

BEYOND BEFORE AND AFTER: TIME-BASED PARTICIPATORY URBANISM

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Abstract

Urban interventions do not end at installation; their meanings and uses develop through repeated encounters over time. When this temporal unfolding is overlooked, participatory planning is narrowed to discrete stages and misses the negotiations that occur through use. This paper argues that participation can be understood not only as a planned event or phase, but also as participation-in-use: the ongoing reinterpretation and negotiation of an intervention through everyday interaction. Through a design-led conceptual inquiry, it develops the notion of Minimally Intrusive Interventions: small-scale, materially modest, reversible, and interpretatively open elements that invite non-prescribed use and remain adjustable as situated feedback accumulates. By foregrounding transitional periods in the life of an intervention, the paper proposes a time-aware design disposition that keeps learning, adaptation, and recalibration possible without presuming a final end-state. In this sense, incompleteness is framed as a deliberate strategy for inclusive engagement across shifting users, rhythms, and institutional constraints.

Keywords:

Participation-in-use, Transitional Phases, Deliberate Incompleteness, Urban Temporality, Minimally Intrusive Interventions (MIIs).

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1. Introduction

'A city is more than a place in space; it is a drama in time.' With this maxim, Patrick Geddes foregrounded a dimension of urban life that resists reduction to spatial form alone (Geddes, 1904, 107). While cities are widely acknowledged as spatial systems, the temporal processes through which urban environments are inhabited, negotiated, and transformed remain difficult to accommodate within many planning and design frameworks. This is not because time is absent from planning discourse, but because it is often treated as a background parameter – something to be scheduled or managed –

rather than as an active design medium which shapes decision-making, representation, and participation (Klaasen, 2005). This paper examines how temporal assumptions embedded in prevailing project logics shape participatory urban planning. It argues that participation is often organised around punctual moments of consultation within linear project timelines, and that this leaves limited space for the transitional phases through which urban interventions are gradually interpreted, negotiated, and reconfigured through use. The paper, therefore, asks how participation might be reconsidered when time is approached not merely as a project parameter but as an active design medium that shapes urban interventions. Rather than answering this question through procedural reform alone, the paper approaches it through a design-led conceptual inquiry into temporally open forms of intervention.

A persistent manifestation of this prevailing temporal framing is the reliance on linear project logics structured around identifiable milestones and moments of completion. In practice, urban change is frequently narrated through simplified timelines that move from a defined "before" state to a resolved "after" condition. Reviews of strategic spatial planning research indicate that even approaches attentive to processualism often depend on fixed horizons and coarse chronologies, leaving limited analytical space for duration, sequencing, or timing as lived phenomena (Hutter & Wiechmann, 2022). Such temporal simplifications are not inherently problematic; they enable coordination and decision-making. They become problematic, however, when they are treated as sufficient representations of how urban change is experienced and negotiated over time.

What tends to be marginalised within these linear accounts are transitional phases: the lived intervals in which interventions begin to interact with their surroundings, uses are tested and adjusted, and meanings emerge through everyday practice. Here, meaning is understood not as symbolic content or designer intention embedded in space, but as an emergent and relational quality that arises through situated interactions over time. In line with Barad's (2003) performative account, meaning does not precede material arrangements but is co-produced through material-discursive practices. Transitional phases rarely align with punctual participation formats or end-of-project evaluations, yet they play a crucial role in how urban change becomes socially meaningful. Longstanding urban critiques have cautioned against assumptions of stable end states, and instead emphasised the open-ended and emergent character of city life (Jacobs, 1961). When interventions are conceived primarily as finished solutions, they risk becoming static insertions into dynamic environments, with limited capacity to absorb lived feedback once delivered.

To address this structural tension, this paper turns to design as a way of creating conditions through which participation can unfold gradually through interaction and use. The concept of Minimally Intrusive Interventions (MII) – defined in Section 4 – is developed through a design-led conceptual inquiry that combines critical synthesis of participatory approaches, theoretical reflection on time and urban complexity, and speculative design exploration. Rather than emerging exclusively from abstract theory, MIIs are constructed through iterative engagement with practical shortcomings observed in participatory urban practice and their reinterpretation through selected theoretical lenses. Design reasoning thus operates as a mediating tool, and translates critique into a design disposition with operational implications. The inquiry began by exploring why participatory actions may fall short in practice and, in doing so, identified a recurring temporal oversight: participation is often bounded, scheduled, and prematurely stabilised within project timelines.

Given this, engagement with existent literature in this paper is critical and selective. Rather than aiming for comprehensive coverage, texts were chosen for their capacity to interrogate time-compressed participation, engage with urban complexity, and inform concrete design consequences. Theoretical insights from authors such as Portugali, Wunderlich, and Storni were used to clarify and consolidate understandings first

encountered through practice in tacit form. In this sense, MIs emerge through abductive reasoning as both a theoretical construct and a design disposition, offering a speculative bridge from critiques of time-compressed participation toward temporally open forms of engagement.

2. Three Temporal Gaps in Participatory Planning

Despite widespread recognition that cities evolve through time, participatory planning practices continue to rely on temporal structures that often sit uneasily with how urban life is lived and negotiated (Forester, 1999; Saad-Sulonen *et al.*, 2018). Rather than a single shortcoming, this misalignment can be understood as a set of interrelated temporal gaps embedded in planning logics, research practices, and participatory formats. This section identifies three such gaps: a misfit between project time and lived time, the limits of expertise under conditions of unpredictability, and the tension which exists between social rhythms and project-based temporalities.

2.1. Temporal Misfit: Project Time versus Lived Time

A first temporal gap concerns the mismatch between project-based temporal frameworks and the temporalities of everyday urban life. Del Gaudio, Franzato, and de Oliveira (2017) describe participatory processes as vulnerable to temporal misfits that arise from differences in roles, expectations, routines, and motivations amongst actors. When participation is organised as a sequence of predefined phases, it implicitly assumes shared availability and synchronised engagement that rarely exist in practice. As a result, collaboration may weaken not because participation is rejected, but because its temporal structure fails to recognise diverse rhythms of involvement; limiting its capacity to function as an ongoing and inclusive process.

This mismatch becomes particularly visible when participation is framed as a project management task. Karasti, Baker, and Millerand (2010) emphasise that collaborative development depends on long-term temporal work, including sustaining engagement, aligning actions across time, and managing dependencies beyond immediate deadlines. Similarly, Dille and Söderlund (2011) show how inter-institutional projects are shaped by timing norms and synchronisation demands, and how temporal misfits emerge when actors operate according to different temporal expectations. These studies show that participation depends less on inclusion alone than on how time is allocated, coordinated, and allowed to unfold.

Temporal misfit is further reinforced by representational practices in planning and design. Klaasen (2005) argues that spatial models necessarily freeze reality at particular moments, making gradual adaptation, delayed effects, and informal negotiation difficult to capture except indirectly. Van Schaick (2011) similarly points to the gap which exists between knowing activity patterns and knowing how to plan and design for them. While abstraction is unavoidable, difficulties arise when project time and representational time are treated as adequate substitutes for lived temporal experience.

2.2. Unpredictability and the Limits of Expertise

A second temporal gap emerges from the persistent tension existing between expert-led planning and the inherently unpredictable character of urban life. Urban theory has long questioned the assumption that cities can be fully anticipated, stabilised, or resolved through design. Jane Jacobs' description of cities as systems of organised complexity remains foundational in this regard: urban patterns emerge from innumerable interactions whose timing, intensity, and meaning cannot be predicted linearly or centrally controlled (Jacobs, 1961). From this perspective, unpredictability is not an anomaly within urban systems, but a defining condition of how they function and evolve over time.

Subsequent research on planning has reinforced this critique by examining how professional expertise encounters uncertainty. Cozzolino (2018) shows how urban outcomes vary under different planning conditions, and emphasises that spontaneity and adaptation cannot be fully scripted in advance. Rauws and de Roo (2016) similarly argue that adaptive planning is less about defining final configurations, and more about generating conditions for ongoing adaptability. Taken together, these contributions suggest that this limitation of expert-led planning lies not in a lack of knowledge but in its tendency to seek premature closure by translating open-ended processes into fixed solutions.

Recent work on collective creation helps to further specify where this limitation becomes most consequential. Muñoz Aparici and Harteveld (2025) argue that disciplinary expertise can systematically filter out forms of situated and unconventional knowledge that are critical for understanding how public spaces are actually experienced and negotiated. Their contribution reframes unpredictability not as a technical failure of planning but as an epistemic blind spot: when professional routines privilege what can be formalised in advance, they marginalise forms of understanding that emerge only through use, appropriation, and interaction over time.

This epistemic gap has direct temporal implications for design and participation. Storni (2013) conceptualises this problem as a 'future-use gap', which describes the persistent distance between imagined futures embedded in design decisions and the fluid realities that unfold through everyday use. When interventions are conceived as one-off insertions rather than evolving propositions, the capacity for reinterpretation and adjustment is significantly reduced. In such cases, unpredictability is treated as a disturbance to be corrected rather than as information generated through engagement over time. Portugali's understanding of the city as an emergent system further reinforces this argument. For Portugali (2021), urban environments are co-produced through recursive interactions between agents and artefacts, unfolding as an open-ended "game" rather than a controllable sequence. The temporal implication is that planning models oriented toward fixed end states struggle to accommodate the dynamics of urban becoming.

2.3. Social Rhythms versus Project Time

A third temporal gap concerns the relationship between project timelines and the social rhythms through which urban spaces are lived. Del Gaudio *et al.* (2017) emphasise that time in community-based contexts cannot be treated as a neutral metric imposed from above; it is negotiated and embedded in everyday life. Urban experience unfolds through repetition, routine, interruption, and maintenance – temporal patterns that rarely align with formal project schedules. To make this misalignment analytically precise, this paper uses "rhythms" not as a metaphor but to name how collective time becomes socially organised and materially expressed in everyday spatial activity.

Lefebvre defines rhythm through the interaction of "a place, a time and an expenditure of energy," foregrounding repetition, interruption, and bodily routines as constitutive of lived space (Lefebvre, 2004, p. 15). Building on this, Brighenti and Kärrholm (2018) emphasise that territories are no less temporal than spatial: rhythms contribute to processes of territorialisation through which socio-material relations become patterned and meaningful over time. The consequence for participatory formats is straightforward: if participation is structured only as punctual events, it systematically misses the rhythmic work through which belonging, care, and negotiated use become legible in everyday life – precisely because those dynamics require duration, recurrence, and exposure to changing conditions (Brighenti & Kärrholm, 2018). This reframing also clarifies why rhythm analysis matters here: it helps distinguish between the time of professional intervention and the time of lived use in which participation actually takes shape.

At the level of spatial practice, drawing on Lefebvre's rhythm analysis, Petrescu (2012) distinguishes between abstract professional spaces and lived spaces shaped through everyday practices. Wunderlich (2013, 2023) extends this perspective by showing how urban places are constituted through rhythms of movement, encounter, and pause, linking temporal experience to sensory and spatial engagement. From this standpoint, participation cannot be understood only through isolated events, because many of its effects become visible only through repeated presence, changing use, and accumulated familiarity. Project-based participation formats, however, tend to operate on homogeneous timelines that assume synchronic engagement and shared temporal capacity, leaving many forms of situated knowledge underrepresented.

Taken together, these three gaps expose a structural mismatch between how participation is planned, and how it is lived. Project timelines privilege linear progression, expert foresight, and punctual moments of engagement, while urban life unfolds through emergent practices, uneven rhythms, and gradual adjustment. This mismatch does not stem from a lack of participatory intent but from temporal frameworks that compress participation into events, phases, and outcomes. As a result, many participatory approaches struggle to engage with the transitional, iterative, and time-dependent dimensions of urban change – dimensions that cannot be resolved through event-based, short-term, or outcome-driven interventions alone.

3. Temporal Structuring of Participation

Participatory planning is often framed as a corrective to top-down decision-making. However, recurrent critiques of participatory outcomes suggest that the challenge lies not simply in the presence or absence of participation, but in how participation is temporally structured (Saad-Sulonen *et al.*, 2018). As argued in the previous section, planning processes tend to privilege linear timelines and moments of closure. This section, therefore, refines the discussion by asking a more specific question: what form of participation is marginalised when participation is treated as a temporally bounded phase rather than as an unfolding process?

In much participatory practice, engagement is concentrated in discrete moments – most commonly early consultation or co-design workshops – after which decisions are stabilised and implementation proceeds. Saad-Sulonen *et al.* (2018) describe this tendency as a narrowing of participation to punctual events, and argue that many forms of knowledge and negotiation emerge only during use and that they therefore remain inaccessible within fixed participatory windows. From this perspective, participation is often front-loaded, while later phases of adaptation and reinterpretation are institutionally marginalised.

Dalsgaard and Halskov (2012) sharpen this critique by distinguishing between who participates and how participation unfolds over time. They show that even when participatory processes are inclusive in terms of representation, their temporal organisation can restrict participant agency. When engagement is confined to predefined stages, participants are positioned as contributors to a design outcome rather than as ongoing actors in its evolution. Participation becomes a matter of consultation rather than a sustained condition of co-presence and learning.

An alternative understanding of participation emerges when attention shifts from formal co-design moments to participation as something that unfolds through situated use, repetition, and everyday interaction. Light and Akama (2012) emphasise that participatory engagement is inherently uneven and emotionally demanding, requiring opportunities for withdrawal, return, and re-entry. Participation, in this view, is staggered rather than continuous, shaped by changing capacities, trust, and confidence over time.

This perspective challenges the assumption of a stable or homogeneous ‘community.’ Kraff (2018) critiques the tendency to treat participants as a unified group present at a single moment, and instead argues that publics are diverse and temporally fluid. People enter and leave participatory processes, and their positions and capacities change. When participation is temporally fixed, it privileges those who are able to engage at a specific moment, while marginalising future users, newcomers, and those whose circumstances shift. Participation as situated use acknowledges that belonging and agency are continuously renegotiated rather than settled once and for all.

3.1. Risks of Temporally Fixed Participatory Approaches

When participation is treated as a completed phase, it generates a set of structural risks that undermine its long-term democratic and spatial ambitions. These risks do not stem from participation itself, but from the assumption that participation can be finalised and translated into a fixed outcome.

First, temporally bounded participation can produce temporal exclusion from belonging. Arnstein’s (1969) classic critique warned that participation limited to symbolic moments risks reproducing power imbalances. Subsequent work in collaborative planning confirms that even inclusive processes can exclude those not present within designated participatory windows (Healey, 1997). Once those windows close, belonging becomes anchored to a past configuration of actors rather than an evolving public.

Second, fixed participation often leads to a functional mismatch. Participatory decisions made early in a process assume that future uses can be sufficiently anticipated. Yet planning theory has long demonstrated that urban problems are inherently indeterminate and resistant to definitive solutions (Rittel & Webber, 1973). Research on adaptive planning shows that even well-informed participatory decisions lose relevance when embedded in static outcomes that lack mechanisms for revision (Rauws & de Roo, 2016). When participation ends at design completion, discrepancies between intention and lived practice remain unaddressed.

Third, temporally closed participation contributes to maintenance disengagement and responsibility vacuums. When participatory processes conclude with delivery, responsibility for ongoing care and upkeep often becomes ambiguous. Forester (1999) emphasises that democratic planning depends on ongoing relational engagement rather than one-off involvement. Empirical research on urban open-space management demonstrates that maintenance outcomes improve when residents remain involved through continuous dialogue and adjustment, rather than through a formal handover alone (Suomalainen *et al.*, 2022). Without temporal continuity, participation gives way to disengagement.

Taken together, these observations point to a specific absence in dominant participatory frameworks. What is missing is not participation as such, but participation understood as a temporal condition rather than as a discrete phase. Participation organised as co-design privileges anticipation and agreement, while participation as situated use foregrounds adaptation, reinterpretation, and everyday feedback. While both modes are valuable, the former dominates participatory planning practice, leaving the latter underdeveloped and weakly institutionalised.

4. Defining Minimally Intrusive Interventions

Having clarified the temporal stakes of participation, discussion moves from diagnosis to specification by introducing a deliberately bounded concept: Minimally Intrusive Interventions (MIIIs). This section defines the minimum criteria for MIIIs to make the subsequent argument evaluable rather than merely aspirational. MIIIs are small-scale, abstract, and reversible urban elements – expert-designed yet co-authored through use – that invite non-prescribed interaction and generate time-based insights into how public space is lived and negotiated. Rather than functioning as problem-solving devices, prototypes for future development, or temporary stand-ins for permanent projects, MIIIs are conceived as materially modest spatial propositions whose meanings, functions, and durations emerge through repeated interaction over time.

This definition positions MIIIs as neither solutions nor accelerators, but as open-ended spatial conditions. Their purpose is not to deliver predefined outcomes, but to create situations in which participation unfolds through situated use, adaptation, and reinterpretation. MIIIs therefore operate at the intersection of material form, temporal openness, and everyday practice, foregrounding participation as something that happens in time rather than at a single moment.

To ensure conceptual clarity, an intervention is classified as an MIII only if it satisfies all of the following criteria:

- Material modesty and limited footprint: introduced without permanently altering existing infrastructure or fixing spatial arrangements.
- Reversibility: fully movable and removable; withdrawal is structurally feasible without leaving lasting physical traces. This paper operationalises reversibility as a strict threshold in order to avoid conflating MIIIs with broader “temporary use” practices. The threshold is informed by temporary-use literature that distinguishes interim/“meanwhile” occupation from end-state redevelopment (Bishop & Williams, 2012), and by accounts of temporary-use repertoires that vary in the extent to which interventions materially alter sites (Haydn & Temel, 2006; Németh & Langhorst, 2014).
- Interpretative openness: the element is not defined by a single prescribed programme; it remains polyvalent in use. This criterion draws on the notion of “loose space,” where urban settings enable appropriation and user invention rather than compliance with a fixed script (Franck & Stevens, 2006).
- Participation-in-use: participation is enacted primarily through embodied interaction and reconfiguration (use, rearrangement, adaptation) rather than being confined to workshop-based input. This is informed by participatory design work that treats participation as something that can unfold over time beyond punctual events (Saad-Sulonen *et al.*, 2018), and by relational accounts of practice that emphasise co-production through situated engagement (Petrescu, 2012). Here, these ideas are translated into an operational emphasis on participation through use.
- Temporal openness: the intervention is not defined by a single event moment or a predetermined narrative of completion; its continuity (or disappearance) is allowed to emerge through ongoing

use, neglect, adaptation, and repair. This criterion is developed by combining participatory design arguments about temporally extended engagement (Saad-Sulonen *et al.*, 2018) with urban design scholarship that treats temporality and rhythm as design conditions rather than mere scheduling variables (Wunderlich, 2023).

These criteria define MIs as spatial conditions for the unfolding of participation, rather than as punctual formats for capturing opinions or showcasing quick wins.

4.1. Improvisation and Participation-in-Use

Participation-in-use within MIs can be further clarified through improvisation theory. Improvisation does not imply randomness or the absence of structure; it refers to the generation of novelty within enabling conditions. Derrida (2004) stresses that improvisation does not exclude the “pre-written” constraints that make an event possible, and thus suggests that the improvised remains situated within a framework rather than unfolding as pure indeterminacy. In a related register, Hallam and Ingold (2007) shift attention from creativity as a finished product toward improvisation as an ongoing process, foregrounding emergence, temporality, and the unfinished.

From this perspective, MIs do not ‘deliver participation’ as a discrete phase; they establish conditions in which participation may be enacted, revised, and contested through repeated encounters over time. The key issue is therefore not openness in the abstract, but whether an intervention’s form is calibrated so that users can reinterpret, reconfigure, stabilise, or refuse it through practice –without requiring a prescribed programme. The paper develops this calibration more explicitly as a design stance of elasticity in Section 6.

4.2. Distinctiveness Within Small-Scale Intervention Fields

Small-scale intervention practices are often distinguished more by their names than by their operative logics. Landgrave-Serrano, Stoker, and Crisman (2021) describe this congestion and propose ‘punctual urbanism’ as an umbrella for rapid, time-limited intervention logics. Although the argument developed here is primarily conceptual, it draws on a broader repertoire of practices that have experimented with temporality, lightness, and reversibility in public space. Practitioner frameworks such as Project for Public Spaces’ ‘Lighter, Quicker, Cheaper’ (LQC) approach promote incremental, low-risk actions that create opportunities for learning and adaptation over time (Project for Public Spaces, 2011). Governance-oriented guidance on enabling temporary use likewise emphasises permitting and regulatory arrangements that can accommodate provisional occupation and iterative adjustment (C40 Cities, 2021). Institutional accounts of participatory design in urban change further underline feedback loops and experimentation as conditions for people-centred urban processes (Robert Bosch Stiftung, 2020).

Initiatives within this field often work through mobile, replicable elements and pop-up formats, ranging from PPS’s Benches Collective, which uses minimal street furniture to invite interaction (Project for Public Spaces, 2015), to Street Lab’s pop-up installations that turn streets into sites for hands-on engagement and learning-through-use (Street Lab, n.d.). In much tactical urbanism guidance, such interventions are framed as prototypes that help legitimise a preferred future condition or accelerate a pathway from pilot to permanence (Global Designing Cities Initiative, 2018; Lydon & Garcia, 2015). Critical commentary has cautioned that “temporary” can become aestheticised or short-termist when detached from situated responsibility (Harris & Nowicki, 2015).

MIs deliberately depart from this repertoire in two ways. First, they suspend instrumentality: they are not designed primarily to validate a predefined solution, prototype a future permanent scheme, or accelerate policy adoption (contrast with tactical urbanism’s “short-term action for long-term change” framing (Lydon & Garcia, 2015)). Second, they suspend temporal closure: they are not defined by a scheduled end (an event or pilot), but by whether they remain meaningful through repeated, changing use over time, and drawing on broader understandings of temporality as well as urban rhythms (Wunderlich, 2013, 2023).

On this basis, MIs are proposed as a distinct category whose contribution is not speed or activation, but the time-based legibility of negotiation: how uses and meanings develop (or fail to develop) when an object

remains open to reinterpretation and reconfiguration over time. While MII's share certain similarities with other temporary or participatory urban practices, they remain analytically distinct. The following intervention types are therefore not considered MII's:

- Tactical urbanism when tactical interventions function as short-term prototypes aimed at steering policy or delivering a defined improvement trajectory (Lydon & Garcia, 2015).
- DIY urbanism when interventions are primarily unauthorised, citizen-led modifications pursuing specific community agendas or claims to space (Douglas, 2018).
- Pop-up/curated activation when the intervention is thematically programmed and temporally bounded (e.g., curated pop-up landscapes tied to entrepreneurial place strategies) (Schaller & Guinand, 2019).
- Participatory design tools when participation is primarily workshop-based facilitation oriented to extracting preferences or producing a design decision (Light & Akama, 2012).
- Performance interventions (e.g., flash mobs, parkour, symbolic disruptions) when the primary medium is performative action rather than an enduring, reconfigurable material proposition (Yaghi et al., 2019).

This exclusion is not evaluative. It is definitional: MII's must remain materially modest, reversible, and open-ended enough for participation to unfold through use over time, not primarily through spectacle, event-time, or a bounded pilot.

5. Deliberate Incompleteness as a Temporal Design Mechanism

Deliberate incompleteness is often misread as under-design, indecision, or a lack of responsibility. In this paper, it is treated differently: as a purposeful design strategy that keeps an intervention open long enough for situated practices to surface, and for the intervention to be iteratively recalibrated in response to those practices. The basic causal claim is straightforward: because urban participation unfolds through time, and because urban use cannot be fully specified in advance, interventions that remain partially unresolved can better accommodate emergent interaction, reduce premature closure, and support learning-by-use.

One way in which deliberate incompleteness enables participation over time is by making early failure and adjustment structurally possible. A useful metaphor for the operational value of incompleteness is Tom Wujec's "Marshmallow Challenge"² (Wujec, 2010). The consistent failure pattern in the exercise is not a lack of intelligence but a sequencing mistake: teams invest in a complete, coherent solution and only test the marshmallow at the end, when revision is costly or impossible. The teams that perform best treat early collapse as information and iterate quickly. Translated into urban interventions, the marshmallow stands for the "weight" of real-world use – misuse, unexpected appropriation, conflict, neglect, weather, shifting user groups – factors that routinely exceed what a design can anticipate at the outset. Deliberate incompleteness works here because it creates structural room for early testing and adjustment, rather than treating completion as the moment when learning should stop. This matters for MII's because their value does not depend on delivering a finished spatial product; it depends on keeping a public situation responsive to the kinds of feedback that only appear once bodies encounter materials over time. Incompleteness is therefore not a stylistic preference but an operational safeguard against end-state assumptions.

Cristiano Storni's argument for "design for future uses" clarifies a key causal mechanism behind deliberate incompleteness: deferring closure because designers necessarily lack access to future contexts of use (Storni, 2013). Rather than treating this lack of foresight as a defect to eliminate, Storni frames it as a condition that design should acknowledge – by postponing certain decisions until the time of use, and by enabling users to participate through appropriation, reconfiguration, and ongoing interpretation. In the context of MII, deliberate incompleteness works because it prevents a common failure mode of participatory projects: participation

2 In the Marshmallow Challenge, teams try to build the tallest free-standing tower they can using spaghetti, tape, string, and a marshmallow, which is placed on top (Wujec, 2010).

is concentrated early, but the built outcome becomes fixed, thereby turning later users into consumers of a resolved design rather than co-producers of an evolving situation.

This temporal argument becomes materially specific through the concept of “loose space.” Franck and Stevens (2006) describe how urban settings can enable appropriation when physical and social conditions allow users to invent uses beyond a single script. From this perspective, deliberate incompleteness does not function as an abstract claim of openness; it works only when openness is materially supported by elements and arrangements that preserve a field of possible actions (moving, pausing, clustering, reorienting, ignoring) rather than narrowing behaviour to compliance with a programmed function. Incompleteness is thus not an accidental gap, but a deliberate design move that keeps multiple uses plausible long enough for emergent patterns to stabilise (or fail to stabilise) through repetition. For MIs, this matters because interpretative openness is not an aesthetic preference but a practical means of keeping participation possible after installation, when situated knowledge becomes observable: use-patterns, conflicts, latent desires, non-use, and informal rules of engagement. In this sense, deliberate incompleteness acts as a temporal redistribution of interpretive authority – shifting meaning-making away from the design phase alone and into the use phase, where embodied practices can surface and be responded to over time.

Empirical accounts of children’s use further illustrate how incomplete conditions can allow meanings and affordances to emerge through lived interaction rather than prescription. In the case of Tahuantinsuyo Park, Castillo Ulloa, Million, and Schwerer show how provisional and adaptable spatial elements were taken up by children in ways that exceeded the pedagogical intentions embedded in the original design. Rather than being treated simply as misuse or deviation, these embodied interactions brought latent affordances to the fore and informed subsequent spatial adjustments (Castillo Ulloa *et al.*, 2021).³ Their case highlights a common mismatch: expert intention encodes “proper” use, but children (and often other groups) reveal alternative spatial logics through embodied practice. What matters for this paper is the mechanism: when design elements do not fully prescribe what counts as correct use, users can discover and stabilise meanings through action, and designers can learn from those meanings without forcing them back into an original script. This is precisely the kind of learning MIs aim to enable. Deliberate incompleteness works because it allows the intervention to remain in a transitional condition where reinterpretations are not treated as deviations but as signals – making otherwise tacit spatial knowledge legible over time.

To avoid treating incompleteness as a vague appeal to openness, the argument requires an operational clarification: the conditions under which incompleteness remains modifiable, reversible, and accountable. Christopher Alexander’s distinction between mechanistic and “living” processes provides a useful lens through which to clarify the form of openness advanced in this paper. Rather than advocating arbitrariness or indeterminacy for its own sake, Alexander’s notion of a living process describes systems that remain responsive to feedback and evolve through incremental adjustment over time (Alexander, 2002). Within the context of MIs, this distinction has an explicit operational implication: a living intervention is one that can be modified in small, reversible steps as patterns of use, appropriation, or friction become visible, rather than fixing an early design intention into a finalised form.

A comparable clarification can be drawn from Taleb’s concept of antifragility. When applied cautiously, antifragility does not function here as a general theory of cities but as a justification for a safe-to-fail design stance (Taleb, 2012). MIs are not intended to be optimised through predictive modelling or exhaustive anticipation. Instead, they are designed to learn through exposure, where minor stresses such as misuse, reinterpretation, wear, and shifts in routine become sources of feedback rather than signs of failure. The relevance of antifragility lies in the capacity of an incomplete intervention to benefit from small disturbances by making adjustment feasible and through avoiding brittle, one-shot delivery logics.

3 The Tahuantinsuyo Park case (La Balanza, Comas, Lima) is framed through four linked concepts—affordance, relational space, spatial knowledge, and spatial pedagogisation—to examine how children’s actual uses diverge from expert design intentions. Castillo Ulloa *et al.* (2021) describe CCC’s process as beginning with the ‘Proyecto Semilla’, in which brightly painted poles, tyre benches, and a dirt ramp were introduced as adaptable elements whose affordances would be tested through use. Over several years, the intervention was revised in response to what children actually did in the space—for example, climbing poles and using sloped surfaces for sliding—eventually reaching an open-ended, trial-and-error stage in which, as the authors put it, experts and children ‘meet halfway’.

Taken together, these perspectives help specify a practical condition for deliberate incompleteness. Incompleteness must be sufficiently structured to support iterative adjustment, while remaining open enough to allow reinterpretation and reconfiguration through use. It is this balance that enables incompleteness to function as a mechanism for time-based participation, rather than as an abstract design attitude or a rhetorical commitment to openness. In this sense, incompleteness operates as a calibrated design condition – one that sustains adaptability without relinquishing responsibility for form, use, or ongoing transformation.

6. Design Sensibilities for Time-Based Participation

This section translates the conceptual arguments developed in Sections 2–5 into a set of design sensibilities for time-based participatory urbanism. Rather than proposing a method or checklist, it articulates principles that guide how MIs can be conceived, situated, and sustained without collapsing openness into vagueness or participation into event-based formality.

If participation unfolds over time rather than at a single moment (Section 3), interventions should not be treated as finished products that resolve spatial questions in advance. Given this, MIs are conceived as temporal invitations: materially present propositions that remain open to interpretation across different rhythms, user groups, and situations. This sensibility responds directly to the temporal gaps identified earlier (Section 2), where project timelines and lived time rarely align. MIs withhold closure at the moment of installation. Instead of signalling completion, the intervention signals availability – for testing, rearrangement, contestation, or disregard. Participation emerges not because users are asked to contribute, but because the intervention remains unresolved enough to be engaged with repeatedly and in different ways over time (Saad-Sulonen *et al.*, 2018).

Such invitations require a specific kind of openness: elasticity. Elasticity describes a productive tension between recognisable form and interpretative freedom – enough structure for an intervention to be legible and usable, but one that also possess sufficient indeterminacy for users to reinterpret, reconfigure, or refuse it without violating a prescribed script (Førde, 2021). In this sense, MIs function as enabling but incomplete frameworks rather than as neutral objects or fully programmed installations. This elasticity matters because public space is not only a setting for activity, but also a site of ongoing social negotiation. When interventions avoid over-programming, they allow tacit norms and boundaries to surface through practice: who initiates action, who yields space, how conflicts form and dissipate, and how shared conventions stabilise (or fail to stabilise) over time. This civic role of unscripted encounter and negotiation is central to Sennett's argument for urban environments that do not over-protect users through order (Sennett, 1970), and was further developed in later discussions of designing openness and disruption as an ethical stance toward public life (Sendra & Sennett, 2020).

A related sensibility concerns looseness as a material affordance. As Franck and Stevens (2006) argue, urban spaces become appropriable when their physical and social conditions allow users to invent uses beyond a single script. For MIs, looseness is not an absence of design intent, but a deliberate calibration of form, weight, connection, and surface that keeps multiple actions plausible. This distinction matters because many temporary or participatory interventions appear open in discourse but are tightly controlled in practice. When the range of acceptable actions is narrow, participation collapses into compliance. MIs instead aim to sustain co-authorship by allowing users to “write back” into the intervention through rearrangement, adaptation, misuse, or neglect – without needing to seek permission to deviate.

MIs treat participation not as input to be extracted, but as a capacity to be cultivated over time. Participation is enacted primarily through embodied, use-based engagement – moving, stacking, sitting, leaning, ignoring, or even damaging elements – rather than through discursive contribution alone. Such actions are not hierarchised as constructive or undesirable; they are interpreted as spatial signals that reveal how public space is negotiated in practice (Petrescu, 2012). Cultivation does not imply intensive facilitation. Rather, facilitation is intentionally light and withdrawable: subtle cues may lower the threshold for first interaction, but ongoing hosting or programming is avoided. This stance preserves participation-in-use and prevents the intervention from reverting to workshop logic, where engagement is punctual, verbalised, and temporally bounded (Saad-Sulonen *et al.*, 2018).

Because participation-in-use unfolds through repeated encounters, the temporal horizon of an intervention matters: not only how it is introduced, but how it remains available for return, reuse, and re-interpretation. Where conventional projects equate success with permanence, MIs treat repetition as evidence of meaning-making across time. What matters is not whether an intervention lasts indefinitely, but whether it remains available long enough for patterns of negotiation to emerge across different times, conditions, and user constellations. Temporality is thus treated as a design condition rather than a scheduling parameter (Wunderlich, 2023).

This sensibility also reframes evaluation. Instead of measuring uptake or popularity, attention shifts to recurring configurations, cycles of re-appropriation, moments of conflict, periods of non-use, and practices of repair or abandonment. Such patterns indicate how meaning stabilises – or fails to stabilise – through time, and align with the argument in Section 5 that deliberate incompleteness works by deferring closure and enabling learning-through-use (Storni, 2013).

At the same time, treating repetition and open-ended use as sources of learning raises ethical constraints that cannot be solved by design intent alone. Openness in time-based participatory interventions must be approached with caution. Loose, reversible, and deliberately unfinished arrangements do not guarantee inclusive or equitable participation. They may equally enable monopolisation, misuse, avoidance, or conflict, shaped by informal norms and unequal capacities to claim space. Such conditions echo long-standing critiques in urban theory that public space is not a neutral setting but a socially structured arena in which encounter, conflict, and uneven capacities to shape space and social life become visible (Sennett, 1970; Sendra & Sennett, 2020). These should be understood as ethical risks rather than design objectives.

Ethical restraint is equally important in observation. If interventions aim to reveal everyday negotiation, intrusive monitoring risks producing performative behaviour and undermining authentic use. Documentation strategies should therefore prioritise non-intrusion and avoid making users feel watched, while still allowing changes in configuration and use to be traced over time (Gehl & Svarre, 2013). This matters especially in a framework that values tacit and emergent forms of participation, since overly intensive observation may distort precisely those practices which the intervention is meant to learn from. Rather than claiming these tensions are resolved in advance, MIs treat them as constitutive limits of time-based participatory inquiry.

7. Conclusion, Ways Forward

This paper has argued for a time-based understanding of participation in urban design by introducing MIs as a conceptual framework rather than as a finished method or solution. By foregrounding temporality, deliberate incompleteness, and participation-in-use, the paper does not seek to replace established participatory approaches, but to complement them by drawing attention to what often remains underexplored: how participation continues, transforms, or dissipates beyond formally organised moments of planning, design, and engagement. Its central contribution lies in linking temporality, deliberate incompleteness, and participation-in-use into a conceptual framework for small-scale urban interventions that remain open to reinterpretation and adjustment over time.

What gives MIs their particular value is their modesty. They are intentionally small-scale, reversible, and open-ended; designed to surface patterns of everyday negotiation rather than to deliver predefined outcomes. In this sense, MIs are proposed neither as a universally applicable tool, nor as a corrective to all shortcomings of participatory planning. Their value is situational and exploratory, particularly in contexts where uncertainty, multiplicity of use, and temporal change are not problems to be eliminated but conditions to be worked with. The paper, therefore, contributes not only a critique of time-compressed participation but also a design-oriented approach to thinking about how participatory processes can remain active through use, repetition, and adjustment over time. In this sense, it extends participation research toward the temporal conditions through which meanings are negotiated in practice, while suggesting for design and planning that interventions may be valuable precisely because they remain provisional, revisitable, and open to situated learning over time.

Several limitations remain. Participation-through-use does not guarantee inclusivity; loose and open conditions may be appropriated unevenly, ignored entirely, or dominated by particular groups. In addition, ethical tensions surrounding observation, interpretation, and intervention cannot be fully resolved in advance

and require ongoing reflexivity. Moreover, the insights generated through MII are context-specific and do not easily translate into generalisable metrics or policy prescriptions. These limitations are not incidental but inherent to the experimental and time-sensitive nature of the approach.

As a next step, the paper points to the planned testing of MII at selected sites in the Ruhr region. Residual and under-programmed spaces – often described as urban cracks – offer a particularly suitable context for such experimentation, as expectations of use are weak and ambiguity is already present. These future explorations are conceived not as validation exercises but as opportunities to examine how minimally intrusive, temporally open interventions are negotiated in practice, and how design sensibilities translate under real-world conditions.

The argument made here is deliberately restrained. It does not advocate for more design, faster action, or stronger intervention. Instead, it suggests slowing down: allowing time for spaces to be inhabited, misused, adapted, and reinterpreted before being resolved. In an urban context increasingly driven by acceleration and closure, taking time seriously may be one of the most modest – and necessary – design choices available.

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