

University of Belgrade - Faculty of Architecture

Research Report

Student Workshop in Golubac

Workshop title: **Place networks. Experience the city on foot**

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Executive Summary

Background

The main topic of the student workshop was the evaluation and design of public spaces in accordance with the user needs and human size. Considering the walking as the everyday activity of the most of the citizens and visitors of particular city or town, the experiences that arises in this kind of the interaction with the place are of great importance because they affect the formation of a general impression of a certain place. The workshop has given a great opportunity for students to discover the ways of organisation networks of pedestrian spaces in order to increase the attractiveness of public space considered as destination and to establish appropriate links/connections between them in order to achieve the desired effect creating a liveable town. Students were also observed the roles and uses of particular public spaces that form the pedestrian network and its share in improving the physical identity of the place. Selected public spaces from the network were included in the evaluation process, which is carried out using a method based on designated criteria. Next to the above, the research also covered the investigation of the image of Golubac perceived from the perspective of visitors/tourists. Obtained results was compared with the results¹ of the image of Golubac seen from the perspective of citizens. This gave us an opportunity to make the conclusions in the way of tourists vs. locals perceptions of Golubac. The overall perception of the potentials of particular public spaces as well as the whole network of public spaces in Golubac is presented in the form of design concepts of possible transformation. Design proposals were emphasised the advantages and given the solutions for overcoming the identified problems. The final result of the workshop is presented in the form catalogue of the main and most important public spaces in Golubac.

Methodology

In order to meet its objectives several methodologies specially designed and adapted for this purpose has been used in this research. They include: field work and study, digital survey, comparative analysis, mapping, criteria based evaluation of public spaces and research by design of the potentials of the public space network. The workshop is planned as the set of activities that were structured chronologically in order to create the final product defined as catalogue of the most important public places in Golubac. In regards with this special attention of this research is given to the preparation of the research layouts – catalogue sheets where most of the research results were clearly presented.

The research has covered following phases and activities:

¹ The research was conducted in 2nd March 2017 with students from University of Belgrade - Faculty of Architecture during the study tour organised within DANURB project.

- **Fieldwork and study** organised as a walking tour for getting the first impressions of the town and making the primary data and real-time documentation: photos, video, short, written impressions, main content distribution and landmarks position.
- **Digital survey** of the 40 workshop participants, students of the Bachelor degree in architecture from the University of Belgrade (Serbia), University of Novi Sad (Serbia), University of Budapest (Hungary) and University of Bucharest (Romania), who were for their first or second time in Golubac. After a fieldwork students fill the online survey in order to investigate the main character of the town. The survey was prepared on the basis of the Lynch's theory and it was the same one that was used during the March 2017 for the interviewing of the residents of Golubac.
- **Comparative analysis** of visitors and local's perception of the image of Golubac was done after processing the results of the digital survey and their comparison with the results obtained in March 2017 from the direct surveying of citizens of Golubac.
- **Evaluation of the selected public spaces** in Golubac on the basis of the set of the criteria that include: safety and security, accessibility, comfort, legibility, inspiration and sensitivity and liveability and vitality.
- **Mapping** included interpretation and presentation of the following data and results: main destinations and its character, program and attractors, the locations of potentially new destinations within the network, network of pedestrian spaces, defining its destinations and links and determining its character, program and attractors, locals' and tourists' image of Golubac with the distribution of the Lynch's five elements and the evaluation of the quality of the most important public spaces based on the quality criteria.
- **Research by design** of the potentials of the network of pedestrian spaces in Golubac as well as of the potentials of the particular most important public spaces in Golubac that include 8 destinations and 7 connections.
- **Post-production and presentation** of the results of the workshop in the form of catalogue of public spaces in Golubac.

Key Findings

The key findings of the research of the public space network in Golubac cover:

- The ways how the people experience the public space in particular city in relation to their roles as citizens or visitors/tourists
- Evaluation and presentation of the potential of the public space network in Golubac and presentation of different development proposals
- Golubac Public space design Catalogue with the evaluation of selected public spaces and the design proposal

Key Recommendations

On the basis of the obtained results and their interpretation, the main recommendations of this research include:

- The importance of public space people who live in particular city evaluate in regard with their needs, everyday routine and the public space contents, while people who visit a city evaluate its public space in regard with their visiting preferences and the public space attractors.
- Public spaces need to be organised in the form of network with clearly defined destinations and the connections between them.
- Good public spaces need to be distinct in character and its main purpose

1. Introduction

1.1 Background

Considering the walking as the everyday activity of the most of the citizens and visitors of particular city or town, the experiences that arises in this kind of the interaction with the place are of great importance because they affect the formation of a general impression of a certain place. By placing an emphasis on public spaces and pedestrian environment, a light is put on the significance of small scale, often neglected in contemporary projects and development strategies. Visions which correspond to this perspective put focus on specific advantages of cities proportional to dimensions, senses and walking speed and form a basis for more complex and diverse relations (Vukmirović 2014). More concretely, they correspond to improving the quality of the smallest places in such way that people are simply attracted to go there and spend time there (Vukmirović/Vaništa Lazarević 2014). Urban design and planning on human size has the task to encourage intensity of pedestrian movement as part of integral urban policy with an aim to develop lively, safe, sustainable and healthy cities. This is equally important for strengthening the social function of urban environment as a meeting place, which contributes to social sustainability and creation of open and democratic society.

From the perspectives of European global urban system key factors were identified: 1) different economic foundation and skilled human capital; 2) services based on high technology and establish strong links with educational institutions; 3) developed and contemporary infrastructure; 4) high quality urban environment and 5) developed institutional capacity that is able to implement the future oriented goals (Gospodini 2001). On the basis of extracted factors, can be concluded that urban design takes a new, more important role as a means of economic development. Compared with previous times the connection between economics and urban design has changed. In the past the quality of the urban environment represented **the result** of economic growth, in contrast to the present time when it is taken as **a prerequisite** for economic development and is used in order to

increase the development trends of the city². In these new circumstances, the main task of local government includes the search for urban conditions, attractive enough to attract potential businesses and people. Accordingly to this and in order to achieve development and progress, certain sites and cities offer much more to attract capital through improving the economic attractiveness³ or change of image⁴.

By observing the communication from the aspect of culture, every cultural phenomenon could be seen from the communicational perspective, i.e. as model or way of communication (Tomić 2003, 12). Taking into account one of the key objectives of the DANUrB project which refers to the improvement of different kinds of heritage and potentials of the selected towns along the Danube corridor in order to increase the tourist offer and attractiveness of the sites, the general framework of this research includes the observation of the city and its elements as the products as generators of its competitive identity (Vukmirovic 2013).

Walking is the most intimate with the environment and allows a much more articulate processes of interpretation and memory (Madanipour 1996, 64-65). Observing the architecture and urban design as a visual art, Cullen (1971, 194) is focusing on personal and emotional reactions of the urban environment, because they are "captured" by sense of sight. In order to form a humane approach to urban form, theorists have been searched for an image of the city and its legibility. The technique that was used in the study of ways that people remember the environment is mental mapping, i.e. detection of mental images created by the individuals when uses the city (Madanipour 1996, 66). Interested in the visual quality of American cities represented in the mental maps of its citizens, Lynch (1979) has distinguished five elements of the image of a city: paths, edges, nodes, landmarks and districts (see Fig. 1.). It was noted that the cities in which the five elements are clearly observed offer much more than a visual pleasure, but emotional security, because they increase the depth and intensity of human experience.



Figure 1: Five elements of the Lynch's image of the city. Source: Pinterest

² Gospodini, Aspa. "Urban Waterfront Redevelopment in Greek Cities. A Framework for Redesigning Space ." *Cities* 18, no. 5 (2001): 285-295, p. 290

³ Reducing taxes and fees, incentives in the form of real estate and transport, etc. in Gospodini Aspa, "European Cities in Competition and the New 'Uses' of Urban Design ." *Journal of Urban Design* 7, no. 1 (2002): 59-73, p.61

⁴ Manipulating interventions in physical space or over soft infrastructure (culture and entertainment facilities)

Focusing on defining the relationship between pedestrian spaces and identity of the city, **pedestrian space communication model** is formed, on the ground of the knowledge from the marketing and branding models, non-verbal communication of urban environment and theory of synergetic inter-representative networks (SIRN).

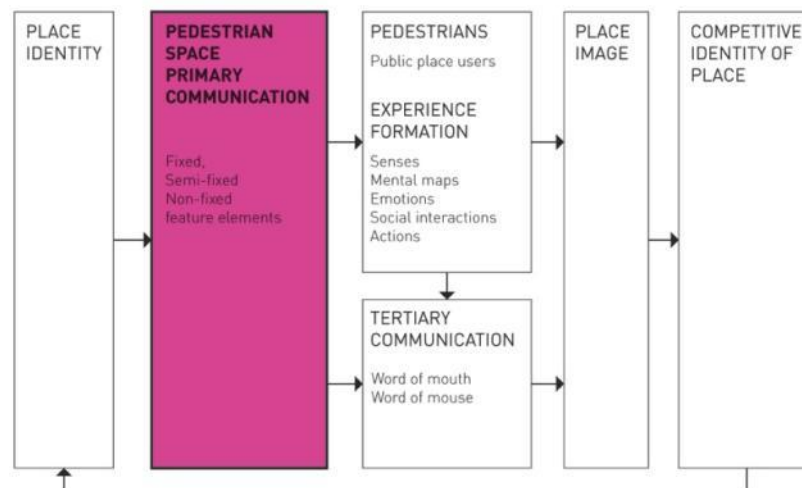


Figure 2: Pedestrian space communication model (PSCM). Source: Vukmirovic, 2014

Pedestrian space communication model is based on existing marketing models (Balmer & Gray 2000; Kavaratzis 2008) of identity and image communication applied to products, companies or places. Observing communication of a city as threefold system covers *primary, secondary and tertiary communication*. Primary communication encompasses communication effects of city activities, by which the communication itself is not the aim of these activities. It is divided into four broader areas of intervention: landscape strategies, infrastructure projects, organizational and administrative structure, and city's behaviour. Secondary communication represents formal, intentional communication which is found in well-known marketing instruments, such as in-door and out-door branding, public relations, graphic design, use of logos etc. Tertiary communication refers to communication marked as word of mouth, which is amplified through the media. With respect to its character the whole process of branding and the other two types of image communications are intended to encourage and reinforce positive tertiary communication (Kavaratzis 2008). This is particularly the case of the city residents and visitors, which are the most important target audiences in city branding and the most important participant in place marketing.

Pedestrian space communication model covers certain specific phases (see Figure 2) of place communication based on real place identity – identity of pedestrian spaces. Identity of a city is presented by primary – non-verbal communication that encompasses fixed, semi-fixed and changeable elements of pedestrian space. Interacting with the immediate surrounding the experience of urban environment i.e. a city is created. The experience will to

a large extent participate in formation of individual image, which is built into common image of that space, but the city in general. In urban design, public spaces are considered as an extension of the community and when they work well, they serve as a stage for public lives. This means when cities have successful public spaces, inhabitants have a strong sense of community; on the other hand, when such spaces are missing, people may feel less connected to each other (Project for Public Spaces). Because of their character, public spaces are recognized and valued in their cities and towns as places with their own special favour that relate to and nurture the larger community and bring the public together. They can also contribute to the strengthening conditions for social integration - including towards peaceful social relations of coexistence, collaboration and cohesion.

Considering the ways of constructing cognitive maps, the formation of the network of pedestrian as well as public spaces could be analysed on the basis of its simplified structure, which includes identification of paths/connections and destinations/nodes (Vukmirovic/Folic 2017). This approach was used in Spatial Metro Project that has the objective to improve the centre of the city for pedestrians (van der Spek 2007). **Destinations** are the places with the greatest intensity of users and correspond to the places that are located at the corners of the streets, main public spaces or dotted along the paths. On the other side, **connections**, function as water canals and correspond to the streets in which the most of the movement takes place.

On the basis of the normative theories in urban design, several frameworks⁵ have been defined to establish the criteria and requirements to be met in order to create quality places (Vukmirovic 2013). Depending on the size of the subject area they observed, their main goal was to define the characteristics that make up a good city, district, public space, street, etc. By observing destinations and connections as the particular elements of the network of public spaces their quality evaluation could be done by using the appropriate framework defined for public space quality evaluation. One that was chosen for this research was designed and tested at the University of Belgrade - Faculty of Architecture and it includes six public space quality criteria: safety and security, accessibility, comfort, legibility, inspiration and sensitivity and liveability and vitality (Bazik/Vukmirović 2006, Vukmirović 2017). There is an established hierarchy among them and it is considered that the vitality and liveability of open public space will be achieved if they meet all other criteria in their order beginning with the safety and security.

Taking into consideration above, the workshop was a great opportunity for students to ***research and discover how to organise the network of pedestrian spaces in Golubac in order to increase the attractiveness at the destination level, establish appropriate links between them and achieve the desired effect creating a liveable town.*** The

⁵ Lynch 1981, Whyte 1988, PPS 2003, PROMPT 2003, Walk21 2006, Bazik and Vukmirovic 2008, Gehl 2010, etc.

research was designed based on the knowledge of theory of the Image of the City defined by Kevin Lynch as well as normative theories in urban design that define a set of qualitative criteria that need to be reached in order to create a good and visited public space. Next to that practical knowledge acquired and published by Jan Gehl, Project for Public Space, Street level desires project were used as a recommendation for design and improvement of public spaces in the network. The workshop started on 16th October 2017 at 9am with walking tour in Golubac and finished on 17th October 2017 at 18pm with the presentation of the workshop results.

1.2 Objectives

Considering the general objective of this research, particular objectives were defined and they included:

- Comparison of the tourist vs. locals perception of Golubac
- Evaluation of the existing network of public spaces
- Creation of development proposals for the network of public spaces in Golubac
- Evaluation of the entire network as well as the particular, most important public spaces in Golubac using the framework of 6 criteria: safety and security, accessibility, comfort, legibility, inspiration and sensibility and liveability and vitality
- Making of the catalogue of the most important public spaces in Golubac and their design proposals

2. Methodology

2.1 Research Questions

The research questions answered by this research were:

1. How the locals and how the visitors/tourists perceive Golubac?
2. Is there a public space network in Golubac and what is its potential?
3. Can we identify individual destinations and connections in the network and what are their characteristics?
4. What is the actual quality of the selected open public spaces?
5. What potential is carrying by and what design concept can we propose for particular public space?

2.2 Research Design

The overview of the research questions and used methodologies are presented in Table 1.

Table 1 Methods used to answer research questions

Research Question	Method Used to Answer Question
How the locals and how the visitors/tourists perceive Golubac?	<ul style="list-style-type: none"> • Citizen and visitor survey defined based on the Kevin Lynch theory of the image of the city. • Presentation of the results of survey as mental maps.
Is there a public space network in Golubac and what is its potential?	<ul style="list-style-type: none"> • Direct on site observation and qualitative analysis - walking tour • Photo documentation.
Can we identify individual destinations and connections within the network and what are their characteristics?	<ul style="list-style-type: none"> • Direct on site observation and qualitative analysis - walking tour • Content analysis • Spatial diagrams
What is the actual quality of selected open public spaces?	<ul style="list-style-type: none"> • Direct on site observation and qualitative analysis - walking tour • Criteria based evaluation of the quality of public spaces • Presentation of the qualities • Rating of the quality of particular space
What potential is carrying by and what design concept can we propose for particular public space?	<ul style="list-style-type: none"> • Research by design

2.3 Instruments

Several methodologies, specially designed and adapted for this purpose, has been used in this research: field work and study, digital survey, comparative analysis, mapping, criteria based evaluation of public spaces and research by design of the potentials of the public space network. The workshop is designed and planned as the set of activities that were structured chronologically in order to create the final product defined as catalogue of the most important public places in Golubac.

The workshop started on Monday, 16th October 2017 at 9am with the fieldwork and immediate study of public spaces in Golubac. There were 48 students of Bachelor degree in architecture from four universities: University of Belgrade (Serbia), University of Novi Sad (Serbia), University of Budapest (Hungary) and University of Bucharest (Romania), who were for their first or second time in Golubac. The fieldwork was organised in the form of walking tour with the task to visit and record the actual state of public spaces in Golubac.

Citizen and visitor survey

The visitor perception of Golubac was investigated using the digital survey. The target group included students⁶ of the workshop, who visited Golubac for their first of second time. The

⁶ Students of Bachelor degree in Architecture, 21 or 22 years old.

survey was the same one prepared on the basis of the Lynch's theory that was used for surveying of citizens in March 2017 and created using online Google surveying application. It was distributed by email to all the participants of the workshop and they are asked to fill it at the end of the first day (16th October 2017).

The survey included simplified and shorter questionnaire, where every element⁷ of city image theory was a base for two questions. A special aspiration was made to make the questionnaire understandable and receptive for the wide range of respondents. Almost all questions are thereby shaped as semi-closed, where several concrete choices, well-known physical elements in Golubac, are given and the last one was left as a blank for additional and unexpected choice. Respondents is given an opportunity to choose one of the offered answers. The last question was different, because it was settled as a specific "synthesis" of the previous ones. Hence, there were no given choices in the question and a respondent could give one answer on his/her own.

After the expiration of the given period, 40 completed polls were obtained. The results are analyzed and presented using graph charts and in the form of mental map of Golubac using the symbols that characterize Lynch's five elements - paths, edges, districts, nodes and landmarks. The results of this (visitor's survey) was compared with the results of other (local's survey that was done in March 2017).

Qualitative analysis of the networks of public spaces

One of the outputs of the fieldwork and *in situ* investigation of public spaces in Golubac was the map of the actual and the map of the future network of public spaces in Golubac. The participants of the workshop had the task to map the most of the observed public spaces and categorise them as destinations and connections. In addition to the above, a general impression of particular locations have been presented (both current and after transformation) using the defined structure that include: character, main attractor, main activity, number of approaching routes and the state of the exiting public space for destinations and character, main activity and the state of the exiting public space for connections.

Criteria based evaluation of the quality of public spaces

The second output of the fieldwork are the results of the evaluation of the selected public spaces on the basis of the set of the criteria that include: safety and security, accessibility, comfort, legibility, inspiration and sensitivity and liveability and vitality. The results were presented graphically and through the assessment of overall impression in relation to the observed criterion. Every criteria has its own group of indicators - phenomena to be analysed in public spaces - safety and security (activities of people in public space, state of

⁷ Parh, Edge, Distict, Node and Landmark

the urban equipment, existence and level of lighting, intensity and character of traffic), accessibility (existence of networks and connections, transport modes and nodes, accessibility for different user groups), comfort (types and presence of greenery, presence and effects of water, presence and effects of sounds), legibility (design character, forms and details, harmony and rhythms of physical structures, existence of meeting points and attractors, contents and main purpose of the place), inspiration and sensitivity (surface patterns and materials, topography, height levels, slopes and vistas, public art, sculptures and installations) and liveability and vitality (design and details of equipment, changeability - constancy, but open for technological improvements and maintenance, neatness, cleanliness, time resistance).

Mapping was used as the way of interpretation of the rating of the quality of the most important public spaces based on the quality criteria. There were 6 maps that present the situation with the 15 selected public spaces in relation to the analysed criteria.

Research by design

The research of the potential of the network as well as of selected public spaces was investigating and presented through the design concept proposals. The future network of public spaces in Golubac is presented as the spatial diagram using the same structure used for the presentation of the actual state of the network in order to explain overall impression using the defined structure that include: character, main attractor, main activity and number of approaching routes for destinations and character and main activity for connections. On the other side, the design proposal for the selected public space is presented as the three-dimensional illustration of the characteristic segment of public space where special attention is devoted to explanation of the design concept, character, attractor, main activity and the urban equipment.

In relation to the mode of work within the workshop, participants were divided into the 8 groups of 5 to 6 students. Every group has three groups of tasks

- to evaluate the network of public spaces in Golubac and to give the proposal of its transformation
- to evaluate one of the selected destinations and to conceive design proposal for it and
- to evaluate one of the selected connections and to conceive design proposal for it.

Selected destinations were: Main Square, Golubac Market, Branka Radičevića Schoolyard, Green area along the quay, East Marina, West Marina and Church Square. In addition to the above, the selected connections included: Cara Lazara Street⁸, Danube Quay, Cara Dušana

⁸ This area was analysed by two groups.

Street, Knez Mihailova Street, Gorana Točića Mačka Street, Karađorđeva Street, Kraljevića Marka Street and Vuka Karadžića Street.

Data presentation

Special attention of this research is given to the preparation of the research layouts – catalogue sheets where most of the research results were clearly presented. Every part of the research had its own place for presentation with the aim to compare different data.

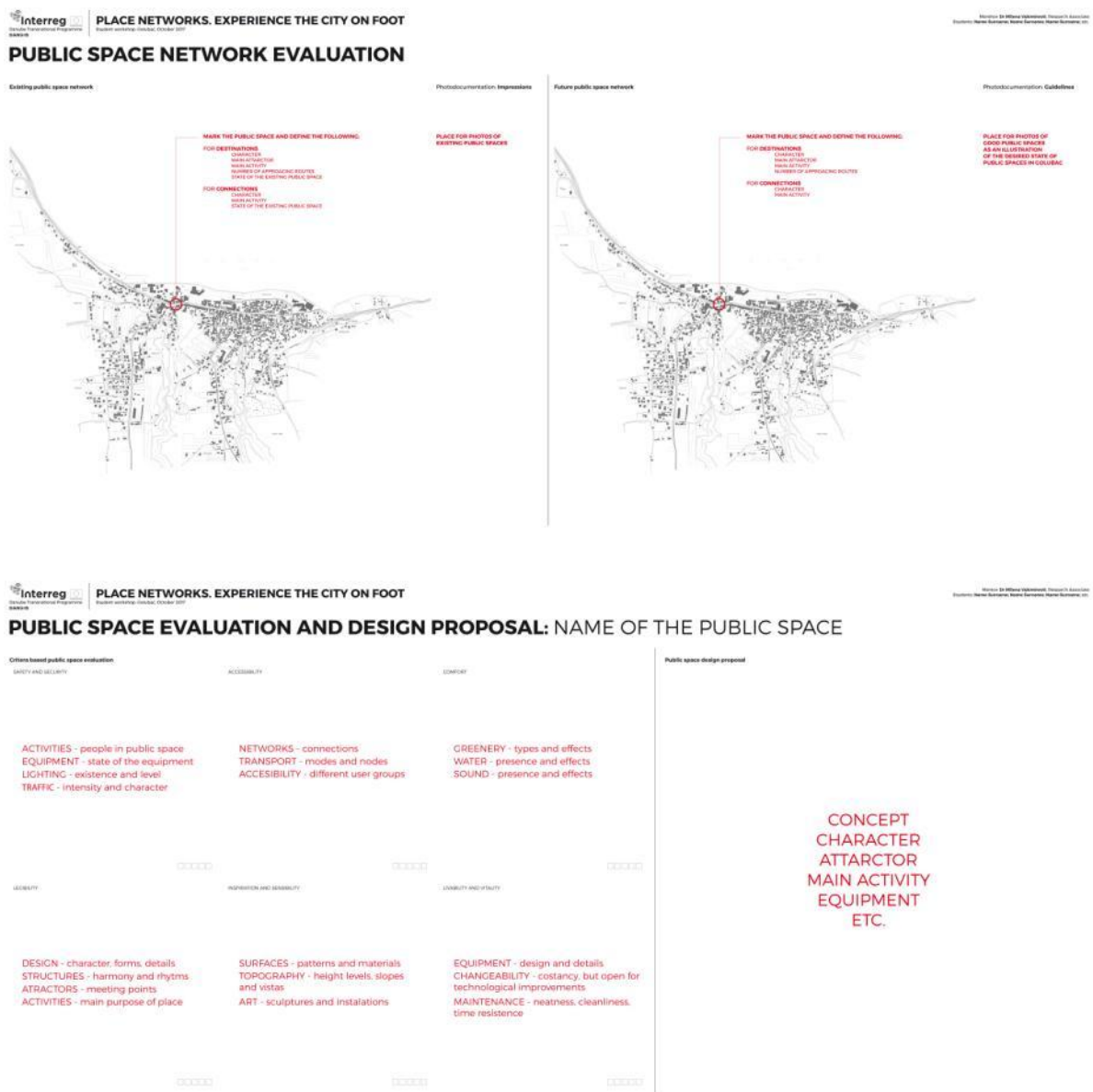


Figure 3: Research layouts - catalogue sheets. Source: M. Vukmirovic, 2017

The research layouts consist of two items - one for public space network evaluation and another for public space evaluation and design proposal (see Figure 3).

3. Results

The presentation of the research results will be presented following the structure of the defined objectives, i.e. research questions: tourists' vs. locals' perception of Golubac, networks of public spaces in Golubac, quality of public spaces in Golubac and transformation of public spaces in Golubac.

3.1 Tourist vs. locals perception of Golubac

The five elements of the image of the city defined within the Kevin Lynch's theory cover paths, edges, districts, nodes and landmarks. Following the mentioned elements and the structure of the survey created on the base if the Lynch's theory, the results of the tourists'' versus locals perception of Golubac will be presented as a comparison of the results of two surveys.

Paths

Considering the streets that are used for pedestrian movement the tourists identified three, while locals choose all four offered routes (see Figure 4). In the opinion of tourists the most important route is Danube Quay, while most of the locals considered Cara Dušana Street as the most used for pedestrian movement.

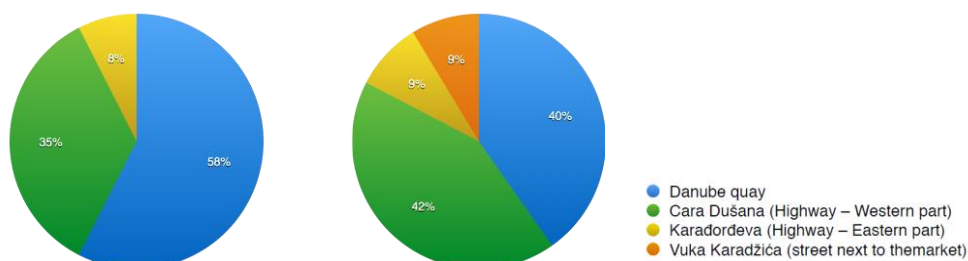


Figure 4: Streets that are used for pedestrian movement

In relation to the transverse movement to the quay, most of the tourists use passage across the Main Square (58%). On the other side, the locals almost equally opt for three answers - passage across the square (32%), Kraljevića Marka Street (29%) and other (21%).

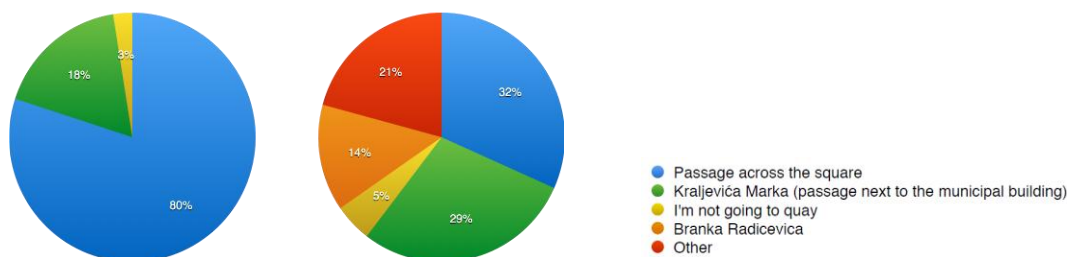


Figure 5: Path used for getting to he quay

Edges

The results has shown that the locals and tourist has the same opinion in regard to the streets and obstacles that restricts movement to the waterfront (see Figure 6). They both identified Cara Dušana Street (60%) as an obstacle in moving to the coastal area.

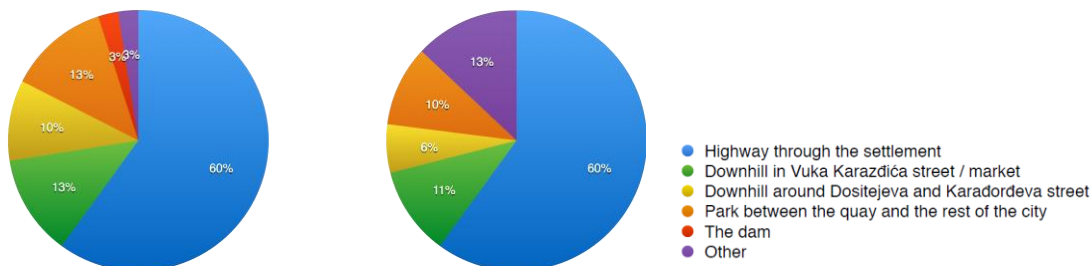


Figure 6: Streets and obstacles that restricts movement to the waterfront

According to the traces that are avoided because of its inaccessible topography locals equally evaluate offered answers, while the tourists chose Vuka Karadžića Street (45%).

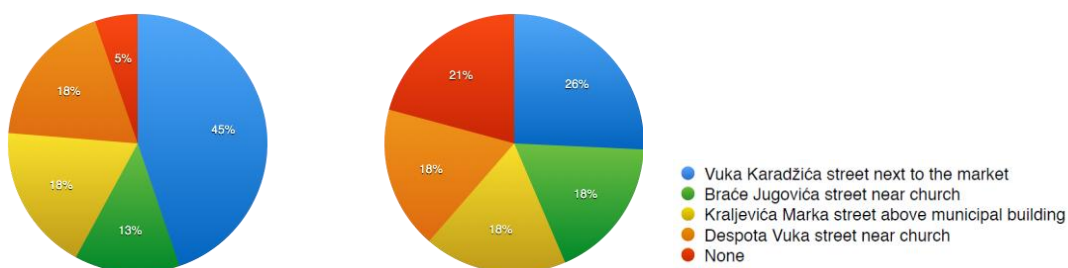


Figure 7: Avoided traces because the slopes

Districts

For the tourist the area of Golubac fortress (47.5%) and Quay and the coast area (42%) are almost equally important, while the locals chose the Fortress area (49%). They also recognise unity around the port as an important part of the city.

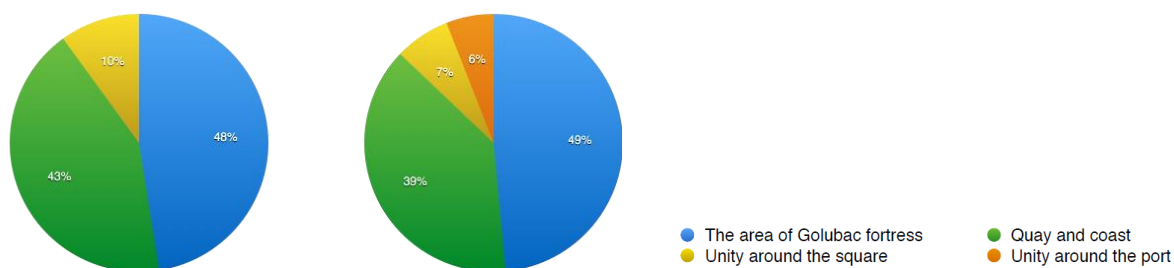


Figure 8: Recognition in the broader area of Golubac

Considering the security during the night, the most unsecure area for both the locals (43) and for tourist (36%) is the area along the highway. The next one for the tourist is park area

between the quay and the city (30%), while for the locals the area around the Golubac fortress (13%)

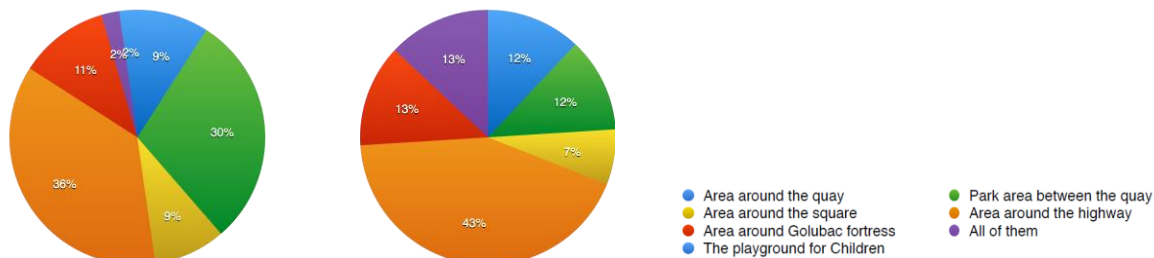


Figure 9: The most unsecure area during the night

Nodes

Three the most important meeting points for locals as well as for tourists are: port and quay around it (42%:47.5%), city park (19%:25%) and city square (19%:25%). Of course, unlike tourists, locals also recognize the market, but also other spaces (see Figure 10).

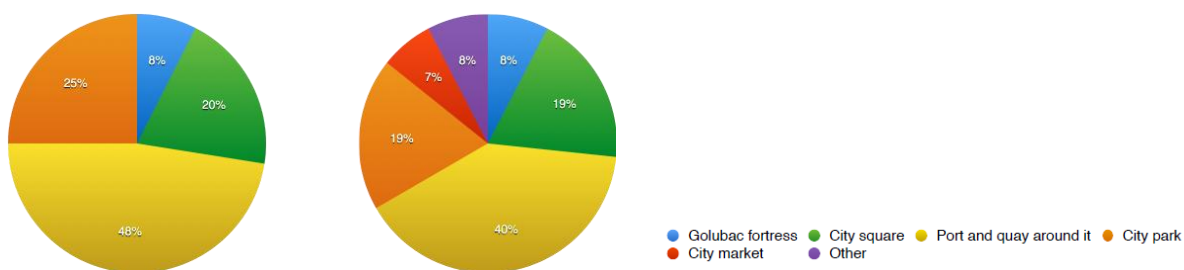


Figure 10: Meeting point during the nice weather

During the bad weather, tourists meet each other at the main square (30%) and city market (25%), while locals city square (30%), port and quay around it (19%).

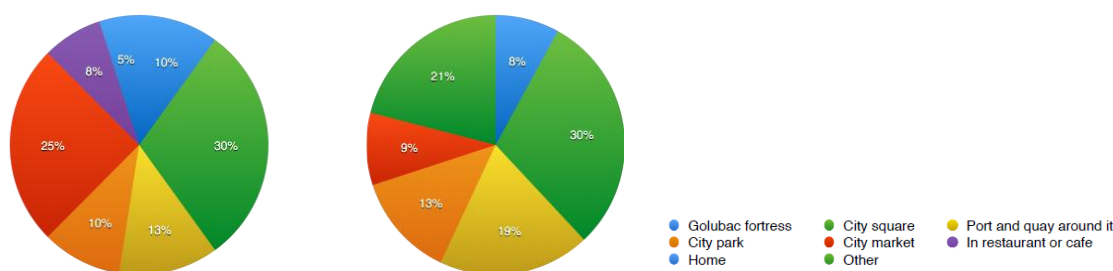


Figure 11: Meeting point during the bad weather

Landmarks

Es expected, the landmarks of Golubac are Golubac fortress and Danube for both the tourists and the locals. The difference is only because part of the citizens recognize the main square as a city landmark, too.

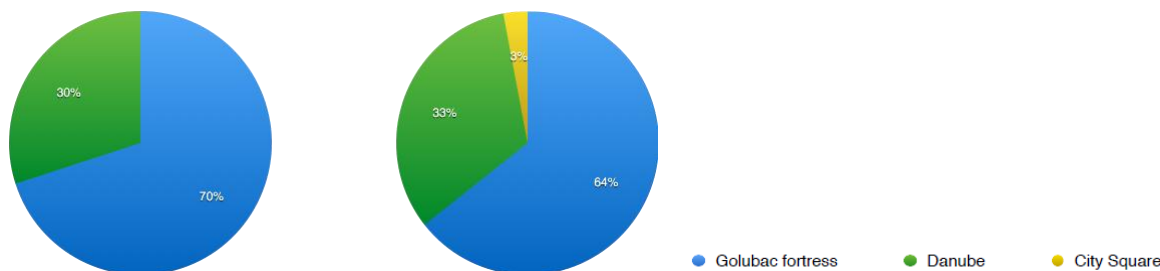


Figure 12: The main symbol of Golubac

The overall results of the surveys were presented in the form of spatial diagram using the symbols that characterise different elements of the image of the city: stars for landmarks, crosses for nodes, lines for paths, interrupted lines for edges and polygons for districts. The size of the elements correspond to the quantity of answers.

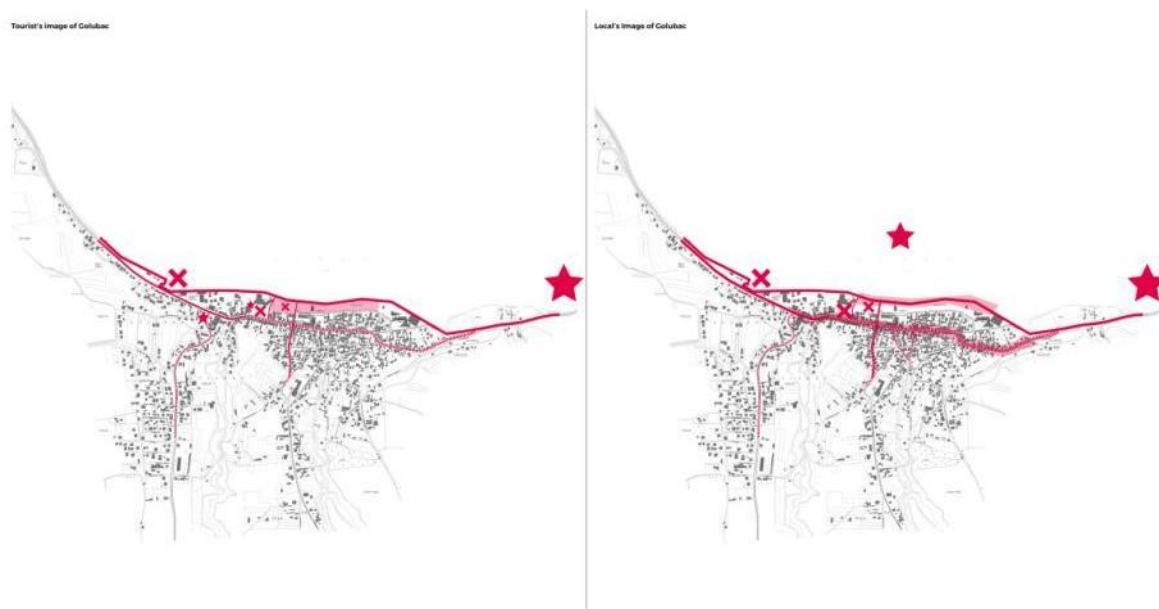


Figure 13: Tourists' vs. locals' Image of Golubac. Source: M. Vukmirovic 2018

By observing the maps, we can conclude that they are very similar and that they are almost identical images of the city of Golubac. The only difference is seen in the importance of Danube as a landmark and one of the districts. For the tourists the most important district is green area along the quay, while for the locals is the quay and the coastal area and the area along Cara Lazara Street.

3.2 Network of public spaces in Golubac

Eight groups of student workshop participants have produced eight evaluations and proposals for the development of public space networks in Golubac. For the purpose of this

report, we have randomly selected one of the presentations, while the other presentations are in the part which refers to appendices.

Considering elements of the public space networks, in the actual state **are recognised 10 destinations and 9 connections**. Destinations are divided into three groups: public places, semi public places and public objects. Some of them also has character defined as main gathering place, commercial zone or promenade. On the other side, connections are divided into the public space and pedestrian connection, main motorway and secondary motorway.

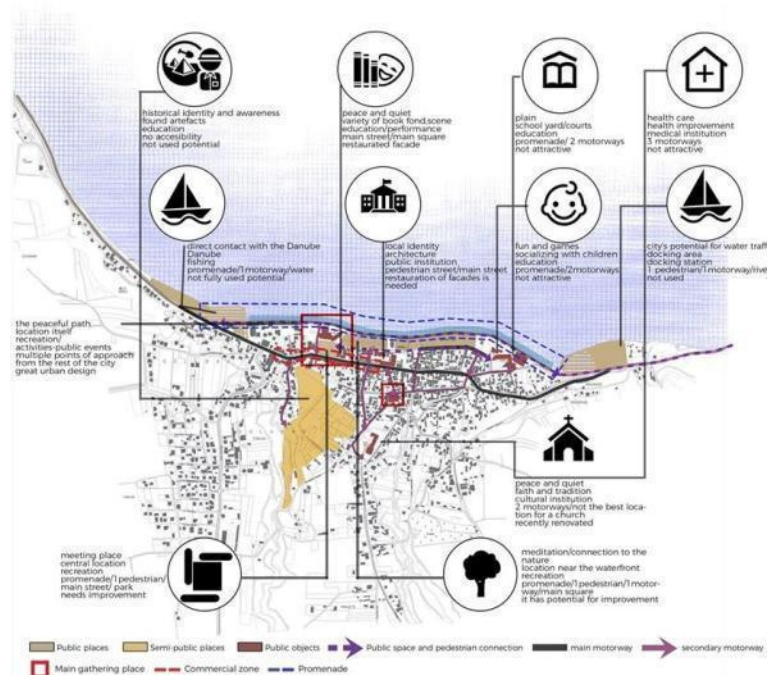


Figure 14: Network of public spaces in Golubac. Source: U. Marković, I. Kisin, J. Jofoldi, T. Heksch, C. Samaranda and P. Condru, 2017

Destinations that are recognised within the network include: **West marina** with the direct contact with Danube, motorway and promenade and possibility for fishing, owns the potential that is not fully used; **Main square** with library, hotel and post office, a meeting place in direct contact with the main street and the public park, owns the potential that could be further improved; **School with an accompanying environment** next to the river, two courts with the direct links to the promenade and main street, in the state that is not attractive; **East marina** with docking area, owns the potential for introduction of the water traffic and installing equipment that would complement this content, at the present it is not in use; **Theatre and cinema building** with its surrounding, public institution places on the main street, the building has architectural value, but need serious reconstructions and reorganisations in order to meet contemporary needs and become more attractive; **Square in front of the church**, another main meeting place, connected with two secondary motorways, peace and quiet, the church is recently renovated, bit the place need the

improvement; **Public park** the area for meditation and the connection with the nature in direct contact with the waterfront promenade and near to the main street, has the potential and need the improvement; **Health care centre**, medical institution connected with three secondary motorways in condition that is not attractive and **Historical site** has the historical identity and awareness, founded artefacts, very poor accessibility, but with the strong unused potential. In relation to the connections there is **river promenade**, a peaceful path for relaxation and recreation, temporarily active with public events, has multiple approaching points and it is in good condition; **main street** with the commercial zone as some king extension of the main city square, a strong and intensively used **motorway** that connect Golubac with other settlements and a few **secondary streets** which flow into the main street.

General attitude is that all public spaces that are recognised within the network of public spaces own its strong character which is related their location, but need a significant reconstruction and improvement. In regard with that, the proposal of the future network of public spaces in Golubac strives to emphasize the existing character of the recognized spaces, to improve and advance their appearance and contents in order to meet contemporary needs and extend its influence and expansion into new areas.

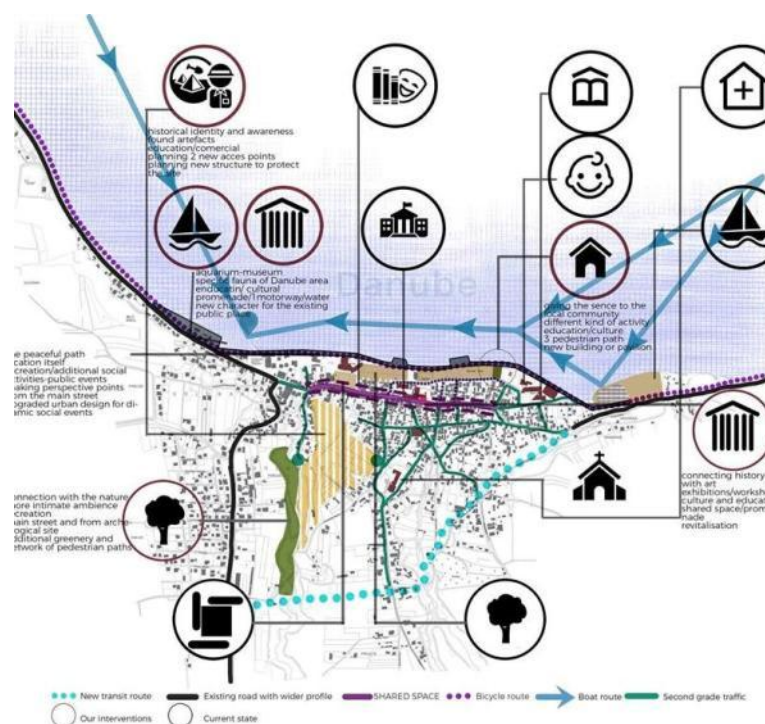


Figure 15: Future network of public spaces in Golubac. Source: U. Marković, I. Kisin, J. Jofoldi, T. Heksch, C. Samaranda and P. Condrut, 2017

The future network of public spaces in Golubac envision 15 destinations and 11 connections (see Figure 15). The main improvement is seen in proposal of the new transit route which

would remove of heavy and intense traffic from the main street. **West marina** will get two new contents - aquarium and museum for the specific fauna of Danube area, it will be recognised as educational and cultural point in improved in that way to highlight its new character; **School with an accompanying environment** will be transform in an area with a strong sense of community and complementary activities, while the area will be arranged in accordance with new needs and **the place in front of the church** will be renewed and improved. The network will be complemented with two new destinations in the southern part of the city on the area of the historical site. It will cover **the historical site** with the special building structure that will protect the artefacts and give the opportunity for locals and visitors to see heritage and to educate. Next to the it will be place for **new park of the natural good** for relaxation and recreation. These destinations will be connected with other places by **two new connections**. One will be completely new connecting the historical site with the main street, and another will be the extension of the existing Kraljevića Marka Street.



Figure 16: Proposal of the public space improvement. Source: U. Marković, I. Kisin, J. Jofoldi, T. Heksch, C. Samaranda and P. Condrut, 2017

Important transformation will be in the area of the commercial zone of the high street which is proposed to be extended and treated as **a shared space** in the future. That will contribute in the integral connection and a kind of unification between the main street, Main square and the green area along the Danube promenade. All the proposed interventions are conceived in the spirit of contemporary design and public space treatment (see Figure 16) which will additionally contribute to the revival and attractiveness of the entire public space network in Golubac.

3.3 Quality of public spaces in Golubac

The quality of public spaces in Golubac is presented in relation to the specific criteria used for evaluation: safety and security, accessibility, comfort, legibility, inspiration and sensitivity and liveability and vitality. The presentation of the results include spatial diagrams used in interpretation of the rating of the quality of the most important public spaces based on the quality criteria and presentation of the best and the worst rated places in regard to the particular criteria.

Safety and security

Safety and security are seen as one of the most important quality of public space, sometimes as a precondition for its use. Analysis of the selected public spaces in Golubac has shown that the most of the selected public spaces are rated with the lowest grade (West marina, Cara Dušana Street, Golubac Market, Kraljevića Marka Street, Karađorđeva Street and East marina), while the highest grade is 4 (Main Square, Green area along the Danube promenade and Danube Quay).



Figure 17: Safety and security of the selected public spaces in Golubac. Source: M. Vukmirovic, 2018

Considering the indicators of safety and security (see Figure 18), on the basis of the activities of people in public space the best rated public spaces has several activities that could be performed during the different parts of the day while the worst rated public space mostly serve to perform one activity; state of the urban equipment is in a satisfactory state in high rated public spaces and poor or extremely bad in low rated ones, existence and level of lighting, intensity and character of traffic is good in high rated public spaces, while in the low rated is in bad condition or it doesn't exist at all.

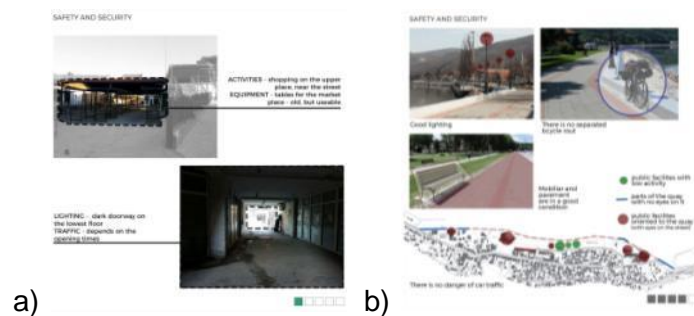


Figure 18: Safety and security _ a) the worst (Golubac market) and b) the best (Danube Quay) rated public space.

Accessibility

The results of the selected public spaces in Golubac has showed that the most of the public spaces are rated by the grade 4 (Danube Quay, West marina, Cara Dušana Street, Kraljevića Marka Street, Gorana Tošića Mačka Street and the Square in front of the Church). The average rate 3 is given to Vuka Karadzica Street, Cara Lazara Street, Knez Mihailova Street, Area around the schoolyard and East marina, while the only one place, Golubac market is rated with them lowest grade.



Figure 19: Accessibility of the selected public spaces in Golubac. Source: M. Vukmirovic, 2018

The overall results of the accessibility has showed that the network exist and it has good connections. In relation to the transport modes and nodes, the places could be divided into two group - places dominated by the pedestrian and bicycle traffic and places where dominant vehicle traffic. The most of the highly rated places are the ones where walking and biking are the only way of movement. The accessibility for different user groups is at a very low level.

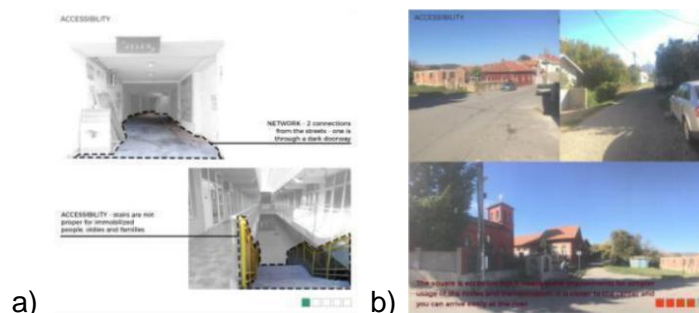


Figure 20: Accessibility _ a) the worst (Golubac market) and b) the best (Square in front of the Church) rated public space.

Comfort

In accordance with comfort six places were rated with 3, six with rate 4, one with 2, one with 1 and one with the best rate 5. That is Gorana Tošića Mačka Street which runs along the city park and can be considered as its integral part. The worst public space according to this criteria is Green area with the sport facilities. It could be said that these results are expected because Golubac as a settlement is favourably positioned in relation to the dominant natural characteristics of this site.



Figure 21: Comfort of the selected public spaces in Golubac. Source: M. Vukmirovic, 2018

Considering the main indicators of public space comfort there are different types of greenery in the form of lawns, high and low vegetation spread evenly across the settlement. Objections relate to the quality of maintenance and the overall impression of neglect. The Danube's domination is large, so the presence of water is noticeably felt. Due to the proximity of a heavy motorway, very often there is a conflict between the natural and sounds of vehicles.

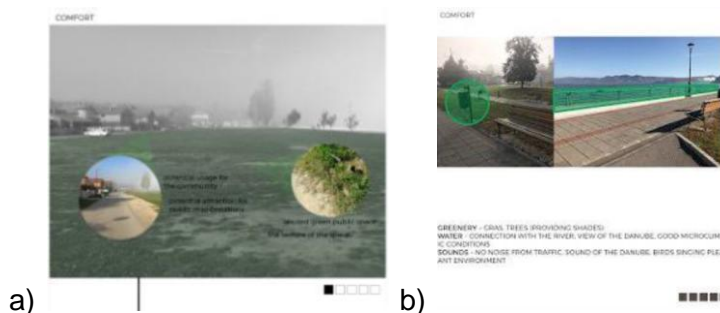


Figure 22: Comfort _ a) the worst (Green area with the sports facilities) and b) the best (Gorana Tošića Mačka Street) rated public space.

Legibility

In relation to the legibility the most legible public space in Golubac is its Main Square. however, it is surprising that the Danube Quay and the Eastern Marina are rated as the lowest. The most of the public spaces are rated 4 (West Marina, Gorana Tošića Mačka Street, Green area with sport facilities, Branka Radičevića Schoolyard and Karađorđeva Street). Due to this evaluation, open spaces in Golubac can be considered legible.



Figure 23: Legibility of the selected public spaces in Golubac. Source: M. Vukmirovic, 2018

Although it is well rated, Golubac still fails in the elements that relate to design character, forms and details which would significantly contribute to the improvement of its legibility, because there are in direct contact with public space users. On the other side in regard with the harmony and rhythms of physical structures, existence of meeting points and attractors and contents and main purpose of the place, Golubac works in an appropriate way, but it also needs a kind of refreshment in terms of new content and restoration of buildings.

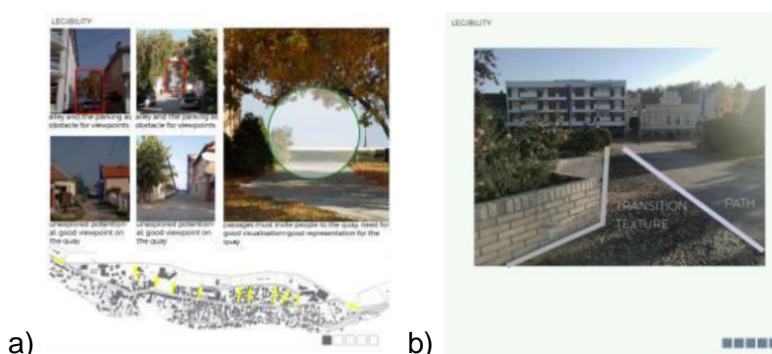


Figure 24: Legibility _ a) the worst (Danube Quay) and b) the best (Main Square) rated public space.

Inspiration and sensitivity

Inspiration and sensitivity of public spaces in Golubac are highly rated. The results of the evaluation has shown that three places received the highest grade (West Marina, Green area with sport facilities and Branka Radičevića Schoolyard). The lowest rated areas have a score of 2 (Golubac Market, Cara Lazara Street and Square in front of the Church). The main reason for such an evaluation is also seen in the proximity of Danube.



Figure 25: Inspiration and sensitivity of the selected public spaces in Golubac. Source: M. Vukmirovic, 2018

However, when analyzing individual indicators this general impression is significantly changed. Public spaces in Golubac have unattractive and average paving of cheaper and artificial materials (concrete and asphalt in bad condition), inaccessible topography in the southern part of the city and very scarce public art. But, domination of Danube with beautiful vistas put everything before mentioned in the foreground.

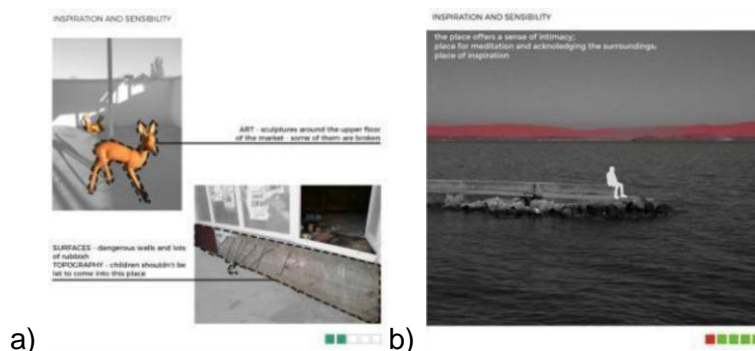


Figure 26: Inspiration and sensitivity _ a) the worst (Golubac Market) and b) the best (West Marina) rated public space.

Liveability and vitality

Liveability and vitality of public spaces in Golubac are characterised by lower rates. Two public spaces are rated with 1 (West Marina and Golubac Market) while the most of the public spaces are rated with 2 (Cara Dušana Street, Cara Lazara Street, Main Square, Knez Mihailova Street, Gorana Tošića Mačka Street, Green area with sport facilities and Karađorđeva Street). This also tells us that the public spaces are poorly visited, which was experienced during the field study.



Figure 27: Legibility and vitality of the selected public spaces in Golubac. Source: M. Vukmirovic, 2018

Considering the main indicators of liveability and vitality of public spaces in Golubac the situation is at a very low level. Design and details on the level of urban equipment almost do not exist, which greatly reduces attractiveness and recognition, but also the possibilities of using a certain space. The used materials are cheap and short durability. There is a certain openness to technological innovation (Wi-Fi device on the Main Square), open spaces require almost complete change in order to meet contemporary needs.

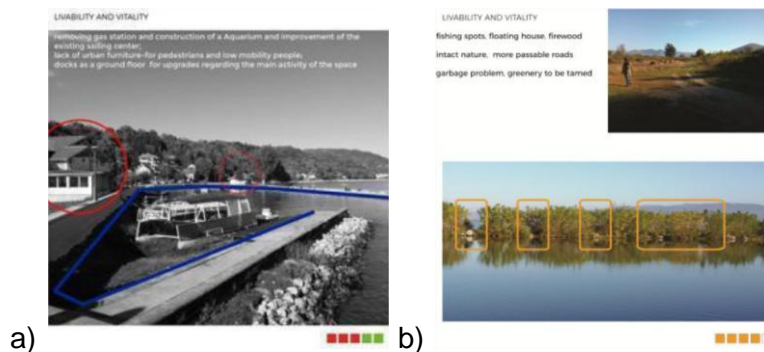


Figure 28: Liveability and vitality _ a) the worst (West Marina) and b) the best (East Marina) rated public space.

Taking into the account the overall results (see Figure 29) Golubac Market is rated as the lowest average rating of 1.7, while the Gorana Tošića Marčka Street was rated with the highest average rating of 3.8.

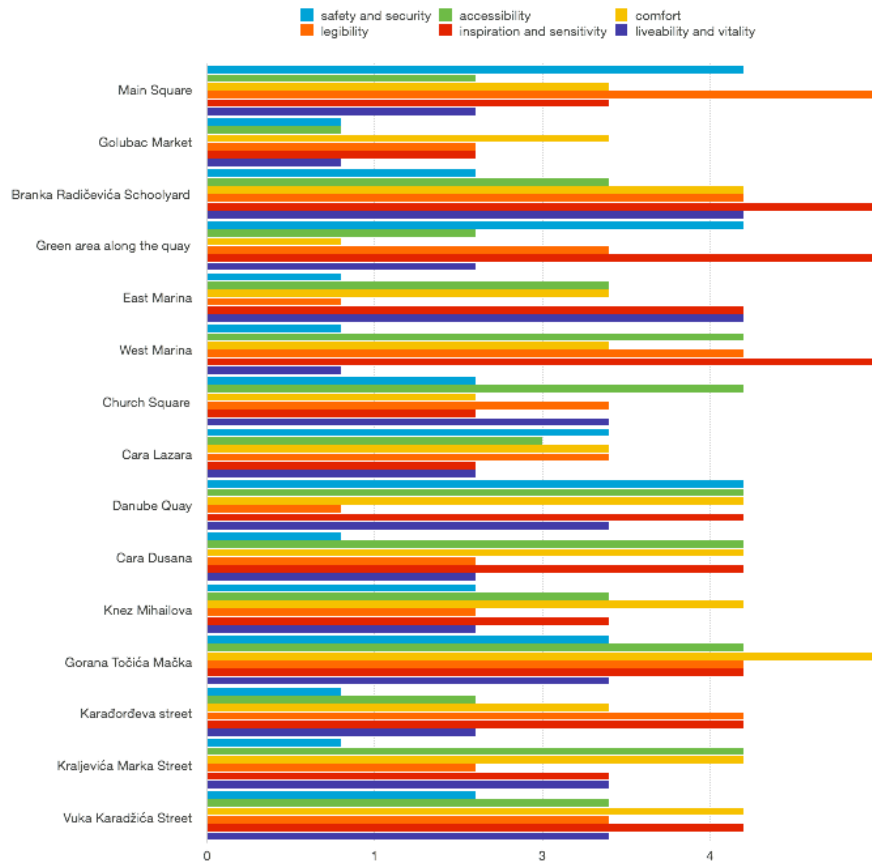


Figure 29: Review of the evaluation of open public spaces in Golubac. Source: M. Vukmirovic, 2018.

Considering the average rates by particular criteria (see Figure 30) open spaces are the worst rated in terms of safety and security (2.1). This aspect need to be seriously improved because safety and security are seen as a precondition for using and visiting open spaces, but also the overall reputation and competitive identity of particular city.

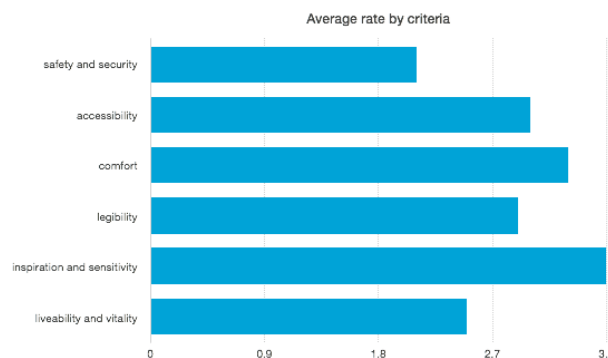


Figure 30: Average rate by criteria. Source: M. Vukmirovic 2018

The best result was achieved in the domain of inspiration and sensitivity (3.6) within which the Danube and the geographical location Golubac have a major contribution. These are also the elements that are the foundation of a positive image and reputation of the city and represent the basis of its offer.

3.4 Transformation of public spaces in Golubac

The potential of selected public spaces (see 7.0 Appendices) is presented as an illustration of a design concept showing its improved future character, the main attraction, activity and urban equipment. For the purpose of this report two of the selected public spaces were randomly chosen. One as a representative of destinations and another as representative of connections.

Golubac market will keep on its basic content, but will benefit from the position of the location which is places on a hill. In this way the market can become a kind of sightseeing which roof can be used for these purposes. The entire space will be improved by the construction of the new market building and contemporary urban equipment.

Public space design proposal



Figure 31: Design concept of Golubac market. Source: D. Kecskes, A. Simon, P. Vitas and V. Vujanovic, 2017

In general, for the most of selected destinations similar enhancements are proposed - keeping the main character and buildings, renovation of existing buildings, new paving and contemporary and contemporary and sustainable urban equipment.

Cara Lazara Street is chosen as the representative of connections. The main task of this transformation is to slow down the traffic in the main city street. If a bypass-road is built, Cara Dušana Street could be transform following the rules of shared space concept where the priority is given to pedestrian s and cyclists. In the presented proposal the authors suggest widening of the sidewalks, new paving, new urban equipment, new lighting and renovation of the abandoned houses into the attractive facilities.

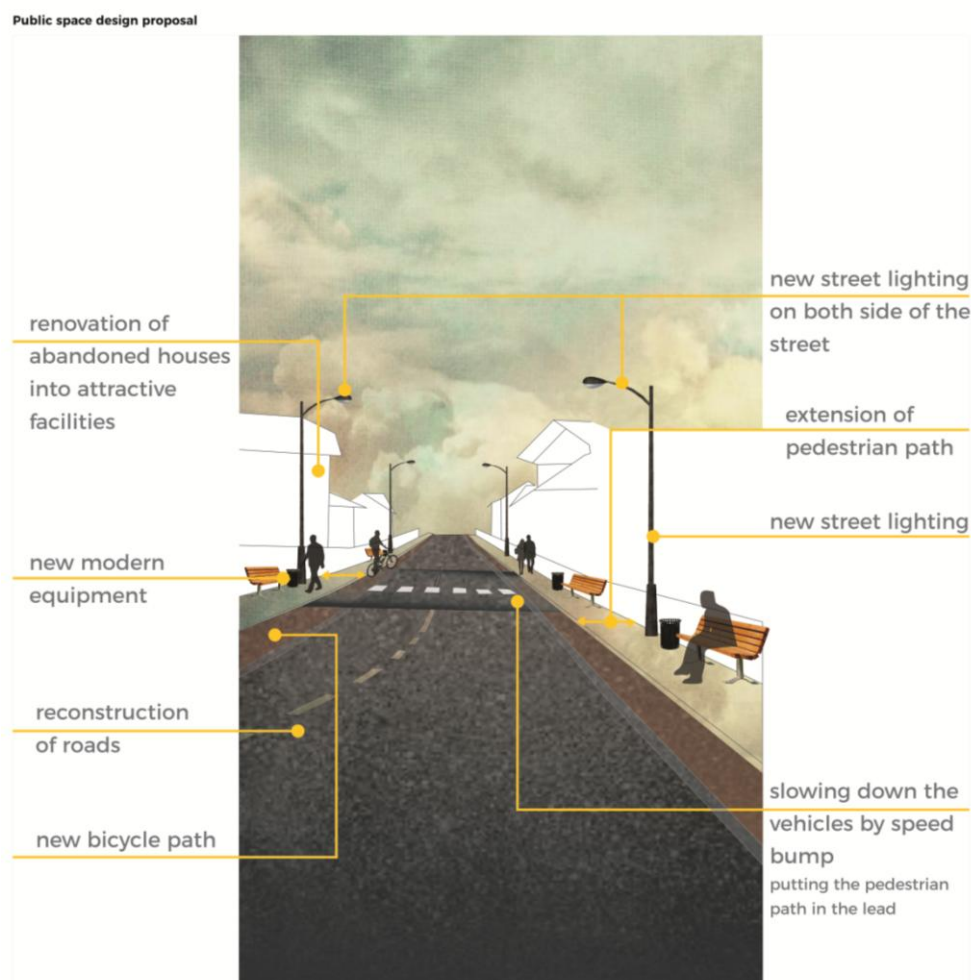


Figure 32: Design concept of Cara Lazara Street. Source: M. Samickov, A. Voros, S. Bunicelu and S. Tajic, 2017

Such interventions are proposed for the most of the connections correspond to motorways, while for pedestrian connections it is proposed to improve the pavement, to introduce better lighting and art in the public space.

4. Discussion and recommendations

Presented results gave an overview of the actual state of the network of public spaces in Golubac as well as their potential. Seen as the resource for improvement of the overall reputation and competitive identity of the city, future organisation and development of public space network would focus on increasing the attractiveness at the destination level, establishing appropriate links between them and achieving the desired effect creating a liveable town. This could be possible if the most important elements of the city are preserved, if the basic character of existing locations is maintain, and the network of open spaces is expanded for new with complementary content and if we shape the city on human size stimulating walking and biking and the preservation of natural resources.

Having in mind the results of the public space quality evaluation the priority need to be given to the improvement of safety and security because it is the primary impression that one place could create and significantly influences the decision of staying and visiting. Other criteria are important because they can contribute in increasing of the liveability and vitality of the city at all.

Considering the importance of public spaces in development of cities, the strategy and action plan of their improvement could be delivered on the basis of this methodology. It will cover detailed analysis of the network and all the public spaces within it and the proposal of their transformation. Catalogue of open public spaces could be one part and product of it.

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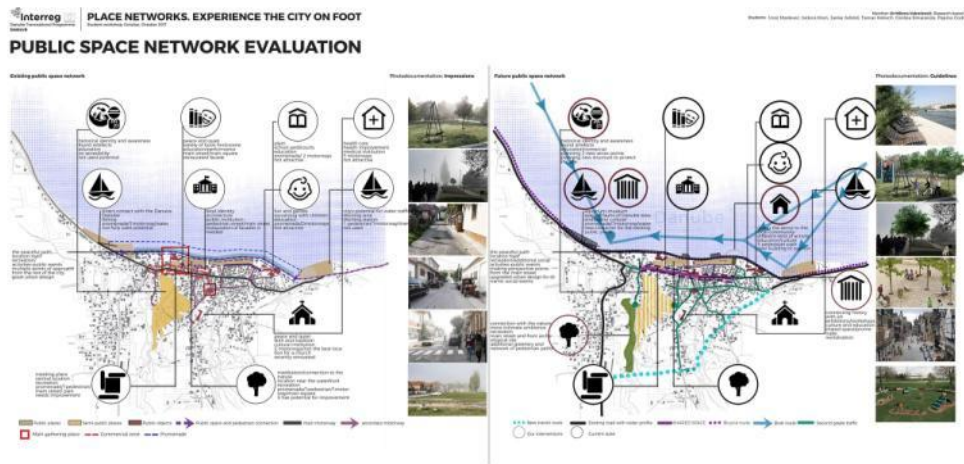
Evaluation of the public spaces in Golubac

Table 2: Evaluation of public spaces in Golubac

PUBLIC SPACE	Safety and security	Accessibility	Comfort	Legibility	Inspiration and sensitivity	Liveability and vitality
DESTINATIONS						
Main Square	4	2	3	5	3	2
Golubac Market	1	1	3	2	2	1
Branka Radičevića Schoolyard	2	3	4	4	5	4
Green area along the quay	4	2	1	3	5	2
East Marina	1	3	3	1	4	4
West Marina	1	4	3	4	5	1
Church Square	2	4	2	3	2	3
CONNECTIONS						
Cara Lazara	3	3	3	3	2	2
Danube Quay	4	4	4	1	4	3
Cara Dusana	1	4	4	2	4	2
Knez Mihailova	2	3	4	2	3	2
Gorana Točića Mačka	3	4	5	4	4	3
Karađorđeva street	1	2	3	4	4	2
Kraljevića Marka Street	1	4	4	2	3	3
Vuka Karadžića Street	2	3	4	3	4	3

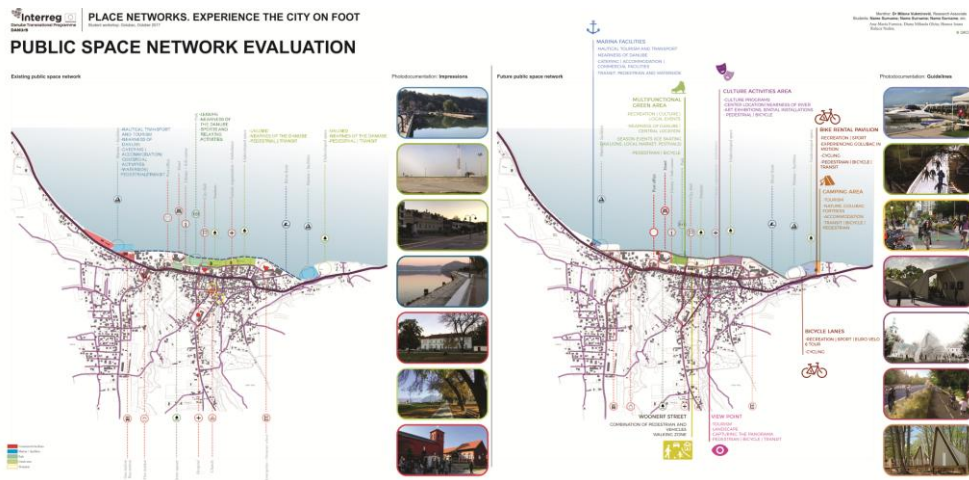
Student workshop presentations

Group 1



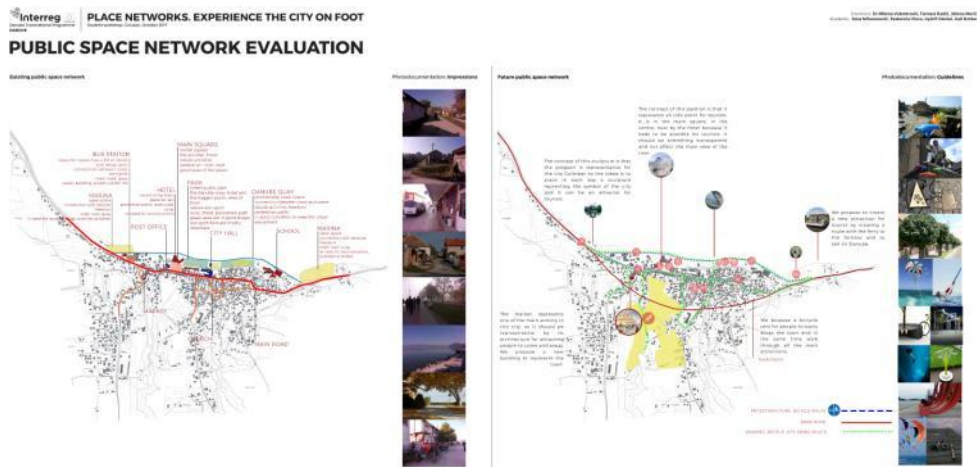
Authors: U. Marković, I. Kisin, J. Jofoldi, T. Heksch, C. Samaranda and P. Condrut, 2017

Group 2



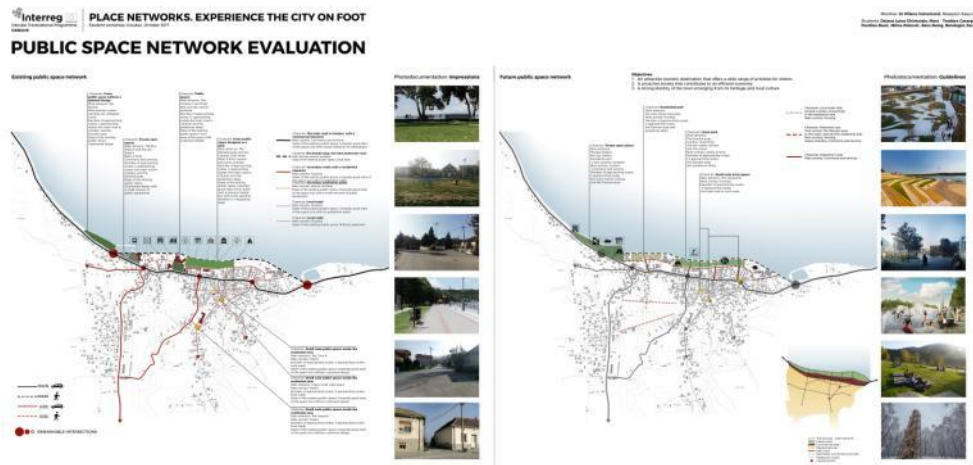
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Group 4



J. Milovanović, P. Ilinca, D. Györfi, E. Gall, 2017

Group 5



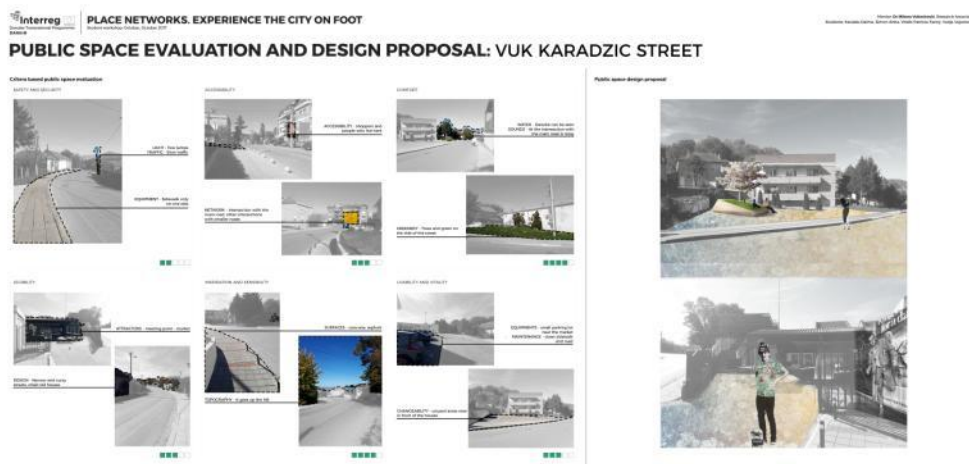
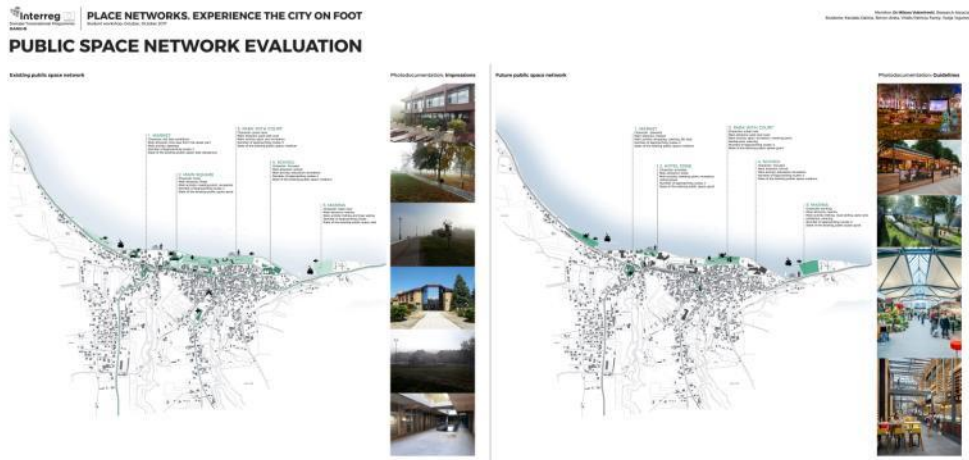
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Group 6



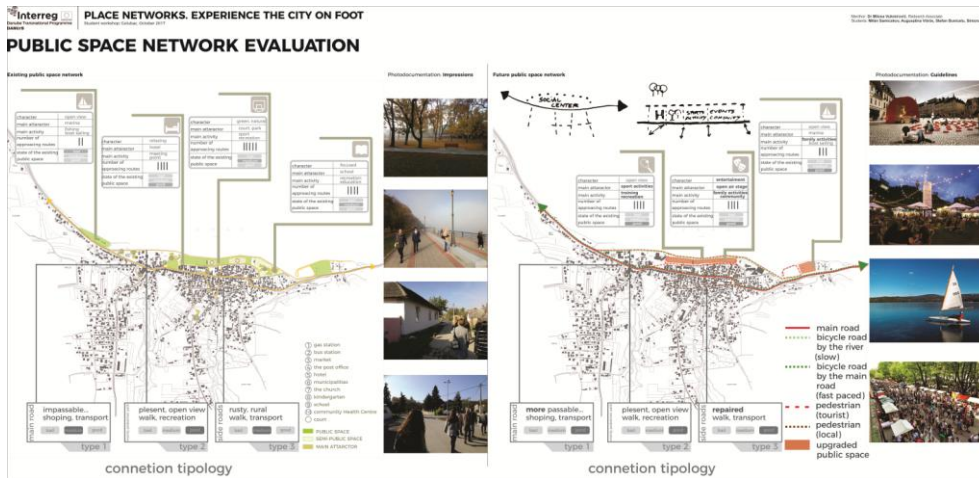
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