

Clear Communication as a Pillar of the Participatory Public Space Design Process

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Abstract

The paper draws on an integrative interdisciplinary literature review spanning urban planning, participatory design, and communication accessibility. Searches were conducted in Scopus and the ACM Digital Library, complemented by supplementary searching in Google Scholar, institutional literature, and backward and forward snowballing, with a principal time frame of 2015–2025 and the inclusion of earlier foundational works. On this basis, the paper analyses how clear communication shapes inclusive co-design processes in the development of public spaces. The discussion shows that communication practices influence collaboration, accessibility, shared understanding, and the perceived legitimacy of participatory processes. It also identifies persistent barriers related to linguistic diversity, literacy, digital exclusion, and structural power asymmetries that continue to constrain equitable participation. Both dimensions are synthesized in a matrix that cross-tabulates opportunities and barriers against four communicative dimensions: linguistic-cultural, cognitive, digital, and institutional. The paper argues that participation cannot be understood independently of the communicative conditions in which it takes place, and examines how far this argument is transferable to other domains of co-creation and citizen participation. The findings underline the need to embed communication considerations systematically within participatory methodologies to move from symbolic participation toward more substantive and equitable engagement in public space design.

Keywords: clear communication, participatory urban planning, inclusive co-design, public space design, communication accessibility

Comunicación clara como pilar del proceso participativo de diseño de espacios públicos

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Resumen

El artículo se basa en una revisión integradora e interdisciplinar de la literatura en planificación urbana, diseño participativo y accesibilidad comunicativa. La búsqueda se realizó en Scopus y ACM Digital Library, complementada con búsqueda suplementaria en Google Scholar, literatura institucional y búsqueda en cadena (snowballing), acotando el periodo principal entre 2015 y 2025 e incorporando obras fundacionales anteriores. A partir de este corpus se analiza cómo la comunicación clara configura los procesos de co-diseño inclusivo en el desarrollo de espacios públicos. La discusión muestra que las prácticas comunicativas influyen de manera decisiva en la colaboración, la accesibilidad, la construcción de entendimientos compartidos y la legitimidad percibida de los procesos participativos. Al mismo tiempo, se identifican barreras persistentes relacionadas con la diversidad lingüística, los niveles de alfabetización, la exclusión digital y las asimetrías estructurales de poder, que continúan limitando una participación equitativa. Ambas dimensiones se sintetizan en una matriz que cruza oportunidades y barreras con cuatro dimensiones comunicativas: lingüístico-cultural, cognitiva, digital e institucional. La síntesis muestra que la literatura especifica las condiciones limitantes con mucha mayor precisión que las facilitadoras.

Palabras Clave: comunicación clara, planificación urbana participativa, codiseño inclusivo, diseño de espacios públicos, accesibilidad comunicativa

1- Introduction¹

Public spaces are a central element of urban life. They host a wide range of everyday activities and reflect the social, cultural, and political dynamics of the communities that use them. Public spaces function simultaneously as physical environments for movement and interaction, as social arenas for dialogue and collective expression, and as symbolic places where identities and values are negotiated. Their openness and accessibility are closely linked to how cities support participation, belonging, and well-being (Mehta & Palazzo, 2020). With more than half of the world's population living in cities and continued urban growth projected, the design and governance of public spaces have become key issues for sustainable urban development (United Nations, 2018).

Although public spaces have long been associated with democratic ideals, contemporary planning practices often fail to achieve inclusive participation. Traditional planning has tended to privilege the perspectives of socially dominant groups, reinforcing physical, procedural, and symbolic barriers for others (Gleeson, 2001). In response, recent planning approaches have increasingly focused on proximity, everyday practices, and community empowerment. Concepts such as the 15-minute city, human-centered street design, and tactical urbanism seek to reconnect public space development with local knowledge and lived experience (Moro, 2022). These shifts are also reflected in European policy agendas, including the New European Bauhaus, which promotes sustainability, social inclusion, and cultural value through interdisciplinary and participatory processes (Ricci, 2021).

Alongside these urban transformations, community participation has become a central concern in planning and design. Policymakers, designers, and researchers increasingly recognize that residents' situated knowledge is essential for creating public spaces that respond to diverse local needs (Calvo & De Rosa, 2017). Participatory approaches aim to redistribute decision-making power, strengthen social trust, and foster a sense of shared ownership (Collina et al., 2022). However, participation is not only a matter of providing formal opportunities to take part. It also depends on communication conditions that allow people to understand information, express their perspectives, and influence outcomes.

Communication, therefore, emerges as a foundational condition for participation. Research on communication accessibility shows that effective communication is central to social inclusion, particularly for people who experience linguistic, cognitive, or communicative

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barriers (Solarsh & Johnson, 2017). Urban planning processes, however, often rely on technical language, complex procedures, and specialized tools that limit meaningful engagement, especially for people with limited literacy, diverse linguistic backgrounds, or little familiarity with planning practices (Gleeson, 2001; Calvo & De Rosa, 2017).

These challenges are compounded by socio-economic inequalities. Civic engagement is unevenly distributed, with higher involvement typically associated with individuals who possess greater educational, economic, and social resources. Moreover, the increasing reliance on digital forms of participation may reproduce existing inequalities, as disparities in access to digital technologies and skills affect both the ability and the confidence of participants to engage effectively in planning processes (Gooch et al., 2018). In response, recent initiatives have explored more experiential and participatory methods of engagement, including immersive visual tools such as virtual reality and structured co-design activities, to support more inclusive participation (Hatton et al., 2020; Dane et al., 2024). While promising, these approaches raise important questions about how communication can be systematically designed to support equitable participation across diverse groups.

It is within this context that the SPICE project positions its contribution. Funded by the European Commission under the Horizon Europe program, SPICE brings together interdisciplinary partners to co-develop inclusive methods and tools for public space design across European neighborhoods. A core assumption of the project is that clear communication, understood as the adaptive alignment of message, medium, and context, is essential for equitable participation.

The present paper contributes to that agenda at a specific and delimited stage. It does not report empirical results generated by the project's pilot sites; rather, it develops and consolidates the conceptual and methodological groundwork on which the project's subsequent empirical work is built. Accordingly, the paper pursues three objectives: (i) to articulate an interdisciplinary conceptual framework that positions clear communication as a condition of participation rather than an accessibility add-on; (ii) to synthesize, through a transparent review of the literature, the opportunities and barriers that communicative practices generate in participatory public space design; and (iii) to assess how far this argument is specific to public space design and how far it is transferable to other domains of co-creation and citizen participation.

2. Conceptual Framework

This section outlines the conceptual framework used to analyze clear communication as a means of engaging vulnerable groups in participatory urban planning. The framework integrates four complementary theoretical strands: public space and sustainability theory, clear communication theory, participatory and co-design foundations, and communication accessibility frameworks. Section 2.5 then draws these strands together and specifies the analytical purpose they serve within the SPICE project.

2.1 Public Space and Sustainability Theory

Public spaces are widely recognized as key components of urban systems and important contributors to the quality of life. Areas of Public Space and Meeting (APSM), such as parks, squares, green areas, and sports facilities, play a decisive role in shaping everyday life and supporting sustainable urban systems (Jiménez-Caldera et al., 2024). Their contribution to sustainability is multidimensional, encompassing environmental, economic, social, psychological, and aesthetic functions.

At the global policy level, the importance of public and green spaces is reinforced by the United Nations Sustainable Development Goals (SDG). SDG 11, and in particular target 11.7, calls for universal access to safe, inclusive, and accessible public spaces, with special attention to women, children, older persons, and persons with disabilities (United Nations, 2015). This framing highlights that public space is not only an environmental resource but also a mechanism for addressing social inclusion and inequality. Inclusive public spaces are fundamental to participation in society (Patrick & McKinnon, 2022). From a practice-oriented perspective, urban development is increasingly understood as a process shaped through action, where participatory practices help programs integrate local knowledge and evolve toward more inclusive public spaces (Moro, 2022).

2.2 Clear Communication Theory

Clear communication is a foundational condition for participation and social inclusion. Effective communication enables people to express needs, exchange information, and engage in social interaction (Solarsh & Johnson, 2017). In urban contexts, communication shapes how public spaces function socially, mediating interaction, connection, and belonging (Wallis et al., 2022).

In planning and design processes, communication plays a particularly important role in the early stages, where a shared understanding of problems, constraints, and possibilities is

developed. Participatory design relies heavily on dialogue as a means of building collective meaning and supporting collaborative sense-making (Collina et al., 2022). From a user-centered perspective, sustained communication between designers and participants is essential for improving user experience and ensuring that design outcomes reflect real needs (Quintero, 2020). These perspectives position clear communication not as an additional layer of accessibility, but as a core condition for participatory and co-design processes.

2.3 Participatory and Co-Design Theoretical Foundations

Co-design is a collaborative practice in which diverse actors work together to improve design outcomes. This orientation situates it within the broader tradition of participatory design, foregrounding collaboration throughout the design process rather than limiting participation to consultation or feedback stages (Gaete Cruz et al., 2022).

Participatory Design (PD) is formally positioned within Human–Computer Interaction, User-Centered Design, and social computing, and is characterized by an explicit commitment to designing with people rather than for them. A defining feature is the continuous involvement of users from formative to summative stages. This participation rests on the recognition of lived experience as a core design resource: users' values and everyday experiences are treated as foundational elements in the co-creation of systems and solutions that affect their lives (Elsayed-Ali et al., 2023).

In co-design processes, users are positioned as active partners rather than passive recipients of design decisions. This reconfiguration of roles challenges hierarchical and top-down models, particularly in public-sector contexts, and emphasizes shared responsibility among designers, institutions, and users throughout design development (Collina et al., 2022). Participatory design is also theorized in relation to broader social and political dynamics. The notion of “publics” highlights how participatory processes form around shared issues and engage with questions of power, marginalization, and authority. Through this lens, participatory design is understood as a means of engaging groups whose voices are often underrepresented in conventional decision-making contexts. The formation of publics foregrounds the potential of participatory processes to address marginalization by creating spaces for collective engagement (Le Dantec & DiSalvo, 2013).

What this literature specifies less clearly, however, are the communicative conditions under which such collective engagement actually becomes possible; a gap that the present review addresses.

2.4 Communication Accessibility Framework

Communication accessibility is grounded in a rights-based understanding of participation and inclusion. International human rights frameworks, such as the *United Nations Convention on the Rights of Persons with Disabilities* (UN CRPD), affirm the right of people with communication disabilities to be treated with dignity and respect, to be listened to, and to communicate in ways that best suit their needs. These principles establish communication as a fundamental condition for equal participation in social and civic life (United Nations, 2006).

Building on this rights-based foundation, research on communication access emphasizes that communication accessibility is a prerequisite for meaningful participation rather than an individual accommodation. Communication accessibility is understood as an environmental condition shaped by the interaction between individuals and their surroundings, rather than solely by individual communicative abilities (Solarsh & Johnson, 2017). Environmental communication supports include physical features of spaces, the attitudes, values, skills, and knowledge of communication partners, as well as accessible communicative resources such as picture-based tools, easy-to-read information, effective signage, and the organizational policies and practices that enable or constrain access. From this perspective, communication barriers are produced through environmental and social arrangements, highlighting the responsibility of communities and institutions to design, organize, and regulate environments in ways that support inclusive participation (Solarsh & Johnson, 2017).

At the interactional level, communication access is defined by relational practices. Communication access occurs when people respond respectfully to individuals with communication difficulties and when strategies and resources are actively used to support successful communication. Theoretical frameworks such as the International Classification of Functioning, Disability and Health (ICF) further support this relational and environmental understanding of communication accessibility by highlighting the influence of environmental factors on interaction and participation (World Health Organization, 2001). Standards for communication accessibility aim to establish minimum conditions for effective interaction. These standards are intended to enable effective communication in

unfamiliar or mainstream settings with the greatest possible level of independence for all individuals, including those with communication support needs (Solarsh & Johnson, 2017; Oncins & Orero, 2021).

2.5 From Conceptual Framework to Analytical Purpose: The Role of the SPICE Project

The four strands outlined above converge on a single proposition: participation is constituted, and not merely facilitated, by the communicative conditions under which it takes place. Public space and sustainability theory establishes why inclusive access to public space matters as a policy objective; clear communication theory establishes how shared understanding is produced in the early, formative stages of design; participatory and co-design theory establishes who is entitled to shape design outcomes and on what terms; and communication accessibility frameworks establish the environmental and institutional conditions under which that entitlement can actually be exercised. Read together, these strands reframe communication from a service delivered alongside participation into a structural pillar of participatory design itself.

This convergence defines the analytical purpose of the present paper within the SPICE project. SPICE is an interdisciplinary Horizon Europe project that co-develops inclusive methods and tools for public space design across European neighborhoods, working through four pilot settings in Portugal, Finland, Poland, and Greece, and proceeding from the assumption that clear communication, understood as the adaptive alignment of message, medium, and context, is essential for equitable participation. The contribution of this paper is to examine that assumption against the interdisciplinary literature and to translate it into an analytical structure that participatory practitioners can apply.

The paper is therefore conceptual and methodological in scope: The analysis presented in Sections 3 and 4 derives from the reviewed literature rather than from data generated within the project, and it is organized around enabling and constraining conditions rather than around disciplines or methods, because the question it addresses is an operational one: under what communicative conditions does participation become equitable rather than symbolic? The synthesis presented in Table 1 sets out the analytical structure that answers this question.

3. Methodology

This section describes the review protocol followed in the study. It first sets out the type of review and its rationale (3.1), the search strategy (3.2), the eligibility criteria (3.3), and the screening and analytical procedure (3.4). It then presents the methodological approaches identified in the reviewed corpus (3.5) and the cross-cutting communicative principles derived from them (3.6).

3.1 Review Design and Rationale

The study is designed as an integrative interdisciplinary literature review. This design was selected in preference to a fully systematic review for reasons intrinsic to the object of study. The research question spans three fields, urban planning, participatory design, and communication accessibility, that use divergent terminology, publish in structurally different venues (journals, ACM conference proceedings, institutional reports), and rarely cite one another. Under these conditions, a protocol optimized for exhaustive retrieval within a single well-bounded literature would have systematically under-represented the very cross-disciplinary connections the study seeks to establish. An integrative design, which admits theoretical, methodological, and empirical contributions and allows iterative expansion of the search through citation tracking, is better suited to mapping and synthesizing a field that is still forming. The review is nonetheless reported against explicit and reproducible criteria, set out below, so that the boundaries of the corpus and the basis of the synthesis are transparent to the reader.

3.2 Search Strategy: Databases, Search Terms, and Time Frame

Searches were conducted in two databases selected for complementary disciplinary coverage: Scopus (multidisciplinary coverage of urban studies, planning, and communication), and the ACM Digital Library (participatory design, HCI, and social computing, where much of the relevant work appears in conference proceedings rather than journals). These were complemented by supplementary searching in Google Scholar, used to identify sources not indexed in the two databases, and by targeted searching of institutional and grey literature from the United Nations, the World Health Organization, and the European Commission, whose normative documents define the policy framework within which participatory practice operates.

The search combined three thematic blocks with Boolean operators. The core search string, adapted to the syntax of each database, was:

("clear communication" OR "plain language" OR "easy-to-read" OR "accessible communication" OR "communication access")

AND ("participatory design" OR "co-design" OR "co-creation" OR "citizen participation" OR "inclusive design" OR "community engagement")

AND ("public space" OR "urban planning" OR "urban design" OR "urban sustainability" OR "neighborhood" OR "urban governance")

Because the three fields converge only rarely, the full three-block string returned a limited yield. Paired-block searches (blocks 1 + 2, and blocks 2 + 3) were therefore also run to capture contributions that address two of the three axes and remain relevant to the synthesis.

The principal time frame was 2015–2025, a window chosen to capture the period in which participatory urban agendas (SDG 11, adopted in 2015; the New European Bauhaus) and digital participation tools became consolidated in the literature. Foundational conceptual works published before this window were retained where they are constitutive of the theoretical framework and continue to be cited as reference points in current debates, notably Gleeson (2001), the ICF (World Health Organization, 2001), the UN CRPD (United Nations, 2006), and Le Dantec and DiSalvo (2013). Searches were conducted in English and were last updated in July 2026.

3.3 Inclusion and Exclusion Criteria

Sources were included where they met all of the following criteria:

1. **Thematic relevance:** the source addressed at least two of the three thematic axes (communication accessibility or clear communication; participatory or co-design processes; public space, urban planning, or urban governance).
2. **Contribution type:** peer-reviewed journal articles, peer-reviewed conference proceedings, book chapters, and normative or institutional reports issued by recognized international bodies.
3. **Substantive content:** the source offered a theoretical, methodological, or empirical contribution bearing on the communicative conditions of participation.

4. **Language:** published in English
5. **Availability:** full text retrievable.

Sources were excluded where they: (i) addressed only one thematic axis without any bearing on the others; (ii) treated communication exclusively as clinical or interpersonal intervention with no civic, institutional, or participatory dimension; (iii) addressed technical or engineering aspects of urban infrastructure with no communicative or participatory component; (iv) consisted of editorials, opinion pieces, or commentary without a developed argument or evidentiary base; or (v) were duplicates of records already retrieved.

3.4 Screening, Selection, and Analytical Strategy

Screening proceeded in three stages. Records retrieved from the database searches were first screened by title and abstract against the criteria in Section 3.3. Records surviving this stage were then assessed in full text, at which point eligibility was confirmed and reasons for exclusion recorded. Finally, backward and forward citation tracking (snowballing) was performed on the retained sources to identify contributions not captured by the database queries, a step of particular importance here, given the terminological divergence between the three fields. The final corpus comprises 36 sources, of which 29 are cited in this article as the works that most directly substantiate the synthesis.

The retained sources were analyzed through qualitative thematic synthesis. Each source was coded for the communicative conditions it identified as enabling or constraining participation. Codes were then grouped inductively into two analytical axes: opportunities (conditions that enable equitable participation) and barriers (conditions that constrain it); and cross-cut by four dimensions that emerged consistently across the corpus: linguistic-cultural, cognitive and literacy-related, digital, and institutional-structural. This two-by-four structure is the analytical instrument that organizes Section 4 and is presented in summary form in Table 1. Where the coding identified barriers within a dimension but no correspondingly specific enabling condition, this was recorded as such rather than resolved by inferring an opportunity from the barrier.

3.5 Methodological Approaches Identified in the Reviewed Literature

This subsection maps the methodological repertoire identified in the corpus, since the communicative conditions analyzed in Section 4 are inseparable from the methods through which participation is enacted. Across disciplines, scholars increasingly acknowledge that inclusive co-design cannot be achieved through formal consultation mechanisms alone

(Pollini et al., 2023); it relies instead on methods that enable participants to understand, interpret, and meaningfully contribute to complex spatial decisions.

Recent educational research has explored the use of immersive and multimedia digital tools, such as virtual reality, to support experiential and participatory learning. By enabling learners to engage with realistic and contextualized environments, immersive technologies allow users not only to visualize but also to experience cultural and communicative scenarios in meaningful ways (Montroy & Matamala, 2025). These tools strengthen spatial comprehension by enabling participants to engage with proposed environments in an embodied and intuitive manner, while at the same time reducing cognitive and attentional barriers.

Importantly, research emphasizes that the accessibility and legitimacy of these tools depend on participatory development processes, in which stakeholders are involved in iterative design workshops to ensure transparency, localization, and accountability (Dane et al., 2024). Complementary studies on multimedia participation suggest that interactive digital approaches can support participatory design processes by facilitating collaboration and engagement when interfaces are carefully designed and appropriately facilitated (Hilmer, 2024).

A related methodological strand emphasizes creative and experiential engagement approaches. Such methods enable participants to share lived experience and reflect collectively on local challenges without relying on technical or professional literacy, and they can help reduce hierarchical dynamics between professionals and community participants, supporting more equitable forms of dialogue (Hatton et al., 2020). In contexts involving people with communication disabilities, first-person narratives have been identified as a catalyst for institutional change, enabling service providers to recognize barriers that might otherwise remain invisible; inclusion is strongest when people with communication support needs are positioned as co-designers rather than simply consulted (Carroll et al., 2018). Improving communication accessibility has been framed as an ethical responsibility toward those historically excluded from civic participation (Solarsh & Johnson, 2017).

Community development research highlights that integrating lived experience with social-relational models of disability can support more inclusive participation by challenging environmental and institutional barriers (Darcy et al., 2022). In parallel,

participatory planning approaches emphasize that involving diverse user groups is central to the democratic governance of public spaces (Jiménez-Caldera et al., 2024).

Another methodological approach focuses on the development of technological infrastructures that support participation and feedback in large and diverse urban contexts. Such platforms often combine digital participation mechanisms with facilitated forms of engagement to manage heterogeneous inputs and perspectives (Gooch et al., 2018). Crowdsourcing tools, such as participatory geoforms, explicitly recognize citizens as knowledge holders, drawing on their firsthand spatial experience to inform planning and management decisions (Jiménez-Caldera et al., 2024). At the same time, research cautions that technologically mediated forms of participation require careful facilitation and governance, as digital participation formats may unintentionally reproduce exclusion if they privilege particular skills, resources, or forms of expertise (Gooch et al., 2018). For this reason, inclusive projects emphasize locally grounded approaches that value community knowledge and seek to ensure that engagement processes remain meaningful and responsive to local contexts (Patrick & McKinnon, 2022).

Research on participatory design underscores the importance of facilitation and the structuring of interaction as core methodological competencies. Effective participation depends not only on the availability of tools, but also on how ideas are made visually accessible and supported through facilitated processes of collective discussion and validation (Vietrova et al., 2022). Facilitation becomes particularly critical in technologically augmented contexts, where AI-mediated or digital conversations are shaped by the facilitator's ability to manage interactions between stakeholders, tools, and institutional constraints (Guridi et al., 2024). From an infrastructure perspective, participatory design is understood as the development of socio-material resources that enable participants to form lasting attachments to shared issues and collective agendas (Le Dantec & DiSalvo, 2013).

3.6 Methodological Principles of Clear Communication

Across these diverse methodological approaches, a common principle emerges: participation is inseparable from communication accessibility. The effectiveness of immersive tools, storytelling, play-based methods, or digital platforms ultimately depends on whether participants can understand what is being proposed, articulate their perspectives, and see their contributions reflected in outcomes.

In methodological terms, clear communication functions as a cross-cutting design criterion. It informs how tools are developed, how workshops are structured, how narratives are elicited, and how data is collected and fed back to communities. Rather than acting as a supplementary accessibility measure, it shapes the epistemic conditions under which participation becomes meaningful and equitable.

4. Discussion

Rather than reproducing theoretical arguments, this section synthesizes and interrogates recurring patterns observed across the reviewed studies and practices. Two complementary dimensions emerge: opportunities that support inclusive participation and improve design outcomes, and barriers that continue to limit access, understanding, and influence. Together, these dimensions illustrate how clear communication operates as both an enabling and a constraining factor in participatory urban design. Section 4.3 then examines how far this account is specific to public space design and how far it extends to other domains of co-creation.

Table 1 presents the resulting synthesis. It cross-tabulates the two analytical axes against the four dimensions identified in the corpus and should be read as the conceptual model that the subsequent discussion unfolds.

The matrix is asymmetric, and this asymmetry is informative. Within the corpus reviewed here, barriers were described with greater specificity than the communicative conditions that overcome them: barriers are reported concretely and by dimension, whereas opportunities tend to be reported at a more general level. For two of the four dimensions, this review did not identify enabling conditions specific to that dimension. Where this is the case, Table 1 records what the review found rather than inferring an opportunity by inverting the corresponding barrier. The imbalance is discussed further in Section 4.1.

Dimension	Opportunities (enabling conditions)	Barriers (constraining conditions)
Linguistic-cultural	Not separately identified in this review	Dominant languages and culturally specific norms; insufficient translation, cultural mediation, or contextual explanation; uneven participation reinforcing existing power asymmetries
Cognitive and literacy-related	Not separately identified in this review	Text-heavy materials; technical terminology; time-bound procedures; formats unadapted to diverse processing needs; reduced confidence and influence
Digital	Experiential clarity through visualization; embodied exploration of proposals; reduced reliance on	Unequal access to devices, connectivity, and digital skills; older adults, low-income groups, and people

Dimension	Opportunities (enabling conditions)	Barriers (constraining conditions)
	technical language, conditional on integration into inclusive communication strategies	with limited digital literacy particularly affected; risk of privileging already empowered groups
Institutional–structural	Transparency about goals, constraints, and decision-making; recognition of contributions as consequential; strengthened perceived legitimacy and shared ownership	Procedures and professional cultures prioritizing efficiency and expertise; accessibility treated as compliance; power imbalances between professionals and participants

Table 1. Conceptual model of clear communication in participatory public space design: matrix of opportunities and barriers by communicative dimension.

4.1 Opportunities

The analysis shows that clear communication creates favorable conditions for participation by supporting collaboration, accessibility, and shared understanding throughout the design process. When communication is adapted to participant capacities and contexts, participatory processes tend to become more inclusive, dialogical, and responsive to local needs.

One key opportunity lies in the strengthening of collaboration and citizen ownership. Clear communication helps reduce the distance between professionals and participants by making goals, constraints, and decision-making processes more transparent. When participants understand how their contributions relate to design outcomes, they are more likely to engage actively and develop a sense of shared responsibility for public spaces. These collaborative dynamics support design solutions that are better aligned with everyday practices and community priorities, rather than abstract planning assumptions.

Inclusive co-design processes benefit from communication practices that support knowledge exchange rather than one-directional information transfer. When participants can articulate experiences, concerns, and aspirations, diverse forms of situated knowledge can be integrated into design decisions, contributing to more context-sensitive and socially sustainable outcomes (Calvo & De Rosa, 2017). From this perspective, clear communication also contributes to improved design quality and process legitimacy. When communicative practices enable participants to express their perspectives in accessible ways, design outcomes are enriched not only through the inclusion of diverse knowledge but also through the recognition of participants' contributions as meaningful and consequential. This, in turn, strengthens the perceived legitimacy of the planning process.

Another opportunity concerns the role of communication in facilitating meaningful dialogue within participatory processes. By prioritizing interaction, explanation, and feedback, particularly in early design stages, co-design practices enable participants to develop a

shared understanding of spatial issues. Visual and interactive forms of communication act as mediating practices that support collective sense-making rather than one-directional information transfer (Collina et al., 2022).

Clear communication is also closely linked to social inclusion. When communication environments are designed to accommodate diverse linguistic, cognitive, and communicative needs, participation becomes more accessible to groups that are often marginalized. Accessible communication practices support dignity, autonomy, and confidence, particularly for people with communication support needs. In inclusive settings, participants who have historically been excluded from public decision-making are better able to express preferences and influence outcomes (Solarsh & Johnson, 2017).

Finally, the analysis highlights the potential of digital and immersive tools to enhance experiential clarity. When used appropriately, visualization technologies can help participants understand spatial proposals by allowing them to explore scenarios in intuitive and embodied ways. This experiential dimension supports informed discussion and reduces reliance on technical language.

However, two critical qualifications should temper this account.

The first concerns the distribution of the evidence, and is visible in Table 1. Opportunities tend to be reported at a higher level of generality than barriers. Where the reviewed sources specify precisely which linguistic and literacy-related conditions exclude people, they tend to describe the conditions that include them in broader terms, accessible communication, adapted formats, accommodation of diverse needs, without consistently identifying which practices produce which effects for which groups. The result is an apparent asymmetry between a well-specified diagnosis and a less well-specified remedy. Whether this reflects the state of the evidence or of its reporting cannot be settled from a review of this kind; either way, practitioners seeking to act on this literature find clearer guidance on what to avoid than on what to do instead.

The second concerns a tension that the literature tends to leave unexamined: the same tools credited with widening access, immersive visualization, digital platforms, and structured facilitation also concentrate interpretive authority in the hands of those who design and facilitate them. A rendered scenario frames what can be discussed while appearing merely to describe it. Clarity, in other words, is not neutral. Communicative accessibility can widen the circle of participants while leaving intact the question of who

sets the terms of the conversation, and the literature reviewed here rarely confronts that possibility directly.

4.2 Barriers

Despite the opportunities outlined above, the analysis identifies persistent barriers that affect how participation is accessed, enacted, and sustained. These barriers are often structural and communicative in nature, and they can undermine inclusive intentions even in participatory frameworks.

A major barrier relates to linguistic and cultural diversity. Participatory processes frequently rely on dominant languages and culturally specific communication norms, which can marginalize migrants, minority groups, and newcomers. When translation, cultural mediation, or contextual explanation are insufficient, participation becomes uneven, reinforcing existing power asymmetries. This limits whose knowledge is recognized and whose voices shape design decisions.

Differences in literacy levels and cognitive processing also pose significant challenges. Text-heavy materials, technical terminology, and time-bound procedures can exclude participants who are unfamiliar with planning practices or who process information differently. Even when physical access is provided, participation may remain inaccessible if communication formats are not adapted. The analysis shows that without visual, experiential, or facilitated communication, some participants struggle to engage meaningfully, reducing both confidence and influence.

Digital exclusion represents another important barrier. While digital tools are often introduced to broaden participation, unequal access to devices, connectivity, and digital skills can reproduce exclusion. Older adults, low-income groups, and people with limited digital literacy are particularly affected. When digital participation is not complemented by alternative formats and active facilitation, it risks privileging already empowered groups.

Beyond individual and technological factors, structural and systemic barriers continue to shape participation. Institutional procedures, regulatory frameworks, and professional cultures often prioritize efficiency and expertise over inclusivity. Accessibility requirements may be treated as compliance issues rather than as integral design principles, leading to environments that formally acknowledge participation while limiting its impact (Gleeson, 2001). Power imbalances between professionals and participants further constrain whose perspectives are ultimately reflected in outcomes.

It is worth noting that these four dimensions are analytically separable but empirically entangled, and the literature seldom treats them as such. A resident who is excluded on linguistic grounds is frequently the same resident excluded by text-heavy formats and by digital channels, and the institutional dimension conditions all three by determining whether resources for translation, facilitation, and non-digital alternatives are allocated at all. Studies that isolate a single barrier therefore risk underestimating the cumulative disadvantage experienced by those furthest from the process. The institutional dimension, in this respect, is not one barrier among four but the condition that governs whether the other three are addressed.

These barriers demonstrate that participation is not guaranteed by invitation alone. Without sustained attention to communication conditions, inclusive co-design risks becoming symbolic rather than transformative. The discussion, therefore, underscores the need to address communication not as a secondary concern, but as a core structural element of participatory urban planning.

4.3 Transferability and Specificity: Public Space and Other Domains of Co-Creation

A question that follows directly from the preceding analysis is whether this argument is specific to public space design or whether it applies to any process of co-creation and citizen participation, in social policy, sustainability policy, health services, or public administration more broadly. Addressing this question is necessary both to delimit the claims made here and to clarify what the urban context contributes to a general theory of participatory communication.

Much of the framework is indeed transferable. The core proposition, that participation is constituted by its communicative conditions, and that formal openness without communicative accessibility produces symbolic rather than substantive engagement, is not a property of urban planning. It follows from the rights-based and environmental understanding of communication accessibility set out in Section 2.4, a framework whose foundational statements, the UN CRPD, the ICF, and the communication access standards literature, were not formulated with urban planning in view. The four dimensions of Table 1 likewise recur across domains: any consultation conducted in a dominant language, through text-heavy documents, on digital platforms, and within institutions that treat accessibility as compliance will reproduce the same exclusions, whatever its subject

matter. To that extent, the model could be restated for other areas of co-creation without loss of coherence.

Four features nonetheless give public space design a distinctive configuration, and these qualify any straightforward generalization.

First, there is a representational gap that most other policy domains do not face in the same form. Participants are asked to deliberate about a three-dimensional environment that does not yet exist and must therefore be mediated through plans, sections, renderings, models, or immersive simulations. Comprehension depends not only on linguistic accessibility but on spatial and visual literacy, the capacity to read a drawing as a future place. This is why immersive and visual tools occupy such a prominent position in this literature relative to, say, sustainability consultation, and why the communicative burden falls disproportionately on representation rather than on text alone.

Second, the constituency is non-self-selecting and universal. Anyone who passes through a square uses it, including people who would never attend a consultation on housing finance or climate policy. Public space has no membership criterion, no enrollment, and no threshold of prior interest. The population affected therefore includes, by definition, people with communication support needs, limited literacy, and no digital access. Exclusion on communicative grounds is consequently both more probable and more consequential here than in domains whose participants are already filtered by expertise or affiliation.

Third, outcomes are material, durable, and largely irreversible. A redesigned square persists for decades and cannot be revised in the next legislative cycle. This raises the stakes of communicative failure: a misunderstanding embedded in a built outcome is not corrected by a subsequent policy amendment. It also means that participants encounter the consequences of the process daily and physically, which makes the legitimacy of the process unusually visible and its failures unusually tangible.

Fourth, and most distinctively, public space is itself a communicative environment. The literature on communication-friendly public spaces establishes that signage, wayfinding, and the accessibility of information within a space are themselves conditions of inclusion (Wallis et al., 2022). It follows, and this is an inference drawn here rather than a claim made in that literature, that in this domain communication is simultaneously the medium of participation and its product. Clear communication is thus not only a condition of the design process but also a criterion of the designed outcome, a recursive relation that has no clear equivalent where the object of co-creation is a policy text or a service protocol.

Taken together, these features suggest a qualified answer. The framework proposed here is transferable in its structure but domain-specific in its weighting: the four dimensions apply broadly, while their relative salience, the tools required to address them, and the consequences of neglecting them are shaped by the material, spatial, and universal character of public space. Public space design is therefore best understood not as an exception to a general theory of participatory communication, but as a demanding limit case of it, one in which the communicative conditions of participation are unusually visible precisely because the constituency is unrestricted and the outcome is built. Testing this proposition comparatively, across public space and non-spatial domains of co-creation, is a productive avenue for further research.

5. Conclusions

This paper has examined how clear communication enables and constrains inclusive participation in urban planning and public space design. Analyzing participatory and co-design practices through a communication-focused lens, the study shows that participation is determined not by procedural openness alone but by the communicative conditions that shape understanding, interaction, and influence.

Clear communication creates opportunities for collaboration, shared ownership, and improved design quality. Where it is accessible and context-sensitive, participatory processes more readily integrate diverse knowledge, support meaningful dialogue, and strengthen the legitimacy of planning outcomes. Visual, narrative, and interactive practices, alongside carefully facilitated digital tools, help translate complex spatial issues into forms participants can engage with confidently and critically.

Persistent barriers nonetheless limit inclusive participation. Linguistic and cultural dominance, literacy-related challenges, digital divides, and structural power imbalances shape who participates and whose perspectives reach decisions. Participation cannot therefore be assumed inclusive simply because participatory mechanisms exist: without deliberate attention to communication accessibility, such processes risk reproducing inequality under the appearance of inclusion. The institutional dimension is decisive among these, since it governs whether the resources needed to address the others are allocated at all.

Clear communication should accordingly be understood as a structural pillar of participatory urban planning rather than an optional enhancement, embedded across all stages from framing and facilitation to feedback and decision-making.

The synthesis also shows that the literature specifies the conditions that exclude people more precisely than those that include them. This is itself a finding: practitioners receive clearer guidance on what to avoid than on what to do. Section 4.3 further established that the framework is transferable in structure to other domains of co-creation, while public space design remains a demanding limit case. Two limitations qualify these conclusions: the review was restricted to English-language sources and draws on published accounts rather than direct observation. Further research should examine how communication accessibility can be operationalized as a design criterion within participatory frameworks, particularly in contexts marked by social diversity and uneven access to resources. Comparative work across spatial and non-spatial domains of co-creation, and longitudinal evidence on whether communicative gains persist beyond the life of funded projects, would be especially valuable.

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