

MAX'CO

**MAPS OF EXPERIENCES FOR
THRIVING COMMUNITIES.**

A DIGITAL GUIDE FOR CO-CREATION.

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Ebook edited in the frame of the Erasmus+ Partnership
MAXICO - Maps of experiences for thriving communities

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ABOUT MAX'CO

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ABOUT THIS REPORT

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INTRO DUC TION

:ABOUT MAXICO
:WHY THIS DIGITAL TOOLKIT?

ABOUT MAXICO

MAXICO is a cross-sectoral partnership that unites citizens, educators and specialists in participation to develop a sustainable and innovative curricula for co-creation methods in education and training. It aims to collect European practices of community mapping and to adapt them to the local community needs. The project aims to initiate a knowledge exchange between countries, test and experiment with the collected best practices, publish a co-creation methodology and open it up to the communities.

Within the framework of MAXICO, a collection of materials, projects and methods in the field of community mapping and co-creation is being gathered.

Community mapping describes a collaborative process of sensitization, reflection and consciousness-raising regarding one's own relationship to space. It represents the act of figuring out and categorizing who is doing what and where. It enables us to locate service gaps, learn about currently offered services, identify important stakeholders, and promote collaboration (CAFO, 2021).

In the process of participation, consultation or data gathering for mapping, people learn to critically read their spatial environment in order to change or shape it, contributing, thus, to improving the understanding of the social and cultural landscape surrounding them in everyday life (Jackson & Bryson, 2018). Regardless of the need or the topic on which community mapping is carried out, it slowly turns into a form of democratization and education of citizens to get involved in the place-making process (Elwood & Leitner, 1998).

Community maps provide a valuable visual representation of what a community perceives as its place and the significant features within that place. The mapping process can influence the internal dynamics of a community, fostering the cultural learnedness as a call for citizens to develop critical perspectives capitalizing their role in society, in the territorial planning (Lydon, 2003). Citizens often feel that they are not considered in the decision making process and, consequently, the issues

raised by them do not sufficiently or correctly reach the ears of the authorities. At the same time, a large number of citizens report problems to the authorities and would like to get involved in the territorial planning and become the source of change in society.

In spite of the fact that community mapping is more and more used as a category of powerful spatial tools to georeference events, places, attitudes and problems, yet there is still little empirical evidence available (Parker, 2003). The mapping procedure is considered to be essential to the definition and comprehension of community mapping (Amsden & VanWynsberghe, 2005). It incorporates principles of inclusion, transparency, and empowerment to connect critical cartography literature to the objectives of community mapping practitioners (Parker, 2003). Although the means of data collection have diversified and digitized in recent years, oral or written communication (especially through opinion forms addressed to citizens) is among the few old methods left up to date. The orality through group / gatherings' communication focuses on the social construction and practice of "community", the connection between citizens' cognitive power and maps, the inherent challenges involved in community mapping, and the symbolic and actual limitations that can slow down or jeopardize community cartography (Fang et al., 2016). It also suggests areas for additional study and investigation while creating a sense of location through social participation in community mapping.

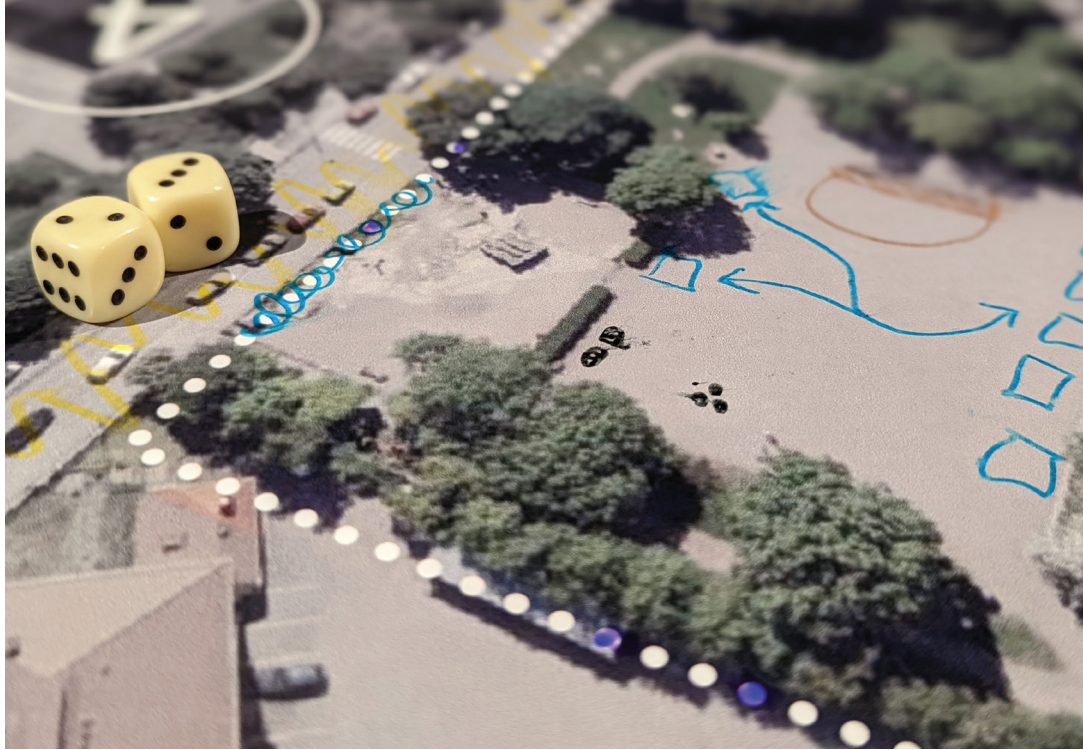
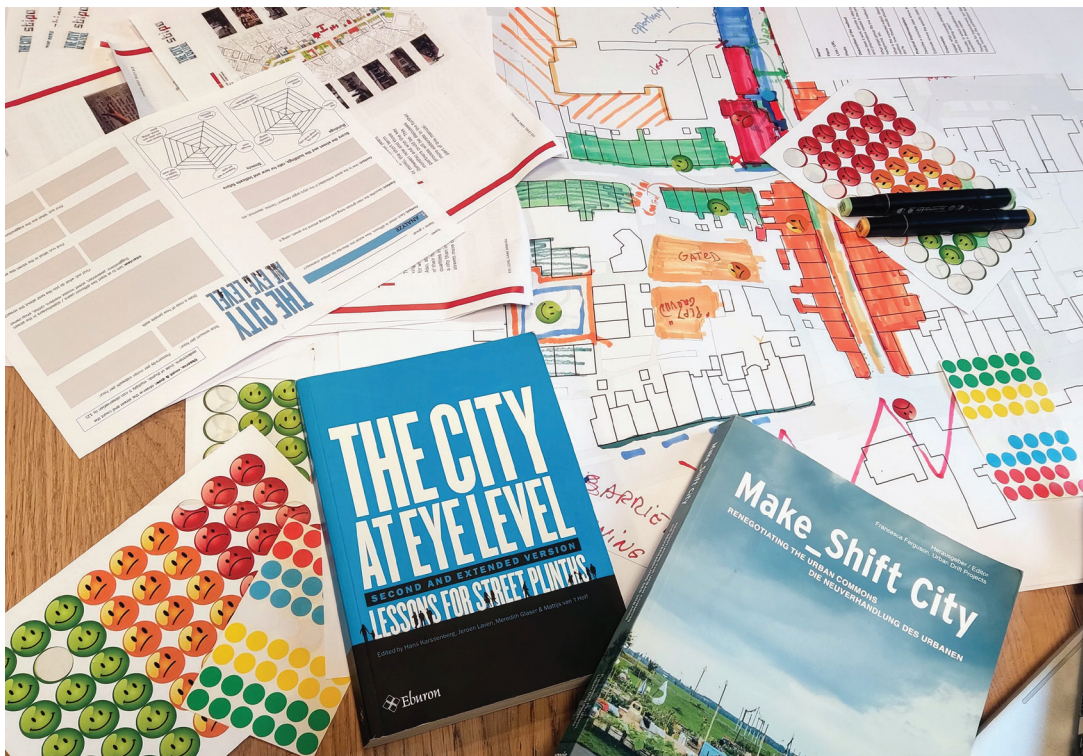
The fundamentals of community mapping stress the significance of developing social contexts that are sustainable and allow individuals to preserve a sense of identity and autonomy (Kretzmann & McKnight, 1993). Community mapping also enables underrepresented groups to participate, such as older people, low and moderate income individuals or persons with inadequate literacy abilities and living in multilingual environments (Fang et al., 2016; Friedman, 1997; Gangarova & Freiwald, 2023). It functions in a variety of contexts with little effort and expense (Gangarova & Freiwald, 2023). As a result, a "rooted sense-of-place" is fostered in various geographical locations by opportunities for forming social connections

WHY THIS DIGITAL TOOLKIT?

across interpersonal, community, cultural, and societal domains (Hay, 1998). It becomes clear that community mapping provides a platform for horizontal dialogue that enables a visual, nonverbal, as well as playful, collective design process. It can also encourage community members to participate in place-based decision-making, raise awareness of pressing place-based issues, and ultimately help strengthen local communities and their members.

This e-book reflects the joint effort of the partnership and their associates in gathering knowledge, testing, curating and improving it for external further use. During the MAXICO project, different methods and practices in the field of community mapping and co-creation were tested and reflected upon during the project in workshops with professionals from different educational sectors (adult, youth and school education), social workers, artists, urban planners, civil society actors, policy makers and active citizens. Individual methods that prove productive for the work were collected on the project website and in this e-book. They can be used flexibly in different contexts and offer a practice-oriented approach.

Therefore, the publication includes a selection of the practices we gathered during the project and it serves as a collection of guidelines and recommendations for educators.



COM MUNITY MAP PING

Empowering Citizens &
Cities to Co-create Solutions

**:EXPLORING THE PROCESSES IN
COMMUNITY MAPPING**

**:COMMUNITY MAPPING –
THE ROAD AHEAD**

A contemporary challenge for shaping urban places and improving the quality of life in communities is the mismatch between a slowly adapting institutional environment and rapidly changing lifestyles and values of urbanites. The result is a gap in knowledge that hinders the creation of inspiring places for today's citizens. Too often, our systems speak the "hard" language of codes and norms while overlooking the "soft" local insight and emotional connection we have with places.

Recognizing this disparity, both municipalities and citizen groups are increasingly emphasizing participatory planning to harness the power of collective intelligence for community improvement. One thread in this evolution has been the subtle renaissance of community mapping, a process for empowering residents to actively chart out various assets or lack thereof in their living environments. Different types of tools and methods are used to make this information available to decision-makers or fellow residents. These processes ideally foster collaboration between cities and citizens, paving the way for a brighter future.

The rapid digital transformation of society has supercharged the growth of community mapping. With an array of online tools now available, it has become possible to upload location-specific information about communities to cloud platforms. This data is then readily available for processing, analysis, and visualization.

While the development and increasingly widespread use of community mapping tools and methods empower residents to actively shape their neighborhoods, the actual practice, like many participatory processes, offers varying degrees of involvement between stakeholders.

When engaging in community mapping processes, residents sometimes might merely have the role of being passive consumers of mapped data. In other processes, the tables are turned, and residents spearhead initiatives, taking leadership roles. In intermediate cases, officials inform citizens or involve them in a consultation process before implementing the practices. This involvement spectrum

is aptly depicted by Sherry Arnstein's ladder of participation (concept proposed in 1969), which spans from mere manipulation to full-fledged citizen control.

From an educational viewpoint, there is the question of who owns the community mapping initiative and how citizens are trained in the process. Often, community mapping projects illustrate very well the idea of "citizen science", by actively involving the public in scientific research that produces new knowledge or understanding of the surrounding space (Haklay, 2012). The term "citizen science" refers to a broad notion that can be used to describe a variety of historical and contemporary methods for committing the general public to scientific inquiry. In this process, community mapping can be one of the ways in which citizens (generally non-professional) are involved in research, from data collecting and mapping to data interpretation and analysis (Land-Zandstra et al., 2021). Thus, citizen science catalyzes communication between science, policymakers, and society, and promotes adult education.

It is crucial to acknowledge these participants' viewpoints and experiences as a result. It is also critical to comprehend the advantages people receive from participating in citizen scientific programs, as forms of "democratisation", in terms of making previously excluded or marginalized populations more available to scientific data and the methods used to manipulate it (Buckingham Shum et al., 2012). This will ensure that participants and scientists both gain from specific projects and will demonstrate the potential of citizen science in the broader sense, in involving people in scientific processes which are not bound by institutional boundaries. The level of involvement might range from quickly gathering data to making a major commitment of free time to discussing a community problem with researchers and/or other volunteers. Although academic training is not a requirement for citizen researchers to participate in community mapping projects, adherence to scientific standards, particularly openness, is important (Land-Zandstra et al., 2021).

It follows that the possibility of amateur scientists to participate in decision-mak-

EXPLORING THE PROCESSES IN COMMUNITY MAPPING

ing is what brings citizen science amidst a large number of community mapping projects. We will see in the following sections what this participation entails and at what levels it can be achieved.

The MAXICO project has provided a profound exploration into the multifaceted realm of community mapping tools and methods, revealing a snapshot of the ways that location-based resident-city interaction takes place in our cities today.

Information Gathering & Visualization: Tools such as [Hoodmaps](#) and [Mapillary](#) primarily focus on accumulating and illustrating data. These tools allow residents to contribute localized information, laying a foundational base for shaping future actions and strategies. Although these platforms play a crucial role in depicting and comprehending community issues, their main function is not to co-create solutions to local problems but to provide a structured and visual representation of the gathered information, enabling a better understanding of community needs and conditions.

Dialogue & Interaction: Tools like [Maptionnaire](#) and [Civic Alert](#) serve as conduits for communication between residents and governing entities, allowing the voices of the grassroots to be heard and considered in governance and planning processes. These platforms aim to synthesize data-driven insights with the nuances of human interaction and feedback, ensuring a well-rounded view of community needs and concerns. They facilitate an ongoing conversation, enabling mutual understanding and collaboration between the community and authorities, thus fostering a more responsive and inclusive approach to addressing local needs.

Exploration & Knowledge Sharing: Platforms like [Nostalgeo](#) and [Instawalks](#) offer avenues for residents to delve into and share the rich tapestry of experiences, cultures, and histories inherent to their neighborhoods. They not only foster a sense of community engagement and shared identity but also act as preservers of the unique characteristics and stories of evolving neighborhoods. By promoting a cul-

COMMUNITY MAPPING THE ROAD AHEAD

ture of learning and mutual discovery, these platforms contribute to the enhancement of communal bonds and the collective appreciation of local heritage.

Collaborative Decision-Making: This category encompasses tools and methods like [Ecomuseo Casilino](#) and [Hush City App](#). These methods transform community mapping processes by elevating residents from mere contributors of data to active participants in the decision-making processes. This transformation ensures the creation of spaces that are genuine reflections of the community's desires and aspirations. In this approach, the mapping processes are predominantly led by the community, from the bottom up, with outcomes being shaped by the proactive and collaborative participation of residents, ensuring that developments are truly representative of and beneficial to the community.

The MAXICO project has provided a profound exploration into the multifaceted realm of community mapping tools and methods, revealing a snapshot of the ways that location-based resident-city interaction takes place in our cities today.

During the project's examination of the community mapping tools and methods, it became clear that the field is not devoid of challenges. Issues such as inclusivity, data management, and bureaucratic red tape often pose hurdles for those who decide to launch a community mapping activity. To all these, we can also add a quite common challenge, which represents the adaptation of the mapping method to the needs and access skills of the community to which it is addressed.

This type of "tool for community organizing", as it is often regarded, implies dedication to carrying out effective mapping and thorough research (Water Aid, 2005; Amsden & VanWynsberghe, 2005; CAFO, 2021). Depending on the method of promotion and the scheme of gathering information from the inhabitants about the problems they face, community maps can be created by hand (on a pre-designed folding map, fabric or an interactive paperback form), by using digital means, or it can be hybrid. Community mapping data collection is often per-

formed through interviews, anecdotes, surveys, and drawings created by specific community members as their data sources (Parker, 2005). At the same time, they can contain much more precise, punctual, well-located or dated information about the topic of the mapping initiative. These data are frequently cross-referenced with existing geographic information systems like GPS coordinates.

Although some data collections capitalize on the knowledge or intuitive and experiential sensing of the community, the vast majority of mapping methods end up being organized and processed sooner or later in the digital environment. Besides, many community maps are only accessible online, which can be a barrier for disadvantaged communities. However, as urban areas continue to expand and diversify, it becomes imperative to ensure that every resident has not just a voice, but an active role in shaping their surroundings. Community mapping not only provides people's voices with a platform but also ensures they are heard by decision-makers and neighbours, setting the stage for collaborative urban solutions.

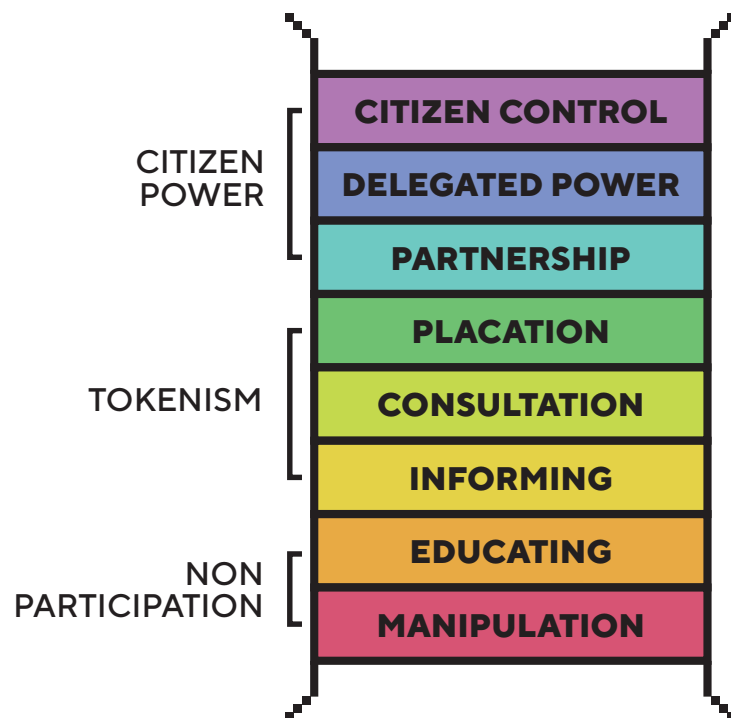
LADDER OF PARTI CIPATION

:LADDER OF PARTICIPATION
ACCORDING TO ARNSTEIN

:LADDER OF PARTICIPATION
AS A HORIZONTAL TOOL

:ADVANCED LADDER
OF PARTICIPATION

LADDER OF PARTICIPATION ACCORDING TO ARNSTEIN



The **MAXICO** project relies on the ladder of participation as an approach to evaluating community mapping methods. The ladder provides a conceptual framework that outlines different levels of engagement and involvement in decision-making processes, particularly within community and civic settings. It was initially developed by Sherry Arnstein in 1969 and it visually represents the increasing degrees of participation, from passive involvement to active empowerment. The ladder has since been widely used in the field of community development and participatory practices. (Figure I)

Stakeholders have the idea and **set up the project**

Goal created by a facilitator but **resources and responsibility given to citizens**

Stakeholders have **direct involvement** in decision-making

Stakeholders **shape ideas**, but the final decision sits with facilitators

Stakeholders **views are sought** but decisions made by facilitators

Stakeholders are **informed on decisions** but have no opportunity to contribute

The assumption that the **stakeholders are passive recipients**

The illusion of participation when **power is denied**

Figure I

At the bottom of the ladder, we find forms of non-participation or tokenism, where individuals have limited influence or agency in decision-making processes. This includes activities such as information dissemination or consultation, where community members are merely informed or asked for feedback without possessing genuine power to influence outcomes. In the context of community mapping, this may manifest as using maps solely as a tool for passive information dissemination. Community members are provided with pre-defined maps or data without the opportunity for active participation or input.

Moving up the ladder, we encounter levels of greater participation. Citizen participation evolves into informed consultation, where community members receive more detailed information and have the opportunity to provide meaningful input. Progressing further up, we reach levels such as partnership and delegated power, where community members actively collaborate and work alongside decision-makers, sharing responsibilities and directly impacting outcomes. At these levels, community mapping can aim to involve community members in a more meaningful way by incorporating consultation during the mapping process. This could include collecting their perspectives, preferences, and experiences of community members to shape the mapping outcomes. Engaging community members as active participants in discussions and decision-making about the mapping process would demonstrate a higher level of participation.

Towards the top of the ladder, we reach the field of citizen power and community control. At these levels, individuals and communities possess significant decision-making authority and have the power to shape and determine outcomes. They have a strong sense of ownership and are actively involved in defining priorities, making decisions, and implementing actions that directly affect their lives. Community mapping methods can provide opportunities for partnership and collaboration, such as co-designing mapping activities, identifying key areas of interest or concern, and collectively analyzing and interpreting the mapped data. This way, community members become true partners in the mapping process, sharing

responsibility and actively shaping the outcomes. As we reach the higher rungs of the ladder, community mapping methods can empower community members with delegated responsibility and community control. This might involve enabling community members to lead the mapping efforts, allowing them to define objectives, make decisions, and take action based on the mapping results. Such an approach entails a sense of ownership and agency, empowering community members to make use of the mapping outcomes to advocate for change and drive community development.

It is important to recognize that the ladder of participation is not a rigid or linear progression. Different contexts and situations may require different levels of engagement, and the ladder should be seen as a tool for assessing and understanding the current level of participation rather than as a fixed hierarchy. The goal is to move towards higher rungs of the ladder, fostering meaningful engagement and empowering individuals and communities to have a genuine voice in the decisions that affect them.

For the MAXICO project, it is crucial to emphasize that the positioning of methods on the ladder is specific to the context of the case studies. Each method can be adapted to different levels of participation. In the methods discussed, the potential for different levels of participation is briefly explored, encouraging experimentation and adaptation in other contexts. While the ladder of participation provides a useful framework for evaluating implementation of community mapping methods, it is not without its critics. The ladder is useful for illustrating in an accessible manner the various levels of participation, yet community mapping methods and participatory processes are often complex and multifaceted, and the ladder might fail to capture the nuanced dynamics and the power imbalances involved, reducing it to a simplistic hierarchy (**Figure II**). Critics argue that the ladder oversimplifies the complexity of participatory processes, overlooks contextual factors, and may not fully address power imbalances and tokenistic practices.

LADDER OF PARTICIPATION AS A HORIZONTAL TOOL

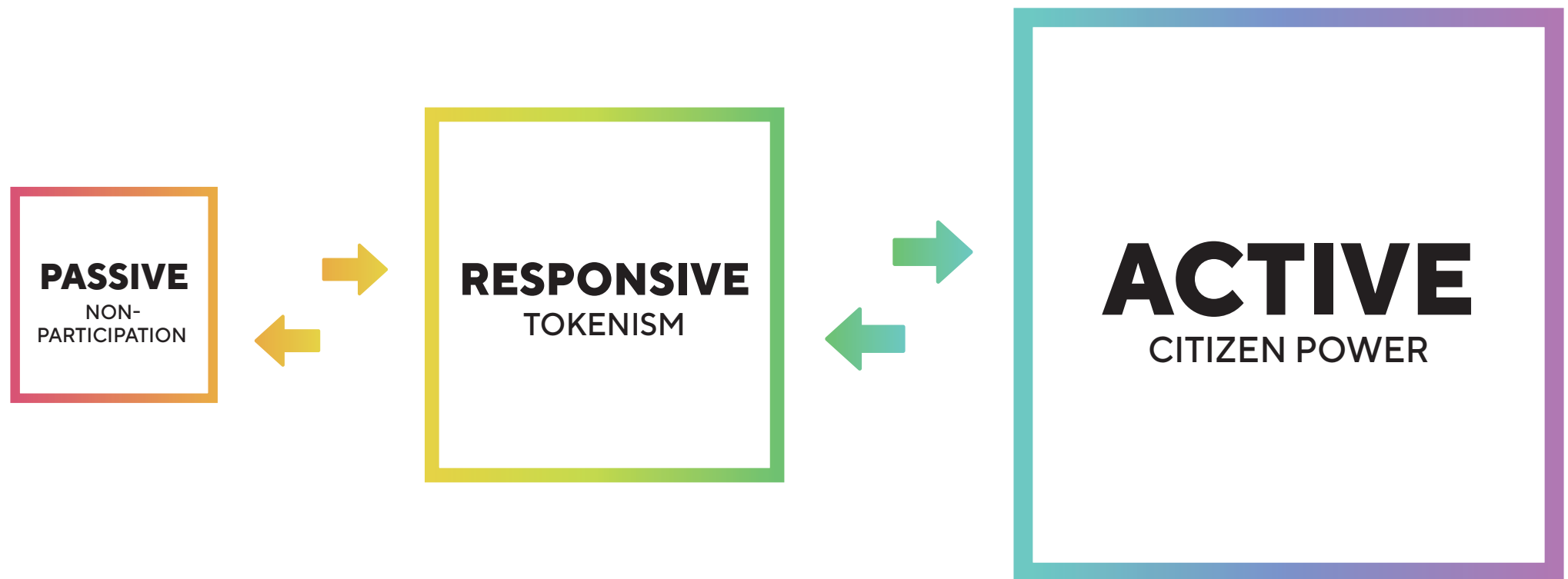


Figure II

First, the dynamic and evolving nature of user participation is not adequately captured by Arnstein's ladder, a linear, hierarchical model of involvement. According to Tritter and McCallum (2006), Arnstein's paradigm inhibits viable solutions to the problem and undercuts the potential of the user involvement process by focusing primarily on power. With power in the spotlight, Arnstein's ladder concept ignores the existence of several significant forms of knowledge and expertise and fathoms a similar basis for users, providers, and policymakers. By neglecting to distinguish between method, user category, and objective, Arnstein's model disregards a number of facets of user involvement. It also does not take into account the prerequisites for user involvement, such as trust in the process and the results, as well as the possibility that some users may not want to participate. Additionally, it does not acknowledge the agency of users who may look for various forms of participation in response to various topics and at various times (Collins & Ison, 2006).

Second, the Arnstein's ladder shows a linear relationship between citizen control and non-participation. According to Bishop and Davis (2002), a linear involvement means that the actual policy issue is unchanging, only the players' methods are different from one level to the next. Instead, they advocate for varied levels and types of participation as many policy issues are unique. Additionally, the nature of the policy issue is established during the participation process, which shapes the process's structure and permits feedback loops. (Collins & Ison, 2006; Tritter & McCallum, 2006).

The third argument is built around citizen obligations in the community mapping process and the power relationship between the community and the authorities (Collins & Ison, 2006). In many ongoing participatory projects, roles are harder to define and responsibilities develop as a result of the participatory process itself, contradicting Arnstein's ladder's assertion that roles and responsibilities only change in relation to changing levels of power (Tritter & McCallum, 2006). To put it another way, people do not always describe their involvement in terms of their

sense of authority. Instead, we contend that people's roles and obligations are depending on how they create their stake (or interest) in a specific circumstance.

There are also views somewhat structurally different from Arnstein's, which argue about the order or number of rungs of the ladder. For instance, Choguill's (1996) reworking of the ladder in a development context argues that when the government fails to provide infrastructure or support, people turn to self-management as their sole option (as described by Collins & Ison (2006). Choguill sees self-management as being at the bottom of the ladder, but we consider that this is rather a circularity, in which citizens tend towards or return to individuality.

At the same time, Buckingham Shum et al. (2012), discuss the concept of "citizen science" to explain the 4 forms of democratization in engagement process of participants to community mapping: L1. Crowdsourcing; L2. Distributed Intelligence; L3. Participatory science; L4. Extreme Citizen Science.

Arnstein's ladder of involvement and Buckingham Shum's framework are somewhat similar, but the interaction between citizens and authorities is where they diverge most. In this context, Buckingham Shum & collab. align with Arnstein's broad critics, arguing that power relations across social processes are not always necessary for the development of a spectrum of participation in community mapping. Relationships in the context of citizen science are more elaborate because as many participants value and respect the expertise of the professional scientists overseeing the research. In addition, when volunteers become more involved in the project and advance in their level of participation, they are more likely to ask questions and use the online tools available to them to further their own learning.

Taking into account these counter-arguments, we will limit the use of Arnstein's ladder as a robust method for evaluating the community mapping practices studied and tested in the MAXICO project. Therefore, it is important to approach the use of the ladder critically and complement it with a deeper understanding of the specific dynamics and contexts of community mapping.

During the project, the MAXICO consortium developed an understanding of the ladder of participation as a horizontal tool that involves viewing it without considering it as a strict hierarchy with fixed steps. Instead, we see it as a flexible framework where various levels or options can be chosen and adapted as needed. In this horizontal interpretation, the focus shifts from a linear progression of participation levels to a more versatile and context-sensitive approach. That means that we consider it as a range of options laid out horizontally. Depending on the particular project, community, or situation, practitioners can select which level(s) of participation are most appropriate. This allows for a customised and adaptable approach to participation, helping to increase the impact and as well the practical implementation. When we recognize that different contexts may require different levels of engagement, this horizontal view encourages practitioners to assess the specific needs and dynamics of a given community or project. It acknowledges that what works in one context may not work in another and that a one-size-fits-all approach to participation is often insufficient. We emphasise in this way the importance of choice and agency in participation. Instead of following a predetermined path, participants, including community members, have the autonomy to choose the level of involvement that aligns with their preferences and goals. This choice-driven approach respects individual and community decision-making and underlines the dynamic and non-linearity of participation, as imagined in Arnstein's ladder.

Community engagement can evolve, and participants may move between levels or engage at multiple levels simultaneously. It accommodates the fluid nature of community dynamics and allows for adjustments as needed.

This perspective underscores the importance of being responsive to community needs and feedback. It encourages practitioners to actively listen to the community and adapt their participation strategies accordingly, rather than imposing a predefined structure.

By offering a broader range of participation options, the horizontal perspective helps to reduce tokenism, where community members are merely given the appearance of participation without genuine influence. Communities can be more actively involved in decision-making processes.

Understanding the ladder of participation as a horizontal tool promotes flexibility, adaptability, and choice in community engagement. It recognizes that effective participation strategies should be context-specific and responsive to community needs, ultimately fostering more meaningful and empowering interactions between practitioners and communities. (Figure III)

ADVANCED LADDER OF PARTICIPATION

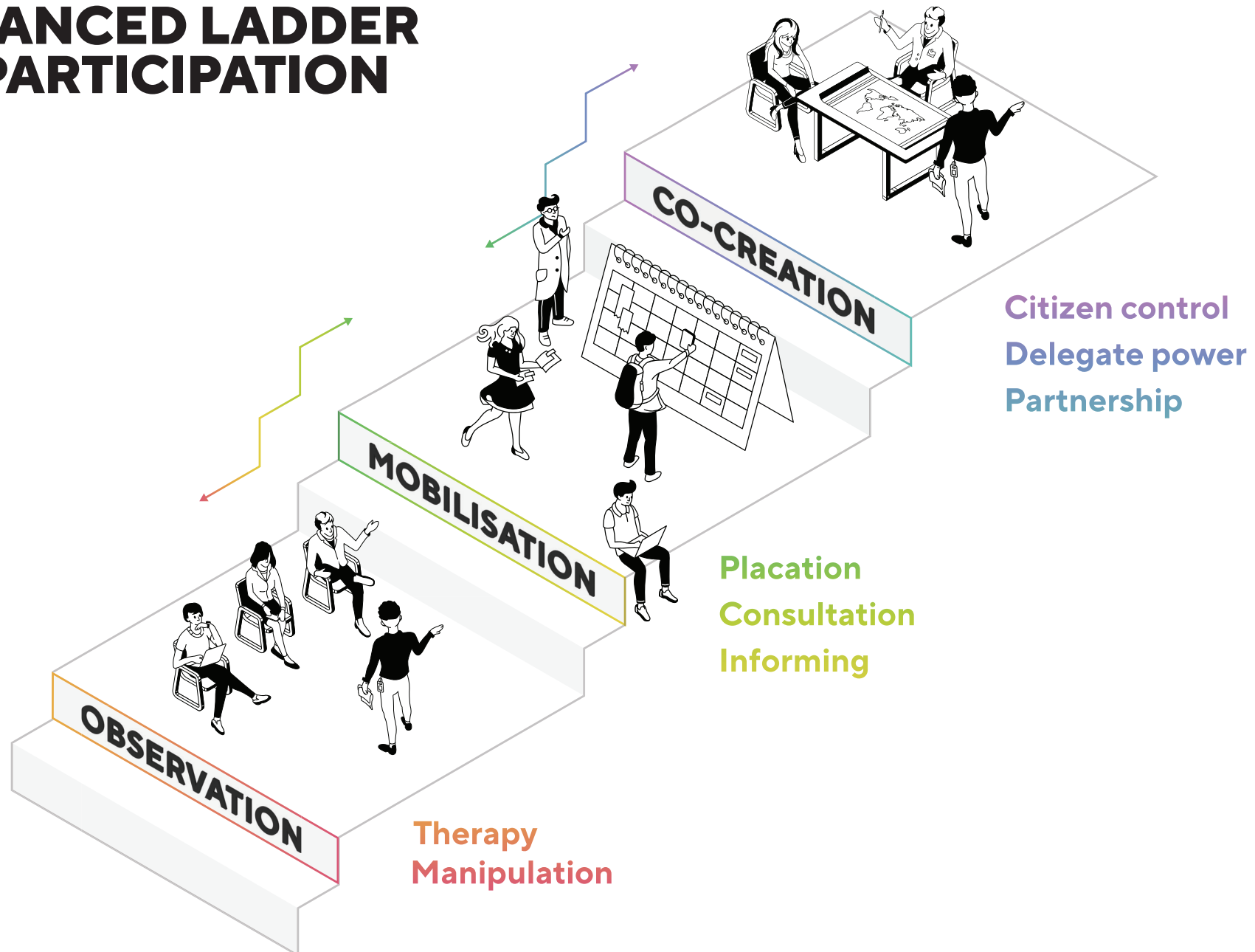


Figure III

SELEC TION OF PRAC TICES

according to participation levels

:PASSIVE | NON-PARTICIPATION

Mapillary
Storymaps

:RESPONSIVE | TOKENISM

Crowdsorsa
Hoodmaps
Instawalk
Map Your Flat
Green Kalasatama

:ACTIVE | CITIZEN POWER

Mundraub.org
Ecomuseo Casilino
KiezActionBound
Kulturtester
Maptionnaire
Active Citizenship



LEVEL OF PARTICI PATION

PASSIVE | Non-Participation

:MAPILLARY
:STORYMAPS

SELECTED PRACTICE 1 MAPILLARY

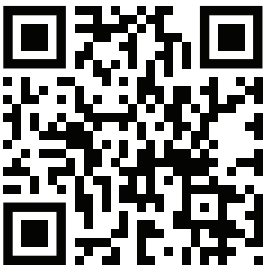
Brief Description: Mapillary is a crowdsourced, geotagged photo-sharing service similar to Google Street View. What sets it apart is that it allows citizens to upload photos of streets, bike lanes, and pedestrian paths. These photos can then be used for wayfinding or as a resource for various community projects.

Application in Case Study: In John's Creek, USA, the municipal GIS team, constrained by limited resources, turned to Mapillary to aid in updating the city's signage inventory. In addition to using their own cameras, they tapped into the existing database of citizen-produced photos of John's Creek to search for images featuring street signs.

Outcome: The project successfully updated the city's signage inventory using photos previously uploaded by citizens. This data was then made publicly available on OpenStreetMap and the municipality's GIS platform, aiding in local street-related problem-solving.

Analysis Based on Arnstein's Ladder: Given the disconnect between the citizens' motivations for uploading photos and the municipality's use of those photos for their project, this case study falls into the Non-Participation category on Arnstein's Ladder. While citizens did contribute data, they did not actively participate in the signage update project. Furthermore, they were neither aware of nor had any influence over how their data would be used.

Potentials and Limitations: Mapillary provides a platform where citizens can contribute valuable data for community improvement and urban planning. However, in this specific case, the citizens were not part of a participatory process; they were merely data providers without their knowledge. The primary utility of the platform in this context was to serve a top-down municipal project. More needs to be done to engage the community and elevate the level of citizen participation and influence in such projects.



SELECTED PRACTICE 2 STORYMAPS

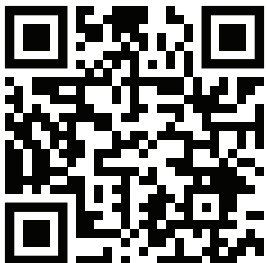
Brief Description: Storymaps is an online platform developed by ESRI, allowing users to create interactive presentations that combine maps, multimedia, and text to share characteristics, impressions, and experiences about specific places. Suitable for any spatial scale, from neighborhoods to national levels, Storymaps can serve multiple purposes, such as raising awareness about an issue or promoting a location.

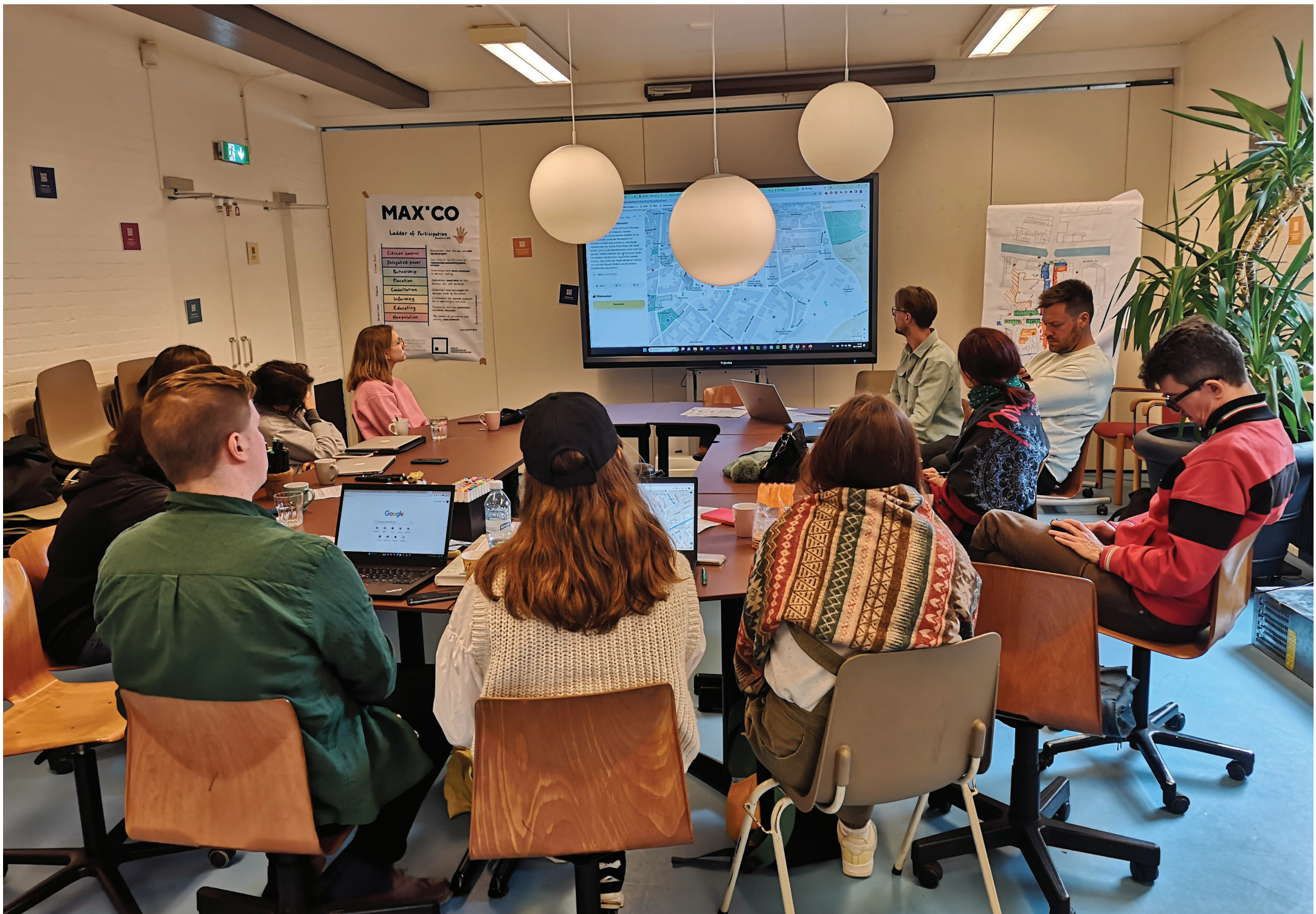
Application in Case Study: In Novaci City, Romania, Storymaps was used to communicate about hydrological risk events. The presentation included public data about river flows, structural measures, and flood risks, alongside images and graphs. The main goal was to educate residents about flood risks and the factors involved, aiming for better future management decisions.

Outcome: The Storymap presentation was disseminated at a national geographical workshop in Romania and among geography students at the University of Bucharest. While it primarily served an educational purpose, it also laid the groundwork for potential consultations between local authorities and citizens.

Analysis Based on Arnstein's Ladder: In this case, Storymaps falls into the Non-Participation category, as it primarily serves as a one-way channel for information dissemination. Although it holds the potential for Consultation—a higher level of engagement—if local authorities were to use it as a basis for involving citizens in decision-making processes.

Potentials and Limitations: Storymaps offers a versatile way to share content interactively, catering to a wide range of topics that have a spatial component. However, its primary limitation is that the content cannot be linked to other platforms. Ideally, Storymaps would work best in partnerships between stakeholders, whether formal or virtual, as a tool for representing spatial characteristics to which all involved parties can contribute.





LEVEL OF PARTICI PATION

RESPONSIVE | Tokenism

:CROWDSORSA
:HOODMAPS
:INSTAWALK
:MAP YOUR FLAT
:GREEN KALASATAMA
:NOSTALGEO
:LINGUISTIC LANDSCAPING
:URBANAGE IOT DEVICES
:PARTICIPOLOGY

SELECTED PRACTICE 1 CROWDSORSA

Brief Description: Crowdsorsa is an augmented reality app designed for cities to engage residents in mapping their environment by participating in gamified missions with monetary rewards.

Application in Case Study: In Tampere, the city utilized Crowdsorsa for a city-wide mapping mission focusing on manhole covers. The city provided a 30-cent reward for each geo-tagged photo of an unphotographed manhole cover. This case aimed primarily to enhance infrastructure management by leveraging citizen participation for data collection.

Outcome: The Tampere case resulted in over 23,000 photo submissions, revealing thousands more manhole covers than initially recorded in the city's database. The most active participants submitted over 300 photos, earning up to 100 euros.

Analysis Based on Arnstein's Ladder: Crowdsorsa falls under the category of Tokenism, as the focus is primarily on collecting data for internal city use. While participants are actively involved in data collection, their influence over how this data is used for decision-making is limited. Essentially, the community serves as a resource for city data collection, but their role in shaping policy or planning decisions is minimal.

Potentials and Limitations: Crowdsorsa leverages gamification to make community mapping engaging, blending the physical and digital world. However, its commercial nature limits its use mainly to top-down projects, and the data collected tends to be simple. While the community ultimately benefits (e.g., improved roads), links to broader social change are tenuous.



SELECTED PRACTICE 2 HOODMAPS

Brief Description: Hoodmaps is a crowdsourced mapping platform that allows users to categorize city areas based on social clusters such as “hipsters,” “tourists,” “rich,” and “normal people.” The tool is open to anyone and aims to represent collective perceptions of city neighbourhoods.

Application in Case Study: In Berlin-Wedding, CRN integrated Hoodmaps into a two-day workshop involving local residents. The area is undergoing gentrification, and the workshop aimed to engage older residents in discussions about their neighbourhood. Hoodmaps was used in the initial stages to trigger discussions and later to capture the insights and perceptions developed during the workshop. The tags added or voted upon during the workshop were incorporated into the broader Hoodmaps platform.

Outcome: The workshop succeeded in generating rich discussions among the participants about their neighborhood’s changing dynamics. While Hoodmaps was not central to the workshop, it acted as a catalyst for conversation and allowed residents to express their perceptions and opinions about their community. Tags added during the workshop received upvotes, giving participants a sense of validation and fulfillment.

Analysis Based on Arnstein’s Ladder: The case study places Hoodmaps in the Tokenism category. Although the tool facilitates community engagement and discussion, it doesn’t empower residents to directly influence decision-making or policies. It acts mainly as a consultation and information tool, collecting perceptions but not necessarily leading to actionable outcomes influenced by the community.

Potentials and Limitations: Hoodmaps offers a platform for initiating dialogues about local issues and collecting data on community perceptions, serving as an effective tool in the early stages of community engagement. However, it has limitations in terms of directly influencing decision-makers or initiating higher-level community involvement. When used responsibly within an educational or facilitated context, Hoodmaps can spark meaningful conversations and challenge existing stereotypes, while also capturing valuable data on local sentiments.



SELECTED PRACTICE 3 INSTAWALK

Brief Description: The Instawalk is a community engagement method that blends social media and physical exploration of neighborhoods, enabling participants to document and share insights about their local environments. By walking pre-defined routes and sharing their experiences and observations through images on social media platforms using designated hashtags, participants can highlight areas of interest or concern within their communities.

Application in Case Study: The city of Helsinki, in conjunction with a walking advocacy group, utilized the Instawalk method to garner insights about the walkability of the city center. Participants, including city officials and local residents, walked a specified route, interacting with various development project sites to understand and discuss the ongoing transformations. The discussions and images captured were subsequently deliberated upon in a session at the city planning department's exhibition space.

Outcome: The event facilitated diverse discussions and provided a platform for participants to express their perspectives on city center developments. The images and conversations, documented online with the hashtag #instawalkhelsinki11, created a lasting repository of the community's observations. However, it is unclear whether the insights gathered had any subsequent impact, and the final disposition of the collaboratively created map from the event remains uncertain.

Analysis Based on Arnstein's Ladder: Given the apparent lack of integration of participants' ideas into actual planning or decision-making processes, this Instawalk application in Helsinki can be categorized under Tokenism on Arnstein's ladder. While it did provide an avenue for expression and documentation of community perspectives, the absence of a clear link to tangible outcomes or influence in planning decisions limited the extent of genuine participation.

Potentials and Limitations: The Instawalk is an innovative approach to gather community insights and foster dialogue about local development. It leverages so-

cial media to extend the reach and longevity of community observations. However, the impacts of Instawalks are contingent on the integration of the collected insights into actual decision-making processes. Without a clear pathway to influence planning decisions, the method risks being a platform for expression without real empowerment. Additionally, the method may face inclusivity challenges, particularly with individuals who do not engage with social media platforms.

SELECTED PRACTICE 4 MAP YOUR FLAT

Brief Description: “Map Your Flat” is an innovative online adaptation of the “Map Me Happy” approach. This tool is designed to help individuals identify and map areas within their living spaces that evoke positive sensations and comfort, fostering a heightened sense of well-being and self-awareness. It allows participants to engage in reflective practices about their immediate environments, focusing on areas that bring comfort, pleasant smells, pleasing sounds, and visual appeal.

Application in Case Study: The method was utilized in the Peer Review Lab of the CONCRIT project, focusing on enhancing critical thinking practices among educators, facilitators, and volunteers working with marginalized communities in civic education. The lab successfully transitioned to an online format due to pandemic restrictions, enabling participants to “re-discover” their living spaces, engage in meaningful discussions about the significance of specific objects and emotions in their homes, and explore the positive aspects within their residences.

Outcome: Participants gained enriched insights into their perceptions, needs, and aspirations, contributing to a deeper understanding of what constitutes a positive living space within their communities. The discussions and reflections stimulated concrete ideas for improvement and allowed participants to consider practical steps to enhance their well-being and their communities’ quality. The results were incorporated into the larger CONCRIT community narrative project and are available online, serving as a repository and platform for sharing diverse community storytelling practices and methodologies.

Analysis Based on Arnstein’s Ladder: This method seems to fall under the “Tokenism” category on Arnstein’s Ladder, as it allows participants to voice their experiences and insights, but it’s unclear how much influence participants have on decision-making processes regarding the utilization of the shared insights and mapped information.

Potentials and Limitations: “Map Your Flat” holds significant potential for fostering self-awareness and critical reflection on one’s living space and well-being. It opens avenues for community engagement and collective reflection on individual and communal well-being. However, the method’s impact might be limited by the online format and participants’ openness to sharing personal experiences. The continuity and depth of engagement would benefit from enhanced interactive features and sustained dialogue platforms, ensuring diverse and inclusive participation for a richer, more holistic understanding of community well-being.

SELECTED PRACTICE 5 GREEN KALASATAMA

Brief Description: Green Kalasatama, developed by Granlund Oy, is an innovative app featuring various AR tools, specifically designed for the inhabitants of Helsinki's Kalasatama district. It enables users to visualize future neighborhood projects, collaborate in park designs, and document local plant life using advanced augmented reality technology, with the overarching goal of enhancing community engagement in urban development processes.

Application in Case Study: The PlantLIFE Mapper AR feature within Green Kalasatama, initiated under the B.Green project in 2022, serves as a practical manifestation of this AR approach. This feature empowers residents to identify and map local plant species, offering a dynamic view of the area's flora on a localized map. The aspiration is to deliver real-time updates on Kalasatama's botanical life and to engage residents in monitoring their natural surroundings and its progression. The anticipation is that the data accumulated will play a pivotal role in shaping climate-resilient neighborhoods and enriching green spaces. While citizens have been introduced to the PlantLIFE Mapper AR, its adoption rate has remained relatively modest.

Outcome: The Green Kalasatama app, with its PlantLIFE Mapper AR feature, has made strides in involving residents in the observation and documentation of their local flora. While the direct engagement of the residents has been modest, the initiative represents a step toward fostering community interaction in environmental observation and urban planning. The feature seeks to bring forth an understanding and appreciation of the existing plant life in the area, potentially influencing the residents' perceptions and interactions with their environment. However, the tangible outcomes and the impact of the collected data on urban planning decisions are yet to be ascertained, as the feature is still in its early stages.

Analysis Based on Arnstein's Ladder: The Green Kalasatama app's case study can be classified under tokenism on Arnstein's Ladder. While the app does provide a platform for residents to interact with and contribute to the understand-



ing of their local environment, there is no clear evidence or mechanism indicating how this input is being integrated into actual decision-making processes related to urban planning or environmental conservation. The involvement of residents is more about data collection rather than active participation in decision-making or planning processes, indicating a lack of empowerment in affecting real change in their communities.

Potentials and Limitations: The Green Kalasatama app has considerable potential to facilitate environmental awareness and community engagement through augmented reality, allowing residents to contribute to environmental data and potentially encouraging a sense of ownership and proactive involvement in local initiatives. However, its effectiveness is constrained by the absence of clear mechanisms to integrate resident input into tangible planning decisions and by limited engagement from the residents, highlighting the need for enhanced community outreach to maximize participation and the app's overall impact on community-driven urban planning.

SELECTED PRACTICE 6 NOSTALGEO

Brief Description: Nostalgeo is an online tool allowing users to add historical photos to specific locations on a map, enabling viewers to contrast past landscapes with the present street view. This tool fosters reflection on historical changes within neighborhoods, potentially enhancing community connection and engagement by visualizing the transformation of local environments over time.

Application in Case Study: Since there is no specific case study available for Nostalgeo, the analysis will be based on its general characteristics and uses.

Findings or Outcomes: The absence of a case study limits the availability of specific findings or outcomes. However, in general terms, Nostalgeo can serve as a valuable resource for communities wishing to explore and understand the historical context and evolution of their local environments, potentially invoking a stronger sense of connection and shared history among community members.

Analysis Based on Arnstein's Ladder: Given its characteristics, Nostalgeo can be placed under "Tokenism" on Arnstein's Ladder. While the tool allows users to contribute historical photographs and engage with the history of their communities, there is no inherent mechanism within the tool for users to influence decision-making or enact changes within their communities. The engagement is largely reflective and lacks a pathway to direct community influence over neighborhood development or policy.

Potentials and Limitations: Nostalgeo holds the potential to strengthen community bonds and awareness by offering a visual and interactive platform to explore local history. It can serve as a catalyst for community discussions about neighborhood development and preservation, enhancing communal knowledge and appreciation of local heritage. However, its limitations lie in its lack of integrated features for community mobilization and action. While it can spark interest and discussion, the tool does not provide direct avenues for communities to leverage this newfound awareness to influence local planning or policy, making its impact largely dependent on the proactive engagement of its user base and the responsiveness of local authorities to the insights and discussions it generates.



SELECTED PRACTICE 7 LINGUISTIC LANDSCAPING

Brief Description: Linguistic Landscaping is a multifaceted method that explores the use and representation of languages on public and commercial signs within a specified area. This technique delves deep into the visible and hidden language layers, offering insights into societal language preferences, habits, power dynamics, and transitions, and culminates in a detailed map adorned with relevant photographs and insights.

Application in Case Study: The case study, forming part of the ERASMUS Training for Trainers event under the LANG@WORK project, applied Linguistic Landscaping to explore the multifarious linguistic environment of Kameruner Str. in Berlin. Participants, predominantly unfamiliar with this Berlin locale, were assigned to analyze different sections of the street, interact with the inhabitants, and capture photographs to represent the diversity and nuances of the locale's linguistic landscape. The ensuing discussions and analyses revealed not only the linguistic diversity and political fervor of the area but also highlighted the latent historical and political remnants, such as the contentious naming of a street.

Findings or Outcomes: The exercise illuminated the rich tapestry of linguistic diversity and revealed the underlying political and historical narratives of the Kameruner Str. community. The method disclosed contrasting attitudes and sentiments of local business owners and uncovered the community's collective disdain for certain historical and regulatory aspects. The exploration of the sociolinguistic landscapes afforded the participants nuanced insights into the societal, historical, and linguistic dynamism of the region.

Analysis Based on Arnstein's Ladder: The Linguistic Landscaping method, in this case, seems to align more appropriately with the "Tokenism" level of Arnstein's Ladder. While the method does allow participants to actively engage in exploring and understanding the community's linguistic and societal contexts, the absence of a clear, subsequent channel to influence or implement change based on these findings limits the participants' power. The participants gained profound insights into the community's socio-linguistic landscapes, but the lack of mechanisms to

employ these insights to effectuate change or influence policies renders the participation somewhat symbolic.

Potentials and Limitations: Linguistic Landscaping can reveal the rich socio-linguistic tapestry of a community, and it holds the potential to serve as a catalyst for societal and policy transformations by highlighting linguistic diversities, societal shifts, and latent historical tensions. However, its efficacy as a transformative tool is contingent upon the incorporation of mechanisms to translate the acquired insights into actionable change. The lack of such provisions in the case study confined the participants to the role of observers, learning about the community dynamics without a clear path to contribute to its evolution or improvement. Balancing the insightful exploration with actionable pathways is crucial to elevate the method from informative tokenism to empowering citizen participation.

SELECTED PRACTICE 8 URBANAGE IOT DEVICES

Brief Description: URBANAGE IoT Devices is a method where older residents are equipped with simple Internet-of-Things (IoT) devices to map their positive or negative encounters in various places during everyday journeys. Developed by the URBANAGE project in Helsinki, this method is tailored to ensure low-threshold digital data collection from older cohorts who might not be adept at using smartphones. The collected data, visualized on a map, provide insights into older residents' perceptions of their everyday spaces.

Application in Case Study: The method is being piloted in Helsinki as part of the URBANAGE project to understand older residents' interactions with and perceptions of their everyday places. The participants are primarily active older residents who frequently visit neighbourhood centres. While the results are aimed at informing planning and maintenance strategies, they are not initially envisioned as catalysts for broader discussions on community transformation.

Findings or Outcomes: The ongoing pilot is revealing insights into the preferences and experiences of older residents in their everyday environments. The focus on active residents, who are regular visitors to neighbourhood centres, may offer a perspective on the needs and preferences of this demographic in active, communal settings. However, the results are primarily intended to inform planning and maintenance without immediate plans for instigating broader community discussions or transformations.

Analysis Based on Arnstein's Ladder: Given the application of the URBANAGE IoT devices, this method falls under the "Tokenism" category of Arnstein's Ladder. While it allows for the inclusion of older residents in data collection processes, the initiative lacks mechanisms for the involved residents to partake in subsequent decision-making or community transformation discussions. The collected insights are primarily used to inform planning and maintenance, rather than to facilitate deeper community engagements or empower residents in shaping their environments.



Potentials and Limitations: The URBANAGE IoT Devices method offers significant potential in engaging older demographics in urban planning processes by providing a user-friendly means of data collection. It captures the experiences and perceptions of a demographic that is often underrepresented in digital data collection endeavors, providing valuable insights for informed urban planning and maintenance. However, the method's limitations lie in its current application, which does not leverage the collected data to spur broader community discussions or transformations. The focus on already active residents also raises questions about the representativeness of the collected data, potentially overlooking the perspectives of less active older residents. Balancing inclusivity and active engagement, while integrating the insights into broader community dialogues and decision-making processes, could enhance the method's impact in fostering more age-inclusive urban environments.

SELECTED PRACTICE 9 PARTICIPOLOGY

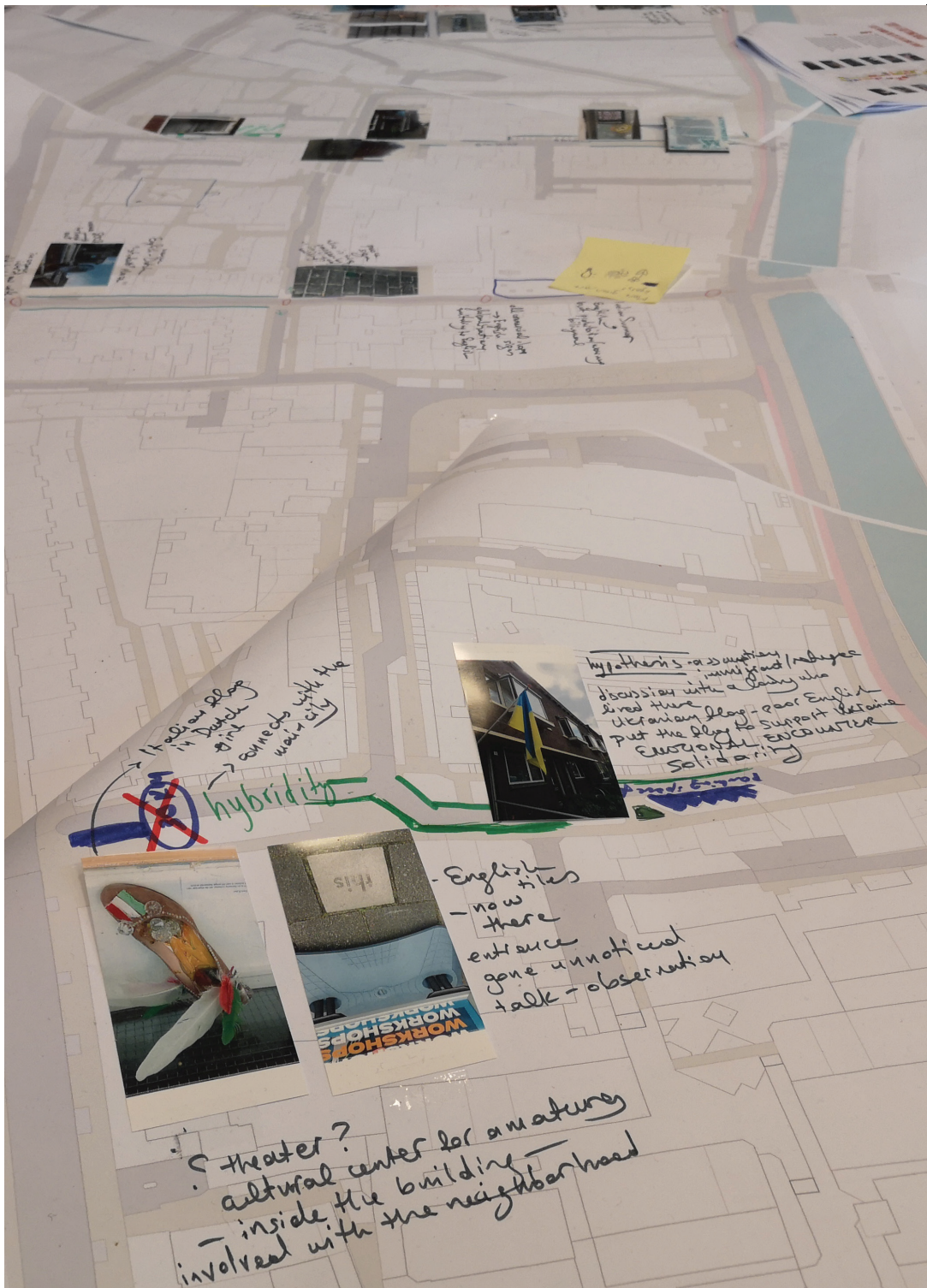
Brief Description: Participology leverages a set of resources to facilitate participative exercises on land-use planning, using a board game format. Players, assigned different stakeholder roles, tackle local planning challenges, learning about each other's viewpoints and encountering different questions and challenges throughout the game. This method, accessible via an online platform, allows customization to address specific local or regional spatial challenges, providing insights into stakeholder views and dynamics and serving as an educational tool to inform real-world planning.

Application in Case Study: Although there isn't a specific case study available for Participology, it's designed to be applied in real planning contexts, providing a platform for stakeholders to explore and understand diverse perspectives on planning challenges, thereby fostering a mutual understanding and collaboration in addressing local planning issues.

Analysis Based on Arnstein's Ladder: Given the nature of Participology, it would be categorized under "Tokenism" on Arnstein's Ladder of Citizen Participation. While this method allows stakeholders to share and understand diverse viewpoints on planning issues, it does not guarantee that these viewpoints will be integrated into the final decision-making processes. The participants are informed and consulted, and their opinions are heard, but they lack the power to ensure that their views are heeded.

Potentials and Limitations: Participology offers a democratic, engaging platform for understanding diverse perspectives on land-use planning, acting as an informative tool to raise awareness of stakeholder dynamics and planning complexities. Its main potential lies in its ability to foster mutual understanding and collaborative learning among stakeholders. However, its effectiveness is constrained by its lack of empowerment in decision-making processes. The impact of Participology is contingent upon the integration of gained insights into actual planning decisions. Its true value emerges when it facilitates genuine stakeholder influence in shaping planning outcomes and includes a diverse array of stakeholders to enrich and authenticate the dialogue.





LEVEL OF PARTICI PATION

ACTIVE | Citizen Power

:MUNDRAUB.ORG
:ECOMUSEO CASILINO
:KIEZACTION BOUND
:KULTURTESTER
:MAPTIONNAIRE
:ACTIVE CITIZENSHIP
:KINDER KIEZ KARTEN
:HUSH CITY APP
:MAPNAT
:SENF.APP
:CIVIC ALERT PLATFORM
:SEISMIC ALERT PLATFORM

SELECTED PRACTICE 1 MUNDRAUB.ORG

Brief Description: Mundraub.org is an online platform designed to map and discover edible urban landscapes. Upon creating an account, users can use both a browser application and a mobile app to identify and map edible plants, bushes, and trees in public spaces. The platform serves as an educational tool and fosters community building by allowing people to connect over shared green spaces.

Application in Case Study: In a case study conducted in East Berlin, a group of international professionals who were unfamiliar with the Friedrichsfelde area used Mundraub to explore the neighborhood's edible landscapes. The guided event allowed participants to discover and map new nut trees, learn about the various uses of plants, and taste products made from these local plants. The experience resulted in participants re-evaluating the potential and attractiveness of the area for families and community events.

Outcome: Participants not only mapped new elements but also engaged in discussions about potential uses for the plants and their importance in community building. As a result, the tool served as an effective means of fostering a sense of community and belonging among participants, while also contributing to an open database of edible landscape resources.

Analysis Based on Arnstein's Ladder: Mundraub can operate at different levels of Arnstein's Ladder, depending on its application. In grassroots, citizen-led initiatives, it reaches the top level, empowering citizens to take charge of their community resources. However, in guided or educational settings like the East Berlin case study, it may be situated lower on the ladder, serving more as an educational method under the guidance of a facilitator.

Potentials and Limitations: Mundraub is versatile, useful in various fields like education, tourism, and urban planning. However, its full potential may be limited if not used for its initial purpose of citizen empowerment. One suggestion for improvement could be adding features that facilitate community action for problem-solving, such as when a mapped tree becomes diseased.



SELECTED PRACTICE 2 ECOMUSEO CASILINO

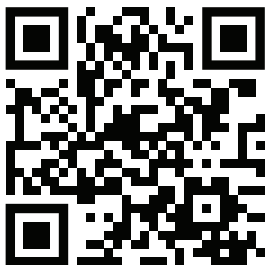
Brief Description: Ecomuseo Casilino represents a unique approach to cultural heritage, emphasizing not just physical territory but also the history and relationships of its inhabitants. It relies on four key elements: pact, community, care, and territory. Unlike traditional museums, an Ecomuseum is a dynamic process that allows the community to conserve, interpret, and enhance its cultural and natural heritage.

Application in Case Study: In Rome, Ecomuseo Casilino focused on preserving and promoting the cultural and environmental heritage of the Casilino area. Through workshops and a digital portal, citizens were empowered to tell and collect their stories, contributing to ‘participatory heritage.’ These collective narratives helped shape local debates on urban development, and unemployed individuals were trained to become licensed guides for the area, offering tours based on these collected stories.

Outcome: The workshops and digital portal resulted in a collective understanding of the Casilino area’s heritage, fostering a sense of belonging among both long-term residents and newcomers, including migrants. The project initiated a process of neighborhood revitalization not otherwise institutionalized in Rome, thereby impacting both the community’s mindset and the area’s physical urban planning.

Analysis Based on Arnstein’s Ladder: The Ecomuseo method exists between the “Citizen Control” and “Delegated Power” tiers of Arnstein’s Ladder. While the method aims for full community involvement, its position on the ladder can vary. For instance, in the Rome case study, the municipality initiated the Ecomuseo process, placing it under “Delegated Power.”

Potentials and Limitations: The Ecomuseo offers a holistic approach to cultural heritage, involving the community in both the preservation and interpretation of their environment. It also provides economic prospects by training marginalized individuals as guides. However, its effectiveness can be constrained by the level of community involvement and the extent to which it is a bottom-up initiative.



SELECTED PRACTICE 3 KIEZACTION BOUND

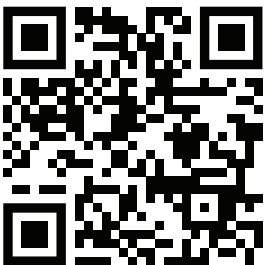
Brief Description: KiezActionBound is an innovative approach utilizing the Actionbound platform that facilitates community interaction and engagement in their neighborhoods through gamification, aiming to collaboratively contribute to neighborhood enhancement and development.

Application in Case Study: The method was implemented in a digital treasure hunt in Berlin-Wedding, serving as a medium to reintegrate citizens with their neighborhoods during the Covid pandemic restrictions. The initiative was localized to the Berlin-Wedding neighborhood with the primary stakeholders being the local residents, community developers, and city planners. The core objective was to direct participants to explore and rediscover favorite spots within their neighborhood and to gather diverse opinions and insights for positive community changes, with the ultimate aim of converting these insights into actionable development plans for the community.

Outcome: The implementation of KiezActionBound resulted in successful citizen engagement in a participatory and interactive manner, enabling them to actively play a role in the development of their community, fostering a sense of ownership and empowerment. The diverse range of data collected, including comments, responses, and videos, were instrumental in forming action plans and steering the execution of various initiatives aimed at enhancing the neighborhood.

Analysis Based on Arnstein's Ladder: KiezActionBound is categorized under Citizen Power on Arnstein's Ladder as it empowers participants by involving them actively in the decision-making processes related to their neighborhood. It allows participants to have a substantial impact on the community development plans and implementations. This method cultivates a sense of empowerment and ownership by leveraging collective insights and creativity to bring about positive community transformations.

Potentials and Limitations: KiezActionBound has considerable potential in galvanizing community engagement and facilitating developmental insights through its interactive and educational gamified experiences, making it a versatile tool ap-



plicable in various sectors including, but not limited to, education and corporate environments. However, the method's effectiveness is somewhat constrained by its inherent reliance on digital technology, potentially alienating those without access to such platforms. Additionally, the success of KiezActionBound is intrinsically tied to the level of engagement and motivation of the participants, requiring sustained innovation and captivating interactions to retain user interest and involvement.

SELECTED PRACTICE 4 KULTURTESTER

Brief Description: Kulturtester is a method grounded in experience design, focusing on understanding and analyzing the cultural significance and experiences associated with different spaces and places. It seeks to map and reflect upon elements important to individuals and communities, such as behaviors, traditions, and experiences, to foster a deeper understanding of a community's local culture and space.

Application in Case Study: Kulturtester was applied in a scenario titled "Kulturtester at Urban Garden," aiming to facilitate users in comprehending how they ascribe cultural value and meaning to a space. The method allowed the participants to reflect on their experiences and interactions with the urban garden, generating insights into the cultural values and significances that individuals attach to it. The participants, predominantly the staff and local community members, engaged in discussions and reflections, enabling them to visualize and understand the inherent cultural essence of the space and how it aligns or conflicts with their individual perceptions and experiences.

Outcome: The implementation of Kulturtester led to the formulation of a cohesive vision for the future of the urban garden, taking into account the diverse cultural nuances, behaviors, and traditions mapped during the process. The method facilitated the creation of actionable plans, aligning the future scenarios of the garden with the local cultural heritage, while also preemptively addressing potential conflicts over space usage. By fostering collective reflections and discussions, Kulturtester helped in mitigating conflicts and cultivating a harmonious integration of the space within the community's cultural framework.

Analysis Based on Arnstein's Ladder: Kulturtester falls under the Citizen Power category of Arnstein's Ladder as it empowers communities to reflect on and understand their cultural attachments to spaces, allowing them to actively participate in shaping and envisioning the future of those spaces. The method offers individuals a platform to voice their perceptions, experiences, and values, contributing to the collective shaping and development of spaces, thereby enhancing community cohesiveness and mitigating potential conflicts.



Potentials and Limitations: Kulturtester holds significant potential in unraveling the intricate cultural tapestry associated with spaces, facilitating communities in aligning their visions and actions with the cultural ethos of the spaces they inhabit. It acts as a catalyst for community-driven change, fostering dialogue, and understanding around the cultural significance of spaces. However, the method's success is contingent on the level of participation and the willingness of the community members to reflect and share their experiences and values. The subjective nature of cultural experiences and the diverse interpretations of spaces can also pose challenges in reaching a consensus, necessitating a balanced and inclusive approach to accommodate the myriad cultural nuances within a community.

SELECTED PRACTICE 5 MAPTIONNAIRE

Brief Description: Maptionnaire is a map-based survey tool developed from research at Aalto University, designed to incorporate community input into contemporary planning systems. It enables the seamless integration of experiential local knowledge with conventional spatial data, fostering informed and community-centered urban development.

Application in Case Study: Maptionnaire was leveraged in Urban Helsinki's Walkable Railway Station Project, aimed at revitalizing the area around Helsinki's railway station. The group designed and disseminated a map survey to the online YIMBY community, inviting participants to highlight areas of enjoyment and challenges and suggest improvements for the station area. The responses were then analyzed to create visual maps depicting public sentiment and insights, which informed a proposal to enhance walkability and attractiveness in the area. The proposal and data were shared with the public and city planners and have influenced subsequent developmental designs for central Helsinki.

Outcome: The utilization of Maptionnaire resulted in a rich collection of insights and perspectives from the community, revealing the public's sentiments and suggestions for the railway station area. The generated visual maps and the subsequent transformation proposal by Urban Helsinki not only highlighted the collective aspirations of the community but also managed to inform the urban development schemes in central Helsinki. The proposal and the collected data were shared openly with the public and have been referenced by city planners in their developmental endeavors, illustrating the tangible impact of community input in shaping urban environments.

Analysis Based on Arnstein's Ladder: Given the case study's context, Maptionnaire falls under the Citizen Power category on Arnstein's Ladder. The tool was leveraged by a group of activists in a bottom-up approach to gather community insights and co-create proposals for urban enhancement. This approach emphasizes the active role of citizens in shaping their environments, transcending mere consultation, and contributing to decision-making processes, thus illustrating a



higher degree of citizen empowerment and participation in urban development initiatives.

Potentials and Limitations: Maptionnaire has substantial potential to integrate community insights into urban planning, bridging local knowledge and formal planning data. It offers a versatile platform for both institutional and grassroots entities to gather and use community perspectives. However, its effectiveness depends greatly on the user entity's commitment to incorporating the collected insights meaningfully into decision-making processes; extensive data collection is futile without a robust, inclusive subsequent process. The tool's commercial nature limits its accessibility to entities that can afford to use it. Enhancing the use of Maptionnaire to enable active community participation in decision-making could further optimize its role in fostering truly inclusive, community-driven urban developments.

SELECTED PRACTICE 6 ACTIVE CITIZENSHIP

Brief Description: Active Citizenship in community mapping refers to the initiatives by individuals or small groups of residents to address community issues or overlooked neighborhood development topics through mapping projects. These projects, diverse and context-specific, often originate from pressing community needs and aim to instigate broader changes in the community or influence policy.

Application in Case Study: In the case of “Mapping Helsinki’s Gravel Fields,” a resident initiated a project focusing on the underutilized gravel fields within city parks in Helsinki’s inner city. The resident, seeking to spur discussions on intelligent public space utilization for enhancing urban life quality, meticulously mapped, observed, and photographed these gravel fields, presenting his findings through an online map and a blog. This endeavor was to engage residents, planners, and decision-makers and encourage deliberation and action on optimizing these spaces. While the direct impact remains uncertain, the initiative garnered media attention and has reportedly instigated discussions within the city administration, showing some signs of emerging political will to address the highlighted issue.

Findings or Outcomes: The resident’s endeavor to map gravel fields aimed to make a tangible contribution to discussions on public space utilization. Though the theme was somewhat abstract for a broader audience, and it was unclear whether key decision-makers were attentive to the issue, the project succeeded in gaining media attention and reportedly initiated conversations within city administration about optimizing such underutilized spaces. The emergence of some level of political will to advance the matter suggests the potential influence of such citizen-led initiatives.

Analysis Based on Arnstein’s Ladder: This case study exemplifies a form of citizen power as it is a resident-initiated and executed project, aiming to influence policy and planning decisions by highlighting underexplored urban development aspects. The resident’s proactive approach to map, document, and publicize the underutilized gravel fields in Helsinki demonstrates a high level of citizen engagement and effort to instigate change, although the extent to which this initiative will impact actual decision-making processes remains to be seen.



Potentials and Limitations: Active Citizenship holds substantial potential to drive change and influence policies by enabling residents to highlight and address overlooked community issues. The resident-led approach of such initiatives can offer fresh perspectives and detailed insights into local problems, potentially leading to more relatable and impactful solutions. However, the success of such initiatives is contingent upon various factors including the relatability of the theme, effective information communication, and the receptiveness of the audience, particularly decision-makers. In this context, while the initiative sparked discussions and media interest, the ambiguity surrounding

SELECTED PRACTICE 7 KINDER KIEZ KARTEN

Brief Description: Kinder Kiez Karten is a participatory mapping method developed by the Youth Participation Department of the municipality of Lichtenberg, Berlin, designed to create local neighborhood maps by children for children. It involves a structured, five-day process with a group of 12 children and comes with a detailed step-by-step manual that includes planning, resource budgeting, and protocols, offering insights into areas valued by children and those needing action.

Application in Case Study: In the neighborhood of Friedrichsfelde, Berlin, a Kinder Kiez Karte was created with the collaboration of a local school and social workers from a family center. Children from the primary school, divided into smaller groups, walked pre-established routes daily, drawing elements they found relevant and interesting. The process involved the democratic selection of map elements, symbols, and reviews, allowing all children to express their opinions and co-create a map. The final map, reflecting the children's perspectives on their environment, was distributed across local schools, youth clubs, sports clubs, and other family-centric locations.

Findings or Outcomes: The Kinder Kiez Karte in Friedrichsfelde successfully facilitated the expression of children's perspectives on their neighborhood, highlighting areas they value and those they perceive as unattractive or unsafe. The children's drawings provided unique insights that might not be apparent to adults, reflecting their fears, preferences, and simplification of city infrastructure according to their needs. The distribution of the resulting map across various local establishments aimed to inform and benefit other children and families in the locality.

Analysis Based on Arnstein's Ladder: This method exhibits elements of Citizen Power as it empowers children to actively participate in mapping their neighborhoods, allowing their unique perspectives and needs to be voiced and considered. The inclusive and democratic process involved in selecting map elements ensures every child's opinion is valued, contributing to a collectively created representation of their environment. The active engagement and expression of opinions by children in creating the map imply a higher rung of participation on Arnstein's Ladder.



Potentials and Limitations: Kinder Kiez Karten holds significant potential as it empowers children to voice their perceptions and needs regarding their neighborhoods, offering unique and often overlooked insights. The inclusive and democratic nature of the method ensures varied perspectives are considered, contributing to more holistic and child-friendly urban development. However, the impact and utilization of the created maps depend on how they are received and integrated by local authorities, institutions, and communities. The limitation lies in the need for effective strategies to ensure the insights gained from these child-created maps are acknowledged and acted upon to bring about tangible improvements in the neighborhood.

SELECTED PRACTICE 8 HUSH CITY APP

Brief Description: Hush City App is a citizen science mobile application launched in 2017, enabling users to identify, assess, and map quiet areas in cities. It aims to create an open-access, web-based map to inform plans and policies for healthier urban living, in alignment with European environmental policies. The app is free, available in five languages, and is used internationally.

Application in Case Study: The Hush City App has been adopted by the City Councils of Berlin and Limerick to aid in the creation of Quiet Areas Plans. The app's methodology allowed citizens to contribute data that significantly impacted governmental actions in both cities. The adoption of the app and its results by the City Councils resulted from consistent research and promotional efforts by the creator of the Hush City methodology.

Findings or Outcomes: The application of the Hush City App in Berlin and Limerick has demonstrated the tool's efficacy in collating data that influences urban planning policies. The app facilitated the creation of the Quiet Areas Plans in both cities, indicating its potential in aiding municipalities in formulating policies that align with residents' needs for quieter urban spaces.

Analysis Based on Arnstein's Ladder: This case study represents an example of Citizen Power on Arnstein's Ladder as it involves citizens directly in the data collection process impacting urban planning policies. The utilization of citizen-generated data by City Councils in creating Quiet Areas Plans showcases a substantial level of citizen influence in decision-making processes related to urban environmental health and well-being.

Potentials and Limitations: The Hush City App possesses extensive potential in fostering healthier urban environments by enabling citizens to actively contribute to the identification and assessment of quiet areas in cities, subsequently influencing urban planning policies. The app's international usage and multilingual support enhance its accessibility and reach. However, the impact and successful



implementation of the app largely depend on the willingness of local governments to adopt the collected data and on citizens' active participation in using the app. The broader adoption by more cities and the continuous engagement of citizens are crucial for realizing the app's full potential in shaping healthier and quieter urban living spaces.

SELECTED PRACTICE 9 MAPNAT

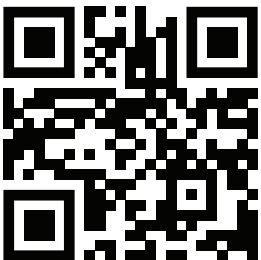
Brief Description: MapNat is a versatile mobile app designed to enable citizens to discover, register, and share green spaces for recreation, scientific data collection, and nature-related activism. It serves as a multifunctional platform allowing users to map and report issues, suggest improvements, and share their favorite nature activities, contributing to the overall knowledge and potential influence on planning processes at various levels.

Application in Case Study: MapNat was employed in Leipzig in the “Ökosystemleistungen in Sachsen” project to enable users and scientists to map how and where they interact with nature. This initiative, a collaboration between an academic institution, local government, and citizens, allowed participants to record a variety of nature uses and environmental problems, providing a comprehensive view of nature management and usage in the area.

Findings or Outcomes: The application of MapNat in Leipzig facilitated the accumulation of diverse data regarding the interaction between individuals and the natural environment. This collaborative approach provided insights into the various ways people use nature for recreation and highlighted environmental issues, contributing to a broader understanding and facilitating discussions and actions related to nature management in the region.

Analysis Based on Arnstein’s Ladder: This case study falls under the Citizen Power category on Arnstein’s Ladder. The collaborative effort involving citizens, an academic institution, and local government in mapping and managing nature use represents a substantial level of citizen engagement and influence. The direct involvement of citizens in data collection and reporting emphasizes their active role in influencing and contributing to discussions on environmental management and planning.

Potentials and Limitations: MapNat holds significant potential as a tool for citizen engagement in environmental management and planning, offering a platform for



diverse stakeholders to contribute to the understanding and improvement of nature use. Its ability to cater to recreation, scientific research, and activism increases its versatility and appeal to a broader user base. However, the effectiveness of MapNat is contingent on widespread adoption and active participation by citizens and varied stakeholders. Ensuring sustained engagement and fostering collaborations between different entities are pivotal for leveraging MapNat's capabilities to influence planning processes and enhance environmental management.

SELECTED PRACTICE 10 SENF.APP

Brief Description: Senf.app is an interactive, map-based web app where citizens, initiatives, associations, and politicians can place ideas for urban development and design directly on the city map. It facilitates constructive and transparent exchanges of ideas, enabling users to discuss, approve, and develop suggestions into concrete projects through virtual project spaces.

Application in Case Study: In Cologne, Senf.app, known as Senf.koeln, has gathered extensive participation, recording, visualizing, and processing the ideas and suggestions from citizens. The app has received over 400 suggestions citywide. The developers prioritize forwarding popular and relevant ideas to the city's Suggestions and Complaints office, leading to concrete discussions and initiatives around urban development, such as campaigns for car-free streets and new street furniture installations.

Findings or Outcomes: The app has had substantial impacts in Cologne, with several initiatives gaining support and visibility through the platform. It has enabled the realization of various urban development projects, like the installation of street furniture at Aachener Weiher pond and has facilitated more concrete discussions and debates about car-free streets in the city, bringing citizen-driven ideas to the forefront of urban planning discussions.

Analysis Based on Arnstein's Ladder: Senf.app falls under "Citizen Power" on Arnstein's Ladder. The app empowers citizens by giving them a platform to voice their ideas and suggestions directly, fostering discussion and approval processes that can lead to tangible changes in the urban landscape. The citizens' active involvement in proposing and discussing urban development ideas and the subsequent realization of several proposals signify a level of citizen control and influence over urban planning decisions.

Potentials and Limitations: Senf.app offers significant potential by empowering citizens to actively participate in urban development, fostering a sense of own-



ership and community. The transparent and interactive nature of the platform encourages constructive dialogue and collaboration, leading to the realization of citizen-driven initiatives. However, the app's effectiveness is dependent on the willingness of local authorities to consider and implement the suggestions made, and there may be limitations in ensuring all ideas are given equal consideration and weight. Balancing inclusivity with feasibility and ensuring a sustained commitment from local authorities are critical to maximizing the impact of such participatory platforms.

SELECTED PRACTICE 11 CIVIC ALERT PLATFORM

Brief Description: Civic Alert is a Romanian mobile application aiming to bridge communication between citizens and government agencies. It enables citizens to promptly report urban issues, allowing them to submit a photo, assign a location, and categorize the problem. The platform then facilitates the management of these reports, forwarding them to the relevant authorities for resolution, thereby fostering responsive governance and civic engagement.

Application in Case Study: Due to the absence of a specific case study, the analysis and discussion will be based on the general functionalities and uses of the Civic Alert platform.

Findings or Outcomes: Without a concrete case study, specific findings or outcomes cannot be detailed. However, generally, the Civic Alert platform can be seen as a tool that empowers citizens by providing a direct line of communication to government agencies, allowing users to highlight and report issues in their community. This can potentially lead to more responsive governance and improved urban environments, depending on the efficiency and responsiveness of the authorities.

Analysis Based on Arnstein's Ladder: Civic Alert can be categorized under "Citizen Power" on Arnstein's Ladder. The platform empowers citizens by providing them with a straightforward mechanism to report issues directly to the authorities, potentially influencing urban maintenance and development. Although the tool's efficacy is contingent on governmental responsiveness, it does provide a framework for citizens to proactively engage with and impact their local environments.

Potentials and Limitations: Civic Alert holds significant potential as a facilitator of enhanced civic engagement and responsive governance. It can empower communities by providing a platform to voice concerns and report issues, potentially leading to more effective urban management and improved city living conditions. The tool can act as a catalyst for fostering a sense of responsibility and proactive engagement within communities, enhancing the dialogue between citizens and



authorities. However, the platform's impact is inherently dependent on the willingness and ability of government agencies to respond to and address the reported issues. If the authorities are unresponsive or ineffective in resolving the highlighted problems, the platform may struggle to fulfill its potential in fostering meaningful change and may lead to disillusionment among its users. The realization of Civic Alert's potential is, thus, intertwined with the institutional frameworks and practices it seeks to navigate.

SELECTED PRACTICE 12 SEISMIC ALERT PLATFORM

Brief Description: The Seismic Alert platform is an innovative online tool allowing citizens to contribute information about earthquake-prone buildings in Bucharest. It enables users to geolocate buildings with seismic risk, share resources, articles, and opinions, and submit information about buildings that have undergone recent expert evaluations. The platform serves as a dynamic, interactive repository of citizen-contributed data on seismic risks, aiming to enhance awareness and preparedness within the community.

Application in Case Study: Given the lack of a specific case study, the discussion and analysis will center on the overall functionalities and utilization of the Seismic Alert platform.

Outcome: While specific outcomes are not available due to the absence of a concrete case study, the Seismic Alert platform's general approach allows citizens to actively participate in mapping and sharing information about seismic risks in their locality. This can potentially lead to heightened awareness, better-prepared communities, and more informed mitigation strategies, subject to the engagement level of the users and the responsiveness of relevant authorities.

Analysis Based on Arnstein's Ladder: The Seismic Alert platform can be positioned in the "Citizen Power" category on Arnstein's Ladder as it enables citizens to actively contribute to the identification and understanding of seismic risks in their neighborhoods. This initiative allows individuals to not only share their knowledge but also to engage in discussions and learn from the collective insight of the community, fostering a sense of empowerment and communal responsibility in addressing seismic risks.

Potentials and Limitations: The Seismic Alert platform holds substantial potential to empower communities by facilitating the collaborative mapping of seismic risks and fostering informed discussions about earthquake-prone buildings. This collective approach can lead to enhanced community awareness and potentially



influence mitigation and response strategies. However, the impact of the platform is contingent on the active participation of the citizens and the validation of the submitted information. If the user engagement is low or the information provided is not accurate, it may limit the effectiveness of the platform in achieving its goals. Moreover, the success of this tool is also dependent on the responsiveness and commitment of the authorities to act upon the collected data and insights. In essence, while the platform provides a promising avenue for citizen empowerment and communal learning, its efficacy is intertwined with the collaborative dynamics between citizens and authorities.



CON CLU SION

**:REFLECTIONS ON COMMUNITY
MAPPING METHODS/TOOLS
:KEY TAKEAWAYS
:MOVING FORWARD**

REFLECTIONS ON COMMUNITY MAPPING METHODS/TOOLS

Community mapping methods/tools have emerged as vital instruments in the participatory planning landscape, allowing the convergence of citizen insights and experiences with urban planning and development processes. The pan-European dimension of the approach to community mapping techniques was illustrated in this work through a series of examples of practices from Germany, Holland, Finland and Romania. The problems that these community mapping practices tried to address were different, reflecting the diversity of citizen or territorial planning needs in the local, regional or national space, to which the geographical perspective tries to respond. The evaluation grid of the selected practices followed the classification on the levels of the Ladder of Citizen Participation, designed by Sherry Arnold (1969), to describe the relationship between authorities, citizens, on the one hand, and the co-creation of the space and social power, on the other on the other.

This final chapter reflects on the diverse array of methods/tools detailed in this book, distilling key takeaways to guide educators, facilitators, and participatory planning practitioners in leveraging these practices to optimize communal engagement and urban development outcomes.

KEY TAKEAWAYS

1. **Citizen Engagement and Empowerment:** Many tools, such as Senf.app and Civic Alert, underscore the essence of fostering citizen engagement, empowerment, and ownership in urban development processes. Active participation allows communities to voice their needs, concerns, and aspirations, creating avenues for impactful, citizen-driven initiatives and changes.
2. **Stakeholder Collaboration and Mutual Understanding:** The versatility of tools like Participology underscores the value of mutual understanding and collaboration among diverse stakeholders. Through dialogue and interactive experiences, stakeholders can understand opposing views and learn about the intricacies of planning challenges, enriching the dialogue and fostering cohesive community visions.

3. **Holistic Insight Integration:** Each tool, from Mapillary to Maptionnaire, highlights the imperative of integrating citizen insights into actual planning decisions. The efficacy of these tools is contingent upon the commitment to incorporating collected insights meaningfully into decision-making processes, ensuring that extensive data collection translates to actionable, inclusive outcomes.
4. **Access and Inclusivity:** The potential of many tools is intertwined with their accessibility and inclusivity. The effectiveness of digital platforms such as KiezActionBound and URBANAGE IoT Devices is dependent on addressing access limitations and ensuring the representation of diverse demographics and perspectives, including often underrepresented groups like older residents.
5. **Community Learning and Awareness:** Several tools, including Linguistic Landscaping and Nostalgeo, serve as catalysts for community learning and awareness, revealing socio-linguistic tapestries, historical legacies, and communal heritage. These insights can spark discussions, challenge stereotypes, and foster a sense of connection and appreciation within communities.
6. **Responsive Governance:** The success of tools like Civic Alert and Seismic Alert Platform is inherently dependent on the responsiveness and effectiveness of government agencies in addressing reported issues. The willingness and ability of authorities to act upon collected data and insights are pivotal for realizing the potential of such platforms in fostering meaningful change and improved urban living conditions.
7. **Versatility and Adaptability:** The diverse range of tools, from MapNat focusing on environmental planning to Storymaps illustrating spatial characteristics, underscores the adaptability and versatility of community mapping methods in addressing various urban planning challenges and catering to different sectors and stakeholder needs.

MOVING FORWARD

8. Communal Bonds and Heritage Appreciation: Tools like Nostalgeo highlight the potential of strengthening community bonds and enhancing heritage appreciation by offering interactive platforms to explore and discuss local history and development, fostering communal knowledge and discussions about neighborhood preservation and evolution.

In conclusion, the potential and limitations inherent in each tool/method reflect the multifaceted nature of community mapping practices. The effectiveness of these practices is intrinsically linked to the level of citizen engagement, stakeholder collaboration, commitment to insight integration, accessibility, governance responsiveness, and adaptability to diverse planning contexts. Also, the conception and adaptation of one or another of the possible community mapping solutions must take into account the nature and magnitude of the problem addressed, the profile of the target citizens and the degree of freedom they can allow themselves in the co-creation of their territory. Therefore, the best possible placement of a community mapping tool or practice on the ladder of citizen participation depends on a multitude of factors, which relate to the level of education of the citizens, their previous involvement in consultation experiences and public debate, the degree of general technologization of the respective neighborhood / locality, as well as, often overlooked, of the general relationship between authorities and citizens. Although sometimes a click away, the transformation of a community mapping practice into a digital, highly accessible application, can be a slow process, met with challenges related to the unitary understanding of the phenomenon/problem addressed, the informational flux, interpersonal functioning of group members, or citizens' accountability and social responsibility.

In the effort to place each practice/tool on the level of public participation in the territorial planning decision process, this work highlighted the opportunities, challenges and limitations of the different methods used to solve a spatial problem. Starting from these examples, existing practices can be improved to ascend the social participation ladder, so as to allow a fairer and more democratic involvement

of citizens. Thus, the acknowledgment on account of the levels of citizen participation through the chosen case studies can be used as a toolkit for sustainable mapping of living environments.

Indeed, we should contemplate more the citizens' potential to be trained to use or design suitable community mapping methods to their needs and to exert their role in co-creating public space.

Educators, facilitators, and practitioners are urged to consider these key takeaways in contemplating the initiation of community mapping processes. The selection and implementation of these tools/methods should be cognizant of the unique communal dynamics, urban challenges, and developmental visions inherent in each context, ensuring that the adopted practices resonate with the communal ethos and contribute to the realization of inclusive, sustainable urban environments.

BIBLIO GRAPHY, PUBLI CATIONS, LINK

to external materials and resources

Amsden, J., VanWynsberghe, R. (2005), Community mapping as a research tool with youth. *Action Research*, 3(4), 357-381.

Arnstein, S. (1969), A ladder of citizen participation. *Journal of the American Planning Association*, 35(4), 216 - 224.

Buckingham Shum, S., Aberer, K., Schmidt, A., Bishop, S., Lukowicz, P., Anderson, S., Charalabidis, Y., Domingue, D., de Freitas, S., Dunwell, I., Edmonds, B., Grey, F., Haklay, M., Jelasity, M., Karpířstsenko, A., Kohlhammer, J., Lewis, J., Pitt, J., Sumner, R., Helbing, D. (2012), Towards a global participatory platform: democratising open data, complexity science and collective intelligence. *European Physical Journal Special Topics*, 214(1), 109 - 152.

CAFO Research Center, (2021), *Community Mapping*, 20 p.

Choguill, M. B. G. (1996), A ladder of community participation for underdeveloped countries. *Habitat International*, 20(3), 431 - 444.

Collins, K., Ison, R. (2006), Dare we jump off Arnstein's ladder? Social learning as a new policy paradigm. *Proceedings of PATH (Participatory Approaches in Science & Technology) Conference*, 4-7 Jun 2006, Edinburgh, 15 p.

Elwood, S. (2002), GIS Use in Community Planning: A Multidimensional Analysis of Empowerment. *Environment and Planning A: Economy and Space*, 34(5), 905-922.

Elwood, S., Leitner, H. (1998), GIS and community-based planning: Exploring the diversity of neighborhood perspectives and needs. *Cartography and Geographic Information Systems*, 25(2), 77 - 88.

Fang, M.L., Woolrych, R., Sixsmith, J., Canham, S., Battersby, L., Sixsmith, A., (2016), Place-making with older persons: Establishing sense-of-place through participatory community mapping workshops, *Social Science & Medicine*, 168, 223-229.

Friedmann, J. (1996), Rethinking poverty: Empowerment and citizen's rights. *International Social Science Journal*, 148, 161 - 172.

Gangarova, T., Freiwald, G., (2021), Engaging communities through community mapping, *European Journal of Public Health*, 31(3), 2 p.

Gay, G. (2000), *Culturally responsive teaching*. New York, NY: Teachers College Press, ISBN-13 978-0807750780

Hay, R. (1998), Sense of place in developmental context, *Journal of Environmental Psychology*, 18(1), 5-29.

Haklay, M. (2012), Citizen Science and Volunteered Geographic Information: Overview and Typology of Participation. *Crowdsourcing Geographic Knowledge*, 105-122.

Jackson T. O., Bryson, B.S. (2018), Community Mapping as a Tool for Developing Culturally Relevant Pedagogy, *The New Educator*, 14(2), 109-128.

Kretzmann, J., McKnight, J. (1993), *Building communities from the inside out: A path toward finding and mobilizing a community's assets*. Evanston, IL: ACTA Publications.

Land-Zandstra, A., Agnello, G., Gültekin, Y.S. (2021), Participants in Citizen Science. In: Vohland, K., et al. *The Science of Citizen Science*. Springer, 243-259.

Lydon, M. (2000), Finding our way home: Community mapping helps residents define their worries and realize their dreams. *Alternatives*, 26, 26-29.

Lydon, M. (2003), Community mapping: The recovery (and discovery) of our common ground. *Geomatica*, 57(2), 131 - 43.

Parker, B. (2006), Constructing Community Through Maps? Power and Praxis in Community Mapping, *The Professional Geographer*, 58(4), 470-484.

Tindle, K., Leconte, P., Buchanan, L., Taymans, J. M. (2005). *Transition planning: Community mapping as a tool for teachers and students* (vol. 4, issue 1). Minneapolis, MN: National Center on Secondary Education and Transition Research to Practice Brief, 6 p.

Tritter, J.Q., McCallum, A. (2006), The snakes and ladders of user involvement: Moving beyond Arnstein. *Health Policy*. 76(2), 156 - 168.

WaterAid, (2005), *Guidelines for WaterAid Programmes and Partners*, 28 p. Retrieved from www.wateraid.org.

Wood, D. (1992), *The power of maps*, The Guilford Press, New York, Revised ed. Edition, 248 p.

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