

CITIZENS' INVOLVEMENT IN THE DESIGN PROCESS OF PUBLIC SPACES: THE CASE OF ELGESETER STREET IN TRONDHEIM, NORWAY

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ABSTRACT

Public spaces are a key element of our cities since they help to create urban life, contribute to inhabitants' well-being, and serve as the setting for a variety of group and individual activities. Therefore, they should be designed for and with the citizens: combining citizens' ideas with the professional knowledge such as architects or urban planners enriches the project. It leads to areas designed for the citizens and generates a sense of community and identity. In Norway, the Elgeseter street is at the heart of many projects for Trondheim municipality. This study questions the participative approaches to design public spaces on Trondheim's Elgeseter street. It is based on a literature review and an experimentation of citizens' involvement in the design of one specific public space in the area. It explains why participative approaches are important in creating better urban designs that improve city life and residents' well-being and it investigates the different participative tools that could be useful for the Elgeseter street. This research explains how empowering citizens with a collective mission to rethink and redesign the urban spaces generate a sense a community and involvement. This sense of community is an essential basis for providing great public spaces. Citizens are willing to see and participate in the transformation of the area because they identify themselves to project and to the area. While it is obvious that involving citizens in the process is essential to improve living conditions and urban life, it is also important to choose adequate and relevant tools depending on the type of project, the area, the context and the identified targets group. For Elgeseter street, relevant tools were designed, as visual and playful objects and models to interact with the citizens and imagine together a nice public space for the area.

KEYWORDS *_ public spaces, citizens' involvement, participative approach, urban design*

INTRODUCTION

This conference paper seeks to address the research question “How can public spaces be designed effectively by involving citizens?”. The study focuses on the significance of citizens’ involvement in the design process of public spaces, using the case study of Elgeseter street in Trondheim, Norway. The primary objective is to identify suitable participation tools that align with the specific context and project requirements. The paper also presents the results of an experimentation involving citizens in a project for Elgeseter street, showing the potential impact of such involvement on the neighbourhood’s quality of living and environment.

Case study description

Elgeseter district as one of the most important streets in Trondheim city is experiencing challenges such as increased traffic, toxic pollutants, and noise pollution (Afshari et al., 2023). This street is an urban road of Trondheim and it is the main road to the city center from the south and it has a total length of one kilometer. The street is now the main access road to the city, with direct access to major highways and the E6, the European Route through Norway and Sweden. It is primarily intended for automobiles, with no tram service, making pedestrians and cyclists feel unwelcome and unsafe. Elgeseter Street is currently plagued by numerous issues, including heavy traffic, excessive noise, and air pollution. It also serves as a barrier for the surrounding area. There are few pedestrian crossings, and people must wait for a long time for the green light.

Aside from Elgeseter park near Studentersamfundet and two other spaces near the street but not directly related to it, there is a notable lack of accessible public spaces in the area. The street was designed for cars, but its citizens and their well-being were overlooked. The lack of attractive public or meeting space contributes to the street’s unwelcoming atmosphere. Citizens desire a higher quality of life free of excessive air and noise pollution, as well as new public spaces that promote social interaction and community engagement. As a result, in order to provide acceptable urban areas and encourage people to use it, infrastructure and regulations in this case study region must meet the expectations of current and future users (Afshari, 2022).

Scope and purpose of the study

Since involving citizens in the design process of public spaces is obvious, the purpose of this paper is to define and identify which methods and tools cities could use to involve citizens. This study focuses on the case of Elgeseter street and was motivated by the following research question: “How to design public spaces in Elgeseter gate by involving citizens?” The goal is to define participation tools that could be useful for involving citizens in the design process of public spaces for Elgeseter Street. It also introduces the results of an experiment conducted with citizens on one project, as well as the potential impact of such involvement on the quality of living and environment in the neighborhood.

THEORETICAL BACKGROUND

In recent times, there has been a significant increase in the migration of people from rural to urban areas (Champion, Cooke, Shuttleworth, 2018). This contemporary trend has put cities under pressure to accommodate and support a growing population. They encounter challenges in meeting the fundamental needs of their inhabitants such as housing, food, education, transports. This situation has led to fast urban expansion, making it essential to focus on the design of urban facilities. Public spaces are urban areas accessible to all citizens that connect the different parts of the built city. Integrating well-designed public spaces within urban development plans is crucial to create more sustainable, liveable and inclusive environments for the residents and they play a key role in the well-being of its inhabitants.

Importance of public spaces in urban life

Public spaces are central to political and social life in cities (Collins, Stadler 2020). Public spaces can be defined as “space to which people normally have unrestricted access and right of way” (Sendi, Goličnik Marušič, 2012). There are open spaces, publicly accessible where citizens can gather, and go for group or individual activities. There are the theatre of protesting, socializing and encountering difference. The city and especially the public spaces are meeting spaces. “Life between buildings” is about every activity practiced in the public spaces (Gehl, 1971). Public spaces are a key element for cities. They contribute directly to the well-being of urban residents and the reputation of cities for vibrancy and liveability (Collins, Stadler 2020). It is therefore essential to pay attention to public spaces in our cities, even more these days given the increasing rural-to-urban migration.

Strengthening citizen involvement and rethinking urban planning

The idea of the “right to the city” (Lefebvre, 1966) highlights the urgent need to rethink cities at human scale, as authors such as Jacobs, Churchill, Gehl and others claim it. “It is the people who make the city” (Churchill, 1962). People are the ones who live and use the urban spaces every day. The city should be designed for and with them. Involving them in the design process of public spaces sounds obvious to make a better, nicer and more adapted city to its inhabitants. Recreating and rethinking the city should be part of a common and collective mission, supported by the city.

Involving citizens in the design process of public spaces means listening to them, to their needs and ideas for the cities as they are the ones who live and experience the city in their everyday lives. It seems essential and obvious to take into account their ideas. (De la Cal, 2018) By merging citizens’ desires with the expertise of architects and urban planners, projects and public spaces can flourish with richness and completeness. Embracing a transversal approach, where all stakeholders contribute to the projects with their diverse knowledge and insights can enrich the project profoundly. When different perspectives come together from various horizons, it results in a more holistic and inclusive outcome that truly reflects the aspirations and well-being of the community.

Finally, embracing a participative approach in designing public spaces has a lot of benefits. When public spaces are thoughtfully designed with the active involvement of citizens, the result is a more welcoming and inclusive environment, where people feel a greater sense of belonging and satisfaction. Consequently, the attractiveness of the area naturally improves which is a good benefit for the city. In the end, the successful execution of a participative approach benefits all stakeholders involved: citizens enjoy their neighborhood, the city supports safer and more welcoming areas and architects, and urban planners take pride in delivering well-received public spaces and projects. (Kaplan, 1980)

The need of public spaces according to the sustainable development goal 11

The United Nations established 17 sustainable developments goals in the 2030 Agenda for Sustainable Development, adopted by all its members. Among all these goals, the goal number 11, sustainable cities and communities aim to provide better urban areas. The objective of the goal 11 is to “make cities and human settlements inclusive, safe, resilient and sustainable”. In other words, with the actual context of fast urban areas expansion this goal intends to give to everyone an access to essential resources and services: food, water, energy, dwelling and transport. It also focuses on air pollution and supports resilient solutions including sustainable development and participative approaches (United Nations, 2015) In the perspective of Elgeseter street, this goal is relevant as the street is lacking some nice areas. It is also a great opportunity to experience participative approaches.

Regarding Elgeseter street, the street and its surroundings hold significant importance for the municipality of Trondheim with numerous ongoing projects focused on enhancing its attractiveness.

The objective is to create a human-scale, inclusive space that attracts people. To achieve this vision, the area seeks to integrate more green spaces, promoting safer environment and to limit the use of cars. Moreover, public spaces and surrounding areas should have as much natural light as possible, with plenty of space for plants, benches, and other street furniture (Afshari et al., 2023). Consequently, there is an obvious challenge to rethink the area, the urban facilities and public spaces to provide a nicer, more sustainable and liveable area to its citizens.

METHODOLOGY

This study was conducted first through a literature review which has for main objective to establish references of citizens' involvement in the design process of public spaces and the tools that could be used for citizens' participation experimentation. Then, the second part of the methodology was an experimentation. The objective of this experimentation was to design a public space in Elgeseter street for and with the citizens. Combining these methods led to a general overview of the relevant tools for citizens' participation for Elgeseter street and offered the opportunity to implement and evaluate one of them in practice.

Literature review

At the beginning of this study, a literature review was established. The purpose of this literature review was to gather references and tools about citizens' involvement in the design process of public spaces. Different articles, books and term papers about public spaces and participative approaches were reviewed. Reading through these scientific articles gave a great overview of the various existing tools and also helped to identify which solutions could be considered regarding the case of Elgeseter street. Moreover, scoping with the literature review was also relevant because it permitted to identify the gaps or lacks in the themes covered by this study.

Participative approach: experimentation

One of the aims of this study was to contribute to achieve the Sustainable Development Goal number 11 "sustainable cities and communities" which encourages to develop participative approaches. In this perspective, this study developed a qualitative method based on an experimentation involving citizens regarding public spaces in Elgeseter street. The objective of this experimentation was to actively involve citizens in the design process of a selected public space within Elgeseter street.

This paper questions the different ways of designing public spaces in Elgeseter street by involving citizens in the process. To address this question, a thorough review of scientific articles introducing tools for citizens' participation was conducted. To further explore the potential of citizen involvement in the design process of public space, the study deemed it relevant to provide a practical experimentation. This approach aims to illustrate how a participative approach could be implemented in Elgeseter street. By providing a concrete example of citizen empowerment, this study seeks to demonstrate the positive impacts and the benefits of such an approach but also its limitations.

Developing a participative approach to enrich this study with a real experimentation for Elgeseter street required organization. It was essential to proceed step by step and ensure that every step was clearly defined. The following figure 1 shows the different steps which will be introduced afterwards.

The first step was to select an area with a great potential to welcome a public space and justify why this particular area is relevant for this experimentation.



Figure 1: Timeline of the experimentation



Figure 2: The selected area for the experimentation identified in red on the picture (source: google maps)

The selected area is located on Elgeseter gate 53, as shown in the figure 2. It is currently a parking lot which is underused. During week days, there are up to ten cars and a lot of empty space next to it. What is more, there is a big outdoor parking lot next to it and another indoor parking lot in the

Once the ideas from the target groups were gathered, the real challenge was to design the public space from the citizens' ideas. Their ideas didn't match with each other's. The challenge was therefore to find a balance between ideas and create a place where each target groups could find something. This part will be further developed. The complementarity of these methods permits to propose a global and rich approach to the research question.

PRESENTATION AND ANALYSIS OF THE RESULTS

The results section is divided into two parts: The findings from the literature review and the outcomes of the experimentation. The tools introduced in the literature review are general participative approaches that could be more or less relevant for the Elgeseter street case while the findings from the experimentation are the feedbacks from the citizens on discussions around the playful model and items.

From the literature review

Quality of life is linked with the ability of the communities to determine their conditions of everyday life. An inspiring example of this can be found in Potenza, Italy, where a simple parking area was transformed into a vibrant garden featuring a children's playground, serene walking spaces, and areas for reading and hosting cultural events. The transformation was not driven solely by authorities but involved the active participation of the citizens themselves. A dedicated workshop was organized to encourage the locals to actively contribute to the design and development of the public space. Numerous small actions and workshops were held throughout the project's implementation. On-site, citizens explored and identified their specific needs using their senses and meticulously mapping out their ideas. As a result, the residents felt a sense of ownership and responsibility towards the renewed public space. They recognized themselves as vital stakeholders in the endeavour, investing wholeheartedly to imbue the project with the essence of local culture (Lorusso et al., 2014).

In United Kingdom, in 2002, a program entitled People Making Places was created by Public Arts. The idea was to push cities, towns and districts within the county to work together to create sustainable communities. It was a participative approach with the attempt of involving a wide range of people to improve the quality of urban design. They created a moving festival which celebrated particular public space and would contribute to generate consideration for the future. During the festival, the organizers ingeniously transformed certain spaces and roads temporarily, generating an interactive and immersive experience for visitors. To further engage the public, reply cards were thoughtfully prepared, providing an opportunity for visitors to share their opinions, comments, and even their aspirations and dreams for their respective districts. The project's underlying mission was to unite local citizens and encourage active involvement in shaping their own communities. By embracing inclusivity and public participation, "People Making Places" sought to empower individuals to take ownership of their surroundings and contribute to the sustainable development and improvement of their neighbourhoods (Powell, 2004).

Placemaking is also an important concept in this issue. It is a hands-on process that aims to improve the quality and accessibility of public spaces by focusing on the physical, cultural, and social identity of the location. Fred Kent, an urban planner, pioneered this participatory approach to shaping and designing public spaces in the 1970s. At its core, placemaking begins on the smallest scale, involving citizens in a variety of projects. Genuine placemaking occurs when people of all ages, abilities, and socioeconomic backgrounds not only have access to and enjoy a place, but also actively contribute to shaping its identity, creation, and maintenance, according to Project for Public Spaces in 2020.

Experimentation: involving citizens in the design process of one public space for Elgeseter street

The coordinator from the city lab Bøker og Bylab was the first person to take part in this experimentation. It was not an official interview but rather an informal talk around the model and about the Elgeseter area. Discussing with her first was strategic since she has good knowledge and connections with the right person for this experimentation. She could help to identify the relevant target group for the experimentation. After talking about the area, she started to look at the model and the playful items to imagine what she would like to see in a potential new public space for Elgeseter street. Her main wish was to see more green and wood in this public space. She said she would like to see the place as "a green lung for Elgeseter street". She also said that she would like to have some berry and fruit trees in the area. She added that the design should avoid toxic or dangerous trees as a lot of children would probably go to this public space. Finally, she was really enthusiastic about urban agriculture, she thinks it could be really nice for elderlies and is convinced that it could be a good way to encourage people to involve themselves for their district.

Once a group of elderlies came before the training activity and was curious about the model and the items. The discussion started with two of them and then other joined and wanted to give their opinions as well. They wished to have a quiet place: "no, we don't want to see these kind of playgrounds in this public space" said one of them when he saw the little item representing playground for children, he continued saying "they have plenty of them in the city, we need a quiet and peaceful place". They could visualize themselves buying a coffee at the shop next door and then coming to the public space, sitting on benches around a little fountain and drinking peacefully their coffee. One of them placed the trees on the model in order to create a barrier to protect the public space from the visual and noise pollution of the street. Some other short talks happened at the city lab, with families and children. Basically, they wished to see more trees, some playground for the children to have fun with.

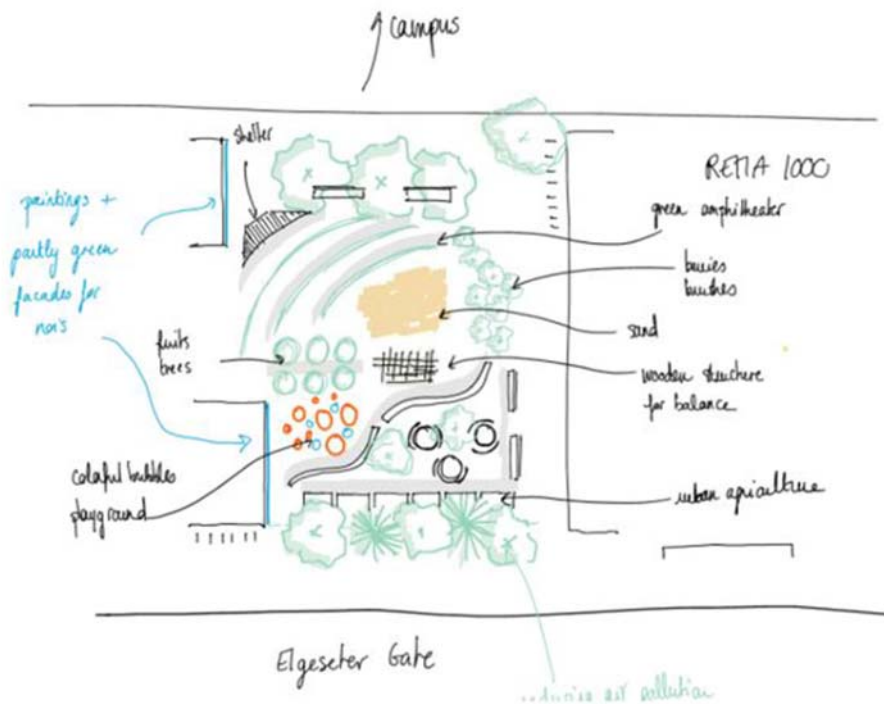
These discussions and interactions around the model and the items were enriching and gave a lot of insights for the study. In Elgeseter area there are two kindergartens. For this study, one of them accepted to take part of the experimentation. So a meeting with two workers from Gartneriet kindergarten was organized, still with the model and the items. They were really enthusiastic about the project. They think there is a big need of public space in the district, especially to welcome children and their families. They wish to see a lot of colours in this public space, playgrounds, they liked the ideas of a wooden structures, suggested some specific playgrounds by showing some references on their phones. They asked if it would be possible to put a shelter in order to bring the children eating outside but being protected in case of bad weather. And finally they said that children really enjoy playing in the sand and going up and down from structure. They also like to hide themselves, so that it would be nice to have some element where the children would think they are hidden but that the parents or kindergartens workers would still be able to keep an eye on them. They also suggested an artist intervention for the blind façades, to make them funnier. In the end, they enlightened the fact that it would really important to create a barrier which would keep the children from going to the street, as Elgeseter street in safe for children.

Meanwhile, the model and its items were also brought to the university campus, libraries or open spaces to talk with the students. They didn't show as much enthusiasm as the workers from the kindergartens or the elderlies but they said that it could be nice to have some green areas, places to sit, hang out with friends and have a drink. They didn't play that much with the items and the model, they rather just expressed what they would like to see in a public space. They didn't feel that concerned about the experimentation.

Table 1: Feedbacks from the citizens

Ideas	Target groups				
	Coordinator	Elderlies	Workers Kindergartens	Families and children	Students
Green areas	Yes	Yes	Yes	Yes	Yes
Playgrounds / wooden structure	Yes	Against	Yes	Yes	-
Urban agriculture	Yes	No	No	-	-
Benches	Yes	Yes	Yes	Yes	Yes
Vegetal barrier to protect from the street	Yes	Yes	Yes	Yes	Yes
Table / shelter	-	Yes	Yes	Yes	-
Colourful paintings on the blind walls	-	-	Yes	-	-
Fountain	No	Yes	No	No	Yes

Once the ideas from the target groups were gathered, it was time to design the public space from the citizens' ideas. Here was the real challenge. Elderlies wished for quiet and peaceful areas. How could it match with the playground imagined by the kindergarten's workers? The challenge was to find a balance between the ideas and create a place where each target group could find something. It was impossible to put all the ideas in the project and it wouldn't have made any sense. Choices and decisions had to be made and here was the job of the architect and the urbanist.

**Figure 4:** One of the first sketches made after gathering the feedbacks

The main idea was to use vegetation as a structure for the public space to give each target group the atmosphere they wished for. Trees and urban agriculture would also play a key role in protecting the children from the street by creating a vegetal barrier. Paintings on the façade and colourful playground would play a key role in creating a sense of identity to the place. Then, everyone could find something like shelter to go in case of bad weather, playgrounds, trees, fruits and berry trees, table and benches, wide space to sit in the grass, sand and wooden structure.

DISCUSSION

The process of involving citizens in the design process of one public space for Elgeseter street was enriching and relevant for this study. It was the opportunity to try out a participative process with the citizens involved about this area. The decision to employ a playful interaction centered around a model of the area and various small items proved to be a highly suitable approach. Firstly, the model served as a tangible representation of the area, complemented by pictures and plans of the selected space, allowing citizens to grasp the volume and spatial dimensions more effectively. Having these different elements helped them visualizing and understanding the space better. Consequently, this improved visualization facilitated the projection of their ideas for the public space with greater ease and creativity. Providing these diverse elements empowered citizens to engage more actively in the participative process, fostering a more enriched and informed dialogue for shaping the future of the area. However, if this experimentation was mainly a success, it also had some limitations. Introducing and understanding these limitations is important to tackle and prevent them for potential future experimentation.

The first limitation is about the individual meetings with the target groups. Conducting individual meetings with the different target groups was on the one hand interesting because it provided them with the freedom to express their desires and envision their ideal project openly. However, a drawback emerged as they were unable to understand each other's unique needs, hindering the collaborative aspect of building the public space together. To enhance the process, a possible approach could involve initiating individual meetings, as was done in this study, allowing each target group to articulate their thoughts freely. Following this first phase, a global workshop could be organized, where the ideas of all participants are presented. This way, each target group would have the opportunity to explore and discuss their perspectives freely, while also being exposed to the realities and aspirations of others.

The second limitation questions the model of the area and the items used in the process. Initially, citizens shared their ideas verbally, prompting us to manually place the items on the model to encourage their active involvement. The model of the area appeared maybe too simple. To enhance the process, several improvements could be made. Firstly, refining the model by adding more details and showing a larger part of the surroundings would help citizens in better identifying the area, fostering a stronger sense of realism. Moreover, employing two models at different scales could also be beneficial. One model could depict the entire area, helping participants grasp the project's location, while the second, larger model could exclusively represent the future public space. This approach would offer a clearer focus on the designated area for transformation, ensuring participants can concentrate their ideas and feedback on the specific project's scope.

Another potential limitation to consider is the communication with the target groups, particularly concerning the language barrier. Conducting interactions in English may have created challenges for some participants, hindering their ability to express their ideas with precision and confidence. Finally, another suggestion to take this study to the next level could have been to come back to the citizens after designing the public space to get their opinions about the final design. Offering a participative approach through an experimentation was valuable and relevant for the project. Citizens felt listened to and involved. Their enthusiastic response and the wealth of great ideas they contributed further underscored the effectiveness of this approach. Interacting around a model of the selected area is relevant but some details could be improved to make this process even better and more efficient.

CONCLUSION

Elgeseter street presents several challenges that need to be addressed to revitalize and create a thriving urban environment in this area. To tackle these issues effectively it is essential to involve citizens in the design process of public projects. The city should give them the opportunities to express their wishes but it also has to encourage them and to empower them with a sense of common and collective mission to rethink and redesign the urban spaces. As the end-users of the city's projects, citizens have the right to voice their opinions and contribute their ideas to shape the spaces they experience in their everyday lives. Emphasizing citizen participation not only fosters a deeper sense of ownership and connection to their community but also ensures that the resulting urban interventions are more attuned to the needs and requirements of the citizens.

Citizens' participation is obvious and needs to be implemented more and more in the coming projects if Trondheim wants to propose areas that are well-designed for its inhabitants, at human scale and which contribute to their well-being. Public places are a central element in our cities: they contribute to the creation of urban life, participate in the well-being of the citizens and are the theatre of many group or individual activities. What is more, nowadays, people move from the rural to urban areas and Trondheim keeps seeing its population growing. Consequently, it becomes even more imperative to direct attention and dedicate efforts towards the enhancement and development of public spaces in the city. By investing in these areas, we can create thriving social hubs that cater to the needs of a diverse and ever-expanding community, promoting a sense of cohesion and enriching the overall urban experience.

Public spaces should be designed for and with the citizens. Combining citizens' ideas with the knowledges of architects and urban planners enrich the project. It leads to spaces made for the citizens, contribute in generating a sense of community and identity for the residents and is efficient from an urban perspective. For Elgeseter street this is really relevant: the area lacks of identity. Involving citizens makes them willing to see and participate in the transformation of the area. They can identify themselves to the project and to the area.

As demonstrated by this study, there are multiple ways to involve citizens in the design process of public places. Workshops, meetings, debates, games and various other forms of interaction hold the potential to enrich a project significantly. While each method comes with its own set of advantages and limitations, the key to success lies in careful selection and adaptation of the tools used to engage citizens. The chosen tool has to be adapted to the type of project, the area, and the identified target groups. In complex projects, a combination of different methods might be relevant, allowing for a holistic and comprehensive engagement process. This study focuses on participative approach in the design process of public places, but it could be interesting to enlarge it to public projects. Considering how the city could actively involve citizens in various public projects would present an interesting further exploration.

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