

# **SUSTAINABLE MANAGEMENT OF OPEN PUBLIC SPACE IN A LARGE HOUSING ESTATE IN SOFIA: INTEGRATING PHYSICAL CHARACTERISTICS AND SOCIAL DIMENSIONS**

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# INTRODUCTION

## **PUBLIC SPACES:**

- urban advantage that favour urban prosperity;
- sustain the productivity, social cohesion and inclusion,
- embody the civic identity and represent quality of life in cities;
- serve a number of social and political ends

**PRODUCTION OF PUBLIC SPACE** - 'a normative goal unto itself' (Schmidt, 2008).

**LIVEABILITY AND EVOLVING ATTRACTIVENESS** of public spaces depends on (Gehl, 2004):

- their quality,
- whether they welcome potential users to walk, stay, sit, or enjoy them

## **MANAGEMENT AND MAINTENANCE OF PUBLIC SPACE**

- are prerequisites for achieving desired pleasant environment
- is based on planning action, and focused on treatment of place,
- pays less attention to the way socio-spatial relations are being conceived.

This study is focused on the interplay between physical characteristics and social dimensions of public space lifecycle management in the context of a post-socialist large housing estate in Sofia.

## RESEARCH CONTEXT (I)

### LINKS BETWEEN SOCIAL AND PHYSICAL SPACE AND SPACE MANAGEMENT

- Social space is inscribed both in the objectivity of spatial structures and in the subjectivity of mental structures, which are in part the product of the embodiment of these objectified structures.  
(Bourdieu, 2018)
- The social interaction among individuals with diverse interests, opinions and perspectives is encouraged by the democratic ideal that emphasizes diversity, difference, and the belief that the needs and desires of diverse citizens groups are met by creating universally inclusive spaces.  
(Young, 1990)
- A correlation exists between sense of place and sense of responsibility or commitment to it. A strong sense of place can also provoke people to increase the levels of concern about its management practices.  
(Williams and Giroux, 1992)

### PUBLIC SPACE IN LARGE SCALE HOUSING ESTATES

- Is recognized and valued element of the urban structure and a means to increase the legibility of the LHE's spatial structure.
- Brings about specific relationships with the housing estates, the groups of multifamily buildings, and the single building.
- Acts as a mirror, which reflects the characteristics of the residents of a housing estate and their way of relating to their immediate environment.

Needs regeneration by means of physical solutions, which alone may not always be sufficient since many of the problems of the LHEs are often social in nature. (Aalbers et al., 2004)

## RESEARCH CONTEXT (II) LHE-S IN SOFIA

### CHARACTERISTICS

- Built in the period of intensive industrialization and urbanization after 1960;
- around 15 housing estates, some on ex-agricultural land at the city periphery.
- 575 000 inhabitants (47% of the city population) presently live there;
- nearly half (47.3%) of the housing stock in Sofia - built in the 20 years between 1970 and 1990. (NSI, 2012)

### THREE MAJOR PERIODS

- 1960s - micro-regions, 15,000-20,000 inhabitants, services, schools and kindergartens centrally located at a walking distance, catchment area.
- After mid- 1970s - a housing district, 40,000-50,000 inhabitants, with planned healthcare and cultural facilities in the district centers
- Mid 1980s - a planning region, 100,000-200,000 inhabitants, with cinema, hospital, etc.

### CURRENT CHALLENGES

- Maintenance and upgrading of the streets, inter-block green areas, playgrounds, facilities and urban furniture.
- Regulating the ownership of inter-block spaces and the level of responsibility of citizens and city administration.
- Improvement and maintenance of public green in the last decade - executed by the municipal enterprises and external services providers.
- Design and the implementation of plans for green infrastructure development - delegated to private sector agents selected through public procurement without securing the long-term involvement of the actors.

### ACIEVEMENTS

- The large non-built up open public space in most of the LHEs has been protected by the adopted detailed urban plans
- “Green Sofia” Municipal Programme thus supporting bottom-up initiatives for restoration of green areas within the LHEs - Between 2011 and 2018, 890 projects implemented under this specific form of participatory budgeting

# RESEARCH METHODOLOGY (I)

## URBINAT LIVING LAB IN SOFIA

The Healthy corridor – the intermediate spatial scale of the collective use, the liveable street life and public open space.

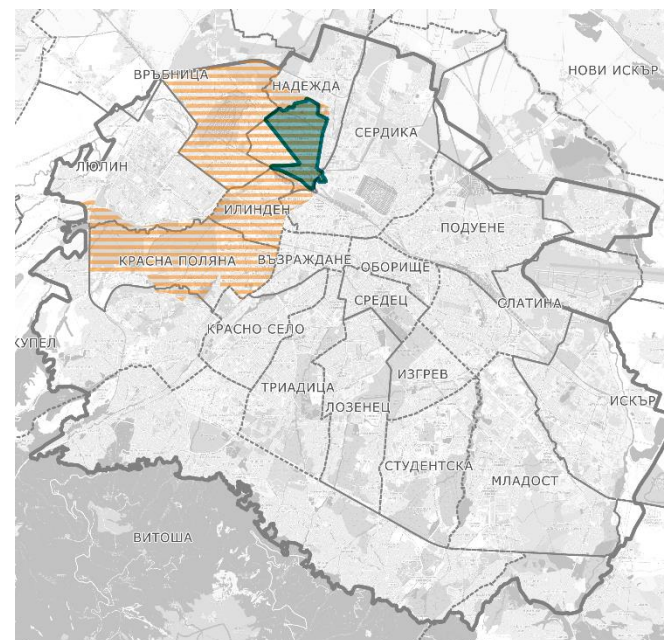
The notion of ‘social space’, the importance of public space design, management, and maintenance; the meaning of social space to the residents and its importance for social interaction and social cohesion.

Focus on: health aspect; the co-creation and spatial appropriation of nature based solutions (NBSs) as means to improve living conditions and microclimate.

Main actions of the project:

- to address the inhabitants’ needs, expectations and desires to transform architectural practices,
- to test social innovation,
- to implement inclusive urban regeneration of public space.

This paper presents results from the co-diagnosis of URBiNAT study area - the first step of the Healthy corridor co-creation



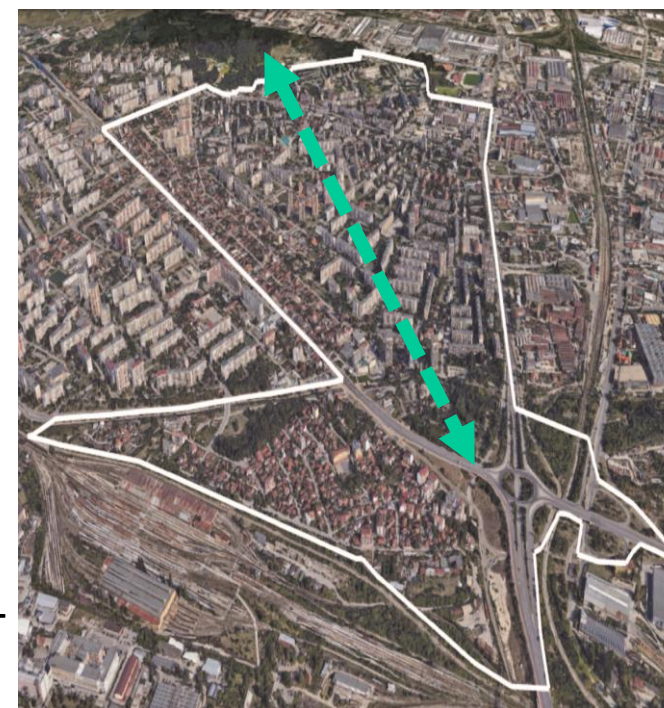
## URBINAT STUDY AREA

Location: to the north of Sofia city center, the south-eastern part of Nadezhda administrative district

Key:

Green-Urbinat area;

Orange – Social zone, Integrated plan of Sofia, grey line – city boundary



Area - 115,16 ha  
5 neighborhoods  
37 770 inhabitants  
17 069 dwellings

Most of the buildings were built in the period 1960-80s. (NSI,2012)

Key:

White –URBiNAT study area;  
Green – Axis of the Green corridor linking two urban parks



# RESEARCH METHODOLOGY (II)

## FRAMEWORK FOR SUSTAINABLE PUBLIC PLACE MANAGEMENT IN LARGE HOUSING ESTATES



## RESEARCH QUESTIONS AND METHODOLOGY

1. How experts access the characteristics of public space?  
*direct observation, functional and spatial analysis, territorial mapping, behavioural mapping of 19 sites, walkthrough and photo voice*
2. How are behaviours, needs, apprehensions, and aspirations of public space users in LHEs interconnected to the physical characteristics of public space in LHEs?  
*direct observation, functional and spatial analysis, territorial mapping, 3 focus groups, 10 in-depth semi-structured interviews, cultural mapping, walkthrough and photo voice, behavioural mapping*
3. What are the different approaches, arguments and motivations to collaboration and participation for public space management?  
*3 focus groups, 10 in-depth semi-structured interviews, walk through, motivational interviews*



# RESULTS AND DISCUSSION

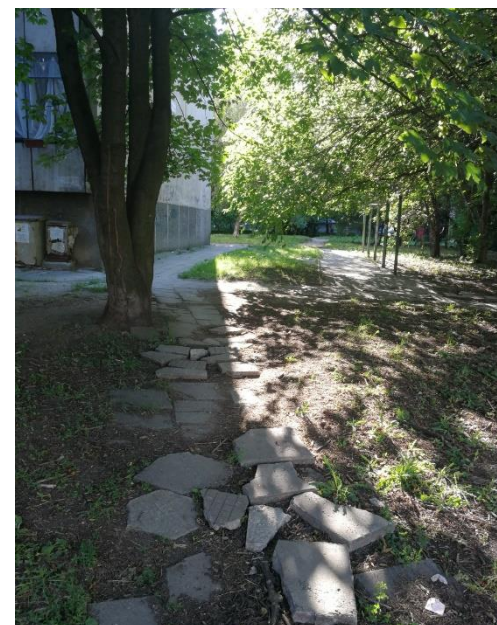
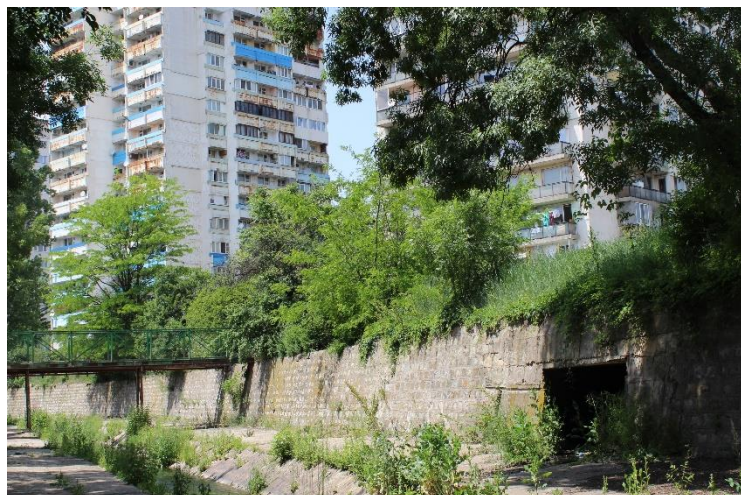
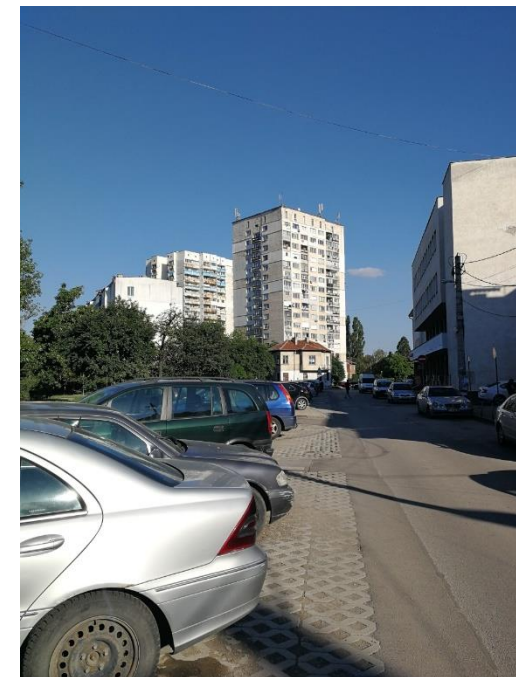
## 1) HOW EXPERTS ACCESS THE CHARACTERISTICS OF PUBLIC SPACE?





# RESULTS AND DISCUSSION

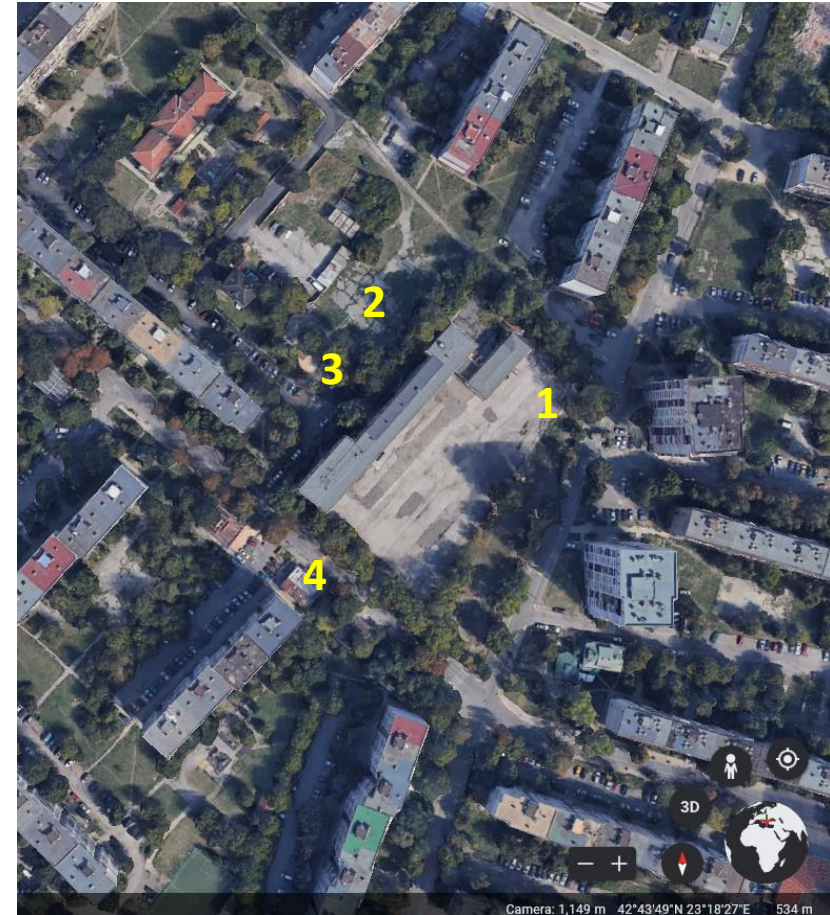
## 1) HOW EXPERTS ACCESS THE CHARACTERISTICS OF PUBLIC SPACE?





# RESULTS AND DISCUSSION

## 1) HOW EXPERTS ACCESS THE CHARACTERISTICS OF PUBLIC SPACE?



Representation sample of public space around 15th secondary school 1) the school yard (restricted access) 2) unattended basketball playground behind the school yard, 3) children's' playground, received funding from inhabitants; 4) kiosk opposite the schoolyard, used as a meeting place right) the area around the school yard, Source: Google earth



# RESULTS AND DISCUSSION

## 1) HOW EXPERTS ACCESS THE CHARACTERISTICS OF PUBLIC SPACE?



URBiNAT project, Behaviour mapping results' sample; (a) up –aerial view of the observed area around 15th school / down – non-motorized flows (12 hours) during working day; b) up - passive activities during working day/ down-dynamic activities during non-working day; c) up-stationary activities during working day (12 hours)/down – stationary activities non-working day (12 hours), Source: D2.1: Local Diagnosis Report for Each Frontrunner City, <https://urbinat.eu/cities/sofia/>



# RESULTS AND DISCUSSION

## 1) HOW EXPERTS ACCESS THE CHARACTERISTICS OF PUBLIC SPACE?

### TERRITORIAL MAPPING AND OBSERVATION:

informal paths and formal paths, accessibility of the informal paths throughout the year  
access and safety, openness, visibility and traffic calming measures  
(un)reliable facilities and infrastructure under extreme weather condition and for non-motorized users.

mowing and cleaning of the open green spaces

jaywalks and bridges – availability, accessibility, physical parameters, lighting

crossing the borders between the neighbourhoods and those with the neighbouring areas, zebra crossings and unregulated crossings

green areas and trees, tree coverage in the inter-block space

the space in front of the entrances of the blocks, neighbourhood meeting places and their equipment

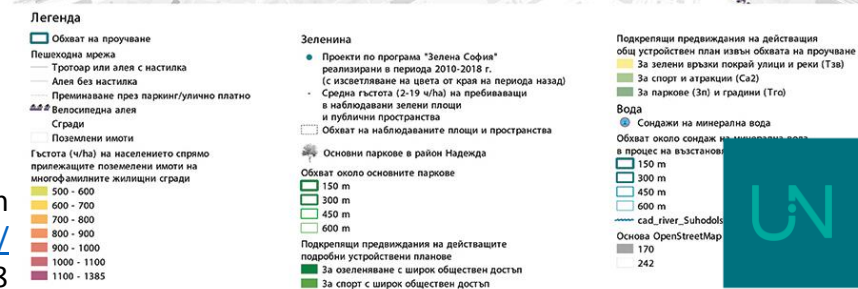
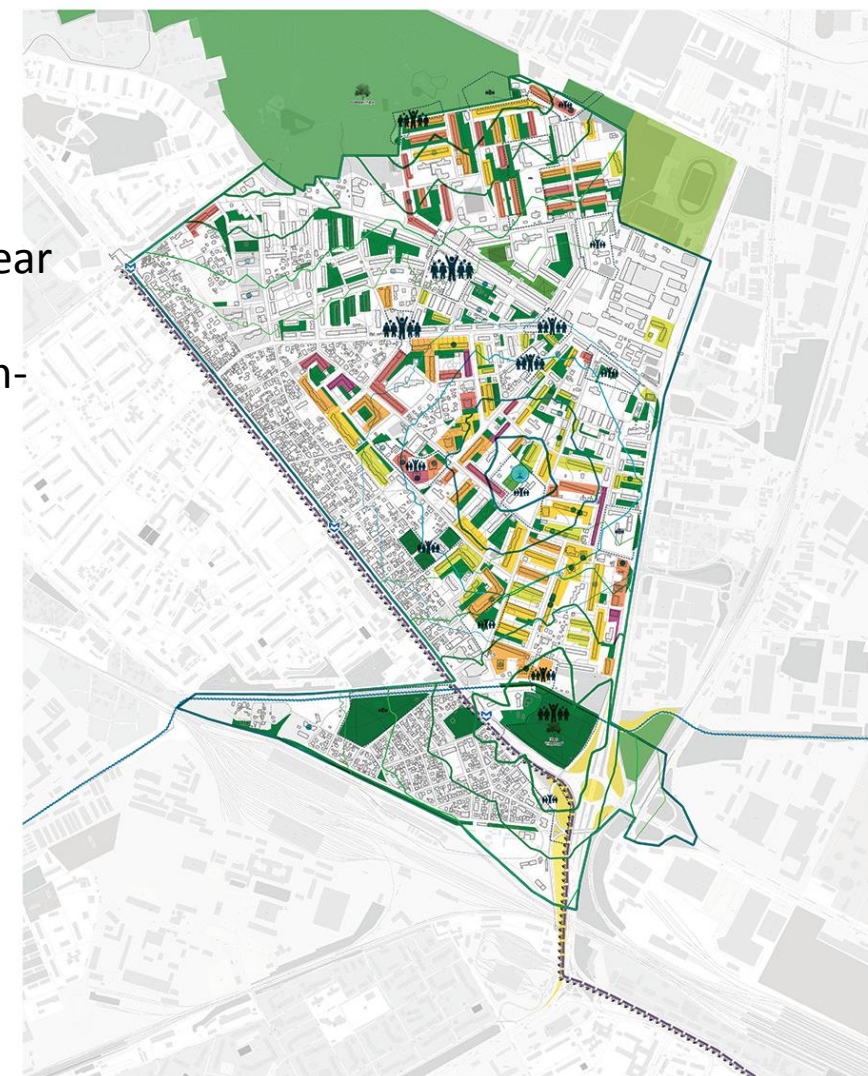
capacity of the facilities and safety, liveability, underused paths, crossways

### BEHAVIOUR MAPPING:

liveability, inventory, conditions for staying and stationary activities, attractors of intensive people's presence.

Spaces and amenities used by children, women and men

Abandoned sites, shrinkage of functions and absence of daily occupiers.



Synthesis map of Physical characteristics and human presence, Source: URBiNAT project, D2.1: Local Diagnosis Report for Each

Frontrunner City, <https://urbinat.eu/cities/sofia/>

Exhibition June 2020, <https://www.flickr.com/photos/189123055@N08/albums/72157715181043398>

# RESULTS AND DISCUSSION

## 2) HOW ARE BEHAVIOURS, NEEDS, APPREHENSIONS, AND ASPIRATIONS OF PUBLIC SPACE USERS IN LHES INTERCONNECTED TO THE PHYSICAL CHARACTERISTICS OF PUBLIC SPACE IN LHES?

Какво харесваме  
в квартала си?

обширните **ОКИ**  
междублокови пространства  
малки магазини и хипермаркети  
сгради за **спортни съоръжения**  
детски площадки кварталите с къщи  
празникът на района **Северен парк**  
името на района **игрища** детски градини и училища  
достъп до градски транспорт  
общуването със съседите **Надежда 2**  
пред блока **МНОГО**  
**деца**

Какво не харесваме  
в квартала си?

липсващо осветление  
недостатъчно места за спорт и игра  
**бездомните кучета**  
поддръжката на междублоковите пространства  
настилките по тротоарите  
**замърсяването с битови отпадъци**  
**шум и замърсен въздух**  
инфраструктурата

The inhabitants	The pupils	The district administration staff
Assessment of Urban Open Space. Key: Like (+), Dislike(-)		
<ul style="list-style-type: none"> <li>+ good transport links and variety of transport modes connecting the area with other parts of the city</li> <li>+ abundance of greenery</li> <li>+ well maintained city park</li> <li>- surrounding areas around the waste containers are non-aesthetic and unhygienic</li> <li>- stray dogs/cats and people digging around the waste containers.</li> <li>- the introduction of one-way traffic greatly prolongs access to the neighbourhood for drivers</li> <li>- green areas and trees in open public space are not regularly maintained</li> <li>- pavements in poor condition</li> <li>- not easy to walk from one park to another</li> </ul>	<ul style="list-style-type: none"> <li>+ nice gardens and places for seating in front of apartment buildings that residents maintain</li> <li>+ like the new playgrounds and sport facilities in the neighbourhoods,</li> <li>- but they do not like the playgrounds in their school yard</li> <li>- scattered waste next to the containers</li> <li>- appearance of the residential buildings</li> <li>- nobody goes to school by bicycle because the sidewalks are broken and uneven, there are no bike lanes, it is dangerous because of the many moving and parked cars</li> </ul>	<ul style="list-style-type: none"> <li>+ many children's' playgrounds in the inter-block spaces</li> <li>+ well organized space in front of the entrances of the multifamily buildings</li> <li>- inconspicuous inter-block spaces - covered with waste, grassy, intact</li> <li>- the self-made benches and meeting places in front of the blocks are worn out and made by low quality materials</li> <li>- too many cars parked over the green space</li> </ul>
Perceptions		
<ul style="list-style-type: none"> <li>* shaded, overgrown with branches and inaccessible areas in the inter-block spaces create discomfort</li> <li>* lack of openness and visibility combined with lack of lighting create a feeling of insecurity</li> <li>* traffic noise and traffic on the streets and noise in the inter-block spaces in the late evening hours</li> </ul>	<ul style="list-style-type: none"> <li>* like and prefer to spend their free time in the large shaded inter-block space opposite the school</li> <li>* are concerned about the low level of maintenance of the greenery and scarce furniture in the school yard</li> </ul>	<ul style="list-style-type: none"> <li>* feeling that the environment needs more color to become joyful and vibrant.</li> <li>* feel that one of the market, organized around small containers, is crowded</li> </ul>
Needs for		
<ul style="list-style-type: none"> <li>* well-thought-out and organized maintenance of public spaces and sidewalks</li> <li>* more activities in open public spaces and more spaces that invite and provoke activities</li> <li>* space for creativity, places to play, and places for elderly to meet and socialize</li> <li>* fruit and vegetable open market in the area</li> </ul>	<ul style="list-style-type: none"> <li>* more well equipped places to spend free time during the breaks, in the free hours and after classes</li> <li>* an organized and well maintained system of sidewalks and paths for walking</li> </ul>	<ul style="list-style-type: none"> <li>* vision and action plan for changes in public space</li> <li>* educational campaigns to raise awareness of the quality of the environment among young people in order to become active in the future</li> </ul>



# RESULTS AND DISCUSSION

## 2) HOW ARE BEHAVIORS, NEEDS, APPREHENSIONS, AND ASPIRATIONS OF PUBLIC SPACE USERS IN LHES INTERCONNECTED TO THE PHYSICAL CHARACTERISTICS OF PUBLIC SPACE IN LHES?

Какво бихме променили?

подобрен график  
на автобусния транспорт  
пространства които позволяват съжителство на деца и кучета  
кафенета соларно осветление пред блоковете  
обновени библиотеки

повече пространство за спорт и за децата  
да се запазят зелените междублокови пространства

По-добро управление на отпадъците  
по-чисто по-добри условия за пешеходно придвижване  
чист въздух По-добро управление на паркирането

басейн с минерална вода нови административни сгради инфраструктура нов общностен център  
библиотеки творчески пространства за деца и граждани нищо музеи велоалея  
на открито повече места за вкусни градинки във всяка детска градина  
повече детски градини отдиш и рекреация добре поддържани зелени  
нов пазар за зони с безплатен Wi-Fi пространства с местни  
плодове и зеленчуци растителни видове

The inhabitants	The pupils	The district administration staff
<i>Dreams about</i>		
<ul style="list-style-type: none"> <li>* harmony between size, colors and shapes of buildings and green spaces</li> <li>* making sense and fully utilize the potential of the mineral water spring</li> <li>* more space for pedestrians along the streets and in front of the blocks, but at the same time options for car-owners to park</li> </ul>	<p>"Ideas for change in the neighborhood? - I will start with the buildings' facades, as I find them the most depressing. Then I will change the pavements, renovate the playgrounds, put more zebras and organize safe streets' crossings"</p>	<ul style="list-style-type: none"> <li>* change in the appearance of public spaces.</li> <li>* more flowers, benches, energy-efficient street lighting, parking regulations and playground rules</li> </ul>
<i>Apprehensions and fears</i>		
<ul style="list-style-type: none"> <li>* threat of development, new construction and the loss of greenery</li> <li>* unsafe jaywalking and high traffic speeds along the inner streets in front of the entrances of the multifamily buildings</li> <li>* avoid passing along shrubs and ruderal vegetation</li> <li>* no way to stop parking in the green areas</li> </ul>	<ul style="list-style-type: none"> <li>* afraid to go through the forest near the stadium because suspicious people often gather there</li> <li>* afraid of stray dogs and do not sympathize to stray cats</li> <li>* avoid lush vegetation because of the insects and animals that inhabit it</li> </ul>	<ul style="list-style-type: none"> <li>* concerned about the maintenance and protection of playgrounds against vandalism</li> <li>* concerned about maintaining a safe environment</li> </ul>
<i>Beliefs and attitudes – rights and obligations</i>		
<ul style="list-style-type: none"> <li>* realize the differences in the inhabitants' needs and expectations towards public space</li> <li>* feel obliged to speak from the name of a group and to name the needs of the others</li> <li>* usually very busy when asked to demonstrate commitment, volunteering and involvement</li> </ul>	<p>There is no place for teenagers in the open public space in the HEs. They are supposed to be in schools, gyms or if they want to meet their friends - in cafes or clubs, movies or to a more interesting meeting place.</p>	<p>Acknowledge responsibility for lighting, visibility (maintenance of municipal plots, including mowing and cleaning shrubs), safety</p>
<i>Tensions</i>		
<ul style="list-style-type: none"> <li>* consider that young people gathering in the open public space make too much noise</li> <li>* consider that pupils should not use the equipment of the neighborhoods' meeting places</li> <li>* do not appreciate good lighting in the inter-block space as it "invites" noisy groups in the evenings</li> <li>* waste in public spaces is a shared responsibility of residents and administration</li> <li>* people from other communities are required to volunteer in order to use the equipment of the neighborhoods' meeting places</li> </ul>	<ul style="list-style-type: none"> <li>* do not understand why residents do not allow them to use the benches in front of apartment buildings</li> <li>* do not approve pets' walking with their owners in the school yard</li> <li>* annoyed with a privatized public space (fenced garden) in front of the block</li> <li>* do not approve the noisy groups of youngsters gathering in the inter-block space</li> </ul>	<ul style="list-style-type: none"> <li>* The presence of good lighting in the area of some playgrounds in inter-block spaces is a prerequisite for gathering noisy companies in the evening</li> <li>* Inconspicuous inter-block spaces (covered with water, grassy, intact) are result of the lack of initiative and organization of people</li> </ul>

# RESULTS AND DISCUSSION

Strengthening of public awareness of the resources and potential of urban public space and the problems associated with its maintenance, protection and management is a needed action.

- This would:
- facilitate public control over the distribution of the funds for the maintenance, management and design of public spaces,
  - better connect the planning process with the control of the implementation and day-to-day management tasks and investment plans.

Control is essential for the credibility of the public space quality management, as the loss of credibility leads to loss of motivation among residents to collaborate.

## 3) WHAT ARE THE DIFFERENT APPROACHES, ARGUMENTS AND MOTIVATIONS TO COLLABORATION AND PARTICIPATION FOR PUBLIC SPACE MANAGEMENT?

<i>The inhabitants</i>	<i>The Pupils</i>	<i>The district administration staff</i>
<b>Level of Participation</b>		
<ul style="list-style-type: none"><li>* People are not very active and interested in participating in the improvement of the urban environment. Parents of students and children should be encouraged and engaged to participate and motivate other friends and parents. Children are seen as a “channel for influencing and motivating participation”.</li><li>* There is a lack of control or initiative for change, as well as concerns about activating people in the community.</li></ul>	<ul style="list-style-type: none"><li>*Are ready to participate in cleaning public spaces and building urban street furniture</li><li>*Young people aged 19-27 were ready to participate at the very moment of the conversation and they clearly demonstrated loss of interest in the successive contacts</li></ul>	<ul style="list-style-type: none"><li>* in the process of changing public spaces the biggest challenge is working with citizens</li><li>* there is potential to improve the two-way dialogue and dissemination of information related to tree care and the municipality's actions and plans for sustainable development</li></ul>
<b>Expectations and willingness to collaborate</b>		
<ul style="list-style-type: none"><li>* People want to study and participate in activities (meetings, discussions) related to their neighborhood by being informed in advance through notices distributed to the blocks or near the venue of the meeting</li><li>* They want to see more signs and posters, informing and motivating the good attitude and care for public spaces and infrastructure. This information should be presented in an impactful way, not just as a list of prohibitions and obligations.</li></ul>	<ul style="list-style-type: none"><li>* They need somebody to guide and instruct them on how to perform transformative activities.</li></ul>	<ul style="list-style-type: none"><li>* Recognize the lack of a mechanism for applying "punishment" in cases of pollution of public spaces – one of the main reasons for the poor condition of the inter-block spaces.</li><li>* Sanctions are hard to impose and practically implement. Their educational or blocking vandalism effect has not been achieved.</li></ul>

The right to choose the projects through participatory forms of budgeting and to control the design and management of public place in LSHs. Co-creation and co-management - strong empowerment tools that trigger a sense of pride and satisfaction with the outcomes, reduce vandalism and anti-social behaviour, strengthens ties among neighbours, and develops sustainable communities.





# CONCLUSION

- Creating high quality public space in LHEs should be part of long-term collaborative integrated regeneration and development strategies that reconnect neighborhoods with the city structure, develop mix of functions based on the communities' needs and local assets through improving public space and place making.
- Public space fulfils diverse functions and because of this, local conditions and residents' needs should be taken into consideration by applying the principles of universal design.
- Communication of local/district administration with citizens, motivating, guiding, and involving are realized need activities that would ensure empowerment.
- Further studies and future efforts - focused on building frameworks and formal arrangements for participation by clearly defining the places and times to enable participation.
- In order to feed policy analysis, planning and design processes, new way of data gathering and approaching public space management should enhance better study and assessment of the cause-effect relationship between physical characteristics and social dimensions of public place.
- The presented study proves the need of analysis of the problems and opportunities of public open space in terms of existing morphologies, current practices, citizens' aspirations, potential to accommodate functions and make residents' dreams come true.

**THANK YOU FOR YOUR INTEREST**