PUBLIC PARTICIPATION IN CITY DESIGN

M. Klun, G. Okršlar, M. Weisseisen

Table of contents

1. Introduction

Today close to two thirds of world population live in cities or suburbanized areas. There, they are faced with numerous problems, such as overpopulation, lack of green areas, excessive and unsustainable use of cars, inadequate public transport… Furthermore, they are fighting global challenges as economic crisis and climate change – to solve these challenges, cities will have to come out with better energy efficiency and effective transport solutions through the intelligent use of modern information and telecommunication technologies (ICT).

All of this can be achieved with better planning and active involvement of stakeholders in the process of decision-making and urban management. The use of contemporary ICT tools can improve participation in the city making process. That could help create sustainable, user-friendly cities that are based on mixed land use, walkable cities and smart and well organized public transport.

Our goal in the project is to explore the forms and possibilities of interactive public participation, such as e-Democracy, different interactive web tools and other kinds of presentations of actual projects and communication with public audience.

We will perform a case study of importance of public awareness and information in designing cities in a smarter way. We will also explore, if it is possible to improve living conditions in cities with public participation and promoting community building.

The same set of problems is occurring in all cities in the metropolis, big urban areas as well as in the medium and small sized cities (SMSC). We will focus our attention on SMSC, because the importance of high level of quality of life remains the same regardless the size of the city. At the same time it is interesting for wider Europe, where urban networks of numerous European countries are formed from medium and small sized cities.

2. Objectives

We will analyze several different web tools for gathering public opinion on certain topics e.g. urban design such as e-democracy, apps for mobile devices, forums… and chose the most appropriate for use in our case study. Our choice for web based tools was based on principles of major accessibility, simplicity, user friendliness and versatility.

We are aware that certain groups of population do not know how to use these tools or they simply do not want to because of lack of trust. However, we believe that the major part of population which has interests in participating does have the knowledge and skills to use web based tools. Since the e-literacy is important part of everyday life and people tend to learn new skills every day (via workshops, seminars, brochures, lectures…), we can expect, that the number of people who will not be able to express their opinion or suggestions will decrease.

Slovenia has population just over 2 million, which is not concentrated in large cities, but is scattered all over the country. Overall, the population density is approximately 100 inhabitants/km^2. Relatively small number of citizens results in formation of smaller cities or towns, rather than just one or two major cities. Therefore our study focuses on smaller cities (By definition in Slovenian strategy of spatial development, large cities have approx. 100.000 citizens, medium cities at least 10.000, and smaller cities less than 10.000, but more than 3.000 citizens).

We believe, that in current way of spatial planning in Slovenia, people are not included in the decision making process early enough. Most of the times, the planners make all the major decisions, prepare the spatial plan and then release it to the public and collect public opinion. Consequences of late inclusion of citizens in spatial planning results in reluctance to new solutions. These reluctances could be avoided by including public opinion and suggestions in early stages of decision making processes and planning. If we ensure that public suggestions will be included in planning, people will not feel reluctant to changes, but will embrace them.

Most households in Slovenia get their energy for heating from individual furnaces, using different types of resources (oil, biomass, gas…). Problem of individual furnaces are:
-incomplete combustion,
-release of large amount of released particles,
-outdated systems,
-large number of pollution sources,
-smog,
-lack of maintenance,
-large sums of money needed for replacement and
-low energy efficiency.

In several municipalities change from individual furnaces to district heating has proven as an appropriate decision. Main reasons are:
-complete combustion,
-high energy efficiency,
-easy to use for customers,
-only one pollution source and
-low amount of released pollutants.

We have analyzed several municipalities and their energy plans. In most of them, encouraging of district heating is one of their top priorities. We have contacted several of the municipalities and asked for their cooperation in the project. Our research is focused on a case study because we would like to help the municipality in gathering public opinion and ensure that spatial solutions will be well accepted by local people and that their wishes and suggestion will be maximally considered. By analyzing a case, we would like to set an example for other municipalities and encourage them to use e-tools in similar cases. We have deducted that our research would bring more benefits to real life stakeholders. Therefore we have contacted several of the municipalities and asked for their cooperation in the project.

For the case study, we have chosen the municipality of Šentrupert, which has already made the first steps towards improving energy efficiency.

The municipality of Šentrupert has in the year of 2009 confirmed its Local Energetic Plan in which energy consumption and long term solutions were established. They have a strong vision of preserving natural heritage and becoming self-sufficient. Basic goals of the vision are long term development of the region, usage of renewable sources of energy, to inform all stakeholders about energy consumption and development of the

infrastructure and to be energetically independent with reliable infrastructure. For this purpose they have also been approved expendable financial support from EU. First step in the project was low - energy and low - carbon wooden kindergarten, which was built in 2010. Building consumes only 30 kWh per square meter (that means only 3 liters of oil per square meter of living space).

Picture: The kindergarten was also awarded as an energy sufficient building by the readers of Finance magazine in year 2011.

The core of the project is to connect all public facilities in the infrastructure for remote heating, and in the year 2013 a woodchip boiler room was constructed and prison Dob as the biggest energy consumption complex was implemented in that net.

In our case study we plan to inform all the citizens (approx. 500) by sending letters to all households. Therefore, we assume, that everyone will be informed. In the letter, we will invite them to participate by filling out questionnaires. If someone will not be able to fill out the online form, we will offer them an alternative (contact phone number), so they will be able to get information by phone arrange and arrange a meeting at the company headquarters and submit their opinion and proposals in person. Additionally, we plan to analyze the response to modern ways of communications by determining the classic to modern ratio.

Hypothesises:

- Citizens are not included in decision making process.
- Citizens are not familiarized with energy plans of the municipality.
- Due to large availability of EU funding for environmentally friendlier way of producing energy, a lot of citizens have recently renewed their heating systems. These individuals will not be interested in becoming clients of the planned heating systems.
- Citizens do not want to live near a heat-only boiler station (NIMBY effect).

3. Comparison of tools

METHOD	+	-
CONVENTIONAL TOOLS		
LOCAL NEWSPAPER	cheapest of all conventional tools, easy targeting (reaches every household)	limited circle of readers, no feedback (no opinions), impersonal approach
MAIL NOTICE	relatively cheap, easy targeting, reaches every individual	environmentally questionable, lack of feedback, impersonal approach

LECTURES	personal approach, more informative than mail notice, possible adaptations of lectures, Q&A session	price, low attendance, lack of dialogue (one sided communication), only one or two occasions (not everybody can attend), only really interested people come to lectures
PUBLIC PRESENTATION	Duration (usually 30 days), two sided communication, accessible to everyone, variant solutions	Presentation of finished plan or strategy, cost, narrow window for modifications
WORKSHOPS	interchange of opinions, variant solution	costs, limited number of participants, attendance
WEB TOOLS		
OFFICAL WEBSITE OF THE MUNICIPALITY	first place to look when searching for municipality's information	low number of regular visitors, no feedback
E DEMOCRACY	no need for going to municipality or administration unit, individual can submit suggestions on any published theme (considering planned law changes)	used mostly for administration processes, not for gathering public opinion
MOBILE APPLICATIONS	suitable for gathering suggestions (with photos), easy and intuitive to use	mostly used by younger population, person must be really interested for improving his/hers environment, suitable for gathering suggestions, not for opinion
QUESTIONNAIRE	versatility, easy to make, detailed, wide audience, easy to analyze	no dialog, lack of interest for completing questionnaires, problematic dissemination

By information of Statistical Office of the Republic of Slovenia (SI-STAT), in the first quarter of 2013, slightly fewer than 1,240,000 persons or 74 % of persons aged 10 to 74 used the Internet. The majority of these persons (95 %) used the Internet at least once a week. Persons aged 10 to 74 years used the Internet in the first quarter of 2013 mostly for sending or receiving e-mails (64%) and for reading online news, newspapers or news magazines (57 %).

Searching for different information on the Internet is also widespread; 54 % of persons used the Internet for searching for information about goods and services, 48 % for searching for health-related information and 33% for searching for information about education, training or course offers.

41% of persons participated in social networks and 27 % of persons used the Internet for telephoning or video calls via webcam over the Internet.

In the first quarter of 2013, 34 % of persons used the Internet for selling of goods or services, 31% for Internet banking and 24 % for ordering or buying goods or services.

Considering collected data, we believe that the fastest and most appropriate way of collecting public opinion will be web based questionnaire. Decision for using web tool is based on the fact, that processing data is easier and environmentally friendly. In addition, answers are already in digital, not paper form, which saves time and money. Also, there is no need for participants to mail their answers or to go to specific location to submit their answers.

Lectures and workshops were considered, but considering short time frame available for gathering public opinion and relatively high costs combined with possible low attendance we have decided, that web based questionnaire will be more appropriate for our case study.

Questionnaire was designed in the way, that participants can express their opinion about two different aspects:
-prospect of district heating in their municipality and
-their involvement in decision making process (not only in specific case, but overall state in the municipality).

In all stages of the questionnaire, participants have had the option of expressing their own opinion, rather just selecting proposed answers.

4. Methodology

In our case study we have informed all the citizens (approx. 500) by sending letters to all households. In the letter, we have invited them to participate by filling out questionnaires. If someone was not able to fill out the online form, we have offered them an alternative (contact phone number), so they were able to get information by phone arrange a meeting at the company headquarters or submit their opinion and proposals in person. We would like to emphasize, that we have contacted households and not individual people, therefore, we are planning to get one response per household.

"Waiting for the end of testing period (17. 4. 2014)"

5. Case study region

The Municipality of Šentrupert is one of the youngest municipalities in the Lower Carniola, it was established in the year of 2007 when became independent of the larger municipality of Trebnje. It is situated in the central area of Mirna River Basin. It has been first mentioned in the 1044 and it has a rich history, nowadays it is known as a land of hayracks. Here the first hayrack museum in the world can be found. The main town Šentrupert, famous for the gothic church dedicated to Saint Rupert is surrounded by populated hills, covered by forest and vineyards. The municipality covers an area of 49 square kilometers, has approx. 2900 inhabitants, who live in 25 settlements.

Picture: Gothic Church of Saint Rupert in the center of Šentrupert

The most typical landscape feature is forest, which covers roughly 66 % of national territory. Municipality of Šentrupert is not much different from the rest of the country and almost half of municipal territory is covered in forests. In its energy plan, city has stated, that one of the main strategic long term goals is encouraging district heating. District heating could be backed by one of the country's richest renewable resource – biomass.

The municipality altogether consumes about 1 156 000 liters of heating oil per year and only prison Dob consumes from 700 000 to 900 000 liters per year, that means over 1.1 million € per year. First step in the project change of energy supply for the public facilities. Wood is the strategic natural material in the valley.
Public company Energetika Šentrupert was established, wood processing center was designed, a woodchip boiler room and woodchip cogeneration were build and prison Dob and college complex (primary school, kindergarten, sports hall) are already heated with the system of remote heating. Electricity production from cogeneration is sold to the grid, waste heat is sold to investors. Woodchips are processed as wood waste from wood processing center.

Vision of municipality is to become energy self - sufficient by the year of 2020. To reach this goal they plan to harvest renewable natural resources of the valley, rich with wood, each year there is a 100 000 of cubic meters of annual increment. Wood processing center, called Puščava, will create new working spaces, there construction wood and wooden products will be created and consequently heat, energy and power are produced.

To be more resilient and responsible to the environment the municipality has already built an electric car charging station and they are planning to build a power station, powered by waste incineration system.

An important task is also to have well informed stakeholders and for this purpose the municipality is very interested in our work, since they want to establish a clear way of communication, which goes in both directions.

Municipality is involved with the Remida (smaRt Energy chains and coMmunities in the meDiterranean Area) project which aims at developing new energy efficient cities thorough promotion of smart management of energy supply and demand. There are several countries taking part in the project: Italy, France, Greece Bosnia and Herzegovina, Montenegro and Slovenia.

6. Results

"Waiting for the end of testing period (17. 4. 2014)"

7. Discussion

"Waiting for the end of testing period (17. 4. 2014)"

8. Conclusions

"Waiting for the end of testing period (17. 4. 2014)"

9. Team

Gašper Okršlar is currently studying a master's in Spatial planning at University of Ljubljana, Faculty of Geodesy and Civil Engineering. He obtained his Bachelor's degree on Biotechnical Faculty (University of Ljubljana), studying Forestry and renewable forest resources.

Mateja Klun is currently studying a master's in Environmental civil engineering at University of Ljubljana, Faculty of Geodesy and Civil Engineering where she has previously obtained Bachelor's degree in civil engineering.

Maja Weisseisen is currently studying a master's in Spatial planning at University of Ljubljana, Faculty of Geodesy and Civil Engineering where she has previously obtained Bachelor's degree in civil engineering.