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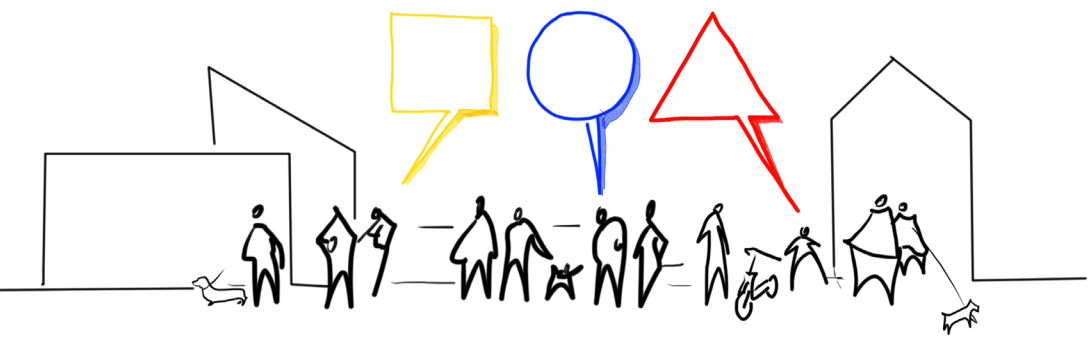
ECTP-CEU

European Council of Spatial Planners
Conseil européen des urbanistes

ebook,
2021 Young Planners
Workshop

CITY REBOOT:

POST-PANDEMIC PLANNING AND THE NEW EUROPEAN BAUHAUS



Athens, Greece

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INTRODUCTION

About ECTP-CEU

ECTP-CEU (the European Council of Spatial Planners – Conseil Européen des Urbanistes), founded in 1985, brings together 40 000 spatial planners with 27 professional town planning associations and institutes from 25 European countries.

It is an umbrella association providing its members with a common framework for planning practice, planning education, continuing professional development and the definition of professional responsibilities.

ECTP-CEU sets standards of education and conduct for the planning profession; identifies, celebrates and rewards examples of good planning all over Europe; and engages in dialogue with local, national and European governments.

In accordance with these objectives, the initiative of the Young Planners' Workshop seeks to set out young planners' perspectives and experiences within the context of new European paradigm.

About 2021 Workshop

The topic relies on the New European Bauhaus initiative launched in order to open the door to a more holistic approach to our built environment, seeking to combine design, sustainability, accessibility, affordability, and investment to help deliver the European Green Deal and to enhance, at the same time, economic, social, environmental and cultural values. This Initiative sets out the shared values regarding sustainability, aesthetics, and inclusiveness.
The 2021 Young planners workshop's primary purpose is to identify and collect best practice examples and innovative projects and ideas, both in practice and education. In that manner, the workshop should serve

as an information platform to actively engage young professionals and academics to rethink and discuss post-pandemic city and reach a large audience via ECTP member organisations.
City reboot refers to the act or an instance of starting anew or making a fresh start on the Bauhaus ideas.
Covid-19 crisis, using equitable recovery planning across Europe backed by broader resilience, renewal, and growth programs, which should be taken as a starting ground for the Workshop.
In this workshop, the ECTP-CEU seeks to contribute to the debate on the ability of planning to find innovative ways of balancing spatial and urban development with sustainability, aesthetics, and inclusiveness in the post-pandemic world. The essential ECTP-CEU goal is to contribute to the Co-design phase of the New European Bauhaus by sharing successful examples in the planning domain and create a starting ground for developing new ideas that could be further submitted within New European Bauhaus pilots, supported by specific calls for proposals.
This workshop seeks innovative projects from participating countries which manage this complex relationship, and we ask that they be brought as exemplars for learning between nations. These might include:

- sharing innovative examples of planning practice, theory and education aimed at the creation of beautiful, sustainable, inclusive living
- sharing innovative ideas – investigating and providing understanding of relevant theories, concepts, theoretical models, instruments of both planning and governance that can reboot the city and provide more beautiful. sustainable and inclusive living environment.
- addressing challenges that prevent us from living together in harmony with ourselves and with the environment in the post-pandemic world.

From the Program of the Workshop.

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PHASE 1

PHASE 2

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PAPERS

TITLE

URBAN STRATEGY FOR BETTER LIFE QUALITY OF MODERNIST HOUSING BLOCKS

authors

Đukić Anastasija
M.Sc Integratred Urban Development and Design
e-mail: anastasija96.djukic@gmail.com

Đukić Anastasija

After finishing Bachelor studies of Architecture at the University of Belgrade, I pursued master studies of Integrated Urban Development and Design at Bauhaus University Weimar. In 2019-2020 I completed a 9-month internship in the Municipality of the city of Amsterdam where I got in touch with various urban topics such as the integral approach to public space design, circular economy, nature inclusive design and social research on the relationship between users and physical structure of open public space. Finally, I graduated in 2021 with a master thesis on the topic of modernistic housing neighborhoods and urban strategies for the improvement of their life quality.

Keywords:

modernism | socialism | New Belgrade | urban rehabilitation | urban liveability | socialist housing estates

ABSTRACT

The Modernist Movement, one of the most influencing revolutionary thoughts in the field of architecture and urban planning of the 20th century, still has a significant impact on the cities and citizens today, inspiring various discussions aiming to define "the right way" of architectural and urban designing. Many experts argue that modernist principles, when applied, result in urban structures being harmful for liveability. On the other hand, there are existing cases of modernist housing projects which have transformed themselves into lively neighbourhoods, with a strong sense of community.

The goal of this thesis is to understand if there is a possibility of rehabilitating modernist housing estates of low life quality without applying big changes to their physical structure or demolishing them. To understand this, it is necessary to examine if the physical characteristics of modernist housing neighbourhoods and modernist spatiality, in general, have a negative impact on liveability. For this purpose, sets of spatial and liveability indicators have been defined, measured and compared through a correlation matrix. Since the results of the conducted research did not confirm a negative correlation between spatial and liveability indicators, a conclusion has been made that modernist housing blocks can indeed be rehabilitated without demolition or big structural changes. In the final part of the thesis, based on the research results and data collected on the field, the Urban Tool for Rehabilitation of Modernist Housing Blocks has been proposed. This tool is intended for designers, architects, urban planners and other specialists, primarily in charge of the maintenance of cities.

1. INTRODUCTION

Modernist housing estates, built all around the world after the second world war and based on the modernist ideology developed at the beginning of the 20th century, are often criticized by architects, urban planners and other scholars for its neglect of human scale, generic appearance and negative impact on life quality (Gehl; Jacobs; Newman; Paans & Pasel). It is clear that many modernist housing neighbourhoods are suffering from low quality of life and that something needs to be changed in order to improve these conditions.

There are many reasons why we should aim to rehabilitate or sanitize modernist housing estates instead of demolishing and constructing new urban neighbourhoods. The construction of buildings itself is not an environmentally friendly process, nor is the demolition of buildings since both of these processes are resulting in large amounts of waste materials which could not be recycled effortlessly (Li et al., 2010). It has even been argued that building construction is one of the main sources of environmental pollution when compared to other industries (Shen et al., 2005). On the other hand, many of the modernist housing projects, such as those in New Belgrade, a case study which will be closely examined later in this paper, are representing valuable historical legacy which should be preserved as such (Blagojević & Vlaskalić, 2003). The city of Brasilia has even been listed as a world heritage site due to its unique example of urban planning brought to fruition in

the 20th century and being an expression of the urban principles of the Modernist Movement as set out in the 1943 Athens Charter (UNESCO).
There is a hint that the rehabilitation of modernist housing blocks is possible with the implementation of small interventions such as the activation of open public space by introducing mixed functions or the reprogramming of the existing urban structure (Paans and Pasel 2014). Informal, self-initiated changes of the living environment by the local inhabitants of modernist housing blocks could be observed in open public space, building ground floors, balconies or roofs. The author of this paper herself finds such informal interventions fascinating and that they represent fruits of the freedom and openness of modernist spatiality. Paans and Pasel even suggest that modernist spatial organization and its variety of urban elements are full of hidden potential, which could be used as a substrate for urban renewal.
If we want to improve liveability in modernist housing estates and simultaneously preserve them for the environmental, historical or cultural reasons, the following question arises: can modernist housing estates be rehabilitated without big changes in their physical structure or their complete demolition? To answer this question, this paper will examine the relationship between the physical characteristics of modernist spatial organization and its effect on inhabitants' satisfaction with life quality with an aim to understand if the physical structure itself is the primal cause of poor quality of life that appears in modernistic housing projects or if the crux of the problem lies on a more subtle level, social, in which case the urban revitalization strategy of small-scale interventions could be devised.

1. Critique of modernistic spatial organization

During the period in the 1960s and 1970s modernist principles were extensively applied in the housing estates all around Europe, in Eastern European cities as well as in the Western cities. Even though there are some varieties between these modernist housing estates, we can recognize many common characteristics in urban forms. Compact urban blocks with conventional streets were replaced by dominant modernist layouts: housing blocks outlined with highway arteries, populated by isolated high-rise buildings, and large areas of green (Monclus & Díez Medina, 2016).
The rapid construction and dissipation of modernist housing projects happened due to the critical housing shortages and because of the urgent need to solve this problem; and secondly, because standardization and prefabrication afforded the possibility of building quickly. Here the crucial problem appears to be the fact that modernist principles were applied quickly and selectively with limited attention paid to urban and architectural design, with a goal to achieve accelerated urban growth. With evident drop in environmental quality in modernist housing estates,

caused by the spreading and a spectacular increase of the size of the estates took place, the modernist principles recommended by Athens Charter have earned a negative connotation. Works of J. Jacobs (1984), G. Cullen (2015), C. Alexander (1977), A. Mitscherlich or A. Rossi were only some representations of the incoming wave of rebellion and rejection of modernist urbanism in 1970's. Modernist urban design practices have been criticized for its monotonous, generic character, absence of human scale, too much open space combined with high-rise buildings which was argued to result in high insecurity and violent behavior (Newman 1978), and overall negative impact on social cohesion, leading to a low quality of life (Jacobs; Paans and Pasel 2014; Newman; Petrović).

1.1 Cross-Reference: comparative study of modernist projects in Europe

The criticism of modernism and discussions involving this topic are still ongoing today. Although many local studies on modernist projects have been carried out – especially monographs on modernist cities and historical analysis of socialist housing estates – there are very few comparative analysis of different case studies in historical and present day context (Monclus & Díez Medina, 2016).

Examples of modernist housing estates in European countries in Western bloc could be found in United Kingdom, France, Netherlands, Germany, Spain, and others. Even though there were some examples of good urban practice with successful results such as the Churchill Gardens in Pimlico and Alton Estate in West London, many projects witnessed decay, rise of criminalization, poverty and were associated with social housing and the home of those who weren't wealthy enough to afford another choice (Gold, 2007). Based on a cross-reference of European case studies (Monclus & Díez Medina, 2016), high crime rates and segregation, occurred more often in housing estates with presumably better spatial conditions and better construction quality, namely in the Western bloc. The projects in Eastern Europe, which were of lower quality

with more monotonous and repetitive structures, appear to have suffered from such problems less frequently. Recent surveys of modernist housing estates in Eastern Europe cities such as Solidarita (1947–49) and (1950–1965) in Prague, Nowa Huta in Poland or Fischerinsel and Marzahn in eastern Berlin suggest that the challenge doesn't lie in their architectural structure, the definition of the public spaces and urban design, but rather, in the large scale of the projects, low quality of the construction, and, in some cases, the abandonment of the industrial areas they were economically dependent on. When we compare cases of Eastern and Western block, the first difference is that we find more large-scale mass housing projects, with homogenous housing typologies, in Eastern than in Western cities. Western practices showed more experimentality. The uniformity of building typologies in the East was present because of the idea that all people are equal and, as a consequence, a mixed population lived in the large housing estates of Eastern countries which meant that there were no social ghettos as in the cases found in Western cities. Finally, the quality of construction in the East was lower than that in the Wastern bloc countries, mostly for economic reasons.

2. GOING BACK TO THE ORIGIN OF MODERN THOUGHT

The most commonly named source of inspiration for modernist spatial organization is The Athens Charter and its idea of The Functional City. Cities such as Brasilia, Chandigarh, New Belgrade, Velenje, university cities in Bagdad, Mexico, China and many other, assumed to be modernist cities, were said to be "fruits of The Athens Charter" (Nikola Dobrovic, as cited in Blagojevic (2007).

The charter offered some unjustified reasoning, such as the recommendation to demolish densely populated quarters of cities saying that they were dangerous and caused the spread of diseases. It was assumed that dense city quarters foster and spread diseases and that this was regarded as common sense. Combined with the imposing writing style of The Athens Charter, the above recommendation to demolish the entire neighborhoods could easily lead to the rejection of the whole modernist ideology. However, this paper suggests taking a more generous thinking approach, considering the historical context and the fact that the members of CIAM were witnesses of the Spanish flu, one of the deadliest pandemics in human history (Spreeuwenberg et al., 2018).

Another weak point of the Charter is that the social aspects were not considered. Modernists were aware of the role that an individual played in society and acknowledged the effect that society, or a group that the individual was a member of, had on the individual (Corbusier, 1988). However they didn't consider

that social factors could have an influence on society. Modernists observed from the perspective of environmental determinism and were persuaded that architecture completely shaped society and that there was no other factor that could have been involved in this process. Today we know that this is not true: „The catastrophes of the Second World War and its consequences showed the complete wrongness of this premise" (Blagojević, 2007, p. 12).

This paper's opinion is that modernist ideas were often simplified, some of its parts taken out of context and their true intentions overseen. Such a case is the often misinterpretation of the separation of function. Modernists suggested separation of industry and dwelling only to reassure a healthy environment for people but advocated to keep other essential functions such as supplies of food and water, work (non harmful for health) and institutions as close to the dwellings as possible. In the case of projects in praxis, designed according to the principles of The Athens Charter, it is possible that a partial realization of projects often occurred, where only one part, most often housing, was built and the other important functional clusters left out. This was, exactly, what happened in the case of New Belgrade, which is the case study of this paper and will be later discussed and analyzed in detail.

Apart from the above-mentioned writing style, demolition of existing city quarters and neglect of social factors, the modernist theory could be described as reasonable and justified, having a constructive and positive intent for the benefit of society. It seems that before the modernistic movement, there was little interest in collective housing or architecture for the middle-income class, let alone social housing and solutions for low-income families. Modernists criticized private initiatives and companies motivated by their own profit and thought that private interest should be subordinated to the collective interest. In that sense, modernistic ideology has drastically influenced the course of time, changing the perception and focus of architecture, which is in itself a huge contribution. It is unfair to deride the whole movement and to deny its original intention to enable architecture to break free and expand from purely

prestigious architecture to architecture that serves the entire society.
The modernist ideology should be acknowledged, while its execution criticized and constantly rethought. It is understandable that the first to be constructed modernistic urban projects had flaws and a lot of room for improvement because they were the first of their kind, that is, the first alterations in the long to be continued trial and error process. As argued by Blagojevic (2007) the modern movement of the post-war period shouldn't be considered as a completed and closed historical process but as a field open to contemporary interpretations. Building upon the modernist legacy means analyzing these first executions, noticing what could be improved and using this knowledge to implement it in future projects.

3. CASE STUDY OF NEW BELGRADE

3.1 Contextualizing the situation of New Belgrade

New Belgrade is one of seventeen city municipalities of Belgrade, the capital of Serbia. It is laying on a floodplain, swampy ground on the confluence and between two rivers Sava and Danube. This location was positioned between two historically independently formed cities Zemun and Belgrade (Figure 1).
The conceptual solution for the master plan of New Belgrade has been changed many times with the first idea of its development dating from 1922. Its shaping

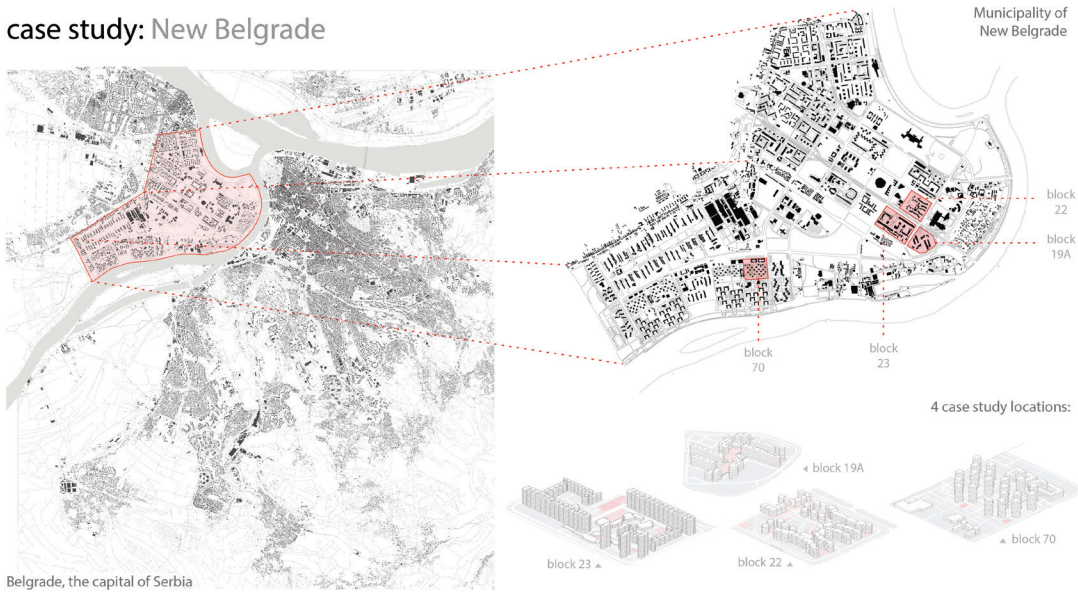


Figure 1. Context of New Belgrade and chosen case study locations for further research

went through different conceptual phases including the academic monumentalism of beaux-art, the concept of the garden city, city beautiful, etc.
The realized master plan of New Belgrade from 1960 is heavily based on the principles of The Athens Charter, with the idea of a city in a garden. An average urban block of New Belgrade has double the amount of open space of an average block in the old city center and this open space is mostly covered by grass. Another modernist principle assigned to New Belgrade is functionalism, due to its, up until the beginning of the 21st century, predominant residential function. Even though a dominant function changed with different stages of New Belgrade's master plan development, a distinctly dominant residential function was present from the conceptual solution of the adopted master plan, all the way through its long inconsistent construction and further until the beginning of the first decade of 2000s when the filling in of "vacant space" started and shopping malls, as well as other commercial content, began to emerge (Marić et al., 2010).
Even though the latest urban development and transformation of New Belgrade are widely criticized by Serbian architects, specialists and scholars (Blagojević; Marić et al.) due to unplanned and discontinuous construction as well as neglect of the historical context, in the first decades of 21st century New Belgrade has finally realized the potential to become something more than just a "dormitory", a neighbourhood with solely residential function.

3.2 Choosing the study case locations

After visiting various housing blocks in New Belgrade, the author of this paper chose four locations for further research (Figure 1). The selected housing blocks have different typologies of buildings, conditions in terms of cleanliness and intensity of activities observed in open public space.
Two selected locations, block 23 and block 22, are part of

the Plan of central zone of New Belgrade, discussed in the previous chapter.
The third location, block 19A is located next to block 23 and was chosen because of its surprisingly low activity level in open public space, despite the praise of this urban solution and the double-track typology of buildings, which was said to provide a more convenient way of insolation, lighting and ventilation of dwelling units (Alfirevic & Simonovic Alfirevic, 2014).
The fourth location, one section of block 70, was chosen because of its 14-storey apartment solitaires, that is, highrise buildings which were said to have a profound negative effect on safety in housing neighbourhoods (Alexander et al., 1977; Newman, 1978).

4. METHODOLOGY

4.1 Relation between physical structure and liveability

In order to understand how the physical characteristic of urban spatiality of modernist blocks affects its liveability, this paper takes a combined quantitative and qualitative approach. Spatial indicators and liveability indicators are first defined (Figure 2), then measured and evaluated for each of four case study locations and finally compared to understand if the correlation between the two sets of indicators exists.
Due to the present homogeneity in terms of nationality in New Belgrade (*Procene Stanovništva Republike Srbije Prema Polu, Starosti I Tipu Naselja*, 2013-2017, 2018) and insufficient data on the economic status of the inhabitants of individual apartment blocks, this paper does not take into account the economic and demographic aspect.

4.2 Spatial indicators

There are 9 spatial indicators defined in total (Figure 2). First four spatial indicators refer to urban density and are used to quantitatively measure different relations between built-up structure and open space, which were argued to, with certain values, harm liveability, as explored in the first chapter of this paper.
The results of calculations show that all four locations have similar density and spatial organization despite the different building typologies. More variety could be observed in the average height of buildings, but the difference is still really subtle.
Fifth and sixth spatial indicators measure characteristics of visible space perceived by the human eye and help to understand how enclosure and complexity of visible space influences life quality in a neighbourhood. The seventh spatial

indicator, street centrality can indicate if more permeable and connective spaces, that is spaces in which one can move more easily, have an effect on life quality in housing neighborhoods. Last two spatial indicators are related to functions and uses and are measured to help understand if presence of functions and their organization in space has an impact on quality of life.

4.3 Liveability indicators

The creation of liveable cities is a priority recognized internationally by the Sustainable Development Goals (SDGs) in 2015 and the New Urban Agenda (NUA) in 2016. However, the term „liveability" and its measurable characteristics haven't been explicitly defined in the literature (Higgs et al., 2019). According to Okulicz-Kozaryn (2013), there's an increase of reports on urban quality of life which offer liveability rankings (as cited in (Kovacs-Györi et al., 2013), however, the majority of the reports focuses on data which measures the performance of the urban neighbourhoods and are not concerned with how space is being experienced by its inhabitants.

Mirkov's understanding of liveability is as follows: „ Quality of life implies a set of living conditions assessed from the aspect of satisfaction of human needs, and in the urban environment it can be observed in the dimensions of housing, employment, education, culture, recreation, health, ecology and the like." (Mirkov, 2016).

This paper applies the same understanding of liveability and defines 12 liveability indicators as follows: Satisfaction with Life Quality, Satisfaction with safety, Quality of Relationships, Feeling of Belonging, Satisfaction with Apartment Quality, Cleanliness and Maintenance, Satisfaction with the Amount of Greenery, Satisfaction with Public Spaces, Fulfilment of Daily Needs, Closeness of Work/School and Connection to the City (Figure 2).

To measure the intensity of activity in open public space of all 4 locations and evaluate its quality, this paper applied the Stationary Activity Mapping, a tool designed by Gehl Architects. The number and type of activities that people engaged in, while staying in or moving within a defined

boundary area were observed while using this tool.
People who were only passing through the location were not counted as the method's aim was to map only the prolonged activities, that is, people who were staying in the space. "It is the number of minutes spent outside per day rather than the number of people outside that determines whether a street is lively or lifeless."(Gehl, 2010)
While conducting the research, the author of the paper was moving along the outline of the defined boundary area, observing the occurring events in its inside,

Figure 2. Spatial and Liveability indicators

during the time period of 20 minutes. The mapping was conducted twice in each study location between 12:00 and 15:00 hour period, once on working and once on a weekend day. Activities were mapped by their posture: standing, different types of sitting and moving. Questionnaires were designed and conducted with a goal to understand who satisfied inhabitants of researched locations are with different aspects of their neighbourhoods.
In the introductory part of the questionnaire, respondents were asked to define their gender, age group and how satisfied they are with the life quality in their neighbourhood. In the following section of the questionnaire, inhabitants were asked to rate their satisfaction with safety, relationships with their neighbors, feeling of belonging, quality of the apartment they live in, cleanliness and

Figure 3.
Correlation Matrix between spatial and liveability indicators

maintenance, amount of greenery, public spaces, the fulfilment of daily needs, the closeness of work or school and connections of their neighbourhood with the rest of the city. In the closing section of the questionnaire, inhabitants were asked to explain if there is anything they would like to change, add or remove from their block.

Questionnaires were conducted in the first week of November 2020, live on the field. However, due to low presence of people in open public space and other difficulties caused by covid-19 pandemic, an additional approach had to be adopted to reach more people in a safer way. The questionnaires were posted online through Google Forms, 200 (50 invitations per case study location) invitations for the online questionnaires printed-out and put into inhabitants' mailboxes. The invitations contained a text explaining the goal of the survey and inviting the inhabitants to take part in it along with the QR code and link leading to the questionnaire online page. The responses

were gathered during the period of three weeks starting from the 24.11.2020 when the invitations were distributed.
With both approaches combined (live and online), a total number of 30 responses was reached from which 21 respondents took part in the online questionnaires and 9 people were interviewed on the field.
Respondents' ratings of satisfaction were translated into quantitative data and calculated as the satisfaction percentage for each criterion. Measurements of these criterion were defined as liveability indicators: Satisfaction with Life Quality, Satisfaction with safety, Quality of Relationships, Feeling of Belonging, Satisfaction with Apartment Quality, Cleanliness and Maintenance, Satisfaction with the Amount of Greenery, Satisfaction with Public Spaces, Fulfilment of Daily Needs, Closeness of Work/School and Connection to the City (Figure 2).

5. RESEARCH RESULTS

5.1 Correlation matrix
In order to understand if the spatial indicators show correlation with particular liveability indicators, this paper examined the relation between spatial indicators and liveability indicators. The result of these correlations is presented in a form of the correlation matrix, where values close to +1.00 indicate strong positive correlation, values close to -1.00 strong negative correlation and 0.00 indicates no correlation (Figure 3).

5.2 How are the inhabitants reshaping their own neighbourhood
During the visit of each case study location, the author of this paper discovered many interventions in open public space that were clearly not part of the initial architectural design but made by the inhabitants. These changes will be referred to as informal interventions.

The catalog of observed informal interventions includes informal gardens in open public space, rooftop gardens, informal leisure spaces, sun protection and canopies, closing of the balconies / winter gardens in the ground floor, informal selling stands, supplement structures, connections between private balconies and public space, unconventional laundry drying systems and aesthetical interventions (Figure 4).

Figure 4.
:Informal interventions - informal gardens in open public space, rooftop gardens, informal leisure spaces, sun protection and canopies, closing of the, informal selling stands, supplement structures, connections between private balconies and public space, unconventional laundry drying systems

Figure 5.
Potentials of modernist housing structures

5.3 What changes would the inhabitants like to see in their neighborhood?

When asked what they would like to change in their neighbourhoods, the most common answer inhabitants gave was better maintenance, urban furniture and better equipment of childrens' playgrounds. Few of the respondents stressed how significant playground slides are and that their children are especially enjoying them. Some parents have to take their children to play in a different block just to be able to enjoy this specific playground element.

Respondents from blocks 23, 70 and 19A wished for more places where they can meet people or exchange ideas. Another reocurring notice was the need for activation of the buildings' ground floors and corridors. Some respondents expressed struggles with finding parking spots in block 22 and 23.

Few respondents expressed their concern with energy-efficiency and one even suggested introduction of a green roof in the distant future.

5.5 Effectiveness of small interventions in open public space

Based on the research results presented in the form of correlation matrix, one can conclude that physical characteristics of modernist structures are not decisive influencing factors when it comes to liveability and could not directly harm the quality of life in a neighbourhood.

Contrary to the claims found in literature the building height showed positive correlations with inhabitants' satisfaction with living conditions. Another observation opposing the literature is the absence of any link between large open space areas (FSI and OSI) and lower experience of safety.

Some data is suggesting that more efficiently built blocks, with higher FSI, could be linked to a stronger sense of community and connections between inhabitants. However, this suggestion is vague. Isovist Occlusivity and Isovist Compactness showed a very persistent positive correlation with overall satisfaction with life quality as well as individual liveability indicators, suggesting that more compact and clear spaces could influence liveability positively. Even though such spaces are not necessarily linked to neither traditional nor modernistic urban spatiality, and therefore not relevant to the research question of this thesis, the finding of their potentially positive effect on the quality of life could be valuable for future improvement and urban design.

The results suggest that higher concentration of functions as well as their even distribution could be beneficial to the neighbourhood's life quality. However, the argument found in the literature suggesting that high function density could increase safety was disputed by a negative correlation between Function Density indicator and Experience of safety.

Based on the above summary of the correlation matrix results, the only

predominantly modernistic feature linked to a lower life quality is the absence of functional programming. This, however, is not dependent on the built physical structure which means that, to improve life quality in a neighbourhood, one doesn't have to make big changes in physical structure, remove it entirely or rebuild it. Small interventions, such as improvement of maintenance of public spaces, an increase in diversity of function, its reorganization or repurposing of certain spaces could be enough to fulfil people's needs and activate the respective neighbourhood. Proof for this are many informal interventions discovered in all four case study locations. The advantage of such interventions is that they do not require large financial resources and they could be implemented relatively fast.

5.6 Potentials of modernist housing structures

Observations on the field enabled the discovery of some spatial potentials and opportunities in the sense of different spatial urban elements of modernist urban structures, which could be used to meet inhabitants' needs. Such spatial elements found in modernist urban structures could be either part of the built structure or found in open public space: Spaces for ground floor activation, Inner public atriums, Flat roofs, Corridors, Different levels in the public space, Flower beds, Space for gardens, Abundance of free space for eventual additional structures and Storage spaces (Figure 5).

6. Urban Tool for Revitalization of Modernist Housing Blocks

To propose the strategy for revitalization of modernist housing neighbourhoods, this thesis takes an inductive approach. By learning from the examined four case study locations, observing their patterns, reoccurring challenges and potentials, the goal of this paper is to develop a

generalized urban tool which could be used to improve all modernist housing projects in need. For this purpose, the findings discovered through field observations, correlations between spatial and liveability indicators and remarks made by the inhabitants of case study locations in the questionnaires are being used.

6.1 Rethinking the role of an urban planner

Even though the informal interventions found in New Belgrade are a result of disinterest and non-interference of the authorities, they could also be perceived as an expression of freedom and reclamation of open public space by its inhabitants. With a careful observation of these interventions one can understand which inhabitants' needs were not met by the initial urban design. In the case of New Belgrade such missing urban elements are open farmers' market, workshops, collective spaces, cafés, meeting places, better connection to open public space, private or semi-private gardens, etc.

The lack of interest of the authorities has obvious negative consequences for New Belgrade. One example is the extremely low level of maintenance and cleanliness of both, buildings and open public space. However, this lack of municipal involvement has also encouraged some residents to start to change the public space by themselves and thus, paradoxically, turned into one of New Belgrade's main qualities. That doesn't mean that this paper suggests noninterference of the authorities, but rather a rethinking of their role and the role of an urban planner in the context of urban maintenance. In the cases of rehabilitation of modernist housing structures, the role of a planner should be similar to that of a moderator. The planner should encourage the inhabitants to be active, give them freedom to reshape the space according to their own needs, but also guide this process and maintain the balance in open public space to prevent situations in which one group of users dominates and thus endangers the interests and needs of other users.

6.2 Defining essential urban requirements and their priority

The research showed that there is a difference in tolerance among urban requirements. For example, one can tolerate a lower level of maintenance if most of the other requirements are fulfilled. Low level of safety is more harmful to liveability. Only a slight decrease in safety can significantly influence the way one perceives the space and overall satisfaction with the quality of life in the neighbourhood, such as in the case of block 22 which will be further explained later.

Using this difference in tolerance, the author singled out urban requirements which could be influenced by a designer, urban planner or municipality to improve the quality of life in the neighbourhood and organized them hierarchically, which resulted in a pyramid of urban neighbourhood's needs (Figure 6). The pyramid

is constructed of six layers, each with a different level of priority, where the first one is the most fundamental and at the base of the pyramid, while the top layer refers to the additional strengthening of the independence and sustainability of the community, but has, therefore, the lowest priority. It is recommended to tackle the needs of a higher level only when the needs of the lower levels have been brought to a satisfying level or completely fulfilled. The pyramid of urban neighbourhood's needs is the first step of the proposed revitalization strategy for modernist urban neighbourhoods designed to help identify the main challenges of the given location and prioritize certain challenges over others and create a timeline of actions which need to be undertaken. In this way the designer will know which problems to tackle and in which order. However, this thesis would like to stress the importance of approaching each situation individually, being critical and avoiding to blindly rely on the proposed tool.

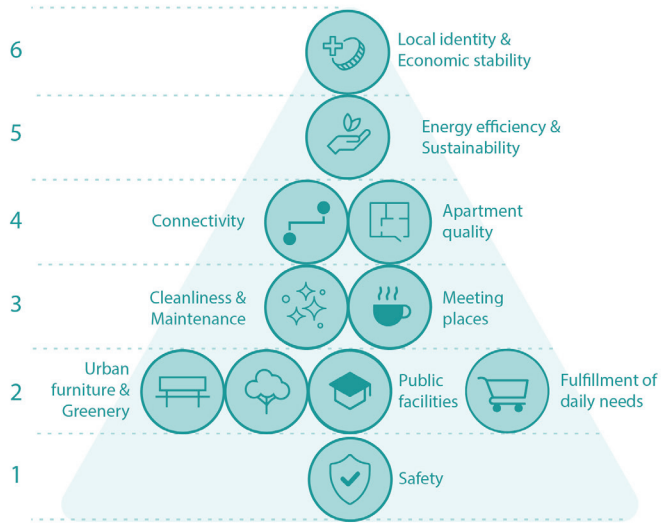


Figure 6.
Pyramid of urban needs

6.3 Urban repair tool kit

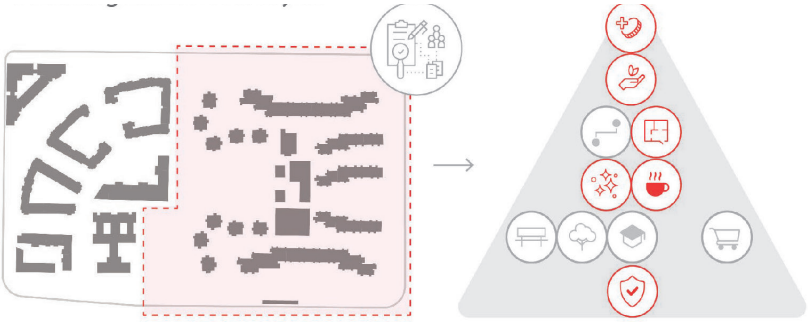
In the process of rehabilitation of a modernist urban neighbourhood, after analyzing the given location, defining which urban requirements need improvement and order in which each of the urban requirements should be tackled, the

next step asks to take action and solve the detected problems. For this purpose, an urban repair tool kit was designed (Figure 7), which represents the second part of the urban strategy for rehabilitation of modernist housing blocks, proposed by this thesis. The urban repair tool kit consists of 20 urban principles which act on 5 different scales: open public space, building, neighbourhood, location and users. All principles are based on the results of the conducted research and observations presented in the previous chapter of this thesis, as well as on the examined literature.

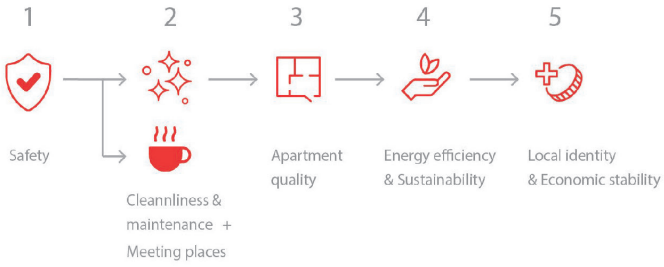
6.4 Application of the Urban Tool

Figure 7.
Urban repair tooll kit

Application of the suggested Urban Tool consists of 3 stages (Figure 8). In the first stage, the designer is expected to analyze the given location with the guide of the pyramid of urban neighbourhood's needs and detect the urban requirements which need to be improved. In the second stage, a timeline of action should be created based on the pyramid to define which urban problems have the priority and should be solved first.
Finally, in the third stage, the designer can refer to the Urban repair tool kit for inspiration or choose some of the tool kit's principles with which he could tackle the detected problems and apply them according to the created timeline.



2. Timeline of actions



3. Choosing the principles

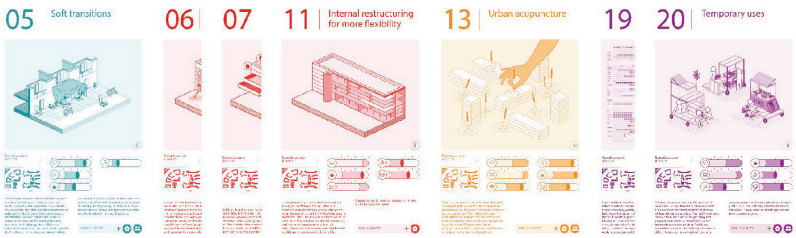


Figure 8.
Applicaion of the
urban tool

Each principle from the Urban repair tool kit shows a scenario of possible impacts it could have on different urban requirements by showing differences between existing and imagined improved situation after the application on a chosen case study location. Possible indirect positive social effects of a principle, such as the Feeling of belonging or encouragement for the formation of Friendly relationships between neighbours, are marked in the bottom right corner of each principle card. Each principle is supplemented by a short text explaining the meaning of the principle, an example of its application and possible effects on liveability in the neighbourhood.

CONCLUSION

With our planet facing an environmental crisis we are obliged to rethink the construction processes and use of our resources. Through initiatives such as the New European Bauhaus and European Green Deal, different urban topics have been revisited, including the topic of building construction and management of waste materials. My goal with this paper was to contribute to the reduction of construction processes and encourage the reuse, renovation and readaptation of existing build forms, with a focus on modernist housing estates. After examining the existing literature on the topic and conducting a thorough research on the case study of New Belgrade, I came to the conclusion that the architecture and urban structures described as modernist has many potentials and hidden qualities. I found no correlations between its physical characteristics and liveability indicators. The Urban Tool for Revitalization of modernist housing blocks at the end of this paper has been developed as a guideline for the designers, urban planners and other specialists in the field of city maintenance, to help them identified the existing liveability issues or challenges of the given location as well as its hidden potentials and offer inspiration for possible solutions.

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TITLE

BARCELONA'S POST-PANDEMIC PLANNING. MAY SUPERBLOCKS BE FEASIBLE SOLUTIONS TOWARDS THE NEW EUROPEAN BAUHAUS?

authors

Camerin Federico
Post-doctoral fellow in Urban Planning, Università IUAV di Venezia
e-mail: fcamerin@iuav.it

Federico Camerin

Federico Camerin (1989), BA in "Urban and Regional Planning" (2011) and MA in "City and Environment: planning and policies" + European postgraduate degree in "Planning & policies for cities, environment and landscape" (2014) awarded by Università IUAV di Venezia. He was fellow researcher in Urban Planning at IUAV in 2014-15 and 2016-17, then Early Stage Researcher in the frame of the European Joint Doctorate urbanHIST (2017-2020). He holds a double PhD degreed awarded by UVA Universidad de Valladolid-ETSAV Departamento de Urbanismo y Representación de la Arquitectura (Spain) and Bauhaus-Universität Weimar-Fakultät Architektur und Urbanistik (Germany).

Keywords:

post-COVID-19 city| urban regeneration | right to the city | NextGenerationUE

ABSTRACT

This work approaches the post-Covid-19 city to reflect on the state of the art of the Barcelona's approach of Superblock. The basic hypothesis is the following: Superblock, along with the concepts of the 15-minute city and tactical urbanism, can be a feasible solution to renew the existing built environment as it actually combines accessibility, affordability, design, investment, resilience and sustainability according to European Green Deal.

The work deals with the case study of Barcelona's Superblocks and its primordial application in the Poblenou district. Despite being a pre-pandemic solution, I will demonstrate that this model is suitable to be included in the New European Bauhaus as Superblocks contribute to develop a healthier, safer and more ecologically and socio-economic balanced city in response to the 2020 pandemic outbreak. In order to do so, I will provide the interpretation of the Barcelona's 'Superblock' implemented in Poblenou district as a short-term solution for providing an innovative way of carrying out urban development at a neighborhood scale, mitigating the pandemic negative effects and how this model may succor health, social, and economic inequities. Through a specific fieldwork, interviews and desk research activity, I specifically focus on the impacts of this model in terms of accessibility, affordability, design, investment, resilience and sustainability.

Barcelona is currently integrating the Covid-19 recovery context with long-term-strategy development updates, using the UN 2030 Agenda of SDGs as a roadmap. One of these strategies refers to Superblocks, thought as a social unit, a tight-knit community with shared common facilities, resilient against the stresses of climate change and social vulnerability. By the analysis of the Poblenou's Superblock unit I search to demonstrate how local government implement the concept of Superblock in the city and the ways in which communities are responding to or resisting such interventions.

1. INTRODUCTION

The objective of the research is to understanding the state of the art of the implementation of Superblocks in the city of Barcelona and its impacts at urban level by taking into consideration the specific case study of Poblenou neighbourhood unit. This analysis aims to partially fill the gap of knowledge on the role this new urban design plays in mitigating the effects of COVID-19 and whether this model is suitable to be included in the New European Bauhaus in terms of developing a healthier, safer and more ecologically and socio-economic balanced city.

As no large public survey has still been released on these aspects, I am trying to overcome the substantial lack of scientific research by quantitatively and qualitatively addressing of Superblocks features in terms of healthier, safer, accessible and inclusive cities. The work comprises a theoretical background to contextualize the concept of Superblocks, the examination of the solution offered by Barcelona's Superblocks, and the case study analysis. I used three diverse ways to obtain the information. First, archival research, i.e., Barcelona's archives, especially the Sant Martí District Archive (*Arxiu Municipal del Districte de Sant Martí*) where the Poblenou neighbourhood unit is located. Second, i.e., on-site visits (2017, 2018 and 2019) and on-line interviews with Superblock's residents and non-residents (June 2021). Eventually, the search for international scientific literature using the bibliographic databases Scopus and JSTOR along with the grey literature (i.e., press

articles, government's legislative documents, and local administrations' urban and territorial planning sources) was performed.
I acknowledge that the research on one Superblock is fraught with complexities and lacunae due to the lack of data of Covid-19 contagious rate in a single neighbourhood unit and the impossibility to conduct on-site visits in 2020 and 2021. It is also true that the New European Bauhaus is at its beginning and does not provide robust theoretical framework. Nevertheless, this research may be an important step toward developing a comparative analytical framework focused on sustainability, inclusion, and aesthetics, combined with the citizen-centric approach for the evaluation of the experience of living in an already consolidated Superblock during a pandemic.

2. Theoretical background

Following the increasing awareness to provide healthier, safer, accessible and inclusive cities (Tulchinsky and Varavikova, 2014), the EU presented in December 2019 the European Green Deal[1], whose implementation is being delivered by the so-called New European Bauhaus[2]. The roadmap for making the EU's economy sustainable responding to climate and environmental challenges seemed to be just sped up by the 2020 pandemic outbreak (OECD, 2020).
Superblocks, along with the concept of the 15-minute city and tactical urbanism (Fabris et al., 2020), appear as a proper solution towards a more holistic approach to our built environment, seeking to combine design, sustainability, accessibility, affordability, and investment to help deliver the European Green Deal and to enhance, at the same time, economic, social, environmental and cultural values. Superblocks match the European Green Deal as they are human-centred groups of a number of blocks that reduce the amount of public space dedicated to private cars in the streets to give it back to people. They provide facilities at the level street in combination with green solutions to improve healthier open spaces. First coined by William Drummond in 1916, the neighbourhood unit is credited to Clarence Perry (1929) taking inspiration from the 'Garden Cities of Tomorrow' of Ebenezer Howard (1902) (Johnson, 2002). In Barcelona this concept was originally proposed by Oriol Bohigas in the late 1950s (Bohigas, 1958: p. 474-475) to deal with the fast and uncontrollable growth of the city. Fifty years later, Salvador Rueda got the Superblocks back under the so-called 'Ecological Urbanism' (Rueda, 2014). Though in the pre-pandemic period as a solution to improve the quality of citizens' life and urban environment, can Superblocks positively influence the environmental factors that play a major role on SARS-CoV-2 transmission?

Since the 2020 pandemic outbreak, growing epidemiological studies are assessing that COVID-19-infected patients residing in areas having a high air pollution index and extreme meteorological conditions have higher risk of mortality in comparison with those who are living in areas having a lower air pollution index and more balanced meteorological conditions (Copat et al., 2020; Hu et al., 2021) Kumar et al., 2021). Also, several analyses found that the COVID-19 mostly hits deprived neighbourhoods (Plümper and Neumayer, 2020; Carrión et al., 2021) and exacerbated ongoing urban issues, such as socio-spatial segregation (Alexandri and Janoschka, 2020). Albeit cities are regarded as heart of infections, Hamidi, Sabouri and Ewing (2020) claimed that there is apparently is no significant relationship between population density, degree of transmissibility, and mortality. The urban focus of solutions aiming at recovering from the loss of amenity is thus justified by demographic factors, the majority of world's population are and will be living in cities (Ashton and Thurston, 2017).

The global city of Barcelona is suffering from longstanding problems of air pollution (Generalitat de Catalunya, 2015; Mueller et al. 2017) and cramped living conditions (Blanco and Nel·lo , 2018), but it is working towards the renewal of its spaces following the UN 2030 Agenda of Sustainable Development Goals (SDGs)[3]. In fact, in the early 2020 Barcelona introduced the Climate Emergency Action Plan to tackle issues related to mobility and renewable energy . Superblocks are among the relevant measures proposed and the pandemic has made this new urban design more urgent to shape the lives and well-being of its inhabitants by the reduction of air pollution index and frequency and intensity of heat waves. Current literature have dealt with a number of aspects of Superblocks: Rueda (2019) and Mueller et al. (2020) quantitatively assessed the overall impacts of Superblocks system; Palència et al. (2020) evaluated the health effects; Scudellari, Staricco and Vitale Brovarone (2020), Zografos, C. et al. (2020) and Benini, Manzini and Parameswaran (2021) questioned the struggle

NOTE 1

https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

NOTE 2

https://europa.eu/new-european-bauhaus/index_en

NOTE 3

https://ajuntament.barcelona.cat/agenda2030/en

NOTE 4

https://www.barcelona.cat/barcelona-pel-clima/en/barcelona-responds/climate-emergency-committee

to apply the approach of Superblocks respectively in terms of urban design, urban politics and governance, and digitalisation, while López, Ortega and Pardo (2020) focused on the impacts on mobility and climate change.

The implementation of Barcelona's Superblocks

The implementation of Superblocks system would cover the entire city's land, creating 503 urban cells by 2030 and its health impact would be the prevention of 667 premature deaths annually. Rueda (2019) and Mueller et al. (2020) quantitatively assessed this impact by assuming that the 503 Superblocks would reduce private motorised transport by 19.2% and increase green surfaces from 2.7 m2/inhabitant to 6.3 m2/inhabitant in the Extension district zone. All this would decrease NO2 pollution by 24% and heat waves by 35.9%. Thought as a specific tactical urbanism series of action that would cost 100 million euros, the implementation of Superblocks system is far to be completed: just six Superblocks took place from September 2016 to mid-2021. However, the 2020 pandemic outbreak gave city authorities the chance to accelerate these experiments (figure 1). As a matter of fact, a public expenditure of approximately €38 million is supporting the conversion of most of Barcelona's Extension district in a great Superblock by the end of 2023[5]. This targeting area is a priority due to its critical levels of pollution (50 micrograms/m3 on overage in 2019, when the WHO recommends not exceeding 40 micrograms/m3) generated by a high volume of through traffic (350,000 cars/day). The City Council's project is expected to create new 21 green streets and 21 squares, 33.4 hectares of pedestrian areas and 6.6 hectares of urban green space. This will mean that one in every three streets will become a green hub, and that each resident will have one of these green hubs or squares no more than 200 meters away from their home (Ajuntament de Barcelona, 2021). While aspects of urban design are seemingly aiming to create a greener city, factors such as investment, public involvement and affordability are crucial in determining the 'right to the city' for current residents. It is in this sense that the first implemented Superblock in Poblenou neighbourhood (September 2016) can help us to understand how Superblocks deal with the three core values of the New European Bauhaus:

- Quality of experience, including style/aesthetics, healthy and safe living environments;
- Sustainability, including circularity (in this case, the focus is on mobility changes due to Superblock-related urban renewal interventions); and
- Inclusion, including accessibility and affordability.

All these data can lead us to understand the impact of an already existing Superblock unit in a dense city especially in relation to COVID-19 contagious and the experience of living in a more human-centred space in comparison with the rest of the city.

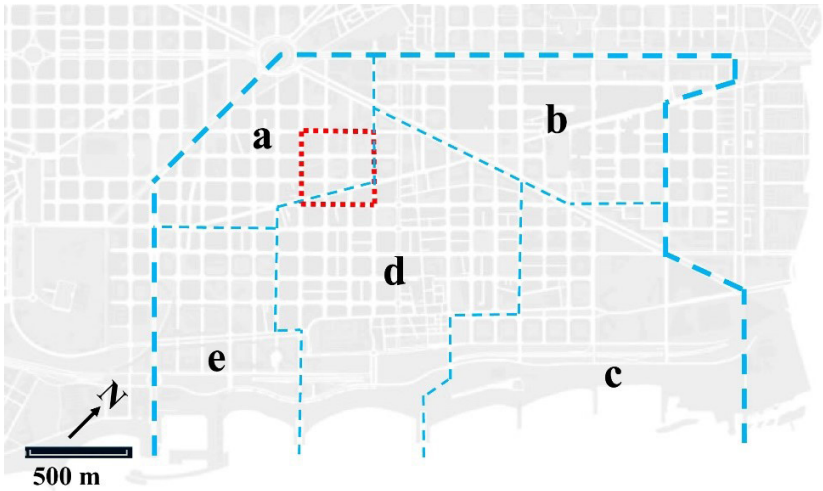

Figure 1. The localisation of the Poblenou Superblock: (a) El Parc i la Llacuna del Poblenou, (b) Provençals del Poblenou, (c) Diagonal Mar i el Front Marítim del Poblenou, (d) El Poblenou, and (e) La Vila Olímpica del Poblenou. Source: elaboration by F. Camerin (2021)

NOTE 5

https://ajuntament.barcelona.cat/superilles/en/superilla/eixample

NOTE 6

Today the former industrial Poblenou comprise 5 neighbourhoods: El Parc i la Llacuna del Poblenou, Provençals del Poblenou, Diagonal Mar i el Front Marítim del Poblenou, El Poblenou, La Vila Olímpica del Poblenou.

The Superblock-related urban change in Poblenou unit neighbourhood

Located at the core of the former working-class district of Poblenou[6] affected by a profit-driven urban regeneration process since the late 1980s (Camerin, 2019), the first Superblock unit was implemented between September 2016 and early 2018. It is located in El Parc i la Llacuna del Poblenou

and El Poblenou neighbourhoods and comprises 16 hectares, with 5.580 inhabitants for a total population density of 348 inhab/ha. The three specific core values of the New European Bauhaus are here reported.
First, as of the quality of experience, the implementation of Superblocks in Poblenou resulted in the pedestrianisation of 13,350 m2 of public space (figure 2), thus strongly cutting vehicular traffic; the increase of trees (+212), green spaces and tree-lined streets from 9,722 m2 to 18,632 m2; the provision of 349 benches; the decrease of car-parking spaces from 575 to 316; new 2,483 m2 of playground and interactive games area for both elderly and young, and even a modest athletics track (figure 3); 37 new premises for activities at street level; more than 1,000 m2 of cycle path, and an electric vehicle charging point.

Second, in terms of sustainable mobility, the urban renewal of the existing environment resulted in the rise by 2.6% of vehicular traffic on the four perimeter roads. However, the interior streets' vehicular traffic dramatically dropped by 58%, with an average reduction in daytime noise level of 5%. The reduction of vehicular traffic went together with the reduction of the speed limit to 10 km/h within the unit.
Third, the Superblocks impacts in terms of inclusion are quite relevant. The accessibility of this area surely improves thanks to the provision of new free-time features, being also the target of other Barcelona's residents. The affordability of the area may be at risk as the improvements in a specific urban environment may result in an increase of housing prices. Nevertheless, El Parc i la Llacuna del Poblenou and El Poblenou neighbourhoods' market values apparently follow the general real estate trend, not suffering from the Superblock's urban renewal. According to the statistic by Barcelona's City Council[7], the price for second-hand houses for sale grew from 3,761 €/m2 of 2016 to 4,657 €/m2 of 2020, thus exceeding the average price of Sant Martí district (from 3,382 €/m2 of 2016 to 3.541 €/m2 of 2020) and the average prices of Barcelona (from 3,478 €/m2 to 4,009 €/m2). Moreover, the Catalan Parliament approved in December 2020 a law regulating rent prices on new housing contracts to guarantee accessibility in sixty Catalan municipalities, including Barcelona (BOE, 2020).

Relations between Poblenou Superblock and COVID-19
The experience of living in a Superblock in an époque of Covid-19 and the evaluation of the incidence of the pandemic in a neighbourhood unit have still not been addressed neither by urban researchers not epistemologists. The overcoming of this research gap may start from comparing data between two average neighbourhoods in terms of income-per-capita index[8] with high population density (El Parc i la Llacuna del Poblenou and El Poblenou) with two bordering and wealthier neighbourhoods, with

Figure 2.
New public spaces in a crossroad within the Poblenou Superblock. Source: photo by F. Camerin (2018)

Figure 3.
The athletics track. Source: photo by F. Camerin (2018)

NOTE 7

Data found in https://www.bcn.cat/estadistica/angles/dades/timm/ipreus/hab2mave/index.htm

NOTE 8

Data found in https://www.bcn.cat/estadistica/angles/dades/economia/renda/rdfamiliar/a2017/rfbarris.htm

less population density (La Vila Olímpica del Poblenou and Diagonal Mar i el Front Marítim del Poblenou) (see table 1). La Vila Olímpica del Poblenou and Diagonal Mar i el Front Marítim del Poblenou were redeveloped in occasion of respectively the

1992 Summer Olympics and 2004 Universal Forum of Cultures. Instead, most of El Parc i la Llacuna del Poblenou and El Poblenou are still suffering from the decline that has affected this sector of Barcelona since the late 1970s (Camerin, 2019), waiting for their regeneration under the 22@ project to create new tertiary activities (Ajuntament de Barcelona, 2017a and 2017b). These dynamics are the among the leading reasons why El Parc i la Llacuna del Poblenou and El Poblenou are the 24th and 25th neighbourhoods in the city in terms of income-per-capita index, while La Vila Olímpica del Poblenou and Diagonal Mar i el Front Marítim del Poblenou are the 7th and 8th ones.
From February 25, 2020 to June 30, 2021, El Parc i la Llacuna del Poblenou and El Poblenou recorded respectively 1,183 and 2,092 cases of COVID-19, while the neighbourhoods of La Vila Olímpica del Poblenou and Diagonal Mar i el Front Marítim del Poblenou registered just 463 and 762 cases of Covid-19 in the same period.[9] These data may demonstrate that the impact of COVID-19 is stronger in poorer areas: the wealthy areas with less population density have been less affected by COVID-19 contagious than the poorer and more densely populated ones. The impact of just one Superblock in a pandemic situation had no relevant effect on the contagious, but how about the experience of living in a more human-centred space with the pandemic-related social restrictions?

The answer to this question relies on the online questionnaire submitted to 20 residents and 20 non-residents of Poblenou Superblock in June 2021 (Table 2).[10] Both groups were asked to answer "Yes" or "No"[11] to the following questions:
1. Do you think that Poblenou Superblock has positively influenced the formation of identity, sense of community and emotional and social well-being?

Table 1. Data for the comparison. Elaboration by F. Camerin (2021).

Neighbourhood	Inhabitants / population density (inhab/ha)	Price for second-hand houses (2016-2020) (€/m2)	Income-per-capita index	Cases Covid-19
El Parc i la Llacuna del Poblenou	14.861 / 136	3,761-4,657	100.4	1,183
El Poblenou	33.621 / 219	4.223-4.557	99.9	2,092
La Vila Olímpica del Poblenou	9.346 / 99	5,365-5,267	164.1	463
Diagonal Mar i el Front Marítim del Poblenou	13.455 / 110	5,891-6,237	150.1	762

Table 2. Results of the interviews. Elaboration by F. Camerin (2021).

Residents (R) / Non-resident (N-R)	1		2		3		4		5		6		7	
	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
R	19	1	19	1	19	1	19	1	20	0	14	6	19	1
N-R	18	2	18	2	17	3	17	3	16	4	12	8	18	2

2. Does the Superblock have a positive effect on human health?
3. Is Superblock unit able to guarantee social distancing better than a non-Superblock area of Barcelona?
4. Would you define the experience of living in a Superblock positive during the pandemic?
5. Are non-residents coming to experience the Superblock in their free-time?
6. Was the City Council able to implement the changes in accordance with the residents' participation?
7. Would you recommend the implementation of Superblock-operated changes in the whole city?

Overall, both residents and non-residents found the implementation of Superblock appropriated to provide a more human-centred, healthier and more enjoyable environment after the 2020 pandemic outbreak than an area still not affected by Superblock-induced changes. However, the management of the urban renewal works did not satisfy all interviewees. The Poblenou neighbourhood unit was the first Superblock to be implemented, with very unsatisfactory participation of local residents. As a consequence of this lack of participation, a citizens group called "Association of People Affected by the Poblenou Superblock" (Plataforma d'Afectats per la Superilla del Poblenou) held protests and lobbied the administration to reverse the Superblock, drawing intense media attention.

NOTE 9

Data found in https://aspb.shinyapps.io/COVID19_BCN/#Distribuci%C3%B3_dels_casos_als_barris

NOTE 10

The statistical reference sample indicated by the local group "Col·lectiu Superilla Poblenou", https://www.superillap9.org/slides). The interviewees' personal information are classified (the interviewer had no information on which stakeholder group they belong, their age, gender...) in compliance with privacy (European law on privacy, the so-called General Data Protection Regulation, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX-:32016R0679)

NOTE 11

Despite having submit the option "Don't know", all interviewees answered "Yes" or "No".

Afterwards, a proper participation led by City Council sort the conflicts out and was extended to other Superblocks.[12] The City Council took advantage of the implementation of the first Superblock to design proper participation processes to avoid the risk of protests as it happened in the case of Poblenou neighbourhood. Despite these initial difficulties, residents and non-residents have increasingly understood the relevance of living in a greener and more human-centred environment with less pollution and noise. More space for the slow mobility meant also the possibility to maintain social distancing recommendations and decrease the risk of transmitting infection in urban environments. In addition, the organisational model of Superblocks gave more space for residents to their leisure time, such as sports activities and play areas for children and the elderly. The Superblock residents did not need to displace towards other sectors of Barcelona to find proper equipment to enjoy their free time. The significant drop of human activities during the lockdown along with the Superblock-related improvements made people understand the importance of extending these measures in the whole city. As a matter of fact, the Poblenou unit captured the attention of non-residents that visit this area in their free time and almost all interviewees recommend to extend Superblocks in all city.

Conclusion

This work demonstrated that Superblocks can be feasible solutions to deal with climate change, environmental and mobility issues in Barcelona according to the European guidelines of the New European Bauhaus. Superblocks are regarded as tools to help shaping healthier and more inclusive forms of living together on the basis of the renewal of the existing polluted and unhealthy urban environments. Superblocks apparently mean to be not just an environmental or economic project for a specific urban sector, but mostly a new cultural vision for designing future ways of living to extend in other European territories with proper adjustments to the local contexts. Superblocks represent also a practical solution to the post-pandemic urban planning challenges, such as reducing the car dependency and the rethink of accessibility within a specific territory in terms of work, leisure and retail habits. The application of Superblocks' principle to urban planning may also help preventing future pandemic outbreak as urban policies are the proper measures that determine the quality of urban spaces and the accessibility.

The tactical urbanism actions that gradually provide more quality spaces for the slow mobility with less disturbing factors (i.e. vehicular traffic) has helped create place attachment and a new use at the ground level. Nevertheless, the research

NOTE 12

See the citizens participation in each case of Superblock implementation, https://ajuntament.barcelona.cat/superilles/es

on Superblocks impacts on the city of Barcelona is far to be completed, also in relation to COVID-19 as this study approach needs to be extended to a broader range of cases and to address its limitations. For instance, this study has examined one case with a limited assessment, so more quantitative and qualitative work is needed in the following ways. First, the creation of an analytical matrix applied to the Superblocks already implemented in Poblenou and based on the New European Bauhaus' core values would result in a more comprehensive understanding of the Superblock-operated changes. These changes may be assessed in terms of accessibility, affordability, design, investment, resilience and sustainability for a systematic approach of these aspects through indicators. Second, a specific research that relate Covid-19 to all Superblocks may result in a truly understanding of the benefits introduced by the neighbourhood unit-operated changes in relation to contagious, physical and mental health, and social distancing in a human-centred urban environment.

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TITLE

THE CHALLENGE OF THE NEW EUROPEAN BAUHAUS FOR EFFECTIVELY ADDRESSING SOCIO-SPATIAL INCLUSION

authors

José Manuel Gómez Giménez
Urban architect and political scientist. Master's in territorial planning. Early-Stage researcher at Departamento de Urbanística y Ordenación del Territorio, Universidad Politécnica de Madrid. GIAU+S UPM research group.
e-mail: jm.gomez@upm.es

Ana Díez Bermejo
Urban architect. Master's in urban and territorial planning. Researcher at Departamento de Urbanística y Ordenación del Territorio, Universidad Politécnica de Madrid. GIAU+S UPM research group.
e-mail: ana.diez@upm.es

José Manuel Gómez Giménez

Architect, social scientist, master's in urban studies, PhD candidate and Teaching Assistant. Member of the research group in Architecture, Urbanism and Sustainability. His research navigates between critical geography, spatial justice and urban economics and focuses on the analysis of the evolution of socio-spatial cleavages and fractures in the Iberian urban systems. Focused on promoting diversity and sustainability in urban territories, which should include all social, economic, and ecological perspectives. Highly motivated by the creative potential of transdisciplinary approaches and multidisciplinary team working. Increasingly convinced of the necessity of political values such as environmentalism, socio-spatial justice, and local internationalism.

Ana Díez Bermejo

Architect, master's in urban studies, PhD candidate and Member of the research group in Architecture, Urbanism and Sustainability. Her research is based in the analysis of public urban policies for rebalancing territories. Focused in the development of methodologies for evaluate urban policies from the point of view of new urban goals. Interesting on urban studies about urban vulnerability, urban resilience and sustainability to rise more sustainable, resilience and inclusive cities with a comprehensive and multidisciplinary vision based on a cooperative and collaborative multilevel governance between pubic administration, civil society and academic field.

Keywords:

Sustainability | Socio-spatial inclusion | New European Bauhaus | case study approach | deprived neighbourhoods | case evaluation

ABSTRACT

One of the strategic lines of the European Green Deal and the New European Bauhaus for post-pandemic urban planning must be to achieve more sustainable models of living: guided by the circular economy, but also by social inclusion. It must be a comprehensive and place-centred response, harmonizing comprehensiveness where all problems occur at the same time.

Spanish cities in the twenty-first century still have about a thousand vulnerable neighbourhoods that could be the object of integrated urban regeneration policies. Responding to its problems, glimpsing its opportunities, will be one of the most challenging and complex tasks faced by the European initiative.

The New European Bauhaus aims to promote common knowledge in Europe. If a century ago the paradigm shift was that "form should follow function", now "form and function must include the sustainability and viability of the planet", to get better places to live.

Three elements are key to this: sustainability as circularity, inclusion as social affordability for all, and experience as identity and aesthetics. But where to put the focus in each singular case?

Interdisciplinarity and inter-administrative cooperation must become priorities to promote imagination, creativity, innovation, design, planning, and action in the urban contexts most in need of achievement. These spaces, crossroads of different ways of living and cultures, must become priority settings where experiencing sustainable life must become a reality. These scenarios require exercises of planning that establish a multi-level approach to combine digital transformation with the green economy and adopt bottom-up methods relying on the rich variety of existing European social capital that represents an opportunity for these spaces. For this, it is essential to start from an analysis of experiences and learning in progress in relation to integrated sustainable development. And this is the exercise that we propose.

1. INTRODUCTION

Spanish cities harbour almost a thousand "vulnerable neighbourhoods" according to the Analysis of the Ministry of Transport, Mobility and Urban Agenda (Ministerio de Transportes, Movilidad y Agenda Urbana (España), 2011; Rodríguez Suárez, Gómez Giménez and Hernández Aja, 2021). The new policies and projects resulting from the New European Bauhaus, the Spanish Urban Agenda, the European Green Deal, the new Cohesion Policy, or the Recovery Funds *NextGenerationEU* should be an opportunity to reduce their deficiencies.

Vulnerable Neighbourhoods are these urban areas in which the conditions of their inhabitants are significantly worse than those of the city to which they belong. This situation implies a greater exposure to risks and uncertainties, a lower capacity and resources of its inhabitants to overcome the problems they face is added in these areas (Alguacil Gómez, 2006). We could enumerate a long list of these types of risks and uncertainties: fear of losing a job and difficulty finding a new one, wage insecurity, a feeling of deprivation on the part of public administrations, lack of education and insecurity to face a changing labour market, lack of support networks in case of need, social isolation and loneliness, poor accessibility from the rest of the city... It is a set of diverse circumstances. Their sum supposes very varied forms of vulnerability with different degrees of intensity. Therefore, urban vulnerability is the result of the relationship of different dimensions (Hernández Aja, Rodríguez Alonso, et al., 2018).

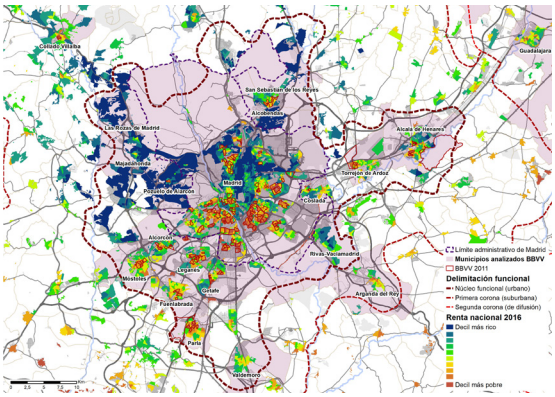


Figure 1. Functional Urban Area of Madrid. Source: Authors, based on information from the Ministry of Transport, Mobility and Urban Agenda and the National Statistical Institute.

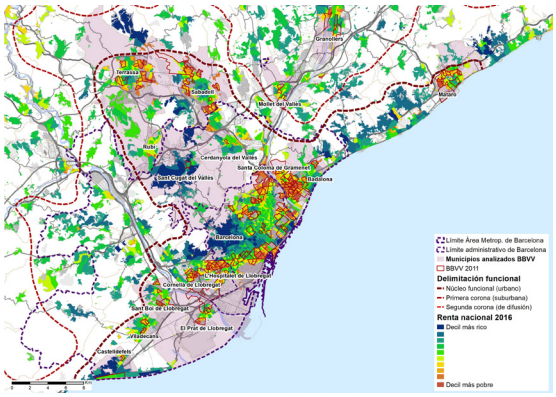


Figure 2. Functional Urban Area of Barcelona. Source: Authors, based on information from the Ministry of Transport, Mobility and Urban Agenda and the National Statistical Institute

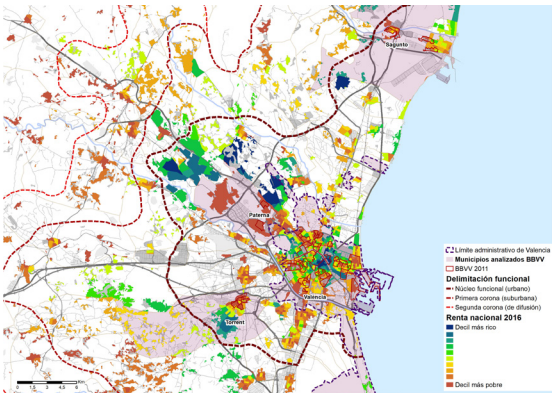


Figure 3. Functional Urban Area of Valencia. Source: Authors, based on information from the Ministry of Transport, Mobility and Urban Agenda and the National Statistical Institute.e.

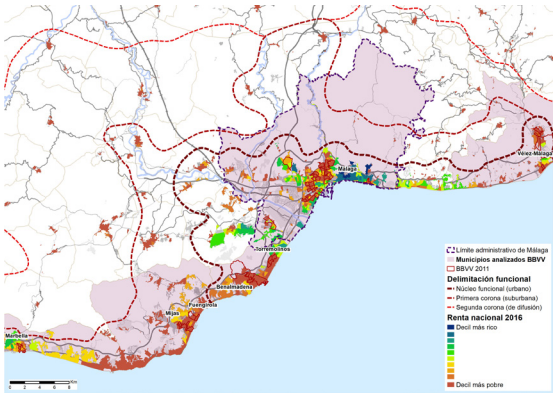


Figure 4. Functional Urban Area of Malaga. Source: Authors, based on information from the Ministry of Transport, Mobility and Urban Agenda and the National Statistical Institute.

The Vulnerable Neighbourhoods Analysis were prepared in three editions for the years 1991, 2001 and 2011. All Spanish cities with more than 50 thousand inhabitants were studied. The delimitations were made with data from the Population and Housing Censuses. Three indicators were used: the concentration of the population with low levels of education, the unemployment rate, and the accumulation of housing with material shortages. All the catalogued neighbourhoods exceed one or more of the reference values. And these cuts were established in figures much higher than the national average indicators (Hernández Aja, Rodríguez Alonso, et al., 2018). In addition, these variables

present a high correlation with others such as income, lack of accessibility, the need for building rehabilitation (Hernández Aja, Rodríguez Suárez, et al., 2018), energy inefficiency or fuel poverty (Martín-Consuegra et al., 2020). Throughout the three Analysis there has been a significant increase in the number of Vulnerable Neighbourhoods. In 1991, 370 were detected. In 2011 there were already 918. The conclusion of its evolution is that the internal imbalances of Spanish cities expanded during the two decades analysed. This occurred in a double process of increase and concentration of the vulnerable population. Between 1991 and 2011 the population of Spain grew by a fifth. Meanwhile, the population in Vulnerable Neighbourhoods vastly exceeded doubling (Hernández Aja, Rodríguez Alonso, et al., 2018).

Against this background, five major strategic initiatives and framework policies have recently emerged:

- The **Spanish Urban Agenda** (2019) is a strategic document, without regulatory character, and therefore of voluntary adherence, which, in accordance with the criteria established by the UN Sustainable Development Goals and the new Urban Agendas adopted at Habitat III and for the EU both in 2016, pursues achieving sustainability in urban development policies. (Consejo de Ministros (España), 2019)
- The **European Green Deal** (2019) is an EU policy working to provide an action plan at to boost the efficient use of resources by moving to clean, circular economy and to restore biodiversity and cut pollution (European Commission, 2019).
- The **Funds *NextGenerationEU*** (2020) is the temporary instrument designed by the EU to boost the recovery after the COVID-19 pandemic and coupled with the EU's long-term budget will be the largest stimulus package ever financed in Europe. Its main goal is helping rebuild the post-COVID-19 economy making the EU greener, more digital, and more resilient (European Commission, 2020b).

- The **New European Bauhaus** (2021) is a European Commission initiative which aims to promote common knowledge to design future ways of living. If a century ago the paradigm shift was that "form should follow function", now form and function must include the sustainability and viability of the planet. Three elements are key to this: inclusion as social accessibility for all, sustainability as circularity, and experience as identity and aesthetics (European Commission, 2021b).
- The **Cohesion Policy** (2021-2027) is the main financial instrument of the Regional and Cohesion Policy of the European Commission to achieve greater social, economic, and territorial cohesion is the European Regional Development Fund (ERDF) with the objective to reduce imbalances between their regions and improve the development of cities through their potential strengthening and as a response to the main urban challenges and problems. (European Commission, 2020c, 2021a).

All of them are guided by the principles of circular economy, but also by social inclusion comprising goals as "fairness", "equity" and "universal accessibility". All of them should start from a comprehensive and place-centred approach, harmonizing comprehensiveness. And for this, all of them should be an opportunity to improve conditions in vulnerable neighbourhoods, the urban contexts most challenging and in need of achievement.

2. OBJETIVES

In Spain, the energy rehabilitation of buildings is already being pointed out as one of the areas in which to focus a large part of the funds of the Recovery, as it is a sector where these economic resources can quickly generate environmental, social, and economic positive effects (De Gregorio Hurtado and Ruiz Sánchez, 2021). The approach must, however, be more ambitious and address a comprehensive urban regeneration. Furthermore, aid mechanisms must be a realistic option for the enclaves that need it most: vulnerable neighbourhoods. The purchasing power in these areas is well below the average and its urban fabric, built mostly in the 1960s and 1970s, is characterized by poor energy performance, among other deficiencies (De Gregorio Hurtado, 2017).
In this context, looking at the urban fact constitutes a framework of opportunity to implement actions that allow progress in the proposed change and guide the ecological transition from a multi-scale perspective. The integral urban

regeneration of vulnerable neighbourhoods offers a field of great potential to start this path. It is important to remember that local entities are the level of government closest to citizens, and that the concentration of activity in cities is responsible for between 60% and 70% of greenhouse effect emissions and carries a similar percentage of total energy consumption. It is also for this reason that they constitute the main nodes from which the ecological transition must necessarily be carried out from a territorial perspective, based on the understanding of the place (place-based) and that, therefore, assigns a leading role to the communities. local. Without the involvement of the latter, it is impossible that this transition will ever be a reality.

Vulnerable neighbourhoods account for almost a third of the Spanish urban population and concentrate the greatest needs for residential rehabilitation (Gómez Giménez and Hernández Aja, 2020). It is about minimizing their fuel poverty, which especially affects the neediest households, including single parents. We will also contribute with this to reduce the energy losses of the building (Martín-Consuegra et al., 2020). A fundamental objective in the current climate emergency scenario. These neighbourhoods have fewer public resources and have a deficit in endowments and basic equipment. In addition, the greatest deficiencies of universal accessibility are concentrated in them. Both at street level, and inside its buildings, or, in many cases, with respect to the rest of the city (Hernández Aja, Rodríguez Suárez, et al., 2018). These realities mean a decrease in the quality of life of its neighbours. And they especially affect the elderly. Residential segregation has repercussions on the lives of citizens, beyond being a mere translation of social differences and the economic inequalities that they entail. Different social groups usually choose to inhabit those areas that best suit their spending possibilities, and this also has consequences in the way in which social relations are reproduced (Nel.lo, 2021). The "neighbourhood effect" assumes that the concentration of vulnerable populations in certain areas aggravates their starting situation. And this makes it difficult for future

generations to improve. Its repercussions are especially significant in children and remain present in the long term. Being even more pronounced in the case of migrant populations (Musterd, Ostendorf and De Vos, 2003).

Nothing categorically determines. But the starting advantages and privileges are undeniable. As it is that the "neighbourhood effect" is a reality, whatever its intensity (Van Ham et al., 2012). The starting disadvantages determine the future of the children who live in Vulnerable Neighbourhoods. We cannot afford to waste their talent nor its potential innovation capacity in a future that is less and less young. For this reason, we should all push to get greater opportunities for them.

In this sense, place-centred integral urban rehabilitation must be a strategy that facilitates the generation of more sustainable and socially cohesive urban areas in relation to the city in which they are inserted. In a context of limited resources and extended actions over time, it must provide a response adapted to the needs of each neighbourhood under the premise of determining not only their content, but also their order of importance or priority (European Commission, 2014). This can only be the result of a joint process that leads the residents, their associations, and the technicians in charge of the plan to determine priorities and prepare the most appropriate proposals (Hernández Aja et al., 2016). Without being exhaustive, it is relevant to point out some areas where European cities have already developed experience. Some key sectors are the provision of equipment needs based on standards, the qualification and redesign of public space, the reduction of energy expenditure through building rehabilitation, mobility, waste management, water management, or an area with great capacity to change the behaviour patterns of the private sector: public procurement.

All of this may seem like a utopia, but it is also true that we have extensive experience and enough accumulated technical knowledge to lead the process towards a more sustainable and inclusive urban environment. It is essential to start from an analysis of experiences and learning in progress in relation to integrated sustainable development. And this is the objective that we propose in this article: analysing the operational dimension of tools already developed or underway in the urban territory of Spain, preferably framed in spatial areas intersected by vulnerability, whose objectives combine social and environmental sustainability in an integral way, understood as urban public policy.

We are going to focus on the real operational potential of the tools, their capacity for change and impact on the environment in which they are executed, beyond their intentions and the theoretical dimensions that they contemplate. In this sense, it will look towards the finalist actions that are developed in the territory. we will examine a series of paradigmatic case studies that have assumed accumulated learning from different time periods in Spanish democracy. To analyse its

integrality, we will use a methodology that has already been developed that we will describe in the corresponding section. It should be pointed out here that it is not so much a question of evaluating its temporal development as of analysing the degree of comprehensiveness contemplated in its planning instruments.

3. STATE OF THE ART-CONTEXT

We are facing the challenges, in a first design phase of a New European Bauhaus initiative. The New European Bauhaus, defined as an environmental, economic, and cultural project which aims to combine design, sustainability, accessibility, affordability, and investment to contribute to the fulfilment of the European Green Pact where essential values such as sustainability, aesthetics and inclusiveness are to be achieved (European Commission, 2021b). In the words of the President of the European Commission, Ursula von der Leyen, "the New European Bauhaus is a project of hope to find a way to live better together after the pandemic". "It is about an ecological transformation, combining aesthetics with sustainability" and "a project for Europe's regions and territories that should contribute to social cohesion and solve housing problems if we want to lead a fuller and more sustainable life by building bridges between the conception of new ideas and their implementation in physical places".

In this sense, we are faced with an interdisciplinary initiative that entrusts us with the responsibility of planning, designing, and building future ways of living in our cities and territories from an integrated vision through art, culture, social inclusion, science, and technology to respond to environmental, economic, and social challenges and by finding answers to the problems of everyday life.

If we recall the Bauhaus movement of the early 20th century, it was born as an innovative cultural movement, that in the words of its precursor, Walter Gropius, was born "Not to be a style, but an attitude", besides, it was

also an initiative that advocated inclusiveness, from its formation, uniting artists, and craftsmen. This is the same idea that underlies the New European Bauhaus initiative, the emergence of an initiative that unites territories in a common goal more ambitious than in the last century by incorporating an integrated and integrating vision of previously sectorial visions to achieve a better quality of life. Just as the Bauhaus of the mid-century brought about a change in the economic and productive model, the New European Bauhaus should adopt the principles of the ecological transition to establish a new economic and productive model, which the pandemic has made more explicitly visible, to improve the conditions and quality of life in our cities and territories.

On this point, Europe has been taking on board a series of guidelines towards sustainable cities and territories for almost fifteen years now, through different charters, declarations, agendas, etc., so we can consider that the framework in which this initiative will be developed will take advantage of the progress made in this area up to now. Since 2007 when "Leipzig's Charter on Sustainable European Cities" was signed, the Member States agree upon common principles and strategies for urban development policy. In doing so, all dimensions of sustainable development should be considered at the same time and with the same weight: economic prosperity, social balance, and a healthy environment (European Commission, 2007, 2020a). This document represents a commitment from now on to an integrated European urban policy whose objectives were endorsed in the 2008 Marseille Declaration, placing special emphasis on the growing importance of climate change and where it was decided to create the voluntary and operational instrument: European Reference Framework for Sustainable Cities (RFSC), to serve as a reference for the implementation of the objectives of urban sustainability and the integrated approach proposed in the Leipzig Charter (European Commission, 2008).

It is in 2010 with the Toledo Declaration (European Commission, 2010b), that the UE adopted at the Informal Ministerial Meeting of Ministers on urban development the decision to work towards the EU Urban Agenda in an integrated way, emphasizing the idea of prioritizing urban interventions through urban regeneration. This was an important step towards the adoption, in the Informal Ministerial Meeting of Ministers responsible for Spatial Planning and Territorial Development, The European Territorial Agenda 2020, which would be the prelude to the subsequent European Urban Agenda in 2015 (European Commission, 2015).

The Urban Agenda for the EU is an integrated and coordinated approach to deal with the urban dimension of EU and national policies and legislation. By focusing on concrete priority themes within dedicated Partnerships, the Urban Agenda

seeks to improve the quality of life in urban areas.
In 2016, the Pact of Amsterdam agreed upon by the EU Ministers Responsible for Urban Matters established the Urban Agenda for the EU. Based on the principles of subsidiarity and proportionality, the Urban Agenda focuses on the three pillars of EU policy making and implementation: better regulation, better funding, and better knowledge (European Commission, 2016).
In the international framework, the 2030 Agenda and the 17 Sustainable Development Goals in 2015 set the lines of action for sustainable development at a global level for the year 2030, and specifically in its urban dimension with SDG11 Sustainable and resilient cities and communities. In this context, one year later, the United Nations New Urban Agenda was drafted, which represents a common ideal to achieve a better and more sustainable future. The international community rethinks urban systems and the physical form of our urban spaces to achieve this (United Nations, 2016). The New Urban Agenda sets standards and principles for planning, building, developing, managing, and improving urban areas in its five pillars of implementation: national urban policies, urban legislation and regulations, urban planning and design, urban planning and urban planning and design, local economy and municipal finance, and local implementation.
It will be 2019 with the arrival of the European Green Deal that will complement the previous documents (Agenda 2030 and The New Urban Agenda) to ensure the European commitment to sustainability and climate change in our cities and territories: protect, conserve, and enhance the EU's natural capital, and protect the health and well-being of citizens from environment-related risks and impacts. At the same time, this transition must be just and inclusive (European Commission, 2019). It is therefore to be hoped that the New European Bauhaus initiative will be committed not only to the circular economy but also to inclusiveness in designing, planning, financing, and managing this emerging cultural movement within an eco-social crisis that the pandemic has highlighted most starkly.

The pandemic has exposed the weaknesses of our cities to implement true sustainable and integrated urban development, highlighting the threats we face if we are not able to implement far-reaching actions towards sustainable, safe, and resilient cities in the face of climate change and increasing social and territorial inequalities to design, plan and build a healthier and more sustainable future in which to live.

In line with this argument, the New Leipzig Charter is drafted, which emphasises the three dimensions on which European cities should focus: the just city, the green city and the productive city (European Commission, 2020a) as key objectives to achieve the Sustainable Development Goals, especially SDG11 and the European Green Pact with an integrated scope, a multilevel urban governance (involving governmental and non-governmental actors) where digitalisation plays an important role in tackling the transformation of our cities.

Obviously, all this series of principles and declarations of intent should not only set in motion strategic plans and programmes, but also intervention tools with associated funding lines. In this sense, the EU's New Cohesion Policy (2021-2027), the final texts of which are just pending formal approval by the European Parliament and the Council, must respond to the aforementioned needs. For the time being, we know that the five main objectives are based on the following: Smarter Europe, Greener: carbon free Europe, Connected Europe, Social Europe and Europe closer to citizen; we are waiting for which investment lines will be financed on this basis as regards European cities and urban areas, although we can advance according to the Simplification Handbook (European Commission, 2020c) that territorial tools will receive 6% of the ERDF Funds dedicated to sustainable urban development (1% more than in the previous programme).

The EU's NextGenerationUE funding line is the programme to support EU Member States hit by the COVID-19 pandemic in the period 2021-2023 and is linked to Europe's Funding Mechanism (2021-2027). To access them, Member States must submit National Recovery and Resilience Plans (RRP), including targets, milestones, and estimated costs. In the case of Spain, which has only recently been approved, it is based on four lines of action, inspired by the Agenda 2030 and the Sustainable Development Goals: Green Spain, Digital Spain, Equality Gender Spain, Cohesion and Inclusive Spain where the Spain Agenda Urbana implementation, rehabilitation buildings and urban dimension take a leading role in financing lines.

Figure 5. European Green Deal. Source: European Commission (2019).

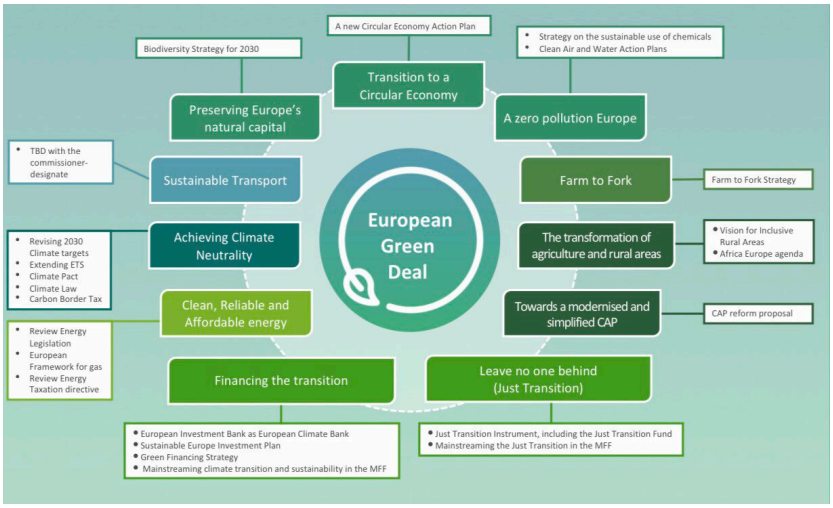


Figure 6. Topics for current plans, programmes, and initiatives in the European Union. Source: Authors based on the documents described above.

TOPICS			
New European Bauhaus	**European Green Deal**	**NextGeneratio-nUE**	**Policy Cohesion 2021-27**
Sustainability	Clean Energy	Research & Innovation	Smarter Europe
Inclusion	Sustainable industry	Climate and digi-tal fair trade	Greener, carbon free Europe
Circular Econ-omy	Renovation and efficient con-struction	Resilience & Cohesion	Connected Europe
Sustainable Life	Biodiversity protection	Biodiversity protection	Social Europe
Innovation	Sustainable mobility	Gender equality	Europe closer to citizens

4. METHODOLOGY

4.1. Assessment of the comprehensiveness of the Plans

To assess the degree of comprehensiveness of the plans we have chosen to use and update a methodology developed in the publication: "Reclaiming the City: A Strategy for the Design and Evolution of Urban Regeneration Plans and Programmes" (Hernández Aja et al., 2016). Its objective was to materialise a tree of concepts and aspects that

should be analysed both before and after the plan or project to see its real impact on the territory in which it was implemented as urban public policy.
The model is constructed in a double dimension. The spatial or scalar dimension, which reflects on the different levels of integration, from the territorial and urban system in which it is embedded, to the public and urban space of the neighbourhood or specific area on which it is intended to act, to the building and housing, and finally to the psychosocial dimension that affects the inhabitants themselves. In addition, this structure has the capacity to guarantee the second dimension, the comprehensiveness of the operations, which is differentiated into three levels: areas, categories and items (Hernández Aja et al., 2016, p. 7).

Four major scalar areas related to the first dimension have been redefined: Territorial framework (Tf), Urban design (Ud), Building (Bu) and Socio-Economic (Se), which establish the basic framework of urban quality. The five categories, into which each area is divided, represent a consistent conceptual framework that establishes the issues that should be considered and analysed in the process if we want to guarantee the comprehensiveness of the action. The categories are further divided into items which are the elements that in each case will be used to ensure, measure, and evaluate the final quality of the plan or programme. In the original publication, the authors warn that they "have considered the items as contextual because they will be shaped in detail and with different nuances depending on each specific project or action" (Hernández Aja et al., 2016, p. 7). In this sense, we have readapted and completed them by virtue of current advances

Territorial framework (Tf)	Tf1. TERRITORIAL INTEGRATION OF THE URBAN AREA	Urban design (Ud)	Ud1. INTERNAL ACCESSIBILITY AND MOBILITY	Building (Bu)	Bu1. BUILT ENVIRONMENT	Socio-economic dimension (Se)	Se1. SOCIAL AND INSTITUTIONAL NETWORK
	Tf2. BALANCE OF THE URBAN MODEL		Ud2. INFRASTRUCTURE AND SERVICES		Bu2. BUILDING SAFETY		Se2. ECONOMIC NETWORK
	Tf3. VARIETY AND COMPLEXITY OF THE URBAN PATTERN		Ud3. URBAN LANDSCAPE, PUBLIC SPACE AND SECURITY		Bu3. ARCHITECTURAL DESIGN		Se3. SOCIO-DEMOGRAPHIC STRUCTURE
	Tf4. HERITAGE AND IDENTITY		Ud4. WELLBEING AND PUBLIC HEALTH		Bu4. BASIC HABITABILITY		Se4. RESIDENTIAL STRUCTURE
	Tf5. CITY METABOLISM		Ud5. ENVIRONMENTAL COMMITMENT		Bu5. BUILDING SUSTAINABILITY		Se5. RELATIONSHIP MANAGEMENT AND PARTICIPATION

Figure 7. Areas and categories covered in the analysis methodology. Source: Authors, based on information from (Hernández Aja et al., 2016).

in the framework of the comprehensiveness of urban policies. For example, for the four major areas, we have grouped aspects related to ecology and sustainability into their respective fifth categories, according to their scale of action.

In the first of the areas, territorial framework, five categories will be examined: the integration of the area with respect to the urban system in which it is inserted; its degree of balance in terms of continuity, urban fittings, and public amenities compared to the average; the variety and complexity of its urban fabric; the respect for its vernacular heritage and identity; and its contribution to the improvement of a more sustainable urban metabolism. For more details on the items comprising each of them, see the following table.

AREA:	CATEGORY:	TOPICS:	Score
Territorial framework (Tf)	Tf1. TERRITORIAL INTEGRATION OF THE URBAN AREA	· Modification of municipal land-use planning to enable internal improvements. · Generation of macro sectoral policies to improve accessibility from the local level. · Improvement of the integrality of the mobility system with the environment. · Balanced access to supra-municipal facilities and equipment. · Integration of its green areas in macro ecological networks.	0 - 5
	Tf2. BALANCE OF THE URBAN MODEL	· Continuity of the urban fabric (breaking down infrastructural barriers) · Improving the network of local health facilities · Improvement of the network of local education facilities · Improvement of the network of local green spaces · Improvement of walkability and non-road connectivity with the area.	0 - 5
	Tf3. VARIETY AND COMPLEXITY OF THE URBAN PATTERN	· Increase in the variety of residential typology (new buildings). · Increased diversity of uses and activities · Proximity facilities for socialisation (public kindergartens) · Improved landscaping and children's playgrounds · Improvement of outdoor recreational and sports areas for the elderly.	0 - 5
	Tf4. HERITAGE AND IDENTITY	· Upgrading and enhancement of public spaces in the city (nodal/iconic positioning) · Place identity enhancement and empowerment policies (against stigmatisation) · Policies of appropriation of urban spaces (support for neighbourhood activities and open-air festivals) · Transfer to social use of the built-up park and community management of open spaces. · Protection and cataloguing of local heritage	0 - 5
	Tf5. CITY METABOLISM	· Protection and promotion of peri-urban agriculture · Reduction of atmospheric emissions · Macro improvements in energy management and production · Improvements in urban water cycle management · Improvements in the region and treatment of solid urban waste	0 - 5

Figure 8. Areas and categories covered in the analysis methodology. Source: Authors, based on information from (Hernández Aja et al., 2016).

The second, urban design, examines: accessibility and mobility within the area; the degree of coverage of its infrastructure and urban services; the public space and its landscape in relation to safety; the degree of wellbeing and health that the urban space can generate; and the environmental commitment of the area. Again, more details are given in the table below.

The third, the building, analyses: the built environment, its safety, its architectural design, its habitability and interior accessibility, and its degree of sustainability (more details are given in the table presented on Figure 10).

Fourthly, the socio-economic area analyses the dimension of the psychosocial well-being of the inhabitants. It considers five categories: the social and institutional network, the economic network, the socio-demographic structure, the residential structure, and the degree of openness to active participation in the management of the urban environment (more details are given in the table presented at Figure 11).

AREA:	CATEGORY:	TOPICS:	Score
Urban design (Ud)	Ud1. INTERNAL ACCESSIBILITY AND MOBILITY	· Urban satisfiers of proximity (especially local shops) · Network of recreational spaces (seating and gathering in public space) · Network of accessible pedestrian routes (especially connectivity to schools) · Cycling mobility network · Traffic calming, shared space policies, park and ride policies, park and ride facilities...	0 - 5
	Ud2. INFRASTRUCTURE AND SERVICES	· Improving the services of provision and accesibility to informatiion about public urban services · Improved energy efficiency of urban facilities (in particular lighting) · Improved digital connectivity (optical fibre, public wifi) · Improved network of public transport waiting areas · Measures for the de-saturation of parking space	0 - 5
	Ud3. URBAN LANDSCAPE, PUBLIC SPACE AND SECURITY	· Urban scene: legibility and orientation systems (signposting) · Universal accessibility of public space (breaking down architectural barriers) · Scale and balance of open spaces (safety in relation to gender and age) · Natural surveillance (visibility ratio private-public spaces) · Relationship and use of ground floors with the public space	0 - 5
	Ud4. WELLBEING AND PUBLIC HEALTH	· Renaturalisation (ecological corridors, treatment of surface watercourses, eco-boulevards) · Hygrothermal well-being (fountains, shadows, trees...) · Environmental pollution (litter bins, containers, rubbish collection) · Noise pollution (noise plans and management of conflicts between activities) · Improvement of the network of sports facilities and activities.	0 - 5
	Ud5. ENVIRONMENTAL COMMITMENT	· Improvements in water management and saving systems (especially irrigation of parks and gardens) · Improvements in waste management systems (street cleaning) · Proposals for urban horticulture / farm schools · Environmental education and awareness-raising policies (responsible consumption campaigns) · Support for responsible consumption groups/proximity producers	0 - 5

Figure 9. Categories and items covered in Urban design. Source: Authors, based on information from (Hernández Aja et al., 2016).

AREA:	CATEGORY:	TOPICS:	Score
Building (Bu)	Bu1. BUILT ENVIRONMENT	· Financial aid for interior residential rehabilitation · Resolution of substandard housing conditions · Reforms in the ownership structure · Legal security of land ownership · Legal security in land care and management	0 - 5
	Bu2. BUILDING SAFETY	· Structural safety of buildings · Constructional safety of buildings · Fire safety of buildings · Safety in use · Safety of access to public space	0 - 5
	Bu3. ARCHITECTURAL DESIGN	· Increased residential typological variety (possibility of increases in usable surface area) · Relationship with the environment (requalification of interface sites with public space) · Improved façade aesthetics · Improvement of the constructive integration of infrastructural facilities · Improvement of spaces for community residential use	0 - 5
	Bu4. BASIC HABITABILITY	· Improvements in ventilation and sunlight · Universal accessibility to public space (connection to street) · Universal accessibility to the residence (lifts) · Acoustic wellbeing (treatment of embrasures and protective barriers) · Cleanliness, salubrity and care of the interblock/sidewalk space	0 - 5
	Bu5. BUILDING SUSTAINABILITY	· Refurbishment and improvement of the energy efficiency of the envelope · Improved efficiency of thermal and electrical installations · Savings in water consumption and grey/rain water management · Incorporation of renewable energy capture and use · Incorporation of bio-blimatic design solutions	0 - 5

Figure 10. Categories and items covered in Building. Source: Authors, based on information from (Hernández Aja et al., 2016).

AREA:	CATEGORY:	TOPICS:	Score
Socio-economic dimension (Se)	Se1. SOCIAL AND INSTITUTIONAL NETWORK	· Policies to support sectoral associations (economic, AMPAS, sports, cultural, etc.) · Improvement of institutional social services · Administrative cooperation with third sector entities · Improvement of cultural facilities and offers · Promotion of forums for citizens' meetings	0 - 5
	Se2. ECONOMIC NETWORK	· Increased social spending · Employment programmes · Training programmes (reskilling and upskilling) · Incentives to support entrepreneurship (especially in relation to local trade) · Programme for facilitating access to information and public services online	0 - 5
	Se3. SOCIO-DEMOGRAPHIC STRUCTURE	· Feminist policies and the promotion of gender equality · Policies to support the integration of vulnerable groups (migrants) · Programme to improve dependency policies · Improvement of the day-care centre network · Programmes to assist the elderly and combat loneliness	0 - 5
	Se4. RESIDENTIAL STRUCTURE	· Public rental solutions · Public programmes for access to home ownership (vulnerable groups and young people). · Support and information programmes for homeowners' associations · Institutionalisation of neighbourhood associations (neighbourhood conflict resolution mechanisms) · Policies against empty housing	0 - 5
	Se5. RELATIONSHIP MANAGEMENT AND PARTICIPATION	· Participation forums / Participatory strategic planning process · Participatory budgeting · Civic and values education programmes · Organisation and promotion of volunteer networks · Programmes to bring local institutions closer together and get to know them better	0 - 5

Figure 11. Categories and items covered in Socio-economic dimension. Source: Authors, based on information from (Hernández Aja et al., 2016).

The areas and categories are considered essential fixed aspects for the elaboration of any plan or programme. They should therefore be present at any discussion table when addressing any intervention on the city. The tool is defined as a method of communication and discussion, with the aim of allowing a simple and understandable communication between the different actors of Integrated Urban Regeneration, citizens, administration, and technicians. To this end, it is proposed to develop the synthesis of the analysis in graphic form. The result of the integral evaluation, considering each of the 100 items (five for each of the five categories of the four areas), will result in a pie chart with the general diagnosis as follows. It will show the twenty categories of analysis grouped into the four main areas.

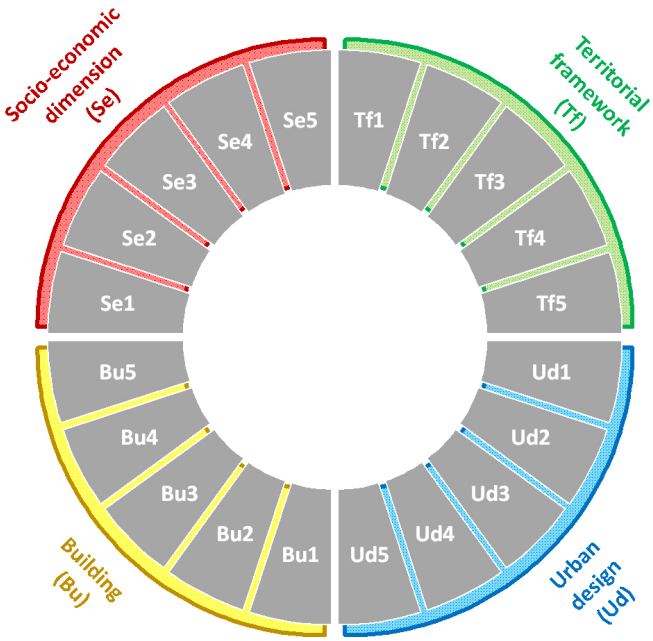


Figure 12. Basic outcome of the case analysis. Source: Authors, based on information from (Hernández Aja et al., 2016).

In this graph each of the twenty categories is coloured in grey, but in the specific results with the case studies analysis each of them will be coloured in three possible ways according to its degree of incorporation in the plan: in red if it is insufficient (when only one or none of the five items of each category have been considered), in amber if it is upgradeable (when two or three items have been considered) and in green when the category has been satisfactorily addressed (considering four or five of its items).

This evaluation system is shown in the table below:

Figure 13. Possible outcome in the evaluation of each category. Source: Authors.

Score	Evaluation
0 - 1	Insufficient
2 - 3	Upgradeable
4 - 5	Satisfactory

4.2. Case studies

In this paper we will evaluate five case studies in terms of their diversity in the time frame, the different tools used to develop them and their varied spatial location. In any case, all of them correspond to spatial frameworks detected in the analysis of vulnerable neighbourhoods (Hernández Aja, Rodríguez Alonso, et al., 2018): Puente de Vallecas in Madrid (where two different plans separated in time will be evaluated), Cabanyal in Valencia, Palma-Palmilla in Malaga, and Nou Barris in Barcelona.

Figure 14. Case studies. Source: Authors.

TOOL	OPERATIVE TOOL	CASE OF STUDY
Neighbourhood Redevelopment Programme in Madrid (1979-1996)	Communicated Order of the Ministry of Housing of 24 May 1979	Palomeras and Pozo del Tío Raimundo in the district of Puente de Vallecas
EDERF Cohesion Policy 2014-2020	Estrategias de Desarrollo Urbano Sostenible e Integrado (EDUSI) 2015, 2016, 2017	EDUSI 3C. Estrategias de Desarrollo Urbano Sostenible e Integrado de Cabanyal - Canyamelar - Cap de França, València 2016-2021
Estrategia Regional Andaluza para la cohesión e inclusión social. Intervención en zonas desfavorecidas (ERACIS) 2018	Planes Locales de Zonas Desfavorecidas	Plan de Zonas Desfavorecidas de Málaga: Palma-Palmilla 2019-2021
Fondo de Reequilibrio Territorial (FRT) 2017	Planes Integrales de Barrio (PIBA)	Plan Integral de Barrios del Distrito de Puente de Vallecas 2019
Pla de Barris de Cataluña 2004	Planes de los Barrios de Barcelona	Pla de Barris de Nou Barris 2019

Case 1: Neighbourhood Redevelopment Programme in Madrid. Puente de Vallecas (1979-1996)

In the Madrid of the 1970s, shantytowns and substandard housing (usually self-built dwellings without foundations, water supply, sewerage, etc.) persisted. Statistics show a total of more than 35,000 shantytowns in 1973, well below the record figure of 1961 (58,530), but still a large number for a city that was beginning to want to emulate the great European capitals. To this reality must be added the poor quality and the construction and stability problems (expansive clays, etc.) of a significant part of the public works of the 1950s and early 1960s (López de Lucio, 2012, p. 174).

In addition, this objective situation was compounded by the emergence of a strong neighbourhood association movement which put forward its demands at a very sensitive political moment, the years immediately after the death of the dictator during the transition to democracy. In 1968, the first Neighbourhood Association was created in Palomeras Bajas (Puente de Vallecas); after a decade of mobilisations and protests, sixty Associations were legalised in 1977. One of the main demands was the right to decent housing and re-housing "in situ" on the land occupied by the substandard housing and the deteriorated neighbourhoods of the 1950s.

It was in this situation that the Ministry of Housing's Communicated Order of 24 May 1979, which was the real origin of the Neighbourhoods Redevelopment Programme in Madrid that will be developed from that same year onwards. It will affect 29 actions within the municipality of Madrid that will be developed over almost 8 km2, building 38,000 new dwellings. The "symbolic" character of the operation: Madrid as a milestone of the urban mobilisations of the recent associative movement is unquestionable (...). There was talk of the "social debt", of the bill presented by the most restless and organised social sectors at the time of access to democracy, always insisting on the particularity of an operation confined to a city and a specific historical moment. We could speak of a "double transition": the political one, which would explain the institutional will and the considerable economic means made available for the operation, and another of a disciplinary nature, which will entail a new way of acting on the part of the administrations, taking on the leadership role and inclusion of the neighbourhood associations (López de Lucio, 2012, p. 175).

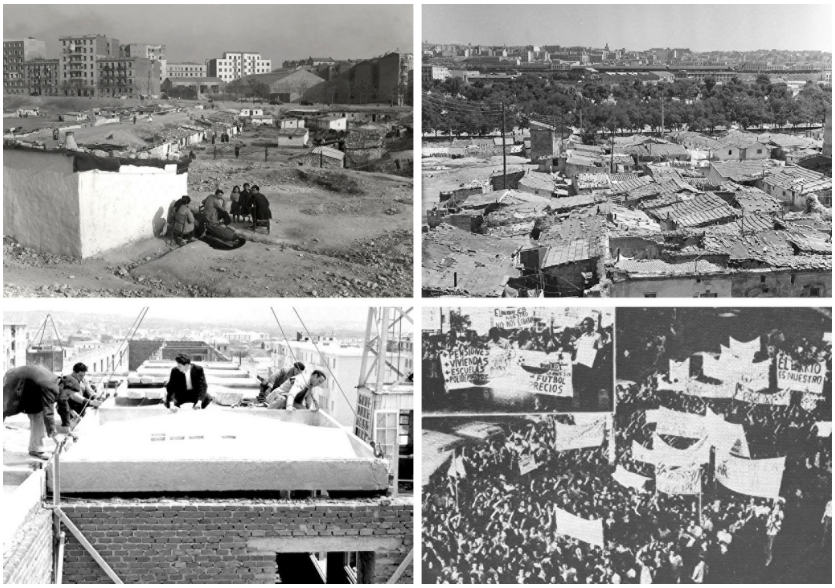


Figure 15. Madrid before the neighbourhood redevelopment programme: residential informality, self-building, and neighbourhood social mobilisation. Source: (Vinuesa Angulo, Sánchez-Fayos and Oliete, 1986)

Case 2: Valencia sustainable and integrated urban development strategy (EDUSI). Cabanyal (2014-2020)

The Integrated Sustainable Urban Development Strategies (ISUDS) are part of the regional and cohesion policy (2014-2020) of the European Union (EU) within one of its main objectives: sustainable development accompanied by other objectives such as job creation, business competitiveness, economic growth and improving the quality of life of citizens in all regions and cities of the European territory, reducing the economic, social, and territorial differences that still exist in the EU.

In the period (2014-2020) of the EU Regional and Cohesion Policy, integrated sustainable urban development focuses on the promotion of integrated strategies to strengthen

Figure 16. Cabanyal neighbourhood. Source: EDUSI programme

the resilience of cities and ensure synergies between investments financed by the European Structural and Investment Funds (European Commission, 2014) in order to respond to the challenges set out in the 2020 Europe Strategy: Achieving the smart, sustainable and inclusive society (European Commission, 2010a) which respond to five ambitious objectives covering employment, research and development, climate change and energy sustainability, education and the fight against poverty and social exclusion in order to meet these challenges and thus committing to finance the objectives of the Europe 2020 Strategy which incorporates the dimension of territorial cohesion to the existing economic and social ones.
The Integrated and Sustainable Urban Development Strategies (EDUSI) respond to a city strategy whose objective is to transform the city or functional urban area into a space of higher urban quality.
The Case of Study here presented, the area formed by the Cabanyal neighborhood, affected by a strong process of degradation over the last twenty years. The main problems in the area are those of residential vulnerability, as well as other mobility and environmental problems, the abandonment of buildings and the loss of commercial and productive activity and population, which have led to greater socio-demographic and economic vulnerability. To this is added a strong deterioration of coexistence, self-esteem, and the image of the neighborhood in Valencia as a whole.
Among the main expected results are those related to the urban regeneration of the neighborhood, the rehabilitation of housing and the improvement and incorporation of public spaces and facilities. In line with the above, in response to the problems of environmental vulnerability and considering the management of energy resources, the implementation of renewable energies, the improvement of waste treatment systems and the expected advances in relation to mobility thanks to the promotion of cycling, walking and public transport are added to the rehabilitation.
In addition, together with the improvement of facilities and in responding to social vulnerability, it considers the development of social and cultural programs that favor both the inclusion and social and educational attention of the most vulnerable groups in the neighborhood, as well as the improvement of coexistence.

Case 3: Malaga strategy for social cohesion and inclusion (ERACI). Palma-Palmilla (2018)
The mission of ERACIS is to improve the quality of life of people living in disadvantaged areas through the design, organization and evaluation of policy, regional and local public management with the active participation of citizens, different administrations, public and private entities involved in the area. ERACIS has four axes: sustainable economic and community development; public policies

Figure 17. Palma-Palmilla neighbourhood. Source: Malaga city council

for welfare and social cohesion; improvement of the habitat and coexistence; networking and innovation in community social intervention. The detection tool is the elaboration of the Map of Disadvantaged Areas, and the Local Plans for Intervention in Disadvantaged Areas (PLIZD) are the tool for intervention in neighborhoods, coordinated by the local administration, elaborated, and executed in a participatory manner between competent public administrations, social agents of the neighborhood and resident citizens (Hernández Aja et al., 2020)

Therefore, the aim is to act on the areas of towns and cities where there are serious situations of social exclusion and/or where there are risk factors for their occurrence, as well as to act on the general context of the municipality to transform the vision of these areas and vice versa, thus eliminating territoriality as a factor of exclusion.

The Case of Study PLZD-Málaga Palma Palmilla, since 2006, the ZI has had a community project, based on the methodology Action Research Participation, led by Malaga City Council and with the participation of all the associations, entities, administrations and neighborhoods of Palma Palmilla, administrations, and the neighborhood of La Palma Palmilla. This Community Plan, and the Integral Action Plan which is the germ of this Local Plan and in fact the structures of participation of the Community Plan are the ones that give rise to those that are the ones

that give rise to those envisaged in the current strategy. The Community Plan is organized into Thematic Committees that address the needs and potential of the neighborhood in a specific neighborhood in each sector. Palma Palmilla is a paradigm in Malaga of marginalization, exclusion, and insecurity. Its image is a degraded and inaccessible urban area completely isolated from the dynamics of the city. The Local Area Plan analyzes different interventions, corresponding to different matters and dimensions of people's lives, with a systemic approach, in which the different dimensions of the sectoral intervention, the different departments of the public administrations and private entities are integrated.

Case 4: Madrid Integral Neighbourhood Plans. Puente de Vallecas (2019)

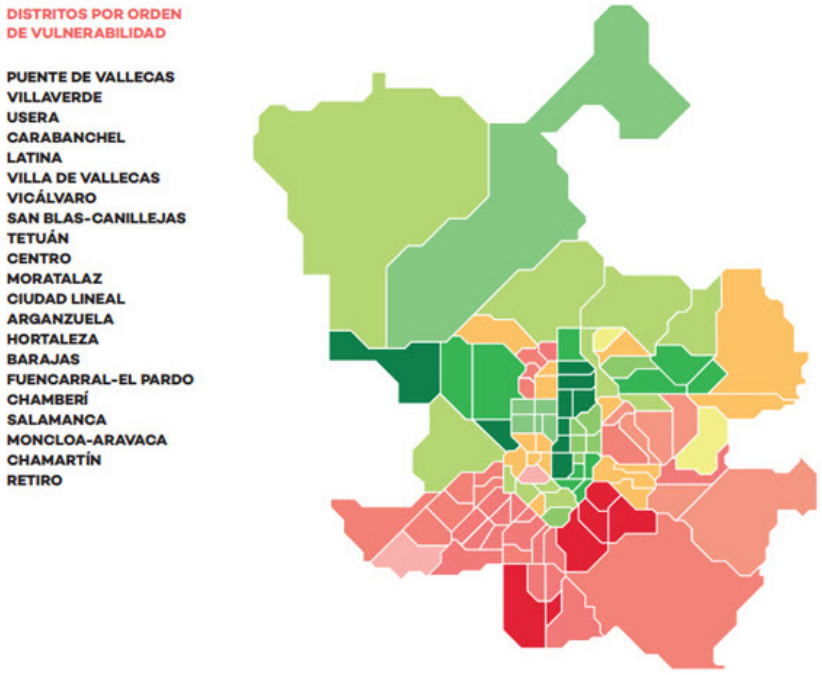
The Territorial Rebalancing Fund created in 2016, is a tool for the cohesion of the city that consolidates the principles of co-responsibility and territorial solidarity led by the Government Area of Territorial Coordination and Public Social Cooperation (Madrid City Council). Through the FRT and at the proposal of the districts, specific actions are carried out to prevent and tackle the causes and main problems that produce imbalances within a territory, for which the projects have been articulated around 4 main areas of needs: social, cultural, and educational intervention; housing; employment, training, and integration; and actions for urban improvement, public spaces, and public facilities. The methodology is based on five key categories or dimensions, which have been arrived at through consensus between the municipal technicians and the university professors in charge of carrying out the study: population, socioeconomic status, economic activity, urban development, and welfare needs (Hernández Aja et al., 2020).

The main objective is to improve the quality of life in the most vulnerable areas of Madrid. It involves urban improvement actions, public spaces, and public facilities.

This strategic planning tool is reflected in an operational tool: the Integrated Neighbourhood Plans. The Integral Neighbourhood Plans (PIBA) are a set of actions agreed with the neighbourhood organisations that have an impact on the daily life of the neighbourhoods by means of training, employment, educational and public space regeneration programmes, to improve the quality of life in the most vulnerable areas.

For each Plan, the Local Forum will constitute will be set up in the Local Forum. neighbourhood associations, the participants (organisations and residents) of the Local Forums of the District concerned, as well as the Municipal District Board, the Regional Federation of Neighbourhood Associations of Madrid (FRAVM) and the Government Department of Territorial Coordination and Public-Social Cooperation of Madrid City Council. In this space for consultation, proposals

Figure 18. Vulnerability Map of Madrid. Source: Madrid city council



for action are formulated and analysed to confirm their viability.

The social composition and economic level make Puente de Vallecas the most vulnerable district in Madrid. In fact, of the seven most vulnerable neighbourhoods in Madrid, six belong to this district.

Case 5: Barcelona Neighbourhood Plans. Nou Barris (2019)

The Barcelona Neighbourhood Plan is a municipal initiative with a 4-year horizon to reverse the current situation of inequality in some areas of the city, launched by the government team of the mayor of Barcelona since 2015 and activist, Ada Colau. It is an extraordinary programme for the most disadvantaged neighbourhoods of Barcelona, which aims to reverse inequalities through the application of new public policies; involving citizens in the development of projects to revitalise their neighbourhoods and with an "extraordinary and intensive budget" allocated for a limited period of time (Ajuntament de Barcelona, 2019).

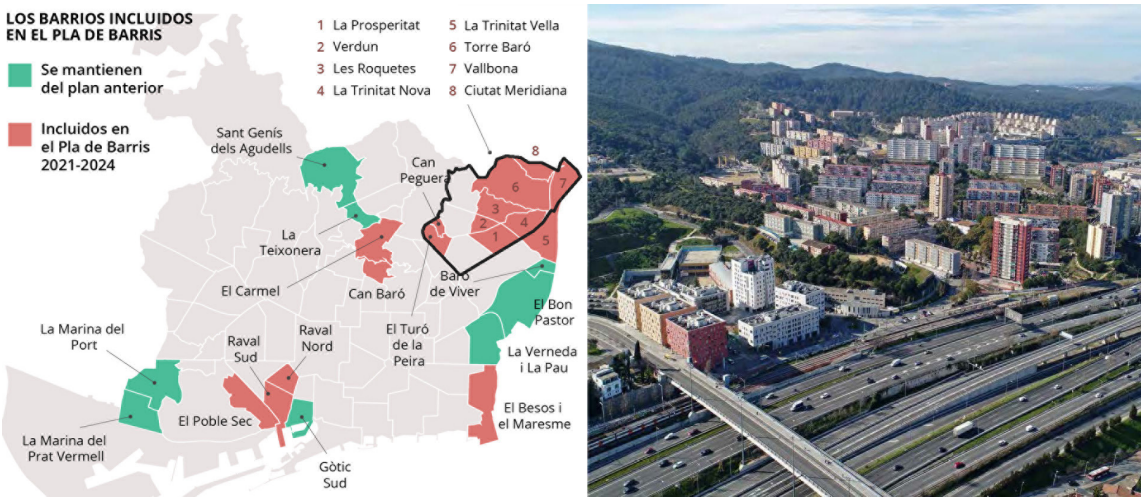


Figure 19. Neighbourhood included in the Barcelona Plam and the view of Nou Barris district. Source: (Ajuntament de Barcelona, 2019)

The Barcelona Neighbourhood Plan does not have a single goal but has multiple objectives that aim to transform key issues in the areas of education and public health, social rights, gender equality and community action, housing, employment, economic development and the social economy, public space and accessibility, environmental sustainability, and climate emergency. The main objective of the Neighbourhood Plan is to empower neighbours to organise themselves and establish objectives and actions to improve collective life in the neighbourhood, promoting social innovation practices and citizen action with a clear objective of improving and strengthening the social capital of the neighbourhoods. For each of the areas addressed (social rights, education, economic activity, urban ecology and environmental sustainability) a series of specific objectives are specified (Ajuntament de Barcelona, 2019).

Each plan has a project manager, who is the person who leads and coordinates it with exclusive dedication. *The institution* does not directly execute all the actions included in the Neighbourhood Plan but is responsible for bringing together the necessary municipal capacity to develop them as transversally as possible. In this sense, the municipality team works together with the technicians of all the areas and districts of Barcelona City Council linked to the actions of the plans and with the residents and organisations of the territories. In parallel to this framework, an Advisory Council has been set up to assist in the design and implementation of the Neighbourhood Plan (Ajuntament de Barcelona, 2019).

5. RESULTS

Case 1: Madrid Neighbourhood redevelopment. Puente de Vallecas (1979-1996)

Madrid Neighbourhood redevelopment was awarded as an example of participation and urban renewal in the Best Practices Competition held in Dubai in 1996 (Biblioteca Ciudades para un Futuro más Sostenible, 1996). Moreover, the report by a group of European experts on the effectiveness of the Habitat II Programme 1996 acknowledged its overall success, apart from some criticisms, and called it "one of the largest urban development projects in Europe since 1945". "The overall assessment has been that it has easily passed the most critical test of all: its impact in human terms. The re-housing in good conditions of almost 150,000 people, nearly 40,000 families, all of whom had been living in substandard conditions and many in the most abject circumstances, will be the programme's greatest achievement ".

Figure 20. Actions in the district of Puente de Vallecas: Palomeras on the left and Pozo del Tío Raimundo at the bottom right. Source: (López de Lucio, 2012)

The essential features of Madrid's redevelopment can be summarised as follows as follows:

- The Administration participated actively, in close relationship with neighbourhood organisations and their technicians, making possible the expropriation or acquisition of the necessary land and investing in infrastructures, facilities and housing.
- The inhabitants of the shantytowns and state housing in ruins were guaranteed to remain on the same land they had previously colonised without any expulsion process taking place.
- The censuses of rehoused people were drawn up by the neighbourhood organisations. There was a close relationship between neighbours-technicians-administration, which is not free of conflicts that are resolved through negotiation and consensus. In fact, the residents participate directly through Assemblies and Control Commissions in the design of their homes and neighbourhoods.
- The speed of the process which, in little more than a decade, has created the equivalent of an intermediate city.
- The city model generated, under the principle of building housing by making city. The dwellings (average surface area of 100 m2) have high quality standards, even higher than the private developments of the time. The new neighbourhoods have a good urban design with a high degree of facilities.
- In no case does the purchase of new housing exceed 10% of the family income of the beneficiaries. of the beneficiaries' family income.

Imputing all the costs the total amount comes to more than 2800 million euros updated to 2021. This figure exceeded the initial forecast and was not without criticism from the international evaluation bodies, which pointed out the lack of measures to deal with the subsequent speculation generated by the process, as well as some doubts about the legitimacy of the acquisition on the part of some owners. Anyway, also it was true that the operation benefited the configuration of the city as a whole. The resulting neighbourhoods were successfully incorporated into the urban continuum and the improved communications allow reasonable accessibility (Biblioteca Ciudades para un Futuro más Sostenible, 1996).

With the data given so far, the overall result of the comprehensiveness of this plan seems obvious. The urgency determined that the action focused on the building, and therefore there was still a lot to improve regarding the territorial framework and urban design (especially in the issues of ecology and urban sustainability that were hardly discussed, obviously it was not yet a topic so present). And in the same way, the only socioeconomic category that is completed is that of the social and institutional network (Se1).

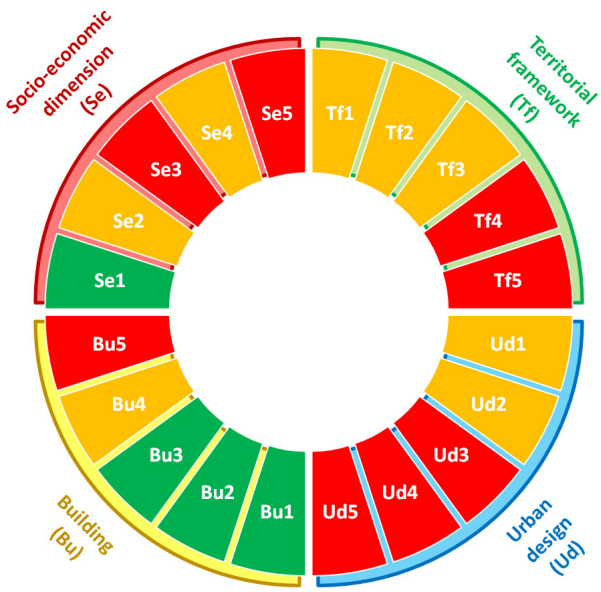


Figure 21. Outcome of the first case study analysis: Madrid Neighbourhood redevelopment in Puente de Vallecas (1979-1996). Source: Authors, based on the methodology from (Hernández Aja et al., 2016).

Case 2: Valencia sustainable and integrated urban development strategy (EDUSI). Cabanyal (2014-2020).

The Strategy is based on a clear vocation of comprehensiveness and transversality. To this end, it will be developed in different dimensions as:

- Sustainable urban mobility: Reducing CO2 emissions by prioritising intermodal pedestrian, cycling and public transport traffic.
- Physical and social regeneration of the neighbourhood through rehabilitation, reconstruction, and housing access programmes. Improvement of energy efficiency and increase of renewable energies: Intervention in the building of the area.
- Physical, economic, and social regeneration of the most degraded urban environment of the neighborhood. Protection, promotion, and development of the cultural heritage.
- Revitalization of the neighborhood through infrastructures and cultural programs. Technical assistance for governance, partnership and coordination and communication between all actors.

- Improving employability and socio-occupational integration. Universal access to ICT on equal terms and elimination of the digital divide.
- Promotion of business reactivation technical assistance for management, monitoring and related capacity building. Support for entrepreneurship and job creation.
-Comprehensive family support: Inclusion and community prevention from a gender perspective.

In the case of Valencia, the results obtained in relation to the objectives set based on the methodology used is the following. There are many gaps, especially in the territorial framework and urban design where the actions are clearly insufficient and focus a little more on building and on the economic dimension of employment policies and commercial reactivation of the urban space.

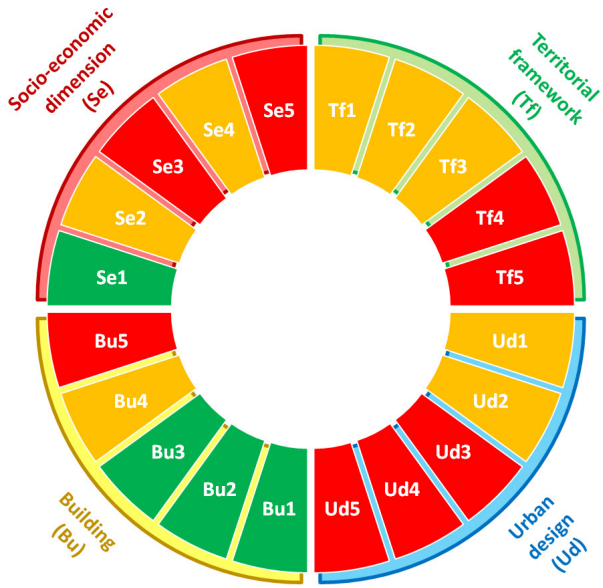


Figure 22. Outcome of the second case study analysis: Valencia sustainable and integrated urban development strategy (EDUSI) in Cabanyal (2014-2020). Source: Authors, based on the methodology from (Hernández Aja et al., 2016).

Case 3: Malaga strategy for social cohesion and inclusion (ERACI). Palma-Palmilla (2018)

The PLZD Palma-Palmilla is based on different themes as:

- Improve sustainable mobility. Planning and development in co-ordination with other intervention plans and facilitate urban and metropolitan mobility. Make public roads accessible and revitalizing the use of public spaces.

- Increase the number of sports, cultural and social facilities promoting inclusive leisure and sporting activities. Increasing the number of green areas and public spaces.
- Improve relations between people from different backgrounds through knowledge and recognition of different cultural identities.
- Ensure access to basic services such as sewerage, electricity, water, rubbish collection and public cleaning.
- Increase actions aimed at conserving, maintaining, and rehabilitating the existing housing stock. Reduce the number of substandard housings and improve knowledge of the socio-economic reality of the area. Identify those living conditions with the greatest influence on existing differences in the level of health and reorient related policies, reinforcing those actions oriented towards prevention, promotion, and lifestyles.
- Reorient health care and the resources of the Andalusian Public Health System towards the most prevalent health problems in disadvantaged areas. Improve sexual and reproductive health.
- Improve and articulate the coordination and integral work between the different Administrations, social entities, and private resources.
- Increase the level of employability of people living in the areas, especially women and people in situations of exclusion, enabling them to access the labour market. Create a specific employment intervention instrument in disadvantaged areas. Adapt and implement active employment policies to the specific needs of people in situations of exclusion or at risk of exclusion. risk of exclusion.
- Promote local trade and its marketing channels within disadvantaged areas. Increase and consolidate the number of companies involved in the development of the areas, promoting social responsibility. Increase the level of linkage between the economic benefits of social services and active employment policies. employment policies.

- Develop itineraries of socio-occupational inclusion, bridging the digital divide and the gender gap.
- Promote the non-enforcement of evictions due to non-payment of rent or mortgage.
- Improve the methodologies applied to the resolution of neighbourhood conflicts and revitalise and consolidate neighbourhood communities by increasing meeting and coexistence spaces.
- Develop cultural events and creative activities and the participation of the neighbourhood in them to support the associative fabric. Encourage the participation of the population of the area in public services.

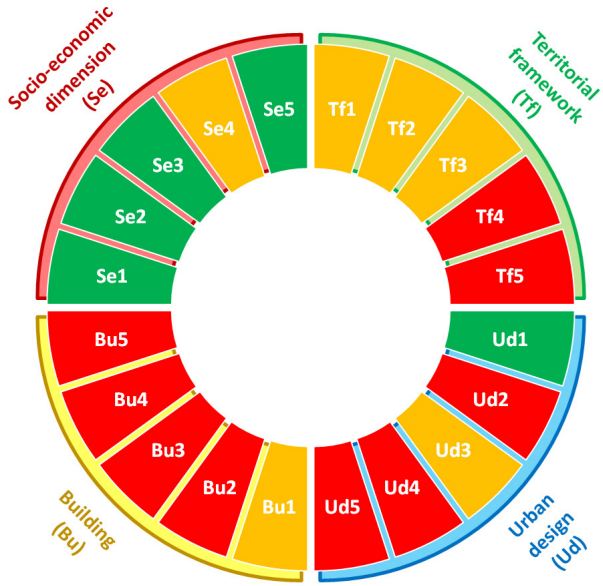


Figure 23. Outcome of the third case study analysis: Malaga strategy for social cohesion and inclusion (ERACI) in Palma-Palmilla (2018). Source: Authors, based on the methodology from (Hernández Aja et al., 2016).

However, despite the wide range of actions, in the case of the Palma-Palmilla neighbourhood in Malaga it should be address that the resources and actions have clearly focused on the socio-economic dimension, perhaps because the strategy to which it adheres was formulated by the Andalusian Ministry of Social Affairs. However, it should be noted that the territorial framework dimension could be improved, while the dimension on building and urban design actions is almost non-existent, even though its objectives include the revitalisation of the urban space as one of the axes of the strategy.

Case 4: Madrid Integral Neighbourhood Plans. Puente de Vallecas (2019)

Despite the intentions set out in this strategy, when applying our methodology in the specific case of Puente Vallecas, the expectations were not what it was hoped. Their general objectives include five dimensions which incorporates the following actions to be carried out:

- Adequacy of adaptation of pedestrian spaces and renaturalisation. Workshops on recycling furniture, self-building, and sports equipment in an Environmental School.

Figure 24. Overview Puente de Vallecas District Source: Creative Commons

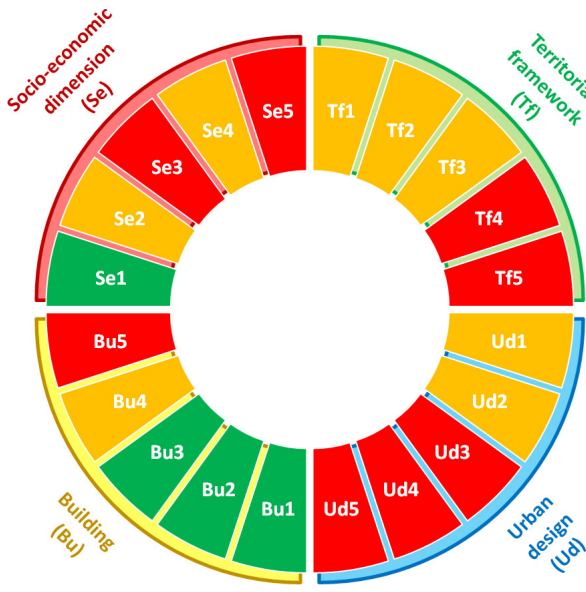


Figure 25. Outcome of the fourth case study analysis: Madrid Integral Neighbourhood Plan in Puente de Vallecas (2019). Source: Authors, based on the methodology from (Hernández Aja et al., 2016).

- *Cuidamos Vallecas Programme* and Psychopedagogical service for support and promotion of autonomy for people with disabilities and/or socio-sanitary difficulties.
- Extracurricular sports activities for children and teenagers, and schools for parents.
- Neighbourhood coexistence actions aimed at the Roma population (especially women). Groups for gender equality and prevention of violence. Awareness-raising against gender violence and on equality. Attention to the specific needs of older women. Community actions with the over 65s.
- Home Economics Group to people with economic difficulties. Training in home economics. Digital literacy and use of ICTs. And an Employment Plan.

There are no actions on building or urban design and the ones presented in the territorial framework could be improved; it is a strategy more focused on the socio-economic dimension of the neighbourhood. Although it is true that Madrid has other strategies more focused on the design and planning of urban space, such as the *Plan Madre*, which may respond to the shortcomings presented here.

Case 5: Barcelona Neighbourhood Plans. Nou Barris (2019)

The conception of the Plan is based on a clear vocation of comprehensiveness and transversality. To this end, it is structured in six areas in which different projects will be developed and deployed in the same territory and at the same time:

- "Education and public health" encompass all those actions that promote the generation of new educational opportunities or that address the improvement of public health, with a community perspective.
- "Social rights, gender equality and community action" are actions that directly affect the community and its rights, with a special focus on inequalities that particularly affect women or other vulnerable groups. It also includes all actions aimed at improving networking and cohesion between neighbours and strengthening community life in the neighbourhoods.
- "Housing" brings together all actions aimed at improving the living conditions of residents in relation to their homes. It mainly responds to physical improvements to their properties but also to those actions of social accompaniment in the communities.
- "Occupation, economic promotion and social economy" include all actions aimed at promoting economic activity and quality employment.
- "Public space and accessibility" aim at improving public space with a community vision or with the objective of improving accessibility.
- "Environmental sustainability and climate emergency" include actions that specifically aim to reduce the effects of climate impact on the most vulnerable

neighbourhoods and population (Ajuntament de Barcelona, 2019).

Figure 26. The integrated approach of the Barcelona Neighbourhood Plans (above) and some of their urban proposals in the district of Nou Barris (below). Source: (Ajuntament de Barcelona, 2019)

The Barcelona Neighbourhood Plan is the last and most comprehensive of the proposals studied: it contains projects and programmes that respond to almost all our categories of analysis. However, we detected shortcomings mainly in the areas of ecology, building sustainability and urban metabolism, despite this being one of the main framework policies in its initial design. This is often the case, when dealing with vulnerable neighbourhoods with entrenched social problems, it is difficult not to focus on them and take a step further towards ecological transition.

On the other hand, most of the proposals have an urban acupuncture methodology: many projects, touching on almost all the issues, but with a confusing common thread that binds them together and not too much expenditure (despite their good intentions). In the Nou Barris district, 30 million have been spent on the second edition of the plan, a pyrrhic amount compared to the actions and aspirations the plan sets out. But still, the most integral of all.

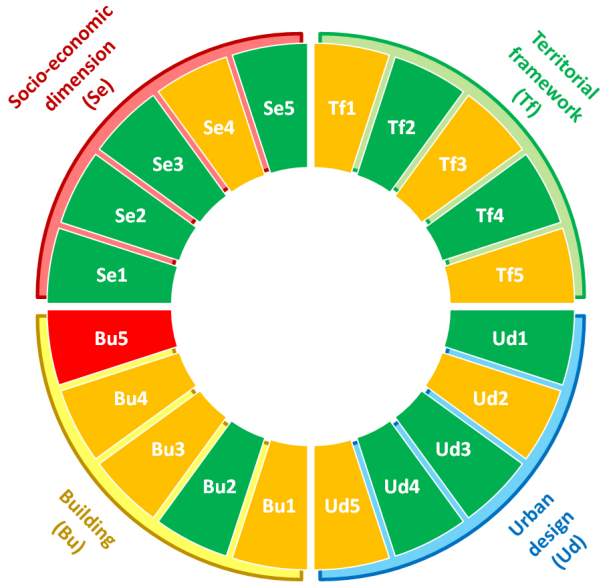


Figure 27. Outcome of the fifth case study analysis: Barcelona Neighbourhood Plans in Nou Barris (2019). Source: Authors, based on the methodology from (Hernández Aja et al., 2016).

6. DISCUSSION

Comparing all the strategies studied, it has been realised that there is a clear tendency for the territorial framework, the urban design, the buildings or the socio-economic dimension to be treated on their own as sectoral actions and not integrated into a integrated urban regeneration strategy. Therefore, the New Bauhaus initiative must have the capacity to join forces so that we really design sustainable and resilient cities in a coordinated way and where all the dimensions that have an impact on this are represented and interlinked.

In the first of the cases analysed, it was observed that the urgency of the

Figure 28. Summary table with the analysis of the five case studies presented. Source: Authors, based on the methodology from (Hernández Aja et al., 2016)

AREA:	CATEGORY:	CASE 1: Madrid Neighbourhood redevelopment. Puente de Vallecas (1979-1996)	CASE 2: Valencia sustainable and integrated urban development strategy (EDUSI). Cabanyal (2014-2020)	CASE 3: Malaga strategy for social cohesion and inclusion (ERACI). Palma-Palmilla (2018)	CASE 4: Madrid Integral Neighbourhood Plans. Puente de Vallecas (2019)	CASE 5: Barcelona Neighbourhood Plans. Nou Barris (2019)
Territorial framework (Tf)	Tf1. TERRITORIAL INTEGRATION OF THE URBAN AREA	Upgradeable	Insufficient	Upgradeable	Insufficient	Upgradeable
	Tf2. BALANCE OF THE URBAN MODEL	Upgradeable	Insufficient	Upgradeable	Upgradeable	Satisfactory
	Tf3. VARIETY AND COMPLEXITY OF THE URBAN PATTERN	Upgradeable	Insufficient	Upgradeable	Insufficient	Upgradeable
	Tf4. HERITAGE AND IDENTITY	Insufficient	Insufficient	Insufficient	Insufficient	Satisfactory
	Tf5. CITY METABOLISM	Insufficient	Insufficient	Insufficient	Insufficient	Upgradeable
Urban design (Ud)	Ud1. INTERNAL ACCESSIBILITY AND MOBILITY	Upgradeable	Upgradeable	Satisfactory	Upgradeable	Satisfactory
	Ud2. INFRASTRUCTURE AND SERVICES	Upgradeable	Insufficient	Insufficient	Insufficient	Upgradeable
	Ud3. URBAN LANDSCAPE, PUBLIC SPACE AND SECURITY	Insufficient	Insufficient	Upgradeable	Insufficient	Satisfactory
	Ud4. WELLBEING AND PUBLIC HEALTH	Insufficient	Insufficient	Insufficient	Insufficient	Satisfactory
	Ud5. ENVIRONMENTAL COMMITMENT	Insufficient	Insufficient	Insufficient	Insufficient	Upgradeable
Building (Bu)	Bu1. BUILT ENVIRONMENT	Satisfactory	Insufficient	Upgradeable	Insufficient	Upgradeable
	Bu2. BUILDING SAFETY	Satisfactory	Insufficient	Insufficient	Insufficient	Satisfactory
	Bu3. ARCHITECTURAL DESIGN	Satisfactory	Upgradeable	Insufficient	Insufficient	Upgradeable
	Bu4. BASIC HABITABILITY	Upgradeable	Insufficient	Insufficient	Insufficient	Upgradeable
	Bu5. BUILDING SUSTAINABILITY	Insufficient	Upgradeable	Insufficient	Insufficient	Insufficient
Socio-economic dimension (Se)	Se1. SOCIAL AND INSTITUTIONAL NETWORK	Satisfactory	Upgradeable	Satisfactory	Upgradeable	Satisfactory
	Se2. ECONOMIC NETWORK	Upgradeable	Satisfactory	Satisfactory	Satisfactory	Satisfactory
	Se3. SOCIO-DEMOGRAPHIC STRUCTURE	Insufficient	Insufficient	Satisfactory	Upgradeable	Satisfactory
	Se4. RESIDENTIAL STRUCTURE	Upgradeable	Insufficient	Upgradeable	Insufficient	Upgradeable
	Se5. RELATIONSHIP MANAGEMENT AND PARTICIPATION	Insufficient	Insufficient	Satisfactory	Satisfactory	Satisfactory

problem made it necessary to focus on the building and institutionalisation of the associative movements, which generated notable deficiencies in the sustainability of the developments generated, but also a notable effort to qualify them, equip them and integrate them with the rest of the city. The following three cases alert us to the difficulty of addressing issues beyond the socio-economic when acting in urban areas with vulnerable populations. In this sense, it is essential that these areas have extraordinary resources if we want to address their weaknesses from a comprehensive perspective. The latest case, the Barcelona Neighbourhood Plan, brings us closer for the first time to a comprehensive approach, but it should not be forgotten that comprehensiveness cannot be the sum of sectoral projects with very limited financial resources and without studying their interdependencies.

7. CONCLUSION

This analysis brings to the table at least five lessons that should be contemplated:

- The New Bauhaus has a primarily architectural origin but must draw on other ongoing programmes to

introduce the social inclusion and the ecological transition as two of its pillars. To do so, it would be sufficient to integrate the principles already developed and learned from the urban agendas, European cohesion policy and the European Green Deal.

- The methodology of analysis with four scalar areas is a good starting point for discussion: territorial/integral/macro; urban/contextual/meso; housing/intergroup/micro; and socio-economic/agency/personal. Addressing these four scales and their interrelationships must be properly included in any comprehensive urban regeneration plan.
- It is difficult to include the ecological transition when there are pressing social problems still to be solved. It is essential that these areas have extraordinary resources if we want to address their weaknesses from a comprehensive perspective.
- Integralitic, compehensiveness or holism in urban public policies still has a long way to go. It seem that they are becoming more integral, but this holism must go beyond urban acupuncture, with comprehensive and far-reaching plans.
- If we have less and less budget for ever more ambitious actions, new investment mechanisms must be researched. Otherwise, the limited operational capacity will reduce the alleged integrality to a good analysis of intentions but its transformative capacity will be minimal.

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TITLE

THE CITY OF THE INDIVIDUALS AND THE CITY OF HUMAN GROUPS. THE CASE STUDY OF MILAN, ITALY

authors

Adriano Colussi
Graduate Student of "Architecture and Urban Planning"
at University IUAV of Venice
e-mail: adriano.colussi@libero.it

Adriano Colussi

Colussi Adriano. Born in November 29th, 1990. Graduate Student of "Architecture and Urban Planning" at University IUAV of Venice, Italy. European Master in Planning & Policies for cities, environment and landscape obtained on April 28th, 2016. Summer school of Environmental Policy at the Tsinghua University in Beijing, China. Member of Ordine degli Architetti, Pianificatori, Conservatori, Paesaggisti e Conservatori della Provincia di Padova n.3884. Member of ASSURB.
Published papers: Colussi A., Le città vivibili – Città Metropolitana di Venezia, Urbanistica Informazioni, a. XXXXV, n.280-281, INU Edizioni, Settembre Ottobre 2018.

Keywords:

Community | ICT | urban facilities | smartphone| groups| global community| smart App| digital| post-modernity | together| cultural identity| spatial justice| environmental sustainability

ABSTRACT

The Smart city concept was introduced ten years ago into the policymaking toolkit. One decade has passed since the City Councils of all over the world adopted hyper-functional systems to handle complexity, through information and communication technology (ICT). Aim of this scientific paper is monitor and report the effects of ICT applied to the city after a considerable amount of time. The effectiveness of smart policy is proportional to the efficiency of personal technological devices. The bias of allocation of equipment and facilities into urban territories is shaped by the attitude of the individuals toward information technology. Meanwhile, the development model moves from community-based services to individual target commodities and goods because of smart devices. The technological framework concerns every part of the daily routine of single and associates, with controversial effects: if the cultural identity, the moral values, and the common adaptive strategies are determined collectively, won't an individualized society be less resilient and more unstable? The point of view of urban planners will bring an end to the affair. The case study takes into account the global city of Milan. The city is a sample for a close analysis, it is a dynamic space that reflects global trends of the population in general. The Italian city is also a scalable model: it has its environmental and inclusive challenges, its good practices, the international architectural masterpieces, the local policymaking, and the issues of a global community.

Die Stadtluft macht frei.
Moving to the city set you free .

1. INTRODUCTION

Architecture is the discipline that shapes the outstanding space for human needs and human activities. There are several goals reachable by architecture projects: security, densification, comfort. The goals of the New European Bauhaus are synthesized by the adjectives beautiful and sustainable. Beauty depends on aesthetic sensibility. Sustainable became a critical word during the ongoing century. There is another adjective that is interesting for the generation of architects of the twenty-first century: it is "digital", "connected", "wired". The European decision-maker left out the "internet". One decade has passed since the portable device launched in 2007 by Steve Jobs revolutionized everyday life more than the new currency, the Euro, at the same way motorized vehicles did one hundred years ago. One decade has passed since the city councils of all over the World adopted hyper-functional systems for basic services, besides urban equipment and public facilities. The so-called Smart City brings to the urban planner a wide toolkit of urban planning solutions driven by technological devices and Apps. This essay is about monitor and reports changes in the city of Milan, an important node in the global network of Global cities and Regions (Saskia Sassen, 2007). This vocabulary belong to urban sociology. Urban sociology is the branch of urban planning that take into account what does a community matter, unspoken needs, and ambitions. The contribution of several sociologists and professors of sociology made possible the comprehension and the deep understanding

of certain phenomena and social issues. This paper describes the practices of singles and associates on modern smart living. The main interest of research is the social issue related to the metropolitan population. How the urban community gets used to a hyper-technological surrounding? Which adaptation strategies do people in their daily routine? Is the society of technological consumption sustainable? Is it possible that a "beautiful", even "sustainable" habitat makes the city a place where we do not live "together" because of interfering variables and technological drivers? According to Hashim Sarkis, curator of 17th Biennale of Architecture of Venice 2021, "How we will live together", the exploration of cohabiting practices is something architects should pay attention to. Particularly the coexistence between people without a shared cultural identity (residents, immigrants), or people without a determining role in the productive framework (working class, NEETs, unemployed), is considered decisive. The contemporary social problem depends by society itself. For example, are available places into healthcare structures proportional to inhabitants who grow older in high populated suburbs? Are hospitals well-balanced facilities for local welfare? The internet and the smartphones allowed to exceed the congestion charge of modern crowded cities for one decade, but the covid emergency put into the public agenda new issues that regard scaling public services and demographic factors. The data infrastructure (ICT) was useful for policymakers to compute statistics. Smart cities solutions were a simplification of the complexity of the urban necessities, but the life-long lasting solution will be offered by architectural projects and plans. The long-term adaptation relies on new concepts of designed spaces for living, working and experiencing leisure time: residential buildings, business districts, and cultural natural areas. The case study takes into account five projects in Milan, developed during the 2010s. The inclusiveness and the safety of the residential areas, the restorativeness of the green areas, the individual comfort zone of the people working and commuting in the urban area are part of a sustainable strategy of modern design. The European design should internalize the "emotions" of the cities and solve the emerging problems of human beings through architecture, it means through solid, material domestication of the space (through buildings and infrastructure). However, the paper identifies social problems, threats, and weaknesses of modernity that will not be solved by the material infrastructure, by the solutions offered by the architects and planners, problems such as: detachment, insecurity, spatial justice, affordability of the apartments into the metropolitan cities, de-location of productive activities, isolation of human beings, even the rising hostility into our beautiful and sustainable cities.

1. THE GLOBAL CITY

Many scientific papers keep the case study as an addendum in the last few pages. That's a different paper. I will start from the beginning with five projects built in the city of Milan, Italy during the last decade 2010s. These are the followings:

1. Vertical Forest by Boeri Architect, inaugurated in 2014. A pair of residential towers with hundred of trees on twenty thousand squared meters (2 hectares) of terraces;
2. Milano City life by Zaha Hadid, Arata Isozaki, and Daniel Libeskind. An urban scale development plan on an area of 25 hectares in the neighborhood of Fiera. A new functions take place in the northern part of Milan where was the former tradeshow and congress hub of Milan, Fiera.
3. Bocconi University Campus by Kazuyo Sejima and Ryue Nishizawa and their SANAA Studio. The urban renovation in the southern part of Milan is implemented by a detailed plan for a new campus of a private University. The academic function plays a decisive role in the post-industrial city, the University of Economy gives a "new third sector specialization" meaning to the urban context. Economic and management studies give to the city of Milan a long-term perspective of a balanced development, changing its industrial connotation for a modern business connotation. Nowadays it hosts the so-called creative class (businessmen), who replaced the industrial working class.
4. Unicredit Tower by Cesar Pelli and Palazzo della Regione Lombardia by Pei, Cobb, Freed & Partners. The new Business District Plan completed in 2012 realized a dynamic public space with Piazza Gae Aulenti and Porta Nuova designed by LAND Studio.
5. Milano Water Front called Darsena by Guazzoni Architetto. A void space on the artificial waterfront realized by the implementation of rationalist principles in architecture and public procurement schemes. The Milano Water Front is the "present simple" of the New European Bauhaus conjugation.

These projects give a wide overview of several aspects of contemporary architectural styles, public- private financing, and modern urban planning models. The city is growing fast, driven by optimism, irresponsibility, and postmodern needs. The adoption of an urban scale plan called Piano del Governo del Territorio – PGT, approved in October 2019 is inspired by sustainable development, and high standards required to produce a desirable quality of life. The PGT of Milan pursues modern targets of beautiful and efficient architectural solutions. The local scale is influenced by super-national development goals. Objective number 11 of the ONU Agenda 2030 is about "Sustainable cities and communities" (Img.1).

The word "community" has a strong echo. Sociological issues related to sustainable communities are well represented in the city of Milan, a global city with commuters, immigrants, and city users (G. Martinotti, 1993). What's a sustainable community? Sustainability is not a trend, it is the new standard, at the same way ICT has been for the last ten years. Environmental sustainability attitude is a cross-over attitude, ICT is cross-over too. ICT is complementary to this new attitude toward sustainability. Do communities implement ICT in the effort for environmental and social sustainability? Sustainability leads to altruistic behaviours. At the other hand, ICT (Television and radio, nowadays internet) were made to spread information from a centered broadcaster. The ICT, also, was made to entertain and educate. The leading message will bring to the awareness of the citizens or to a dangerous conformism. The ICT is a vector of hypodermic messages. The ICT designed an immaterial infrastructure that affects both the social and the built environment. The case study of Milan is not a "site-specific research" but a scalable topic, internationally spendable, inspired by a full bibliography of humanists and scientists. "Inference" is a statistical methodology that proceeds from the little part to the bigger one. The technological approach to complexity offers the new "ratio" for the evaluation of the quality of the urban space and policy making. As said in the introduction, the technological approach offered an alleviation of the demographic congestion charge. The simplification of legal frames and the overlaps of jurisdiction was due to a mobile smartphone, that was charged of the new social balance. An "everywhere internet individual connection" has been useful, but flows of people and spots of human activities are materially identified on the map and their pressure is relevant. The virtual space will not bring the coexistence of different human beings into urban space. Overcrowded urban areas are real problems for politics, not virtual, as the private mothorized mobility, that causes congestion and pollution, at the same way of the mass consumption or the overproduction of garbage are not virtual problems. All regard SDG n°11. The architecture will contribute to the solution of real problems

Figure 1.
Sustainable development Goals. N°11.

of living communities. Innovative design like the one of the case study of Milan, described in the next paragraphs, will help policymakers and designers.

2.1.The residential forest

"There are two towers that bloom every season". The vertical forest is the English name for "Bosco verticale", a tall pair of buildings that were implemented with huge concrete pots on the balconies: hundreds of terraces that measure twenty thousand squared meters overall (fig. 2). Small plants and tall trees grow on the façade. The designer of this very popular sustainable building, Stefano Boeri, describes the benefits of the vertical forest:

- Natural cooling;
- Shading system realized by the tall trees;
- An antisprawl solution (in fact, the regular density of inhabitants of a residential complex is provided by forty plans of apartments that host hundreds of families).

Of course, the plants and the trees on the vertical forest improve the monetary value of each flat, more than luxury pieces of furniture. Rem Koolhaas wrote his masterpiece "Delirious New York. A Retroactive Manifesto for Manhattan" (R. Koolhaas, 1978) relating about the residential towers built in New York in the first half of twenty century: The Empire State Building, the Woolworth building, the Rockefeller Center, the Chrysler Building.

The "Vertical forest" of Milan should be mentioned in a scientific handbook of the current century architecture. "Vertical Forest" represents the New European Bauhaus taste perfectly. Bauhaus means "building a house" - the art of building (bau: m, s. build, Haus: n, s. pl.Häuser - house). The composite meaning of the German word draws inspiration: Baum (Baum: m, s. - tree). Indeed the "Baum-Haus" is properly the house that grows like a tree, the name of an artistic movement that implements nature into the project. The design of the two towers by Boeri reminds the straight lines and the angles of Walter Gropius and Mies Van der Rohe, their taste for minimalism; the choice of traditional materials (POROTON® hold up easily the ventilated walls of the towers). Bauhaus inspired the project, said the designer Stefano Boeri. He is aware of the threat that a living variable, plants and trees, represents for something that is fixed in the time as a building of concrete: first of all, the death of the plants and the trees, the living variable.
A large number of gardeners/climbers take care of the vegetation. The flying gardeners are a social innovation that enables high qualified jobs (edilizia acrobatica) an additional cost for the houseowners. The video realized by Domus is watchable at this link: https://www.domusweb.it/the_flying_gardners. The owners of these apartments do not take care of their own gardens, the vegetation is a top down design, not a bottom up collective choice. A quote by a famous American architect, Frank Lloyd Wright says: "A doctor can bury his mistakes, but an architect can only advise his clients to plant trees of vine". The sarcasm reduces drastically the innovative contribution of the Vertical forest for the handbook of architecture. The vertical forest is flat. It is a simple traditional residential tower of concrete and iron that implement nature (the living variable) in the project. There is another living variable in the project: the householders, the common people. The European average number of components per family is another important factor: the demand. The size of the apartments is proportioned to the typical European single person with no large family. The vertical forest offers small size apartments: an apartment of three rooms for a married couple and an only child.
What kind of human group is supposed to live in? The vertical forest became a prototype of new sustainable building, but it is a bad prototype of new citizens who don't take care by their own of their gardens and live with not affordable monthly costs. The early success of the Vertical forest is a phenomenon related to marketing. It has been spent in the Netherlands and in developing countries too: Albany and China. Boeri gained accountability in Tirana, the capital of the candidate EU State of the ex-Yugoslavia peninsula, and Boeri designed a masterplan for the region of Chengdong, China, the Asian commercial partner. China has in Milan an important node, a special headquarter for international business and cultural

Figure 2 (left).
Img. 2 - Residential Forest view

Figure 3a (right).
The green vertical system

influence. Is the Boeri tower a functional solution? It depends, the contemporary metropolitan city has several problems, first of all, those related to climate change driven by anthropic and demographic factors.

2.2. The climate impact on the vertical forest neighborhood

Milan is set in the middle of northern Italy, in a flat land called Plain Padana. There is no overflow risk connected with the delta of any river or the rising level of the sea. Nonetheless, the sewers get busy with water discharge and rainwater. Milan is not affected by water scarcity, drought, or similar problems. Unfortunately, the soil is covered by anthropic activities (even intensive agriculture is not that good for the environmental dynamics) and the consumption of soil is as massive as the consumption of clean water, which is higher than the natural rate of replacement of water sources. Milan isn't geographically in the heat zone of the equator, characterized for high temperature during the hot season, but its intense urban development, the waterproofing asphalt, the technological heating-cooling systems and the low elevation above sea level (120 asl, Rome is only 20 meters high above sea level, Florence 50 m asl and Venice only 1 m asl) put the Italian cities in a low atmospheric pressure zone that carries overheating for three months a year. Moreover, there are urban heat islands located near certain places (shopping malls, offices, garages) that in the metropolitan cities are a plentiful catalog.

The quality of air is bad. Air pollution depends to productive activities, private consumption, and the vehicles circulating daily. The number of residents of Milan is 1.3 million inhabitants, the number of cars is equivalent. But this is just a part of the total amount of cars driven by commuters, city users, and tourists. The fuels used are full of impure particulates. According to the report 2019 by ARPA Lombardia, the Regional Agency for Environmental Protection, PM2,5 and PM10 have higher values than the admitted ones. The congestion charge, the tax on vehicles (AREA C - AREA B for diesel cars) that the public administration decided to establish in 2012 is a strong signal for drivers. But this good practice in the policy making (London has a congestion charge too) isn't as effective as a garbage collection that avoids the threat of trash collapse, like the one that happened in Naples, Italy, in 2008 (2million people of inhabitants). All these data emphasize that the climate change of the cities is related to anthropic drivers. Risk caused by the demographic driver (the amount of people on the Earth) should be investigated as a variable of the equation in a DPSIR model (drivers – pressure – state – impact – reduction). The negative multiplier is human! In the figure below (tab.2 - attached) there is the aggregate urban solid waste weight per year, 706.543.604 Kg that is part recycled, part incinerated. There are special waste too (from industry, hospitals, intensive agriculture) that are not calculated in the equation. The Boeri Tower is not an answer, not even a green leaf building or a LEED certification (Leadership in energy and environmental design), because it is not effective on demography and densification. Urban planning and policies of the last century implied the increase of the settled population, this target is achived and exceeded. The increase of population is not anymore a current issue. There is a short story about a man who left the countryside for the city. Once upon a time there was a shepherd. He had more than fifty sheeps, a large countryhouse and a fireplace to get warm. He moved to the city. He got poket money instead of goat cheese and wool, he got a small apartment, he had to use gas heating system during the winter. The man who was a shepherd became miserable when he started following the herd to the slaughterhouse.

3. THE LANDSCAPE OF THE CITY

Do human groups contribute to the urban landscape? The European convention on landscapes of Florence 2001 identifies the role of settled communities to

Figure 3b (left). Vertical section of the concrete pot of Vertical Forest

Figure 4 (right). Internal migration from the south of Italy to Milan during the 50s

shape and domesticate the natural surroundings. Actually, the European council never recognized the layout realized by the engineering company, that set up streets and dikes, sewers, and water distribution. The European council neither pointed out the real foundation of the European cities, which were realized by a master plan (piano di fabbricazione unitari, società di trasformazione urbana). This fact fakes the origin of human settlements. Many Italian cities grew up because of a strong national political will, despite of a popular will. The downtown, also called the old city, has an "historical interest" because of the public procurement and political schemes, public funds counterposed to the residential areas built by private funds, with their commercial short-term needs. The city more than the countryside originated by the will of selected human groups with certain established organizations. Even manufacturers were international (not local) arts and crafts. After the masterplan has been accomplished or "stralciato" (subdivided in functional parts), and the palaces for businesses of the downtown have been built; the regulation of the "lifeless walls" was left to rising administrations. An urban plan, with regulation and guidance that depends on the lawgiver, followed the first settlement made of buildings and streets. Once again selected groups (elites - lawgivers) design the landscape of the city by policy and norms, more than common people do. Nowadays common people have the power to make the entire system fail only because of their critical mass.

This potential threat is an authentic “lock pick” for the negotiation of policies and welfare, this negative power is in the hand of individuals and human groups, migrations are an example (but this is the subject of another scientific paper). Therefore we got the point that citizens do not make the buildings where they live, the apartments that cointribute to their mortgages. At least, citizens adapt their life on the habitat where they act as individuals or groups. The next paragraph concerns the daily routine of these common people, the next paragraph is about Milano City life, a neighborhood built by the funds of a Company of Assurances, Generali s.p.a. , just like as the buildings of the past century belong to the capital of Assurances and Società anonime.

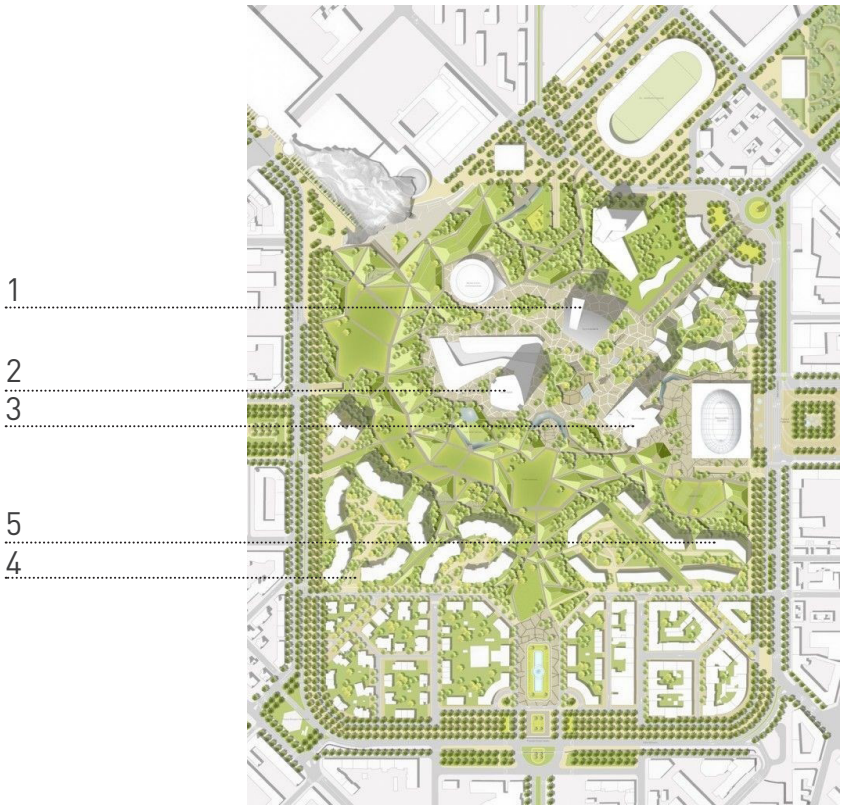


Figure 5. Milano City life masterplan. 1) Tower by DanielLibeskind 2) Tower and Shopping mall by Zaha Hadid 3) Tower by Arata Isozaki 4) Residential complex by Daniel Libeskind 5) Residential area by Zaha Hadid.

4. THE CONTEMPORARY CITY LIFE

At the end of 2015 three tall towers took place in the skyline of the city of Milan. The towers by Arata Isozaki, Zaha Hadid, and Daniel Libeskind were "placeholders" for the urban regeneration plan of the area of the former trade show and congress hub called Fiera. The towers helped to fund and streamline the primary urbanization (especially the metro line MM5 - Tre Torri, the underground mobility). Then the residential buildings and the green area of 170.000 square meters made the rest. Milano city life contains all the main post-materialistic social activities: housing, third sector works (assurance and

Figure 6 (left). Three towers (1-2-3) at Milano City Life

Figure 7 (right). Section and frontal view of Residential Buildings by Zaha Hadid at Milano City Life

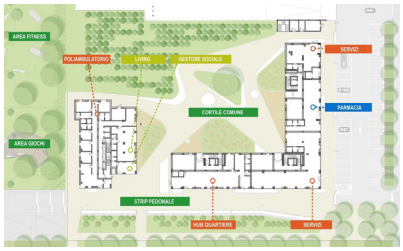
banking), leisure activities, shopping, and jogging into the local garden (tai chi and walk the dog are substitutes). The municipal plan for the area of the Fiera is developed by private funds of the assurance company Generali S.p.A. and other partners jointly. It is planned and regulated (volumes and urban standards) through Piani attuativi di iniziativa privata (L.r. 11/03/2005, n.12 - Legge Regionale della Lombardia). The urban master plan was a great opportunity for a high return of investments. The EXPO 2015 gave visibility to the city of Milan internationally. The website of the real estate agency is translated into a dozen

languages, the quality of the projects is something valuable itself. Archistars firms guarantee the investment with something more than a sign on a project, because the creative work is spendable all over, its intellectual value is immortal, and the quality of the materials used for those residential buildings is noticeable. Anyway, the apartments are not affordable for the middle class, the average price for 1 squared meter is 8.500 € it means that a flat of 100 squared meters costs 850.000,00 €. The prices are even higher, 11.000 €/squared meter for premium typology. The shopping district by Zaha Hadid is a really interesting part of the project. It reminds those hubs located into train stations or airports more than the rez-de chaussée (little ground-floor shops of the residential areas). Green area constituted by green grass and medium-tall trees isn't particularly innovative under a green design point of view: it is not a forest of rare trees and plants, neither a park with a playground for children, open-air theatre for adults and a bocciodromo (a game of two teams throwing a heavy ball towards a smooth surface) for old retired people.
It is quite simple as an urban green area, but it represents a nice place for meeting and leisure moments to join with the new neighbors. The importance of green spaces is a trend for social housing too. If the City life of Milano is really expensive for the householder, the alternative is five kilometers far from the city center. Two social housing complexes, Urbana and Moneta are low-cost solutions for low-income families. The right to a fair rent secures worthy condition to inhabitants. It is the local welfare state! The scheme summarizes (img.8) how to apply for this kind of apartments of social housing. Which categories of people have the access to the house? There are parameters to get in the social housing apartments:

A. Number of components of the family;
B. ISEE - the index of overall wealth, not simply the salary but the earnings in general;
C. other parameters example seniority is preferred to fresh moved in the city (certificato di residenza) ones.

The weighted average of these factors carry the dwellers to move into an apartment. The regional office of social housing is called ALER (Azienza Lombarda per edilizia residenziale) it depends on the regional council of the Region Lombardia, according to a "vertical subsidiarity view" that select the nearest institution to the citizen. Social housing has always been one of the most debated thematics of architecture. The normative "boring" part of the debate about "how to get in" a social house (img.8), is secondary to the design and the quality of the projects (img.9). Spatial justice can be realized by put together homogeneous

categories of people (low wages, large families) or create a well-designed habitat for all. From this perspective, the project of Milano City life and Moneta look-alike: multilevel buildings set in an open green area. What will happen if the son of a rich entrepreneur from Milano City life gets into the shoes of the son of a middle-class office worker in the neighborhood of Moneta and vice versa? This is the plot of a comedy, but the reality isn't funny at all. Probably because the house where a child lives and grows up is linked to a wide range of personal and family considerations.



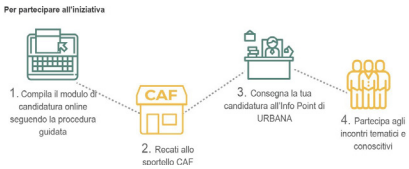


Figure 8 (left). Social Housing application. Source: ALER Lombardia

Figure 9 (right). Masterplan and render of the social housing complex of Moneta and Urbana

4.2 Householders and hapiness

What is a family? The family is a social establishment, it is regulated by civil law, (marriage and childhood rights, hereditary succession, and adoption). It is the minimum module of the polymeric society. Sensibilization to environmental subjects, professional or educational choices, grows into the family. The family is a good example of a human group, the topic of this essay. A family is a basic unit of consumption too. As seen in the previous chapter, urban solid waste matters at the moment to scale a residential area, the capacity of a city. Statistics focus on the important aspect related to a subject: family. Surveys made by ISTAT (the national institution for statistics produce a detailed report every decade, that's why this paper takes ten years for this research) reveal that the composition of

the Italian families is changing. Advertisements show happy families sit at the breakfast table, but how many are already late for work/school?! Most of these families set up their business into suburbs, that look like grand ensembles (the European form of suburbs, different from the suburbs of the American sprawl). The "Ville Radiouse" by Le Courbusier is a mess! This settlement of tall buildings of dense residential complex is the most popular and the most planned in the western capitalistic Europe and the eastern former socialist Europe. At the very beginning, buildings and residential complex were preferred to single houses, especially in the cities. Napoli, Milano, and Rome show several mid-eighteenth century examples of modernist residential buildings. The Bauhaus and the schools of engineering and architecture ruined everything! Bauhaus normalized the art of design, un-bundling the faculty of architecture to the academy of fine art. Standardization became an imperative for public procurement and urban development.

This standardization happened for social housing, introduced in Italy by a law L. 167/1962 that produced a fatal fast development. A sort of social housing by private initiative created a better quality of urban space, innovating the architecture techniques and the financing schemes (edilizia convenzionata and others) in the 90s. The monster buildings realized in the past century have dramatic social implications: On the one hand, the riots in the banlieues in France, where first migration post-colonial human groups who rise against the inequalities and the white hegemony of the political parties, or at the same way, human groups of the Italian criminal clans (mafia, camorra) that dominate the social housing buildings of Napoli and Palermo - grow their roots in the same urban background. On the other hand, the dramatic estrangement of old people (retired people), unemployed isolated angry young men, lonely housewives married to over-exploited workers (workers of the offices and the hospitals are included, nurses as example work 36 hours per week as the employees) and children that have never seen a tree or a cow except those on the TV. The middle class of the suburbs is composed by employees with no-social class identity and no-strong trade unions. They have work-schedule of 8 hours per day (9 hours per day with commuting home-work time) with no-holiday except 28 days per year. The low income isn't adequate to cost of life after the conversion to euro. That's the contemporary city life: parents that can't afford the bicycle for their only child. Architects and urban planner don't see the buildings only from the outside!

There is no happiness in this development model! Families make the demand and the supply chain suits it, as a consequence the "break-even point" in the microeconomic diagram is located on low prices and high quantities. Democratize textile goods and motorized mobility, electronic devices, and meat consumption has been self-defeating. What's the point? Demographic drivers are driving

Figure 10 (left). Bauhaus school in Dessau, Germany

Figure 11 (right). The relevant issues in a poster of the past century

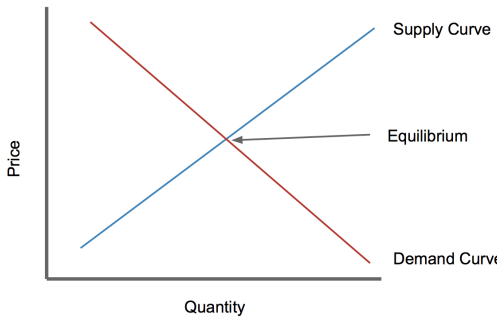


Figure 12. The basic Demand Diagram - the aggregate demand. The Q stand for the quantity of goods required for the humans' activities. The consumerism assume the quantity of human beings themselves, more than the quantity of goods.

the world mad! The salaries do not increase from the euro conversion of the European local currencies, at the contrary the prices of goods decrese till goods theirselves became ordinary and second-rated. The working class requests are addressed to the job itself, despite amending the working hours, salaries, and holidays. It seems that the activists, the trade unionists had a drastic regress. It is connected to human groups and individuals? Yes, it is.

Focus on the urban aspects of socio-dynamics will simplify the issue of western living societies. In fact, the analisys is easier adopting the urban scale. The general discontent and displeasure of western european civilization is more evident in the city. A life that is frugal, made of poor habits and trivial practices, spoils the city: low cost, fast-fashion, pub crawling are activities that model a banal cityscape, depleting its meanings and collective actions.

Pauperization of the middle class is the most dangerous phenomenon of the current era. As said in the previous paragraph, the rich son of an entrepreneur will have better preparation, culture and will spend his money better than the son of the employee of the middle-class. The mass consumption will produce more wastes - an intervention for a more sustainable environment should take into account social sustainability.
The phenomenon is not led by the high class of people, the rich educated class. At the contrary, if the middle class become poorer this will have shocking effects on everyone.

4.3.UNE SOCIÉTÉ DU SPECTACLE - The European middle class

There is one apartment of the block made by Zaha Hadid in the neighborhood of Milano City life that is constantly filmed in the web reality show, live on Instagram called Ferragnez, starring the rap singer Fedez, his wife Chiara Ferragni, a fashion stylist, and the 4 years old child. The camera of the mobile phones are intrusive, the exploitation of childhood is controversial and the family life is hyperbolic. The interior design of the apartment of Ferragnez set the trend for minimalism and glamour furniture. Through social media, there is a strong identification with this model of family. The book by Guy Debord that has the title "la Societè du spectacle", went out in the libraries in 1967. Herbert Marcuse wrote his "One-dimensional man" in 1964. The student revolt happened in 1968, but the European students were different from those of the United States, who were against the war (war in Vietnam). The European students made the revolution against the values of the middle class: traditional family (divorce and abortion were debated in the 70s), the education of childhood, the emancipation for the women through abortion and promiscuos sexual intercourses. The traditional family, the backbone of western society, was cracked. The human group made of revolutionary students determined the modern society made of individuals. The main characteristic of the "société du spectacle" is the apparent satisfaction, the temporary achievement of certain socially insignificant goals, the personal status that masks insecurities. "Spectacle" (trad.: "set into a show") is a passive retrospective motion, an action that simulates real life with the effect of social estrangement.
The TV and the smartphones, the internet, and radio frequencies transform the perception of ourselves. What's the consequence on the cities of the unreal expectations and the unawareness of the social conditions of the middle class? The requests of the inhabitants and workers are not centered on urban welfare, the political contents of the political competition are facing extreme poverty (social canteens of CARITAS) and economic subsidies (reddito di cittadinanza). The political target is very low, this will make the social gap become deeper.

Figure 13.
The western dysfunctional family

The statistics concern the "mode" measurement. The mode calculates the variable with the higher frequency. The political statistics calculate the variable (a number) with the lower frequency. This distortion set the agenda of national parties as the agenda of the European parliament. Instead of hunger or extreme poverty (variables with the lower frequency) the social needs of employed workers, householders, and families in general, are under-estimated. The disjunction between regional, local and national powers causes a dramatic discrepancy. The political levels are the followings:

1. The city council is focused on the maintenance ("upkeep") of the public city. It authorizes the private projects (commercial mall, business districts of private companies, and luxury residences) – the greater impacts on the city development depends by the administrators of the city.
2. The regional administration has planning competencies on the landscape, cultural heritage, and mobility (especially roads and railways);
3. The national government and the elected parliament has a competence on economics and interior and exterior affair (police force and international relations). Moreover strategic infrastructure are debated by few ministries.

Actually national societies such as ANAC – for national roads have planning initiative. Also Authorities such as the

Authority of port and airport have a planning competence, that belong to regional and local interests, more than national ones. Who should take care of suburbs, a conglomeration of people of different ages, wages, and nationalities where is set the overwhelming majority of the population? Who should take care of the small businesses, activities that are experiencing economic difficulties related to relocation and unfair competition?
The European Union gives weak feedbacks while the private sector is depressed. The only sector that gives responses to authentic needs is the ICT sector. There are trajectories to correct, and phenomena to take into account as we will see in the next chapter about the University of Milan.

5. THE UNIVERSITAS SAPIENTIAE

The human group of professors, students, and researchers is an open community. Several procedural innovations into the field of creativity and knowledge such as peer review, open-source data, and not- lucrative business (startup, etc.) were born in higher education institutions. The webmail was developed by the University of Berkley, USA. Webmail is free, inclusive, and very useful, one of the best innovations of the modern age (considering the initial difficulties of British Royal mail). The University is a kingdom of freedom, freedom that is normatively guaranteed by the Constitution of many States (in Italy, art.33 Cost.) even in the dictatorships like the Republic of China the University is free to get contaminated by foreign countries. The network of Universities has a worldwide extension. It is the only institution that can compare the G20 or an ONU meeting for the different languages spoken at a round table. Will the University be able to take care of the development of national private business and bring consolation to inhabitants of the suburban areas of the previous paragraph? The answer is: Yes, but not in a proficient way. The model of Universities as new drivers of the industry of knowledge can create opportunities at a urban scale (new specialized shops for students, new apartments for rent, new gyms and athletic activities, libraries, etc.) and regenerate suburbs and business districts (as the last workshop carried out by the Politecnico di Milano focused on Neighborhood of Bovisa).

5.2 THE CREATIVE CLASS

The University Bocconi of Milan is one of the symbols of the city. The Italian city of Milan was secondary to the capital city, Rome, where the political representatives and the public television Rai and the cinema had place; it was subordinated to

Figure 13.
The entrance of
Università Bocconi

Florence or Venice the cities of culture, well-known all over the globe for the museums and the events. But the new media (television and communication), the private industrial small-medium business, and the new financial private banking companies give the city of Milan a new identity. The University Bocconi trained this new business class of men and women. The human capital of a city determines the success in the long term of whole new sectors of productivity, and creativity. The foggy city where the working class gets into the industries of manufacture of Pirelli (tire, wheels) Ansaldo (mechanic), and others was replaced by a dynamic northern European city of finance and knowledge. The employee and the employer of the third sector industry were educated in the University Bocconi of Milan. The new productivity is immaterial: sponsorship to obtain, big data to analyze, consultancy for the most difficult choices is the new assembly work line of capital. But the most profitable business is the University itself. A continuous incoming flow comes from the tuition fees of the students who apply to the highly-rated Universities. Private Universities are competitive for public onew but both are becoming comparable under many point of views. The L.240/2010 – Legge Gelmini adopted a financial

innovation for the universities: Economic accounting implements the budget. It means that the University is considered a business. The independence of the University is subject to the stream of revenues. The properties of the University and the recruitment of professors are cards to play in the competitive game of the market of knowledge. Universities are propaedeutics for a selective labor market. Unfortunately, this system create a gap for the learners, based on their private income and family status. The liberal egalitarianism by John Rawls ends at the entrance of the University. This happens because the son of an alchol addicted, or the daughter of a single mother have different priorities. As a consequence, the establishment and the elite can keep their privileged position, but at the same time can't renew itself. This "pre-emption on the turn over" (the Italian word is "prelazione sul turn-over") affects bureaucracy as well as Universities.

5.3 THE NEW CAMPUS

The University Bocconi is localized in a compact area of the city, it means that on two parallel streets there are several faculties: law, and economics, political science, the postgraduate and the Ph.D. school. New buildings were built by recognizable architecture firms: Grafton architects, the Irish atelier founded by two female architects Shelley McNamara and Yvonne Farrel, and the new urban plan by SANAA, the Japanese architects Kazuyo Sejima and Ryue Nishizawa. This last building is articulated into open-closed cloisters, and shaded or high bright classrooms. It reminds the architecture for the programmers of the smart apps of the San Francisco bay. The Hi-Tech architecture fosters civic pride. A completely new set of surroundings can determine a better adaptivity to progress, and the green cloisters are restorative for the environmental stress of the city. The area of the university is calm, large groups of students are glad. In general, in the cities, the areas where the Universities are set, are quiet places full of joyful events and social intergenerational innovations.

The map of many cities is completed by urban areas entrusted to universities: the city of Boston has the University of Harvard, the city of Beijing has the Tsinghua University, the city of Barcelona the area of the UB faculties on the Diagonal avenue, the city of Milan the University Politecnico. The European cities grew up including universities in their development. The shape of the University Bocconi is rhizomatic. Growing roots of knowledge have the power to inseminate blossoms of ideas. Rhizome is a concept by Thousands plateau (1980) by Gilles Deleuze and Felix Guattari. A place that allows multiple theory and researches, non-hierarchical entries with different outlets and courses. Walking through the area of the university provides you ideas, ignites curiosity, it is salvation for desolate

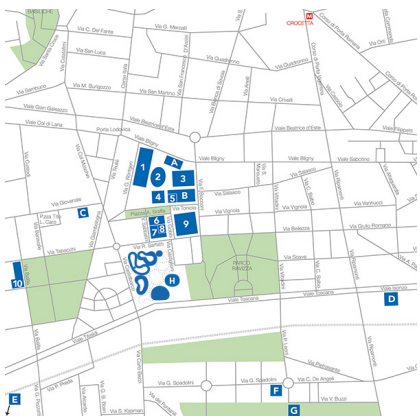
Figure 15.
Masterplan and view of the new campus of the University Bocconi.

humanities. Meanwhile the University as a urban business it-sellf shapes a city made of new economic activities (the innovative business as 3d plotting shops and "old style" copy shops), fresh growcery and street food restaurants, new places for sport and athletic, and tidy open green areas that are restorative for the environmental stress. Businessmen and politics should visit the areas of the university more often to get involved with the future.

6. BUSINESS DISTRICTS

The business and financial districts of European cities are cold places in a figurative sense: formal human relations, crowded rush hours during the weekdays and empty spaces/ closed business on Sunday morning. The land

Figure 16.
The southern part of Milan the UniBoc properties



use of a business district is different from the bulky and impacting occupation of an industrial site. The conception of the industrial areas includes heavy infrastructure, polluting systems of production, and closed gate at the fence of the industry.
From this point of view, the industrial areas look like the shopping mall areas: heavy logistic infrastructure, highly polluting parking lot, and use of public space ruled by scheduled timetables (with surveillance at night). Intensive consumption is bad as industrial production. At the contrary, the business districts do not privatize large parts of the territory for a single productive purpose, do not disfigure the amenity of a landscape if built in front of the sea (Business districts can valorize it: like Mapei Tower in Barcelona or Canarsie Warf in London), can regenerate former industrial areas with renewed buildings and functions that belong to the third sector (like Vega in the industrial part of Venice, Marghera, or the Ruhr park in the Emscher river basin in Germany). The industrial era was dominated by a cohesive working-class ideology. The human groups' struggle for the rights of the workers was deleted in the third sector era. Information and communication technologies don't drive the public opinion to increase self-consciousness of the group you belong to (as an example, the middle class of the suburbs). Introspection makes the workers introvert, expectations are frustrated. There is always someone who is going worse, said the Breaking news at the TV, we hope it doesn't happen to us. The Media age is turning into a Middle age. Individuals are alone and confused. There will be someone that will represent the condition of the misery of the overwhelming majority? May Regionalism will save us all. Regional and metropolitan Institutions will succed where the national and the european ones failed. After all, Renaissance took place in the small-medium sized cities and the prosperous italian Regions.

6.2 THE POLITICAL DISTRICT OF REGIONAL AND METROPOLITAN DEVELOPMENT

Architecture produce a benchmark for human ambitions. It gives a second term of comparison for the development of a human community. The urban plan of Milano Porta Nuova is something fascinating for its innovative contribution. Only a few very dynamic realities have been so determinants: the World Trade Center in the southern part of New York City, or Pudong - the business district of Shanghai. The sociologist Saskia Sassen identifies these areas as the core of the global city, part of a network of nodes, which have the strategic importance of an entire Nation. The Defense in Paris has failed its ambition. Milano Porta Nuova succeed.
The city council designed this area to be post-contemporary, as said in the previous chapter: a new set of surroundings can determine a better adaptivity to

Figure 17.
Square Gae Aulenti at Porta Nuova, Milan

Figure 18
Porta Nuova, Milan - Gioia, Milan. View Unicredit Tower and Palazzo della Regione (frontal view and interior view)

progress. The result is Piazza Gae Aulenti, a space out-of-ordinary reality be named as the Italian female architect that projected the Musee d'Orsay, Gae Aulenti. The square reminds something seen in Rotterdam, Netherlands. Post-contemporary architecture suite no taste of the past, but the novelistic one, it invents a joyful wonderland full

of special effects that embroil the city user. The architecture operates for the amusement, recreation, and distraction of the citizens, that's the definition of post-contemporary architecture style.
The Unicredit tower is an amazing landmark, a stainless steel spire that could be put on the gothic cathedral of Notre-dame after the fire accident that happened at the end of the decade. Designed by Cesar Pelli, it is the counterpart of the tower of the Regional Institution Lombardia by Pei, Cobb, Fredd, and Partner. The Northern American firm of architecture projected a building that is implemented on the vertical plan by a tower inspired by the Alps, and on the horizontal plan by a covered gallery inspired by the lake of Garda, the Lake of Iseo, and the Lake of Como. It is liquid architecture. The regional council, the offices of the administrators, and the desk for the public relations are hosted in this building. The regional level has several competencies in an "almost federal" system like Italian regionalism. It has competence on the health system, landscape, environment, mobility, even on the international presence and representation. The medium scale of Italian regions can be a restart point for the human groups that compose the regional stakeholders.
The ICT plays a critical role. The frequency of the TV has a national scale, the internet and social media are based nowhere, as the main consequence, the people have low local links, they are individualized but informed of international news. Aggregation on territories to debate decision of public or private initiative that regards everyone is important. The participation, recommended for urban planning or Strategic Environmental Assessment SEA (Directive 2001/42/EC) has little space on traditional media. The small-medium NGOs, volunteering organizations, and local organizations will take care of the stakeholders' interests in some local process. But what happens to the people that are not represented by an intermediate association? Shall they live underrepresented by national leaders or at least identify themselves with the fake models of la Societè du Spectacle, while their individualities become miserable?

7. THE WRONG WAY

Milan grew up as an industrial city, the main architectonic features were built after the second industrial revolution when coal was the first source of electric power. The downtown of Milan (il centro storico) has nothing to hide: the Duomo is a new-gothic cathedral, an on-going opus that the elder population has seen from the foundation. The covered gallery Galleria Vittorio Emanuele II is a triumph of glass and iron. It is bigger than the Gallerie Saint Hubert in the city

center of Bruxelles, Belgium, but both have commercial use, which means that both were built for the purpose to welcome the rising bourgeoisie, inhabitants of the modern cities. The Theatre la Scala set its date before the second half of the nineteenth century (1850) but it's a fact that the music of the Opera, the Italian Drama, become famous after Giuseppe Verdi. The plan of Milano is model on the same needs of modernization of Lisbon: cafè for intellectuals and motorized collective public vehicles on rails for omnibus (the bus of today). There is a place that preserves a rural identity. Rural doesn't mean an age before modernity, foregoing the industrial revolution, but it means simply populated by different human groups with rural backgrounds. This place is Navigli. There are clothes hanging up to dry on the balconies, the color of the walls is ocher. There are old examples of social housing with connective tissues on the outer space, corridors on the long balconies, called "case di ringhiera".
Emile Durkheim (1898) distinguishes two human groups: the community and the society. According to the definition of these two human groups, the first one presents informal social rules and a certain acceptancy for bugs and lapses. The community contribute to colorful and picturesque spaces. Society is formal and grim. That's the reason why the reset of the Darsena dei Navigli by Guazzoni Architetto is blameworthy.

Figure 19.
Navigli of Milan, Italy

Figure 20. New Darsena, Milan

Figure 21. Frontal view of a new building on the Darsena.

7.2 THE DARSENA

Darsena means waterfront. In this case, the waterfront is an artificial basin used for water discharges and water regulation. The minimalism of the reset project made the public space unstable. It is a place for leisure activities but it is not a public garden. It is designed with river banks and shores but there aren't productive activities of fishermen. This place is appealing to the young population of Milan. It attracts a large number of people joined by the age, a generational temporary group with no purpose in particular. It is a place for the "Movida", pub crawl. The quality of life depends on the quality of the space. The public selection rewarded simplicity.
The project by Guazzoni is infused of a contemporary Bauhaus style: the thickness of the metal columns is reduced, the curtain walls of glass are on three sides of the building, roofs are flat and protruding (Img.21). The pathway is made of hard stone, the line and edges are frigid. It is a void space that will be fulfilled by the ability of human groups to create their own ideal habitat: if the groups have the right attitude and they are capable to domesticate this space it will be prosperous (second-hand markets, concerts on floating platforms, a strike of students, etc.); if the individualities are detached and weak there will be conflicts between the users of the space, with irritability, bother stress, frightening or simply sterility.

CONCLUSION

The case study of Milan is used in this scientific paper as a lens focus on the issues of the modern city. The main aspects that compose the quality of life have been investigated: housing, learning, working and experiencing leisure time. Mobility isn't part of this essay but the last decade was characterized by car-

sharing, bike-sharing (a type of mobility that can be related to human groups, if it weren't for ICT and smartphones that put this type of mobility on the plan of individuals). Migration is underestimated in the speech on human groups. There are communities of the first generation of immigrants that may are not integrated with the hosting society, who preserves strong relations among them. But this consideration will make deviate from the aim of the paper to describe the western development model. A model that reveals strengths, weaknesses, opportunities, and threats. But the SWOT analysis made on the case study along the previous seven chapters should be operationalized: the SWOT is useful for the analysis, but the URCA is important for policy design.

URCA is the acronym of Use, Reduce, Commute, Avoid that must be combined with the other four letters.

- The Strength to Use is the local welfare, made of social housing, public spaces, and spill-over of knowledge from higher education institutions.
- The Weakness to Reduce is in the individualism that takes us away from penetrating the core of the relevant issue. The middle class is divided into small groups (dysfunctional families); the third sector working class hasn't got strong trade unions. Individualism can be reduced by ICT that can raise awareness on the condition of workers and families. The opinion leaders (journalists, scientists, or VIP) have many responsibilities, but the trend is changing especially regard the environmental sustainable thematic, but social one is emerging too.
- The Opportunities to Commute rely on post-materialistic needs. The scarcity of food, clothes, and tools are no longer a problem for anyone, but everyone needs somebody who takes care as human beings. It means that services that have as object the human wealth and health, services for the people from the people, based on mutual aid: babysitting and teaching, health care and caregiving; based on intellectual reward: social innovation and cooperative business (engineering and architecture cooperatives); based on joy and talent: like sports and music, organization of events, will prevail on other sectors.

- The Threats to Avoid regards the lack of intellectuals with an holistic point of view. Partial views of the phenomena bring bad political agenda. Architecture and urban planning recognize this threat better than other disciplines, because the participation of the people is direct, not mediated by political parties or social gurus. The inhabitants are demanding social and living changes. The effects are visible with social and environmental indicators.

The urban scale reveals the everyday problems. The ICTs are powerful and awful at the same time. In the last decade, academic literature pointed out the risks of digital capitalism devoted to control the masses and influence their choices. The Covid19 emergency demonstrates the bad propensity of national administrations for control through smart devices and public opinion-making. A city where the human groups are stronger than single individualities will oppose greater resistance to questionable choices that depend on blind protocols more than valuable utility.
Human groups will build barriers against fascism or globalism ruled by technicians. The technological infrastructure is part of the urban plan, the good development of it depends on a project that has the scale of the architecture project: A project that allows new forms of spatial intelligence, meeting organized in certain places at certain hours. Projects to sensibilize to nature and share scientific knowledge, an interface that allows people to examine trees and plants in the urban gardens, as wastes in the trash bucket. Projects that valorize heritage, not faking the common identity of the population with "monumentality". Projects that allows participation or rate public policies (for example the curfew with zero stars, the public library with four stars). The New European architectural and artistic school is digital, inclusive, locally-based, and globally linked. NEB is joyful – an architecture that will support the human development raising awareness with interactive urban spaces and amusements of post-contemporary architecture; at the contrary, the risk of a beautiful and sustainable architecture is to overlap the idea of sustainability and beauty with the one of an elite. The Bauhaus end its activity because of the social-nationalism of the 30s. The art, the freedom and the liberal culture of the Academy couldn't resist to the obtuseness of the political regime. Meanwhile a young architect of Milan was starting its glorious activity thousands kilometers far from the nazist regime, his name was Giò Ponti. Giò Ponti overtook the Bauhaus rational style. His buildings are modern and beutiful. There is a wide choice of its works for the city of Milan. He may do not create a school of architecture, but his style influenced more students of architecture than any other. He was the founder of the magazine of architecture Domus, sold in more than 20 Countries. He also was a designer for the italian industry of furniture and durable goods. If the Bauhaus

was an open school to teach the art and the standards of building, Giò Ponti was an innovative industrial designer who contributes to "made in Italy", during the 50s. Bauhaus never produced goods and forniture for the mass. He, Giò Ponti, innovates the relations between industry (the "procurement") and the architect. He also contribute to the dialogue between individualities along the time through its magazine (Domus exists for seventy years). This produce good intellectuals, a relevant human group. I feel inspired more by Giò Ponti than Walter Gropius, Rietfeld and Mies.

This paper left out many other buildings of Milan, made during the past decade: Fondazione Prada by the architect Rem Koolhaas and its OMA studio, set in Rotterdam. This museum of modern art will produce significant results at a urban scale when the scalo ferroviario of Porta Romana, the railway crossway will be renewed. The paper left out the plan for the area of the Expo2015 by Carlo Ratti from the MIT Massachussets Institute of Technology, called MIND. The paper left out many other projects but may, one day, there will be another published scientific paper by me about the case study of Milan. The city of Milan will witness the evolution of style for the next decade, the 2020s. Milano is an Avangard.

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ANNEX

Table 1.
Datas on population, facilities, and activities 2020-2022. Source: DUP - Documento unico di programmazione del Comune di Milano

1.1 – POPOLAZIONE

1-1-1	Popolazione legale al censimento 2011 (*)	n.	1.242.123
2-1-1	Popolazione residente al 31.12.2018 (art. 156 D. L.gs. 267/2000)	n.	1.395.274
	di cui maschi	n.	671.217
	femmine	n	724.057
	nuclei familiari (dato anagrafico)	n.	737.133
	comunità/convivenze (totale convivenze 589)	n.	12.918

Condizione occupazionale della popolazione in età 15-64

Anno	OCCUPATI (a)	IN CERCA DI OCCUPAZIONE (b)	FORZE LAVORO (a)+(b)	INATTIVI (c)	POPOLAZ. 15-64 ANNI (a)+(b)+(c)
2004	546.403	27.702	574.105	238.658	812.763
2005	564.217	27.454	591.671	238.407	830.078
2006	586.334	24.915	611.249	226.979	838.228
2007	591.530	24.049	615.579	225.351	840.930
2008	594.968	26.057	621.025	211.867	832.892
2009	572.413	38.399	610.812	212.796	823.608
2010	572.993	35.226	608.219	219.507	827.726
2011	584.129	32.425	616.554	221.744	838.298
2012	593.115	45.203	638.318	211.047	849.365
2013	599.421	41.952	641.373	215.475	856.848
2014	589.850	53.870	643.720	213.295	857.015
2015	587.442	46.757	634.199	202.665	836.864
2016	599.632	39.804	639.436	209.161	848.597
2017	606.851	40.898	647.749	208.629	856.378

Fonte: Elaborazione Settore Statistica - Indagine Continua sulle Forze di lavoro ISTAT

STRUTTURE

		ESERCIZIO IN CORSO	PROGRAMMAZIONE PLURIENNALE		
		Anno 2019	Anno 2020	Anno 2021	Anno 2022
- Asili nido	n°. 265	posti n° 9.178	posti n° 9.178	posti n° 9.178	posti n° 9.178
- Scuole materne (comunali e statali)	n°. 218	posti n° 23.619	posti n° 23.619	posti n° 23.619	posti n 23.619
- Scuole elementari	n°. 144	posti n° 47.018	posti n° 47.018	posti n° 47.018	posti n° 47.018
- Scuole medie più 1 civica	n° 93	posti n° 29.845	posti n° 29.822	posti n° 29.822	posti n° 29.822
- Strutture residenziali per anziani	n°. 96	posti n° 2.500	posti n° 2.600	posti n° 2.600	posti n. 2.600
- Rete fognaria in Km.		1.632,46	1.642,4	1.649,9	1.652,1
- bianca		40,5	40,5	40,5	40,5
- nera		30,0	30,0	30,0	30,0
- mista		1.561,9	1.571,9	1.576,9	1.581,6
- Esistenza depuratore		si | x | no | |	si | x | no | |	si | x | no | |	si | x | no | |
- Rete acquedotto in Km		2.188,3	2.190,8	2.193,3	2.195,7
- Attuazione servizio idrico integrato		si | x | no | |	si | x | no | |	si | x | no | |	si | x | no | |
- Aree verdi, parchi, giardini (*)		n° 3.151	n° 3.180	n° 3.210	n° 3.240
- Punti luce illuminazione pubblica		n° 149.869	n° 150.869	n° 151.869	n° 152.869
- Raccolta rifiuti in quintali:		7.083.870	7.083.870	7.083.870	7.083.870
- raccolta differenziata		si | x | no | |	si | x | no | |	si | x | no | |	si | x | no | |
- Esistenza discarica		si | | no | x |	si | | no | x |	si | | no | x |	si | | no | x |
- Mezzi operativi		n° 2.543	n° 3.687	n° 3.687	n° 3.687
- Veicoli		n° 1.116	n° 1.151	n° 1.153	n° 1.153
- Centro elaborazione dati		si | x | no | |	si | x | no | |	si | x | no | |	si | x | no | |

Table 2.
Datas on waste collection (civil wastes). Source: ARPA Lombardia

Città Metropolitana di Milano

Comune di Milano — 2019

Abitanti	1.396.059	**Superificie (kmq)**	181,755	**Comp. dom.:** NO	
• N. utenze domestiche	762.065	• Sup. urbanizzata	141,893	**CdR:** SI (5)	
• N. ut. non domestiche	140.053	• Zona altimetrica	Pianura	**T. punt.:**	

DATI RIEPILOGATIVI

	2019 kg	2019 kg/ab*anno	2019 %	2018 kg	2018 kg/ab*anno	2018 %
PRODUZIONE TOTALE DI RIFIUTI URBANI	**706.543.604**	**506,1**		**698.729.359**	**506,8**	
Rifiuti indifferenziati	**274.103.410**	**196,3**	**38,8%**	**284.909.854**	**206,7**	**40,8%**
Rifiuti urbani non differenziati (fraz. residuale)	*274.103.410*	*196,3*	*38,8%*	*284.909.854*	*206,7*	*40,8%*
Ingombranti a smaltimento (+giacenze)	*0*	*0,0*	*0,0%*	*0*	*0,0*	*0,0%*
Spazzamento strade a smaltimento (+giacenze)	*0*	*0,0*	*0,0%*	*0*	*0,0*	*0,0%*
Raccolta differenziata totale	**432.440.194**	**309,8**	**61,2%**	**413.819.505**	**300,2**	**59,2%**
Raccolte differenziate	*381.069.359*	*273,0*	*53,9%*	*365.681.624*	*265,2*	*52,3%*
Ingombranti a recupero	*21.273.230*	*15,2*	*3,0%*	*19.464.950*	*14,1*	*2,8%*
Spazzamento strade a recupero	*21.834.540*	*15,6*	*3,1%*	*22.171.807*	*16,1*	*3,2%*
Inerti a recupero	*8.263.065*	*5,9*	*1,2%*	*6.501.124*	*4,7*	*0,9%*
Stima compostaggio domestico						
RSA						

PRODUZIONE PROCAPITE (kg/ab*anno 506,1 -0,1%

	kg	kg/ab*anno
Prod. tot. 2019 metodo precedente	*698.281.970*	*500,2*

RACCOLTA DIFFERENZIATA (%) 61,2% 3,3%

	kg	%
Racc. diff. 2019 metodo precedente	*381.070.430*	*55,4%*

	2019 kg	2019 %	2018 kg	2018 %
RECUPERO MATERIA+ENERGIA	643.089.029	92,1%	636.408.970	91,9%

NOTA: l'indicatore è riferito al totale RU calcolato con il metodo precedente

RECUPERO COMPLESSIVO (%) 92,1% 0,2%

	2019 kg	2019 kg/ab*anno	2018 kg	2018 kg/ab*anno
Q.TA' AVVIATE A RECUPERO DI MATERIA	373.750.541	267,72	359.282.898	260,60
Carta e cartone	82.105.630	58,81	78.472.957	56,92
Vetro	75.920.088	54,38	80.321.145	58,26
Plastica	25.504.221	18,27	19.898.881	14,43
Metalli	5.921.516	4,24	5.432.744	3,94
Legno	7.556.566	5,41	7.210.950	5,23
Verde	1.044.350	0,75	1.102.340	0,80
Umido	153.939.030	110,27	148.990.550	108,07
Raee	3.327.691	2,38	3.039.454	2,20
Tessili	3.801.824	2,72	3.419.724	2,48
Oli e grassi commestibili	92.572	0,07	69.803	0,05
Oli e grassi minerali	35.933	0,03	34.222	0,02
Accumulatori per veicoli	137.191	0,10	122.181	0,09
Altri materiali	578.615	0,41	447.919	0,32
Ingombranti a recupero	5.831.397	4,18	6.046.948	4,33
Recupero da spazzamento	7.953.918	5,70	4.673.082	3,39
Totale a smaltimento in sicurezza	631.102	0,45	655.696	0,48
Scarti	21.437.755	15,36	16.466.569	11,94

NOTA: l'indicatore è riferito al totale RU calcolato con il metodo precedente

AVVIO A RECUPERO DI MATERIA (%) 53,5% 3,1%

	2019 kg	2019 %	2018 kg	2018 %
INCENERIMENTO CON RECUPERO DI ENERGIA	269.338.487	38,6%	277.126.071	40,0%

NOTA: l'indicatore è riferito al totale RU calcolato con il metodo precedente

RECUPERO DI ENERGIA (%) 38,6% -3,7%

	2019 totale	2019 €/ab*anno	2018 totale	2018 €/ab*anno
COSTO DELL'INTERA GESTIONE DEI RIFIUTI	€ 300.054.695	€ 214,9	€ 300.763.524	€ 218,2

COSTO PROCAPITE (euro/abitante*anno) € 214,9 -1,5%

TITLE

"PROJECT CINEMA": A HOLISTIC APPROACH TO REDESIGN AND REUSE OF A MULTI-STOREY BUILDING IN LADADIKA, THESSALONIKI

authors

Georgia Eleftheraki
Ph.D. candidate NTUA
M.L.A. in Landscape Architecture
MSc in Architecture-Spatial Design
MSc in Environmental conservation and management
e-mail: elefgogo@gmail.com

Argyro Papathanassi
Architect and project management professional
e-mail: argyro.papathanassi@hotmail.com

Georgia Eleftheraki

Holder of M.Arch. in Architecture - Spatial Design (School of Architecture, National Technical University of Athens), M.L.A. in Landscape Architecture (Agricultural University of Athens) and M.Sc in Environmental Management and Protection (Open University of Cyprus). Georgia, currently, studies M.A. in Curation: Theoretical and Practical Approaches (School of Fine Arts, University of Ioannina). Her research has been presented at conferences in Greece and abroad since 2017. She is an author of articles, and she has participated in architectural seminars, research programmes and workshops in city research and representation, in mental and psychogeographical mapping, in design of the urban cultural landscape and in the multi-sensory mapping. She has received the ECOPOLIS_2018 Award for her Postgraduate thesis, the First Best Poster Award at the 5th Pan-Hellenic Conference on Urban Planning and the ECOPOLIS_2019 Award in the category "Study of Young Scientist". Her research interests are Urban Landscape, Cultural Landscape, Cultural Heritage, History of Architecture & Landscape Architecture and Landscape Design

Argyro Papathanassi

Holder of Master of Architecture - M.A.Sc, National Technical University of Athens (NTUA), Greece. Architectural Design -Space –Culture and Master of Architecture- M.A.Sc, Department of Architecture, University of Patras, Greece. Highly motivated Architect and project management Professional with the ability to run creative projects. Artistic at hard with passion for innovation and hard work. Strongly focused on the latest forms and new materials with Social aspirations and proven ability to complete tasks successfully under effective time management. Always investigates Architectural Knowledge in relation to the broader social production and approaches the object of Architecture through the theoretical, historical and social approach.

Keywords:

Ladadika | Thessaloniki International Film Festival | redesign | reuse | public space | city revitalization | patio

ABSTRACT

A central demand in the debate on the sustainability of modern cities is the revitalization of historic or not, parts of them and / or the building hoard that they include. The main goal of the redesign of the, often, abandoned buildings or ensembles, is their reintegration into modern life. In this paper we present a study of redesign and reuse of a former craft ten-storey building of the 1960s in the area of Ladadika in Thessaloniki and its connection with one of the most important cultural activities of the city. Ladadika was, for centuries, one of the most important commercial centers of the city. It has been declared a historic site since 1985 and today, it is an entertainment area. This change had affected the use of the building, gradually becoming a kaleidoscope of uses and partly being abandoned. The proximity of the building to the venues hosted by the Thessaloniki International Film Festival, one of the oldest in the world with a history of sixty years, was the reason for the proposal to transform it, on the one hand into a meeting place and work for filmmakers during the festival, but also annually, on the other hand, in a training laboratory for film students. The laboratory is developed on all floors of the building and covers all areas of filmmaking. The building, maintaining only its bearing structure, is redesigned and upgraded functionally, morphologically, aesthetically, statically and energetically. Its ground floor is integrated into the public space and turns into a transitional area between the city and the functions of the building, with green areas and spaces for public cinema screenings. Through "Project Cinema", we aim to share an example of a holistic approach to creating beautiful and sustainable living spaces, which enhance the cultural identity of the city.

1. INSPIRATION

Last year has brought many changes in the lives of all of us. The pandemic has changed how we work, learn and interact as social distancing guidelines have led to a more virtual existence, both personally and professionally. This situation inspired us and so we started this project from the site. This site has undergone many changes as we will mention below. In the same way that this year we adapted to this situation, so did the area we chose and the building. This was the reason why we chose to change its operation and bring it to today as well as to the requirements of the area.
Another function of the building which we consider to be very important now is the common and open space. Shared because we lacked communication with other people and open as we were locked in our homes all this time. We pursued this by creating the atrium shared projection space.

Introduction

The proposal "Project Cinema" aims to contribute to the effort of creating beautiful and sustainable living spaces, which enhance the cultural identity of the city and the promotion of its historicity. This approach is consistent to The New European Bauhaus which wants to integrate in the design three dimensions: *sustainability (including circularity), quality of experience (including aesthetics) and inclusion (including affordability)* with the goal of making us

all live better together after the pandemic. At the same time, understanding and evaluating the historic urban landscape is, currently, a field of research around the world. The Recommendation on the Historic Urban Landscape (HUL) was adopted on 10 November 2011 by the 36th session of UNESCO's General Conference. The second Consultation on the 2011 Recommendation on Historic Urban landscape Implementation by Member States took place in 2019. UNESCO's approach to managing historic urban landscapes is holistic by integrating the goals of urban heritage conservation and those of social and economic development. This method sees urban heritage as a social, cultural and economic asset for the development of cities. The proposed project follows this holistic approach, as it treats the redesign and reuse of a half-abandoned high-rise building in the historic center of Thessaloniki as an opportunity to highlight the city's cultural heritage associated with a historical institution such as the Thessaloniki International Film Festival and at the same time creates an economical and artistic pole.

3.The "patio"

3.1 The patio as architectural synthetic element

In architecture, the patio (atrium) is a synthetic element that appears in a variety of buildings from antiquity to the present day, not only in Greece but also in the rest of the world, but mainly in areas where the climate is temperate. The above fact suggests that its existence as well as all the beneficial properties it imparts to the building itself, are known from the past. The patio has been used over the centuries by many cultures, for the smoother integration of structures in the climatic conditions that prevailed in each area and in the natural environment. An example of the use of a central inner courtyard (patio) can be found in the palaces during the Minoan Period[1]. The atrium was a key structural element and extended from north to south, while around it were developed and organized spaces with different functions and qualities (Figure.1). In the Mycenaean civilization that developed in mainland Greece from 1700 to 1100 BC, the inner courtyard was also the main structural element of both the mansion and the houses (Figure. 2). In Greece of the 5th century BC. and then, the house had as its central structural element the inner courtyard which was accessed through a covered corridor that started from the street. In the yard were developed all the main activities of the tenants, while it was also a place where the whole family gathered. Also, foreigners were welcomed there and there was the altar for religious ceremonies.

The use of the inner courtyard continued during the Roman era (Figure.3) and the Byzantine times, where typical examples of the use of the atrium are observed in

NOTE 1

The Minoan civilization developed in the Aegean islands, centered in Crete, around 2000 BC.

the religious buildings of this period, in the temples and monasteries (Figure. 4 & 5).

The main core of the houses of Greek vernacular architecture (Figure. 6 & 7) was the inner courtyard, which in addition to security; offered wind protection, sun protection and thermal comfort. Observing the properties and the qualities that the yard presents, it is obvious that it

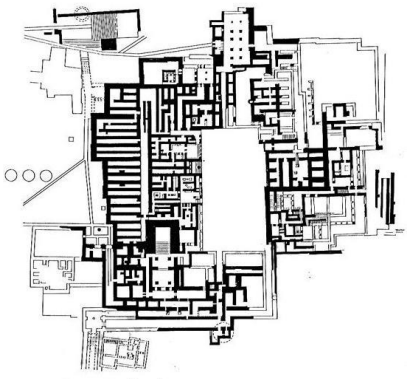


Figure 1 (left). Top view of the palace complex of Knossos. (Bouras 1999, 93)

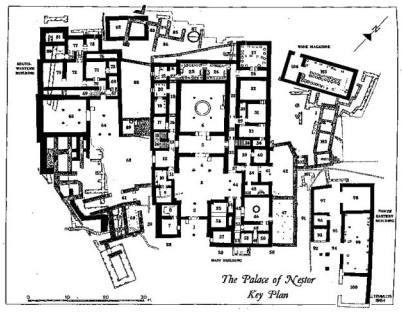


Figure 2 (right). Top view of Nestor's palace in Pylos. (Source: http://www.dimos-pylou-nestoros.gr/images/lolos/palace_katopsi.jpg)

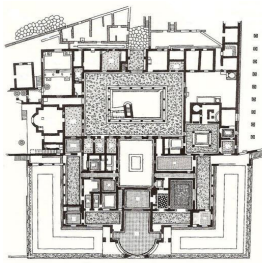


Figure 3 (left). Top view of the Villa of Mysteries in Ancient Pompeii

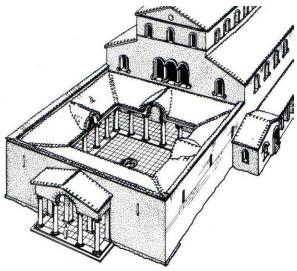


Figure 4 (midle). Representation of the early Christian basilica of Agios Stergios in Gaza (Bouras 2001, 40)

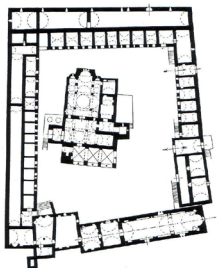


Figure 5 (right). Top view of the Monastery of Osios Meletios in Kithaironas (Bouras 2001, 200)

is perhaps the most living part of the house, a "container of life" as Aris Konstantinidis would say.

The patio can be the "central idea" of architecture composition of a building and sometimes may be a secondary element, serving different needs each time. In the first case the functions of the building are arranged around it thus ensuring in all areas sunbathing, lighting and ventilation, while at the same time is a means of relaxing the surrounding areas. In other words, it is the center of his life building. In the second case it is a simple architectural element, a fact which usually occurs in large

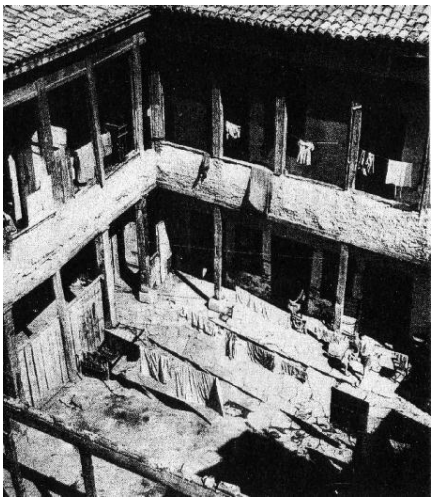


Figure 6. Old Athenian house Yard. (Konstantinidis 1983, 90)

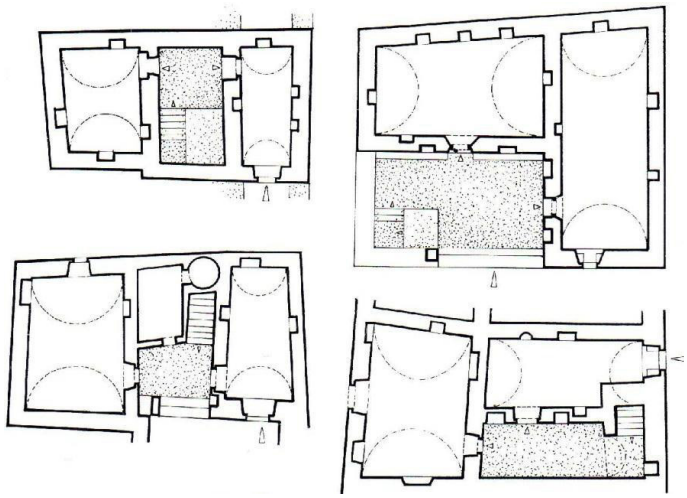


Figure 7. Floor plans of houses with "solar" or "poundi" [2] in Chios (Agapitou-Kyritsi 2010, 28)

buildings to obtain outdoor relaxation or natural light. More than one can also be used patios in a larger scale composition. The atrium can also be a transitional element, the intermediate space between the public space and the internal environment of a building. For this and in a building with a patio the entrance to the interior space can be made through the inner courtyard, isolating on essence the building from external factors, and preparing the visitor for the entrance and the activities that take place in it.

A building shapes the style and character of the people who live and work within it. Thus the study of the relation of the atrium, as construction, with human is of particular importance. The patio is one means of transporting external weather conditions inside the building, since it enables tenants to perceive the seasons, the sun, the hours of the day, making their living more enjoyable and more creative. In many patios there are also water tanks, fountains and vegetation, elements that bring nature inside of the building while giving the occupants a sense of calm and relaxation. We conclude, that is, that the atrium can be one particularly vital space in both private and public buildings.

3.2 The patio as an element of urban planning

The patio can contribute to the shaping of the urban fabric, as an element of urban planning. Uncovered spaces in a city can perform many functions and at the same time be more than just passages. With their correct placement in the whole urban fabric they can function as a solar passage and aeration lung of a wider area. Taking as a model the characteristic inner courtyard in the vernacular

NOTE 2

Small inner courtyard on the first floor around which the rooms used by the family are arranged

architecture -essentially the "patio"-, as well as all the advantages of its use in buildings from a long time ago, the spatial designers tried to integrate it in the design of the urban fabric. As a result, the patio became part of the urban planning, as it appears in different sizes and scales, serving different functions each time, but always having the same purpose. We can connect the existence of uncovered spaces within the building blocks of a city with the function of the atrium. The building complexes on adjacent plots of a building block, due to the building constraints, leave uncovered spaces inside the building block, which are in contact with each other, although they belong to different plots, creating a "patio". The above building layout, which usually results by chance, leads in the development of a repetitive pattern at the city level, which also offers the buildings of each block the required conditions for sunbathing and ventilation (Vasileiou & Papastavrinides 2012).

The yard or patio of a building is a space created for the exclusive exploitation of its users. In very few cases the patio could be used as a semi-public space, while its shared use took place conditionally. Initially, only the patios of public buildings gave the feeling of public space. As a result, the patio, although an integral part of an individual building, is gradually transformed into a kind of urban space. The patio, therefore, can be a kind of public space typical of the case where it functions as a square. Spaces of this type are not contained in a single building, but in a complex of buildings that are interconnected and share the common area for different uses (Figure.8). As the above space is a square, it is large and has a variety of uses and there is usually the possibility of connecting this area with network of pedestrians' roads, turning the patio-square into an excellent urban space. Consequently, one of the most fascinating design values of patios is their contribution to hiking in the city, as they can connect roads (Figure.9). Until recently, urban designers had to use outdoor areas such as streets, arcades, squares or parks as pedestrian crossings. On the contrary, patios are traffic

areas that are sometimes covered with a transparent roof. This fact makes them useful for most of the time since the weather is no longer a deterrent. A place of this kind can perform many functions and is not a simple passage. Inside the patios there can be many additional facilities such as sculptures, green spaces, water spaces or exhibitions, thus giving the opportunity to the citizens to spend their time happily. In this context, our proposal for the redesign and reuse of a multi-storey craft building in Ladadika in Thessaloniki, defines as an option and the use of the patio in the case of revitalization of historic or non-historic parts of the city.

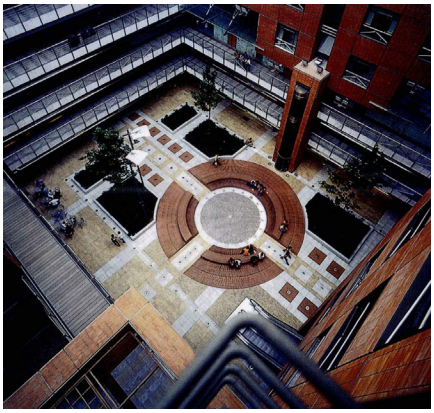


Figure 8. The commercial and business center "Plateia" in Thessaloniki (Source: Magazine "YLI & KTIRIO (Material & Building) Issue 76", July - September 2006, p. 100)

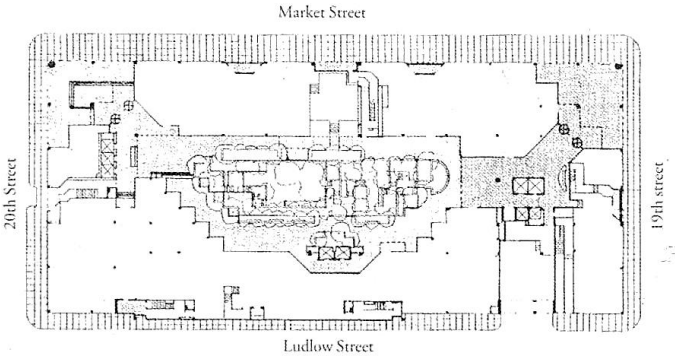


Figure 9. The Philadelphia Stock Exchange, which connects four streets with protected areas sidewalks between a planted patio (Tsigkas 1996, 142)

4. Ladadika

Ladadika, the only district outside the walls of Thessaloniki until 1870, was

Figure 10. The area of Ladadika

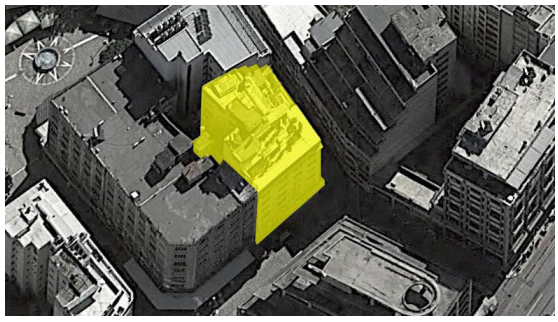


Figure 11. Location of the building

created after the 16th century as a commercial annex of the city dock (Figure. 10), on the site of the Byzantine port, which was excavated and for centuries was one of its most important commercial centers. The area was saved from the widespread fire of 1917, but was affected by the new plan of the city, which destroyed one part of the market and divided it into two parts.

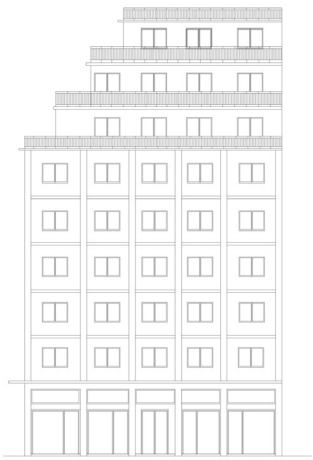
Ladadika was abandoned for about two decades, entering a period of decline that lasted until the earthquake of 1978. In 1985, the boundaries of the area - an area of 6.5 hectares - are defined by the decree declaring to a "historic site" (DILAP / G / 24917/1598 / 24.5.85) and at the same time, the special architectural style of the buildings of the 19th century is maintained and protected by the Ministry of Macedonia Thrace. Today, having undergone restoration processes during the 1980s and 1990s, Ladadika is an entertainment area of Thessaloniki, housing many restaurants and nightclubs

5.The building

The building owned by D. Sgourides - N. Agathou & Co., at the junction of Navachias Ellis and Doxis streets in

Figure 12 (left). Facade of the building

Figure 13 (right). Photo of the building



Ladadika (Figure. 11), was erected after 1964, according to the plans of NTUA Civil Engineer Dionysios Robotis. It consists of a ground floor of 5.20 m, and eight overhead floors (Figure.12), of which, the three upper ones are in a gradual retreat from the B. L.(building line). It is a typical example of the late development phase of the area of Ladadika.

Initially, it was designed to house 46 office spaces on the floors, but gradually began to house craft shoe factories that took advantage of its proximity to the port to dispose of their products. Remains of footwear are still preserved in the building. The total decline of handicraft production in Northern Greece during the 90's coincides with the transformation of Ladadika into an entertainment space, as a result of which the use of the building is influenced and it is gradually transformed into a hosting space for artistic workshops of painters, photographers and musicians.

Its current image, with the use of a house on the upper floors, was formed from the beginning of the 2000s, overlaps on these floors made in the course by the owners, as a result of which they have now made it a kaleidoscope of uses and users (Figure.13).

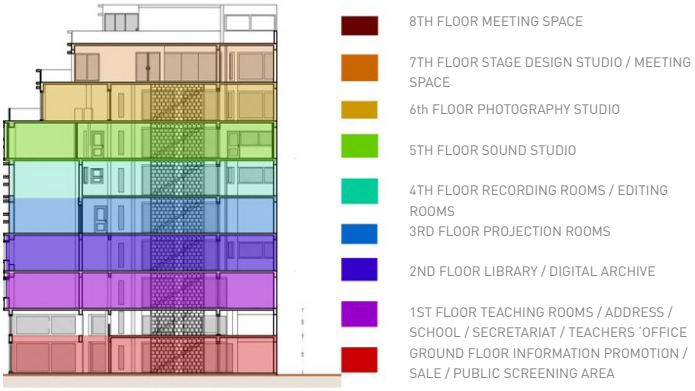
6. The concept

The proximity of the building to the venues hosted by the Thessaloniki International Film Festival (Figure. 14), one of the oldest in the world with a history of sixty years, was the reason for the proposal to transform it, on the one hand into a meeting place and work for filmmakers during the festival, but also annually, on the other hand, in a training laboratory for film students.

The configuration of the laboratory includes eight artistic directions, covering the fields of cinematic creation and is developed on all floors of the building, according to the building program (Figure.15). The eight artistic directions are:

Figure 14. The proximity of the building to the venues hosted by the Thessaloniki International Film Festival

Figure 15 .
The building
program



1. Scenario, 2. Direction, 3 Sounds / Music, 4. Documentary, 5. Stage Design, 6. Montage, 7. Cinema History and 8. Photography.

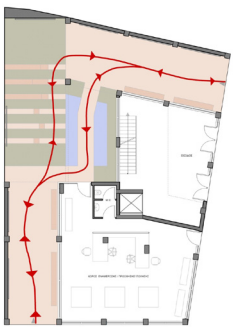
7. The Proposal

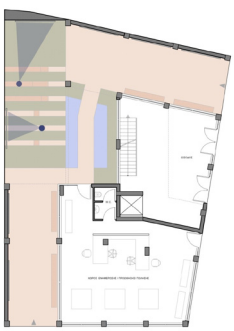
The main idea was to create a central interior patio, which is the core of the building around which all the main spaces are developed. The building "embraces" the atrium, giving the possibility of visual contact to it from all its spaces and the provision of natural light throughout its height (Figure.18, 19 & 20). The vertical communication of the building is in contact with the atrium. On the ground floor, in an effort to integrate with the common area of the city, a route is created, along which public screenings of cinematic creations (Figure.17) of the students of the laboratory will take place. This route leads to the atrium, which is proposed as a transitional space between the city and the functions of the building (Figure.16), a space that can be transformed into a note of calm and serenity, with the use of the water element and planting.

Figure 16 (left)
Transitional space

Figure 17 (middle)
Public screenings
of cinematic
creations(
Ground Floor)

Figure 18.
Visual escapes
(1st Floor)





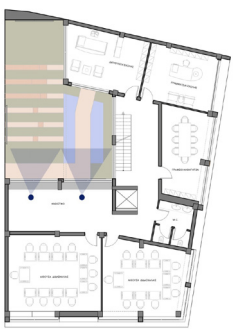
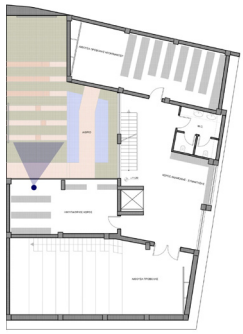
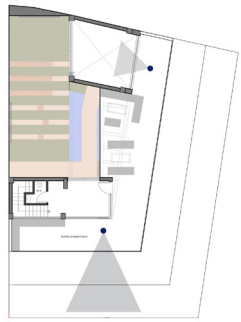


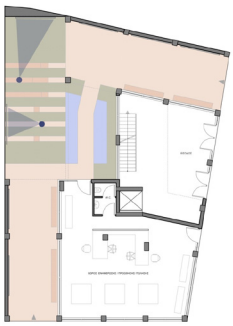
Figure 19(left)
Visual escapes (3rd Floor)

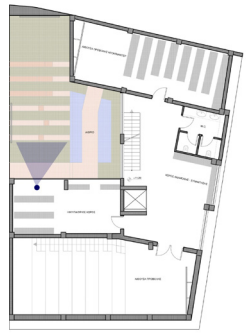
Figure20(right)
Visual escapes (8th Floor)

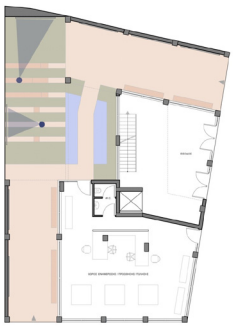


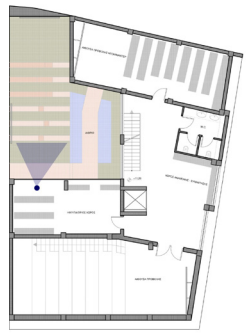


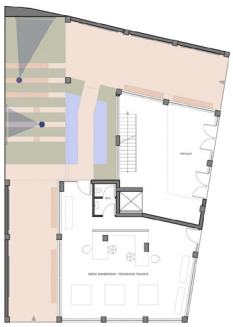
7.1 The Floor Plans











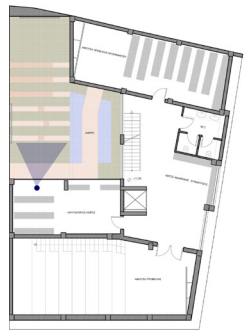


Figure 21.The proposed Floor Plans of the ten-storey building (Mezzanine, 1st, 2nd, 3rd, 4th, 5th, 6th, 7th & 8th floor)

7.2 The Facades

On the facades of the building there is an "exterior skin" with multiple levels, reminiscent of photographic films and with recesses and recesses, arches and fully open windows, which sometimes create transparency and sometimes completely closed spaces, following the internal functions and needs of the building (Figure. 22).

Figure 22
The proposed facades of the building

8.Conclusions

The ultimate focus of the New European Bauhaus is *"beyond buildings" – the project should bring benefit to the whole of society*. The NEB aims to help to revisit Europe's cultural heritage and shape its future. At the same time, central demand in the debate on the sustainability of modern cities is the revitalization of historic or not, parts of them and / or the building hoard that they include. The main goal of the redesign of the often, abandoned buildings or ensembles, is their reintegration into modern life which is in line with the Recommendation on the Historic Urban Landscape (HUL) by UNESCO.

In this frame, through "Project Cinema", we aim to share an example of a holistic approach to creating beautiful and sustainable living spaces, which enhance the cultural identity of the city. The project connects and combines greenery, creativity, inclusion and the quality of

experience with the urban cultural heritage. The proposed reuse of the multi-storey building in the area of creation and education, which is connected to one of the most important artistic institutions of the city, is an attempt to integrate it into the life of the city. The main idea of the redesign was the creation of a central interior patio, which is the core of the building around which all the main spaces are developed and on the ground floor, it is transformed into a common area of the city. Buildings with a patio change the structure of the urban fabric and in combination with the correct urban planning become valuable spaces for the upgrade of the quality of life of the citizens. The patio can be perceived as a free space that is controlled, thus providing users with protection from severe weather and it has advantages for the development of various activities. The ability of the atrium to adapt to a variety of natural and social environments is the most basic quality of this space, adaptability, both in nature and in society. By nature we mean different climatic conditions, locations of different geography, and in a variety of materials depending on the recourses of each place. The adaptability of the atrium to society is respectively the ability to be assimilated by different societies and cultures. With "Project Cinema" we aim to inspire behaviors, attract the markets and propose ideas which maybe can influence the development discourse to make new ways of living possible according to the New European Bauhaus.

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TITLE

DESIGN WITH NATURE: SPATIAL SOLUTION AND CITY-EFFECT

authors

Antonio Bocca
Architect, Ph.D. Student | "G. d'Annunzio" University
Chieti-Pescara (Italy), INU Giovani
e-mail: antonio.bocca@unich.it, antoniobocca23@gmail.com

Sara Ferraro
Architect | INU Giovani
e-mail: arch.ferrarosara@gmail.com

Antonio Bocca

Antonio Bocca (1992) is an architect, currently Ph.D. Student in "Earth Systems and Built Environments" at the "G. d'Annunzio" University Chieti-Pescara, Dd'A-Department of Architecture. In 2017 he graduated in Architecture, with a thesis in Urban Planning, and in 2018 he won a post-graduate fellowship at the same university. His doctoral research studies centralities in relation to urban-architectural design and socio-economic context. He has collaborated in several academic and national research projects. His contributions are published in books, journals and conference proceedings. He is a member of INU (Italian Institute of Urbanism) and INU Giovani Laboratory.

Sara Ferraro

Sara Ferraro (1993) is an architect, graduated in 2019 in Architecture and Urban Planning at RomaTre Department of Architecture with a thesis about green & blu infrastructures and recently graduated at II level Master "Smart governance & GIS strategy" at RomaTre Department of Humanities, with a research about GIS tool model for apply Nature Based Solutions. She is a member of INU (Italian Institute of Urbanism) and INU Giovani Laboratory.

Keywords:

urban regenerations| centralities| public space| NbS| design with nature| network

ABSTRACT

The relationship between the city and its inhabitants has changed very quickly over the years. In recent times, cities have reflected a social, environmental and economic crisis. The conditions of inadequacy, especially for suburbs, are really evident jet, exposing citizens to ever greater risks. Urban areas, even if re-configured through urban regeneration projects, have not been able to guarantee adequate levels of well-being and *city-effect.* In fact, the growing urbanisation of cities has involved the loss of green spaces, with consequent negative impacts on biodiversity, social relations and climate.

In this contest, planning strategies inspired by nature like Nature Based Solutions (NBS), Green&Blu Infrastructures and more, may be possible answers to stimulate urban regeneration and sustainability in urban systems, improved livability also. A selection of European projects from the Horizon 2020 programme (such as Nature4cities, UNaLab, UrbanGreenUp) are going to be used to demonstrate how the use of NBS strategies at the urban scale can counteract the effects of urban mismanagement, improve the quality of living and provide a sustainable environment.

Through the selection of projects, the urban scale and public space will be investigated, from an adaptive perspective, with a focus on environmental and socio-economic performance, namely triggering the *city-effect*.

The thesis is that urban areas re-designed according to NBS methodologies and embedded in a network of interconnected centralities, networks of places, can initiate transformations not only of degraded urban elements, but of the whole city, so that the entire city system becomes adaptive and resilient. A sustainable future needs sustainable cities.

INTRODUCTION

«A syndemic is not merely a comorbidity. Syndemics are characterised by biological and social interactions between conditions and states, interactions that increase a person's susceptibility to harm or worsen their health outcomes» (Horton, 2020).
The current cities are the result of an urban planning season in which the culture of building has prevailed over quality. This has produced social inequalities and spatial injustices, amplified by the pandemic crisis.
Until now, the development of the city – alongside the enormous use of concrete – was quantified in relation to its capacity to develop and meet urban demand (housing, services, employment, accessibility).
The results are buildings devoid of performance and functional characteristics, streets unsuitable for traffic and squares without urbanity and attention to urban well-being.
In addition, the continuous waterproofing of the road surface has highlighted the limitations of the soil in draining rainwater. These limitations and difficulties not only lead to continuous flooding, but also cause physical damage by limiting – sometimes preventing – the use of public space.
The meaning of urban space has exploded; it has become indifferent, incidental and to be redefined in social and environmental terms. We experience the need to design no more with function, but with performance. Urban space becomes an ecosystemic element and a reconnection between the fragmented elements of the city.

This research paper seeks to combine socio-economic, perceptual, qualitative and regenerative aspects with Nature Based Solution (NBS) interventions. The paper aims to feed into the debate of the urban planning discipline in favour of increasingly sustainable cities.
The article will be articulated in:

- *Literature review.* This section aims to address the issues of the city effect and NBS, with a focus on urban regeneration;
- *Compliance between city-effect and NBS*. Based on the analysis of some European projects, this section investigates how NBSs can contribute to the creation of sustainable public spaces and improve their use;
- *A sustainable future needs sustainable cities*. This section introduces the topic of integrated planning through the use of technology and NBS;
- *Case study: analysis/research*. This section introduces the topic of integrated planning through the use of technology and NBS;
- *Conclusion*. The section reflects on possible applications of NBS strategies to increase the well-being of the city, opening up new research horizons.

1. Literature review

1.1 City effect

Talking about the city effect implies thinking about socio-economic and social issues as well as architectural and urban quality. This theme crosses different areas of knowledge; it aims to bring together the dichotomy between urbanism and architecture, seen as two separate 'fields' of design.
The city effect (Fig.1) is seen with varying intensity at different scales of design:

- in the metropolitan dimension it is a question of different spatial allocation of the amenities and their accessibility;
- in the local dimension (neighbourhood) it is implemented through the quality of public space and its attractiveness for the community.

Triggering the city effect therefore means planning a network of centralities, i.e. implementing urban restructuring and regeneration. The latter are often disconnected, punctual and not included in an overall vision of the city's sustainability, without bringing any real improvement.
Current settlement systems, on the other hand, require interventions that give urban space back to citizens. Urban spaces, designed with social and environmental aspects in mind, attempt to replace relational neutrality with a

renewed urbanity. We need only think of how – especially in Italian culture – the place like the piazza has lost its relational role, regressing to an urban void or car park. In recent projects, the piazza has become an active element in the fight against climate change while maintaining its value aspects. Examples of ecological transformation can be identified in Rotterdam's 'Water Squares', where water as a threat is reinterpreted as a design resource through different spatial solutions. These urban spaces, reconfigured with innovative design approaches, allow relational and sports activities both in its 'classic' configuration and in flooding situations. Thus, the natural component and the use of new emerging technologies become fundamental in the design of future public spaces. In addition, recent studies have shown how the activation of green transformation processes in urban spaces brings social benefits, expressed in quality of life, sense of belonging and social cohesion. Today's increasingly smart society urgently needs to rediscover opportunities for interpersonal relationships.
The design of public space becomes the engine for the revitalisation and enjoyment of the urban environment.

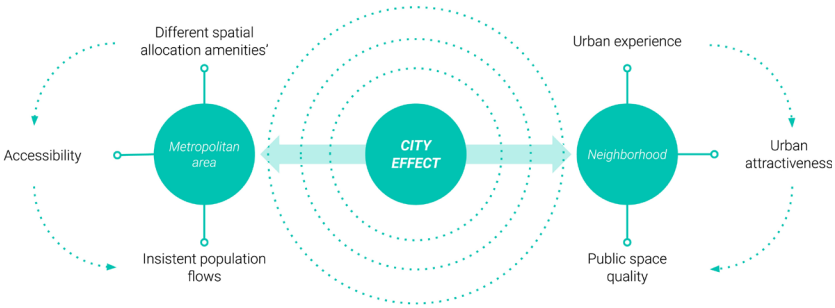

Figure 1. City-effect. Elaboration of authors.

1.2 Nature Based Solution

For years, Europe has placed quality of life in relation to human and natural factors at the heart of urban and territorial development, as highlighted by the European Agendas, the Green Deal and the New European

Bauhaus programme. Based on the goals of the 2030 Agenda for Sustainable Development, the theme of Nature Based Solutions (NBS) is proposed as one of the effective design responses to today's crucial issues. The International Union for Conservation of Nature (IUCN) defines NBS as the set of alternative solutions to conserve, sustainably manage and preserve the functionality of natural ecosystems or restore it in ecosystems altered by man, which address societal challenges in an effective and flexible manner: increasing human well-being and biodiversity, climate change, food and water security, disaster risks, social and economic development.
In addition, interest in NBS has increased significantly in recent years. This is evidenced by advances in the management of biodiversity and natural-anthropic ecosystems that are instrumental in countering extreme natural phenomena. Continued progress is helpful in meeting the challenge of urbanisation[1] and achieving an appropriate level of urban quality. In fact, global population growth, when compared with rising temperatures, makes it possible to assess the possible risks of future threats.
They can be of a different nature:

- *environment*, where biodiversity and ecosystem services are affected by changes in temperature resulting in reduced availability of resources such as water and nutrients;
- *health*, acting mainly on two components. The first concerns food safety[2], the second the quality of life of citizens;
- *socio-economic*, due to the damage inflicted by catastrophic and exceptional weather events, negatively affecting the social infrastructure and the local economy.

Therefore, the proposed article focuses on the management of urban space in terms of quality and liveability, through the use of the NBS approach as a binder between social inclusion and sustainability.

2. Perception of public space

Urban development in recent years has led to the degradation of public spaces and the loss of social cohesion, resulting in an impoverished urban appeal. The identification of functions, therefore, becomes essential to respond to future urban demands. Urban space has moved from being interpreted through consumerist stimuli to being defined through perceptual and performance stimuli.
It is clear that a positive social climate requires the design of both spaces for privacy and spaces for social interaction. Providing diverse spaces, where areas

of privacy and social interaction are amalgamated, can stimulate and foster interpersonal behaviour. Urban space, reinterpreted through indicators such as legibility (understanding), complexity, accessibility and urban flexibility, influences both social and design components. Considerations that affect the urban environment in terms of people's needs and social impact, influencing the quality of the space and services provided (Fig. 2).
Thus, users initiate a process and a cognitive evaluation that leads the space to be identified as a place, i.e. an area of identity, well-being and socialisation. Unfortunately, not all-natural contexts are hospitable places, but there is a tendency to prefer[3] natural environments to built ones, regardless of age and cultural background. Natural environments help to relieve 'urban stress' (noise, traffic, crowding, etc.) and offer moments of escape from everyday life. Public spaces, therefore, can improve mood, increase well-being, and nurture the feeling of being an integral part of the ecosystem (Ulrich, 1991).

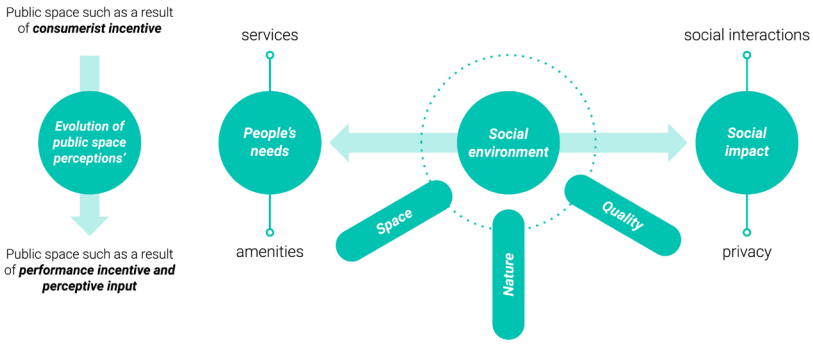

Figure 2. URBAN EXPERIENCE. Social impact and spatial quality. Elaboration of authors.

3. Relations between city-effect and NbS

In the field of public space and social connections a variety of interventions for the rehabilitation and management of NBS can be found. To support this, a number of European projects were identified that address these issues through

NOTE 1

According to estimates by the United Nations Department of Economic and Social Affairs (UN|DESA, 2018), in 2018, 55% of the world's population lived in cities. Projections show that the gradual transfer of population from rural to urban areas and the increase in world population increases the percentage to 68%. By 2050, the urban population is expected to increase by 2.5 billion people (UN|DESA, 2018)

NOTE2

Food safety is defined as ensuring that there is enough basic food and water to sustain the life of the population.

NOTE 3

Preferences are divided into two groups: (i) evolutionary, based on an immediate response, argues that the preference for nature depends on our animal origins; (ii) constructionist, believes that positive attitudes towards natural environments depend on cognitive evaluations.

an integrated strategic vision, acting at both local and metropolitan scales.
By analysing these European projects, an attempt was made to understand the social and environmental benefits of nature-based strategies. To be effective, NBS needs to be adapted to local conditions. The aim is to achieve a sustainable and resilient environment, where the latter is understood as «'adaptation', that is the capacity to react and respond to an external stimulus or stress such as climate change, and 'mitigation', that is the potential to improve the current state of a parameter or driver through active or passive behaviour» (EKLIPSE, 2017).
According to this view, by relating the city effect to NBS regenerative processes, the goal is the sustainable development of cities. The latter are incremental areas where the socio-economic system reacts synergistically with urban centres and ecosystem services (Fig. 3).

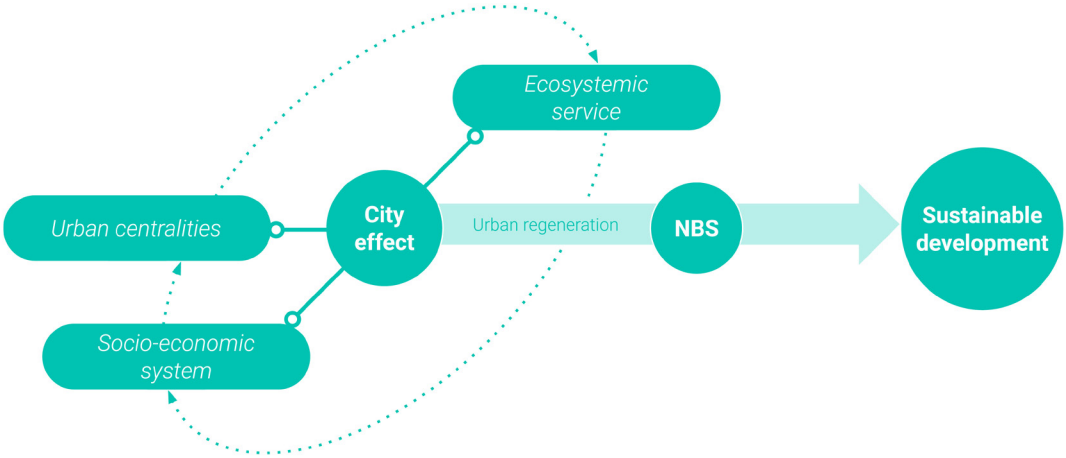

Figure 3. City-effect & Nature Based Solutions (NBS). Elaboration of authors.

3.1 Eindhoven, Netherlands

Eindhoven has long pursued the goal of increased liveability and urban health. The strategic vision includes integrated green&blue infrastructure projects for urban planning against climate change (Fig. 4).
Recently, Eindhoven joined the European project Urban Nature Labs, supporting the development of smarter, more inclusive, more resilient and more sustainable urban communities through the implementation of nature-based solutions (NBS) (UNaLab). Although Eindhoven is very active on these issues, not all implemented projects that can be identified as NBS can be considered fully successful, due to projects still to be developed or the wrong use of this approach.
Working simultaneously on both urban greenery and public space, Eidhoven has

pursued the spatial strategy 'Stad, rood beeldbepalend'. It attempts to increase green areas in order to achieve as many permeable surfaces as possible. Among the needs expressed by the administration is the redevelopment of the Aanschotse Beemden stream, and the consequent reorganisation of the water course. This choice is geared towards using the area as a flood zone in the event of heavy rainfall.

These actions undertaken are put into a system in order to create an ecological connection characterised by an increase in public space and sustainable mobility by reducing the surface area for vehicles. Transformations that are also reflected in the heart of the city which, as in the case of the Hermanus Boexstraat (shopping street), adopt a different urban design to facilitate the management of green spaces (e.g. lifting pavement slabs due to root growth).

Another best practice is the case of Smalle Haven and the creation of a green oasis which, through the use of green roofs, has helped to raise the urban appeal of the area.

Other projects not only increase biodiversity but also actively involve the population in their implementation and management. Examples include the Eetbaar Plantsoen (Food Park) in the Geestenberg district or the greening of Clausplein square, previously entirely paved.

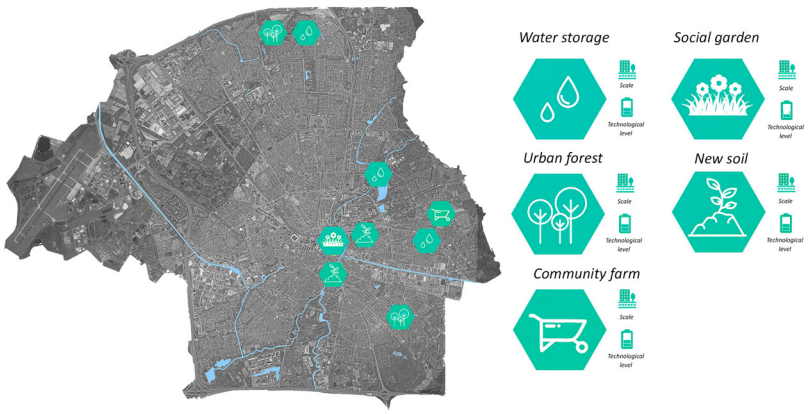

Figure 4.
NbS interventions (demonstration areas) in Eindhoven. Elaboration of authors.

Eindhoven has implemented green spaces and elements in several streets within the city centre, which previously were completely paved. By using less pavement, less water is channelled into the sewer which reduces the risk of flooding (UNaLab) and improves the overall liveability of the urban experience.

3.2 Turin, Italy

Among the urban regeneration strategies, through the application of NbS and green infrastructures, the project case of Turin is a best practice of transformation of ex-industrial area focused on offering new urban potential (Fig. 5).
The project, part of the ProGIreg strategy, is developed in the peripheral area of Torino, called Mirafiori Sud, an area known for its industrial development.
In the 1940s, the birth of the Mirafiori car factory attracted large flows of immigrants to the area, with an increased demand for residential areas and services.
The continuous demands have inevitably caused the impoverishment of the natural environment and serious drawbacks both for the quality of public spaces and for biodiversity and landscape management.
The intervention uses 7 types of NbS: soil regeneration, social farms and urban gardens for the creation of culture and work, green roofs and walls, implementation of "pollinator" vegetation, aquaponics, accessible green corridors, pollinator biodiversity. These interventions not only aim at regeneration in natural terms, but also focus on the 'circular economy'.
In accordance with ProGIreg - an acronym for 'Productive Green Infrastructure for post-industrial urban Regeneration' - the administration of Turin has attempted to initiate urban regeneration processes through small structural interventions. The aim is to obtain benefits that enhance the potential of the existing environment through the active involvement of the neighbourhood's inhabitants.

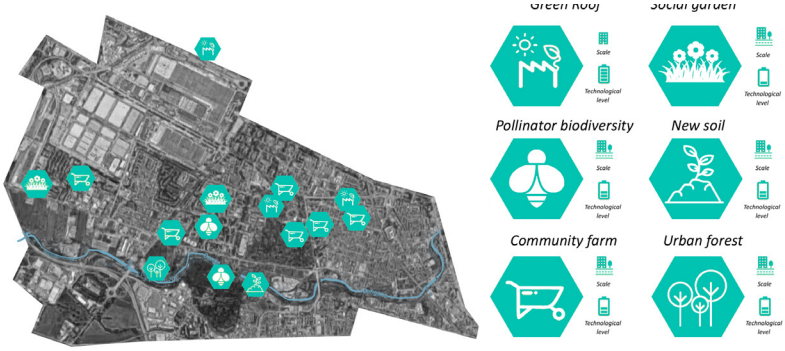

Figure 5. NbS interventions in the Mirafiori Sud area. Elaboration of authors.

4. A sustainable future needs sustainable cities

«The convergence of the environmental problem with the urban one, which has always been felt and theorised by the most critical fringes of planners, can only improve the performance of both urban and environmental policies» (Archibugi, 1994).
While one thinks of the urgency of making cities more liveable and greener, it is equally true that adequate planning is needed to achieve this goal. It must take into account the current state of places, their 'vocations', the needs of inhabitants and the potential offered by nature.
This 'integrated' approach, in which different areas of knowledge converge, must necessarily be based on innovative methods for the management of urban space. Thus, a system is needed that analyses the various levels that make up a city (infrastructures, public spaces, buildings, natural areas, urban services, etc.) separately, but is able to put them together to understand their dynamics and criticalities. The areas where the most critical issues are concentrated (heat island, water management, soil sealing, etc.) will therefore be the ones where the most targeted interventions will be needed.

4.1 Tools and management systems

So far, the approach to urban and landscape planning used in Italy does not consider, if not marginally, the potential offered by digital data management. The availability of precise and detailed information, at different planning scales, raises planning to a new level of awareness and knowledge of the territory. This choice connects levels of data – so far disconnected – and allows greater understanding in planning choices.
Digitising the characteristics of an urban area can be a valuable support to research methods of environmental impact analysis and subsequent strategies to be applied in relation to NBS. To support the digitisation of information

for integrated planning, a tool was developed using the open-source software Qgis. The tool was developed using the 'graphical modeller' and is easily applicable to different case studies.
This tool is able to divide the urban area into 'sub-areas' and assess the degree of criticality of the urban situation. From the results, a range of criticality values is obtained on the basis of which the most suitable NBS are identified for mitigation. This approach encourages intelligent planning that takes into account the real needs of cities and their inhabitants, and promotes sustainable innovation.
Through analytical models, such as this tool, research can take a further step. After the analysis, design and implementation phase of the strategy, it could accommodate analyses using IoT sensors, which are able to assess the qualitative state of the area in a post-intervention time frame. This analysis would make it possible to understand both the degree of improvement and the timing of the achievement of the set objectives. In addition, from the point of view of social impact, the model could host questionnaires to the population to analyse the degree of satisfaction and manage the consequent and eventual modification actions.

5. Case study: Analysis / Research

The tool - previously exposed - was used for the chosen case study, located in the municipality of Sesto San Giovanni, in the northern suburbs of Milan. The study area is relevant both for its links with the Milanese hinterland and for its environmental value. It is located between three important natural parks (Parco Nord, Parco Sud and Parco della media valle del Lambro) and runs along the Lambro river (Fig. 6). This position, strategic from an environmental aspect, configures the study area as a potential ecological corridor. Since NBS are mainly developed on natural areas within or in the immediate vicinity of the city (EU, 2015), the presence of green infrastructure provides for the creation of a large environmental network that is strategically planned and managed. On an urban scale, the chosen area features a former industrial settlement (Ex-Area Falck) adjacent to the river. The municipal administration has long identified the area as brownfields where urban regeneration processes can be initiated. Due to these factors, the area is suitable for testing the tool.
The existing conditions were investigated by examining data on land use, the Normalized Difference Vegetation Index (NDVI), the Normalized Difference Moisture Index (NDMI), brownfield sites, hydrogeological hazards and connecting infrastructures (Fig. 7). Each of the resulting data is reclassified by the model so that it can be correlated – at a later stage – to the 'degree' of criticality and

the consequent intervention to be suggested. The urban area is then subdivided into a grid composed of hexagonal meshes of size 150x150 metres, in order to have a more concrete analytical focus. In addition, on each of these meshes the model averages each of the data contained in the individual meshes.

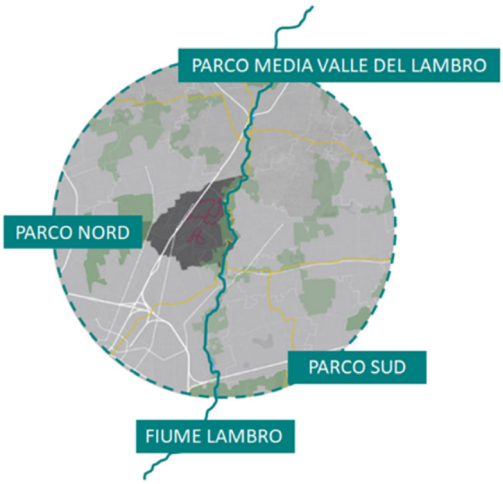

Figure 6. Environmental context of reference for Sesto San Giovanni. Elaboration of authors.

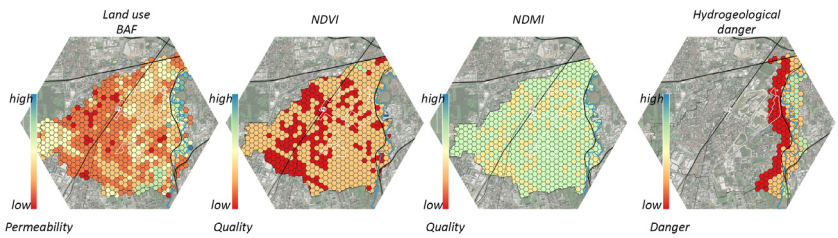

Figure 7. . Analysis of existing conditions reclassified on a model grid. Elaboration of authors

The next step is related to 'design', understood as the choice of functional NBS interventions to counteract the criticalities and favour the vocations of the urban area.
Therefore, four areas of intervention were selected in the case study:

- *Sustainable water management*: green roof, bioswales, permeable paving systems, infiltration basin, urban wetland, water retention ponds, phytodepuration, lamination basin;
- P*ublic space & social infrastructure*: community gardens, noise green barrier, arboretum, urban orchard;

- *Ecological restoration & biodiversity*: phytoremediation, river renaturation, green bridges for wildlife;
- *Green connections & rural land*: peri-urban parks, natural paths, green boulevard.

Once the interventions to be included in the model are highlighted, they are related, according to the degree of criticality, to the data of the current state. At the end of the analytical and design process, the model graphs the results obtained, highlighting the most critical areas and listing the most suitable interventions for the requalification of urban spaces as a means of bringing the city closer to nature.

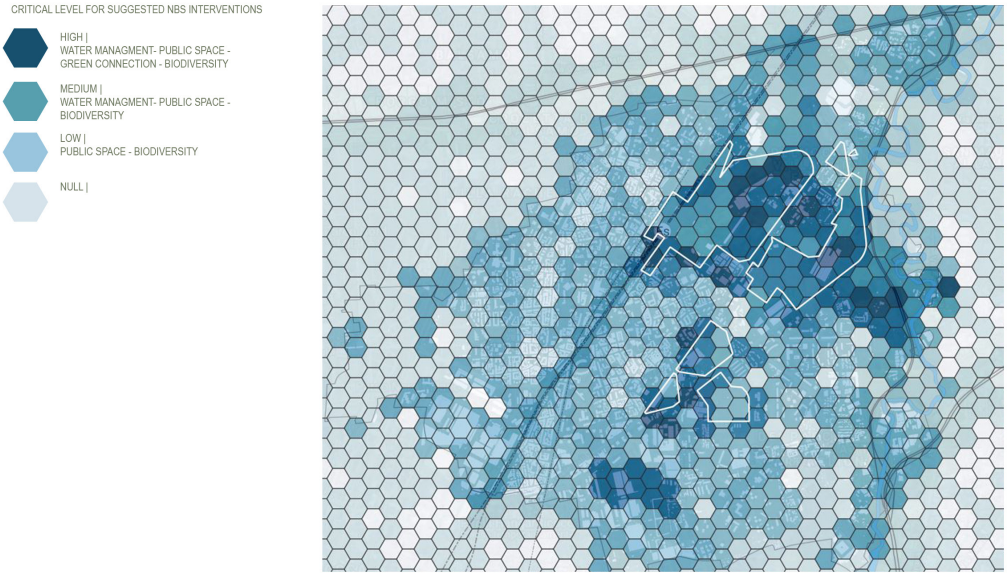

Figure 8. Tool elaborations and results. Elaboration of authors..

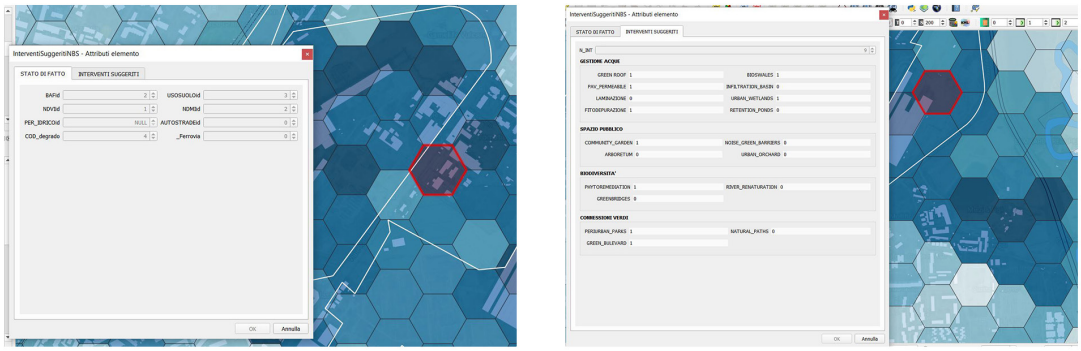

Figure 9. Left image: existing conditions of the analysed mesh.
Right image: suggested interventions classified by thematic areas. Elaboration of authors.

From the graphical elaboration (Fig. 8) it can be seen that the most critical areas are the brownfields, indicated by the white perimeter. These are brownfields, abandoned or discarded spaces, waiting for regeneration projects.
When querying each individual mesh in the report, the tool presents a pop-up divided into status data and suggested NBS interventions. These interventions are classified according to the themes: public space, biodiversity, water management and green connections (Fig. 9).
The comparison between the starting and ending point of the model shows that the natural and digital approach to the topic of integrated planning is fundamental to the design of urban spaces, together with the assessment of the impacts produced.
Urban spaces, reinterpreted through the theme of the city effect and NBS, result in the creation of highly usable and accessible sustainable environments. Environments in which green infrastructure, rich in biodiversity and functions, overlap with multifunctional urban environments. The NBS approach, therefore, uses the natural component as an 'active' design element within cities, determining an environmental mix of blue and green elements (zero height, hanging and vertical). Actions that, in addition to determining a 'perceptive wellbeing', also counteract the phenomena of heat islands, acting on 'physical and microclimatic wellbeing' and stimulating relationships thanks to the presence of the areas of relations and services offered (Fig. 10).

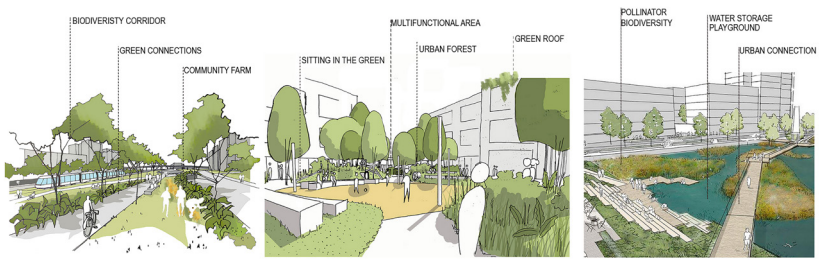

Figure 10.
Suggestions of urban spaces affected by NBS interventions. Re-elaboration by the authors on images by Studio Basta, Espacio coletivo+OPUS, Townshend Landscape Architects.

6. Conclusions

In the near future, the urban regeneration debate will be oriented towards city management and socio-environmental performance in order to achieve multidimensional benefits. The NBS highlights that the themes of social cohesion and circular economy should be actively included in Urban Agendas. NBS «addresses societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits» (Cohen-Shacham et al., 2016).

«As highlighted, the systemic adoption of NBS allows to integrate, with an organic perspective, transformation and management projects addressed to environmental, landscape and socioeconomic components with the aim to increase urban resilience» (Mussinelli, 2018). Thus, abandoned and underused areas, such as post-industrial areas, become a field of experimentation for NBS, depending on the diversity of context, development directions and urban policies, in order to address certain urban challenges.

While from an engineering point of view NBS translates into engineering solutions (roof gardens, drainage systems, etc.), it also promotes a 'place-based' approach, focusing on the ability of the project to enhance the identity of the area and initiate urban and socio-economic regeneration processes.

«Overcoming these challenges requires major systemic change in how we conduct and communicate interdisciplinary research, and how we organize and run our institutions» (Seddon et al., 2020).

In accordance with the New European Bauhaus programme, the combined use of new technologies and the natural component aims to create easily accessible urban spaces that address environmental challenges and promote social innovation as well as democratic participation. The proposed work not only enhances the term 'sustainability', but encourages a new aesthetic through the valorisation of emerging practices and technologies. «Therefore, our cities must once again accept the challenge of unpredictability, of indeterminacy. [...] In this perspective, the spheres of the human and the natural are no longer two ways of creating a geography of living species on the planet, but rather a phenomenology of the living, in all its forms» (Boeri, 2021: 6). It is undeniable that this approach, while bringing many advantages in terms of beauty and urban well-being, currently has limits to overcome. «A major difficulty comes in identifying appropriate indicators and metrics for the social-ecological effectiveness of nature-based interventions» (Christensen et al., 2018). The possible metrics of analysis (socio-economic, biophysical and ecological) are extremely variable due to the dynamic nature of socio-ecological systems. These indicators would

also influence the interpretation of the actual effects produced on the economic development of the urban areas concerned. It is hypothesised that only through joint methods of investigation and interpretation will it be possible to assess the real socio-ecological impact of NBS interventions, considering both spatial and morphological aspects as well as socio-economic and performance aspects.

These considerations outline fields of research between Urbanism and NBS, still to be explored, useful for the definition and implementation of adaptive and sustainable integrated planning. The integrated approach between policies and projects would help to initiate or increase the 'city effect', understood as the overlapping of different urban conditions: aesthetic quality, quality of life, perceived safety, functional mixité, presence of proximity services and possibility of daily and cultural activities.

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Image sources

Fig. 10_Left image: Studio Basta (2017). Schoolyard St Lutgardiscollege, Brussels. Available at: http://landezine.com/index.php/2019/02/schoolyard-st-lutgardiscollege-by-studio-basta/ ;

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Fig. 10_Right image: Townshend Landscape Architects (2014). Canada Water Masterplan, London Borough of Southwark. Available at: http://townshendla.com/projects/canada-water-masterplan-90/

TITLE

TRANSITIONAL WASTESCAPES: VACANT LAND, OPEN SPACE AND BUILT ASSETS AS RESOURCES FOR URBAN CIRCULARITY

authors

Carlos E. Soto Nieto
Senior Project Officer – Strategy Planning focused on Active Travel, Place-Making and 20-minute neighbourhoods.
e-mail: csoton200@caledonian.ac.uk

Carlos Soto

Holds a BSc in Urban Planning from Universidad Simon Bolivar where he later was an adjunct lecturer following his postgraduate studies in Urban Design at Universidad Central de Venezuela. After gaining six years of practical experience combining master-planning of infrastructure/urban design projects, spatial analysis, and planning policy in Latin America, Carlos completed a European Joint MSc in Urban Climate and Sustainability and collaborated through internship projects in Finland and the UK researching climate action aspects. He is interested in urban systems and strategic synergies supporting the design of sustainable communities and is now a Senior Project Officer for active travel strategies in the UK.

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circular cities|
sustainability|
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planning|
flexible design

ABSTRACT

The contribution of urbanisation to resource consumption, environmental degradation and climate change is a reminder of the need of a better relationship with nature. Urban practitioners, governments, and decision-makers strive for sustainable, and more recently; "Circular" cities. This article explores the alignment of the circular economy to spatial issues and the implications of this concept on urban planning and design. For that, the project presented in the following pages is based on a broader research work on urban circularity, where academia and practitioners' perspectives, and the exploration of Glasgow as a case study amid the "Circular Glasgow" agenda served as inputs. This work considers spatial variables through GIS techniques, therefore quantifying and recognising open space, vacant land, and built assets, as key elements to inform the needed transition towards a circular management and sustainable regeneration of urban areas. The project resulted in the identification of stocks in the city of Glasgow, which post-industrial settings make it a good place to pilot and scale-up circularity from the spatial planning perspective; towards flexibility and an enhanced harmony with the environment. Finally, this project contributes to the discussions on further research required to understand urban circularity as a catalyst of climate-sensitive actions relevant to the Green Deal and the New European Bauhaus.

INTRODUCTION

We live in a world increasingly urban; 3 million people are moving to urban areas every week and 2% of the land area is occupied by the cities where half of the world population lives. With figures surrounding 75% of urban population in Europe and about 80% in America (UN-Department of Economic and Social Affairs 2018), cities generate about 85% of global GDP, while consuming 75% of global resources, emitting around the same percentage of global energy-related greenhouse gas emissions (UN Habitat 2019). The European Green Deal intends to respond to these trends and envisions a continent with no net emissions of greenhouse gases by 2050, an economic growth decoupled from resource use, and a just transition through overarching policies and investments (European Commission 2019).

The CE represents the latest framework adopted by businesses and industries to achieve a better alignment with a sustainable development, by transitioning from a 'consumption to disposal' linear model to a circular one, reducing and rethinking waste (European Investment Bank 2019). However, what circularity means for cities is still under exploration, as its prospective application to the urban scale is context-specific with varying scenarios to be considered (De Vita et al. 2019; Paiho et al. 2020).

Glasgow has recently given some steps towards becoming a circular city, as a case study it has the potential to illustrate the linkages between circularity, spatial planning

and engagement in a city where urban regeneration has deep roots in its narrative, which some studies have associated to an ongoing dialogue between health issues and urban dereliction (Maantay & Maroko 2015) as well as its local economies (Macdonald et al. 2018).
The aim of this article is to contextualise the alignment of the circular economy principles and ideas to the urban scale, specifically to the spatial dimension, as to the implications of circularity in urban planning and design. For that, the research is based on a combination of methods; literature review, interviews and the exploration of Glasgow as a case study amid the "Circular Glasgow" agenda. The literature review takes academic and grey literature, the interviews were focused on the main stakeholders (promoters) of Circular Glasgow and the mapping process is better described in the following sections.
This article presents one part of the spatialisation of variables conducted through GIS for a broader research on urban circularity, with an emphasis on the quantification and recognition of open space, vacant land and built assets, as well as the dynamics affecting the use of these, to inform the discussions on the needed transition towards a circular management of urban resources and the sustainable regeneration of cities and towns.

2. DOWNSCALING THE CONCEPTS

The traditional economy, also referred to in academic literature as 'Linear Economy', follows a "Take – Make – waste" flow. This manner of economic development ruled and increased since the industrial revolution, but is now on the table for reformation, particularly in Europe where the Green Deal pursues an economic growth decoupled from resource use.
The Circular Economy concept has gained ground during the last decade, and as many of the concepts adopted in sustainability studies, it has a blended origin in between economics and ecology. Its relevance as an approach to shape the climate-sensitive route of organisations and cities lies in its links with a resource-led system thinking and the ecological idea of 'feedback' proposed by other concepts related to looping cycles (Geissdoerfer et al. 2017), shaping a systems-level approach that can guide policies and actions from the macro to the micro scale (Ellen MacArthur Foundation 2019). This idea is still evolving and being explored in academia, as it remains as a contested concept in terms of definitions (Korhonen et al. 2018a).
Geissdoerfer et al. (2017) points out that contemporary definitions of CE and its practical applications incorporate different features and contributions from

a variety of previous concepts and disciplines including and not limited to industrial ecology, regenerative design and cradle to cradle. Moreover, the understanding of the urban metabolism (UM), a concept that goes hand in hand with that of a circular economy, requires to be deepened in terms of the how-to look at material flows (Bahers et al. 2018), which suggest resources and material consumption and production should be understood as part of a living metabolism rather than a mechanism (Wolman 1965:). However, an urban metabolism is 'the total sum of the technical and socioeconomic processes that occur in cities, resulting in growth, production of energy, and waste.' (Kennedy et al. 2007, p44, as cited in Prendeville et al. 2018). This means that UM is a descriptive concept, not a prescriptive one as the circular economy or circular metabolism.

There are missing links between UM analyses and the execution of real-world design solutions for integrating urban planning and urban ecology (Perrotti 2020). Thus, while the potential of seeing cities through the lens of a circularity to support urban design, planning and policy development is supported in scientific literature, its practical implementation is so far focused on the resource efficiency of economic/business activities (Musango et al. 2017).

With this in mind, interdisciplinary ideas under the umbrella of sustainability such as the CE and UM could be downscaled to address contemporary challenges in planning and design.

3. URBAN CIRCULARITY

Approximately 50% of all waste is generated in cities and that number is expected to reach 70% over the next 30 years (Enel, 2019), but little is said about other type of waste; the wastescapes that result from urban obsolesce, functional and spatial changes, and the deterioration of both natural and urban assets (Amenta & Van Timmeren

2018) as part of the consumption patterns in cities along with emerging social issues and technological changes in every context.
After the literature review of frameworks and guidelines from selected public and private organisations, the points in common that were found are summarized in the following table:

Table 1. Circular Economy principles identified in grey literature (frameworks)

Principle/Element	Description in terms of the rural-urban systems
Bio regeneration	Aiming to recover resources to the biosphere, reclaim, retain, restore natural ecosystems, wastewater, energy, carbon and other natural resources through conversion, digestion and treatment, considering cost/benefit accounting.
Functional Dematerial-isation	Enabling collective sharing of information and assets through the use of both physical and digital platforms. Promote direct and indirect dematerialisation of products by focusing on the commercialisation of services over products and turning traditional procedures into paperless, remote-basis, data-led etc.
Optimisation	Increasing performance and efficiency by using better and cleaner technology. Considers predictive actions for maintenance and the extension of the life urban assets, from the conception and design stages of these to the improvement of managerial procedures and regulations (e.g., building codes, incentives) that accompany and support such efforts.
Looping and Adaptation	Keep components, materials and resources of the assets in a closed loop, both physically (e.g., dismantling and reusing components) and functionally (e.g., changing and adapting use). Recycling, reusing, repurposing, repairing, remanufacturing and refurbishing against underutilisation.
Localisation	Reinforcing local systems of services, flows and activities (e.g., supply chains) to leverage symbiosis and foster a manageable urban metabolism by localising and spatialising the stock and flows of resources to inform decision-making
Collaboration	Incentivising synergies between actors, exchange of knowledge and grassroots projects are key catalysts. Also, collaboration can be seen at a large scale (the connections inter-systems i.e. neighbouring cities and regions) and the players at the micro-level (e.g. behavioural change of the population).
Collaboration	Incentivising synergies between actors, exchange of knowledge and grassroots projects are key catalysts. Also, collaboration can be seen at a large scale (the connections inter-systems i.e. neighbouring cities and regions) and the players at the micro-level (e.g. behavioural change of the population).

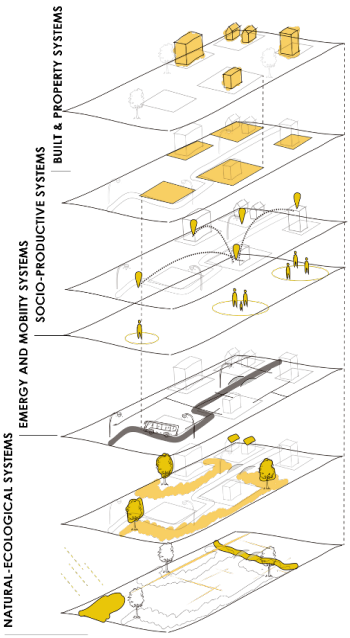
Based on the review of guidelines and reports from The Ellen McArthur Foundation (2015), Stopwaste & ARUP (2018), Enel (2019), EU (2020), Circle Economy (2019), EIB (2019), as per the thesis work; Soto-Nieto (2020).

In order to visualise urban circularity, it is important to define how those elements previously described can be embedded into the main urban systems. Therefore, the following table shows the traditional lens that is normally used to look at, for instance, the built and property systems, and the circular perspective that should

be considered as well, on the right column. The same with socio-productivity, energy and mobility networks and nature in cities.

Table 2..
The urban systems, traditionally and through the lens of circularity

Reviewed version based on the thesis work; Soto-Nieto (2020).



	Traditional lens	+Circularity lens
BUILT & PROPERTY SYSTEMS	Real state market, Land use and value, Development Planning and Management (Building regulations), social and economic offer and demand of urban activities (housing, local economies, facilities...). Sense of place, amenities, aesthetics and function.	Traditional + Building and their material content (Stock for urban mining), Life cycle of buildings; physical and functional flows (flexible design), resource-efficient buildings (circular buildings). Temporary and/or Long-term land use, availability and compactness (localisation) of activities.
SOCIO-PRODUCTIVE SYSTEMS	Actors: Academy, NGOs, Government, Businesses, their interactions/networks and needs, their products and services	Traditional + circular procurement, consumption and production patterns, localisation.
	Citizens: demographics and their needs, community-led projects, social participation, well-being.	Traditional + individual behaviour, household consumption choices, entrepreneurship, community-led circular initiatives, services over goods.
EMERGY AND MOBIITY SYSTEMS	Infrastructure: road network, gas/electricity, transport, internet and other networks that satisfy social and economic demands of urban activities. Waste management perspective	Grey infrastructure: Road network, gas/electricity pipelines (Material content) supply and sources of energy, transport, internet and others. Deployment of modes that support symbiosis. Waste looping perspective.
NATURAL-ECOLOGICAL SYSTEMS	Natural environment normally seen as source of well-being. Attending demands of conservation and sustainable management for ecosystem preservation, nature seen as separate from urban regulations mostly preserving greenery in suburban areas or the outskirt of the city (green belts) and rarely or slightly seen as assets within the infrastructure in the inner city	Green infrastructure (Stock and Flow): Urban greenery/forestry, timber and food production, NBS for mitigation, carbon sequestration and other ecosystem services, urban biodiversity and action towards bio-regeneration. Blue infrastructure (SnF): Water surfaces, sustainable drainages and other structures for water harvesting and management towards bio-regeneration.

4. Glasgow and its journey towards a sustainable city: context of the case study.

Glasgow is the largest and most populated city in Scotland, with circa 624,000 inhabitants within the administrative borders of the council and a total population in the Greater Glasgow region of circa 1.2 million (Understanding Glasgow, 2018). The city has an approximate density of 3,500 people per km2. The Figure 1 shows the location of the city and its administrative boundary, which was considered for the data analysis and mapping in this project.

In the past, the city had a powerful position followed by a strong decline stressed by some policy approaches taken during and shortly after the 50-60s; large-scale relocations, functional and socio-spatial issues resulting in conflicted urban management, development-oriented measures and the resulting changes in population (Keating 1988; Wannop 1990; Tucker 2008) in the middle of a post-industrial transition that also affected the future of local economies in Glasgow (Reed, 1999).

Glasgow started recovering from such dynamics during the 80s, getting noticed in the urban scene in terms of competitiveness and an enhanced reputation as a result of the regeneration processes at the end of the 20th century accompanied by a momentum gained through city marketing milestones such as the branding campaign 'Glasgow Miles Better' in 1983, followed by a series of events and titles that contributed to the image of the city (Gomez 1998); such as the National Gardens Festival in 1988, European Capital of Culture in 1990 and the British City of Architecture & Design in 1999. However, remaining socio-spatial footprints in Glasgow are still part of the pending challenges to overcome nowadays, as the signs of a long-term spatial dereliction and socio-spatial deprivation which has been also associated to health issues that have affected the city (Maantay, 2013: Maantay et al., 2015: McDonald et al., 2018) and its collective perception.

At present, most of the population within Glasgow City Council live in flats (tenements), which are the most common residential type of building in the city. On the other hand, according to latest official reports, Glasgow accounts with 1007 hectares of vacant and derelict land, 45% of which are of public property. This has a strong social implication as to 44% of the population in Glasgow is said to live within the 20% of most deprived areas as classified by the Scottish Index of Multiple Deprivation (SIMD) and are highlighted in red in Figure 2.

In 2010, the *Sustainable Glasgow* board was established with an aim at fostering greener approaches. Since then, this partnership between the local authority, academia and other organisations has supported different initiatives towards a sustainable city, such as the *Resilient Glasgow 2014* membership in the Rockefeller Foundation's project 100 Resilient Cities, the regeneration projects that accompanied the *Commonwealth Games 2014* and the *Glasgow's Green Year Agenda 2015* as a runner up for European Green Capital.

Figure 1.
Location of the city of Glasgow

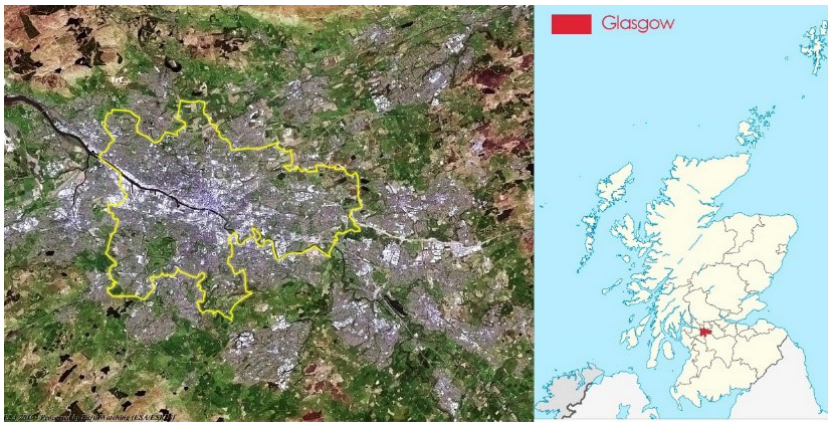
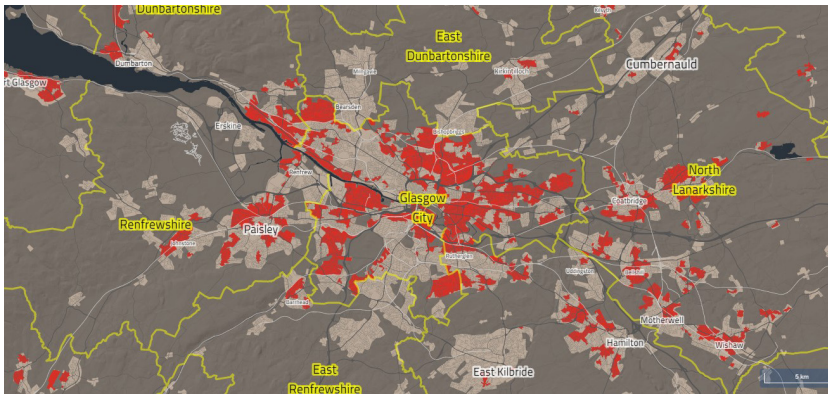


Figure 2.
Scottish Index of Multiple Deprivation 2020, Glasgow 20% most deprived
Source: Scottish Government, retrieved from www.simd.scot



In 2016, another partnership was established between the City Council and the Chamber of Commerce, funded by the organisation Zero Waste Scotland, with the intention of becoming one of the pioneering cities implementing the circular economy principles in the UK. A goal that came at the same time Glasgow aims to become the first net-zero carbon city in the UK (GCC 2019). So far Circular Glasgow has managed to engage with local businesses and communities to promote activities that follow core principles of circularity, call for ideas in the form of hackathons/workshops, accelerating business demonstrations through incubation, running city scans, reporting on the state of circular jobs, and the procurement of key sectors/industries.

The diagram in Figure 3 highlights key moments in the journey of Glasgow as a city where regeneration is one of the hot topics not only for planners and policy makers, but for all those stakeholders striving for urban sustainability of this post-industrial city.
By the time the interviews for this research work were conducted, the City Council was working on the roadmap for the circular economy in Glasgow, along with the drafting of new policies like the *Property and Land Strategy 2019-2029* which will guide a better use of land and buildings in the city. One of the main issues to tackle is material loss -especially in the construction sector- and expecting to improve the management of these assets.
On the other hand, Zero Waste Scotland and The Chamber of Commerce pointed out the need of stronger engagement initiatives when it comes to get stakeholders on board with an active participation. The understanding of the CE concept in Glasgow is primarily based on the scope of waste and recycling strategies as seen from the lens of resource management in industry with an emphasis on the construction, manufacturing and the business/retail sectors, as they present most opportunities (according to the promoters of Circular Glasgow) for scaling up processes towards improved business models that will be then deliver on behavioural and financial benefits towards positive structural changes in urban activities.

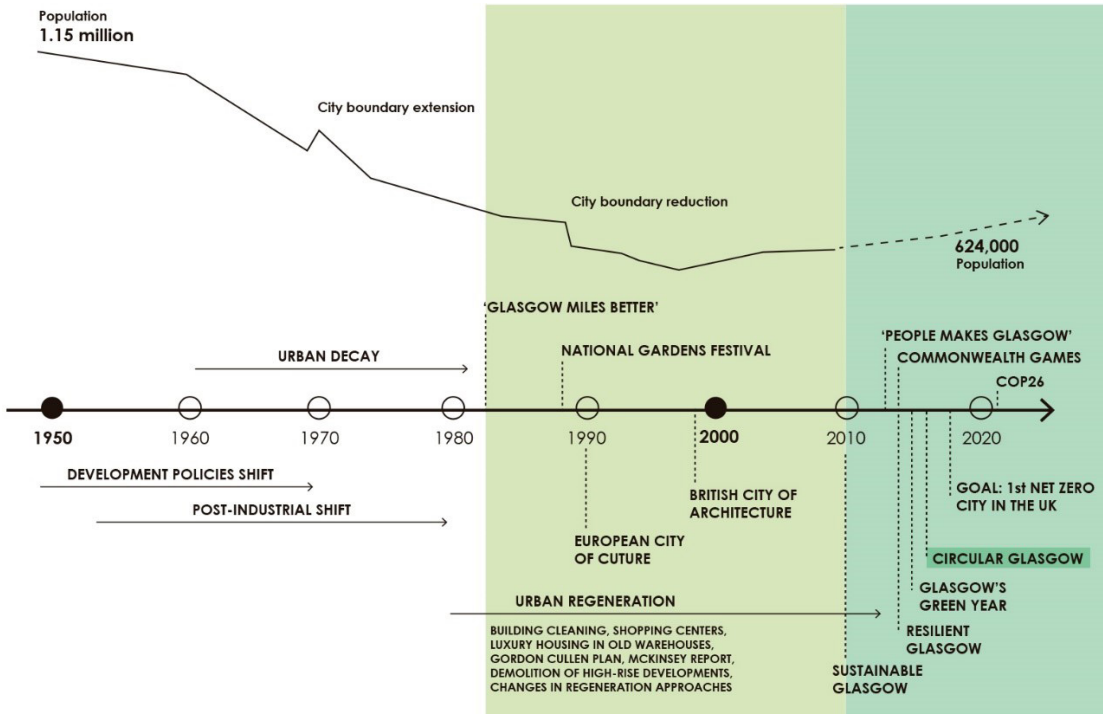


Figure 3. Glasgow's planning highlights. Own edition based on GCC City Centre Living Strategy (2019) and Gomez (1998).

5. WHAT ABOUT SPATIAL ASSETS SUPPORTING THE CIRCULAR AGENDA?

The physical environment is an inherent component of urban activities. One cannot exist without the other and they affect each other constantly in time. If an urban activity is successful or not, its immediate area is going to change to either improved conditions or deterioration, but hardly likely to stay the same in the long term. Therefore, when speaking of circularity in cities we could isolate some spatial aspects to analyse them. For instance, the wastescapes.

In order to map spatial variables, data was collected from EDINA Digimap/Ordnance Survey and Geomni, official reports and planning documents and open sources such as the UBDC (Urban Big Data Centre) along with the own processing and spatialisation of secondary records and excel spreadsheets (e.g., Building as Risk Register). Maps in this article are both descriptive and comparative, made by arranging and overlaying thematic data on ArcGIS with specific functions to facilitate the processing (Map Algebra, Intersections, Spatial Joints and a final Weighted Overlay of selected variables) into an uniform grid of cells of 300x300m as a synthetic representation of immediate walkable areas (below 5 min). The main streams of data and general processes to produce these maps are shown in the Table 3.

5.1 Materials in the buildings Stock

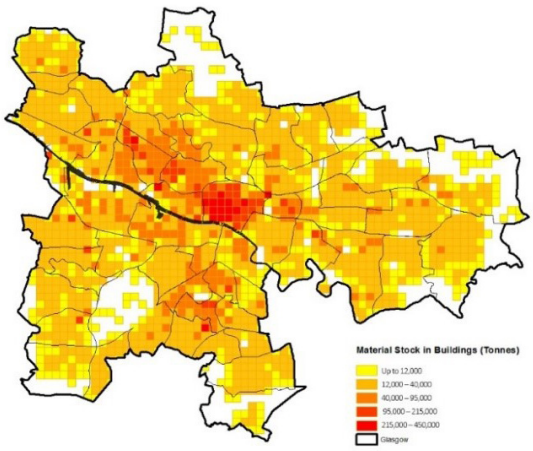
It was estimated that Glasgow has around 48.9 million tonnes of materials in the building stock sampled (90% of the buildings in the city). The City Centre, some parts of the West End (Hillhead, Woodlands, Hyndland, Partick East, and Dowanhill) and the Southside (Langside and Battlefield) concentrate the highest amount of material that could be mined in the future. The City Centre alone

Table 3. Four types of transitional wastescapes

Variable	Data inputs	Thematic focus
Built Stock	Building Height Attribute (BHA) Shapefile (SHP) retrieved from EDINADigimap/OrdnanceSurvey October 2019. UK Buildings Shapefile: Residential and Non Residential Classification (Digimap/Geomni 2019) Indicators from Global construction materials database and stock of residential and service sector buildings. (Marinova et al. 2020; Deetman et al. 2020)	Estimation exercise of the amount of basic materials in the current buildings stock; copper, steel, aluminium, wood, and concrete. Based on the Global.
Vacant and Derelict Spaces	Shapefiles (SHP) of *Vacant and Derelict Land, Points of Interest, and Topography* retrieved from EDINADigimap/OrdnanceSurvey January 2020, CSV collecting the Building at Risk, locations retrieved manually from online register available at www.buildingsatrisk.org.uk, Stalled Spaces ArcGIS online, re-digitised manually.	Spaces seen as assets that because of its current state, are classified as empty, representing a potential, or those in a condition that demands attention in terms of repurposing, retrofitting or reprogramming.
Streetscape	Shapefiles (SHP) of *Topography* retrieved from EDINADigimap/OrdnanceSurvey January 2020.	Spatial appraisal of the physical provision of features that incentivise or prevent sustainable movements, with an emphasis on the allocation of road space for pedestrianised areas versus mere vehicle traffic.
Natural open Space	Shapefiles (SHP) of *Points of Interest, OS Open Green Space* and *OS Open Rivers* retrieved from EDINADigimap/OrdnanceSurvey April 2020. PAN 65 Open Space 2008.	Spatial appraisal of Open green Areas, according to formal categories and the functionality of these assets.

has approximately 7 million tonnes of material in buildings (14,3% of the total) with up to 430 thousand tonnes of material per each 9 hectares of urban surface (the size of the grid used for the analysis). Steel and glass are more prominent in the City Centre, whereas copper and aluminum are clustered around. In average, there are 280 tonnes of material per building, this varies according not only to the size but the type and use of the edification. However, this model is not exhaustive as it is not differentiating between structural and non-structural materials due to the lack of such indicators, but it serves to visualise where the building stock could potentially be managed as an urban mine in the long term.

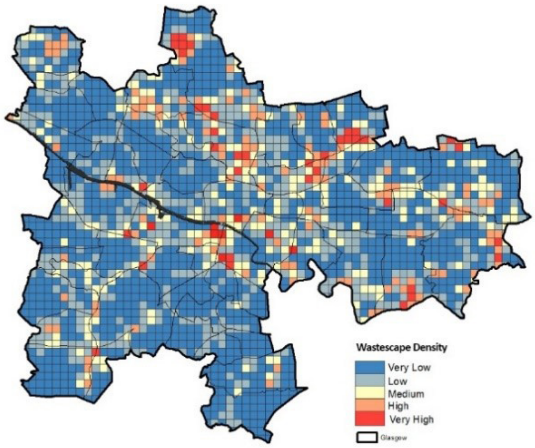
Figure 4.
Spatial distribution of material in the building stock of Glasgow



5.2 Vacant and derelict spaces:

9% of the vacant and derelict land of Scotland is in Glasgow, the largest area among the local authorities with 954 hectares declared in 2019 (Scottish Government 2019), which according to the latest register available on Ordnance Survey in January 2020, ascends to 1007 hectares with 460 hectares (45.6% of the total) being of public property. These wastescapes are scattered all around the city.

Figure 5.
Spatial distribution of vacant and derelect spaces in Glasgow



The number of non-residential buildings in the city that were found to be vacant, derelict and/or at risk, reaches 440 units. But in a recent report of Glasgow City Heritage Trust it is claimed that there are around 2,600 long-term empty homes in 2018 and circa 1,000 empty commercial and industrial premises in Glasgow (GCHT, 2019). Similarly, the 'Dross from infrastructures', which mostly accompanies highways and junctions do not provide an actual use or service and represents around 828 hectares of areas that could be used for a more productive purpose.
Overall, most wastescapes are located to the center/north (Figure 5). Opposite to this, around 100 initiatives have made interim use of vacant land and there are successful cases of repurposed buildings into versatile and productive uses, 18 examples were identified, most of these around the central area.

5.3 Streetscape:
the physical characteristics of the street networks is illustrated in the Figure 6. The share of pedestrianised surfaces compared with vehicle-oriented surfaces varies around the city. The street network favouring vehicle tends to be that around the main roads and highways (red cells), but in general most neighbourhoods tend to have 40-60% or pedestrian space against road spaces (Yellow cells). Overall, there are 31 Sqm/cap of roads, 25 Sqm/cap of sidewalks or pedestrianised civic areas and 11 Sqm/cap of green spaces (excluding private green areas and non-equipped green areas such as grasslands without formal footpaths).

5.4 Green space:
When considering all the natural landscape, without classifications, Glasgow's greenery can reach up to 10,420 hectares. But a significant amount of these areas corresponds to private gardens or areas that do not offer a place for the public enjoyment, e.g., dross space from infrastructure that, although green, it does not offer either ecosystem services or alternatives for communities to transit or stay. However, there are around 70.4 hectares of equipped green areas, and 35 allotments around the city that together with other community gardens identified, form an offer of around 45 spaces for local food growing (Figure 7). Park Power, a recent project that intends to make the most of parks and watercourses to decarbonise the energy production systems in Scotland, classifies parks according to its size, location, and other conditions to determine its suitability to generate an actual benefit for the surrounding buildings in terms of energy provision and ecosystems services (Greenspace Scotland 2020). In theory, there is an opportunity to power different areas of the city through these green areas. However, the city centre and neighbourhoods alongside the River Clyde are less likely to benefit from this approach.

Figure 6.
Spatial distribution of road versus pedestrianised space in Glasgow

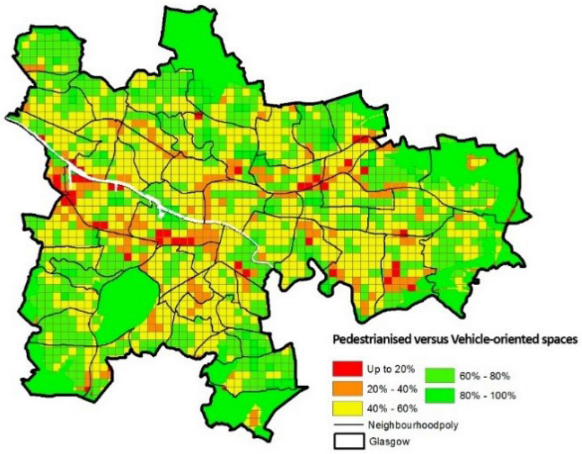
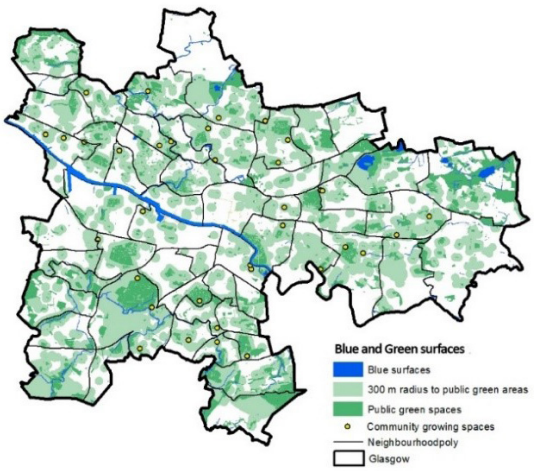


Figure 7.
Spatial distribution of natural open space in Glasgow



6. Implications and conclusions

The circular economy is a developing multi-sector concept receiving increasing contributions from both academia and practitioners as a system level approach (Kirchherr et al. 2017). Circular cities are a recent application of this concept; with international organisations guiding the knowledge transfer and demonstrations and an increasing number of cities promoting circular action.

Understanding urban circularity needs to be contextualized, considering the variation of local realities, local economies and the characteristics of the urban settings where this could be implemented.

The idea of urban circularity is not dissociated from urban sustainability, the first contributes to the latter but in a more specialised and tailored way, focusing on the resources (natural+urban) a city or town uses to sustain its settings. Yet, there are many silos for its application in urban areas, a gap that this article builds on by facilitating the construction of a spatial perspective (with social implications) of the strategic elements of circularity to inform policy making, urban development planning and the design of local regulations and actions by thinking on 'where' these resources and practices are distributed, especially those affecting the built and infrastructure assets.

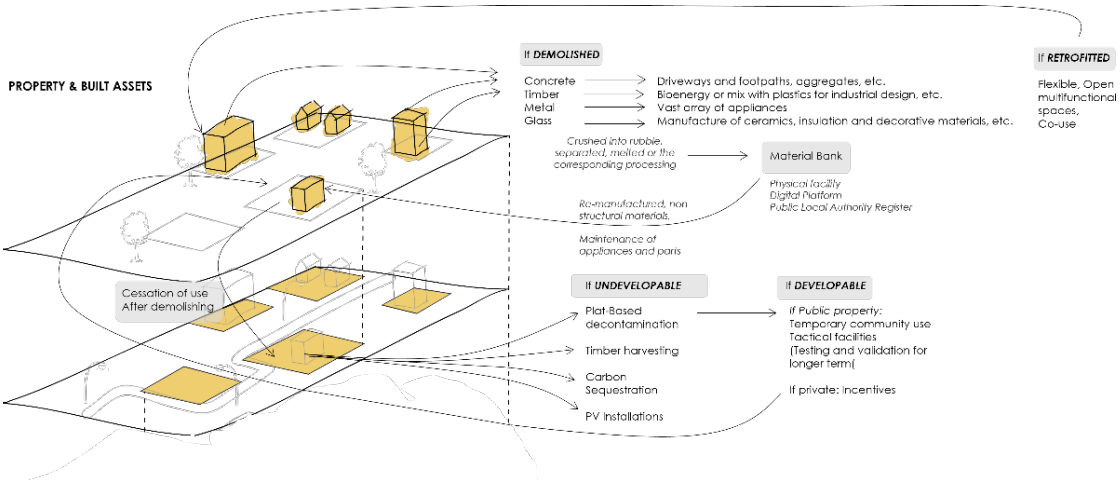


Figure 8. Examples of circular actions in the property/built systems of cities

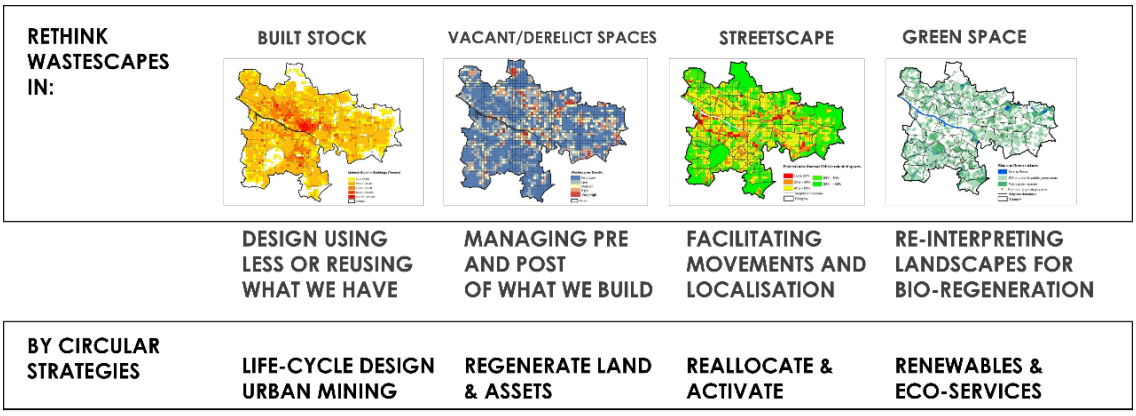


Figure 9. 4 spatial variables in Glasgow where circularity could mitigate wastescapes

The premises of a circular city are based on ecological and metabolic cycles: the outputs of one part are the input of another (Figure X), and this can be transferable not only to the design of future facilities, buildings, industrial parks and neighbourhoods, but also to the planning processes of both intra and interconnections at the city-level for localisation of resources.

Policies and plans are levers for enhanced design guidelines dedicated to the built environment, as well as calling for changes in the construction sector into a more 'flexible' one, both physically and functionally. Regulations, monitoring and disclosure processes are important for the implementation of a circular economy in cities, as a transition needs to be measured in order to succeed.

In urban areas with highly industrialised origins, such as Glasgow, urban regeneration challenges include that of an urban fabric that is affected by modern economies and services that move faster than the physical settings. In this context, it worth revisiting the schools of thoughts and approaches to urban planning/design and resource management towards sustainability. Therefore, initiatives such as the New European Bauhaus recognise the evolution of design statements; from 'form following function' into broader positions that attend overarching issues that could be synergistically tackled from a spatial perspective where form follows planet as well.

Glasgow started its circular journey in 2016 and has been raising awareness within the business and public sectors. However, most institutionalization as per the urban perspective is needed. Because of its post-shrinking characteristics, the built environment of Glasgow has a high potential to be "circled" considering aspects related to reutilisation of vacant land for ecosystem services, timber or solar energy harvesting, as well as urban mining of disused buildings for substitution of non-structural elements, but there are both technological and normative implications that slow down the transition. Glasgow is starting to consider a better management of wastescapes and the embodied impacts of the urban fabric, the team of

Circular Glasgow in the City Council envisions a future scenario where the local authority collaborates with developers to share data and resources, with the council acting as an administrator to match up material needs and requests.
Finally, contemporary challenges demand resilience and the capacity of cities and communities to adapt, not only because of the changing climate but also due to emerging and unexpected events such as the last COVID-19 Pandemic, which taught us about the necessity of flexibility of functions and places. Circularity is therefore a way to support this and other aspects of the so-called Green Deal towards both climate-sensitive and futureproofed communities. For not only a city but a system reboot is required.

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TITLE

COLLECTIVE MAPPING OF THE POST-PANDEMIC PUBLIC SPACES OF ATHENS

authors

Eirini Vallindra
Scientific Associate of the Technical University of Crete
e-mail: eirini.vallindra@gmail.com

Eirini Vallindra

Eirini Vallindra is an architect–researcher at the TUC TIE Lab, currently working in the research program 'Designed for Better Learning' funded by the Municipality of Athens, in the field of education and architecture. Her area of responsibilities involves design-thinking, problem-solving and experiential learning, through workshops with children and teachers, in public schools. She holds a Diploma in Architecture Engineering from the National Technical University of Athens (NTUA) and a master in Urban and Regional Planning from the NTUA.

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collective mapping| post-pandemic public spaces| reclaim urban spaces| collective empathy

ABSTRACT

In the hope of entering a post-covid era, gradually leaving behind a strictly limited routine, it is useful to reconsider city's public spaces. The health crisis we are going through would be expected to focus our attention on the open public spaces, as an antidote to the closure of private businesses, the ban on indoor social gatherings and the cessation of most activities. Instead, movement restrictions during the day and curfew overnight were most used measures against the virus. This horizontal approach to the situation failed to include isolated cases of people whose daily lives could not keep up with the constraints. The lack of inclusion, adaptation and flexibility of the measures leads to the need to renegotiate our living in the city and reclaim public spaces. The primary step towards this direction is collective observation, recording and understanding of the imprints left behind by this 'adventure'. In other words, participatory mapping of public space can be a crucial tool in identifying the issues that emerge in the post-pandemic city. Mapping practices can lead to the development of a kind of collective empathy that emerges from the collective memory of the social crisis caused by the pandemic, and of the collective knowledge we gained through our experiences. Those practices can become increasingly effective with the development of new technologies and applications that enable the use of interactive mapping environments. The utilization of such environments encourages various ways of thinking about public spaces in terms of their dynamics while highlighting their social aspects. Gradual lifting of the measures allows the study of public spaces of the center of Athens. Experimenting with mapping methods helps to explore indicative aspects of the above concerns. The aim is to utilize contemporary mapping tools to envisage new social and inclusive planning practices.

INTRODUCTION

The city can be seen as an uninterrupted sphere of socio-spatial events, which can only be identified through tools that highlight the multiple layers of space. Such tools may be mapping practices -as means of analyzing the social and spatial phenomena that compose the perception of reality. As such, experimental mapping methods can achieve the systematic observation and extraction of valuable knowledge about social environment and spatial practices. The knowledge and the power that cartographic research can bring, therefore, functions as a political act, through which we have the opportunity to exercise our right to the free expression of our views and ideas about our environment and consequently to learn the ways we can claim our rights regarding living and interacting with it. Consequently, through mapping practices, we are given the chance to approach the right to the city, as Harvey (2003, 939) set: *"the right to remake ourselves by creating a qualitatively different kind of urban sociality is one of the most precious of all human rights...not merely a right of access to what the planners define, but an active right to make the city different, to shape it as we desire, and to re-make ourselves thereby in a different image"*.

The idea of rethinking our subjectivity in the city and redefining our perceptions of public space seems to be gaining even more importance in the post-pandemic era, as it follows a period of very strict measures and constraints that affected urban life in various ways. Recent research on

the pandemic issue shows that urban life can only deal with such a phenomenon if all social actors (government, healthcare system, citizens ect) cooperate with each other and that each of them affects the effectiveness of responding to this situation (Kumaravel et al. 2020). In such instances, there is also a need to understand the characteristics of the pandemic progress, while at the same time it is important to record all those strategies that can ultimately help restore the city to normal operation (Elavarasan et al. 2021). However, Greece's government strategic planning, for the management of the pandemic, did not show the intention to cooperate with the other social bodies and especially with the citizens. While in the first phase of the pandemic the authorities seemed to react methodically, in relation to the extraordinary and unprecedented conditions of the situation, in the second phase, the strategic line of battle was more rigorous, generalized and consequently ineffective. Restrictions that have had a critical impact on public life are the repetitive lockdowns, which lasted about six months (on winter 2021), the general curfew at night and the movement restrictions during the day. Measures that decisively affected the vitality of the city and people's activities in public space.

With the gradual lifting of measures and the return to normality, it is worth remarking whether people really perceive transformations of public space, and if so, in which way do these transformations occur. Mapping techniques -which involve observing, recording and analyzing urban phenomena- can prove to be very useful research tools to study post pandemic urban life. This article deals with experimental mapping practices of Protomagias square, which is a field of intense activity, located in the center of Athens.

2. Social mapping practices

In this research project, mapping is defined as a practice that is implemented within a horizon of infinite possibilities and includes actions and methodologies that enhance the work of social justice. It seeks to expand beyond the strict scientific boundaries that recognize it as a technical skill, the application of which reveals an objective knowledge. In other words, mapping is not meant as a neutral and passive tool of spatial measurement and description. Instead, it is studied as an imaginative, functional tool -an intellectual construct that allows and influences change (Firth 2014) and as a "cultural practice that involves action" (Kitchin et al. 2009: 17). It is an exercise through which tacit knowledge, as it is embedded in people's spatial memory, is transformed into socially beneficial knowledge (Di Gessa 2008). A tool

that provides empowerment and production of new ideas for the social space.

Until now, many international and local activist movements use mapping as "a means of popular expression, resistance and redefinition of political, social, cultural or natural spaces" (Caquard, Dormann 2008: 55). These kind of social mapping processes seek to provoke and propose alternative views and reflections on space (Crampton 2009: 841). Such practices usually go hand in hand with participatory approaches to planning and development and are argued to acquire a progressive dynamic in socially disadvantaged groups (Firth 2014). The purpose of such actions is not to envision a comprehensive blueprint of a future ideal society, but processes of creating active spaces "under constant remodeling" (Coté et al. 2007: 3).

Mapping practices of today's political activism can also take advantage of a very powerful modern technological tool, the Internet (Crampton 2009). Beyond simple digital map applications such as Google, there is a growing access to open source Geographic Information Systems (GIS) software, which can be freely used by individuals or groups for mapping activities. In fact, such applications constitute a relatively recent category that refers to public participatory mapping, the so-called Participatory GIS (PGIS). However, after the first positive reactions, in the early 2000s (Elwood 2006), these applications began to be criticized as to whether they could be considered the corresponding democratization of GIS (Dunn 2007). This critique was based on the fact that the scientific field of Geographic Information Systems places more and more emphasis on the development of technical factors, to the detriment of the social and political dimensions of mapping (Crampton 2009). As a result, modern digital mapping applications are characterized as dysfunctional for the majority of ordinary people and a privilege of experts. An important research question that arises, according to Goodspeed (2013) is the kind of participation that can be achieved through all those new visualization systems. However, the experience of the pandemic period shows that such digital media play a key role in carrying out participatory actions, eliminating the distances between people.

2.1 Forms of social mapping practices

Shiloh Krupar (2015) identifies and explores three distinct types of social mapping practices:

- Mapping as a protest mechanism or form of political commentary (Crampton 2009), which aims to reveal hidden power relations and to represent complex networks, which are the basis for conversation and for action. Such mapping examples are the radical atlases and the critical geopolitical maps -constructions that do not necessarily criticize the official maps themselves, but the social relations and the infrastructures. Combining radical geography with art and activism, they formulate creative arguments for critical social issues, such as refugee, gender discrimination, etc.
- Social mapping practices can also take the form of social actions that include alternative spatial narratives and collective walks. These actions aim to highlight marginalized experiences, to focus on the creation and communication of local and decentralized knowledge (Turnbull 2000: 13), to review structures and characteristics of space, through the prism of social interactions, but also to develop proposals for their transformation. Maps produced through these activities include personal narratives and invisible historical events, unobserved phenomena and spaces that emerge through the collective experience of space (Pinder 2007).
- Finally, the third type of mapping practices that involve collective action and promote social justice, according to Krupar, include community education through participatory workshops. In these workshops, mapping exercises promote information, experiences exchange and experiential learning through active participation.

3. Participatory mapping as a tool to highlight the potential of the post-pandemic public space

Mapping can be an interpretive tool for studying everyday life, through a methodology that aims not only to visualize the spatial characteristics of the city, but that integrates socio-cultural data into the narrative of the space. In this sense, city is explored as an experiential field and public space is recognized as a dynamic sphere of interactions that "reflects and embodies the diversity in the city" (Young 2002). This point of view reveals a variety of perceptions of public space that constitute a significant area of research (Heffernan et al. 2014),

and inevitably influence its use but also may dictate its planning. However, in the pandemic period we witnessed new forms of control systems in public spaces that restrict freedom of movement, expression and in general, concepts that are intertwined with the contemporary city's open spaces. As a result, this situation threatens to profoundly change our urban life. Home restrictions and curfews have introduced new habits that may in the long run lead to new ways of connecting and interacting with the city's public space. A serious question that arises is whether the experience of recent months can alternate our perceptions and the way we interact with public space (e.g. for reasons of insecurity). Also a question raises of whether the short-term measures taken are temporary trial conditions for changes that may eventually become permanent (Bliss 2020).

To approach the above considerations, it is essential to keep in mind that map making is one of the earliest forms of human communication (Cochrane et al. 2014) and thus appears to be an innate means of exploring space. Also maps have been proven to have great communicative power and therefore significant impact on decision making. Consequently, their use should be a revealing medium to reconsider the city and to imagine the post-pandemic public space. Considering Gabor's (1963) state that: "the future cannot be predicted, but only invented", we need to reinvent city's public life in ecologically sustainable, healthy and fair terms -in line with the principles of the New European Bauhaus- in order to avoid future permanent surveillance measures and more intense discrimination. Beyond that, it is important to bear in mind that public spaces are imbued with collective meanings and memories, which can be recorded and disseminated as local knowledge, through participatory mapping methodologies and practices.

4. Case study: Protomagias square

Protomagias square is a meeting point for many people, residents and visitors, coming from different social groups, in the center of Athens. It is located at the east side of Pedion tou Areos, which is one of the busiest parks of the city and it is one of the largest squares of the capital, although not

so well known by people living in surrounding districts. As revealed in the plan of the square (fig. 1) there are two large open spaces in the center of it, which are suitable for free play and sports activities (fig. 2,3) and a variety of spatial qualities all around, such as an open-air amphitheater, a small skateboarding track, green areas, a cafe and other small gathering places ideal for open events. Regarding human activity, there is a wide variety of uses that take place in the field, which will be analyzed below.

In recent years, the residents of the surrounding area have been proactive in the square, through organizing assemblies and taking collective initiatives, in an effort to improve the living conditions in the area. It is essential to point out that the administrative management of the square belongs to the wider region of Attica instead of the Municipality of Athens. As an outcome of that, the square has been neglected by the competent authorities for a long time, despite residents have repeatedly called for their attention. Subsequently, despite citizens' interest, who are demanding a regular maintenance of the square and better urban equipment, the square is left without benches in most parts and without adequate lighting in the evening hours.

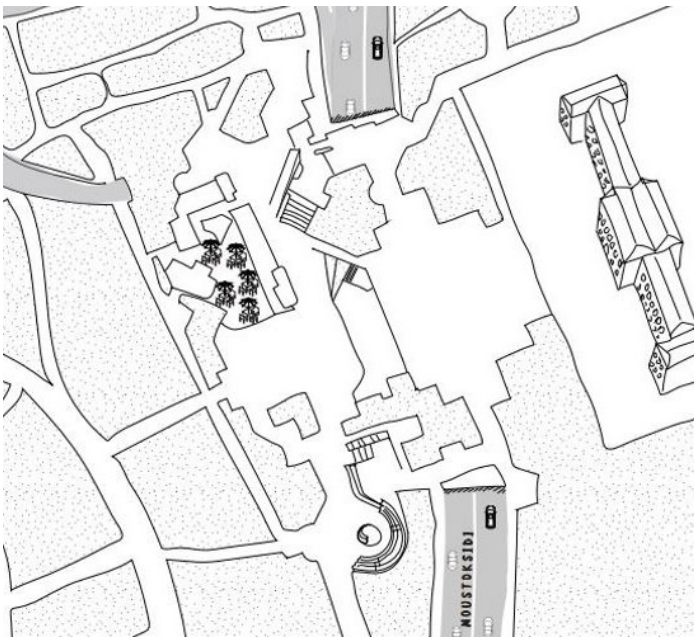


Figure 1. Protomagias Square Plan, Source: Author, 2021

Figure 2 and 3. Views of the square, Source: Author, 2021

5. Methodological approach of the field research

Regarding the fieldwork at the square, it includes a series of visits to the area on a daily basis, over a period of one week, shortly after the gradual lifting of the measures against the pandemic. The main purpose for these visits is to observe the square and record the activities that take place there during the day. Observation on a daily basis serves as a method to familiarize the researcher with the field, as well as to give valuable information about the daily life of the area. It also serves to indicate the hours that people frequent there, which in our case are predominantly afternoon and evening, while in the morning the area is mainly used as a passage or as parking of vehicles. This fact applies to the square over time and is not related in any way to the pandemic period.

The field research precedes the mapping workshop in order to identify the area and its spatial, social and cultural characteristics. The research tools used to conduct the first conclusions are personal and participant observation and semi-structured interviews with residents and passers-by. In the initial stage of the field research, familiar people (who are long-term users of the square) are involved in the interviews, while later an attempt is made to involve different groups of people (different age groups, with different interests) in order to create a thorough view of the issues concerning the square.

At this stage of the research, the findings highlight the multifunctionality of the square. The variety of activities that take place there could be divided into the following categories:

- Sports activities: running, football, free play, skating, cricket etc.
- Cultural - Artistic activities: music concerts, performances, festivals, intercultural events, bazaars etc.
- Entertainment: gatherings, parties etc.
- Political actions: rallies, collective discussions ect.

At this stage of the research, in which the semi-structured interviews play a significant role, it is found that Protomagias square gathers a large number of different social groups and actions over time and that a large percentage of people who pass through daily cross the square to reach Pedion tou Areos -because at the east side of the square is located one of the main entrances to the park. The interviews also reveal that no major changes occur during the pandemic period (despite the restrictive measures) and after the lifting of measures, apart from the fact that more residents of the wider area discover and are active in the square. This is a result of the closure of private sports and entertainment centers because of the lockdown.

6.THE MAPPING WORKSHOP OF PROTOMAGIAS SQUARE

6.1 Methodological tools

The organization of the mapping workshop is based on the first observations extracted from the field research. The goal of this workshop is to study more purposefully and in more detail the areas of interest of the square and its dynamics during the post-pandemic period. To achieve this goal the participants are invited to edit an individual research booklet, that includes a questionnaire concerning the experience of the space over time and then precisely during the pandemic and post-pandemic period. More specifically, the questions are concerning: the participant's relationship with the square, the frequency of visits and the nature of the activities he/she does, a brief description of the square from each observer's point of view, the description of a strongly imprinted experience related to the square (positive or negative), and proposals for changes (of social or material nature) to improve the experience of the space. Regarding the pandemic and post-pandemic period, the questions are concerning: the description of participants' experiences from the square during this time and the identification of any changes that have taken place gradually or suddenly due to the pandemic (fig.4).

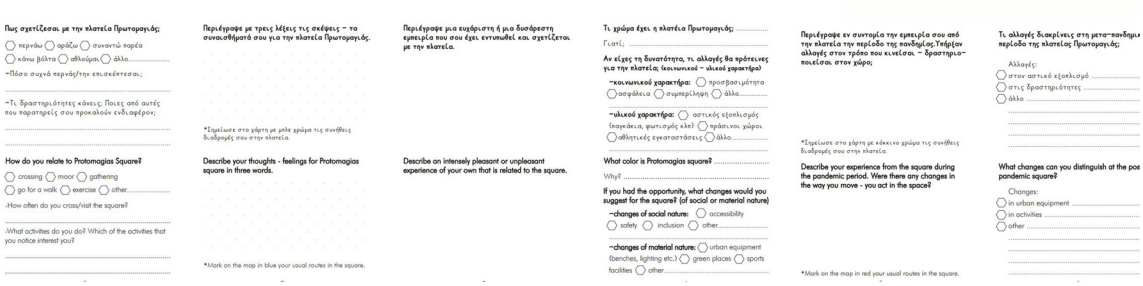
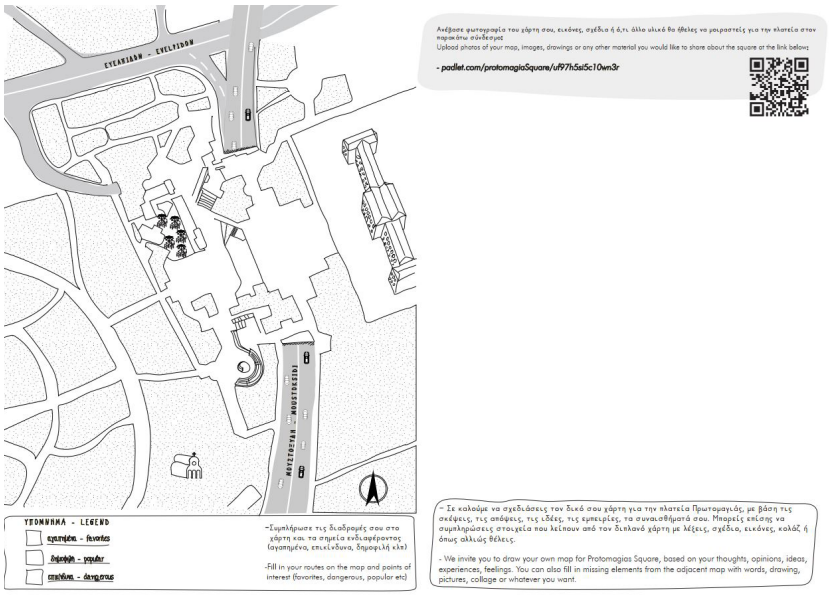


Figure 4. Research Booklet: Questionaire, Source: Author, 2021

Figure 5.
Research Booklet:
Mapping exercises,
Source:
Author, 2021



The booklet also contains an editable map of the area and a blank page in which they are asked to draw their own map from scratch, based on their personal perspective in space (fig.5). The editable map is a line drawing plan of the square, while some landmarks are illustrated in three-dimensional form to be recognizable. In this map, participants are asked to mark their routes in the square, before and after the pandemic, as well as to edit their favorite places and the ones they identify as the most popular and the most dangerous, based on their experiences. To complete the form, they are also asked to imprint on the blank page, by any means they wish (text, image, collage, sketch), their own perception of the study area. In other words, participants are asked to fill in two types of maps to complete the experimental mapping process. The first type has a semi-guided structure, using a background plan of the square and a legend that is half edited by the researcher, while the other half is left to be edited by the participant. In the second one, no rules are given on how to create the map, only examples of means that can be used by the participant. This decision is based on the need to provide participants with more than one opportunity to express their views, feelings and ideas.

In addition, it is important to emphasize that researcher's intention is not to interfere in any way by influencing participants decisions in the creation of the map. This justifies the choice of the second mapping exercise. However, the semi-structured mapping exercise is included in the workshop because of the difficulty of constructing a map from scratch, by people unfamiliar with such processes.

6.2 Workshop's preparation / equipment

Workshop's preparation includes the design of the printed booklet (with the questionnaire and the maps) given to the participants (fig.6). It is designed to be read and edited in the form of a small book and alongside been unfolded like a map. It is estimated that this design creates a positive predisposition to participants and makes this research tool more understandable and the mapping process more enjoyable. The graphic character of the map looks intentionally informal -like a sketch- so that it becomes more familiar to participants, but also to encourage them to try to draw their own version of Protomagias square. The map is accompanied by pictorial stickers corresponding to icons described in the legend. These icons depict the favorite, popular and dangerous points on the map. Other stickers with geometric abstract shapes are also given, with which the participants can mark their own observations on the map and form the legend accordingly. Regarding drawing of the routes on the map, participants are suggested to use the color blue to indicate their routes before the pandemic period and red to indicate those during the pandemic. Finally, the last request to create a personal map is given together with a QRcode, that leads to a web

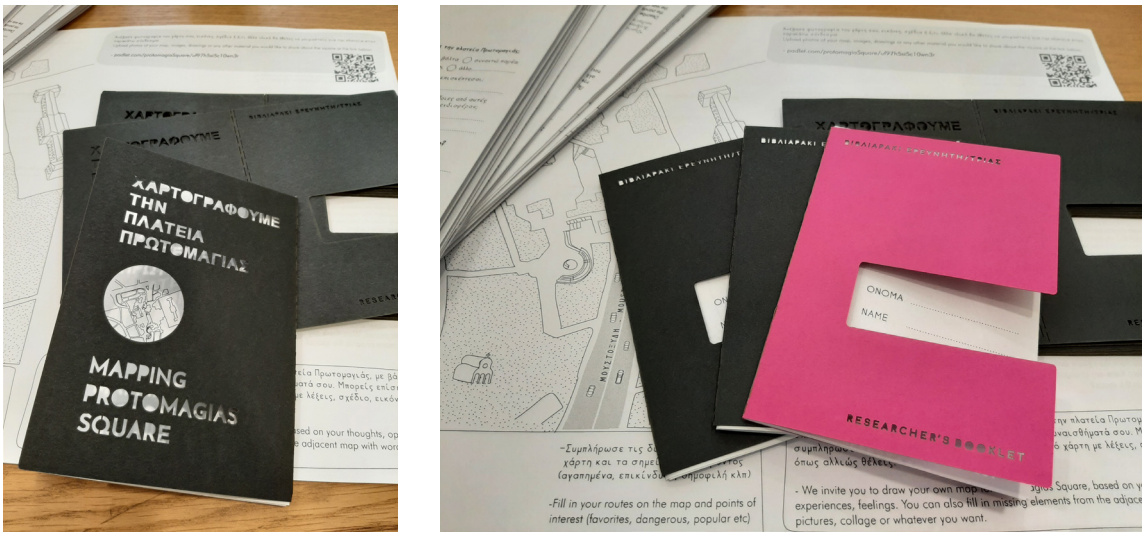


Figure 6. Research Booklets, Source: Author, 2021

application (padlet.com, fig. 5,7), where participants can upload their maps or anything else related to the square. This website allows participants to continue editing the research form in their own time after the workshop. This need arises due to the demanding nature of the research booklet which sometimes makes it difficult to get finished on site.

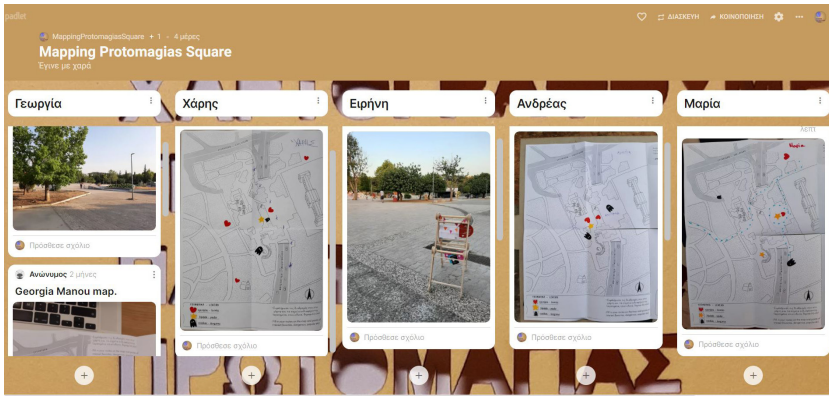


Figure 7. Participants' Maps on Padlet's Digital Panel, Source: Author, 2021

In addition to the research booklet, a wooden transformable structure (fig. 8) -designed for urban collective mapping workshops- is used, as an information point for passers-by. In more detail, this structure is used to place the research booklets, consumables and a poster related to the mapping workshop.

Figure 8. Protomagias Square Mapping Worshop, Source: Author, 2021

6.3 Conducting the mapping workshop

The workshop takes place in the afternoon of a weekday, because as observed in the field, it's the rush hours of the square. It is implemented with passers-by who are informed on site and wish to participate. In order to be communicated to the largest possible audience, the workshop is set up at the passage that connects Protomagias square with Pedion tou Areos, as it is observed to be the busiest point of the square. People who show interest in the action are approached and asked to participate by filling in the questions and the semi-structured map, while they orally explain their perspectives. Their answers to the questions and marks on the map are mostly short, using keywords in the text, simple lines and the given stickers in the drawing (fig. 9). Therefore, simultaneous oral commentary proves to be useful and necessary for a better understanding of their views. After filling in as many requested fields as possible, the individual booklet is given to each participant so that he/she has the opportunity to further process it in his/her own time and then upload it to the digital panel of Padlet application, which is created for this purpose.

The workshop is implemented once and its participants are a total of 13 people, including teenage girls and boys who play various team activities in the square, and women and men, whose ages range from about 20 to 40 years old. Some of them use the square only as a passage for other destinations, while most of them meet their friends, play sports or take their daily walk in the square.

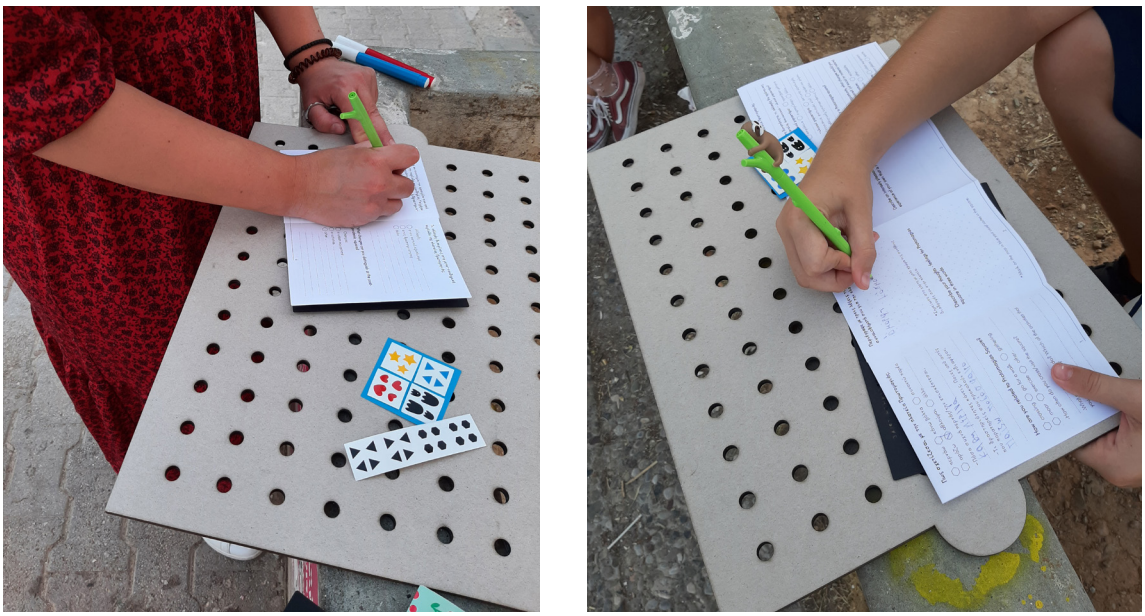


Figure 9. Participants filling in the research booklet, Source: Author, 2021

6.4 Workshop outcomes

The field research and the mapping workshop in Protomagias square lead to some conclusions that could be divided into three levels. Conclusions about: daily life in the square, more specifically, daily life during pandemic and post-pandemic period and some remarks on the response of people to participatory actions such as that of the mapping workshop. It is essential to point out that the conclusions are indicative and cannot be generalized, as the scope of the project is small and the methodology followed is still at an early experimental stage.

Regarding the square, the research indicates that it is a meeting place for people of many different characteristics (nationality, ages, financial status) and interests because of its size and its proximity to the park, the building of the former Military School "Evelpidon" and the around central axes. As characteristically described by a young woman, Eleni: *"it is a colorful square. A meeting place for many different people"*. Participants' answers also reveal that most of them visit the square on a daily basis. Their descriptions express mainly positive emotions and experiences, although some views express an insecurity and concern in relation to groups of homeless people who occasionally appropriate some parts of it. These are usually refugees who spend the night on a permanent basis in the southwestern part of the square, some of whose activities cause resentment to other people who are active in the area. Opinions also differ on the existence of sufficient green areas in the square. Children tend to describe the square as having many trees and plants, while the older ones describe it as *"gray"*, *"with a lot of cement, and not so much green space"*. Furthermore, there is a small percentage of negative descriptions referring to neglection of the space by the authorities and lack of hygiene standards. Finally, the responses on proposals for changes, converge on the need for security and new urban equipment.

The pandemic does not seem to have brought significant changes either to people who frequent the square, or to

the activities that take place on a daily basis. The only difference, according to participants' answers is that more residents of the surrounding areas have known and appropriated the square, as a means of relief from restrictive measures. As a participant stated, the square was *"a place of freedom during these months"*. In addition, the answers given to the question whether participants distinguish any changes in the post-pandemic period of the square, are all negative. Regarding the routes that the participants draw on their maps, there are no distinct changes before and after the pandemic period.
Regarding citizens' participation in the workshop, it is observed that a small percentage of people intend to be informed and participate, by filling in the research form, and most of them are young. The reluctance to participate is an indication that citizens' participation in urban planning is not yet widespread in Greece. Therefore people often do not know in which way they can contribute to such issues or they are unaware that their knowledge can be valuable in exploring public space. It is also worth mentioning that people are unfamiliar with mapping activities, as few of the participants feel confident to edit the semi-structured map on their own and none of them attempt to draw their own map from scratch.

7. Conclusion

Participatory actions, such as that of the mapping workshop are not often encountered in public places of Athens. In recent years, however, there has been a growing interest in participatory processes, at a research and professional level, by academics and urban planning laboratories (such as Open Lab Athens , Urbana Lab and Commonspace). Such undertakings give an optimistic direction to urban planning, as they seek to integrate critical social issues into public space decision-making processes, such as inclusion, gender awareness, climate change awareness and the integration of digital technologies in participatory processes. These aspects of urban space, that are on the same wavelength with the strategic principles of the New European Bauhaus movement, can be studied in depth through participatory mappings. This is, after all, the aim of this research -to highlight mapping practice as a tool that can reveal the social aspects of public space. Mapping, as a means of recognizing and perceiving space, can play a crucial role in achieving the goals set by the initiative of the New European Bauhaus, for sustainable and inclusive urban spaces. Moreover, city's post-pandemic period, gives an opportunity to observe and reflect on the existing space and re-evaluate its significance. This is exactly what Protomagias mapping workshop aspires to achieve. That is to encourage people to think and reflect on a

public space with which they interact on a daily basis, to get into the process of imagining their own (improved) version of this space. Thus, experimental mapping practices are intended to help us understand the environment in which we coexist and interact so that we can visualize, co-design and actively construct our future spaces.

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Links:
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urbana.gr
commonspace.gr

TITLE

AN OUTSIDE CITY

authors

Asimina Koutsogianni
Architect, Master in Advanced Architectural design of the University of Thessaly, Greece
e-mail: asikoutsogianni@gmail.com

Asimina Koutsogianni

Born in Ioannina of Greece in 1990 , she studied Architecture at the University of Thessaly from 2008 to 2014. She attended a semester in Bahcesehir University of Istanbul as an Erasmus student in 2011. After completing the master in Advanced Architectural Design of the university of Thessaly (2015-2016) and up to now she works as an architect.

Keywords:

low density|
post-covid|
outside| city

ABSTRACT

In reality of covid-19 this year globally people are either urged or forced to stay at home. The "inside" became synonymous with safety and everything flagged with the slogan "STAY HOME", from governamental and media prompts to avatar stickers in social media. Experiencing the quarantine period in Athens and being an architect myself I could not resist but thinking about home and city as living spaces. The Internet is the only way of communication, of work, of having fun when inside but when the structure of the building does not allow that one stays at the internet spot closest to the "couch" as if there was a magnet. A pleasant incident was when people were on their balconies having a basic interaction with their neighbours. This in-between condition of being outside and inside, close and far from one another at the same time, made me think of a covid-free future city where inside and outside are not opposed. What if we could live on the balconies? What if we could demolish the facade walls to convert the living room into a balcony?

A positive outcome of quarantine is that physical presence started not to be necessary. Video-calls with friends and colleagues, virtual theaters,museums etc, made people be present in events that otherwise would never participate. Computers or smartphones became the gates to the world and suddenly it does not matter where the body is, so somehow this situation freed the location of the "home". It seems that there is no need neither to have city centers with high density, nor transportation so every place in the world is potentially a habitable place as long as there is electricity and internet. What if a post-covid city is a "village" of low density?

INTRODUCTION

1.1experiencing the lockdown in Athens

Experiencing the pandemic in the center of Athens I was able to observe the empty city that I experienced for the first time, since I live downtown and in one of the higher populated neighborhoods of Athens. Except for shopping groceries and going to work -when one could not work from home- physical exercise was another option of being outside.A fun fact is that people who wanted to see some friends had "running appointments" at which they were talking like they were hanging out but in athletic outfits during jogging. It is very interesting how we were forced to keep moving when we were outside but stayed almost still when we were inside working, eating and enjoying ourselves while sitting on the couch. The only ones not in movement were people living in semi-basements -in Athens they are mostly immigrants- who were sitting outside their buildings just to find a signal on their smartphones to speak with their friends and family. The Internet was the only way of communication, of work, of having fun when inside but when the structure of the building does not allow that, one stays at the internet spot closest to the "couch" as if there was a magnet. A pleasant condition was when people were on their balconies having a basic interaction with their neighbors. This in-between condition of being outside and inside, close and far from one another at the same time, made me think of a covid-free future city where inside and outside are not opposed.

1.2 from physical to digital social life

Lockdown worked as a sneak peak of a digital future that had started to be seen even before and forced to be accelerated during the pandemic. The way of living, since recently, used to be mainly physically enhanced by digital features, while during the past two decades digital gained more and more space. At the moment it seems that we are on the point where digital social life has more space than physical.During pandemic tele-communications along with tele-work and tele-entertainment were already a reality which added during pandemic a more massive use of tele-education, tele-buying, tele-governance and even tele-healthcare. In the extremes of this upcoming future people will live mainly on the internet through their monitors having some short breaths of the physical world as recreation.Computers or smartphones become the gates to the world and it doesn't matter where the body is. There is no need for everyday transportation to work and back, saving some time and space being the whole time in the safe familiar "cockpit" participating in any event despite the location, while one is in touch with anyone around the world. At the same time people consume less products. (there are already digital fashion companies who dress digitally the image of yourself to post it on social media[1]).

On the other hand, we should be concerned about this enclosure in one space but at the same time this place cannot be a refuge since one is always online that leads to an individualistic way of living physically but never being actually alone, extending the relations from distance but without having a real bonding and where one loses the physical contact with the environment as it is the way one feels the scale, the texture, the smells, etc. The second of the three global scenarios of the OECD about 2035 is called "Virtual Worlds" and traces a possible future, in which most of the human experience - whether it be work or entertainment - takes place in extremely immersive and exciting virtual reality spaces, while there is a great deal of pressure from citizens to create such spaces, which will be globally connected and interoperable[2].

This upcoming change of life cannot leave architecture and urban planning uninvolved despite their low capacity of rapid reaction. We need to think of cities and buildings not as delimited spaces that leave the others (other people, nature, weather, etc) outside but as perforated structures that enable interactions and at the same time ability of isolation.

1.3 the open city

Cities have to face a lot of challenges by adopting or rejecting current tendencies and by questioning established practices. It seems that since metropolitan anthropocentric crowded cities failed - besides others - to confront the pandemic,

maybe it is time for them to transform into open cities mainly made of in-between spaces and full of relations between people, animals, plants, buildings, appliances and objects with the surroundings. In order to avoid further degradation and the phobic abandonment of the big cities,along with the bizarre destruction of the countryside - to which tourism contributes the most, concerning at least the greek cities -Yorgos Tzirtzilakis suggests to let us imagine the cities and the countryside as an archipelago of areas and settlements. As a set of places in a network of urban centers, rural and suburban settlements that favor the geographical peculiarities of the country. Provided we do not repeat the disastrous slips and destruction of the suburban landscape of previous decades: the unbridled urban sprawl expansions[3]. It is time to question the strict differentiation between manmade and nature by letting the one get inside the other -with the help of technology- in a spontaneous and organic way and not as the past utopian garden cities.

Cities can be open and spread with low height -in the majority- and borderless constructions instead of the rigorous building blocks. Architecture should provide chances for coexisting, for example surfaces with multiple uses -digitally enhanced to keep an ideal temperature, light,etc- on which people pose their physical bodies while living their digital lives.(image 1) People keep their anonymity and privacy due to the distance of one another but at the same time through the eye contact of the openness they have a sense of belonging in a community. In-between spaces also help people have physical interaction with others, with plants, animals, etc, where work, living, education, entertainment, etc happen in the same hybrid places.

Current cities can gradually become open cities by removing and demolishing elements (such as street materials, walls, slabs,etc) in order to give space to nature to come inside and at the same time the city expands to the areas around the cities that are now low inhabited or even empty. Since the gradual transformation of a city to an open city is a spontaneous and from the bottom

NOTE 1

DressX smartphone application that dresses with designed 3d clothes a photo you upload

NOTE 2

OECD (2021), Global Scenarios 2035

NOTE 3

Tzirtzilakis Yorgos, Lifo 2021

action, it cannot be designed in a master plan so consequently what can be given is a strategy as guidelines of the steps. Because of this organic and long term procedure of the transformation it is obvious that an open city is not a uniform city but consists of parts with different density, different heights and different openness of the structures at given times.

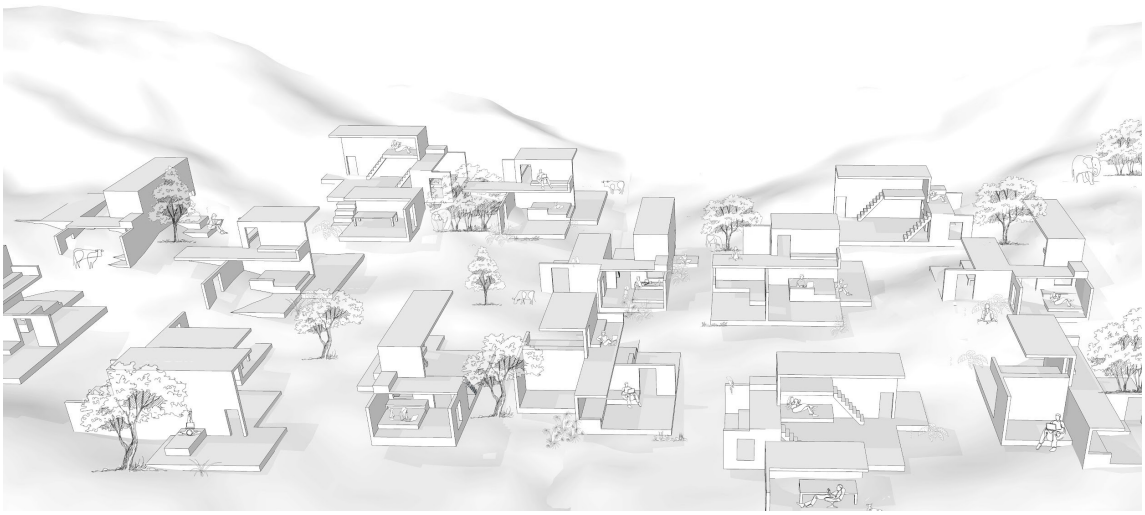


Figure 1. Part of the proposed open city

2. THE ISSUE OF DENSITY

The term density has a complex meaning, which usually is defined exclusively by spatial terms. Even the spatial meaning has different aspects since it can refer to the ratio of building coverage and free land and/or building volume or the ratio of dwelling units per building or even the ratio of people per square meter of land/ building space(image 2). Scale is one more factor that affects the perception of density. From the block to the neighborhood, to the district to the city, densities might be similar or contradictory. We could go even further to explore the density in the frequency of the cities, of how close one city is to the other and what is the space between them. The ease of the connection between them makes the density seem bigger. There is also the distinction between internal and external density. Internal density refers to the number of people per spatial unit in an internal space (room) while external density refers to the number of people in an external geographical area (neighborhood).

NOTE 4

Sigolitou Efi , environmental psychology 1997

NOTE 5

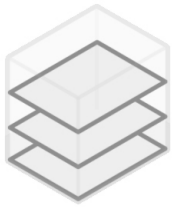
Alterman Rachelle Mehaffy Michael , 2019

Stokols(1972), in addition, points out the difference between density and the sense of crowding to include the emotional state derived from the interaction of spatial, social and personal factors.The interpretation of the concept of density is related to the interpretation of the human-environment relationship either as a characteristic of the people occupying these environments. Density can be perceived as something pleasant or unpleasant, a feeling that depends, respectively, on the conditions under which the individual experiences density. A very interesting view of interpreting the feeling of overcrowding is that of Chandler et al. (1978) who argue that social situations are experienced as density when the social context is governed by rules and organizational principles that go beyond the cognitive abilities of the individual.[4]

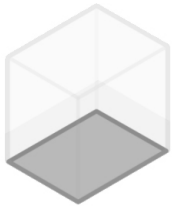
It is obvious that density is a relative term with either positive or negative meaning depending on the situation it refers to. For example, the density related to the demographic mixture and the land uses is a desirable condition. Compact cities also have a big ratio of building to land, which may lack in terms of privacy and contact with public space and nature but at the same time the short intra-urban distances make the dependency of automobiles less so that more people can have access. In urban planning the idea of dense and compact city as a model of sustainability has recently consolidated mostly because of the qualitative appraisal of the environmental issues deriving from an uncontrolled urban sprawl. Current research shows that from an urban sustainability perspective, it is not just density, but the efficient placement of people and their activities that is important. A dense downtown, far away from a dense bedroom community, may actually be worse, from a carbon point of view, than a less dense mix of the two. At the same moment this model ignores some small scale environmental issues such as heating islands, air quality, noise, or some other small scale social issues because of the major benefits in other factors, which we can question if we add the release of digital living offers.

Population Density (POP)

Dwelling Unit Density (DUD)

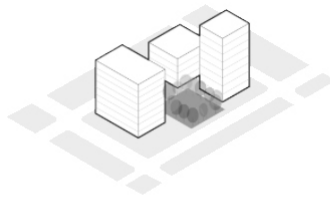


Floor Area Ratio (FAR)

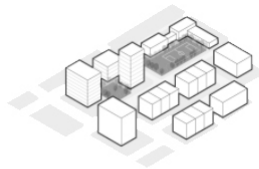


Coverage (CVG)

Figure 2. densityatlas.org/key metrics

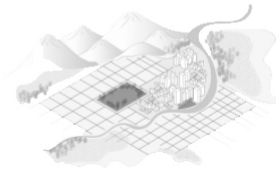


Block



Neighborhood

District



City

Figure 3. densityatlas.org/scales

3.1 About Athens

Athens developed very dynamically during the first three post-war decades, when it more than doubled its population (from 1,500,000 in 1951 to 3,500,000 in 1981).[6] The growing population of the city was housed in two main ways: the popular self-housing in the outskirts of the city, which served mainly the large stream of internal migration of the 1950s and 1960s and part of which was the arbitrary construction and secondly the housing in new modern apartments that were produced at an extremely high pace by the process of compensation (antiparochi) and mainly covered the needs of a wide range of middle and lower classes. Antiparochi is a self-funding system, in which developers saved themselves the

NOTE 6
Greek Statistical Office

NOTE 7
Isaias Plato, 2017

NOTE 8
Dragonas Panos, bloomberg city lab 2020

cost of buying land by giving landowners a share of the constructed units when they were completed. Because of this today the city is defined by a construction model that is actualised by this singular building unit. These buildings, on average four to five storeys high, are organized in irregular, fragmented plots in a patchwork of discontinuous grids, made of in situ, labour-intensive concrete frames, filled with bricks, plastered, something that ultimately looks like a stack of slabs with rather continuous balconies.[7] These modernist apartment buildings (polykatoikia-pronounced "Pol-i-kat-i-KEE-A" and means condominium) adopted a modernist construction model — the Le Corbusier-developed Dom-Ino system, in which reinforced concrete pillars freed a building of the need for load-bearing interior walls. In Athens, this permitted the creation of a sort of modernist tenement. Industrial in construction, it was still aligned to a traditional street in densely packed urban neighborhoods, with differing building heights and lengths giving a haphazard, unregimented impression.[8] The graduation of the floors was translated and still is into a graduation of prices and consequently of working classes from the basement to the top floor who even if they are separated they live in the same building. Also, this vertical state of co-ownership in percentages over the years resulted in multiple owners of each flat (parents inherit the apartment to the children, etc) and consequently of a building which makes extremely difficult and slow any changes on them.

The increase in the Athenian population in central neighborhoods got reversed during the 80s when people left the center to live in houses in the suburbs. The decay of some neighborhoods enabled the immigrants who arrived in Athens during the 1990s to find cheap apartments in the lower floors of the buildings, along with the Athenians who did not leave the center and mostly lived in higher floors. Financial crisis of the early 2010s forced the evacuation of the small shops in ground floors that resulted in dead and hazardous street level areas and at the same time young generation left the country because of the unemployment

which led to an extended devastation of the city center where criminality rose. This downgrade of the center, which resulted in very low property prices, gave way to short-term rental services for foreigners in areas close to transport, which in turn eventually raised rental prices in these areas. "pushing" lower classes to move to other affordable areas with worse transportation.At the moment, a new metro line is preparing to be delivered to traffic within the next 10 years, joining several central areas that have not had access so far, something that changes the rental and real estate prices again.

Figure 4. Yiorgis Yerolymbos, athens spread 2012

3.2 about Kypseli

Kypseli is one of the oldest neighbourhoods in the municipality of "new" Athens that appears with more or less its present boundaries on the "city plan" of 1930, which incorporates considerable extensions of the city as a whole. In the beginning of the 20th century dispersed country houses and villas started appearing in an area, which was practically agricultural land. The influx of refugees from Asia Minor in 1922, along with internal migration from other parts of the country contributed to more intense urbanisation of the area, initially with single family houses, mainly for well-off households. In the 1930s the first multi-storey apartment blocks made their appearance and the river-bed which traverses the area was covered and re-designed into a linear garden with trees, bushes, fountains, playgrounds and sculptures. This linear garden, present day Fokionos Negri street, is still the central open space in the neighbourhood, leading to Kypseli square, which is one of the sites of our fieldwork. Kypseli, like

many other central neighbourhoods of Athens, is intensely built with apartment blocks in the 1960s and 1970s. But in the 1950s it still kept many features of its past, with several non-urban uses, a lot of green spaces and still many single family houses with gardens. Local residents know each other, children play in the streets and cars are scarce. Such aspects of its urban development appear vividly in the accounts of old residents. After the degradation of 1980s, in 1990s a high number of migrants found shelter in Kypseli who kept the social and economical life high, contributed to the development of activities and services oriented to the "new" population, but also revived some of the old uses. The distribution of urban functions, as well as population, is obviously not homogeneous, but Kypseli is a successful example of a peaceful and interesting cohabitation with active public spaces, despite the drag dealing and use around the dark streets.

The rise of airbnb, as mentioned above, along with the lack of easy access to the subway makes Kypseli an affordable neighborhood for Athenians- at least until recently- who came back to the city center or moved from other central districts that became less affordable, mostly students and artists (which raised the question if Athens is the new Berlin).

Figure 5 and 6. Google view and plan of Kypseli

Figure 7 and 8. Kypseli 2020

This situation led the 40% of empty buildings that were in 2015 to be 10% at the moment due to the relatively low rental prices in comparison to other central neighborhoods, along with some government programs for providing renovated apartments to refugees from the migration wave from Syria. At the moment, with the announcement of the new metro line that passes through Kypseli, mobility is seen in real estate both in the rental prices, as well as in the renovations and the fullness of the remaining empty apartments. In terms of greenery and nature, although Kypseli is very close to the park (Pedion tou Areos) and there is a green restraint zone in Fokionos Negri, however the dense construction does not allow residents to take advantage of the benefits in their daily lives and the few trees of low height do not help.

3.3 Kypseli as an open city

Even though Kypseli is getting higher populated over the last 5 years and will keep to for at least a decade -because of the new subway line- the release of work and location will eventually lead to less population in the not so far future. Consequently, the transformation of Kypseli into an open city should be in two phases, one of the direct future without changing population and one of the further future taking into consideration the decrease of the number of habitants. Since Athens city center, along with Kypseli, was not formed by a master plan -but by the need, a legislation and the psontaneouw impulse of the people- the same way should be done the transition to an open city. The procedure is a reverse antiparochi, an exchange of vertical ownership to percentage of horizontal but with a concession to the public space.

In the first phase, that will take place in the following decades, the guidelines refer to the removal of street facades of the buildings which brings the more social rooms of the house, such as the living room and kitchen, to the public, while private rooms such as bathrooms and bedrooms are still closed boxes. Some parts of the slabs also can also be removed, as the case may be, in order to create some atriums. Even if some top floors will be removed completely it is important to keep high wall elements to the east-west orientation for the shadow, since in mediterranean cities summer temperature is high and the shadow of vertical elements helps in the micro-clima. Additionally it is very important to open the ground floor -now closed spaces- either to the owners or to the public to make the city life happen at the street level. The Dom-Ino system the majority of the buildings are constructed enables all these big changes in the morphology.

In the second phase, that will take place in the next centuries, that less vehicles will be needed, street material will be removed to let the natural pavement exist. At this phase the population will be decreased, which leaves space to the animals and plants also to expand. Spontaneously some areas will be denser in the sense of built elements and other denser in plantation -with cultivations or wild- with low or not at all constructions.

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TITLE

TOWARDS IMAGINARY STUDIES: NEW EUROPEAN BAUHAUS AND POST-PANDEMIC PLANNERS' EDUCATION

authors

Mladen Pešić
M.Arch. Ph.D., Teaching Assistant, University of Belgrade, Faculty of Architecture,
e-mail: mladen.pesic@arh.bg.ac.rs

Aleksandra Đorđević,
M.Arch., M.Urban and Regional development, Ph.D., Teaching Assistant, University of Belgrade, Faculty of Architecture
e-mail: aleksandra.dj@arh.bg.ac.rs

Aleksandra Milovanović,
M.Arch. Ph.D. Candidate, Research Assistant, University of Belgrade, Faculty of Architecture
e-mail: alekmil@arh.bg.ac.rs

Mladen Pešić

Dr. Mladen Pešić (1986) is a teaching assistant at the University of Belgrade, Faculty of Architecture. He graduated from the University of Belgrade - Faculty of Architecture (2007 – bachelor degree, 2009 – master degree). His research is generally focused on visual display, spatial representation and memory. As a part of scholarship he was involved in scientific projects organized by Faculty of Architecture and Ministry of Education, Science and Technological development of Republic of Serbia.

Aleksandra Đorđević

Aleksandra Đorđević (1990) is a teaching assistant at the University of Belgrade. She graduated from the University of Belgrade - Faculty of Architecture (2012 – bachelor degree, 2014 – Two master degrees in Architecture and Integrated Urbanism). She finished Ph.D. studies at home University in 2020. In the professional and research activity, she is interested in urban planning, values in planning, planning ethics, post-socialist development, design regulations, urban morphology, and urban form. As a member of the various author's teams, she received numerous awards and recognitions for architecture and urban design competition projects.

Aleksandra Milovanović

Aleksandra Milovanović (1993) has finished the Bachelor (2015) and Master (2017) academic studies of Architecture at the University of Belgrade, Faculty of Architecture (UB-FA), where she enrolled in Doctoral academic studies (2017) and is currently working on her doctoral dissertation. She was employed at UB-FA first as a Research Trainee (2018), then as a Research Assistant (2021). The focus of her reserach include Architectural Programming, Urban Morphology, Urban Housing, Landscape Studies, Sustainability and Heritage.

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New European Bauhaus| Covid-19| planning education| study programs

ABSTRACT

Cities development and landscape transformation are under the constant influence of numerous challenges that need to be addressed through the planning process. The COVID-19 pandemic has opened completely new perspectives of research in various scientific fields and has put before planners a serious task of rethinking the post-pandemic city, it also opens the horizon of planners' education in the context of the dynamics of the pandemic towards recovering cities and pandemic control.

This paper aims to critically re-examine the state-of-the-art of existing curricula and to build on these foundations' visionary ideas for learning about a post-pandemic city. The paper starts from the thesis that studies on the post-pandemic city should be interdisciplinary, multidisciplinary, and transdisciplinary (IMT), problem-based and future-oriented. At the methodological level, the research will engage the case study method, particularly the University of Belgrade, Serbia. The master level book of courses from 31 faculties in 4 scientific fields will be analysed in relation to the sustainable, beautiful, and inclusive city, highlighted as fundamentals of the New European Bauhaus initiative. The tendency is that the research results in the study program concept note at the master level, perceived as an IMT platform for planners' education on post-COVID urban planning and design. Given that the Bauhaus as a movement was primarily oriented towards state school, the visionary-oriented approach will be used to define new studies for learning about the post-pandemic city. In line with the initial diagram of the Bauhaus curriculum developed by Walter Gropius in 1922, research output will be presented through a thematic diagram of the study program.

INTRODUCTION

The present-day worldwide pandemic continually shows that humanity along with the built environment, which is constantly shaped by man-made influences, is vulnerable to health crises and disasters not only during the emergency but also long after the primary threat has declined. Short-termed measures that were supposed to overcome a pandemic and its negative impacts most certainly saved lives but simultaneously confronted all of us with new, from this perspective long-termed, spatial, social and psychological challenges and transformations. Following these challenges and transformations, low response capacity for spatial diagnostics and low level of emergency preparedness was revealed indicating the need to reconsider the role and potentials of systematic planning and building the resilience of complex systems to successfully mitigate and prevent an epidemic or natural disaster and, simultaneously, ensure the quality of everyday life in the future. During the previous two years, ad hoc solutions were directed towards providing immediate results and were supposed to overcome the current situation, but at the same time, they accumulated multiple political, economic, social and psychological effects. As a result, a serious task was put in front all the disciplines in general, and specifically to professionals that are involved in the development and shaping of the built environment. Accordingly new planning and design perspectives of planning that have been opened following on COVID–19 pandem-

ic-imposed measures of social distancing, restricted movements, regulated use of public space, and suspended daily activities, introduced new spatial requirements and formations that should be addressed in the process of rethinking the post-pandemic city development and landscape transformation. Escalation of COVID-19 global pandemic and variety and inconsistency of imposed measures revealed the need for a rapid response regarding professional action in order to develop and implement an adequate planning framework for the prevention and suppression of the pandemic spread, or mitigation of its consequences equally in present and in the future. In this context, practical and theoretical research of the appropriate responses during the state of emergency is one of the leading challenges in the light of creating new planning scenarios and at the same time new educational models for planners' that will enable appropriate professional action when needed. Recognizing these aspects and challenges, this paper has initiated and started research focused on the search for new, innovative and imaginary, but yet rationally grounded educational models for learning about a post-pandemic city. Having in mind that the built environment and planning profession are perceived as matters of significance and vital importance in future spatial development, the main aim of the research is to form the new arena for critical re-examination of the state-of-the-art of existing curricula and to upgrade these foundations' by visionary ideas for learning about, in and for planning.

2.Research Background and Context

Leading global networks, associations, and organizations including WHO, UNHCR, UN, UNICEF and Habitat for Humanity International defined recommendations for creating spatial measures in case of different types of natural disasters or pandemics. However, these documents and studies often do not provide operational knowledge for wider planning of emergency response, due to their focus on construction of completely new spatial infrastructure, general selection of facility types, and as such they cannot be an effective response in long term. At the same time, leading professional organizations in the field of architecture and urbanism, primarily call for effective participation in finding innovative architectural and urban solutions for various types of emergencies, implying the unpreparedness of the profession to face these problems and the need to find an urgent sustainable framework for action. In that order, in pre-pandemic period most of the recommendations and scenarios were focused on short-term locally based actions dominantly related to natural disasters and related emergencies. Although planning and architectural practice and education were already

facing numerous globally recognized challenges related to social transformation, climate change, globalization, urbanization, depletion of existing environments, growing pressure on public services, infrastructure and housing, the COVID-19 pandemic raised new issues and challenges having in mind how it affected global community in a short period of time. In the period of just two years supply chains on which global economy relied on collapsed, global travels were restricted, daily routines of millions were changed and the way people use space on every scale was changed. At this point, it could be stated that what once was normal has entered into the new state of normality, or to say into abnormality, that will certainly lead to new urban and architectural paradigms that will require new theoretical and practical approaches in dealing with the planning of the built environment. In that regard, post-pandemic planning will certainly have to broaden its scope, to include all the experiences and challenges from the period of pandemic into its future discourse and to produce sustainable and transferable results that will directly enhance the existing practice and research in the process of spatial and urban planning. The fast evolving nature of the COVID-19 seeks the development of effective planning responses and better preparedness of society in situations of pandemics or other natural disasters with the use of innovative and sustainable technical and technological solutions that should be based on existing knowledge and resources.

As a response to the abovementioned challenges and transformation of architectural, urban and planning practice new profiles of professionals and experts are required to take part in theoretical and practical efforts and to respond to established initiatives and strategies regarding pandemic conditions. Newly established context enables the development of spatial scenarios and solutions in response to the sustainability goals defined within the 2030 Agenda for Sustainable Development (2015). As stated within Agenda, the process of education has a fundamental mission reflected in the permeation of following purposes: to reach and enhance the development of inclusive, safe,

resilient and sustainable cities and human settlements (Sustainable Development Goal 11) and to ensure inclusive and equitable quality education (Sustainable Development Goal 4) with focus on contemporary city problems and their addressing through design while educating future professionals. Professional responsibility of future experts to "contribute to the built environment and make choices that change the world for the better—through better buildings, settlements, landscape architecture and urban planning" was pointed in the SDG Dhaka Declaration (2018) while the fundamental challenge in education, that was perceived in need for life-long learning of both students and practitioners was highlighted by the EDUCATE project (Environmental Design in University Curricula and Architectural Training in Europe, 2012). Along with the changes in educational models and importance of specific universities and schools within this process, it is important to follow up and evaluate changes in the field of urban planning and architecture through the work and statements of professional organizations and associations, particularly through their charters and agendas. Following this argumentation, three tracks were used in this research regarding imaginary studies for post-pandemic planners - one that is referring to the Bauhaus school (1919) and its already stated importance in the field of architecture and urbanism, second that is referring to the idea of New European Bauhaus (2020) and third that is in close connection to the ECTP-CEU RE-START EUROPE (2020) manifesto. Regarding these three tracks, we developed the thesis that studies on the post-pandemic city should be interdisciplinary, multidisciplinary and transdisciplinary (IMT) and in the further part of the research, the importance of these tracks and research background and context will be emphasized.

2.1. Bauhaus Manifest: Educational background and core diagram

The well-known Bauhaus art and design school was established in Germany (Weimar Republic) in 1919 with three main aims: (1) to abolish the "arrogant" distinction between artist and craftsperson by recognizing the knowledge and skills common to both; (2) to mobilize all arts and crafts towards the creation of total design environments and (3) to foster links between the school and local manufacturers (Cramer, 2019). Despite its brief existence (14 years) this school has had an enormous influence both on our contemporary visual and on the built environment. Established after the First World War in the period of reconstruction and rebuilt of the devastated cities and territories, Bauhaus is globally known for its influence regarding the design (in the scale from products to buildings and urban areas) and development of the specific design education. In the years of operation, the school had experienced several changes in leadership and intellectual direction but its "contribution to design and the education of designers

had, and has continued to have, a profound and unparalleled impact within this field" (Cross, 1983). While discussing fields where the influence of Bauhaus educational model is visible Hans Wingler (1969) outlines the following: (a) in devising teaching methods which have transformed the teaching of art and design throughout the world; (b) in the influence upon the architecture of the teaching and practices of Walter Gropius and Mies Van Der Rohe; (c) in the contributions of Bauhaus painters to the development of art, and (d) in bringing about revolutions in the field of the home environment and industrial design.

Bauhaus as a school developed on three locations - Weimar, Dessau and Berlin and under the leadership and coordination of three directors - Walter Gropius, Hannes Meyer and Ludwig Mies van der Rohe. The founding manifesto was declared by the first Director of the school, Walter Gropius who stated that together, we are desiring, conceiving and creating the new building of the future and that ''the ultimate aim of all creative activity is building'' (Walter Gropius, 1919).

In ''Program of the Staatliche Bauhaus in Weimar'' that is considered as a manifesto of the school Walter Gropius is inspired by new tendencies and responsibilities of future architects, painters, sculptors and their role in the future world that will ''combine architecture, sculpture, and painting in a single form, and will one day rise towards the heavens from the hands of a million workers as the crystalline symbol of a new and coming faith.''

When examining the educational model, methodology of the Bauhaus school and structure of the curricula through the school history, Anita Cross (1983) emphasizes the preliminary or the basic course in design as the most important educational innovation. This course was the introduction for each student, in the duration of six months, and was intended to "encourage students both to develop and to demonstrate their inherent abilities" (Cross, 1983). Accordingly, "projects and exercises in the course were generally aimed at freeing the students from preconceived notions of 'art' and 'design' which they may have brought

with them, by exploring 'basic properties' in materials, colours, textures, structures and compositions." (Cross, 1983). Not only that these basic properties were important in freeing students from their previous notions and experiences, they were also highly positioned in the structure of Bauhaus curricula- In 1922 Walter Gropius developed a conceptual diagram that illustrated the structure of teaching at the Bauhaus. Diagram was conceptualised as a group of concentric circles, having materials in inner circles and various activities on the outside, while he placed 'building' (BAU) in the centre of the circle (Figure 1).

The Bauhaus study program, diagrammed as a circle, functioned according to the following principles: students began in the outer ring with six months of Vorkurs (preliminary course) after which they progressed to a workshop where they had an opportunity to work on practical tasks within various disciplines. In the pre-final phase, specific medium such as ceramics, woodworking, weaving, metalworking etc., were chosen after which ''student converged again in Bau (building), to construct total environments, designing everything from the architecture to the furniture, carpets, dishes, and flatware'' (Cramer, 2019). Although 'building' was at the centre of the diagram it is interesting that regular course and Department of architecture to Bauhaus was introduced in 1927, which sounds a little bit strange because the notion of the school and coherent education models from the present standpoint are very visible in the field in architecture and urbanism. Specialisation of the Bauhaus as a school of technology for architecture took part under the third Director, Ludwig Mies van der Rohe, who reduced the structure and importance of work in workshops, and under which art and workshop department mainly served as groundwork and orientation ''for developing a more up-to-date form of architecture that used contemporary structures and materials'' (Teaching at the Bauhaus, Bauhaus Archiv – Museum fur Gestaltung).

When comparing periods previous to Bauhaus and present-day pandemic situation, it is clear that both situations cope with emergency state (post-war reconstruction and machine age on one side and post-pandemic scenarios on the other) that needed solutions and scenarios for new spatial arrangements and transformations. Overlapping with these issues, new professional profiles were needed and the shift in their education regarding the need to develop new teaching methodologies, curricula and learning outcomes already started. Accordingly, in further development of our research we wanted to use the central part of the Bauhaus diagram (with notions of building, testing, site and design) and to try to find new key words that will be connected within current context, needs and post-pandemic development. Also, the dynamic of pandemic allowed us to go back once more to utopias, visionary ideas and ideal states. In other words as stated before - to think about rebooting.

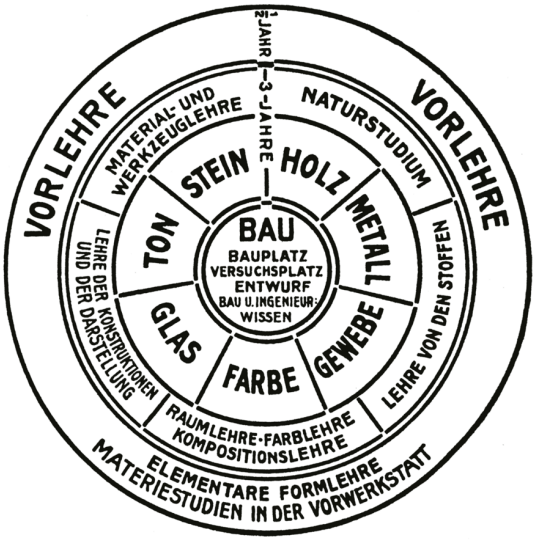


Figure 1. Conceptual diagram of the Bauhaus curriculum (Walter Gropius. 1922)

2.2. New European Bauhaus initiative: Sustainable, Beautiful and Inclusive post-pandemic future

New European Bauhaus brought up initiative that is creative and interdisciplinary and that should convene "a space of encounter to design future ways of living, situated at the crossroads between art, culture, social inclusion, science and technology" (New European Bauhaus, 2021). As stated in the initiative explanatory document "The New Bauhaus wants to connect different realities'' because "the COVID crisis has shown that many topics are interlinked and that new thinking comes from breaking the silos, just as Bauhaus movement did on hundred years ago.'' Initiative was launched by European Commission to "bring the Green Deal closer to the European citizens" and to promote "core values" of sustainability, aesthetics and inclusiveness. At the kick-off period European Commission called European networks and umbrella organisations to engage with the new initiative and to become partners of "New European Bauhaus" (NEB). It is expected that NEB would open new ways for "a long-awaited recognition of the role of culture in the implementation of the UN Sustainable Development Goals" and that will at the same time raise concerns about the understanding of culture at the service of political and

economical projects (Culture Action Europe, 2021). Regarding spatial practices and planning, it could be stated that NEB strives to "build sustainable future through creativity, innovation and imagination" and to "enable experimental places and spaces for us to reimagine how to live better together after the pandemic. The New European Bauhaus wants to build a sustainable future through creativity, innovation and imagination and to enable experimental places and spaces for us to reimagine how to live better together after the pandemic ((New European Bauhaus, 2021). It is planned that NEB initiative would last between four and six years and that would be implemented through three phases – Design phase, Delivery phase and Dissemination phase. The goal of the first phase is to connect already existing processes and projects and to accelerate, concretise and materialise good ideas. In second phase NEB will deal with setting up pilot projects form the ides, networks and actions that were recognized within the previous phase. In the end, final phase will be about networking and sharing of knowledge and supporting the emergence of lead markets.

Following this line of reasoning, we reimagined a conceptual diagram of imaginary studies as part of the inner circle directly connected to the issue of building and updated it with principles, notions and ideas that are promoted by NEB (Figure 2). Knowing that current research in higher education recognizes the concept

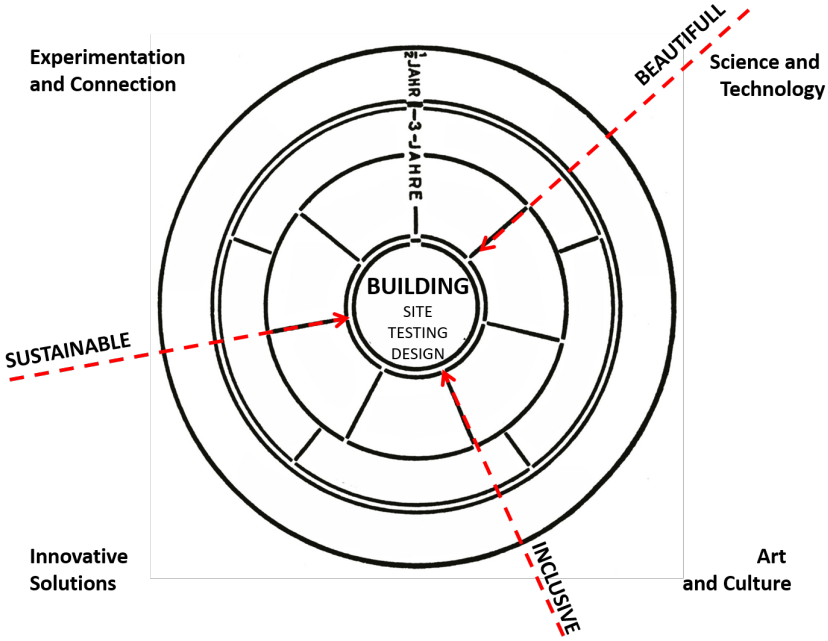


Figure 2. Conceptual diagram of imaginary studies with NEB principles

of sustainability as a contemporary tool for delivery of environmental sensitivity these notions are not new, they are already included in everyday spatial practice but in this way and with the conceptual framework of NEB they are once more emphasized and rediscovered. By including the principles of beauty and inclusivity into the conceptual diagram for new studies for learning about the post-pandemic city, a better understanding of the need for immediate spatial responses regarding altered socio-psychological conditions caused by the pandemic or other natural disaster will be provided. Also new educational models and developed in this way should improve already existing adaptive response capacity and create and create better health and wellbeing conditions for managing post-pandemic space adaptations and transformations.

2.3. ECTP-CEU RE-START EUROPE manifesto

Following this line of actions in 2020 ECTP-CEU (European Council of Spatial Planners – Conseil Européen des Urbanistes) in the form of declaration reflected on the effects of the current crisis on future and living conditions from the aspect of spatial and urban planning. As indicated in the Declaration ''seeks to harness the creative power and technical expertise of spatial planners in tackling the social and economic crisis created by the COVID-19 pandemic'' (ECTP-CEU, 2020). Declaration has Preamble, Principles of Restart-Europe and Annex with mega-trends and it is dealing with inequalities and exposing the fragilities in societies across Europe that are affecting the wellbeing of communities across Europe on different scales and levels. The principles that are set out in it should help with the Recovery plans for Europe. Among other things Declaration is calling for: (a) ethical values that seek to create liveable communities for future generations that are robust, equitable and climate-friendly; (b) strengthened planning systems required at all levels - national, regional and local - which draw upon the experience and expertise of the planning professions in

every country, and for (c) the academic and professional expertise that can and must be called upon to inform, understand issues and to formulate solutions, to ensure policy as evidence-based, and not ideologically led. Separate part of the Declaration in the form of Annex is dealing with Post-Covid-19 mega-trends – An age of Uncertainty, Greater Safety and Security, Local Empowerment-Supported Devolution, Renewed Nations, Growing Inequality and Beyond Austerity, Towards Frugality.

Aligned with the objective of this paper - to develop new imaginary studies for future professionals in the field of architecture, urbanism and spatial planning, mega-trends were used to form contextual framework that could address new challenges and ideas in post-pandemic planning. We are already witnessing transformations in everyday life and in that reason it is crucial to put additional attention to COVID-19 mega-trends as a contextual factors that will shape future actions and activities (Figure 3.) As a response to the abovementioned factors, the horizons of research and experimentation in architecture and planning are expanding rapidly while at the same time putting additional pressure to re-examine existing approaches to the education, the content of existing curricula and learning environments.

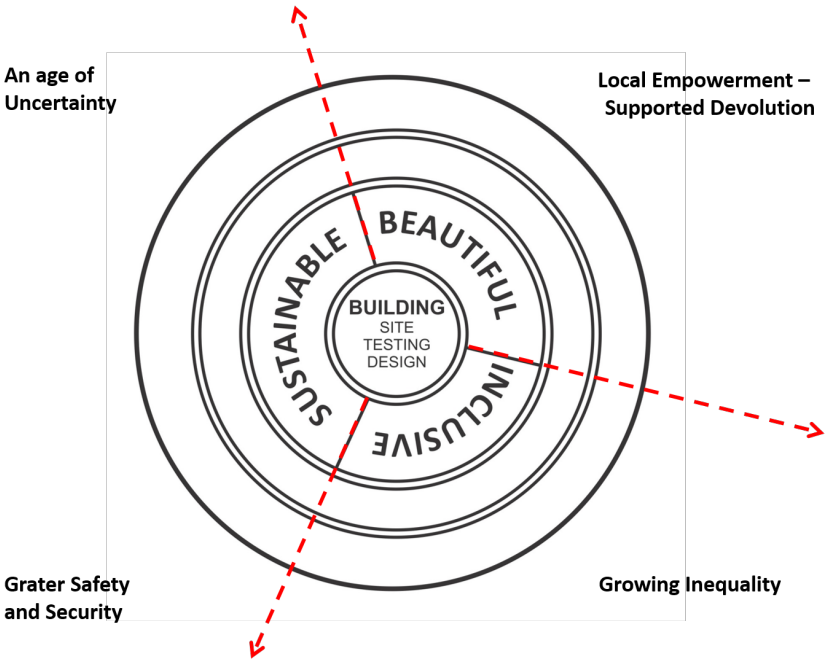


Figure 2. Conceptual diagram of imaginary studies with NEB principles

3. Methodology

Having in mind previously defined contextual and theoretical background, the value framework of the research is based on the development of a multidisciplinary platform for creating innovative study programs on Master level that interrelates knowledge from various scientific fields while following NEB principles and statements from Restart Europe Manifesto. At the methodological level, the research will engage the case study method, particularly the content analysis of courses from the University of Belgrade (UB), Serbia. The books of courses on Master level, from 31 faculties in 4 scientific fields were analysed in relation to the sustainable, beautiful, and inclusive city, highlighted as fundamentals of the New European Bauhaus initiative. The tendency was to design and develop study program concept note at the master level, perceived as an IMT platform for planners' education on post-COVID urban planning and design. Starting point in the process was collection of data from 31 faculties from the UB, after which further selection and analysis of specific courses was conducted. This part can be observed through two separate but overlapping tracks – first connected to understanding that overcoming the negative consequences of a pandemic can be achieved by implementing new educational models and global knowledge in line with New European Bauhaus initiative and Re-Start Europe Manifesto, and second that is related to local experiences and skills from the already existing courses from the UB in order to develop globally adaptive and applicable solutions and ideas.

4. Case Study: Local examples and experiences in dealing with global challenges

When deciding how to develop new approaches and curricula for the education of planners, first step was to

develop a conceptual diagram based on the original Bauhaus diagram, updated with principles and contextual background that was extracted from NEB and ECTP Restart Manifesto. The next step was directed towards choosing thematic fields and courses that will be implemented in the study structure of new imaginary studies. Instead of developing a completely new course, it was decided to use already existing courses, that are already established and implemented. The main question was how connect them and put them in a new order, maybe not as it was, but instead how we want them to be according to the conceptual diagram formed in previous steps.
Following the decision of using, and in a certain way recycling existing courses on Master level we integrated the local knowledge and experience, and choose to create new curricula of the future Master program that will be developed of already existing courses on Master level from the University of Belgrade..

4.1. University of Belgrade: From the present knowledge towards new visions

The University of Belgrade is the oldest university in Serbia and the largest in South-Eastern Europe. Founded in 1808, it consists of 31 faculties, 11 research institutes and 13 University centres. UB provides education in sciences and mathematics, technology and engineering sciences, medical sciences, social sciences and humanities. The general agenda of the University is to combine and comprehend education, research and collaboration with the public sector and private companies. With 100,000 students, UB is offering more than 350 study programs and it is an academic community that is well-positioned in the scientific and practical arenas. The internal organization of the faculties within the University is organised in 4 groups: social sciences and humanities, medical sciences, sciences and mathematics and technology and engineering sciences (Figure 4.),

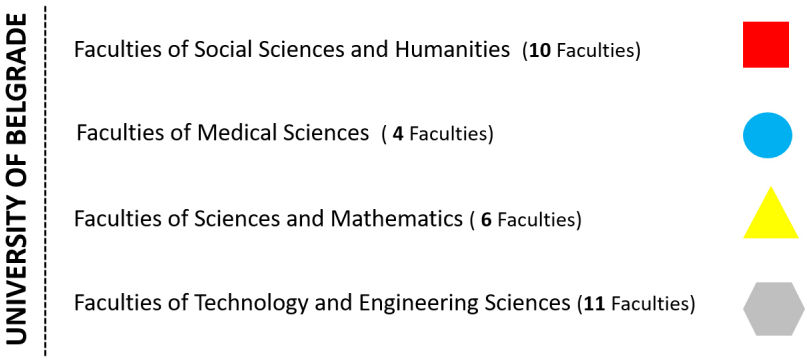
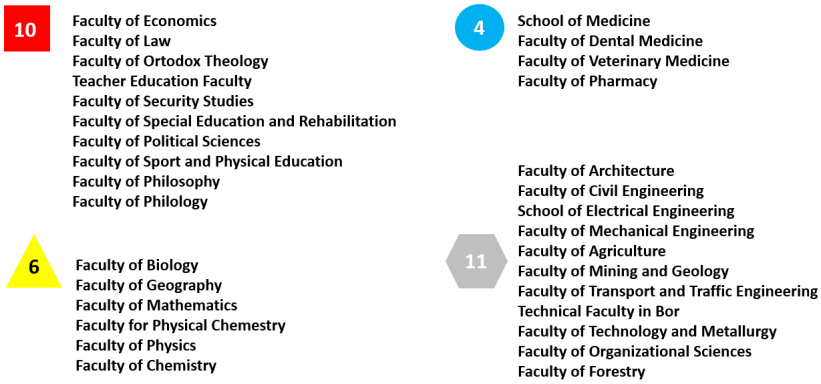


Figure 4. UB internal organization of the faculties

Further on, we decided to analyse each faculty separately, by studying the courses on the Master level and by analysing curriculums using keywords such as sustainable, inclusive, beautiful etc. We started with an internal division of faculties, grouped in scientific fields and we established more precise criteria for the analysis of courses (Figure 5.).

Figure 5
University of Belgrade – Internal organisation and University



After the analysis of courses from different scientific fields and faculties, 98 courses were selected and analysed in more detail in order to make a more comprehensive structure of the courses and to decide on their role in the future imaginary Master program. Each course was analysed according to course subject, objectives, learning outcomes and ECTP credits in order to have a clear picture of the dimension and role of these courses. In this step, courses from the Faculty of Architecture were omitted because of the tendency to use these courses as a basis structure that will be updated and improved with other courses from the University of Belgrade. In the following figures selected courses are presented in line with the chosen criteria's.
The majority of the selected courses, as a common feature had the aim to promote the values extracted through NEB and ECTP-CEU Restart Manifesto. Some of the objectives are: ''to point out to students contemporary concepts of transport policy in Europe, as well as the interdependence in the development of transport system and economy'' or to enable contemporary knowledge ''about adaptations to

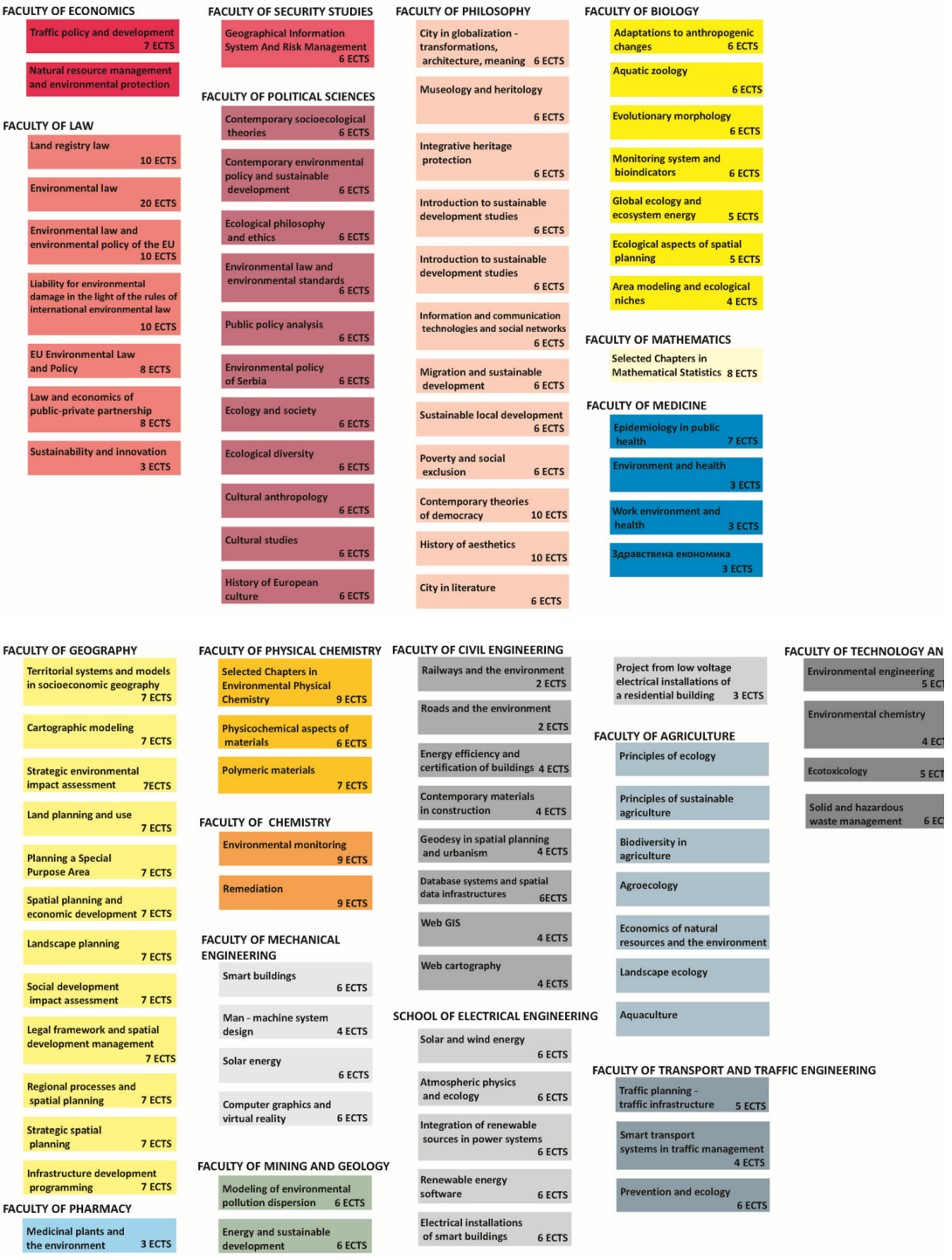


Figure 6. Courses that were selected from Master programs

different types of anthropogenic changes, as well as about the most important concepts and methodological approaches in researching the mechanisms of these adaptations'' to point out just a few. At the same time, learning objectives are dealing with ''identification and differentiation of the basic structural and functional components of ecological systems at different levels of the ecological hierarchy'' or with ''introduction to the concepts, categories and patterns of cultures and cultural systems that significantly determine the actions and behaviours of people in modern societies and social relations''. By choosing courses from different scientific fields and from different faculties from the UB a solid date base was formed, that could be used in conceptualisation of IMT platform for planners' education on post-COVID urban planning and design. In this manner, various subjects are covered, while different approaches and aspects can be used when tailoring already established and functional courses. In this way, local knowledge, expertise and methodologies could be used to address global issues and post-pandemic planning (Figure 7.).

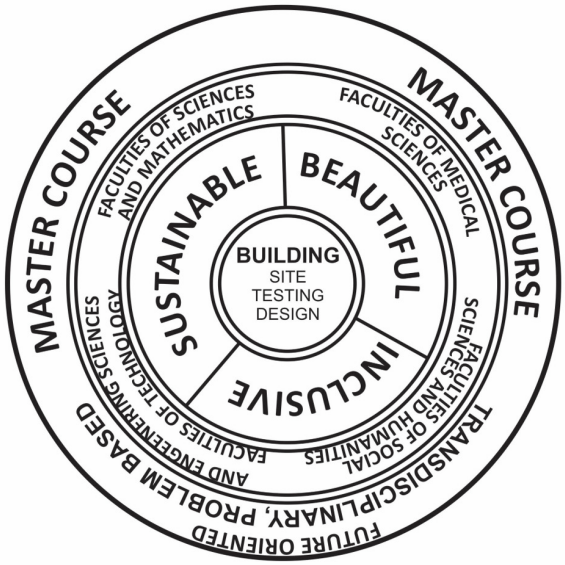


Figure 7.
Updated conceptual diagram of imaginary Master studies

4.1. Faculty of Architecture – Core values for future studies

Regarding the more specific structure of the study program, it was decided to use the already existing structure of Master programs from the Faculty of Architecture, having in mind that the topics related to spatial scenarios in architecture, urban design and urban planning are already considered within this institution and that there are already developed and established academic and practical skills, knowledge and research along with cooperation with state and local institutions and industry.

Faculty of Architecture offers comprehensive education of future architects and urbanists enabling the sharing of knowledge and the development of skills that are required for practicing architecture and urbanism within a multidisciplinary environment. The faculty is structured around three departments: Architecture, Urbanism and Architectural Technology that are promoting integrated approach to education, involvement and participation in studio-based courses and school projects are encouraged and implemented in curricula. The current study programmes offered at the UBFA are: Bachelor studies, Master studies of Architecture, Integral urbanism and Interior architecture, as well as the single-cycle 5 year Studies in Architecture. The Faculty also provides Specialist studies in Design and Heritage, Urban Renewal, Energy-Efficient and Green Architecture, and Doctoral Studies in Architecture and Urbanism. Faculty of Architecture also has existing practice of constant activities to improve education processes by implementing innovative curricular and extracurricular activities in architecture and urbanism (Nikezić et al., 2015; Radosavljević et al., 2019) integration of the SDGs in curricula (Stupar et al., 2017; Maruna et al., 2019; Maruna et al., 2018) and organizing workshops in times of emergency (Bugarski et al., 2016; MIlovanović et al., 2020). The past engagement makes the Faculty of Architecture an institution that has the capacity to initiate critical thinking, develop an effective response to the fast-evolving nature of the COVID-19 and its influence on built environment, and enable better preparedness and response of society and professionals in post-pandemic planning.

Based on previous statements, in the focus of this paper are Master study programs of Architecture and Integral urbanism along with the previous experience of the institution regarding innovation in the models of education of professionals that are dealing with the built environment (Figure 8.). The existing principles from NEB and context of mega-trends that are pointed out are coinciding with the theoretical approaches within Master programs at the Faculty of Architecture and they are in line with the practical application in the field of architecture, urban design and urban planning. In this sense combining courses from different faculties from UB along with the already established experiences and course types from the Faculty of Architecture could generate improvements in sustainable design and planning through crossover

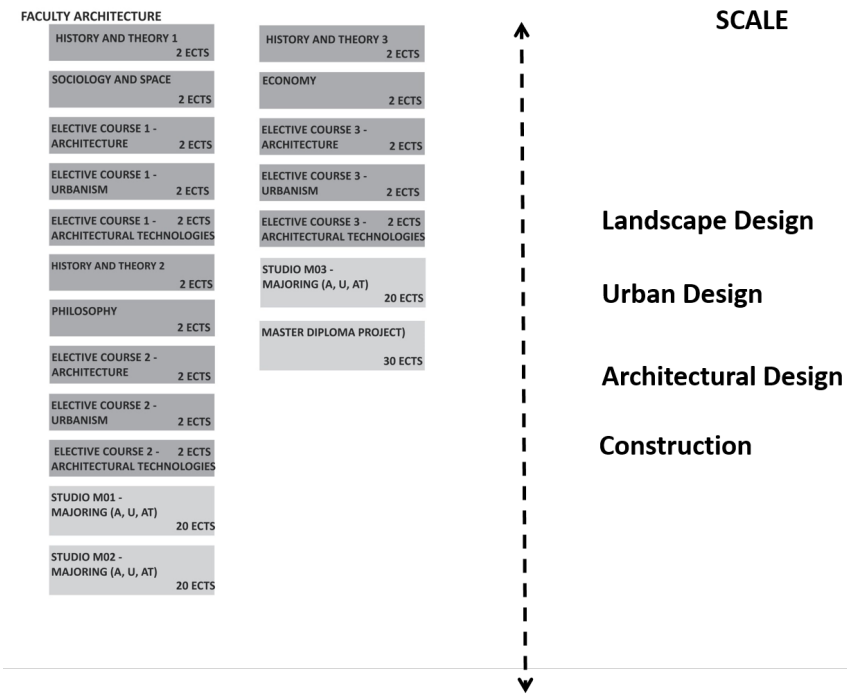


Figure8. General structure of Master studies at Faculty of Architecture

effects. These effects could further produce scenarios and adaptive strategies for post-pandemic planning and could generate innovative options between existing resources, actual needs and expected results. A specific point of view could be addressed through various scales in which these changes are anticipated and which are already recognized within the practical and theoretical approaches at the Faculty of Architecture.

5. Concluding Remarks and Conceptual note for imaginary studies

This paper stresses the importance of building the capacities of future professionals in the field of planning to face global challenges and post-pandemic scenarios. By illustrating the process of creating a conceptual model for the new Master program at the University of Belgrade challenges from the COVID-19 were transferred towards

creating a learning environment and teaching methodology for new imaginary studies within a new pandemic reality. Paper outlined the potentials of already existing strategies and initiatives and added new insights from the New European Bauhaus initiative and ECTP-CEU Restart Europe manifesto in order to cope with current challenges and provide answers to the question of how should new curricula be designed in order to build the capacity of future professionals and to broaden their professional competences and responsibilities. Simultaneously new study program should improve the technical, technological, socio humanistic, and artistic skills of future experts, while at the same bringing flexibility in the developed curriculum with new methods of training and education. The basis for generating a new theoretical and methodological approach to the design of the innovative study program is based on a multidisciplinary approach and exchange of knowledge between experts from four different scientific fields that are represented at the UB. Upgrade of this base was achieved by complementary Master programs from the Faculty of Architecture allowing an integrated design approach that includes dimensional, functional, programmatic, construction and materialization standards. A conceptual model is comprised from multiple connections, thematic fields and scales that are interwoven through different types of courses (elective, compulsory, Design Studio etc.) and contextual influences (Figure 9.).

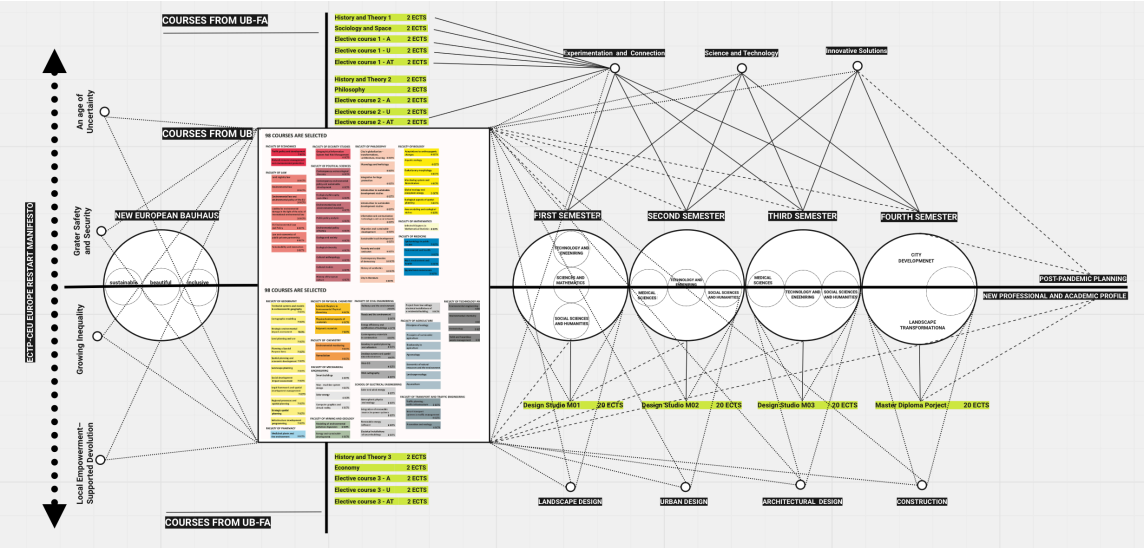


Figure 9. Conceptual model of Imaginary Studies

By using already developed courses from other faculties new Master study program included locally specific requirements and conditions, with a focus on general concepts which are sometimes difficult to be adapted to specific spatial and social contexts. The general outline and background of the program are based on the experiences of different professional and cultural frameworks applied in the local context through the exchange of resources, ideas and limitations. Different variations of the program and its structure could be achieved through an illustrated conceptual model that will prepare future professionals to respond to upcoming challenges and threats, to work on sustainable solutions and ideas, and to generate adaptive solutions for the general improvement of the built environment. Designed curriculum indicates that the planning profession is constantly required to engage its creative skills and critical thinking to re-imagine how will cities develop and adapt in line with future events. As stated in the title of this paper, Towards Imaginary Studies : New European Bauhaus and Post Pandemic Planners Education is referring to imaginary not as something that is not possible to achieve but as something that will allow us to imagine a better future.

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TITLE

INCLUSIVITY, HERITAGE AND PUBLIC SPACE. THE CASE OF PEDION AREOS, ATHENS

authors

Vicky Kampouridou, PhD candidate at the Laboratory of Gender and Space at the National Technical University of Athens
e-mail: vkkampou@gmail.com

Liana Katsanikou, Civil Engineer
e-mail: katsanikouliana@gmail.com

Vicky Kampouridou

Vicky Kampouridou studied civil engineering with specialty in public transportation at Aristotle University of Thessaloniki. She got a Masters in urban planning in National Technical University of Athens where she worked with the subjects of feminism, gendered space, threshold bodily situations, the narration of the "other" bodies, the culture of the margins and culture of phantasmagoria. She is currently a PhD candidate at the Laboratory of Gender and Space at the National Technical University of Athens, under the subject "The issue of Gender Fluidity as Body Practice in Public Space. Representation in the reality talent show 'RuPaul's Drag Race".

Liana Katsanikou

Liana Katsanikou is a civil engineer and got her M.Sc in Conservation and Restoration of Historic Buildings and Sites from the School of Architecture in National Technical University of Athens. She has been working for a decade in a variety of restoration projects, including byzantine churches, traditional houses, neoclassical and industrial buildings. Her scientific interests involve a holistic approach for the sustainable protection and conservation of the cultural and natural heritage as well as the role of heritage practices for the improvement of mental health and wellbeing.

Keywords:

Inclusivity| sustainability| heritage| green infrastructure

ABSTRACT

To live in the city is to live with people. The covid-19 pandemic highlighted the importance of urban space and its public infrastructure as the sole space for socialisation. Athens, among the cities with strict lockdowns, offers a unique field to explore the phenomenon of re-appropriation of public space. A standing out example is Pedion Areos, one of the biggest parks within the city, among dense residential areas for people from vastly different walks of life. Despite its central location and a number of pop-up events taking place there, the park has a long history of neglect and was linked to marginalised people and activities (i.e., homeless, immigrants, refugees, cruising, drug dealing). No one expected the vivid atmosphere that sprung during the lockdown, with the coexistence of all types of people and the revitalizing abundance of interweaved activities, essential for the well-being of the urban population. So, what are the elements that created this metamorphosis? How can this plethora of activities continue to coexist beyond the ad hoc conditions of a lockdown? What characteristics should be taken in consideration in a future regeneration and repurposing of the adjacent courthouse and military buildings? In a future of sustainability and inclusivity, participatory observation and design approaches in Pedion are key tools which can showcase the strength of light touch and long-term sustainable interventions, even on a larger scale, in re-conceptualisation of the whole area and its neglected buildings of cultural and industrial heritage. Pedion provides a case study for a design methodology that invites new inhabitations of public space and simultaneously preserves the patchwork of genders, classes, ethnicities and bodies that organically appropriated the space during the pandemic.

INTRODUCTION

To live in the city is to live with people. The covid-19 pandemic highlighted the importance of urban space and its public infrastructure as the sole space for socialization but also as an important factor of the wellbeing of urban residents. Athens, among the cities with strict lockdowns, offers a unique field to explore the phenomenon of the re-appropriation of public space. A standing out example is Pedio Areos, one of the biggest parks within the city, among dense residential areas inhabited by people from vastly different walks of life. Despite its central location and apart

Figure1.
Aerophotography
of Pedio Areos.
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from a number of pop-up events taking place there, the park has a long history of neglect and has been linked to marginalized groups of people and activities (i.e., homeless, immigrants, refugees, cruising, drug dealing). The vivid atmosphere that sprung during the lockdowns, the coexistence of all types of people and the revitalizing abundance of interweaved activities, was unprecedented. We will be attempting to explore this occurrence and the effect the pandemic had on the popularity and visitation frequency of the park. Evidence will be taken by participatory observation, interviews of residents, and news media of the lockdown periods and afterwards (March 2020 – August 2021). Pedio provides a case study for a design methodology that invites new inhabitations of public space suited for the patchwork of genders, classes, ethnicities and bodies that reclaimed the park. The purpose of this paper is to utilize these organically occurring inhabitations in order to reach and clarify sustainable and applicable light touch design suggestions. Lastly, we will be considering general axes for long-term sustainable interventions, reconceptualizing the whole area and its neglected buildings of cultural and industrial heritage, as places of social interaction.

1. The new European Bauhaus Initiative, Post Pandemic Planning

The Bauhaus method is characterized by its radical attempt to "analyse conditions and things, to question their purpose, and to consequently reinvent them." Michael Siebenbrodt

The New European Bauhaus challenges us to now come up with the ideas that will be deemed self-evident in 50 years because they "just make sense" for a better living together. Max Möglich (-Siebenbrodt, n.d.)

Disease and health crises have been shaping cities for centuries. A lot of the characteristics that we take for granted in contemporary cities, like the sewage system, were urban planning breakthroughs after major urban health crises. However, the way we have been building our cities has been proven inadequate to address grave problems of the world such as sustainability, food and commerce lines of supply, inequality and residential crisis. Crises have been making their appearance and holding humanity accountable as a result of humanity falling short in re-conceptualizing its space correlations and dynamics. (Akcan, 2020) (Klaus)

Reading papers from fellow designers and planners written during the first year of the pandemic, we get a sense of an impending definite end to the pandemic

and its coerced measures, mostly in hope of the then-impeding vaccine. As this paper is being written one year later and after the COVID-19 vaccine has been put into the pharmaceutical market, this scenario seems unrealistic. As new variants of the virus make their appearance and outbreaks resurgent or recede depending on time and space, it is becoming evident that the pandemic will not be one singular point in human history but a milestone period that will mutate the course of humanity. Subsequently, humanity's relationship with public space will follow and transform as well.
For green spaces specifically, the pandemic might force us to revisit our existing green space typologies (Cvejic et al., 2015)

1.1. The post pandemic Planning: Public Space and Well Being

Cities around the world are starting to get an idea of the importance of maximizing access to public space. Throughout containment, there have been a variety of creative and low-cost initiatives to make urban spaces safe and suitable for the residents of the city. (Anne-Marie Broudehoux, n.d.)
Health crisis shedded a spotlight on social injustices as fear once again gave ground to social discord and the narration of the Other bodies. (Ahmed.S, 2000)
Pandemic has demonstrated how unevenly public space is distributed throughout many cities, especially in poor neighborhoods, where there are few shared spaces, green spaces, parks and playgrounds, which have been proven important in contributing to reducing stress levels, improving mental health and wellbeing and being key factors to children's development. (Habitat, n.d.)
As the planet is dealing with collective global trauma, perhaps we should not try to conceptualize and design according to the social needs we know but according to the social needs we gradually see arising. The shock of the Covid-19 pandemic forced city residents out of their routines and rhythms and into new ones. Perhaps the severity of the need to change makes the time right for a profound change of habits. (Rasheed, 2020)

2. Case Study, Pedio Areos, Athens

2.1. Introduction – General and historical information about Pedio Areos

Pedio Areos is one of the largest parks in Athens, it is approximately 280 acres. It is situated in the 1st apartment of Athens, in a densely populated and central position of the city. Its jurisdiction is under the Region of Attica not under the Municipality of Athens as it would probably be expected, which is a topic frequently discussed and frowned upon by the residents and activists of the park. (Avaaz, n.d.)

Pedio Areos is enclosed among 4 densely populated residential and mixed usage areas; Kypseli, Polygono, Exarchia and Viktoria. Additionally, it is delimited by two of the biggest and most significant streets of central Athens, Alexandras avenue and 28th October (Patision) street.

At the beginning of the 20th century it was already being used as an urban recreational park where music and athletic events were taking place. In 1934 a new design project began, including a vast tree planting program. In the first half of the 20th century a promenade was commissioned and built for the commemoration of the heroes of the war of 1821. In 1944 the construction of the irrigation of the park ended. The Park has always been considered a landmark for the Athenians. Up until the 70s the park was also very popular for its open air theaters and the legendary café, Green Park. The place constitutes one of the most significant places for walking, cycling and playing, but also for flirting in the 50s-60s according to narrations. (Stekia, n.d.)The frequentation of the park by the young people has never stopped during the day, although after the 80s the place was being progressively considered more and more dangerous in the collective consciousness. In the late 90s, the lack of maintenance of its flora and infrastructures played a decisive role in its devaluation even during the day. For many decades it has been one a hot spot for drug dealing and use in Athens. The park has been one of the biggest cruising spots (mainly for but not limited to) gay men in Athens. Pedio Areos has been attracting deviant and marginalized social groups, adhering to the common phenomenon of parks and visually protected urban public spaces, especially when those have been neglected by the authorities and disparaged to the public eye.

An important moment in the history of the park is the placement of barriers and gates along its perimeter in 2003 against the residents' wishes. A redevelopment of Pedio Areos took place from 2008 to 2010. The plan included planting of flowers and trees, improvement of the lightning, a new irrigation system that was to drain water from the six boreholes of the park, new sewage system, a rose garden and water pathways. Although the original design was never completed, the

park was opened for the public with serious deficiencies compared to the actual plan. In addition to that, the inadequate maintenance very quickly led the improvements to decay.

Figure 2.

2.2. Pedio Areos - during the Lockdowns

During the first months of the pandemic a lot of cities have experienced a radical shift to the temporal movement patterns of their habitants. Athens experienced very strict measures with restaurants, coffee shops, bars, music halls, cinema venues, museums and more staying closed for months. Athenians were compelled to stay at home or had their urban (and not) movements policed under lockdown and/or strict curfews. Soon enough, the residents of Athens shifted their attention to public spaces and started inhabiting and revitalizing them. There are a plethora of examples in central Athens such as Lycabettus Hill, Strefi Hill (both in proximity to Pedio Areos), National Garden, Zappeio Garden, Filopappou Hill and many more that gained a newfound place in the everyday schedule of Athenians. Pedio Areos is a very interesting example among them because of its size and central position but even more because of the diversity of the nearby neighborhoods and residents. Under the crisis people from vastly different walks of life frequented the park using it for all sorts of activities that varied from sports and spiritual gatherings to bar-like social gatherings and even impromptu parties.

Community and socialization are majorly important to the life and identity of the urban resident and are deeply embedded in the identity of being a city resident. Pedio Areos, as most public spaces in Athens, became a community beacon for people to gather, to talk, to commune, to see and be seen. (Senett, 2018)
Pedio Areos has been left to neglect for years but also been thought as dangerous and underworldly by the Ahtenians. Residents of adjacent neighborhoods and users of the park have been trying to raise awareness for the neglected state that the park has been left to during the past decades. It was a common belief among most Athenians that the park was unusable because of the state of rot it was left to, and that maintenance and policing intervention had to be made in order for it to be usable again. However, the park started being reused, and so, in a way, repurposed by the residents without any budget, redesign or intervention whatsoever, solely because it was needed. Merely because it was filled with people and social activity, the park was no longer a place for the margin or considered to be dangerous. Rephrasing Jane Jacobs, the eyes on the park alleys and benches were enough to render the park safe and welcoming to the people, both in public opinion and reality (mostly, minor incidents of course have occurred). (Jacobs, 1993)
The fact that Pedio Areos is adjacent to low-income residential neighborhoods adds to its importance as a public space. Minority social groups that experience social adversity in the public realm depend on their community spaces both as safe spaces and community spaces. When lockdown measures locked these spaces, vulnerable communities were disrupted and solved their urgent and imperative need to coexist using public spaces such as Pedio Areos. Adversities of people in vulnerable social groups can extend to their own homes (lgbtq+ people, youth, women). During lockdown/curfew measures people living in abusive domestic environments found themselves secluded from community spaces where they could seek social refuge. In these cases where public space and public interactions scheduled or not, play a key role to social life, general health and life quality, Pedio Areos has played the role of safe community space as well.

2.3. Pedio Areos - post Lockdowns

By the beginning of summer, lockdown and curfew have been lifted from Athens. Since then, Pedio Areos Areos has more or less returned to its previous condition with fewer users and very specific activities. Additionally, during summer Pedio Areos and all parks in Athens remained closed for almost a month, as a precaution due to the wildfires in suburban Athens (a redundant measure in the opinion of Athenians). All these as well as the extremely high temperatures of this past summer have possibly influenced the frequency of visits to the park. As the

pandemic crisis is still unfolding the new status quo of the residents' connection to the park is still under observation. The scenarios that suggest that strict measures will return to a lot of European cities sound more and more realistic. We cannot predict the future and even if we could our prediction would have to vary from city to city and even within one single city. This paper is trying to contribute to the discussion of what we can possibly learn from the global health crisis until now and how we can design smart and anthropocentric public spaces for any type of new normality we are about to face.

3. Evaluation and Rethinking – Basic Axes

3.1. Safety

If we were to rethink Pedio Areos and design a more welcome space for Athenians, the first issue we would have to address would be safety. We suggest the thought that besides the existent factors of unsafety, the feeling of a dangerous space escalates by the public perception that the park is a dangerous space. Our assumption is based firstly on the "eyes upon the street" idea, meaning that the more dangerous a place is thought to be, the less users it attracts, and as a result the more dangerous it becomes. In a way, this thought has been proven in the case of Pedio Areos during the lockdown/curfew period. Athenians have been trying to raise awareness on the safety issues of Pedio Areos requesting more policing, better lighting etc. However, people felt safe to frequent the park when the necessity rose, without any intervention having been made. In consequence, the more popular the park was, the safer it was becoming. To be noticed that September 2021, the Region of Attica, organized open air film screenings in the Park. This first- time taken initiative, shows that the reappropriation of the park during the lockdowns raised more awareness to the parks responsible entity.

This does not mean that there are no improvements to be done. Water, sanitation and hygiene infrastructures should be improved. The park does need better lighting coming from different angles, trimming of the hedge vegetation to no more than one meter high and redesigning the vegetation as to eliminate blind corners (Feminist City, n.d.)These are all light touch, low budget and not time-consuming procedures, which means that should the authorities decide upon them, they could be put into practice in a very short amount of time.
As an additional element on safety and instead of policing the public space, stands of monitoring the space and raising public awareness can be installed. In Barcelona stands have been installed in public places against violence and harassment. (Feminist City, n.d.)These would be very useful in an Athenian Park as well, but we could also expand their awareness to other antisocial behaviors as well and create fixed points in space where users of the park can find refuge should they feel threatened or unsafe.

3.2. Inclusivity. Share the space.

Urban residents vary vastly and so do their needs. Specifically, Pedio Areos has to serve the needs of the variety of neighborhoods that encloses it. Eva Kail, the urban planner mostly responsible for the gender mainstreaming policies in Vienna, thinks that urban planning is political and "It's about bringing people into spaces where they didn't exist before or felt they had no right to exist." (How to Design a City for Women - Bloomberg.pdf.)
If the designer wants to propose a space that can host different types of activities, they need to design a space with different points of focus that are also equipped differently. The designer trio Equal Saree has redesigned playgrounds with multiple focus points that host multiple activities and as a result they invited more girls to the playgrounds (Women, n.d.). If we observe the activities that were taking place in Pedio Areos we can subdivide pocket spaces and diversify the activities and the users. (Citywomen, n.d.)
In the effort to rethink public spaces (even more so in the event that we will be needing to use them much more in the future, as the Covid-19 pandemic is still far from over) we have to re-evaluate the connection between public and private space. There are a lot of activities that have been taking place in private (whether at home or at a business establishment) spaces that could be invited in green public spaces. In Greece, people avoid using public space for socialization, and only decided to do so in the absence of an alternative. But if we equipped Pedio Areos with group benches (most benches are for two people), picnic tables and lounge chairs made to last, activities as get-togethers, group events and meals, work or transit breaks and general socialization that traditionally happens in pri-

vate spaces can be moved to a greener, more sustainable and more sanitary space as the park. We can take our example from many traditional settlements in the Aegean Sea where the private space extended and worked only in synergy with the outside space and the limits of public and private outside space were vague if not non-existent. The city of the near future has to find a solution against the crowded urban space, and the balancing point between social isolation and crowding can be the extension of the private space to the public space.

Planners have to be very sensitive to vulnerable social groups that inhabit the park. The challenge lies on how the designer can secure the safety of the park but also respect the privacy of different activities taking place. Social equality but also health and safety dictate that we turn our focus to vulnerable and under-represented social groups and Pedio Areos is a great design field in this matter. The park has traditionally being used by women, lgbtq+ people, seniors and immigrants but not in the safest of ways. We have already addressed the subject of safety but the challenge here lies on how do we keep safety from being deformed into exclusivity with moralistic overtones. We have to attempt to design a space that by its topography alone induces feelings of being welcome and safe and starts designing with gender sensitivity. (EquitableCities, n.d.) That being said, it has been said/speculated by users of the park, that deviant and illegal activity had not seized during the lockdown periods and kept happening discretely alongside the activities of normality. However there is a distinct differentiation between illegal/antisocial activities and activities beside normality, as cruising and queer people gatherings. Socially sensitive activities that have traditionally been happening in the darker corners of Pedio Areos are equally important to social equality and should not be disregarded by planning/designing.The rehabilitation of the rose garden and the water pathway are of great significance because they will restore the places where the inhabitants can rest in a shady and spacious way.

Lastly, the connection of the park with the city is of high-

est importance for the reappropriation of the space by the Athenians. Even the interventions needed in such scale do not belong to light-touch or low budget interventions -which are the main topics of this paper- a reference should be made for holistic approach of the topic. The Park should not be considered as an island. The determined entrances and its labyrinthic design, do not facilitate the crossing of parc, giving the possibility to people to make it part of their way going from one neighbor to another, but prefer to go around it. Furthermore, the access to public transit – two new metro stations will be constructed around it the upcoming years- impose a rethink about the redesign of its exterior zone. (Park, n.d.)

4. General Conclusion

"The right to the city is far more than the individual liberty to access urban resources: it is a right to change ourselves by changing the city. It is, moreover, a common rather than an individual right since this transformation inevitably depends upon the exercise of a collective power to reshape the processes of urbanization. The freedom to make and remake our cities and ourselves is, I want to argue, one of the most precious yet most neglected of our human rights" David Harvey commenting in Henry Lefebvre Right to the City.
The debate on the post pandemic city planning, reflects a call to rethink the way we live, the need to reprioritize what we value most for ourselves and society, so that can be mirrored in the way we attempt to reshape our cities.
One of the most important key points of the discussion on Pedio Areos is that the park was deemed welcoming and adequate for use by Athenians because of necessity and without any intervention. Certainly, this does not mean that the maintenance and improvement of its existing infrastructures is of minor importance, especially regarding the water management of the park. Conversely, it opened the possibility that the park can easily be transformed into a more inviting public space with light touch and low budget interventions.

5. Further axes

The overall green space per person in Athens is 6.45 square meters, among which roughly 3.90 square meters per person referred to parks (Park: A public green space, managed by the city or state. Often includes areas of recreation, rest and sports, such a playgrounds, stadiums and benches.) (statista, n.d.) The

WHO recommends a minimum amount of 9m2 of green open space per person (WHO, 2009). (WHO, n.d.) Therefore, the need to maximize the access to green public spaces is well defined. But where can we find such vacant spaces in a very dense residential city as Athens? Thinking accordingly the Bauhaus method (analyzing conditions, question purposes and reinvent them), we aimed to come up with further ideas that can contribute to the discussion for the post pandemic planning and could embody the New Bauhaus principles.

The New European Bauhaus challenges us to now come up with the ideas that will be deemed self-evident in 50 years because they "just make sense" for a better living together. Max Möglich (-Siebenbrodt, n.d.)

Reconsidering again the phrase above make us think the global situation of the Bauhaus movement when it was born. What were the challenges of that period, their tools, their knowledge, their vision? So, what we have now that was not there at that moment? Which were their social challenges, their environmental challenges?
The amount of information through many different fields today. The specialization, as a consequence of a previous living, inherits us a valuable tool. But is there any common vision, common space to work on it? The Occident World should deal in the future of how did it manifest its intentions and will to participate in settling the priorities in the global level and and giving space to next (?) post pandemic world that comes.
The functionality of the New Bauhaus should be interpreted today as a problem to be solved by interdisciplinary co-operations, answering with a project/ idea in multiple directions. The business administration will need the team to save time and money. But the quality of living, is the time or the money? HoW do we elaborate the mental collapse of millions people in the planet. What would the doctor suggest?
We should come up with the most intelligent of our ideas

to fix problems combining the knowledge that is already there for us. The simple way is always a right way. (comment to be elaborated.)
So, in our field? The urban space. The case study of Center of Athens. Public green space should enlarged the most possible.
The abandoned small scale industry complexes among the urban tissue in the center of Athens were brought into focus. Although an official database does not exist, a vault of industrial digital archives has been organized by a citizen's initiative ¬– (VIDA), - interested in the industrial heritage, in order to register them, providing information for their current situation and history, whether or not, are characterized by the State as protected heritage. Most times the complicated and inflexible legislation concerning them, but also the ignorance of the potential of their surrounding area has led them to decay. (how does the participatory procedures are incorporated to a direct dialogue with the Institutions?)
An official database should be created and a well-coordinated effort to evaluate them, taking into consideration their characteristics and their ownership. The legislation should be revised in a more flexible way, examining case by case the relevant buildings and areas. The "Love me or Leave me" epigram could summarize the spirit of our approach. In some cases, even radical decisions should be taken, promoting even demolishment in order to create vacant spaces destined to be parks. The profit of small-scale urban voids should not be neglected as well. Buildings that their current state is valuated safe, especially in neighborhoods of migrants and low incomes, can become places for Temporary Occupations, enabling uses of multi-functional spaces where inhabitants of proximate areas can get together (exemple of Communa, Brussels). Circular models leveraging investments in cultural (industrial) heritage adaptive reuse are of great importance, and a tool for the urban planners to think about.

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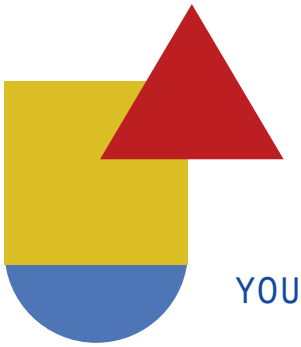
ECTP-CEU (aisbl)
European Council of Spatial Planners
Conseil Européen des Urbanistes
Architects' House
21 rue Ernest Allard 1000 Bruxelles /
Ernest Allardstraat 21 1000 Brussels
secretariat@ectp-ceu.eu
www.ectp-ceu.eu
+32 (0) 470 350 432



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