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PUBLIC PARTICIPATION IN URBAN DEVELOPMENT PROJECTS

A systematic cross-disciplinary literature review

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Introduction

To a considerable extent, cities are developed through urban development projects (UDPs), one-of-a-kind undertakings that seek to build and improve urban infrastructure and to develop the resources, such as information systems, that facilitate its use. This study rests on the premise that individual members of the public (i.e. citizens) may possess knowledge that can support the management of UDPs and their deliverables throughout their life cycles, which for urban infrastructure typically span years and often span decades (Leite, 2022). For instance, in a project's front-end phase, during which alternative investment options are conceptualised and evaluated, individual citizens may possess an in-depth understanding of their needs and urban surroundings and frequently have ideas for projects that, if realised, would provide value for them (Letaifa, 2015).

But how—and to what extent—are the views and insights of individual citizens currently being taken into consideration when UDPs are being conceptualised, planned, implemented and ultimately used? In the project studies discipline, the stream of research on stakeholder engagement has highlighted the importance of creating value for all of a project's stakeholders, including individual citizens (Eskerod & Huemann, 2014; Leite, 2022). Moreover, this research stream has acknowledged the importance of actively engaging stakeholders, that is, inviting diverse stakeholders to collaborate in the design and implementation of projects (Lehtinen et al., 2019; Lehtinen & Aaltonen, 2020). However, with only a few exceptions, such as studies of the perspectives of local communities (Cuganesan & Floris, 2020; Di Maddaloni & Davis, 2017; De Crescenzo

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et al., 2021), such research has focused on organisational stakeholders or powerful individual decision-makers instead of individual citizens (Chow & Leiringer, 2020).

The limited focus of the earlier discussion may be insufficient as public participation and citizen participation are central research themes in several academic disciplines such as public administration (Berntzen & Johannessen, 2016), transportation planning (e.g. Majumdar, 2017), sociology (e.g. Adamson, 2010) and health care (e.g. Chandra et al., 2016). Such research is likely to shed light on the nature of various *mechanisms of citizen participation*, that is, mechanisms for involving individual citizens in project-related decision-making. Accordingly, the aim of this chapter is to answer the following research question:

RQ: *How do citizens participate in urban development projects throughout their life cycles?*

We answer our research question by means of a systematic cross-disciplinary literature review that reveals and describes 16 mechanisms of citizen participation.

Literature

The extant literature has defined UDPs as 'focused efforts to improve and/or rehabilitate urban neighbourhoods through the (re)construction of housing, commercial real estate and/or public works' (Janssen-Jansen & van der Veen, 2017, p. 207). In this study, we approach urban development from a project-based perspective, conceptualising UDPs broadly as multistakeholder projects that impact the physical, economic or social environment in urban settings. This view encompasses the conceptualisation, design, planning, implementation and more effective utilisation of buildings and other infrastructure, such as transportation systems, recreational areas, information systems and cultural events. Further, we cover the entire UDP life cycle, spanning the project front-end phase and the operations phase.

There is a large and well-established body of research in the interdisciplinary field of public participation which has been discussed in the following contexts:

- research activities (e.g. Riesch et al., 2013)
- resource management, including the management of forests (e.g. Busscher et al., 2018), national parks (e.g. Gandiwa et al., 2013) and wetlands (e.g. Slootweg, 2018)
- educational programmes (e.g. Corrie, 2013)
- political processes (e.g. Copus, 2003)

The interdisciplinary field of public participation has highlighted various forms of participation and evaluated their extent and depth. Typologies of public participation distinguish among passive participation (e.g. receiving project information), interactive participation (e.g. workshops) and active participation (citizen-led participation) (Chi et al., 2014) as well as Arnstein's ladder of citizen participation (Arnstein, 1969). Moreover, in the cognate stream of research on user involvement in product development, the lateral dimension (depth of user involvement) is complemented by the longitudinal dimension (points of interaction during the design life cycle) (Kaulio, 1998).

Method

Our study is based on a systematic interdisciplinary review of literature on citizen participation in UDPs. Because the extensive literature on citizen participation and public engagement is distributed across a number of distinct research fields, a systematic literature review (SLR) is justified. SLRs enable a minimisation of bias, because the identification and analysis of academic contributions occur in a transparent and reproducible manner (Tranfield et al., 2003). Further, SLRs enable the identification of key concepts and themes as well as their relationships (Rousseau et al., 2008). Figure 2.1

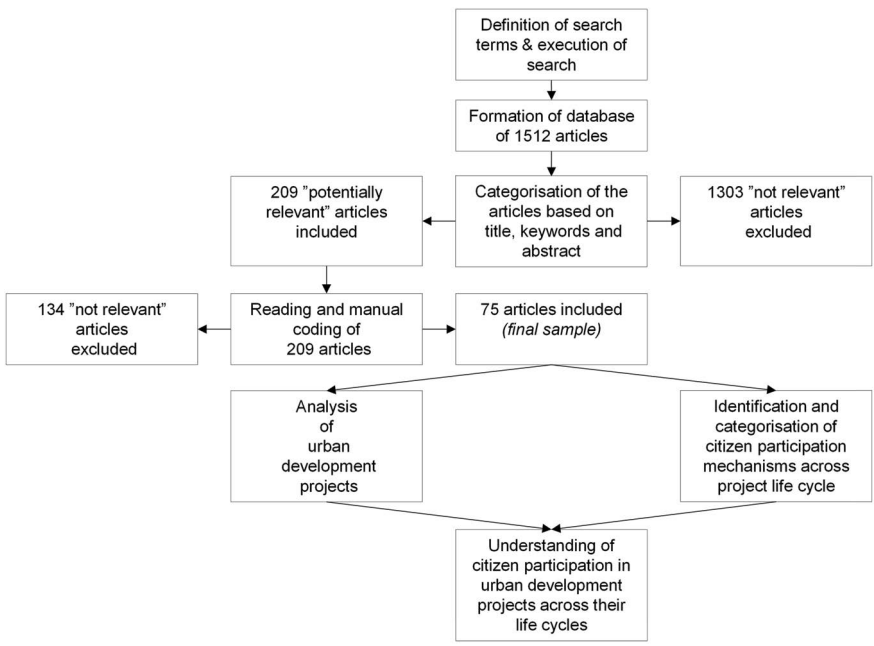

FIGURE 2.1 Method

Source: Authors.

provides an overview of our method, which is discussed in detail in the following sections.

Identification of articles

To identify relevant articles, we first carried out keyword-based searches using the Scopus database. Indexing more than 28,000 titles, Scopus is widely regarded as a leading platform for accessing scientific research. Our intent was to identify all articles in the database that met the following criteria:

- discussion of one or several mechanisms of citizen participation
- discussion of one or several UDPs
- English-language article

Because the term 'citizen participation' has several synonyms (or terms with at least strongly overlapping meanings), such as 'public participation', 'citizen involvement', 'public involvement' and 'citizen engagement', we carried out several searches and downloaded the titles, keywords and abstracts of all the articles that appeared in the search results. Moreover, because the concept of UDP is not established across all scientific disciplines, we employed the semantically broader keyword 'project' in the first step to ensure that we did not overlook papers discussing relevant UDPs under a different name. To ensure maximum coverage in terms of time and academic disciplines, no limitations were set regarding publication year, discipline or journal.

Categorisation of the articles based on title, keywords and abstract

Following the removal of duplicate articles and articles without author details, we read the title, keywords and abstract of each of the 1,512 articles. The purpose of this step was to exclude articles that were not relevant to our study. We relied on the following exclusion criteria:

- The article does not discuss one or more UDPs.
- The article does not focus on citizen participation.

First, four of the authors independently categorised into two groups—'potentially relevant' and 'not relevant'—a set of 100 articles drawn from total set of 1,512 articles. The results of the categorisation efforts were shared, and a meeting was held to discuss the results and develop a joint understanding of how the exclusion criteria should be utilised. Following this meeting, the entire set of 1,512 articles was categorised. During this phase, 1,303 articles, clearly the majority of the 1,512 articles, were

categorised as not relevant. The main reasons for categorising an article as not relevant were as follows:

- The article focused on a national or regional development project, or a project carried out in a rural context, instead of a UDP.
- The article discussed gradual efforts to improve ongoing municipal processes, and no UDP could be clearly identified.
- The article discussed participation mechanisms in a highly abstract way (e.g. as a pillar of democracy) and with no link to a specific UDP.

In the 209 cases in which the article's status was unclear, it was categorised as potentially relevant and processed as described in the following section.

Manual coding of articles

The authors read and manually coded all 209 articles categorised as potentially relevant. We coded both the predetermined variables and the codes that we iteratively developed during the coding process. The purpose of the predetermined codes was to provide a high-level overview of the descriptive characteristics of UDPs discussed in the sample articles, the citizen-participation mechanisms used and the UDP outcomes. The iteratively developed codes enriched our understanding of the nature of each participation mechanism and its use throughout the project life cycle. The predetermined variables included (1) country context, (2) type of UDP (transportation, city-area or building development, infrastructure, culture, recreation, IT and other), (3) citizen groups involved and (4) name of citizen-participation mechanism. We arrived at a detailed understanding of the citizen-participation mechanisms through an in-depth qualitative content analysis of the body text of each of the 75 articles.

Results

In this section, we present brief descriptive analyses of our sample and then discuss the characteristics of UDPs and the participation mechanisms identified in the articles.

Descriptive analyses

Figure 2.2 illustrates the number of publications per year, starting in 1994, the publication year of the oldest article in our final sample, and ending in 2020. A clear upward trend in the number of articles published annually is evident, indicating increasing scholarly interest in the phenomenon.

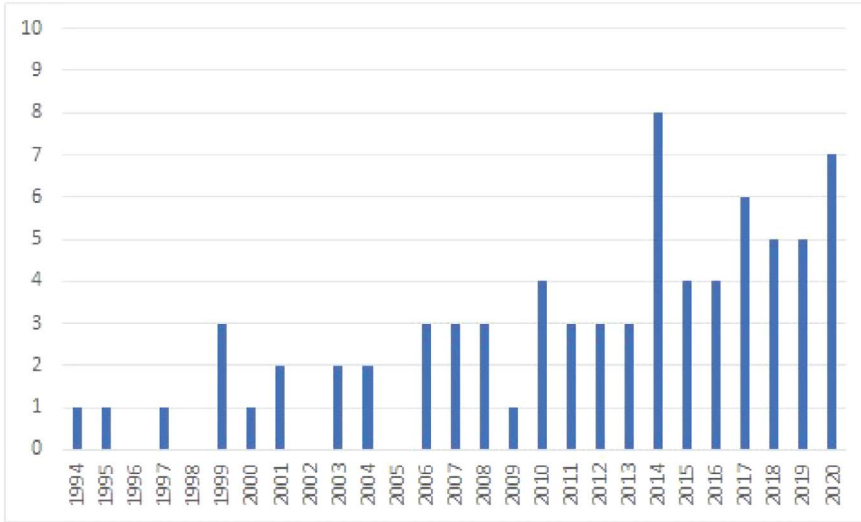

FIGURE 2.2 Publications per year based on the final sample

Source: Authors.

Participation mechanisms in urban development projects

In this section, the mechanisms of public participation in UDPs discussed by the articles are introduced and described in regard to the actor utilising the mechanism, the frequency of occurrence, the typical project-life-cycle phases, the role of citizens and the depth of participation. Table 2.1 summarises the 16 participation mechanisms, and the individual mechanisms are discussed in more detail directly below.

Mechanisms utilised predominantly by the project organisation

Public events are participation mechanisms for medium or large groups of people (~50+ people). Public events took place under various names, such as public, local, open, information and community meetings (e.g. Alter et al., 2008; Bailey et al., 2007; Bakht & El-Diraby, 2014; Cuppen et al., 2012), public hearings (Barnes & Langworthy, 2004; Hillier, 2018; Keever et al., 1999) and various events and engagement sessions (Goodman et al., 2020). An important detail of these participation mechanisms is that the law often requires them (especially public hearings for large projects; Barnes & Langworthy, 2004; Hillier, 2018; Keever et al., 1999). Public events typically took place in the project-planning phase, and to a lesser extent, they took place during the front-end phase. In their typical form, public events resembled Arnstein's concept of informing. In Arnstein's typology, examples of this position are 'informing citizens about an action plan' (Li & de Jong, 2017) and public

TABLE 2.1 Summary of Mechanisms of Participation in Urban Development Projects

Mechanism	*Description*	*Number of discussions of the use of a mechanism in articles*	*Typical project-life-cycle phase(s)*	*Citizens' role in UDPs*	*Typical depth of participation (according to Arnstein, 1969)*
Mechanisms utilised predominantly by the project organisation					
Public events	Project-related discussions or presentations take place before medium-to-large audiences (~50+ people; e.g. public hearings).	57	Primarily planning, also front end	Avenues for citizens to receive information on the project and often also to provide their views on project plans, project design etc.	Informing, consultation
Workshops and focus groups	The project and citizens work together in small-to-medium groups (~5–15 people) in preplanned collaborative sessions.	54	Primarily planning, also front end	Citizens provide their views on project plans, project design etc. Citizens may also suggest novel design ideas or scope changes.	Consultation
Written communication	Written information regarding project details is actively shared with targeted citizen groups.	31	Primarily planning, also implementation	Citizens are recipients of information	Informing
Surveys and polling	The opinions of larger numbers of citizens are systematically collected (e.g. via surveys).	21	Primarily planning, also front end	Citizens provide their views on project plans, project design etc.	Consultation

(*Continued*)

TABLE 2.1 (Continued)

Mechanism	*Description*	*Number of discussions of the use of a mechanism in articles*	*Typical project-life-cycle phase(s)*	*Citizens' role in UDPs*	*Typical depth of participation (according to Arnstein, 1969)*
Assigning formal roles to individuals	Individual citizens are assigned specific roles in the project organisation.	15	Planning and front end	Citizens' official representation in the project. Representatives may also have decision-making power on project plans.	Placation, partnership, consultation, manipulation
Personal engagement	Efforts to engage citizens individually, such as through visits and interviews.	13	Primarily planning, also front end and implementation	Influential citizens, such as opinion leaders, local residents and experts, provide their views on project plans, project design etc.	Consultation
Physical contact point	Project establishes a physical office (or site) that citizens can visit to acquire information and provide feedback.	10	Primarily planning, also front end and implementation	Citizens are recipients of project information; moreover, they may provide feedback on the project (e.g. project plans or scope).	Informing, consultation
Feature demonstrations	Project features, alternatives or plans are publicly demonstrated over a limited time period (e.g. prototypes and pilots).	10	Primarily planning, also front end and implementation	Citizens are recipients of project information; moreover, they may provide feedback on the project (e.g. design alternatives).	Informing, consultation

(*Continued*)

TABLE 2.1 (Continued)

Mechanism	*Description*	*Number of discussions of the use of a mechanism in articles*	*Typical project-life-cycle phase(s)*	*Citizens' role in UDPs*	*Typical depth of participation (according to Arnstein, 1969)*
Visual-design tools	Tools that support visual presentation of project plans and design options are used.	8	Planning	Citizens contribute new ideas by refining existing designs.	Informing, consultation
Project hotline	Citizens may contact the project office via a dedicated telephone number.	8	Primarily planning, also implementation	Citizens are recipients of project information; moreover they may provide feedback on the project.	Informing, consultation
Mechanisms utilised by both the project organisation and citizens					
Online presence	Online platforms, such as websites and social media, are used for engagement.	19	Primarily planning, also front end	Citizens may be recipients of project information, active contributors of project ideas or opponents of the project.	Informing, consultation
Mass media	Information about the project is distributed to a broad audience.	19	Primarily planning, also implementation	Citizens may be recipients of information about the project and its intended benefits or may focus media attention on project shortcomings.	Informing

(*Continued*)

TABLE 2.1 (Continued)

Mechanism	*Description*	*Number of discussions of the use of a mechanism in articles*	*Typical project-life-cycle phase(s)*	*Citizens' role in UDPs*	*Typical depth of participation (according to Arnstein, 1969)*
Engagement through dedicated organisations	A specific organisation is used or established to support and promote public participation.	18	Primarily planning, also front end	Dedicated organisations may either support or oppose the project.	Placation, consultation
Mechanisms utilised predominantly by citizens					
Protests	Visible protests are organised to hinder or stop the progress of the entire project or certain aspects of it.	13	Primarily planning, also front end	Citizens' protests aim to direct the attention of media and other stakeholders to negative aspects of the project, hindering its progress.	N/A
Formal petitions and change demands	Citizens make formal (often juridical) demands to change the project scope or stop it altogether.	12	Primarily planning	Legal process may result in forced changes to the project scope or in abandonment of the project in its entirety. Repeated claims may also attract media attention.	N/A
Mobilising resources	Additional resources or powerful individuals for supporting or opposing the project are linked.	9	Primarily planning, also implementation	By linking resources, citizens' power to influence the project increases. This power can be used to support or oppose the project.	N/A

meetings that resemble 'information meetings' (Lidskog & Soneryd, 2000). In some cases, the depth of participation in public events reached consultation as well (e.g. 'soliciting feedback'; Goodman et al., 2020). However, the depth of consultation provided by citizens has often been considered highly symbolic or limited by citizens' lack of expertise.

Like public events, **workshops and focus groups** target groups of people. In contrast with public events, however, the participant groups are relatively small (~5–15 people). In workshops and focus groups, the participants discuss a project in a preplanned and collaborative manner. Agenda items included identification of project-related challenges (Alter et al., 2008) and prioritisation of project-design options (Goodman et al., 2020). All three of these items aligned with the concept of consultation in Arnstein's typology. However, in some cases, the influence of citizens has been considered very low and, thus, the depth of participation is limited to informing only. Most often, these kinds of sessions took place in the project-planning phase, although in some cases they were positioned in the front-end phase as well.

Written communication is a participation mechanism in which project information is shared via various channels. These channels include leaflets (Blakeley & Evans, 2010), letters (Casello et al., 2015) and emails, mailing lists and newsletters (Fontaine, 2008; Meyer et al., 2001). Regarding the depth of participation, written communication exemplified Arnstein's concept of informing.

Surveys and polling enable the systematic collection of citizens' opinions, views or expectations. Surveys and polling usually took place in the project-planning phase and sometimes also in the front-end phase. Surveys and polling included polls about citizens' priorities for project objectives in a transportation project (Grossardt et al., 2019) and surveys about residents' opinions of competing project-design alternatives for a bridge project in Hong Kong (Hooton et al., 2011). Illustrating that several participation mechanisms can be combined, a poll was used to confirm or verify the results of earlier rounds of public participation in a transportation project in China (Chen & Mehndiratta, 2007). On Arnstein's ladder, this category of participation mechanisms exemplified the rung of consultation; on this rung, there is clear two-way communication between the project and citizens, but citizens' influence and decision-making power are typically quite limited.

The fifth participation mechanism in this group is **assigning formal roles to individuals**. This relates to citizens' representation in parties such as a project's advisory committee or steering group (e.g. Cuppen et al., 2012) or to the establishment of similar parties representing citizens (e.g. a citizens' task force or a residents' steering group; Blakeley & Evans, 2010). Assigning formal roles to individuals typically occurred in the project-planning and front-end phases. Regarding depth of participation, this participation mechanism exhibited both placation and partnership. Regarding partnership, in the

groups with citizen representatives, there were some cases of 'real' decision-making power in UDPs (e.g. Meyer et al., 2001). However, in other cases, the citizens' representation was considered more symbolic and their decision-making power significantly more limited. In the most extreme case, citizens expressed concerns about not being heard and even 'unfair play', which reflected Arnstein's concept of manipulation.

Personal engagement includes various approaches to engaging individual citizens or specific citizen groups. These approaches include interviews (Alter et al., 2008; Chen & Mehndiratta, 2007) and various forms of visitation and outreach (Alavijeh & Ahmadi, 2018; Bakht & El-Diraby, 2014; Casello et al., 2015). The empirical examples of personal engagement were especially prominent in the project-planning phase, but they also occurred in the front-end and implementation phases. An important characteristic of this participation mechanism is a tailored approach to specific citizen groups; studies have discussed personal visits to business owners (Casello et al., 2015) and individual interviews of disadvantaged citizen groups (Chen & Mehndiratta, 2007). With respect to Arnstein's typology, this participation mechanism typically reflected the rung of consultation. This was indicated, for example, by the two-way communication between the project and citizens in interviews.

Physical contact points are physical locations where a UDP is presented or project information is shared. These physical locations include open houses (Bakht & El-Diraby, 2014), booths or kiosks at events (Bakht & El-Diraby, 2014; Liu et al., 2015) and information stations or centres (Goodman et al., 2020; Prevost, 2006). Most empirical cases of this participation mechanism were associated with the planning phase, but they appeared in the front-end and implementation phases as well. Typically, the depth of participation was limited to informing, but it demonstrated some potential for consultation as well.

Much like physical contact points, **feature demonstrations** involve situations in which a project is showcased or in which a project, project plans or project-design alternatives are demonstrated to the public. Again, most of the empirical examples appeared in the project-planning phase, but some appeared in the front-end and implementation phases as well. Two empirical examples were full-scale and miniature models of new houses (Mota, 2019) and a 'preview park' constructed by a city to market and demonstrate a project for designing and building a new park on the site of a former marine air base (Garde, 2014). Importantly, in both cases, visitors' insights affected the project design or project plans. Thus, this participation mechanism had the potential for consultation in addition to mere informing.

UDPs are often large and complex and therefore require the visualisation of elements like project scope (e.g. size), appearance or position in the landscape. **Visual design tools** can provide valuable insights for local stakeholders with little or no technical background. The great majority of empirical cases

utilising visual design tools for citizen participation occurred in the project-planning phase. Examples were aerial photographs (Anderson et al., 1994), visual prototyping tools (Noyman et al., 2017) and augmented reality systems (Simonofski et al., 2017). With respect to Arnstein's ladder, visual design tools seemed to correspond to the rung of informing, but they included elements of consultation as well.

The final participation mechanism in this category is **project hotlines.** Project hotlines are channels that enable citizens to contact the project (e.g. a project office or project coordinator) and ask questions, receive information or provide feedback, for example. Typically, the channel of communication between citizens and a UDP is the telephone. Most of the empirical evidence was associated with the project-planning phase, but some cases were associated with the implementation phase as well (Li & de Jong, 2017; Talvitie & Pearson, 1997, p. 750). Regarding depth of participation, project hotlines mainly reflect the rung of informing. However, there was some evidence of the use of project hotlines to collect citizens' feedback or learn about their preferences (e.g. Meyer et al., 2001), demonstrating hotlines' potential for consultation.

Mechanisms utilised by both the project organisation and citizens

Online presence is citizen participation that takes place in various online settings. The two main categories of this type of participation are project websites (e.g. Meyer et al., 2001; Petts, 2006) and presence or activity on social media (e.g. Casello et al., 2015; Tsuladze et al., 2018). Although we identified more empirical examples of this mechanism being utilised by the projects, there were a few cases of initiation from the citizens as well. An example of the latter was nongovernmental organisations (NGOs) supporting public transportation projects on social media (Casello et al., 2015). Regarding the project life cycle, most online presence was associated with the project-planning and front-end phases. Regarding depth of participation, online presence most often reflected Arnstein's concept of informing. However, elements of consultation were evident in some cases (e.g. comments received from citizens online; Garde, 2014).

The second participation mechanism in this category is **mass media**. Through this mechanism, project organisations or citizen groups utilise a broad range of media channels to share information, seek influence or affect opinions or preferences. Typical examples of media channels were open letters (e.g. De Mello Lemos & Luna, 1999), and television or radio (e.g. de la Motte, 2007; Keever et al., 1999). Most uses of mass media occurred in the project-planning phase, and it was used to a lesser extent in the project-implementation phase. In the typology of Arnstein, these uses of mass media exemplified the concept of informing.

Engagement through dedicated organisations is a participation mechanism in which a dedicated organisation is established or utilised to promote public participation. These kinds of organisations have numerous titles, including citizen task forces (Barnes & Langworthy, 2004), committees and expert panels (Casello et al., 2015) and advisory committees (Goodman et al., 2020). As these names suggest, this participation mechanism clearly resembles the mechanism of assigning formal roles to individuals, discussed above. Empirical examples of the mechanism were especially prominent in the planning phase, but it was used to a lesser extent in the front-end phase as well. This participation mechanism was utilised by both the project and the citizen sides of UDPs. For example, in the front-end phase of a smart-city development project in Canada, an advisory committee was set up by the region of Waterloo (i.e. the project initiator) to promote public participation in designing the project (Goodman et al., 2020). In another case, a local NGO had the role of 'the official body of the extended citizen participation' in the redevelopment of an old military site in Freiburg, Germany (Bagaeen, 2006). Most often, the depth of participation in this mechanism was at the level of consultation. However, there was some evidence of the potential for placation as well; for instance, a community advisory group evaluated project alternatives and provided a recommendation for the county in a facility-development project in Seattle, Washington, USA (van der Vieren et al., 2011).

Mechanisms utilised predominantly by citizens

The participation mechanism of **protests** is active opposition initiated by citizens. Specifically, citizens actively oppose or resist a project, certain elements of its scope or how it is managed. This participation mechanism was most evident in the project-planning phase, although some cases occurred in the front-end phase as well. The papers discussed cases of both successful and unsuccessful protests. In a discussion of the former, de la Motte (2007) presented a case of water-supply and wastewater treatment in which the local councillors' protests forced a private company to arrange public consultations and discuss project plans more openly. Finally, even the Ministry of Internal Affairs intervened to change the initial privatisation proposal.

Like protests, **formal petitions and change demands** is a participation mechanism through which citizens seek to influence UDPs or the opinions of project stakeholders. Typical channels through which this kind of influence is sought include petitions (e.g. Barnes & Langworthy, 2004; Cuganesan & Floris, 2020) and appeals (e.g. Lidskog & Soneryd, 2000). A characteristic of this mechanism is unidirectional communication; that is, the purpose of statements is primarily influencing others instead of generating discourse between parties. As with protests, we identified both successful and unsuccessful attempts to gain influence with this participation mechanism. Examples

included the mayor not responding to letters from trade unions (de la Motte, 2007) and the abandonment of a UDP after fierce public opposition (Rubin & Carbajal-Quintas, 1995).

Mobilising resources consists of various approaches to gaining access to additional resources to support or oppose projects or to increase power or influence, for example. An empirical example of project support was a case in which project proponents (public officials) mobilised large groups of Colonia residents to show support for the project at a project-certification meeting (De Mello Lemos & Luna, 1999). Exemplifying more critical viewpoints, local residents formed activist groups to advocate for a certain project design in a transportation project in the USA (Barnes & Langworthy, 2004), and coalitions of local residents organised to oppose a road-infrastructure project in Australia (Cuganesan & Floris, 2020). Again, most instances of mobilising resources occurred in the project-planning phase, and they occurred to a lesser extent in the project-implementation phase.

Use of participation mechanisms across the project life cycle

Our analysis revealed that mechanisms of citizen participation were most frequently utilised during the project-planning phase. More specifically, of the 320 specific uses identified in our source articles, 197 (62%) occurred during the planning phase. With 72 identified uses of participation mechanisms, the front-end phase ranked second among life-cycle phases in terms of citizen involvement in UDPs. We identified a total of 44 uses of participation mechanisms during the project-implementation phase and the use of citizen-participation mechanisms during the project operations phase was extremely scarce; only seven occurrences (2% of all occurrences) were associated with this phase.

Discussion

As the main result of our literature-based study, we identify and scrutinise 16 mechanisms of citizen participation. The resulting framework and the descriptions of the 16 mechanisms provide a comprehensive summary of various approaches through which public participation in UDPs is enabled, supported or pursued. The few recent studies of stakeholder engagement in projects have typically prioritised the viewpoint of the focal firm by discussing stakeholder engagement at the level of organising such engagement (Lehtinen & Aaltonen, 2020) or with respect to the rationales for engaging and disengaging stakeholders (Lehtinen et al., 2019). Similarly, although some prior studies have homed in on a specific mechanism, such as public forums (Chow & Leiringer, 2020), no study has characterised the variety of citizen-participation mechanisms. Thus, our findings complement previous research

by providing a more comprehensive and nuanced account of the practices of engaging a specific type of stakeholder, that is, individual citizens, in projects.

Our further analysis of the 16 participation mechanisms reveals a highly uneven distribution of mechanisms over the UDP life cycle. Indeed, participation mechanisms are predominantly used during the planning phase of UDPs; fewer mechanisms are used during the front-end phase, and very few are used during the implementation and operation phases. The front-end phase is especially critical, because many decisions are made at that point (Artto et al., 2016; Edkins et al., 2013; Leite, 2022) and the belated involvement of relevant actors can create misalignments (Miterev et al., 2020). Similar issues are evident in other forms of citizen involvement, such as citizen participation in public budgeting (Ebdon & Franklin, 2006) or public crowdsourcing (De Crescenzo et al., 2021).

Implications for practice and policy

Our study highlights the necessity for involving citizens through a portfolio of diverse and partially overlapping engagement strategies. The identification of 16 distinct mechanisms for public participation suggests that practitioners should implement a variety of approaches, such as public events, workshops, and online platforms, to cater to different community needs and preferences. Furthermore, the findings indicate that participation tends to be emphasized in the project planning phase, highlighting the importance of prioritizing citizen engagement early in the project lifecycle. By ensuring that community insights shape project goals and designs from the outset, practitioners can mitigate conflicts and enhance project acceptance. In addition to these practical strategies, our findings highlight the importance of tailored communication methods. Utilizing various channels, including social media and traditional media, can help reach different citizen groups effectively.

Regarding policy, our observations advocate for the establishment of regulatory frameworks that mandate public participation in all phases of UDPs (including ideation, planning, implementation and operations). By formalizing citizen engagement requirements, governments can ensure that community input is not only welcomed but also integrated into decision-making processes. This regulatory support can significantly enhance the legitimacy and effectiveness of urban development initiatives. Moreover, there is a pressing need for capacity-building initiatives aimed at both citizens and project management professionals. Empowering citizens with knowledge about UDPs and equipping project teams with the capabilities necessary to facilitate engagement can enhance the depth and impact of participation. This dual approach fosters a more informed and active citizenry while also preparing project managers to navigate the complexities of public involvement. Finally, implementing evaluation and feedback mechanisms is essential

for refining participation strategies over time. Policymakers should encourage the development of feedback loops that allow citizens to express their views on the engagement process itself, fostering continuous improvement. By systematically evaluating the effectiveness of participation mechanisms, stakeholders can adapt and enhance their approaches, ensuring that public participation remains both meaningful and impactful.

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