Smart Governance: An Investigation into Participatory Budgeting Models [†]

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Abstract: Promoting public participation in urban processes has long been a key issue in discussions about urban governance. However, despite the advantages of more progressive and inclusive city governance, participatory budgeting (PB) often faces challenges to ensure collaboration between different city departments and involved residents. In some cases, residents are unsure about PB models' transparency, other examples show the way NGOs use the model as a counterforce to central governance and thus local actors lack political and financial support. Moreover, uncertainty and restrictions imposed by the global pandemic in some way also impacted the realization of PB. This research aims to identify stakeholders in the participatory budgeting approach, describing opportunities and challenges of the organizational process and digital technologies as a means of enabling communication and collaboration between actors.

Keywords: smart governance; participatory budgeting; urban regeneration

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1. Introduction

Many cities across Europe are using the smart city concept to tackle such challenges as rapid urbanization, climate and environmental changes, demographic changes, and economic restructuring. It is generally agreed that smart cities use digital solutions to make the management and services of the urban environment more efficient for the benefit of its inhabitants and business. Recent research has shown that the concept of smart cities emerges to its second generation with the shift towards approaches that foster collaboration and community involvement. Local governments around Europe have embraced digital technologies for optimizing urban management and communication between local governments and non-governmental actors in the search for sustainable inclusive urban development. Thus, smart city governance is viewed as an approach that aligns the potential of digital technologies and new collaboration models to improve the quality of life and local prosperity.

Cities are complex systems, inhabited by people with different wishes and needs. Thus, communication and collaboration appear to be crucial elements of governance [1]. Through the channels which are a result of communication between different actors, it is possible to support collaboration between citizens and public organizations and make use of private companies while solving social issues [2].

Smart governance is a complex concept that has been explained by various scholars. Smart governance includes ICT-based governance which consists of digital technologies, people, policies, practices, resources, social norms and information that interact to support city governing activities, moreover, smart governance also includes good practices in involving citizens in transparent, participative and accountable governance activities [1]. ICT-based approaches are crucial to achieving a qualitative improvement in the relationship between citizens and their government [3].

Public participation is aimed at recognizing people's voices in addressing urban challenges and city-making, which are viewed as a crucial element to accomplish urban development in a more effective, sustainable, and inclusive way. Participatory budgeting (PB) empowers people to collectively decide on how to spend part of the public budget. While in some cities of Europe PB was introduced in the 2000s, in others such programs appeared only in the 2010s. Thus, the process of applying different models and bringing together different parties is new to all engaged actors: local authorities, citizens, stakeholders, researchers.

There is an increasing interest of universities in contributing to urban development issues [4]. Over decades Universities gave input on questions related to urban development by conducting theoretical studies and research by design. Moreover, in recent decades, universities are supporting partnerships, grassroots projects and media conversations in order to take an active part in the development of cities.

In the case of neighborhood regeneration, participatory actions are of special importance as they can strengthen the sense of community, sense of belonging to the neighborhood and can foster greater interest in community life, raise the quality of public spaces and foster regeneration processes. In the last decade, a number of different support tools were created to ensure more active involvement of neighborhood communities in the planning and design processes in different cities. Thus, it is crucial to enhance the knowledge about PB using experience and supporting knowledge exchange.

This research aims to identify stakeholders in the participatory budgeting approach, opportunities and challenges of organizational process and digital technologies as a means of enabling communication and collaboration between actors. This process is discussed through detailed case studies in Riga in relation to similar participatory budgeting processes in the cities of the Baltic Sea region.

2. Materials and Methods

To reach the research aim several tasks were defined:

- Collection and qualitative comparative analysis of data related to participatory budgeting programs.
- Discussion of the process of participatory budgeting approach.
- Definition of the role of universities in the participatory budgeting process in Riga.

Selected case studies illustrate the different approaches and digital technologies and define involved stakeholders. The case studies are based on a collection of participatory budgeting project data from the Riga government official webpage and on results from collaboration activities between the Riga Technical University Faculty of Architecture and actors involved in participatory budgeting initiatives. The Faculty of Architecture is involved in different stages of participatory budgeting projects: preliminary studies, brainstorming, testing collaboration approaches, etc. The authors of this article participated in several projects within programs: "Riga City Participatory Budgeting Project Ideas Competition" and "Multifunctional Public Open Space Development in Riga's Neighborhoods". The participatory budgeting approach in Riga is then compared to the approach used in Tartu and Tampere.

3. Results

Involvement of local inhabitants in co-planning and co-design of a neighborhood is of special importance, as it strengthens the sense of belonging to a place and sense of community. Participatory budgeting allows direct citizen engagement in decision-making related to the regeneration of the urban environment. While the participatory budgeting processes are organized by municipality, the stages of PB, involved stakeholders and digital technologies may differ.

3.1. Participatory Budgeting Programs in Tartu

The city of Tartu started the PB process in 2012 with an introductory seminar. The next year the special working group was formed with the aim to elaborate a suitable model and scenario for the implementation of PB. Already in the 2010s, the city government had taken first steps towards combining the tools of traditional participation with e-tools in order to engage citizens in spatial planning processes. In Estonia, PB in the framework of the project “Participatory Budgeting in Local Governments” was implemented by the Estonian non-governmental organization eGovernance Academy (eGA) [5]. Currently, the participatory budgeting initiative is realized in terms of Tartu’s inclusive budget program. Voting is allowed for those who have reached the age of 14, each person with an opportunity to vote for a maximum of three project ideas. The ideas can be submitted by everyone—both individuals and organizations.

Stages of PB in Tartu include submission of ideas, division of proposals into themes and feasibility check, discussions. Feasible ideas are published on the web page to receive citizens’ feedback. This stage is followed by co-working with experts within the theme group and a common decision of a group on proposals, which need to be nominated for further public voting.

The participatory budgeting project for Tartu city [5] implements a relatively simple informative, at the same time clearly structured web platform providing the description of participative budgeting project progress and ideas. The solution is based on open-source CMS Drupal [6]. The platform is not integrated with any cartographic services. For the voting support, there is implemented an integration with the participatory voting system of Tartu city government [7].

3.2. Participatory Budgeting Programs in Tampere

Similarly, as in Tartu, also in Tampere PB initiatives appeared in the 2010s. The first experiment through the pilot initiative of the city and Tampere University was realized in 2014. Residents were invited to co-develop a recreation area. The initiative gained political acceptance and showed a growing interest in PB. Still, the pilot did not result in further PB projects and only in 2020–2021, Tampere started to implement a new PB process with a particular focus on the well-being of children and young people [8]. In the context of PB, focus ideas can be submitted by everyone regardless of their age and place of residence.

The participatory budgeting project for Tampere [9] city proposes a modern advanced interactive web platform that is based on Decidim [10]—free open-source participatory democracy, citizen participation and open government framework for cities and organizations.

Decidim (from the Catalan “let’s decide” or “we decide”) is a participatory democracy framework, implemented in Ruby on Rails, originally developed for the Barcelona City government online and offline participation website. The Decidim platform allows any organization (local city council, association, university, NGO, neighborhood or cooperative) to create mass processes for strategic planning, participatory budgeting, public consultation, collaborative design for regulations, urban spaces and election processes, etc.

The cartographic information is provided by HERE Maps (HERE, 2021) (formerly a Nokia product) implementing high-quality interactive web mapping and other related services. The solution is highly informative and interactive including also integrated voting capabilities.

3.3. Participatory Budgeting Programs in Riga

Since 2016, the city of Riga is launching a funding program called “Neighborhood’s initiative to promote public participation and strengthen the sense of community” [11]. In terms of this program, the city organizes four contests a year to fund projects submitted by neighborhood community associations and other related NGOs or institutions.

In 2019, the Riga City Council launched a new participatory budgeting pilot program called “Riga City Participatory Budgeting Project Ideas Competition” [12,13]. The main

aim is to foster neighborhood regeneration and the creation of identity while supporting local inhabitant participation in the development of the area.

The digital platform of the program is based on an open-source content management system (CMS) Drupal [6] providing an integrated back-end and front-end solution for easy content authoring, reliable performance, and security both for desktop, as well as for mobile users. The CMS is integrated with Google Maps web mapping service for visualization of GIS data. The electronic voting for submitted projects is organized through integration with the state service portal latvija.lv. The digital platform is also integrated with social networking platforms Facebook and Twitter. The GIS data on the project webpage show how many projects were submitted in each neighborhood and allows to analyze how fragmented is the urban regeneration process. Additionally, it facilitates the easier search for projects in specific neighborhoods, while voting (Table 1).

Table 1. Number of projects and voting results under the program “Riga City Participatory Budgeting Project Ideas Competition” (developed by authors using publicly available data from [13]).

Year	Submitted Projects	Total Votes	Accepted Projects	Votes for Accepted Projects
2019	33	9234	5	7073
2020	24	23,915	6	19,299
2021	34	ongoing	ongoing	ongoing

In December 2019 Riga City Council City Development department started the new initiative “Multifunctional Public Open Space Development in Riga’s Neighborhoods”. Riga Technical University Faculty of Architecture (RTU FA) and RISEBA FAD were actively involved in the process of preliminary studies, communication with local inhabitants and development of project proposals (Figure 1a,b). The web pages of the given project [14] are implemented on a basis of the worldwide popular CMS—WordPress [15]. The digital platform provides simple static content that is not integrated with any external cartographic or other services. An exception there is the possibility for the users to provide feedback about the public outdoor space proposals published on the platform.

(a)

(b)

Figure 1. On-site discussions (a) and participation of local inhabitants in co-creation activities (b) in terms of the program “Multifunctional Public Open Space Development in Riga’s Neighborhoods” ((a,b)—photos by authors).

In the case of the initiative “Multifunctional Public Open Space Development in Riga’s Neighborhoods”, project sites were pre-selected by the municipality, thus also the involvement of residents and voting during the later stages is in general limited to inhabitants of the neighboring houses.

Whereas RTU FA collaboration with NGOs with an aim to support communities in their application for the “Riga City Participatory Budgeting Project Ideas Competition” ensures communication through all project idea development phases starting from identification of opportunities and challenges, selection of sites in cooperation with the local community, till the discussion of proposed ideas and development of alternatives through the active engagement process. Project ideas which are applied within this PB are open for voting by everyone who reached the age of 16. A person can vote only for one project.

4. Discussion

Smart governance allows taking advantage of digital technologies to involve multi-actor and multi-sector views and support community-based smart urban development [16]. In all three city cases, participatory budgeting programs promote multi-actor involvement in decision-making on urban regeneration issues and the allocation of a part of the public budget. In the case of Riga, both individuals and citizens as representatives of an association can submit ideas. Submission of proposals on behalf of an association allows optimization of resources and building capacity, thus, ensuring the creation of more qualitative proposals.

The stages of the participatory budgeting program are formed by the public participation (PP) approach. The PP approach includes several stages: inform, consult, involve, collaborate, empower [17]. Similarly, participatory budgeting includes stages of organization/designing the process, brainstorming, development and submission of proposals, voting, and funding (Figure 2). Despite all analyzed cases involving the process of proposal submission by individuals or groups of individuals and public voting, still differences exist in the organization of discussions, brainstorming sessions and co-design activities.

Figure 2. Role of the university in participatory budgeting process in Riga [diagram created by authors].

Digital technologies allow to involve a wider range of actors and ensure effective communication between officials and actors, and feedback collection. Similarities in the choice of digital technologies are seen across three city cases: open-source CMS Drupal is used in Riga and Tartu, while both Riga and Tampere incorporate in PB a cartographic information, still only Tampere uses decidim framework, to ensure collaborative proposal design.

The number of votes collected during the public voting stage is one of the main factors that influence whether the proposal is accepted or not. For proposals to be competitive, they need to be of high visual quality with a clear objective and calculation of financial costs. For this reason, in order to develop qualitative proposals, the community requires

professional support. The University acts as a supporting institution (Figure 2). In the case of Riga, the university integrates a brainstorming stage before a proposal is submitted for evaluation and public voting.

5. Conclusions

PB is a part of the smart governance concept that fosters the involvement of interested parties in the initiation and implementation of urban environment development projects. PB provides a direct link between local people and municipalities and ensures a clear and transparent path from an idea/proposal to a realized project.

The effectiveness of digital technologies to support the PB process is dependent on the digital skills of local people. Thus, accessibility of digital tools and education aimed at improving digital skills allows a more active involvement of the local community in the PB process.

Universities are taking new roles as city planning facilitators, bridging the gap in the PB brainstorming stage and acting as a point of contact between the municipality and local people. Universities are taking on responsibility for the active communication and collaboration with citizens to foster the development of more qualitative proposals to benefit the daily life of communities.

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