Rethinking Public Buildings' Functions: The Case for Participatory Design Methodology

V Kandusová and T Vácha
Czech Technical University in Prague, University Centre for Energy Efficient Buildings, Trinecká 1024, Buštěhrad, Czech Republic

veronika.kandusova@cvut.cz

Abstract. Municipalities often struggle with reconstructions and refurbishing of buildings in public ownership. This is not only because of limited expert capacities that municipalities struggle with (municipal architect position or urban planner position is vacant, or non-existent etc.) or lack of finances. There is an increasing need and demand from municipalities for redefining buildings’ original purpose and finding new, sustainable and innovate functions. They have to decide not only how to reconstruct, but how to rethink its original purpose. The case study from a city of Slaný shows how participatory design can serve the goal of finding new functions of a public building and effectively contribute to the planning phase of reconstruction projects. Sustainable urban development should react to people’s needs, new technologies and environmental challenges. Reconstruction projects should reflect innovations in both technologies and approaches and respond to newly emerged functions. The methodology demonstrated in the case study can serve as a tool for assessing preferences of citizens, needs of the municipality and bridge the gap between politicians, experts and citizens by supporting efficient communication and evidence-based decision making. Moreover, this case shows how to ensure social sustainability and project effectiveness by involving multidisciplinary teams, in this case architects, urban planners, sociologists, communications experts and environmental and engineering psychologists.

1. Introduction

1.1. Data of public buildings owned by municipalities
Municipalities together with other state administration are the main owners or administrators of buildings in public ownership. The exact numbers of how many public buildings are owned by municipalities in the Czech Republic is not exactly known. So-called “CRAB” system (The Central Register of Administrative Buildings), active from 2012, was created with the intention to have an overall and detailed information about buildings in state ownership, including costs or rent revenues [1]. However, by the end of the 2018 the register seems to be incomplete and only consisting of buildings in state ownership – mainly administrative buildings of Ministries, thus lacking numbers and information about other publicly owned buildings, including the ones owned by municipalities. Questions about the costs of developing the CRAB system and its results have arisen, doubting whether the whole procurement was “corruption free” [2]. To sum it up, not many conclusive information and reports can be found on the numbers and quality of public buildings in municipalities’ ownership by the end of 2018. In 2019, though, results from a survey conducted by the Czech Statistical Office [3] should be known, focusing on the whole range of public buildings, mainly administrative ones.
1.2. Reconstructions and maintenance of public buildings – the obstacles

What we know from our experience from working with municipalities, is that they struggle with what they are obliged to do as “public corporation” and follow the main legal requirements – as an obligation “to care about the public building with due diligence”. This is due to many reasons. The most known and often mentioned one is that municipalities lack finances to properly and regularly secure refurbishments and reconstructions of the buildings they own. Other reason is that they lack expert capacities/human resources. For instance, by not having municipal architect or urban planner with whom they could discuss the regular maintenance of buildings and other necessities, seek advices for new projects et cetera. The lack of resources – financial or personal – is most certainly a crucial obstacle for municipalities when fulfilling their legal obligations. However, another challenge is the changing nature of society, new forms of community activities and subsequently new citizens’ claims on what municipality should secure for them. There is an increasing need and demand from municipalities for redefining buildings’ original purpose and finding new, sustainable and innovate functions. Public building that is not used or rarely used (due to its function) is not only incompatible with legal requirement “to care about public building with due diligence”, it is also unsustainable. Such buildings are wasting the potential of making revenue or being used for public good.

Thus, municipalities seek partners to advise them how to reconstruct an existing building and how to rethink its original purpose. Reconstruction of existing public building or public space represents great opportunity to accommodate unsatisfied needs of the citizens and organizations [4]. The approach that can serve in these situations is participatory design methodology and involvement of multidisciplinary teams consisting of both “experts on buildings” and “experts on people” – architects or urban planners on one side and sociologists or psychologists on the other. The case study from a city of Slaný shows how participatory design methodology can serve the goal of finding new functions of a public building, effectively contribute to the planning phase of reconstruction projects, and, consequently, contribute to sustainable urban development by reacting to people’s needs.

2. Participatory design: how and why?

2.1. What is participatory design?

Participatory design, broadly speaking, is an approach that stems from realisation that individuals and organizations who are affected by a project or can affect the project, should be involved into the process of project design, planning and implementation. Moreover, when the project is administered by a public entity (like municipality), special focus needs to be given to the interests and needs of the citizens. Therefore the municipality, or other public authority should engage citizens and key stakeholders using participatory design resp. participatory planning [5].

There are three basic pillars of participatory design:

A. **To inform**: creating communication strategy, distributing understandable information about the project and reacting to questions and concerns brought up by the public.

B. **To listen**: analysing needs, preferences and capabilities of target groups using methods of social sciences.

C. **To involve**: involving key stakeholders into design through workshops and feedback sessions on proposed solutions [6].

These pillars are complementing each other, and they should always be used as a part of complex communication and participation strategy. Before developing the strategy, a necessary step is to perform a stakeholder analysis. The analysis aim is to identify who can be influenced by the project and who can influence its outcome. Based on the stakeholder analysis, categories of stakeholders are defined. The analysis helps to decide to what extent and how should different stakeholders be involved in each pillar or individual activities [7].

Participation can significantly help change citizens’ attitude towards the projects. Active engagement in the discussion regarding construction project generates the state of psychological ownership. The feeling that the building is theirs can change how involved parties feel and behave towards the building.
or space and how much it is used [8]. However, it should be noted that misuse of participation and random indication of some of its methods can lead to more damage than no participation at all [9]. For instance, people will feel betrayed if you organise public discussion at the stage when they cannot influence any of the project parts.

The participation process should follow the following principles:

1. There is a strategy and responsible individual coordinating the process.
2. The process has defined ties to decision making and outcomes of the project.
3. There is clear logic behind selection of target groups and their role in the process.
4. Independent experts on relevant topics are involved in the discussions.
5. Combination of several differed methods of needs analysis and engagement is used.
6. Existing communication channels are used effectively (local news, social media, public events).
7. Local schools, NGO’s and citizen associations are involved as partners.

ICT tools bring new ways of engaging stakeholders in participatory design process. They are especially useful for informing large amount of people, presenting the project in interactive way and for analysing needs of broad spectrum of people. However online tools should never be used alone. They leave out people with limited digital literacy and limited access to internet [10].

2.2. Participatory design – what for?
Participatory design serves many purposes. At the beginning, during stakeholder analysis, it helps municipalities to realize how many people can be influenced by the project and how many people do influence the project at the end. By looking at various types of stakeholders, it helps the planners to realize how many different motivations these stakeholders may have and that they need to communicate with each of them differently. It helps municipalities to discover citizens’ needs and attitudes towards the project – in our case finding new use for a public building. If this part would be skipped, the municipality might realize too late that the new function they thought is needed is not that warmly welcomed by municipality’s citizens and vice versa. It helps to communicate the project to the public as well – what is being planned and why, what are expected benefits, who is involved in the process etc. As mentioned above, it helps with creating psychological ownership – people will internalize that the building is public, therefore is also theirs and they should actively engage in discussion regarding its use as well as actively using it once it’s built. It helps translating the needs of the municipality to the citizens and vice versa, it helps translating the possibilities and limits of the reconstruction between experts and project coordinators, citizens and political representatives. When municipality has a clearer picture of what is possible and what is needed and useful for the municipality, it’s much easier to specify the tender documentation. Better preparations before the project starts help municipalities to save money and time at later stages [7], thus making the project more efficient.

3. Case study: public building in Slaný
The city of Slaný owns currently unused building – so called “County Hall/House” (Okresní dům), built in 1902, which served as a representative and administrative building till the end of the 20th century. Now the building is vacant and the representatives of Slaný were seeking advisory in deciding how they should renovate and reconstruct this building, and giving it a new purposes since it was no longer needed as an administrative building. That is when our university centre joined the city as a partner. Hereafter, the participatory design used is described.

3.1. Stakeholder analysis
Firstly, stakeholder analysis was conducted. Several stakeholder groups were selected to be involved in needs analysis and to be reflected when creating an effective communication strategy. Stakeholders identified and involved were:
• Political representatives of Slaný.
• Employees at the municipality office, including staff of departments of urban planning, culture, social services etc.
• Non-governmental organisations active in Slaný.
• Interest groups in various areas (culture, sports and other interest groups such as local hunter groups, fisherman association etc.).
• Municipal library.
• Local elementary schools.
• Local elementary arts school.
• The general public (divided into age groups such as seniors, families with children, youth, students etc.).

3.2. Communication Strategy
As the main stream for informing about the project, local newspaper issued monthly by the municipality were used since it was crucial not to leave out people who do not use modern technologies. The official web page and Facebook page were also used. During the project, everyone had an opportunity to contact the participatory team via email or phone. List of activities and dates were decided at the very beginning so everyone could take time to take part in discussions and workshops. People were also informed during field surveys which were part of the needs analysis. Representatives of specific groups were directly contacted, invited for all public events that were part of the project and invited for an interview. The participatory team was regularly meeting with the contracting authority – municipality representatives, to discuss following steps and interim results.

3.3. Needs Analysis
The needs analysis combined several methods selected considering the target group and the information that needed to be gathered.

Individual interviews were conducted with people who had an extensive knowledge of local conditions in specific areas of public life, culture or governance:

• Political representatives.
• Employees of the municipality office.
• Representative of Local elementary arts school.
• Expert on Slaný’s cultural life – representative of a local alternative cultural center.

Workshop was organised with representatives of local interest groups and NGOs. Participants were considered as representatives of various groups, various interests and, therefore, experts on needs of these groups. Around thirty individuals from ten interests groups took part in this workshop, for instance representatives of local museum, municipality library, fisherman association, senior interest group or NGO organising free time activities for children. Crucial was that both participatory experts and experts on buildings took part in this workshop. Former facilitated activities, the latter answered questions of participants and discussed possible options and limits of the building itself. Themes that were discussed during the workshop were:

• Currents needs of citizens and organisations/groups.
• Possible involvement in the operation of the building.
• Potential activities and their functional requirements
• Historical value of the building.
• Multipurpose use of the building.
• Organisational aspects, coordinating of the activities with the building.
• Financial viability and sustainable operation of the building.
Special workshop was organised with the municipality library, since they were the first interested candidate for using the building. Their current place was no longer sufficient and they wanted to extend their activities – to organise more events for broader scope of people. During this workshop, their current operational problems were discussed, their needs, scope of their activities, their capacities, and willingness to share the space with different organisations.

General public was first involved via short questionnaire and field survey. The questionnaire was distributed both online and offline and contained two open questions – what public buildings and spaces are lacking in Slaný and what would be the best use of the former “County Hall/House”. The questionnaire was distributed via official online networks (Web page, Facebook) or in paper form at the municipality office and in the official newspaper. Around 100 responses were gathered.

The age or social groups underrepresented in survey were more involved during a field survey. The survey included questions from questionnaire and in addition presented initial ideas regarding building use to the citizens and their reactions were discussed and recorded. These first ideas were based on the interim results from workshop and individual interviews. This way it was possible to confront the proposals with immediate responses and take some new, interesting remarks and ideas into consideration.

As the last event and activity, public discussion was organised in cooperation with the municipality. During the public discussion, proposals on buildings functions were already presented. However, these proposals were still intended for comments and alternat ions, and open for a discussion. Purpose of the public discussion was to:

- confront the proposals,
- answer to peoples’ questions,
- deal with and respond to peoples’ concerns,
- communicate what was done during the first phase,
- introduce the next steps.

4. Results of the participatory design

Participatory design allowed various groups to be involved in shaping the future of an important public building in Slaný. It also allowed political representatives to communicate the project with general public and confront what they thought was best with what people actually wanted. During all stages, independent architects were part of the team to react to questions of the stakeholders including real options and limitations, so all the involved parties would not be disappointed when some conditions or needs were not possible to meet. At the end of the project, the city of Slaný received detailed needs analysis, specification on the future functions of the building and two specific variations on how the building should be used after reconstruction. The purpose of this report was to enable informed political decision-making and later to serve as base document for preparation of an architectural competition.

Agreement on the future role and function of the building, from various involved groups, was as followed:

- Building open to wide public where various cultural and social activities are being held.
- Barrier-free-access and openness to all
- Friendliness for everyone – understanding different needs for using the building (youth, seniors etc.).
- Multipurpose use of the building, flexibility of the building.
- One coordinating entity responsible for communicating with groups/organisations using the building.
- Intended also for the use of local organisations/interest groups.

The two presented variations on how to combine all these functions was to have either:

1. Independent community and cultural center – creating a new legal entity which would be the administrator of the building. Combining free time activities, social activities, cultural events.
2. **Community center with a library** – connecting the function of a library with other cultural and social events. Library serves as the building main administrator.

For each variant a set of proposed functions/activities defining the building’s use and their spatial requirements were described. Examples of good practices and successful projects were included as well. The variants were also described from organizational and operational perspective.

5. **Conclusion**

The paper demonstrates how participatory design can be used to find a new purpose for unused municipal buildings. Importance of stakeholder analysis, tailored communication strategy and selection of appropriate methods for success of the processes is stressed. The process needs to have clear goal, real ties to decision making and declared political support. Experts such as architects and as well as municipality representatives should be presented on workshops and public meetings to provide answers for participants’ questions and to keep discussion from diverging into speculations. The paper presents combination of methods that can be used and how, if put together, they can provide ground for informed political decision making which takes the needs of citizens into account. Old building can serve new purpose and fulfil the needs of citizens, but unless the needs are understood, nobody can be sure that the building will provide what is needed and that the result will be accepted. Engagement of active organizations can also motivate them to take part in building’s operation by filling it with activities and share the operational cost or duties.

**Acknowledgement:**

This work has been supported by the Ministry of Education, Youth and Sports within National Sustainability Programme I (NPU I), project No. LO1605 – University Centre for Energy Efficient Buildings – Sustainability Phase.

**References**

[1] Integrovaný operační program Centrální registra administrativních budov 2011 [Online] Available: https://crab.uzsvm.cz/. [Accessed 30 10 2018]

[2] Seznam Zprávy Policie vyšetřuje největší tunel v dějinách českého IT 201. [Online] Available: https://www.seznamzpravy.cz/clanek/policie-vysetruje-nejvetsi-tunel-v-dejinach-ceskeho-it-28226. [Accessed 30 10 2018]

[3] Svaz měst a obcí ČR ČSÚ provede mimořádné šetření o nebytových a vybraných budovách 19 10 2017 [Online] Available: http://www.smocr.cz/cz/oblasti-cinnosti/majetek-obci/csu-provede-mimoradne-setreni-o-nebytovych-a-vybranych-budovach.aspx. [Accessed 30 10 2018]

[4] Eriksson J, Glad W and Johansson M 2015 User Involvement in Swedish Residential Building Projects: A Stakeholder Perspective J. Hous. Built Environ. 30(2) 313–29

[5] Arnstein S 1969 A Ladder of Citizen Participation JAIP 35(4) 216-24

[6] Vácha T, Přibyl O and Bacúrová M 2016 Involving citizens in smart city projects: Systems engineering meets participation Smart Cities Symposium Prague (Prague)

[7] Yang R 2014 An investigation of stakeholder analysis in urban development projects: Empirical or rationalistic perspectives Int. J. Proj. Manage. 32(5) 838-49

[8] Pierce J, Kostova T and Dirks K 2003 The state of psychological ownership: Integrating and extending a century of research Rev. Gen. Psychol. 7(1) 84–107

[9] Irvin R A and Stansbury J 2004 Citizen Participation in Decision Making: Is It Worth the Effort? Public Adm. Rev. 64 55–66

[10] Modarres A 2015 Beyond the digital divide Natl. Civ. Rev.100(3) 4-7