

Article

Co-Creating a Seniors' Meeting Place: A Prototype Pop-Up Installation on a Popowice Housing Estate in Wrocław, Poland

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Abstract: Citizens worldwide are increasingly engaged in co-creation processes. It can be applied to meet the needs of seniors regarding their living arrangements or activities in public spaces. This article presents a fragment of research aimed at identifying problems and needs faced by older adults (aged 65 and older) in the Popowice neighborhood in Wrocław, Poland, and co-creating solutions with them. Using the co-creation method—both qualitative and quantitative research—a series of activities were conducted (workshops, interviews, surveys) during five phases of the Living Lab, culminating in the creation of a physical prototype. Intervention through a physical prototype allowed for verifying the validity of the conclusions drawn in the earlier part of the study, serving as an activator and accelerator of neighborhood life. The research suggests that the co-creation process and the prototype can influence the social activity of seniors. Recommendations for future co-design processes with older people include establishing relationships with stakeholders and beneficiaries, which is essential for the success of co-creation projects, and involving participants in directly creating solutions to increase their engagement and willingness to collaborate. In the face of aging societies, co-creation can be a useful method for creating tailored solutions to meet users' needs.

Keywords: co-creation; placemaking; architecture for elderly; aging in place; older people; communities; co-housing; human-centered design



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1. Introduction

The current challenges facing Europe—population aging, globalization, and the need for rational resource utilization—are considered pressing by the European Commission. Three main priorities have been established for EU countries: smart growth, sustainable growth, and inclusive growth, encompassing endeavors related to research, education, environmental protection, and innovations [1] (playing an increasingly significant role in the economy). Innovations are crucial for maintaining the EU's global market position, creating better job opportunities, fostering ecological societies, and improving quality of life [2]. As early as 2009, the European Commission identified design as a tool for innovative processes [3]. User-oriented design, considering technological aspects, market conditions, and user experiences (their needs), contributes to a better quality of life [4]. Social participation, through collaborative efforts of governments, designers, and individuals, breaks down the boundaries between service “recipients” and “providers” [5]. The European Union and national governments place significant emphasis on the involvement of older individuals in community engagement and policymaking, acknowledging their pivotal role in addressing local needs [6]. Collaborative endeavors involving older adults are deemed essential for the development of customized solutions aimed at addressing their distinct needs and circumstances [6].

In 2020, President of the European Commission Ursula von der Leyen announced the establishment of the New European Bauhaus (NEB)—a co-creation space wherein architects, artists, students, engineers, and designers collaborate synergistically [6]. Within NEB's

comprehensive mission, dedicated to shaping a desirable world, significant attention is directed toward transforming neighborhoods for the better, aiming to enhance their aesthetic appeal, sustainability, and inclusivity [6]. Envisaged as “Living Labs” for innovation, these neighborhoods are poised to serve as dynamic spaces where experimentation and novel ideas thrive in a real-world setting. NEB aims to support small-scale initiatives within individuals, neighborhoods, and local communities, involving a participatory approach to engaging civil society across diverse age groups [6]. The initiative adopts a transdisciplinary perspective, breaking down silos between viewpoints and professions. At its core, the movement seeks to restore a sense of belonging through collective and individual experiences, with a strong emphasis on building bridges between people. This article addresses several challenging issues that NEB must face, relevant not only to Poland but to Europe as a whole, including population aging, citizen engagement in co-creating services and spaces, co-design, and the impact of architectural spaces on residents’ social activities.

The active involvement of older individuals in exploring Age-Friendly Cities and Communities commonly takes place through participatory research or co-research projects [7–14]. Participatory research diverges from conventional methodologies by granting older adults the authority to delineate research problems and assume ownership of their social and physical surroundings [15,16]. While certain projects concentrate on specific aspects, such as seating design, others address broader urban design considerations [11,17]. Research focusing on the procedural aspect of involving older adults in co-design exists, albeit being scarce in the literature where the principal outcome is an age-friendly design solution [18]. The Mobility Mood and Place study [18] furnishes methodological insights concerning older adults, including offering choices within activities to leverage personal strengths for enjoyable and informal engagement and devising activities tailored to the group’s capacities to prevent exhaustion. Studies on co-design with older adults to foster improved aging, presenting a deeper understanding of this process, are predominantly found in design fields centered on creating solutions or systems in health, social care, and technology [19–26]. Recent studies demonstrate the efficacy of involving older adults in co-design processes, highlighting challenges such as participant fatigue, difficulty grasping abstract concepts, and digressive conversations [22]. Studies also indicate that active participation of older women in a residential setting can lead to increased empowerment and shared management of their needs and preferences, underscoring the reciprocal relationship between participation and empowerment [23]. Collaborating with co-researchers on the topic of age-friendly communities presents various challenges, including managing expectations regarding research benefits and addressing ethical concerns related to confidentiality between co-researchers and interviewees [9]. Additionally, some older individuals may not readily identify as seniors and may struggle to perceive personal benefits, posing challenges for recruitment and engagement [20,22–25].

Some of the studies underscore the increasing demand for bottom-up approaches in designing age-friendly cities [27–30]. It is argued that to effectively develop spaces for older adults, a deeper understanding of the co-creation process is crucial [29]. Drawing insights from fields with established traditions in participatory design, such as co-design, can offer valuable perspectives [31]. Continued investment in co-creation research is imperative to promote inclusive research practices and empower older adults as active agents of change in shaping age-friendly environments [32].

In the context of seniors, their specific needs and experiences in public spaces within residential areas can have a crucial impact on their quality of life and sense of social belonging [33]. Additionally, the cultural definition of space, expressed in interpersonal distance or behavior in public spaces, highlights the importance of considering cultural diversity when designing public spaces for seniors [33]. The lack of a universal model of an ideal space emphasizes the need to understand how local cultures influence the experiences of older individuals, which is crucial in creating spaces more tailored to their needs. The topic leaves many unknowns and requires a bottom-up approach to designing age-friendly cities, as participation in the process can be key for older adults. In

a recent research article, the significance of comprehending the unique contexts of local communities emerges as crucial for their effective inclusion in the co-creation linked with urban regeneration processes [34]. It is known that different urban environments necessitate tailored approaches to ensure comprehensive inclusion and meaningful engagement on both individual and community levels [35].

The purpose of this article is to methodologically develop and discuss the co-creation process conducted with older individuals in the Popowice residential estate in Wrocław during the co-designing of neighborhood spaces. The publication aims to fill a research gap in co-creation activities with seniors aimed at adapting the built environment to the needs of this group, conducted in the local context of Eastern European countries. Due to the earlier impact of socio-economic and cultural transformations in Western European countries compared to Poland, these nations have already formulated various strategies to address the challenges posed by global and regional changes, such as the emergence of the concept of co-creation, which stems from several concurrent developments worldwide and in Europe [5]. The article focuses on actions specific to this residential estate, which were necessary to develop a successful co-creation process co-created by the local senior community. This study focused on a multidimensional co-creation process, enabling older individuals to define the problem and seek solutions in line with their priorities. Seeking factors contributing to building a partnership network that could influence the social activity of older adults, the study attempts to answer the question—to what extent does the physical prototype in the co-creation process influence the social activity of seniors? Researchers aim to answer the question: How can participatory and co-creation approaches effectively engage seniors and other community members in the design and management of shared spaces? Firstly, the paper presents a fragment of the conducted research project as well as the thinking process and methodological foundations of co-design. Then, empirical data are presented, and finally, observations that proved to be particularly important for increasing the social activity of the surveyed older adults are discussed. In reference to existing knowledge, the aim was to contribute knowledge beneficial for future co-design processes with older individuals.

Old Age in Urban Environments

The global population is aging, with one in six people projected to be 60 years of age or older worldwide by 2030 [36]. Polish society is among the fastest aging in Europe [37] and consistently ranks in the top thirty countries with advanced levels of demographic aging. Currently, one in four individuals is over 60 years old, with this number steadily increasing, reaching 9.7 million in 2021, accounting for 25.7% of the total population [38]. It is noteworthy that there has been a dynamic increase in the number of older individuals in urban areas, rising from 11.8% in 1980 to 27.7% in 2021 [39]. Furthermore, there is a projected gradual increase in life expectancy, leading to both absolute and proportional growth in the elderly population. Already at the turn of the 20th and 21st centuries, UN experts forecasted that the aging process in transitional countries (including Poland) would progress several times faster than in Western countries [39,40].

In the context of the evolving age-diverse societal structure, it seems necessary to restructure Polish cities and adapt them to the growing needs of seniors. Experiences from Western countries, where the aging process has been faster, may serve as inspiration for seeking adequate solutions [5]. However, it is important to note that the level and nature of seniors' activity depend on various factors, such as preferences, health, skills, as well as social context and expectations from the environment [41]. Although models of nursing homes for seniors are well-developed in Western Europe, Polish seniors expressing a strong preference for remaining in their own homes (over 90%) [42] require appropriately adapted housing and public spaces that support autonomy while fostering intergenerational integration [43]. In Poland, the issue of social housing for seniors, including senior co-housing as an opportunity to create small integrated communities of elderly residents, is underesti-

mated [44]. Most Poles wish to remain independent but desire to spend their leisure time with loved ones and their peer group while staying in their place of residence [45].

Environmental gerontology emphasizes the analysis of physical and social environments to promote healthy aging in place [46].

In recent years, the concept of aging in place has been increasingly discussed, initially focusing on the idea of aging in one's current residence and neighborhood, providing seniors with a sense of stability and security that translates into a better quality of life [47]. However, the significance of this concept has evolved to encompass a broader scope [48], emphasizing the satisfaction of older adults' needs and aspirations by providing them with adequate services and assistance while remaining relatively independent in their current homes or apartments [47]. In environmental gerontology, the person–environment (PE) fit model suggests a reciprocal relationship between agency and belongingness, influencing identity and well-being in later life [49]. Meanwhile, the ecological theory of aging emphasizes the impact of the relational balance between personal competencies and environmental pressures on the quality of life of older adults [50]. Public sector actions should focus on revitalizing spaces to make them more conducive to the aging process [51]. A crucial element of the built environment that enables older individuals to function independently is well-designed public spaces in residential neighborhoods. As the surroundings of living spaces, neighborhood spaces often serve as the sole areas of mobility for older adults, especially those over 80 years old, making their quality immensely important [52]. The built environment provides the framework for social actions and relationships, fulfilling diverse needs, while architects shape the built environment, which, in turn, influences and interacts with its users [53]. The environment in which people reside demonstrates an impact on their well-being, social interactions, and communication strategies; space and its organization shape interpersonal relationships within it [53]. Research on housing and living spaces is crucial for influencing the quality of life and well-being of older adults, with particular emphasis on psychologically and socially oriented approaches [54]. Public spaces may possess social aspects, extending beyond the physical dimension. Urban complexity and diversity are crucial, manifesting not only spatially but also socially and functionally. Designing public spaces in aging societies must consider the specific needs and preferences of older adults to ensure diverse environmental amenities [55].

Cities are beginning to strive towards creating physical, social, and service environments friendly to seniors by developing policies aimed at improving healthy aging and well-being in Europe [56]. Leveraging the Active Ageing paradigm, the World Health Organization (WHO) introduced the Age-Friendly Cities initiative, aiming to establish such environments [57]. In this concept, one of the clusters—the social environment—aims to establish socially inclusive environments where older individuals can participate to reduce loneliness and create opportunities for engagement and contribution to social and political life [57]. Evidence suggests that social participation and engagement are associated with a range of health benefits, both psychological and physical, among older adults [58–61]. However, it is also important to consider research indicating that engagement in public space decreases with age, highlighting the need to examine the relationship between agency, belongingness, and spatial (dis)engagement [49]. Furthermore, a study of public spaces in urban neighborhoods revealed that intangible dimensions, such as social and cultural environments, significantly influence the requirements of older adults in outdoor settings [62]. The disparity between personal competencies and neighborhood environmental pressures significantly impacts the quality of life of older adults, suggesting the need for neighborhood environment improvements to align with the competencies of older adults aging in place [50].

2. Metological Background—Co-Creation

Co-creation, a multifaceted concept contingent upon its operational context, finds diverse applications across business and design domains. In the realm of business, co-creation targets users endowed with profound knowledge in a specific domain, demonstrating a

keen interest in effecting changes within that sphere [63,64]. Co-creation adopts a broader perspective, acknowledging the creative potential inherent in ordinary individuals when appropriately facilitated and encouraged [65]. Sanders [66] characterizes co-creation as a collective act of creativity wherein a group jointly experiences and performs creative endeavors. This approach leverages users' intrinsic knowledge of their own needs, daily lives, and creative capabilities. Diverging from participatory design [67], co-creation's innovations may not necessarily culminate in artifacts directly used in the future by participants. Users actively contribute to knowledge gathering, idea generation, and concept development. The designer/researcher designs the innovation process and provides tools for ideation. Both the designer/researcher and the user collaborate on the tools for ideation [67]. Ultimately, the designer/researcher gives form to the ideas.

The adoption of co-creation methodologies in urban regeneration projects, supported by European Commission-funded initiatives, has become a standard practice [68–72]. Effective co-creation involves engaging diverse stakeholders to gather community-based knowledge and incorporate it into decision-making processes [73]. Governments are increasingly adopting innovative approaches to improve the efficiency and effectiveness of policy formulation and service delivery. This shift acknowledges the complex landscape of stakeholders involved and seeks to involve not only traditional actors but also the market, civil society, and citizens [74–77]. Citizen participation, in particular, is recognized for its potential to enhance regulatory efficacy, elevate the quality of public goods provision, and generate positive outcomes, especially in sectors such as health and education, which span public, private, and social spheres [74–77].

During co-creation processes, prototyping can occur through three approaches. Initially, designers and participants collaborate in the development of prototypes to exchange and convey their ideas. Subsequently, designers introduce prototypes to participants to elicit preliminary insights. Following this, the prototypes are collectively refined to delve deeper into the identified problem [78]. Lastly, designers suggest partially completed prototypes to participants, encouraging them to contribute to the further development of these prototypes while gaining additional insights from users. In this process, the designer primarily functions as a facilitator [78,79]. Moreover, approaches like co-creation, co-production, or co-finances have gained acceptance as novel participatory methodologies within the realm of placemaking, which is a method largely based on collaborative prototyping [80–82].

3. Materials and Methods

This section describes the methods, and empirical data are described in the form of considerations regarding the process of designing a prototype—a pop-up installation, in relation to the level of social activity among seniors. The pilot program, within which the prototype was created, was part of a larger CoSIE project, into which the Living Lab had to fit, but it was adapted to local contexts. Therefore, this study does not refer to the full set of steps specified in the co-creation guidelines but rather sub-phases on a micro level, which characterized the co-design process of the pop-up installation with users and professionals. This stage was preceded by creating social groups and building trust in earlier stages, and it was simultaneously complemented by co-implementation and co-management—described in subsequent sub-chapters.

Various methods were employed in the project; primary data were collected using the methods applied. A specific methodology was adopted for the project. In the first part, the method of logical argumentation was used, encompassing the literature research (scientific literature, national and regional formal documents) and descriptive analyses. After identifying the research assumptions, the current state of research related to co-creation and policies of senior housing and senior cohousing was verified (state of the art). Subsequently, quantitative research was conducted in representative selection, and qualitative research in purposive selection. In quantitative research, an online survey questionnaire (CAWI) and a scenario of in-depth individual interviews (IDI) were used, and descriptive

statistics were used for analysis, while quantitative variables were presented using charts and tables. In participatory quantitative research, a focused group interview scenario (FGI), Design Thinking workshop scenarios, scenarios of actions by Social Reporters, and Open Space meeting scenarios were used. The analysis of the collected data took place continuously during the project with the entire research team, and then individual analyses were conducted. The presented data come from part of the co-creation research, co-design workshops—qualitative research, quantitative research—surveys, and field notes. The specific methods will be described in more detail in the section below.

3.1. Context of the Study

The ProPoLab project was implemented in the form of a Living Lab as part of the CoSiE (Co-creation of Social Innovation) project funded by the Horizon 2020 program between September 2018 and February 2020. More information about the CoSiE project can be found on the websites whose addresses are provided in the Supplementary Materials. The experiment took place in Wrocław, where—engaging local residents (seniors)—efforts were made to develop a solution that could be a practical response to the demand for senior co-housing specific to the Popowice district in Wrocław.

The CoSiE project employed a mixed-method multidimensional strategy, combining the Action-Research tradition with the framework of the Theory of Change [83]. This innovative research strategy involves the UWr Team adopting a flexible role, oscillating between an “inside/internal” observation standpoint and an “outside/external” one, requiring a high level of reflexivity among the involved partners. Drawing from a diverse array of literature on co-production [84,85], co-creation [76], and co-design [74,86,87], various analytical frameworks to guide the evaluation research process have been examined.

The developed and subsequently tested model of co-creating senior co-housing in the ProPoLab laboratory was divided into five main stages, which followed one another, although some actions allowed for overlapping and simultaneous activities at several stages (Figure 1). The selection of tools and methods used in each stage was determined in such a way as to take into account both the personalized nature of the co-created service and its social dimension.

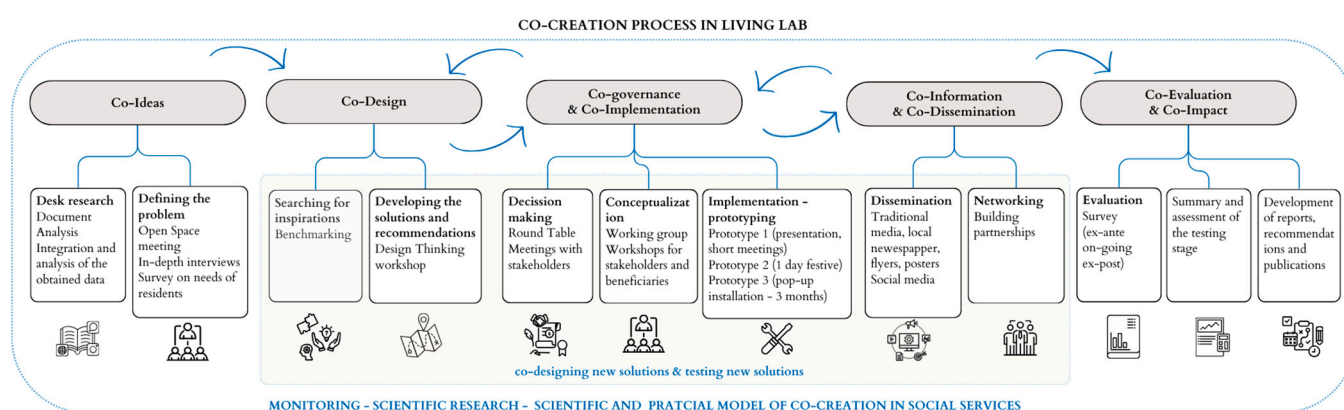


Figure 1. Co-creation process in the Living Lab “ProPoLab”. Source: the author.

Fundacja Aktywny Senior led the Living Laboratory ProPoLab, while the University of Wrocław developed the Theory of Change framework, which the Living Laboratory tested during its activities and monitored the progress of the pilot program. Living labs have been utilized to allow cities to observe urban issues and test solutions in complex and real-life conditions [88,89]. The concept of Living Lab is crucial to introduce. It represents a new model wherein all stakeholders, including academia, citizens, policymakers, users’ associations, etc., actively participate in innovation [90]. Specifically, they engage in the co-creation and validation of solutions, forming an ecosystem of research and development that continually enables social innovation [90].

3.2. Co-Ideas

Before starting work with the target group (seniors), a literature review, document review, and review of relevant concepts in the field of co-creation were conducted. Practices used in the field of co-creation with seniors, both in Poland and abroad, were reviewed. This preliminary step helped identify problematic areas in the local senior environment. This stage involved conducting in-depth analysis and research to determine directions of action. Additionally, it served to identify, locate, and engage a group of individuals representing the target service recipients for ProPoLab. From the available methods, suitable ones for the specific social group—seniors—were selected to allow everyone to express themselves and articulate their needs. For this purpose, workshop methods such as Open Space, Design Thinking, and Community Reporting (face-to-face interviews) were employed. The first inaugural project meeting took the form of an Open Space event. Seniors were invited to the event through publication in local media, placement of official notices at every entrance to the building on the estate, and dissemination of information by all local organizations and associations, including the local church. Stakeholders were formally invited via email and personally with visits to their facilities.

The Open Space format was successful in terms of integrating residents and stakeholders and identifying the initial needs of beneficiaries, while it did not fully meet the expectations concerning engagement with the project's users (seniors). The adopted Open Space method required participants to take initiative and moderate the meeting. However, the seniors did not take the initiative, and at some point, the project team took over moderation. Nonetheless, the meeting fulfilled its function in terms of promoting the laboratory, strongly emphasizing the existence of the pilot project in the neighborhood and in the consciousness of some residents. Through the meeting, a collection of issues significant to residents was gathered (23 topics), space was created for beneficiaries ($n = 70$) and stakeholders ($n = 16$) to become acquainted, and a group of leaders ($n = 12$) was identified. The leaders were individuals who engaged in discussions during the Open Space meeting and expressed their willingness to continue participating in the study. The group of senior leaders identified participated in subsequent activities—Design Thinking workshops and Community Reporting, in total 5 meetings, each lasting 6 h. The choice of methods was dictated by the success they have had in similar endeavors [8,15,17,19,23]. The Design Thinking workshops were divided into two cycles with a break in between. The planned break of over a month was intended to provide seniors the opportunity to reflect on the conclusions reached during the workshops and to prepare for the second phase of co-design.

A significant emphasis was placed on listening to the representatives of the target group with whom the service was co-designed and on searching for deep, hidden needs (insights). Based on these actions, key issues to be addressed were diagnosed, including those that were important for the ultimately developed service. From the gathered information, seniors identified two topics that were most frequently mentioned in the beneficiaries' statements during the collective workshop discussion: (a) the issue of communication and information within the housing estate and (b) the place for neighborhood meetings. For further development within the pilot program, seniors decided to focus on the issue of communication and information during the workshops. The problem of communication and information was treated as a result of weak social ties among seniors, which was confirmed in the subsequent workshop research. Seniors precisely defined the problem, mapped the networks of beneficiaries and stakeholders, and familiarized themselves with the team's capabilities.

3.3. Co-Design

The second stage of the co-creation process during the laboratory involved the concretization of the solution to the problem identified in the previous phase, done collectively with beneficiaries and stakeholders. The Design Thinking approach with elements of Service Design was chosen as the working method for the next step in the laboratory. The

local senior leaders participated in a series of workshops (5 meetings, each lasting 6 h) held at the Neighborhood Club in Popowice, with each workshop attended by 8 to 12 people over 60 years of age.

The focus was on creating solutions for the previously specified problem of neighborhood communication and information. Numerous ideas were generated, representing a wide range of possibilities, which were then narrowed down in subsequent steps, with the criterion for decision-making being the feasibility of implementation and meeting the expectations of the recipients. Mainly, ideas for integrating residents or establishing connections with neighbors were proposed as solutions to the issue of interpersonal communication. Based on the identified preferences, workshop participants refined the vision of a service, which was seen as the quintessence of senior co-living feasible for implementation in Popowice “here and now”.

Seniors eagerly engaged in workshop activities, although initially, they seemed incomprehensible to them, and the purpose and execution of each task had to be explained several times. The solution ultimately identified at this stage and accepted by the involved parties was a small neighborhood center, a place for residents’ meetings or an activity center. In principle, it should meet the needs for activity and self-realization, information exchange, and intergenerational integration. Participants in the workshops, still guided by the Design Thinking process, developed detailed guidelines for such a service, including its possible functioning, financing, management, etc. One of the main conclusions was the necessity of involving all age groups in the process of creating and planning the service if it is to be multi-generational, as desired by the seniors. Workshop participants expressed readiness to actively participate in providing and managing such a space through voluntary involvement.

Senior: ‘Maybe we could do something like setting up a club, where we can come at any time to meet with young people who will work as volunteers. This club would help lonely seniors because it would offer them a place where they can get help and support’

Senior: ‘To create a community, we need to start with integrating into small groups of neighbors’

Senior: ‘I would like to open up to others and be active in the neighborhood, but I need support to open up to other people, I also need to see motivating actions’

Working with seniors worked better in small groups; achieving the focus and concentration necessary for work was challenging in larger groups. Seniors required careful moderation at every step, and a greater number of facilitators was needed so that 3–5 seniors per facilitator could be involved in more complicated tasks. It is worth noting that the initial workshop plan had to be modified during the sessions and adjusted to the seniors’ capabilities. Some seniors with cognitive impairments found workshop exercises difficult and needed individual assistance, while others easily enjoyed the creative activities. The workshop cycle highlighted the need for slightly different planning of meetings for seniors (shorter, less intensive meetings with coffee breaks). Additionally, during the workshops, they were diversified by introducing introductory lectures, during which the facilitator provided various examples illustrating what the group would be doing that day. Introductory lectures helped participants better understand the workshop work and expanded their knowledge. Acquiring knowledge was an additional asset that seniors highly valued. It was necessary to encourage seniors to attend meetings, remind them of meetings, and maintain individual contact. The method proved effective in diagnosing problems and constructing solutions (seniors together with seniors, although this was not always possible due to the length and frequency of the workshops; they only needed encouragement to unleash their creativity). It would be reasonable for stakeholders to participate in the workshops to identify problems and create solutions within social services.

In the group of seniors who participated in the workshops, representatives of all four categories defining the direct relationship with the user engagement in co-creating public

services were found (Figure 2). Seniors do not play all roles simultaneously but may play several roles throughout the process. The high involvement of the respondents enabled the smooth and efficient conduct of the Living Laboratory.

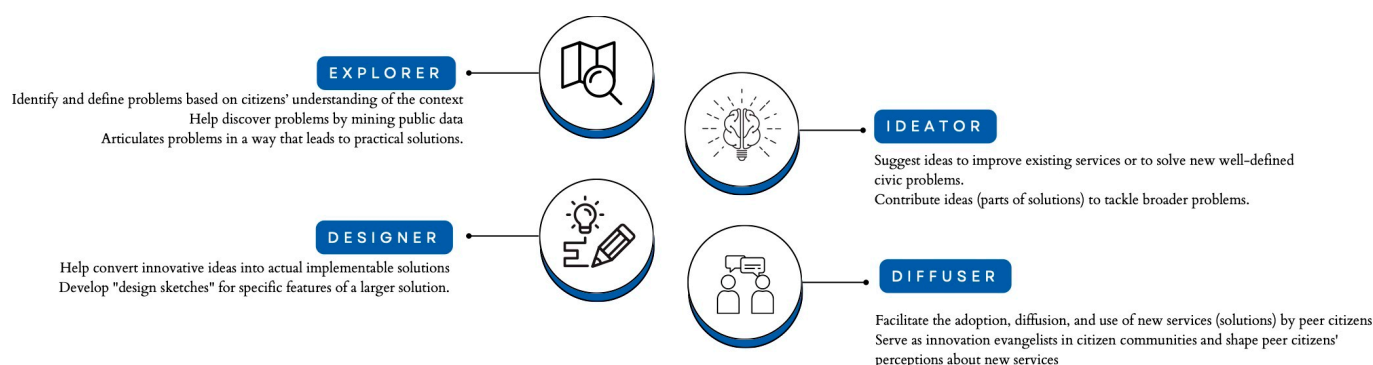


Figure 2. Four Roles in Citizen Co-Creation by Nambisian S., Nambisian P. [91]. Source: the author.

To validate the developed solution and engage residents, appropriate studies were conducted. The first study conducted as part of the pilot program was to gather the opinions of seniors during a meeting at the local club. The presentation of the idea received a very positive reception among the other seniors. The next study chosen was a one-day test of the prototype meeting place at a local festival. As part of this activity, senior leaders, encouraged by their peers' excellent reception of the idea, decided to actively engage in the activities. They were responsible for most of the attractions held under the tent belonging to the prototype. These attractions were intended to simulate activities that could potentially take place in the neighborhood meeting place. During the festival, seniors conducted a mini survey to verify their ideas, and its positive outcome encouraged them to continue their efforts. Additionally, each of the mentioned prototypes was presented to stakeholders during individual meetings and a Round Table to explore implementation opportunities.

Due to the success of the second prototype organized during the neighborhood festival, it was decided to organize a temporary prototype that could serve residents throughout the summer and serve as a venue for local events. The second prototype was to be a temporary structure serving as a neighborhood meeting place. It was created with the involvement of students from the Faculty of Architecture of Wrocław University of Technology, who designed and built the installation during the Summer School of Architecture workshops. Collaborating with students in co-designing the prototype allowed for its rapid and efficient implementation. Involving beneficiaries in the implementation process was impossible due to their age and physical abilities. Conducting preliminary prototypes—presenting the vision to a wider audience and a one-day prototype during the neighborhood festival—helped identify the potential of seniors, which lay in their organizational skills.

Senior: 'We could help take care of such a place, I could help in the afternoon'

To allow participants to work with the activity at their preferred level, the activity was designed so that seniors were mainly responsible for organizing events held in the prototype. Additionally, the combination of two extreme age groups resulted in intergenerational integration; students were fascinated by the needs of the elderly and their willingness to be active, while in the eyes of the seniors, seniors gained great respect for their involvement and work. The aim of prototyping was to transition from the immersion phase to the ideation and implementation phase. Local stakeholders were involved in the planning process of the prototype, enabling the realization of the concept. Creating this project, with the intention of meeting the requirements of all groups involved in the co-creation process, was the goal pursued by the students. Guidelines developed by beneficiaries and stakeholders, as well as budget, time, and human resources, influenced the final appearance of the installation. Materials, structural feasibility, and form were the primary goals of the

task for the students during the workshops. Preliminary design criteria for the installation designed in the environment of the public space of the Popowice multi-family housing estate were determined by seniors during the Design Thinking workshops (Figure 3). These design criteria enable a more precise understanding of the needs and expectations of seniors in the process of creating installations in public spaces.

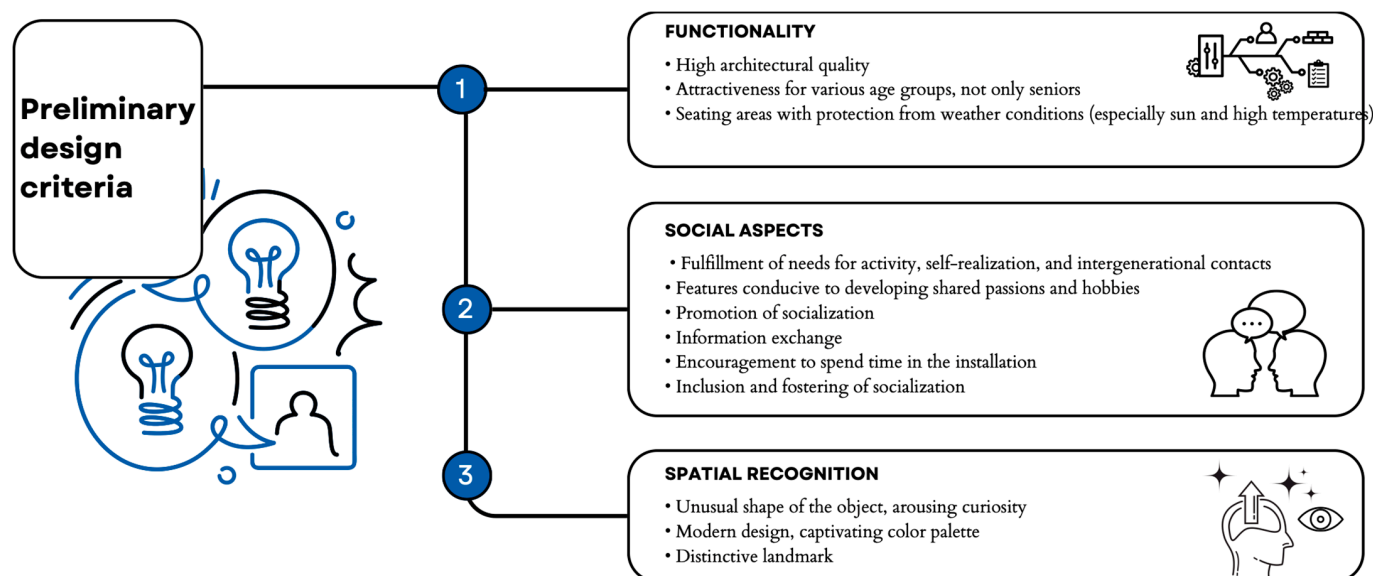


Figure 3. Preliminary design criteria for the installation prototype. Source: the author.

Temporary architecture is characterized by simplified structural systems and functional layouts. Due to mobility and lightweight requirements, it is often a single-story structure with small dimensions. The materials used in temporary structures play a significant role in their perception. Low-tech materials, supplemented by advanced technologies from other industries, introduce new values such as symbolism, emotions, originality, and environmental care.

The design process (co-design) involved collaboration between students and end users—residents. It was mainly based on working with key data collected in earlier phases of the process and the results of previous activities—co-ideas and co-design. The resulting project was a system of urban furniture, taking the form of an irregular zigzag. It consisted of multifunctional seating, providing up to several seating places, including seating at a table and benches with backrests (Figure 4). Additional functions of the installation included the possibility of growing plants by seniors in raised high planters, which also served as bench backrests. Referring to the passions of seniors and the potential for cooperation between residents, students designed shelves for book exchange (popularly known as bookcrossing), protected from weather conditions by sliding doors made of plexiglass. A crate designed under one of the seats, serving as storage for items necessary for event animation or plant cultivation, was an element for flexible use. A significant completion of the installation was a plaque serving as the visual identification of the place, the regulations for use, and a description of the initiative, which was placed above the little library. On the side wall of the installation, a notice board was designed, also described in large font.

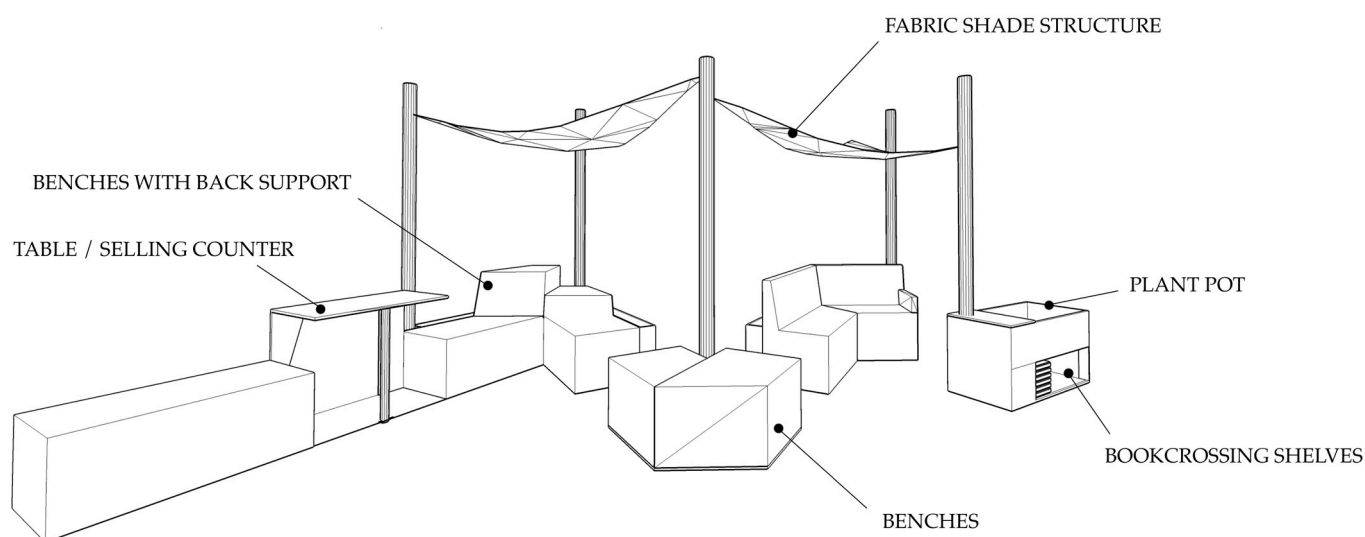


Figure 4. Conceptual project of the installation co-designed with students. Source: the author, based on students project.

The installation was designed as a prefabricated structure for the needs of Living Labs, enabling its construction in a hall during the summer school (Figure 5). The majority of the elements of the installation were made from single (10 mm) and double (20 mm) layers of oriented strand board (OSB), with the double reinforcement in areas exposed to higher loads—seating areas. The use of a double layer of the board in these specific locations allowed for the desired structural stiffness to be achieved. The joints were made using metal brackets and screws. The membrane for shading the installation, due to budget constraints, technical parameters, and the expected lifespan of the structure, was made of Cordura material, which is a polyester textile additionally impregnated with a PVC layer. The material was sewn with the use of folded seams. The material did not require the use of special stitches resistant to high stresses or load-bearing stitches. The textile did not serve structural functions due to the risk of structural damage from wind (lack of material tension); therefore, a decision was made to create a minimal-sized canvas. The material was sewn with folded seams and attached with cords to the structural elements—poles—made of cardboard tubes, 250 cm in length, 10 cm in internal diameter, and 1 cm in wall thickness. These tubes were placed in holes made in the OSB boards (additionally reinforced with a second layer of OSB). The installation measured 675 cm in length, 300 cm in width at the widest point, and 205 cm at the narrowest point (Figure 6). The seats had a depth of 50 cm and a height of 45 cm, while the planters, with a depth of 15 cm, additionally widened the seats locally, creating a structure with a depth of 65 cm.

The team decided to add color to the project using strong horizontal navy-colored stripes. This design choice aimed to make the installation stand out as a distinctive focal point while harmonizing with the surrounding greenery. The prototype, created in the hall, was disassembled into elements according to the transport design and then transported to the housing estate. It was assembled within a few hours by students and residents. The assembly process attracted attention from the surroundings. Once assembled on-site, the structure was weighted from the inside with concrete slabs placed on the seats to provide the required stability.



Figure 5. Construction process during the workshop for students. Source: the author.

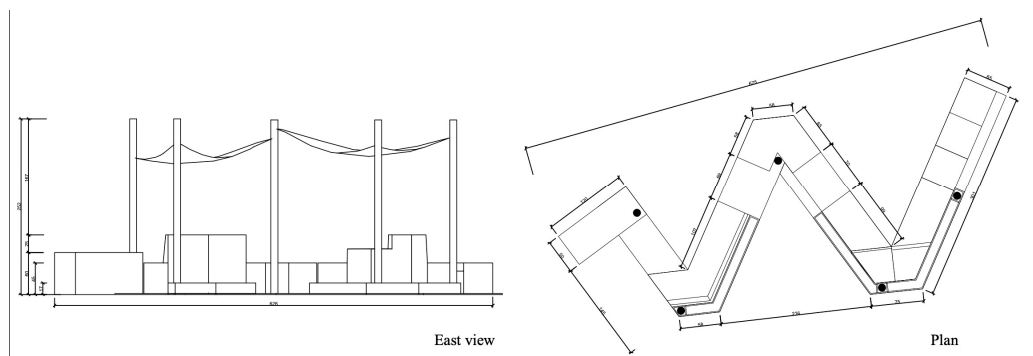


Figure 6. Project of the PoPo Center installation. Source: the author, based on students project.

During the summer period (July–October), the prototype, named by residents as Popo Centrum, hosted six intergenerational events created by residents for residents (Figures 7 and 8) supported by local neighborhood groups and sponsors (local small services). The picnics offered diverse attractions, including flea markets, performances, exhibitions, sports and skill games, children’s activities, lotteries, outdoor games, culinary delights, barbecues, and more. The events primarily attracted families with children, who actively participated in the activities, as well as older individuals. In the fall, after the conclusion of the last picnic, the installation was dismantled and disposed of. During the existence of Popo Centrum, a survey was conducted regarding the need for creating a local activity center for residents and the program it should encompass.



Figure 7. Installation during local event. Source: the author.



Figure 8. Installation during normal day. Source: the author.

Pop-up structures can play the role of a temporary pushpin in urban aquapuncture, creating fresh dynamics and new quality in existing spaces and drawing users' focus to the essence of "being" in a specific place [92,93], making them an ideal solution for placemaking initiatives.

3.4. Co-Governance and Co-Implementation

The co-governance and co-implementation process with project stakeholders began before the pilot program was launched. Co-governance and co-implementation were ongoing processes. Before starting the process, stakeholder mapping was conducted using network mapping and motivational profiling, and stakeholder matrices were created to invite stakeholders to participate in the project. Interested stakeholders were assigned to groups based on their motivational alignment with the project goals and decision-making authority. Each group participated in different studies: individual interviews, focus groups, workshops, and Round Table discussions. Stakeholders were kept informed about the project's goals and potential actions. The main challenge was the time commitment of stakeholders, who, due to professional obligations, could not fully participate in all processes and meetings. As part of the co-governance process, a schedule of regular meetings was adopted in teams consisting of beneficiaries and stakeholders. Conceptualization meetings for the service took the form of focus groups and stakeholder councils, aiming to practically test and implement solutions developed in the project. Creating a service prototype and then gathering feedback and refining the idea were the main goals of this stage of the pilot program. Testing took place in the real environment of end users, allowing the validated

idea to be implemented before final implementation. The conceptualization of co-creating social innovation across all stakeholder groups associated with the ultimate product was grounded in the notion that social innovation should encompass three primary dimensions: addressing human needs, instigating social change, and enhancing socio-political capacity and resource access. To confront these challenges, emphasis was placed on engaging citizens and stakeholders in the co-creation process. Stakeholders were actively involved in every stage of the co-creation process (Figure 9), and their inputs materialized the envisioned service in a tangible manner, aligning with practical possibilities. To assess the viability of the solution and community engagement, tests were conducted at different levels. A more extensive prototype, lasting almost the entire summer, featured a small installation in the estate's green space.

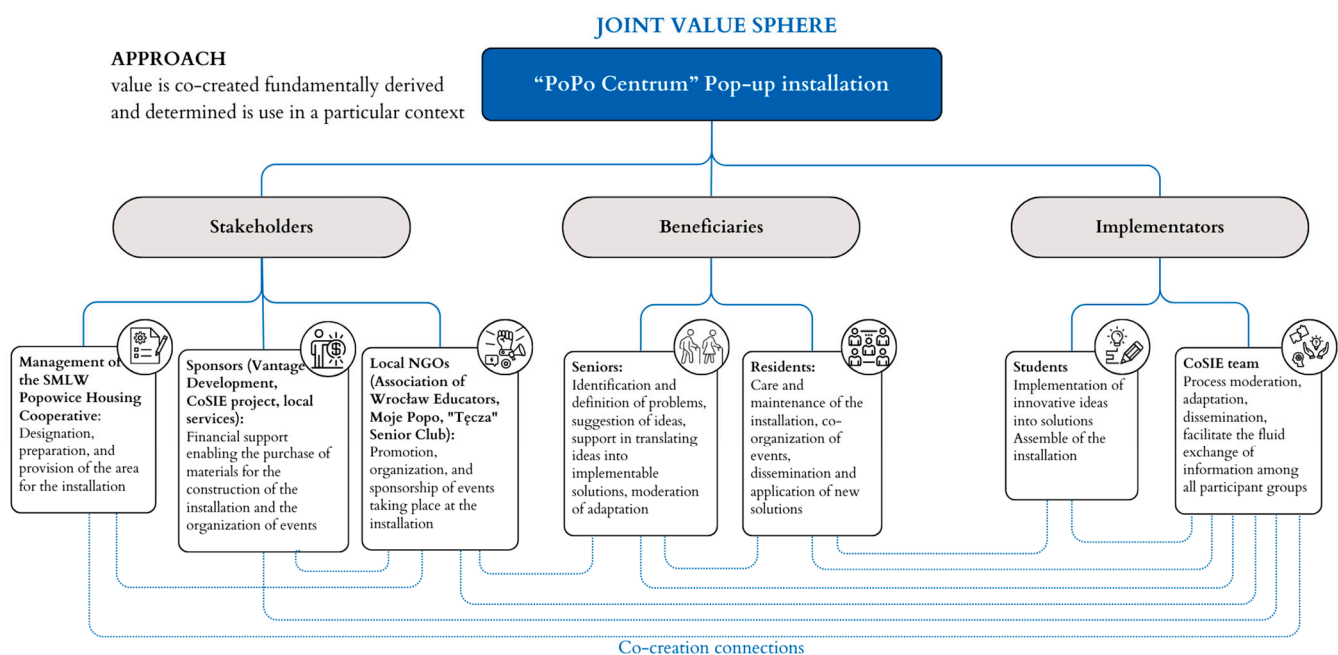


Figure 9. Stakeholder map of relationships along co-creation of the "PoPo Centrum" installation. Source: the author.

3.5. Co-Dissemination and Co-Communication

Communication and networking were crucial in the co-creation process within ProPo-Lab. Networking and partnership building required an individual approach, especially with stakeholder groups. Communication strategies utilized were drawn from advice from other organizations, the literature, and field experience.

Equally important was the dissemination of the pilot program at all its stages. For the effectiveness and success of the prototype described in this article, it was extremely important to raise awareness among residents. To achieve this, a quarterly eight-page brochure was regularly created and placed in the local quarterly magazine, distributed by the estate manager to all mailboxes within the neighborhood. This allowed residents to follow the entire project process.

3.6. Co-Evaluation and Impact

Evaluation, cooperation, and the project's impact on social service policies are elements that arise throughout the laboratory testing process, but they became most significant when shaping the final service. The initial prototype gathered opinions from other residents through meetings and interviews, followed by a one-day prototype of a meeting place during a local festival. This phase also involved seeking collaboration paths and connections with current city policies. These actions were intended to ensure the project's sustainability,

further development, and implementation possibilities so that it would not remain solely a research project.

In this phase, efforts were made to strengthen the status of local formal and informal groups, build and reinforce connections between them, and develop strategies to make the process more systematic while strengthening openness and trust, which had been established so far. Combining individual neighborhood groups proved problematic due to personal conflicts among some group members. Different goals of the groups also posed a difficult-to-overcome problem, which ultimately remained unresolved—groups less interested in social activity issues withdrew from networking. Administrative, local, and existential issues also presented problems, leading to doubt, reluctance, and apathy, causing residents to believe in zero chances for change and reducing their engagement in the process. The gradual process of social structuring (supporting and creating new social groups) helped create a better sense of community, which, in turn, was fundamental to increasing well-being in this small part of the community. To observe the local sustainability of co-creation processes as a long-term strategy, it was necessary to plan the creation of a meeting place for neighborhood groups. As part of the process, promises were made with stakeholders managing the estate to create such a space within cultural–social funds. However, the promise remained in the stage of official record in the neighborhood statute due to a lack of financial resources.

At the city level and in terms of influencing neighborhood activities, participation in creating the municipal concept of Centers of Local Activity (CAL) was initiated, which was being formed at that time. Representatives of the project team participated in monthly meetings aimed at developing regulations, statutes, and forms for such municipal units. Activities included benchmarking visits to all municipal cultural–social centers with a similar profile (14 places), meetings with decision-making representatives of the city council (4 meetings), and workshop groups (5 workshops). The opportunity to participate in the group enabled the project to have an impact at the city level, while simultaneously allowing the application of proven local methods of working with residents in the project.

Survey

The actions taken aimed to increase the knowledge and social activity of seniors, including through active participation in the design, testing, and delivery of social services. The events organized had activating, educational, and integrative dimensions and were therefore open to all residents of Popowice regardless of their age. To assess the organized events, a Participant Satisfaction Survey was conducted during their duration. The study was carried out in the form of a traditional paper-based survey (PAPI), and the sample selection was random among event participants. Conducting interviews encountered many difficulties, including a high refusal rate and interview abandonment during implementation. Despite the challenges, a total of 55 complete interviews ($n = 55$) were conducted and subjected to analysis. As previously indicated, one of the goals of the activities carried out within ProPoLab was to increase the activity and social integration of seniors with the residents of the estate (including intergenerational integration).

Increasing the level of social activity among seniors through their involvement in active co-creation of social services and co-governance of the surrounding architectural space were among the main goals of the social intervention undertaken. The assessment of the degree of achievement of these goals was based on comparing the results of two surveys, the first—Needs Assessment was conducted at the beginning of the COSiE project implementation, and the second—Evaluation Survey at its conclusion. To maintain comparability of the results of both survey waves, some questions in both surveys were repeated, allowing observation of changes that occurred during the project implementation. A portion of these extensive surveys is presented in the text, focusing on issues related to participation in social life and social activity enabling involvement in the process of creating and testing public services.

Social value refers to the societal influence generated by any organization, project, or program on the lives of the stakeholders impacted by its undertakings [94]. This concept encapsulates the three pillars of sustainability—encompassing social, environmental, and economic factors—with a focus on comprehending their contributions in relation to the advantages they provide to society or the overall quality of life for individuals.

Social activity, depending on individual preferences and social environment, can take various forms and manifest in different activities. One manifestation of social activity is maintaining contact with family and friends, as well as formal and informal groups, and engaging in their activities. In the first wave of the study, participants were asked to specify the frequency of contacts with 5 predefined categories of people and were given the opportunity to indicate an additional category that was significant from their perspective. Regarding contacts with family, over half of the respondents (52%) maintain them once a week or more frequently, just over 1/5 (20.3%) several times a month, while 4.1% once a month. Less than 1% of respondents never have contact with family, and 2.4% of survey participants selected the response “don’t know” or “not applicable”, which can be interpreted as a refusal to answer.

As a result of the analysis of the data collected during the first wave of the study, it was established that seniors from Popowice most often maintained relatively frequent (once a month or more often) contacts with neighbors (74%) and family (72.4%) and less frequently with friends (54.5%). Only 22.8% of respondents declared frequent meetings with friends from clubs, associations, etc. Barely less than 5% regularly met new people, while other groups were mentioned by only 0.8% of survey participants. The obtained results indicated that in the initial period of the COSiE project implementation (during the preparatory and diagnostic phase, before the social intervention), the involvement of seniors from Popowice in social life, including neighborhood life, was relatively low.

The success of the undertaken actions may be evidenced by the fact that younger residents of Popowice also willingly participated in events aimed at activating and integrating seniors (Figure 10). It can be inferred that both the form of the installation and/or the activity program (developed by seniors) proved to be attractive for other age groups as well. Among the participants of events organized within the PoPo Center, women constituted a significant majority (74%), which is not surprising considering the feminization of old age and greater social activity among women [95]. The vast majority of participants in events organized within ProPoLab, in which they took part, enjoyed them—collectively over 94% of participants positively evaluated the organized events (Figure 11). It is worth noting that young people did not participate in the events, which may have made the events seem less attractive to them.

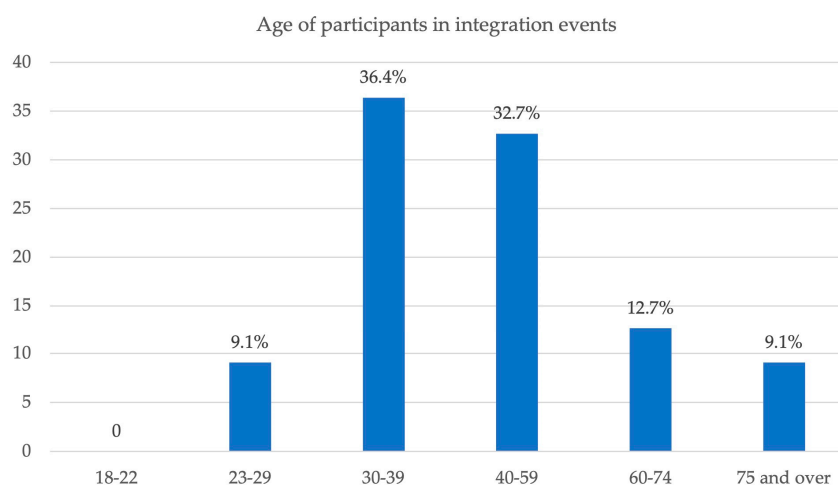


Figure 10. Age of participants. Source: ProPoLab documentation.

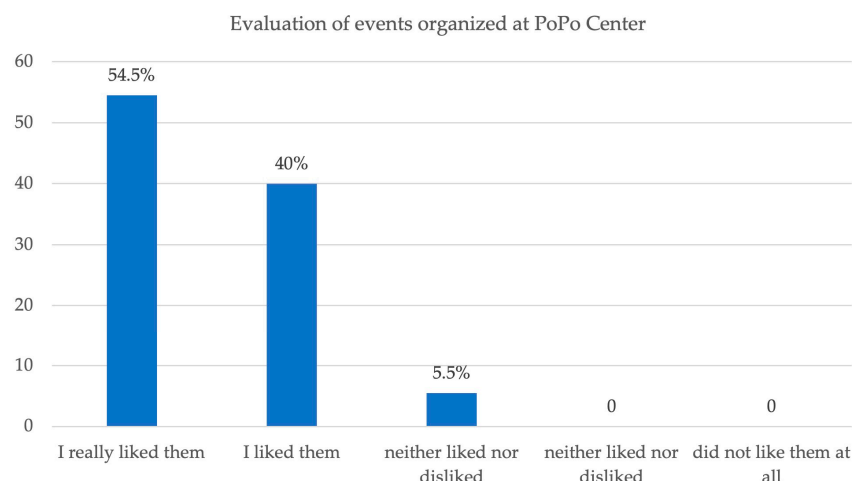


Figure 11. Evaluation of events organized at the PoPo Center. Source: ProPoLab documentation.

Besides attractiveness, the organization of these events was also highly rated. In total, over 96% of respondents positively evaluated the organizational aspects of the events in which they participated. Participants in the events were asked whether, in their opinion, the events organized in PoPo Centrum influence the social activity of Popowice residents (Figure 12)—whether they contribute to increased social activity. The vast majority (87%) of respondents perceive their positive impact on the level of social activity. An overwhelming majority of respondents (93%) declared their willingness to participate in similar events in the future (Figure 13).

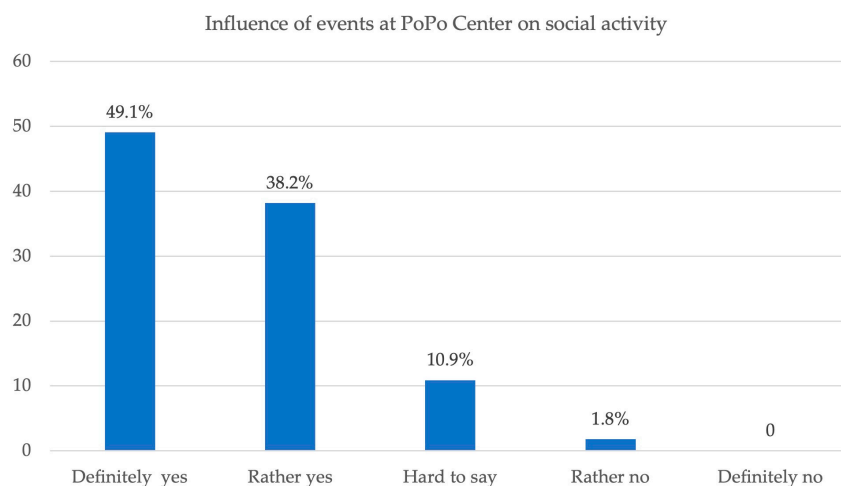


Figure 12. Influence of events at the PoPo Center on social activity. Source: ProPoLab documentation.

Based on the results of the first wave of the study (conducted before the intervention), it can be observed that the seniors from Popowice who participated in the study were generally reluctant to engage in social life, including activities related to the functioning of the neighborhood. Due to the difficulties reported by respondents in defining/distinguishing community meetings and housing cooperative meetings, these categories were analyzed together. The results obtained in the second wave of the study (conducted after the social intervention) are significantly different from the results of the first wave (Figure 14). All indicators have clearly shifted upwards. In the survey conducted in the second wave of the study, in addition to the 6 predefined categories of social activity known from the first survey (1st wave), there were also 3 additional items related to activation activities carried out within the COSiE project (Figure 12). Among the additional forms of social activity,

participation in fairs, events, and local (neighborhood) gatherings proved to be the most popular (surpassing all predefined forms), indicated by over 90% of survey participants.

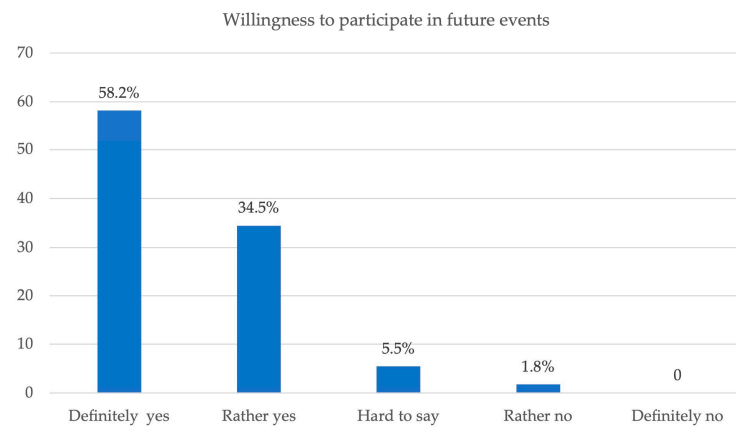


Figure 13. Willingness to participate in future events. Source: ProPoLab documentation.

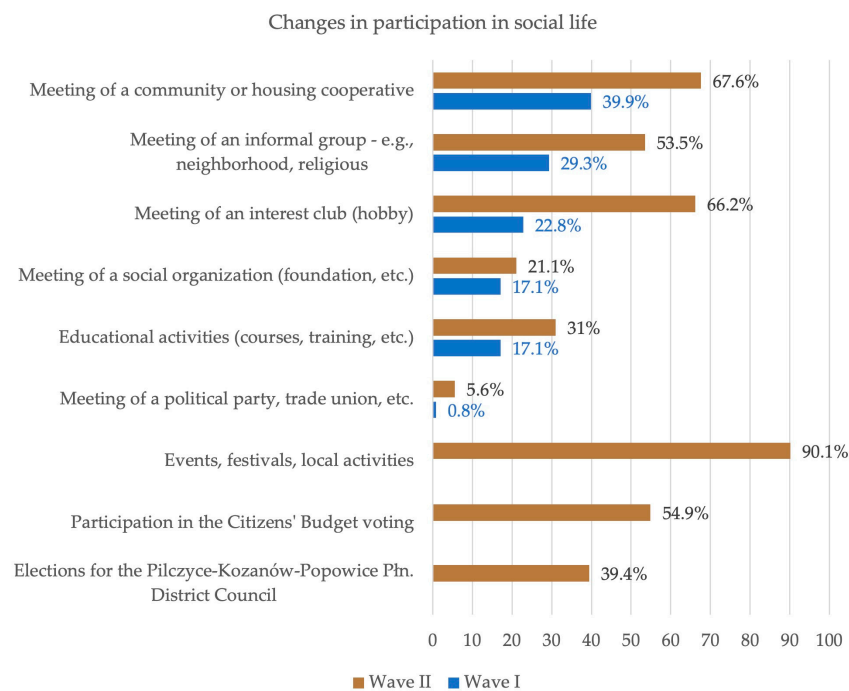


Figure 14. Participation in social life—types of social activities undertaken (the chart only presents the percentage of YES responses). Source: ProPoLab documentation.

Participants in the second wave of the study were asked to provide a subjective assessment of the change in their social activity over the past year (Figure 15). They could evaluate their situation on a five-point scale with a neutral center and an additional category of “I don’t know/hard to say”. In total, 40% of respondents acknowledged that their social activity had increased over the past year, with almost 23% believing it had increased significantly. The declared significant increase in social activity by seniors living in Popowice is also evident in other data collected during the evaluative study. In the question posed in both waves of the study about the forms of social activity undertaken, respondents, out of the six proposed categories, indicated those they engaged in. In the first wave of the study, each participant, on average, pointed out 1.27 forms of social activities they undertook. Based on the same predefined criteria, the average response in the second wave of the study was significantly higher, reaching 2.45. Therefore, it can be said that

during the implementation of the COSiE project, the social activity of seniors in Popowice (measured by their participation in various forms of activities) almost doubled (an increase of 193%).

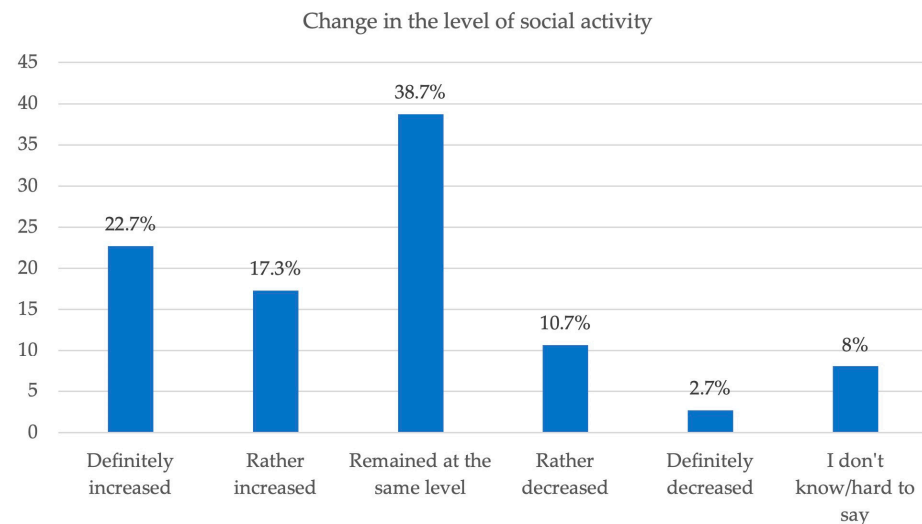


Figure 15. Change in the level of social activity. Source: ProPoLab documentation.

4. Results and Discussion

Throughout the entire process, emphasis was placed on involving stakeholders, including citizens, in co-creation. Working in multidisciplinary teams enabled the development of an innovative service based on in-depth diagnosis [96]. The innovativeness of the assumptions adopted in ProPoLab lies in simultaneously launching multiple processes: educating all stakeholders on co-creating public services, ongoing consultation of activities, monitoring processes, and implementing test solutions. Innovativeness also lies in introducing a method where the user created the final solution: they were directly involved in the process and able to express their needs, but also had to develop the outcome themselves. The application of Living Labs in an urban context can be crucial for initiating positive changes. They provide a space where co-creation practice can take place and larger, long-term co-management structures can begin to emerge [90]. They allow for experimentation with different solutions both in terms of development processes and the solutions themselves. While these experiments may not always be successful, they help communities, stakeholders, and researchers determine what works in practice.

4.1. Co-Ideas and Co-Design

Splitting the Design Thinking workshops into two cycles contributed to the participation of those most interested, providing participants with an opportunity to analyze and prepare for the next stage. The workshops could have attracted more interest if they had been held in a more attractive meeting place. The location of the meeting was unimpressive and located at the very end of the estate (some seniors complained about the distance from their homes). Despite being retired, older people have numerous tasks, obligations, or activities that may hinder their participation in research. Seniors would leave individual meetings or parts of them (e.g., a few hours) due to doctor's appointments and helping family with daily tasks and recreational trips; their lives continued at a normal pace, and workshop meetings often clashed with other matters. Therefore, requiring participation in the entire process should be avoided as it may discourage potential candidates from participating. The process must include flexible and optional elements that respect the individual contribution of the participant in the design process [22]. Implementation requires respect for how much the community wants to participate in specific stages to avoid burnout [97]. Recommendations from this study include collaborating with professionals

who understand social work with older people and can participate in planning and preparing implementation tasks and understanding the studied group. Swiftly noticing problems and reacting immediately are necessary to keep participants engaged for longer periods than just one day. Flexibility and quick responses to attempts to withdraw from the study were crucial. Individual negotiation conversations were conducted, taking into account the perspectives of various beneficiaries and employing consensus-building and negotiation mechanisms. Seniors are not necessarily members of formal organizational practice, so the approach to them must take this fact into account [24].

One of the key outcomes was the involvement and inclusion of seniors living in Popowice in activities related to the delivery of public services. Participants' decisions to join the project concerning senior co-living in Popowice (the estate where they lived) stemmed from a variety of usually very personal motivations, circumstances, and preferences. Accessibility was a primary concern, with motivation being another important issue. People can be motivated in various ways; internal motivation can stem from an interest in the topic, aligning project goals with their core values, or identifying with those goals [98]. Motivations can also be driven by financial benefits, recognition from others, or increased self-esteem. It is worthwhile to map participants' motivational factors not only to engage them in participation but also to maintain their engagement and interest in the project. In the case of the described study, a tangible benefit for senior leaders who participated in the research was a several-day trip to the seaside enriched with benchmarking visits, conducted after the project ended. There are many ways to motivate people over time, which should be considered in a systemic and long-term context.

Another outcome was the stimulation and strengthening of their motivation for active participation in the project. Another key result was the inclusion of seniors in the process of creating a shared vision of the Neighborhood Meeting Place as the quintessence of a common understanding of what senior co-living could be in the local conditions of Popowice in Wrocław. With the support of facilitators, seniors were able to identify their needs and ways to meet them using solutions they themselves created. However, the quality of identifying needs in the local space and immediate neighborhood remains low, as inferred from the attendance during the research, which is an area for further investigation. For this to happen, the workshop facilitation process must be clearly explained and communicated. Communication involves the importance of conveying how steps in the design process are interconnected because that is what ties the process together [20]. Participants should be informed about the experimental and creative dimensions of designers' work [59]. Workshop tasks can often seem strange and nonsensical to participants; Design Thinking exercises often appear completely unrelated to the research topic, which is why continuous communication and clarification of the process are so important. As with other researchers, it was found that the level of user engagement can vary significantly during the process, depending on knowledge, interests, skills, and effort [32,99].

The involvement of seniors in directly creating solutions allowed them to establish bonds with the pilot program and positively influenced their willingness to collaborate on shaping services. Moreover, these actions encouraged them to engage in community activities for the benefit of the neighborhood. The official appointment of the co-creation group (senior leaders) during the presentation of the first sketch—prototype—helped to increase the involvement of senior leaders in cooperation with the pilot program. Presenting the workshop results to a wider group of seniors helped to verify and develop the idea and brought many constructive comments from potential future service recipients. Seniors crossed the boundary between passivity and activity and began to take on the role not only of service recipients but also of its creators and donors.

Establishing relationships while creating the next prototype was a turning point in relations with other local organizations. Collaboration gained momentum when intentions and steps taken during the prototype implementation were confirmed, along with the feasibility of its execution. Tangible results of the work motivated its users to build relationships with stakeholders and take initiative. The prototype activated feedback loops; groups of younger residents, who previously did not want to collaborate with seniors during this project, eagerly joined the cooperation after the prototype development began, further motivating seniors to take action.

The creation of the prototype and cooperation among all units involved in its organization were possible thanks to earlier collaboration efforts. Some stakeholders were very difficult to engage and reluctant to act or grant permissions; however, months of work to engage them and explain the sense of the co-creation process yielded positive results. Educating stakeholders and beneficiaries was a crucial element of the project; education ranged from translating during conversations to participating in workshops and academic presentations/lectures. Each person involved in co-creation needs to translate it from scientific to everyday language, making it less abstract. Co-creation is a process that is not understood by those not involved in design broadly; designers, during their education and professional work, are trained to accept the uncertainty inherent in the creative process, which needs to be trusted [32,59].

Throughout the study, emphasis was placed on involving seniors in co-creation activities aimed at enhancing their social activity within the neighborhood. The findings reveal that the multidimensional co-creation process enabled older individuals to define problems and seek solutions aligned with their priorities. By actively involving seniors in the design and management of neighborhood spaces, the study responds to the research question regarding the effectiveness of participatory approaches in engaging seniors and other community members. As other studies also indicate, there is a growing demand for bottom-up approaches in designing age-friendly cities [27–30].

4.2. Co-Design—Prototyping

The ProPoLab pilot program entailed numerous co-creation steps, developed through the co-creation process with beneficiaries and stakeholders. Solutions were tested on equal scales, with initial versions consisting of project visualizations and one-day events during festivals.

Rapid prototyping greatly aided in developing ideas and clarifying the service vision; prototypes can significantly assist in idea development [100]. The physical presence of a prototype, even for just one day, reinforced seniors' willingness to act; physicality is important for enacting future scenarios [21]. The swift intervention through physical installations in space is referred to as the pop-up phenomenon. The appeal of pop-up structures stems from the prevalence of permanent urban constructions, where the transient character of pop-up installations offers a platform for exploring innovative solutions and conducting experiments in public spaces, all within the constraints of limited financial and regulatory considerations [93]. These structures or spaces are swiftly erected, designed for temporary purposes, yet effectively meeting the functional and aesthetic requirements of users [99].

The prototype was a crucial element of the pilot program; the physical appearance of the place provided residents with an idea and hope for the possible creation of the solution they envisioned for Popowice in the future. The aim of ProPoLab was to develop a concept of a shared space for seniors, which would serve as a meeting place, generating ideas and actions regarding local issues and initiatives. This space should be co-created, managed, and maintained by local residents, which is not an obvious solution in Polish realities. One of the research goals of the project was to investigate the social activity of seniors in the Popowice estate and the impact of co-creation process activities on the level of this activity. The results presented below were influenced not only by the installation but also by the activities that emerged around it; however, it is worth noting that events at the installation

were organized by the residents of the estate. The collaborative paradigm accentuates the significance of community engagement in the planning and design process, aiming to cultivate inclusivity, sustainable communities, and effective governance [101]. Space is perceived as a process in which the shaping of the environment arises from users' actions, and thus, transforming a place is a social activity in which people are engaged [102,103]. Spaces evolve into places when they are acknowledged by the individuals who reside and engage in activities within them [104].

The installation has served as ephemeral catalysts in urban aquapuncture, injecting novel qualities into established spaces and directing users' focus toward a heightened sense of "being" in a specific location. These dynamic and temporary interventions contribute to the dynamism of urban environments, offering flexibility for creative exploration and adaptability to changing societal needs and preferences [93].

The study indicates that a sufficient prototype for fostering social activities was a small installation made of OSB boards. An accelerator of activities can be symbolic; places emerge through iterative social practices, with meanings created and transformed on a daily basis [105]. The foundation of the place-making concept lies in distinguishing between "space" and "place". "Space" pertains to the functional aspect of the "physical space", whereas "place" constructs a notion of "space" in a relational sense, signifying the location of social practices involving various stakeholders [106]. The collaborative nature of placemaking, akin to co-creation, involves various stakeholders such as local authorities, design and planning professionals, engineering and construction experts, craftsmen, facility management providers, and local communities along with their members [107]. It extends beyond conventional focus on physical place-making, emphasizing the importance of social processes in shaping these spaces. As accurately expressed by Iwińska, K. [108], design should stem from community needs rather than being an independent goal, underscoring that the process itself is crucial over the ultimate outcomes.

Collaboration during the prototype construction phase was a pivotal moment; the meeting place began to acquire the anticipated intergenerational character, and residents became more engaged. The opportunity to create a tangible object, rather than just planning a future service, significantly changed the involvement of beneficiaries. It was the moment when beneficiaries and stakeholders recognized and believed in the power of co-creation. Furthermore, collaboration with local academic units—students from Wrocław universities—through education and collaboration built a positive image in relation to co-creation principles. The prototype was a significant project element—a physical emanation of ideas and a place that could be immediately used to meet users' needs—confirming the rationale of the undertaken actions and giving residents hope for the future (Figure 16). The effect of collaborative work motivated users to build relationships with stakeholders and undertake their own initiatives.

The results demonstrate that the physical prototype developed through the co-creation process played a significant role in influencing the social activity of seniors. By actively participating in the creation of solutions and engaging in community activities, older adults experienced a strengthened motivation for active involvement in the project. This addresses the research question regarding the extent to which the physical prototype influences the social activity of seniors, highlighting the importance of co-creation in fostering community engagement and empowerment.

SWOT ANALYSIS

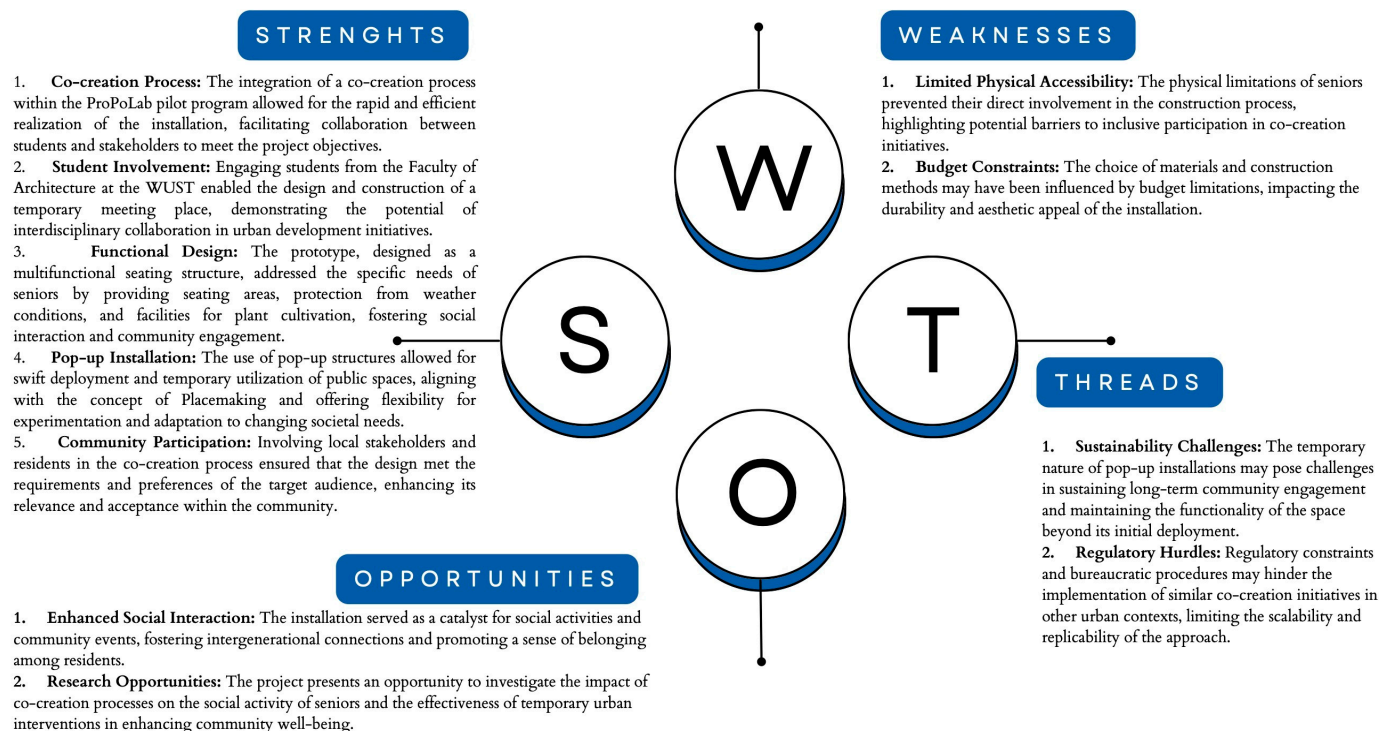


Figure 16. SWOT analysis of the PoPo Centrum pop-up installation. Source: the author.

4.3. Co-Governance and Co-Implementation

The approach was innovative, and thanks to appointing local leaders to animate dialogue and collaboration, despite differing stakeholder perspectives, it aligned with local contexts and beneficiaries [98]. Similarly, efforts were made to co-create social innovations with all groups associated with the end product—the service. During co-management and co-implementation activities, a joint effort was made to engage local leaders in promoting dialogue and collaboration among stakeholders, thus firmly embedding the approach in the local context. Decision-making was characterized by inclusivity, considering the viewpoints of various stakeholders and employing consensus-building mechanisms. Utilizing Action Learning principles proved useful in resolving contentious issues, including exploring different solutions, drawing conclusions through reflection, and planning actions.

Low attendance of stakeholders at meetings may indicate an improper invitation method. Stakeholders were invited through official letters sent via email, and confirmation calls were made. Additionally, other municipal events were utilized for informal discussions about the project and invitations to participate, targeting individuals who had previously received official invitations. Maintaining communication and stakeholders' interest was conducted similarly to beneficiaries, through phone calls, emails, and personal interactions. It seems that personal contact and individual phone conversations yielded the best results, particularly among individuals who were previously acquainted with a team member, emphasizing the importance of familiarity.

Issues with stakeholder participation did not occur during Round Table meetings held in official locations such as the University of Wroclaw or stakeholders' headquarters, both municipal and local. Therefore, it is recommended to organize official meetings in prestigious venues to enhance the meeting's significance in the context of stakeholder participation.

During one of the Stakeholder Council meetings, a workshop on readiness for co-creation activities was conducted, where participants were asked about their understanding of the concept. It was found that co-creation was often confused with participation or

consultations, mainly by representatives of the public finance sector. Upon analyzing their statements, it was determined that stakeholders needed to be presented with the comprehensive implementation perspective of the lab. The stakeholders were shown the “roadmap” of the project, their roles, and where they could engage in the processes. More time could have been dedicated to explaining the purpose of the meeting and presenting the concept. The stakeholder awareness-raising process regarding co-creation is crucial, so it cannot be overlooked. Despite challenges such as low stakeholder attendance at working meetings, we recognize the need to improve our invitation methods and increase stakeholders’ awareness of the co-creation process. Efforts to enhance communication included exploring alternative educational paths, such as short online meetings, and disseminating concise informational materials.

The limitations mentioned above regarding stakeholders’ attitudes toward participating in the co-creation process and different understandings of values, responsibility, and accountability have been identified by numerous researchers as crucial [109,110].

Perhaps the educational component should be conducted differently, for example, through short online meetings or by sending brief materials (written, video) over the internet. Stakeholders who opt for deep involvement typically have different motivational frameworks from those who sporadically participate in social events [98]. Understanding and mapping these differences can be crucial not only for engaging people in the event but also for maintaining their involvement over time and striving to create co-management structures. Stakeholder analyses were also conducted during the process, revealing that key institutions are those operating at a level lower than local. These institutions have the greatest impact on end-users. It was learned that building relationships with stakeholders requires adapting the message and maintaining relationships.

Stakeholder analyses played a crucial role in identifying key local institutions whose involvement was deemed necessary to maximize impact on end users. Tailoring communications and nurturing relationships proved to be key strategies for effectively engaging stakeholders. Furthermore, the project team had a diverse composition, including specialists from various disciplines on the university side, as well as practitioners responsible for intervention processes in collaboration with local seniors. Despite the diversity, aligning specialists towards common research goals posed a challenge, requiring intensive joint meetings and workshop sessions to support coherence and consensus. Fundamentally, decision-making processes were characterized by transparency, inclusivity, and commitment to fostering collaboration among stakeholders, ensuring that the interests and perspectives of all parties were duly considered and incorporated into our approach.

Influencing social activity through changes in public space requires the involvement of various stakeholders and beneficiary participants [111,112]. The greater the diversity of experiences in the process, even crossing professional boundaries, the more likely participants are to learn and generate valuable ideas, increase quality, improve efficiency, and simulate appropriate resource utilization [113]. The project team in the described study was highly diverse, encompassing specialists from various fields on the university side, with researchers in sociology, political science, and law responsible for formal frameworks and evaluation, while the practitioner team such as workshop facilitators, architects, and animators were responsible for developing and implementing intervention processes in collaboration with local seniors. Differences were experienced among specialists, posing a challenge in aligning them toward a common research goal and leveling the knowledge base. To address these challenges, significant time was devoted to joint meetings aimed at aligning knowledge levels across different specialties and workshop sessions aimed at jointly developing goals and action plans, resulting in the consolidation of practical and theoretical plans. All activities conducted within the project were archived in the Trello tool, which also served as a communication platform and task monitoring system for the team in accordance with the research plan. Additionally, a summary of each team meeting was published on the official project website to provide beneficiaries, stakeholders, and the broader community with insight into all ongoing activities.

4.4. Co-Evaluation and Impact

Conducting a survey among seniors posed a significant challenge due to the technological exclusion of this social group. The survey had to be conducted in a traditional manner—in a paper version. The questionnaire contained many questions, and filling it out took seniors quite a long time (about half an hour), so filling out the survey “on the street” was impossible. Respondents were mainly reached through the “snowball sampling” method, which significantly prolonged the data collection process. It is reasonable to involve stakeholders such as housing cooperatives or Social Welfare Centers in such activities to assist in conducting surveys. In our case—the seniors of Popowice—we opted for a paper version of the study due to the digital exclusion of the beneficiaries. The online version of the survey—placed on the website and social media—did not generate interest, but in other age groups, this is a recommended form of survey dissemination. Moreover, it may be beneficial to employ mixed survey formats, offering respondents options such as online, paper-based, or telephone surveys—which could prove to be a good solution for seniors. It is important to provide seniors with the choice of survey type according to their preferences and capabilities. Additionally, minimizing the length of the survey is also recommended, especially when targeting seniors.

Comparing the forms of social activity undertaken by seniors from Popowice at the beginning and after the completion of the COSiE project, significant changes are evident. The results of the study indicate significant changes in the forms of social activity among seniors after the completion of the COSiE project (Table 1). The observed increase in participation in various social activities, such as community meetings, interest clubs, and informal group meetings, may indicate the success of initiatives aimed at activating this social group. The most frequently engaged form of social activity remains participation in community or housing cooperative meetings, but the participation rate has increased by almost 28 percentage points (p.p.), indicating a growth of nearly 70%. The second most frequently indicated type of activity is the club meeting, with over 66% of responses. This represents an increase of over 43 p.p. or a spectacular growth of almost 191%. This is the highest recorded change, making this form of activity more popular than meetings of informal groups such as neighbors or religious gatherings. Additionally, the growing popularity of educational activities and informal group meetings suggests that seniors are becoming increasingly open to various forms of social activity. At the same time, the low interest in participating in political life indicates the need for more targeted action in this area. Detailed data are presented in the table below.

Table 1. Participation in Social Life—a Comparison of Engaged Types of Social Activities.

Types of Social Activities	Wave II	Wave I	Change (p.p.)	Change (Ranking)
community meeting or housing cooperative assembly	67.6%	39.9%	+27.7%	1 (→)
informal group meeting—e.g., neighborhood, religious	53.5%	29.3%	+24.3%	3 (↓)
club of interests (hobby) meeting	66.2%	22.8%	+43.4%	2 (↑)
meeting of a social organization (foundation, etc.)	21.1%	17.1%	+4.1%	5 (↓)
	31.0%	17.1%	+13.9%	4 (↑)
educational activities (courses, training, etc.)	5.6%	0.8%	+4.8%	6 (→)
meeting of a political party, trade union, etc.	90.1%	n/a	n/a	-
events, festivities, local happenings	54.9%	n/a	n/a	-
participation in the Citizens’ Budget	39.4%	n/a	n/a	-
elections to the Pilczyce-Kozanów-Popowice Płn. District Council	67.6%	39.9%	+27.7%	1 (→)

Symbol explanation: → remain at the same place in the ranking, ↓ drop to a specific rank, ↑ rise to a specific rank.

The high level of social activity among seniors living in Popowice is also evident in the indicators of participation in three additional forms of social activity compared to the first wave of the study. Given that during the implementation of the COSiE project, elections were held for the Pilczyce-Kozanów-Popowice Płn. District Council, voting within the Wrocław Citizens' Budget, as well as numerous festivals and local events, Popowice seniors were asked about their participation in these events. Over 90% of respondents declared their participation in events, festivals, and local gatherings. In the voting for the Wrocław Citizens' Budget, almost 55% of seniors took part, while in the elections for the Pilczyce-Kozanów-Popowice Płn. District Council, almost 40% of respondents cast their votes. The results indicate a very high involvement of Popowice seniors in neighborhood life, the need for integration, and the willingness to co-create and co-manage the surrounding social fabric at both the neighborhood and city levels. In the second wave of the study, respondents declaring a change in the degree of social activity were asked to provide a brief explanation of this change. Among respondents whose social activity decreased, the most significant reason for the changes was the deterioration of health and/or age (four out of ten respondents). Other reasons were indicated by individual persons, including factors such as a lack of sufficient information about events, lack of interest, or lack of time. One respondent expressed this in the following words: "Because I had six funerals of people very close to me and had no time". Among the motivators for increased involvement in social life, the most frequently mentioned was the opportunity to participate in interesting events, thereby meeting neighbors and doing something together for the common good.

These conclusions should be approached with caution, as there is a possibility that seniors participated in the co-creation process mainly due to a lack of other alternatives or a sense of obligation to the project. It is also worth considering that the observed changes may be the result of a broader social context or local initiatives rather than solely the participation in the co-creation process. Therefore, additional research or analysis is necessary to more precisely understand the impact of older adults' participation in the co-creation process on their social activity.

While the study aimed to engage a diverse range of stakeholders, including citizens and seniors, it is essential to acknowledge the potential biases inherent in the data collection and analysis process. Despite the efforts to ensure inclusivity, there may have been inherent biases that influenced the selection of participants and the interpretation of the data. One source of bias stems from the method of participant recruitment. Although it was endeavored to recruit a representative sample of seniors living in the Popowice estate, certain individuals may have been more inclined to participate based on their level of interest or availability. This self-selection bias could have skewed the demographic representation of our sample, leading to a potential overrepresentation of certain perspectives or experiences. Seniors who participated in the survey were in relatively good physical and mental condition, barring a few exceptions, and they were able to participate in activities; this is a group referred to as "active seniors" understood as a social group that uses services, recreation, and social contacts in the immediate area [114]. Missing from the workshop survey were representatives of the "independent senior" group—people who spend a lot of time in the apartment in late old age, often more than 20 h a day, and the "senior requiring support or care" group of health problems, reduced physical fitness, sometimes disability or physical and mental incapacity. While the last group, due to its inability to participate in social life, was not an object of study, reaching the group of independent seniors may be crucial. It is a group that, perhaps with appropriate changes or facilities, could begin to lead a more active lifestyle and remain in good health longer [52]. Unequal access is identified by many researchers as a key limitation of co-creation [109,110]. Co-creation can result in biased participation favoring the most extreme or privileged groups who have the time and energy to participate, as well as the knowledge and resources to influence joint decisions.

Additionally, biases may have been introduced during the data collection process itself. For example, the facilitators conducting the workshops and interviews may have

inadvertently influenced participants' responses through their demeanor, language, or preconceived notions. This interviewer bias could have impacted the quality and validity of the data collected, potentially leading to a distorted understanding of the participants' perspectives. Furthermore, biases may have arisen during the analysis and interpretation of the data. Researchers' preexisting beliefs, assumptions, or theoretical frameworks could have influenced their interpretation of the findings, leading to confirmation bias or selective perception. This could have resulted in certain themes or perspectives being prioritized over others, potentially obscuring important nuances or alternative viewpoints.

A single-case research project does not provide entirely reliable information that can be generalized to a broader population. However, the project was deliberately based on an in-depth examination of a single case to allow for a detailed study where individual elements of the process could be closely examined. Furthermore, the project was continuously reviewed in conjunction with partner teams in the CoSIE consortium (six workshop series), and revisions were made based on shared conclusions drawn during consortium meetings and workshops. While knowledge cannot always be generalized, it can still influence the knowledge-gathering process in a given field [115]. Evaluating the use of specific methods and tools in the described study may lead to new insights that can be applied in similar urban renewal projects and social activation initiatives for older adults in cities.

5. Conclusions

The present study aimed to understand the impact of the co-design process and prototype testing on the social activity of seniors, as well as their involvement in designing and managing shared spaces.

The implementation of ProPoLab served as evidence that senior cohabitation in local conditions is associated with a shared space for maintaining and supporting interpersonal contacts and activities in the local environment. The ideas of senior cohabitation developed within ProPoLab are not aimed at cohabiting with other seniors but at promoting independence and self-sufficiency, reducing social isolation, and providing residents with homes for their entire lives in a familiar environment, which contributes to improving their quality of life. It is possible that, due to the local specificity, senior cohabitation in Poland may take different forms than in Northern and Western Europe. As Poland is at the beginning of shaping social housing, rather than copying examples from other countries, it might be better to create solutions based on local culture and lifestyle.

An important element for the local community may not only be a public space but also a club or meeting place, creating an accessible common ground for all residents' interactions. Complementing a multi-family residential estate with shared spaces that help continuously strengthen neighborhood ties could be an answer to the local form of cohabitation. Such a formula does not require significant financial investments and does not significantly interfere with existing buildings. As revealed by the conducted research, it is the communal space that is the missing element in the block estate in Popowice, Wrocław.

The idea of a meeting place developed by workshop participants fits well with the concept of placemaking [94,102], which involves the continuous evolution of public space, adapting to the changing needs and possibilities of residents. This concept, based on a multi-aspect approach to space planning, design, and management, aligns perfectly with the idea of the New European Bauhaus. The New European Bauhaus initiative aims to support small-scale initiatives within local communities, which corresponds ideally to the described study. It includes a participatory and co-creation approach, engaging civil society in all age groups, which is an essential element of this project.

In advancing the field of co-creation activities with seniors, particularly within Eastern European contexts, this study fills a significant research gap. By providing empirical evidence of the benefits and challenges associated with co-designing neighborhood spaces with older individuals, the study contributes valuable insights for future co-design processes. Moreover, the findings underscore the importance of flexibility, effective communication, and stakeholder engagement in ensuring the success of co-creation initiatives, thereby

advancing our understanding of inclusive urban design practices. Similar accommodations have been identified by others as preferred mechanisms for facilitating successful co-design with older users [6,10,11,32,62,90].

In summary, the co-created installation, serving as a prototype for a meeting place, fulfilled its purpose as a test element by activating and engaging residents of different age groups. Despite its small size and relatively low-quality materials, the installation sparked interest among residents and was regularly utilized. Increased social activity and engagement in the co-creation process can be achieved by ensuring that the process includes options for repeated and flexible participation, adapting to the participants' needs. This approach can foster growth in social activity. Prototyping stages are crucial, if not the most important, in building social activity among participants. Prototyping and implementation enhance engagement in the design process, raising awareness of the significance of actions and strengthening the group by fostering camaraderie around shared work and common goals. Involving local leaders in the co-creation process can serve as a seed for creating a local community and building social capital, aligning with the principles of the New European Bauhaus [7]. Care for the jointly created space had a positive impact on seniors, enabling their meaningful participation in social life and increasing their actual social activity.

Future research directions in this area should encompass co-creation processes incorporating low-cost prototypes, allowing solutions to be tested by a broader range of users than those involved in the study. The methods and tools used in this study, while not high in cost, require significant time commitment, thus it would be worthwhile to explore opportunities to streamline the process, minimizing engagement demands on both participants and facilitators. When designing the co-creation process, it is important to tailor it to local cultural and social contexts as well as the requirements of the age group, leveraging diverse knowledge of research and workshop methodologies.

Future research in this field should focus on addressing the limitations identified in the study and advancing methodologies for co-creation processes. This includes implementing more robust recruitment strategies to ensure a representative sample of stakeholders, particularly seniors from diverse demographic backgrounds. Additionally, exploring alternative methods of communication and engagement could enhance participation and inclusivity in co-creation initiatives. By fostering ongoing collaboration and knowledge exchange with partner teams and consortia, researchers can validate findings and derive collective insights from diverse contexts. Moreover, emphasizing the transferability of knowledge gained from the study can inform similar urban renewal and social activation projects targeting older adults in urban areas. Furthermore, there is a need for theoretical development to better understand the intersection of co-creation, aging, and urban design, especially in Eastern European contexts. Research in this area should consider the cultural and social contexts, as well as the specific requirements of different age groups. Drawing on diverse research methodologies and workshop techniques can facilitate this process. By addressing these biases, limitations, and theoretical gaps, future research can contribute to the development of more inclusive and age-friendly urban environments. Longitudinal studies can provide deeper insights into the long-term impact of participatory urban design on the well-being of older adults and the broader community. Additionally, research focusing on the scalability and sustainability of co-creation initiatives can further enhance our understanding of their effectiveness in addressing the evolving needs of aging populations.

Supplementary Materials: Supplementary data to this article can be found online at: <https://cosie.turkuamk.fi/arkisto/co-housing-of-seniors/index.html> (accessed on 20 March 2024) or at <https://propolab.f-as.pl> (accessed on 20 March 2024).

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