conducted research on how Covid-19 has boosted the main issues related on designing of public space. Based on systematic observations we made within the case study of Mantua, we propose a reinterpretation of those urban issues in the light of some forced shifts due to Coronavirus spread. Then, we think that the sense of *diversity*, *community* and *participation* in urban design has expanded with new shades of meaning that highlight the way going ahead in pandemic times. The aim is to verify whether the pandemic contingency has highlighted innovative practices and ways of use of public spaces able to prefigure and decline at different design scales, formal and informal strategies, capable of reactivating the community sense of belonging and giving new awareness to the institutions' actions.

## **2. AN OPPORTUNITY TO RE-DISCOVER THE COMPLEXITY OF THE CITY. THE PILOT CASE OF MANTUA**

The activities with the Municipal Administration of the city of Mantua started with the awareness of having lived profound changes in the relationship between the communities of the city and the administrative tools that govern urban phenomena. The pandemic spread has generated profound changes in our urban systems in the last two years. These changes derive from a plurality of conditions and affect territories and the urban aggregations in a different way. It follows the need to consider these transformations “collectively” trying to give some original interpretations. Functional interpretations are needed to understand contemporary values and main topics in order to pay attention to new and more challenging matters that the project of public spaces shall meet today. The topic of urban regeneration takes on great importance because city planners and designers work in pre-existent areas that are more fragile and vulnerable as a result of the major changes that the pandemic has brought in different urban contexts. In this post-pandemic phase, exploring new needs of the communities requires greater attentions because the correlation between social dynamics and the urban context has changed a lot. This correlation shows increasingly articulated issues that need specific attention. To understand this scenario is necessary an interpretative strategy able to grasp the material composition, the innovative profiles of social organization, and the new forms and functions that characterize the city today. Never as today in the city are produced unexpected and surprising contaminations of places, uses, and functions; contamination heightened by new technologies of information and sociality. It is inevitably to compose complex images made by a set of fragmented observations and partial and provisional considerations; we need investigations conducted with rigour and commitment but structurally unsuited to produce comprehensive resolutions.

Therefore, the aim of the work is to recognize the nature of the base elements of these fragmented plots avoiding using classifications considered obsolete and outdated by the contemporary. It means going in search of the meaning that today, in the post-pandemic condition, the project of the city assumes striving to recognize its potential and attitudes, to be able to act effectively within the articulated processes of urban transformation.

The activities carried out stems from the experience of collaboration between the Technical Office of the City of Mantua and MantovaLAB, the Research Laboratory of the Mantua Campus of Politecnico di Milano. The reason for this shared commitment was the need to confront issues of inclusion and social fragility, asking ourselves how these issues can influence the policies of territorial governments in the post-pandemic path. The intent is to understand how (and why) to transfer into urban planning, tools, and issues that present themselves as different in this post-pandemic phase. This involves defining new strategies to be integrated into the urban plan, particularly in the design of public spaces [2]. The trans-disciplinary nature of this activity is evident: talking about urban services and public space design means knowing how to read a set of issues; issues of a social nature (poverty, ageing, exclusion...), economic (commercial activities, workplaces, services to companies...) and environmental (green infrastructures, interventions of natural solutions, urban drainage...). In this context, policies must act in a coordinated and transversal manner, combining several actions that must be verified against their ability to produce significant effects. The project has worked in a dual direction, on the one hand, deepening the knowledge about the characteristics of the demand for space and services, on the other hand, verifying the adequacy of the offer of all the urban equipment. The goal is to construct, in a later stage, a system of strategies attentive and characterized by the issues brought to light by pandemic events.

## **2.1 How we have worked in trying to investigate new needs**

We have worked to expand the ability to read the demographic and social characteristics of the city of Mantua, developing a mode of processing and transmission of data that allows to switch from a quantitative reading of the phenomena to a qualitative one. This is especially important to acknowledge the critical elements and fragility that the pandemic has brought to light. The survey has highlighted how the needs of the population have changed according to changes in the composition, distribution and structure of the resident population itself. It is important to remember how the major changes brought about by the pandemic situation are concerning births and deaths, but in general, the structure of the population (arrivals and departures) has undergone important changes. The investigation process included a different mapping of the dynamics of the city: these maps are representative of the processes of substitution, and maintenance of demographic characteristics within the various areas of the city with particular attention to the relations with the local system of public spaces. For this analysis, we used functional geocoding techniques to localize the dynamics recorded in the urban area of Mantua; the different analyses are articulated in the 27 areas identified as areas of urban proximity.

A second action, activated in parallel with the previous one, has allowed representing an interpretative framework of the "system of the services" of the city to understand its physical and spatial characterizations and, at the same time, to grasp the value of intangible performances. Starting from the existing documentation, the experimentation provided for the reworking and digitization of information specifically related to the "third sector" acquired through the interlocution with entities and entities operating in the municipal territory, verifying the available informative documents, and the systematic recognition of the activated initiatives.

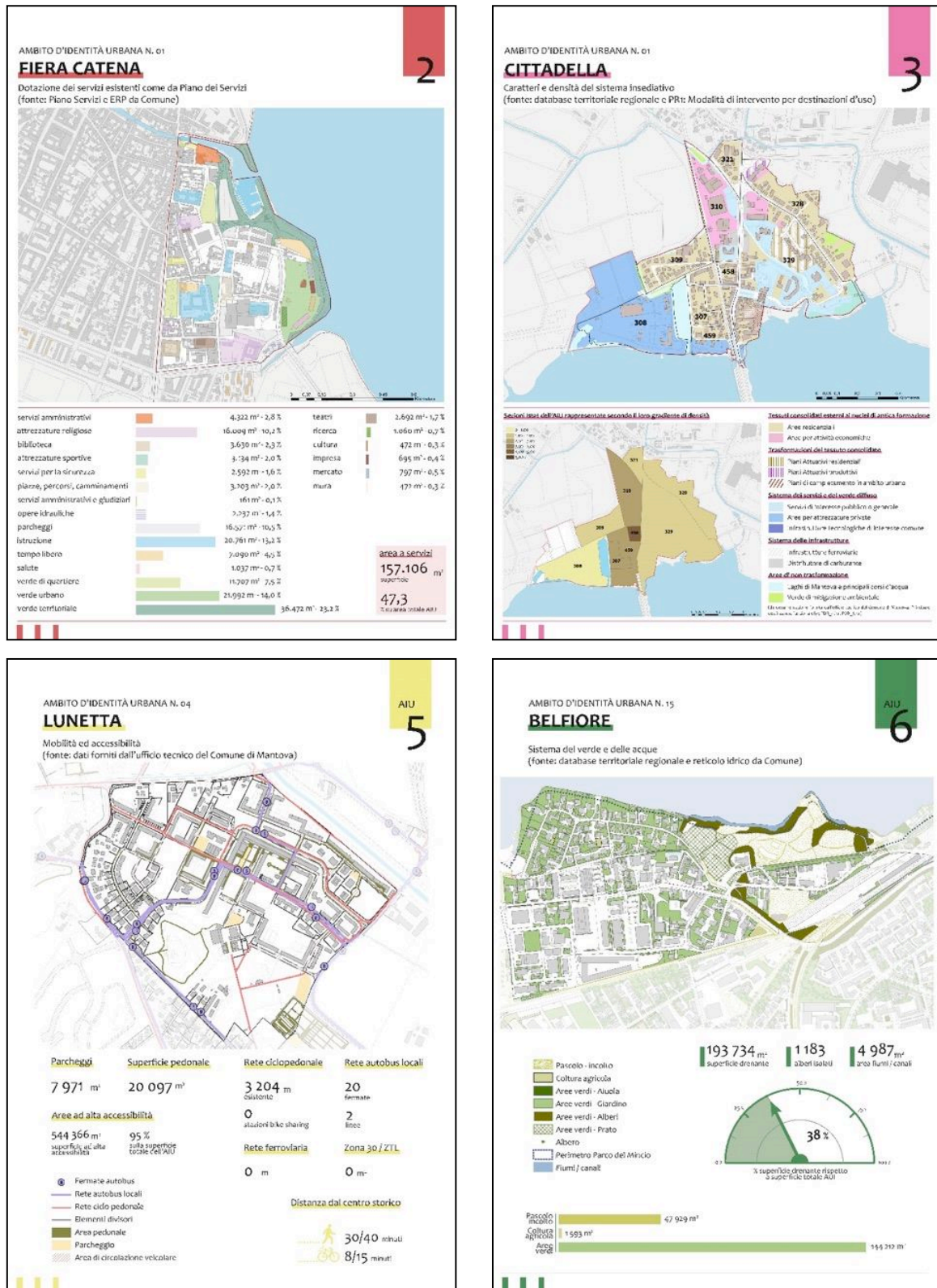


Figure 1. These figures represent some examples of the analysis conducted within the neighborhoods of Mantua.

The research has led to the production, for each portion of the urban fabric analyzed, of georeferenced thematic mappings and a dossier consisting of seven information frameworks for each area analyzed: the analysis of socio-demographic structure; the verification of the equipment of existing services; the reading of the settlement system; the recognition of intangible services and social centers; the map of the green and water system; the elements for urban characterization. The aim of this work is to verify and document the condition of public services and spaces at present by verifying their usability and accessibility, two prerequisites necessary to ensure adequate use for all citizens. These pre-requisites are important and necessary to facilitate a post-pandemic transition. During this activity, we pay attention to understanding how the types of services useful to the population, are now more articulated and evolved over time towards higher quality levels [3].

These conditions aren't always ascribable to a "physical dimension" but can be traced back to fruition that takes place through digital networks, home delivery, indirect delivery, bonuses, and facilities - without forgetting the increasing digitalization and the progressive use of smart technologies [4]. The final phase of the work was characterized as a time of synthesis and recognition of the reflections that emerged during the previous two stages; these activities have arrived at the definition of a set of design strategies relating to the system of services and public spaces, within which to place and recognize the specificities of cohesion and inclusion themes.

These themes must be placed in a contextual and conscious way within the guidelines of the instrument of the territorial government [5].

## **2.2 What can we understand about the new characters of same public spaces?**

The results of the analysis of the characteristics of the population and the consistency of the services currently present have allowed us to read the characterization of the public spaces in terms of equipment and services provided by the public city, going beyond the idea of "standard" equipment for the different citizen's activities. This elaborative process starts from the desire to promote forms of project capable of grasping the needs of strengthening the existing public spaces. The aim is to integrate the topic of inclusion in the actual development and regeneration of the urban fabric of Mantua in a more efficiency and consistency way.

The results collected through this experiment, taken together, are multiple and interconnected and make it possible to articulate a range of multidisciplinary and integrated considerations. Guiding this process of knowledge of the territory is the awareness that, in the complexity of today's world, accurate knowledge of social and urban phenomena is all the more difficult and articulated as necessary. The policies of the territory must necessarily understand the post-pandemic complexity and identify new tools capable of formulating appropriate and articulated design solutions. This requires expanding our vocabulary by looking for new and innovative meanings.

The results of this activity have contributed to the construction of an interpretive framework able to respond to the needs of post-pandemic urban welfare and at the same time try to create a "sensitive vision", able to place at the center of the project the theme of urban inclusiveness.

## **3. RESULTS: SAME PLACES, NEW RELATIONSHIPS**

Reading the structure of the city in multidisciplinary and systemic terms allows us to highlight new characteristics of public space and to grasp the many difficulties that the vocabulary traditionally used by design meets in describing and understanding new and different situations.

A reflection on possible new terms of the "vocabulary" used to describe the design strategies of public spaces moves from the necessity to share knowledge with all actors (local authorities or external partners) involved in the production processes of the public spaces of the city. In this sense, it's important that the different thematic rationalities that perform in the construction of the public space (infrastructures, green spaces, service networks, educational services, leisure time equipment,

etc.) work together overcoming "vertical logics" whereby each service or organization thinks and intervenes without relating to the others.

In this post-pandemic phase, we need to promote a working method based on an "horizontal coherence" able to connect shared knowledge. A language which is accessible to all and can allow everyone to interpret the relationships between the various uses of the city and promote a shared culture of public spaces. It is necessary to work to recover and transform public spaces in order to give them the qualities necessary to respond to the new questions posed by urban communities.

It is necessary to move from a design of functional spaces sometimes realized to host contradictory functions, to a project that is organized and identifies places as expressions of urban conviviality.

The sharing of a common language leads to the progressive consolidation of common principles and recognizes an urban identity that expresses the different cultures of the city.

### **3.1 The new set of keywords**

Since we re-interpreted the pandemic scenario, we have redrawn the three crucial issues related to public space design ("diversity", "community" and "participation") into six keywords that are as follow.

Care: is both a noun and a verb; as a noun it means "cure" as responsibility and a kind of supervision. As a verb it means feeling affection for somebody and to be concerned of something. That is the main framework in which we consider care as a reciprocal responsibility. Within the urban context and after the unexpected event of Coronavirus spread, the key category of "care" is "a sense of reciprocal responsibility citizens need to have for each other and for the world around them" [6]. So, the interest on the use, management and care of public spaces has become something that belongs to everyone [7]. With the spread of Covid-19 pandemic, we also acknowledge that common good is not an abstract entity, but rather the sum of concrete actions of each individual person. In addition, Bonomi [8] says that reciprocal care is a very important collective self-recognition for communities. So, for instance, to prevent people from spreading the virus, we have to wear mask and keep the distance. This precaution has showed us the need for more public space for pedestrians and all the people activities in urban places.

Interplay: as a noun it means mutual influence; as a verb it means interactions among different factors. Considering both meanings, the interplay becomes a crucial issues because it reminds us to approach design leaving behind the sector-by-sector treatment. Everything is connected: people healthcare and wellbeing, climate crisis, the sustainable development of the environment, the way we manage and plan urban projects, the active role and the inclusion of communities, and so on. "To create more ethically and socially sustainable places [...] it is necessary to go beyond traditional sectoral approaches to urban policies and practices and to make the process of creating and upgrading the physical and social space more democratic, active and inclusive" [9]. Now more than ever, there is the need to create synergies across sectors. It is the pandemic itself that is showing the need to integrate medical and environmental sciences, urban sociology, psychology, urban planning, architecture, in order to gain systemic operational skills capable of addressing the complexity of a city [10]. For instance, the development of the "emergency mobility network" (popular during the pandemic period in Italy) is an answer to multiple matters: the need to enable people to use bicycles more safely, the need to avoid crowd in public transports, an incentive for get around without using a car.

Adaptability: it is a noun and means elasticity, flexibility, scalability and versatility. In our framework is related to the ability to take actions in evolving scenarios. Cities are the canonical example of uncertainties permeating the space we live. As complex systems, cities are highly interconnected so there are countless conditions (related to space, time, the economic and the social system) that can generate unknown outcomes [11]. Considering evolving scenarios is a way to "mitigate" uncertainty and be prepared for any events. Covid-19 demonstrates urgent need for cities

to prepare also for pandemics. Cities, but also their public spaces, need to be designed dealing with all hazards, including biological ones. Moreover, they should address gaps in their preparedness and develop response capacity to prevent being overwhelmed [12]. Sustainable public spaces have to accommodate changes and hold their unique preciousness over time, so adaptable public spaces could offer multiple type of uses and allow to save money and time in case of functional changes. During the spread of Covid-19 open spaces becomes the theater of the public sphere, but also of the private one; squares, streets, parks became more and more an extension of the restricted private residences and also work spaces, as well as privileged places for the carrying out a public cultural and social life [13].

*Integration*: this noun means “to be part” of a whole or a community but it is also the action of combining things together making connections and additions. On one hand, considering people and communities, the term is strictly linked to the topic of inclusion; on the other hand, considering the urban structure, its meaning is linked to both the layering of different things and holding them together. Recognize a city as a complex system means interpret its synergic integration of elementary parts. Integration is a way to manage urban complexity, for instance, addressing better usage of underutilized public spaces and engaging people in the co-design processes. This kind of integration should be based on the collaboration between civil society and institutional actors in a way to overcome the traditional opposition between top-down and bottom-up initiatives, encouraging attitudes closer to the place-making [14].

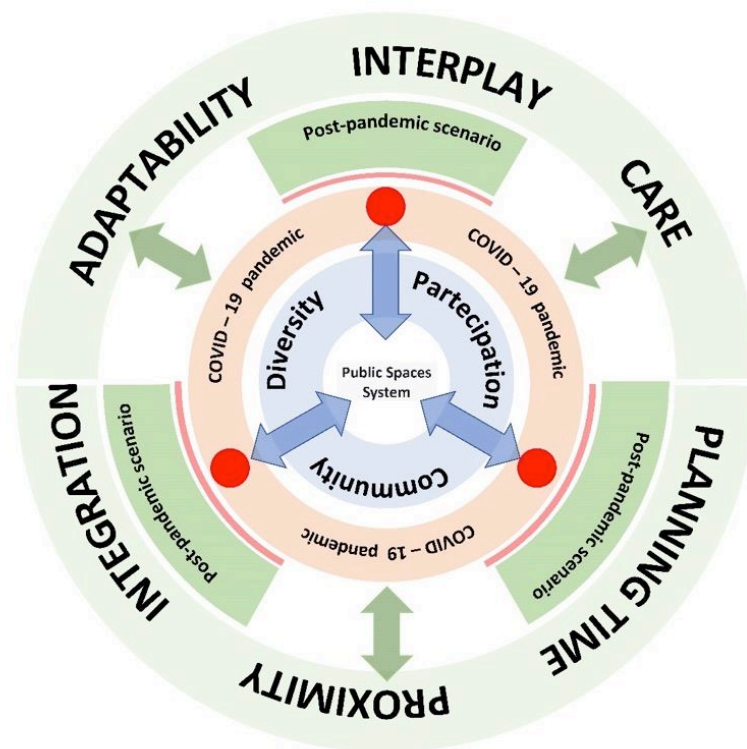
*Proximity*: its meaning does not refer only to closeness in space and time, but also to the realm of relationship in the sense of “to be close” and “to be with”. Within the urban context, when speaking of proximity, we refer to the distribution of different types of uses that can easily be reached by the non-motorized traffic. It is the easiness of accessing to urban key functions in a predetermined distance reachable at a walkable scale [15]. Tadi et al. also state that “the main relationship here is the one between functions and volume/voids [in which] the street network is also a key factor”. In this sense, proximity is the quality we experience in public spaces and between buildings. During the lockdown, when we were forced to distance ourselves, we rediscovered the value of proximity: both in the sense to meet our friends and other people and in the sense to easily reach different shops and services near us. But, since the city was particularly struck by the pandemic, it has become a place of fear and contagion, uncertainty and closure. So we we have also experienced the difficulty of returning to a “new normal” life. The pandemic experience has reminded us of the strong connection between individual and collective destinies. And public spaces can play a crucial role in giving answers to the proximity needs of people [16].

*Planning time*: we have declined this concept as the necessity to organize and project considering both the long view and the short term perspective. The necessity to plan actions in an urban context means managing strategies and interventions in response to needs. These needs can be linked to the emergency or the ordinary procedures. During the pandemic we have experienced the need to apply immediate measures able to cope with the closure of economical activities, the limited availability of public transports, the need for more outdoor space and so on. The spread of tactical urban interventions has emerged from this state of emergency which has supported more urban experimentation and innovation through pilot projects, pop-ups, community hackathons and test beds for new ideas in order to optimize the public space for recovery. Since COVID-19 struck, it seems clear that the severity of the pandemic, its geographic dynamics and the associated crisis requires localized and multilevel governance responses [17]. We have to find new solutions through experiments and participation, enabling an active listening and an ongoing monitoring of co-ordinated local actions. So that, combining feedbacks with forwards becomes a way to evolve and innovate the urban planning. [18].

#### 4. CONCLUSION

Covid-19 has reminded us that we are all connected, and cities enable us to share, to connect, and to learn from one another; but cities can also be the medium of the virus spread. After two years of the pandemic, it has indeed become evident that space truly matters in the response, recovery, and rebuilding of our urban life. Urban public space helped foster social connection when physical distance was mandatory. Urban planning principles that espouse sustainability and equitability are still relevant and critical for coping with the current pandemic and preparing for future health crises. So, the public space design plays a significant role in determining how a city can be prepared for responding to crises and enhancing the theme of urban inclusiveness.

The results of this research project have contributed to the construction of an interpretive framework able to respond to the needs of post-pandemic urban life and welfare. Thus, we can state that Covid-19 pandemic has highlighted some latent transformations and needs that were dormant but still current. Topics such as care, interplay, adaptability, integration, proximity and planning time have been boosted by the pandemic crisis and now can help us in the definition of new strategies for urban projects.



**Figure 2.** This schema shows the relations between the starting key-issues and the new interpretive framework.



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